



YORK Technical Guide: HMM7 Series - 17 SEER Horizontal Discharge Modulating Heat Pump

R-410A 2 to 5 Nominal Ton



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Drive, Norman, OK 73069

6062825-YTG-A-0321

Supersedes: Nothing

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Description

The HMH7 horizontal discharge modulating heat pumps are the outdoor section of a high-efficiency heating and cooling system. The outdoor units are designed to be connected to a matching indoor coil with sweat connect lines. Each unit is to be matched with one ducted indoor unit and is not designed for application in a ductless configuration. Sweat connect units are factory charged with refrigerant for a nominal sized matching indoor coil plus 15 ft of field-supplied lines.

Figure 1: Installation certification map

For installation in all US regions and Canada*



*Not currently certified for installation in localities requiring hurricane certification. Check local codes for specific requirements.

Due to continuous product improvement, specifications are subject to change without notice.

Visit us on the web at www.simplygettingthejobdone.com and www.york.com.

Additional rating information can be found at www.ahridirectory.org.

Certification

The units are tested in accordance with the following:



Warranty summary

Extended 10-year limited parts warranty.

Extended 10-year limited compressor warranty.

Extended parts and compressor warranties require online registration within 90 days of purchase for replacement or closing for new home construction.

Warranty does not apply to R-22 models, 3-phase models, or Internet sales.

See the *Limited Warranty* certificate in the *User's Information Manual* for details.

Features

- **360 DC inverter driven technology:** With 360 all DC inverter driven technology, compressor rotation direction and speed is controlled optimizing energy usage and compressor stability through the spectrum of operating conditions. This guarantees optimal space temperature control while providing quiet operation.
- **Pressure sensor:** This unit contains pressure sensing technology, which detects low pressure in cooling mode and high pressure in heating mode to protect the system from damage. Intelligent control can also be realized by calculating the indoor coil temperature from system suction pressure.
- **Smaller outdoor form factor for installation flexibility:** This side-discharge outdoor unit saves roughly 35% space over traditional air conditioners. It offers the flexibility of wall, yard or roof installation.
- **Stable temperature control means optimal comfort:** The DC inverter is able to provide full capacity at startup to cool/warm quickly and adjusts speed to prevent temperature fluctuation and energy loss.
- **Agency Listed:** Safety certified by CSA to UL 1995/CSA 22.2. Performance certified to ANSI/AHRI Standard 210/240 in accordance with the Unitary Small Equipment certification program.

Nomeclature

Table 1: Horizontal discharge AC and HP

Configuration	H	H = Horizontal discharge
Stages	1	1 = 1 stage
		2 = 2 stage
		3 = 3 stage
		M = Modulating
		V = Variable capacity
Product type	C	C = Air conditioner
		H = Heat pump
Efficiency	7	3 = 13 SEER
		4 = 14 SEER
		5 = 15 SEER
		6 = 16 SEER
		7 = 17 SEER
		8 = 18 SEER
		9 = 19 SEER
Voltage	2	2 = 208/230-1-60
		3 = 208/230-3-60
		4 = 460-3-60
Refrigerant	B	B = R-410A
		D = R-454B
Capacity	24	12 = 1 ton
		18 = 1.5 ton
		24 = 2 ton
		30 = 2.5 ton
		36 = 3 ton
		42 = 3.5 ton
		48 = 4 ton
		60 = 5 ton
Generation	1	1 = 1st Generation
		2 = 2nd Generation
Control strategy	S	C = Communicating
		B = Wireless (communicating)
		S = Standard (conventional)
		W = Wireless (conventional)
Style	A	A = Style A
		B = Style B

Physical and electrical data

Table 2: Physical and electrical data

Model	HMH72B241S	HMH72B361S	HMH72B481S	HMH72B601S
Unit supply voltage	208/230 V, 1 phase, 60 Hz	208/230 V, 1 phase, 60 Hz	208/230 V, 1 phase, 60 Hz	208/230 V, 1 phase, 60 Hz
Normal voltage range (V)	198 to 253	198 to 253	198 to 253	198 to 253
Minimum circuit ampacity (A)	15	23	36	37
Maximum overcurrent device (A)	25	35	50	50
Minimum overcurrent device (A)	15	23	36	37
Compressor type	Twin rotary	Twin rotary	Twin rotary	Twin rotary
Compressor rated load (A)	11.0	16.1	26.0	26.5
Compressor locked rotor (A)	n/a	n/a	n/a	n/a
Crankcase heater (base heater)	Yes	Yes	Yes	Yes
Factory discharge muffler	Yes	Yes	Yes	No
HS kit required with TXV	N/A	N/A	N/A	N/A
Fan motor type	ECM	ECM	ECM	ECM
Fan motor quantity	1	1	2	2
Fan motor rated HP	1/12	1/6	1/6	1/6
Fan motor nominal RPM	880	810	850	850
Fan motor nominal CFM	1,825	2,350	3,525	3,525
Coil face area (sq. ft)	6.1	8.3	14.0	14.0
Coil rows deep	2	2	2	2
Coil fins per inch	18	19	17	18
Liquid lineset outdoor (field installed)	3/8	3/8	3/8	3/8
Vapor lineset outdoor (field installed)	5/8	3/4	7/8	7/8
Unit charge (lb-oz)	4-7	6-3	8-15	8-9
Charge (oz/ft)	0.38	0.38	0.60	0.60
Operating weight (lb)	112	157	227	251

Note:

- The normal voltage range is rated in accordance with AHRI Standard 110-2012, utilization range A.
- Dual element fuses or HACR circuit breaker. Maximum allowable overcurrent protection.
- Dual element fuses or HACR circuit breaker. Minimum recommended overcurrent protection.
- The unit charge provided is less than the system total charge required. Select the appropriate indoor section and lineset length charge additions to calculate additional charge required and total system charge.
- For applications with non-standard vapor line sizes, see [Applications and accessories](#).

Dimensions

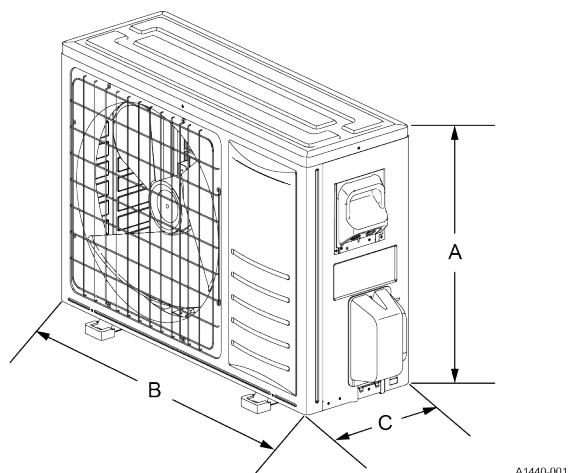
Table 3: Dimensions

Unit model	Dimensions (in.)			Refrigerant connections service valve size (in.)	
	A	B	C	Liquid	Vapor
HMH72B241S	26 3/8	33 7/8	12 1/4	3/8	5/8
HMH72B361S	33	37 3/8	13 3/8		3/4
HMH72B481S	54 5/8	37 3/8	13 3/8		7/8
HMH72B601S	54 5/8	37 3/8	13 3/8		7/8

Note:

- All dimensions are in inches and are subject to change without notice.
- Overall length and width include screw heads.

Figure 2: Dimensions



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System charge

Table 4: System charge table

Outdoor unit	HMH72B241S	HMH72B361S	HMH72B481S	HMH72B601S
Required TXV	BA1	BC1	BC1	BC1
Indoor unit	additional charge (oz)			
AE18B	-	-	-	-
AE24B	-	-	-	-
AE30B	-	-	-	-
AE36(C,B)	2	9	-	-
AE42C	-	-	-	-
AE43C	-	-	-	-
AE48(C,D)	-	-	-	-
AE60(C)	-	-	-	-
AE60(D)	-	-	7	8
AVC18B	-	-	-	-
AVC24B	-	-	-	-
AVC30B	-	-	-	-
AVC36(B,C)	2	9	-	-

Table 4: System charge table

Outdoor unit	HMH72B241S	HMH72B361S	HMH72B481S	HMH72B601S
AVC42C	-	-	-	-
AVC48(C,D)	-	-	-	-
AVC49(C)	-	-	-	-
AVC60(C)	-	-	-	-
AVC60(D)	-	-	7	8
CF/CM/CU18(A,B)	-	-	-	-
CF/CM/CU24(B,C)	-	-	-	-
CF/CM/CU30(A,B,C)	-	-	-	-
CF/CM/CU36(B,C,D)	2	9	-	-
CF/CM/CU42(B,C,D)	-	-	-	-
CF/CM/CU48(C,D)	-	-	-	-
CF/CM/CU60(C,D)	-	-	-	-
CF/CM64D	-	-	7	8

❶ Note:

- For applications requiring a TXV, use the S1-1TVM*** series kit.
- It is necessary to use a TXV kit with these indoor units to obtain system performance.
- Systems matched with furnaces or air handlers not equipped with blower-off delays may require blower Time Delay Kit S1-2FD06700224.
- It is not possible to use CF and CU coils in horizontal applications.
- Charge adders shown above do not indicate that coils are rated for every application. See [Physical and electrical data](#) for actual performance for specified system matches. Obtain certified system ratings from www.ahridirectory.org.

Charging procedure

1. Check the unit factory charge listed on the unit nameplate to verify the refrigerant charge for the outdoor unit, the smallest matched indoor unit, and 15 ft of interconnecting line tubing.
2. Verify the TXV and additional charge required for the specific matched indoor unit in the system using [System charge](#).
3. Add additional charge for the amount of interconnecting line tubing greater than 15 ft at the rate specified in [Physical and electrical data](#).
4. For indoor matches requiring additional charge, weigh in the refrigerant for the specific matched indoor unit and the actual lineset length.
5. After weighing in the charge adders for the matched indoor unit and lineset, verify the system operation against the temperatures and pressures in the charging chart for the outdoor unit. Locate the charging charts on the outdoor unit and also in the *Service Data Application Guide* on www.simplygettingthejobdone.com. Follow the charging procedure in the Installation Manual according to the type of indoor metering device in the system, and allow 10 min after each charge adjustment for the system operation to stabilize. Record the charge adjustment made to match the charging chart.
6. For downflow installations and horizontal right installations, some indoor units require additional charging adjustments to ensure correct equipment operation. Refer to the *Installation Manual* for the outdoor unit.

7. Permanently stamp the unit nameplate with the total system charge, which is defined as follows: total system charge = base charge (as shipped) + charge adder for matched indoor unit + charge adder for actual lineset length + charge adjustments to match the charging chart.

System capacity

Table 5: System capacity - single piece and modular air handlers

Unit model	Air handler		Coil model	Rated	Cooling				Heating					
	Model	Width			Net MBH		SEER	EER	Net MBH		HSPF	HSPF region V	COP	
					Total	Sens.			47°F OD	17°F OD			47°F OD	17°F OD
HMH72B241S	AE36CX21	21.0	-	850	22.2	17.0	17.50	10.00	22.0	14.7	9.00	7.60	3.36	2.54
HMH72B361S	AE36CX21	21.0	-	1200	36.0	26.5	18.00	10.00	36.8	25.4	10.50	8.75	3.40	2.74
HMH72B481S	AE60DX21	24.5	-	1500	48.0	34.3	18.00	10.50	46.0	32.8	9.50	8.00	3.34	2.72
HMH72B601S	AE60DX21	24.5	-	1700	58.5	20.7	17.00	8.50	56.5	40.0	10.00	8.45	3.24	2.74

Note:

- Rated in accordance with DOE test procedures (Federal Register 12-27-79 and 3-18-88) and ANSI/AHRI Standard 210/240.
- Cooling MBH is based on 80°F entering air temperature, 50% RH (relative humidity), and rated airflow.

EER (energy efficiency ratio) is the total cooling output in BTUs at 95°F outdoor ambient divided by the total electric power in watt-hours at those conditions.

SEER (seasonal energy efficiency ratio) is the total cooling output in Btu during a normal annual usage period for cooling divided by the total electric power input in watt-hours during the same period.

- Heating MBH is based on AHRI standards of 70°F DB (dry bulb) entering indoor air, 72% RH (relative humidity) outdoor air with 25 ft of interconnecting piping and no supplemental electric heat operation.

HSPF (heating seasonal performance factor) is the total heating output during a normal annual usage period for heating divided by the total electric power input during the same period.

COP (coefficient of performance) equals heating MBH output divided by (total kW input x 3.412).

Applications and accessories

Table 6: Minimum and maximum operating limit conditions

Ambient temperature limits	Outdoor coil °F (°C)	
	DB cool	DB heat
Minimum	35 (2)	-5 (-21)
Maximum	122 (50)	75 (24)

- Note:** The maximum lineset equivalent length is 200 ft.

The following accessories are compatible with H Series heat pumps:

H Series - Horizontal Discharge Modulating Heat Pump Compatibility Kit (HMH7AK001): The H Series outdoor section is designed for lower airflow when outdoor terminal S1 is energized and does not function correctly without this kit.

TXV Kits (S1-1TVM*): Thermal expansion valves precisely meter refrigerant for optimum performance over a wide range of conditions. See Table 4 for the TXV part number for each model.

Sound power ratings

Table 7: Sound power - cooling

Model number	Octave band sound power level (dB re. 1 pW)								dBA	SQI
	63	125	250	500	1000	2000	4000	8000		
HMH72B241S	70	70	63	62	61	55	50	43	65	19.1
HMH72B361S	72	71	67	63	64	58	56	50	68	19.1
HMH72B481S	73	70	67	64	65	60	57	48	69	19.2
HMH72B601S	78	79	71	66	66	62	64	52	73	19.0

Table 8: Sound power - heating

Model number	Octave band sound power level (dB re. 1 pW)								dBA	SQI
	63	125	250	500	1000	2000	4000	8000		
HMH72B241S	70	72	64	62	61	55	50	42	65	19.1
HMH72B361S	68	71	68	65	66	62	60	56	70	19.1
HMH72B481S	74	72	70	67	67	63	59	53	71	19.2
HMH72B601S	77	77	73	70	68	63	61	52	73	19.0

Mechanical specifications

Manufacture and certifications

- Units shall be manufactured in an ISO 9001 certified facility.
- Units shall be certified by ETL to UL 1995 and performance certified to ANSI/AHRI Standard 210/240.
- Units shall be sound tested according to ANSI/AHRI Standard 270.
- Certified matched system ratings will be available for download from the AHRI online directory at www.ahridirectory.org

Unit application

- Units shall be approved for cooling operation between 35°F and 122°F without modification.
- Units shall be approved for linesets up to an equivalent length of 164 ft for HMH72B241S and 246 ft for HMH72B361S, HMH72B481S, and HMH72B601S without modification.
- Units shall be approved for installation within 8 in. (long side) and 6 in. (short side) of a flat vertical wall without modification, according to the instructions in the technical literature.
- Units shall be designed to 73 dBA or less to minimize sound pollution.

Unit access

- Units shall be factory leak checked, run tested, and shipped with a holding charge of R-410A refrigerant.
- Unit cabinet components shall be G90 equivalent steel finished with powder-coat paint rated at a minimum of 1,000 h under ASTM B117 testing.

- Units shall be constructed with a high pressure switch for system protection.
- Units shall be constructed with all badging and labels applied at the factory.

Unit components

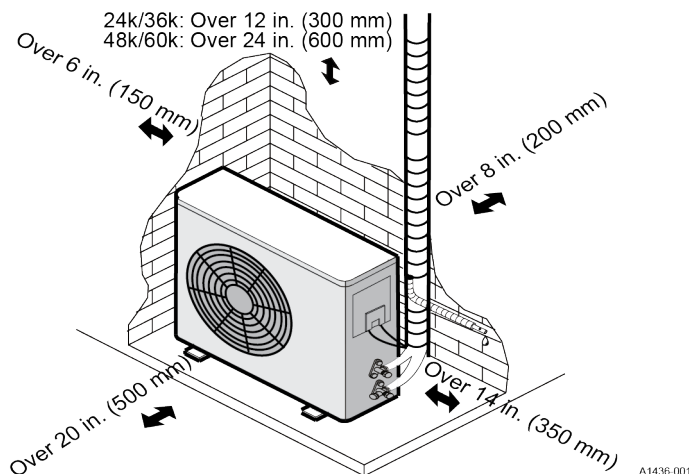
- Compressor shall be hermetic with internal electrical overload protection and internal overpressure protection.
- Compressor shall be mounted on neoprene vibration isolators that do not require the removal of transportation clips or brackets.
- Outdoor fan shall be direct drive with horizontal air discharge for low sound levels.
- Outdoor fan blades shall be swept-wing to minimize sound (applies to select models).
- Outdoor fan motor shall be totally enclosed with permanently lubricated ball bearings motors approved for vertical shaft applications.
- Outdoor fan motor shall be ECM construction with permanently lubricated ball bearing motors approved for vertical shaft applications.

Unit warranties

- Unit manufacturer shall provide a 5-year compressor warranty without a requirement for unit registration.

Typical installation

Figure 3: Minimum clearances when selecting a location



CAUTION

Caution

Care must be taken to prevent ice from damaging the unit. Damage may occur from ice falling onto unit from a sloped roof or from a vertical drip line due to a partial overhang.

Typical field wiring

Figure 4: Typical field wiring - HMM72B241S and HMM72B361S

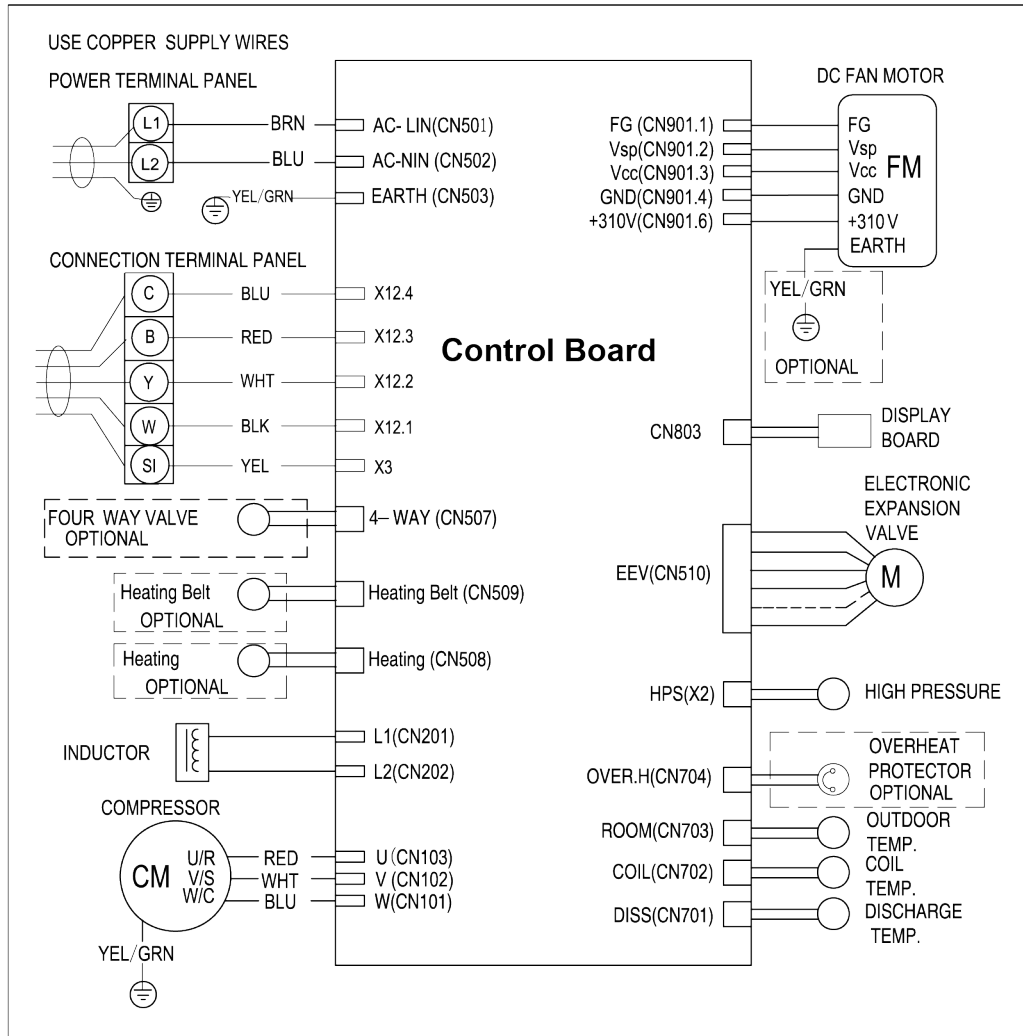
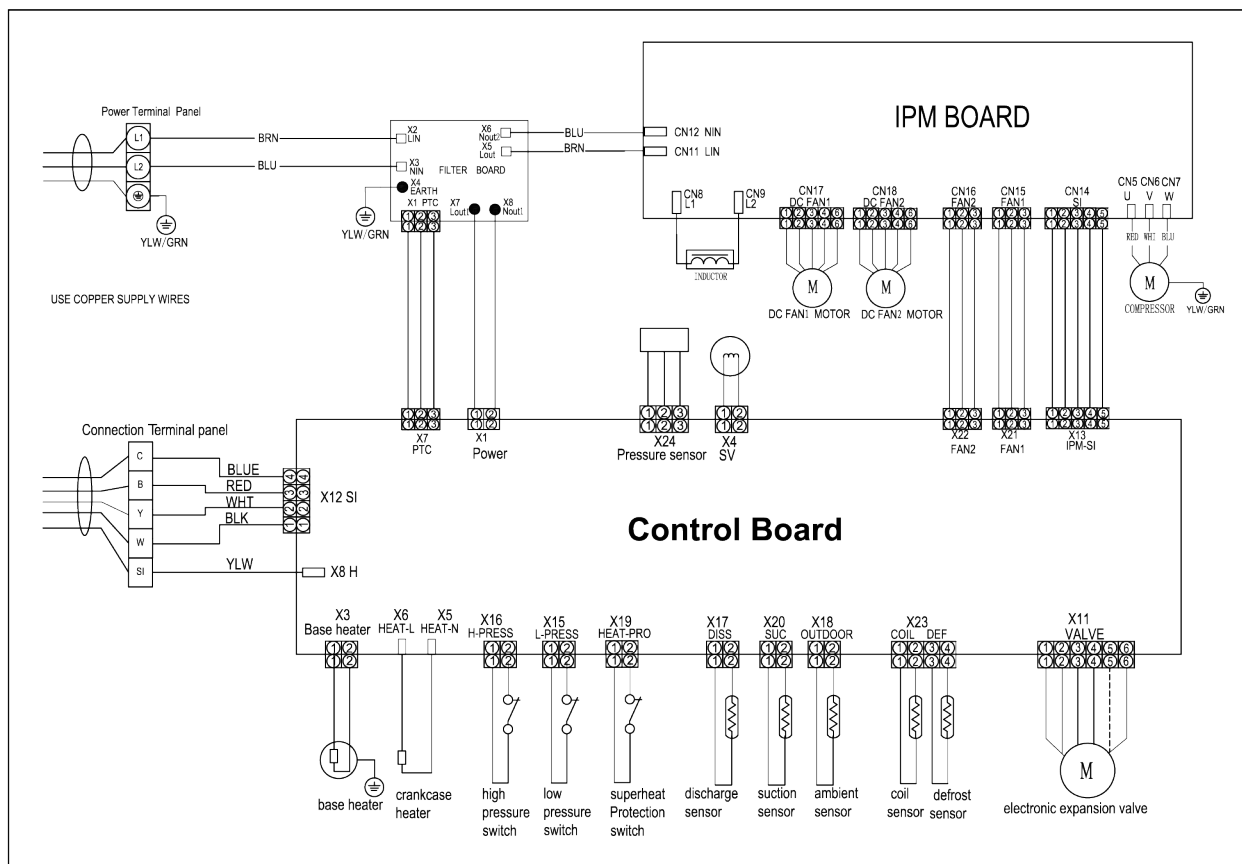
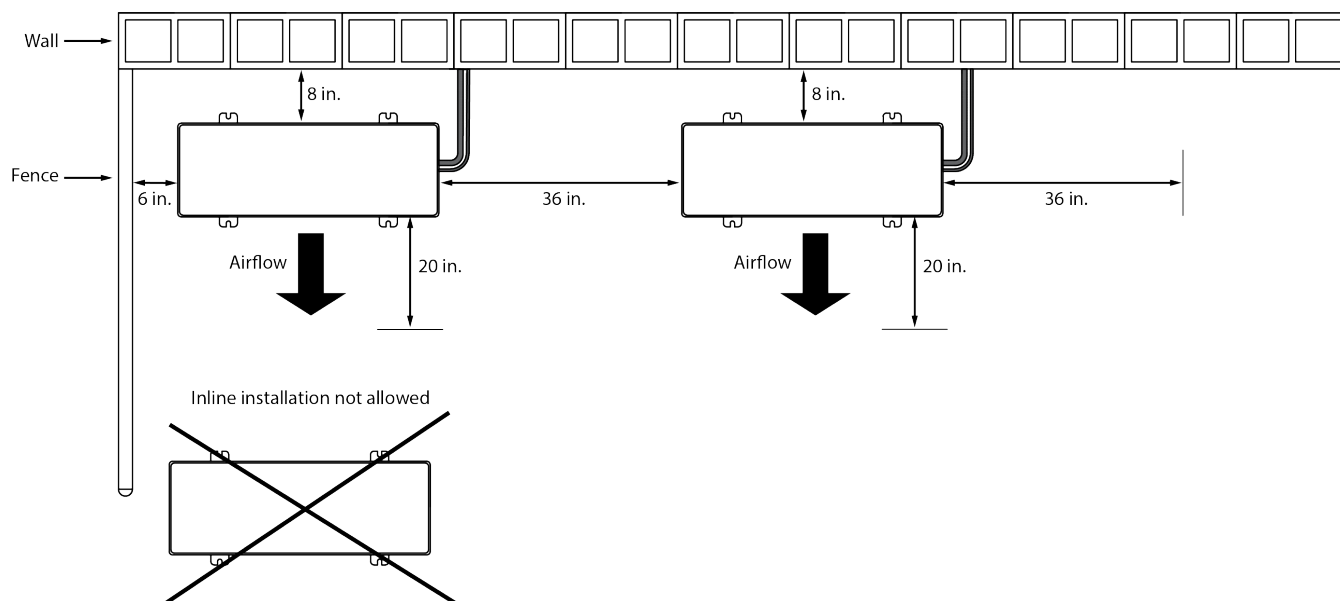


Figure 5: Typical field wiring - HMH72B481S and HMH72B601S



Alternative installation clearances

Figure 6: Alternative installation clearances



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Performance data - 2 ton

Cooling performance data - 2 ton

Table 9: Cooling performance data - 2 ton - air temperature (°F) entering outdoor unit

Outdoor unit model: HMMH72B2415																
Air temp (°F)	ID CFM	600					800					1000				
	ID DB (°F)	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	ID WB (°F)	57	62	62	67	72	57	62	62	67	72	57	62	62	67	72
55	T.C.	22.7	24.1	24.6	26.3	27.5	24.1	25.7	26.1	28.1	29.9	26.8	27.4	27.6	29.8	32.4
	S.C.	22.2	19.6	16.7	16.8	12.7	24.1	22.3	18.8	18.4	14.2	26.3	25.0	20.9	20.0	15.7
	kW	1.3	1.4	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.7	1.5	1.5	1.5	1.5
65	T.C.	21.8	23.0	23.3	25.1	26.1	23.2	24.5	24.9	26.7	28.4	25.5	26.1	26.5	28.4	30.7
	S.C.	21.3	19.4	16.3	16.3	12.4	23.2	21.8	18.4	18.0	13.7	25.0	24.2	20.5	19.7	14.9
	kW	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.9	1.7	1.7	1.7	1.7
75	T.C.	20.9	22.0	22.1	23.9	24.7	22.3	23.4	23.7	25.4	26.9	24.3	24.8	25.4	26.9	29.1
	S.C.	20.4	19.0	15.9	15.8	12.0	22.3	21.1	18.0	17.5	13.1	23.8	23.3	20.0	19.3	14.1
	kW	1.7	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9
85	T.C.	20.0	20.9	20.8	22.7	23.3	21.4	22.2	22.5	24.1	25.4	23.0	23.6	24.2	25.4	27.4
	S.C.	19.6	18.7	15.5	15.2	11.6	21.4	20.5	17.4	17.0	12.5	22.5	22.3	19.4	18.8	13.4
	kW	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2
95	T.C.	19.2	19.9	19.5	21.5	21.9	20.4	21.1	21.3	22.7	23.9	21.7	22.3	23.1	24.0	25.8
	S.C.	18.7	18.2	14.9	14.7	11.2	20.4	19.8	16.9	16.5	11.9	21.3	21.4	18.9	18.3	12.6
	kW	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4
105	T.C.	18.3	18.8	18.3	20.2	20.5	19.5	19.9	20.1	21.4	22.3	20.5	21.0	21.9	22.5	24.1
	S.C.	17.8	17.8	14.3	14.1	10.7	19.5	19.1	16.3	15.9	11.3	20.0	20.4	18.3	17.7	11.8
	kW	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.7	2.7
115	T.C.	17.4	17.7	17.0	19.0	19.1	18.5	18.8	18.9	20.1	20.8	19.2	19.8	20.8	21.1	22.5
	S.C.	17.0	17.2	13.7	13.4	10.2	18.5	18.3	15.7	15.2	10.6	18.8	19.4	17.6	17.1	11.0
	kW	2.6	2.6	2.6	2.7	2.8	2.7	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.9	2.9

Note:

- All capacities include indoor fan heat. kW values are for the system (outdoor + indoor).

Heating performance data - 2 ton

Table 10: Heating performance data - 2 ton - air temperature (°F) entering outdoor unit

Outdoor unit model: HMMH72B2415										
Air temperature (°F)		ID CFM								
Entering outdoor unit	Entering indoor coil	600			800			1000		
		MBH	COP	kW	MBH	COP	kW	MBH	COP	kW
60	60	24.6	3.61	2.00	26.7	3.89	2.01	28.7	4.17	2.02
	70	22.8	3.31	2.02	24.2	3.61	1.96	25.6	3.94	1.90
	80	24.2	2.87	2.47	27.4	3.34	2.40	30.5	3.83	2.34
47	60	22.6	3.16	2.10	24.1	3.43	2.06	25.6	3.72	2.01
	70	20.9	2.91	2.10	22.1	3.14	2.06	23.2	3.38	2.01
	80	22.1	2.55	2.54	24.8	2.92	2.49	27.4	3.30	2.43
40	60	21.5	2.93	2.15	22.7	3.20	2.08	23.9	3.48	2.01
	70	19.8	2.71	2.15	20.9	2.91	2.11	22.0	3.11	2.07
	80	20.9	2.38	2.58	23.4	2.70	2.53	25.8	3.04	2.48
30	60	19.9	2.63	2.22	20.7	2.87	2.11	21.4	3.14	2.00
	70	18.4	2.44	2.21	19.3	2.59	2.18	20.2	2.74	2.16
	80	19.3	2.15	2.63	21.3	2.41	2.60	23.4	2.68	2.56
17	60	17.9	2.26	2.32	18.1	2.46	2.16	18.3	2.68	2.00
	70	16.4	2.10	2.29	17.2	2.21	2.28	17.9	2.31	2.27
	80	17.2	1.86	2.71	18.7	2.05	2.68	20.3	2.24	2.65

Table 10: Heating performance data - 2 ton - air temperature (°F) entering outdoor unit

Outdoor unit model: HMH72B241S										
Air temperature (°F)		ID CFM								
Entering outdoor unit	Entering indoor coil	600			800			1000		
		MBH	COP	kW	MBH	COP	kW	MBH	COP	kW
10	60	16.8	2.08	2.37	16.7	2.24	2.18	16.6	2.44	1.99
	70	15.4	1.93	2.33	16.0	2.01	2.33	16.7	2.09	2.33
	80	16.0	1.71	2.75	17.3	1.86	2.73	18.7	2.02	2.71
0	60	15.2	1.83	2.44	14.7	1.94	2.21	14.2	2.09	1.99
	70	13.9	1.70	2.40	14.4	1.75	2.41	14.9	1.80	2.42
	80	14.4	1.50	2.80	15.3	1.61	2.79	16.3	1.72	2.78

Note:

- All capacities include indoor fan heat. kW values are for the system (outdoor + indoor).

Performance data - 3 ton

Cooling performance data - 3 ton

Table 11: Cooling performance data - 3 ton - air temperature (°F) entering outdoor unit

Outdoor unit model: HMH72B361S																
Air temp (°F)	ID CFM	900					1200					1500				
	ID DB (°F)	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	ID WB (°F)	57	62	62	67	72	57	62	62	67	72	57	62	62	67	72
55	T.C.	31.3	37.1	38.1	41.6	45.5	36.7	39.2	39.7	43.2	46.9	40.0	41.2	41.2	44.8	48.3
	S.C.	31.3	30.1	26.4	26.4	21.7	36.7	34.8	29.8	29.8	24.0	40.0	39.4	33.1	33.2	26.3
	kW	2.07	2.46	2.47	2.50	2.53	2.59	2.59	2.60	2.62	2.65	2.70	2.72	2.73	2.75	2.77
65	T.C.	30.8	35.7	36.5	39.8	43.6	35.6	37.6	37.9	41.3	44.9	38.5	39.5	39.4	42.7	46.2
	S.C.	30.8	29.6	25.8	25.8	21.0	35.6	34.2	29.2	29.2	23.4	38.5	38.7	32.6	32.6	25.7
	kW	2.46	2.78	2.79	2.83	2.88	2.91	2.91	2.92	2.96	3.00	3.03	3.05	3.06	3.09	3.13
75	T.C.	30.3	34.3	34.9	38.1	41.7	34.3	36.0	36.2	39.4	42.9	37.0	37.7	37.5	40.7	44.0
	S.C.	30.3	29.0	25.1	25.1	20.4	34.3	33.4	28.6	28.5	22.7	37.0	37.7	32.0	32.0	25.1
	kW	2.85	3.09	3.11	3.17	3.22	3.24	3.24	3.25	3.30	3.35	3.36	3.38	3.39	3.44	3.49
85	T.C.	29.8	32.9	33.2	36.3	39.8	33.1	34.4	34.4	37.5	40.8	35.4	35.9	35.6	38.7	41.8
	S.C.	29.8	28.4	24.4	24.4	19.7	33.1	32.2	27.9	27.8	22.0	35.4	35.9	31.3	31.2	24.4
	kW	3.25	3.41	3.42	3.50	3.57	3.56	3.56	3.57	3.64	3.71	3.69	3.71	3.71	3.78	3.84
95	T.C.	29.3	31.5	31.6	34.6	37.9	31.8	32.8	32.7	35.6	38.8	33.9	34.1	33.7	36.7	39.7
	S.C.	29.3	27.8	23.7	23.6	19.0	31.8	31.0	27.1	27.0	21.3	33.9	34.1	30.5	30.4	23.6
	kW	3.64	3.73	3.74	3.84	3.91	3.88	3.88	3.89	3.98	4.06	4.03	4.04	4.04	4.13	4.20
105	T.C.	28.8	30.1	30.0	32.8	36.0	30.5	31.2	30.9	33.7	36.7	32.4	32.4	31.8	34.6	37.5
	S.C.	28.8	27.1	22.9	22.8	18.2	30.5	29.7	26.2	26.1	20.5	32.4	32.4	29.6	29.5	22.8
	kW	4.03	4.04	4.06	4.17	4.26	4.21	4.21	4.21	4.32	4.41	4.36	4.37	4.37	4.47	4.55
115	T.C.	20.8	23.9	21.9	23.2	27.9	24.4	24.8	22.2	23.4	26.8	22.9	25.6	22.6	23.5	25.7
	S.C.	20.8	23.5	18.6	23.2	15.6	24.4	24.5	20.6	23.4	16.9	22.9	25.6	22.6	23.5	18.2
	kW	3.00	3.60	3.19	3.11	3.42	3.66	3.66	3.32	3.23	3.46	3.27	3.73	3.45	3.35	3.51

Note:

- All capacities include indoor fan heat. kW values are for the system (outdoor + indoor).
- Drive output is limited in the shaded area. Performance may vary and interpolation is not permissible.

Heating performance data - 3 ton

Table 12: Heating performance data - 3 ton - air temperature (°F) entering outdoor unit

Outdoor unit model: HMM72B361S										
Air temperature (°F)		ID CFM								
Entering outdoor unit	Entering indoor coil	900			1200			1500		
		MBH	COP	kW	MBH	COP	kW	MBH	COP	kW
60	60	41.6	3.51	3.47	43.6	3.81	3.36	45.7	4.12	3.25
	70	39.1	3.03	3.78	40.2	3.23	3.65	41.3	3.45	3.51
	80	38.5	2.78	4.07	40.7	3.02	3.95	42.9	3.28	3.83
47	60	36.4	3.27	3.26	38.2	3.51	3.19	40.1	3.77	3.13
	70	34.4	2.85	3.55	35.4	3.00	3.45	36.3	3.16	3.36
	80	33.7	2.60	3.80	35.6	2.80	3.72	37.4	3.01	3.64
40	60	33.5	3.12	3.15	35.3	3.34	3.10	37.2	3.56	3.06
	70	31.9	2.73	3.42	32.7	2.87	3.35	33.6	3.00	3.28
	80	31.2	2.49	3.66	32.8	2.67	3.60	34.4	2.85	3.54
30	60	29.5	2.90	2.99	31.2	3.08	2.97	32.9	3.25	2.96
	70	28.3	2.56	3.24	29.0	2.66	3.20	29.7	2.75	3.16
	80	27.5	2.33	3.46	28.9	2.47	3.43	30.2	2.61	3.40
17	60	24.3	2.57	2.78	25.8	2.70	2.81	27.3	2.82	2.84
	70	23.7	2.31	3.01	24.2	2.35	3.01	24.7	2.40	3.01
	80	22.7	2.08	3.20	23.7	2.17	3.21	24.7	2.26	3.21
10	60	21.5	2.37	2.66	22.9	2.47	2.72	24.3	2.58	2.77
	70	21.2	2.15	2.88	21.6	2.18	2.90	21.9	2.20	2.92
	80	20.1	1.93	3.06	21.0	1.99	3.09	21.8	2.05	3.11
0	60	17.5	2.05	2.50	18.8	2.13	2.59	20.0	2.20	2.67
	70	17.6	1.91	2.70	17.8	1.90	2.76	18.1	1.89	2.81
	80	16.5	1.69	2.86	17.0	1.71	2.91	17.6	1.74	2.97

Note:

- All capacities include indoor fan heat. kW values are for the system (outdoor + indoor).

Performance data - 4 ton

Cooling performance data - 4 ton

Table 13: Cooling performance data - 4 ton - air temperature (°F) entering outdoor unit

Outdoor unit model: HMM72B481S																
Air temp (°F)	ID CFM	1200					1500					1800				
	ID DB (°F)	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	ID WB (°F)	57	62	62	67	72	57	62	62	67	72	57	62	62	67	72
55	T.C.	41.2	50.0	49.7	55.2	58.7	44.7	49.9	51.0	57.7	61.6	48.3	49.8	52.2	60.1	64.4
	S.C.	41.2	31.9	35.7	36.3	28.0	44.7	40.9	39.2	39.5	30.3	48.3	49.8	42.7	42.8	32.6
	kW	2.92	2.96	2.96	3.00	3.08	3.06	3.08	3.08	3.12	3.18	3.21	3.21	3.19	3.23	3.28
65	T.C.	39.2	46.9	47.1	52.5	56.4	41.6	46.4	48.1	54.7	58.8	44.0	45.9	49.2	56.9	61.2
	S.C.	39.2	30.1	34.7	35.0	27.2	41.6	38.0	38.3	38.3	29.5	44.0	45.9	41.8	41.6	31.7
	kW	3.31	3.35	3.35	3.40	3.51	3.46	3.48	3.48	3.52	3.62	3.60	3.61	3.60	3.65	3.73
75	T.C.	37.3	43.7	44.4	49.7	54.0	38.5	42.9	45.3	51.7	56.0	39.8	42.0	46.2	53.6	58.1
	S.C.	37.3	28.2	33.6	33.7	26.5	38.5	35.1	37.2	36.9	28.6	39.8	42.0	40.8	40.2	30.8
	kW	3.70	3.75	3.75	3.79	3.94	3.85	3.88	3.88	3.93	4.06	4.00	4.01	4.01	4.06	4.18
85	T.C.	35.3	40.6	41.7	47.0	51.7	35.4	39.4	42.5	48.7	53.3	35.6	38.1	43.3	50.4	54.9
	S.C.	35.3	26.3	32.4	32.3	25.7	35.4	32.2	36.0	35.5	27.7	35.6	38.1	39.5	38.7	29.8
	kW	4.09	4.14	4.14	4.19	4.37	4.24	4.27	4.28	4.33	4.50	4.39	4.41	4.42	4.47	4.63
95	T.C.	33.3	37.4	39.0	44.2	49.3	32.3	35.8	39.7	45.7	50.5	31.4	34.2	40.3	47.2	51.7
	S.C.	33.3	24.4	31.1	30.8	24.9	32.3	29.3	34.6	34.0	26.8	31.4	34.2	38.1	37.2	28.7
	kW	4.48	4.53	4.53	4.58	4.79	4.64	4.67	4.68	4.73	4.93	4.79	4.81	4.83	4.89	5.07

Table 13: Cooling performance data - 4 ton - air temperature (°F) entering outdoor unit

Outdoor unit model: HMM72B481S																
Air temp (°F)	ID CFM	1200					1500					1800				
	ID DB (°F)	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	ID WB (°F)	57	62	62	67	72	57	62	62	67	72	57	62	62	67	72
105	T.C.	31.4	34.3	36.4	41.5	47.0	29.3	32.3	36.8	42.7	47.8	27.1	30.3	37.3	43.9	48.6
	S.C.	31.4	22.5	29.7	29.3	24.0	29.3	26.4	33.1	32.4	25.8	27.1	30.3	36.5	35.4	27.5
	kW	4.87	4.93	4.93	4.97	5.22	5.03	5.07	5.08	5.14	5.37	5.18	5.21	5.24	5.30	5.52
115	T.C.	36.2	31.1	35.3	38.3	39.0	28.1	28.0	36.3	39.2	38.5	20.0	25.0	37.3	40.1	37.9
	S.C.	36.2	31.1	29.3	28.0	20.7	27.9	28.0	32.9	31.2	21.9	19.6	25.0	36.5	34.5	23.1
	kW	5.30	5.36	5.40	5.34	5.21	5.44	5.50	5.55	5.52	5.29	5.57	5.64	5.70	5.70	5.36

Note:

- All capacities include indoor fan heat. kW values are for the system (outdoor + indoor).
- Drive output is limited in the shaded area. Performance may vary and interpolation is not permissible.

Heating performance data - 4 ton

Table 14: Heating performance data - 4 ton - air temperature (°F) entering outdoor unit

Outdoor unit model: HMM72B481S										
Air temperature (°F)		ID CFM								
Entering outdoor unit	Entering indoor coil	1200			1500			1800		
		MBH	COP	kW	MBH	COP	kW	MBH	COP	kW
60	60	41.6	2.93	4.15	53.5	3.90	4.02	53.4	4.02	3.89
	70	51.0	3.30	4.53	52.7	3.51	4.41	54.4	3.73	4.28
	80	50.1	3.01	4.87	50.8	3.14	4.74	51.5	3.28	4.60
47	60	46.0	3.44	3.92	46.3	3.54	3.83	46.6	3.65	3.75
	70	43.7	3.00	4.26	45.1	3.17	4.18	46.6	3.34	4.09
	80	42.8	2.75	4.57	43.4	2.84	4.48	44.0	2.94	4.39
40	60	41.9	3.23	3.80	42.4	3.33	3.73	43.0	3.43	3.67
	70	39.7	2.83	4.11	41.0	2.97	4.05	42.4	3.11	3.99
	80	38.9	2.59	4.41	39.4	2.66	4.34	39.9	2.74	4.27
30	60	35.9	2.91	3.62	36.9	3.01	3.59	37.9	3.12	3.56
	70	34.0	2.56	3.90	35.2	2.66	3.87	36.4	2.77	3.85
	80	33.4	2.34	4.18	33.8	2.39	4.14	34.2	2.44	4.10
17	60	28.3	2.45	3.38	29.7	2.56	3.40	31.2	2.67	3.42
	70	26.6	2.15	3.63	27.6	2.22	3.64	28.6	2.29	3.66
	80	26.1	1.97	3.88	26.4	1.99	3.88	26.7	2.01	3.88
10	60	24.1	2.17	3.26	25.8	2.29	3.30	27.6	2.41	3.35
	70	22.7	1.91	3.48	23.5	1.96	3.52	24.3	2.00	3.56
	80	22.2	1.75	3.72	22.4	1.76	3.74	22.6	1.76	3.77
0	60	18.2	1.73	3.08	20.3	1.88	3.16	22.4	2.03	3.24
	70	17.0	1.52	3.27	17.7	1.55	3.34	18.3	1.57	3.42
	80	16.6	1.40	3.49	16.7	1.39	3.54	16.9	1.37	3.60

Note:

- All capacities include indoor fan heat. kW values are for the system (outdoor + indoor).

Performance data - 5 ton

Cooling performance data - 5 ton

Table 15: Cooling performance data - 5 ton - air temperature (°F) entering outdoor unit

Outdoor unit model: HMM72B601S																
Air temp (°F)	ID CFM	1500					1750					2000				
	ID DB (°F)	80	80	75	80	80	80	80	75	80	80	80	80	75	80	80
	ID WB (°F)	57	62	62	67	72	57	62	62	67	72	57	62	62	67	72
55	T.C.	55.2	60.6	60.4	64.4	67.7	56.8	61.7	61.7	65.2	68.2	59.1	63.3	63.7	66.4	69.0
	S.C.	53.7	47.1	41.2	39.8	32.6	55.8	49.0	42.6	41.0	33.5	59.1	51.9	44.8	42.8	34.8
	kW	4.39	4.41	4.42	4.47	4.50	4.47	4.51	4.50	4.55	4.58	4.58	4.66	4.63	4.68	4.70
65	T.C.	53.0	57.8	57.5	61.5	64.7	54.6	58.9	58.7	62.3	65.2	56.9	60.5	60.5	63.5	66.0
	S.C.	52.7	46.6	40.3	39.1	32.1	54.3	48.7	41.9	40.4	32.9	56.9	51.7	44.3	42.3	34.1
	kW	4.85	4.88	4.88	4.96	5.01	4.93	4.98	4.97	5.05	5.10	5.05	5.14	5.11	5.18	5.23
75	T.C.	50.8	55.1	54.6	58.6	61.7	52.4	56.1	55.7	59.4	62.2	54.6	57.6	57.3	60.5	62.9
	S.C.	50.8	46.0	39.4	38.2	31.5	52.4	48.2	41.1	39.6	32.2	54.6	51.4	43.6	41.7	33.3
	kW	5.32	5.35	5.35	5.45	5.52	5.40	5.46	5.45	5.55	5.61	5.52	5.62	5.59	5.69	5.76
85	T.C.	48.6	52.3	51.7	55.7	58.8	50.2	53.3	52.6	56.4	59.2	52.4	54.8	54.1	57.5	59.8
	S.C.	48.6	45.2	38.3	37.3	30.8	50.2	47.5	40.1	38.7	31.5	52.4	50.8	42.7	40.9	32.5
	kW	5.78	5.82	5.81	5.94	6.02	5.86	5.93	5.92	6.04	6.13	5.99	6.10	6.07	6.20	6.29
95	T.C.	46.4	49.5	48.7	52.8	55.8	48.0	50.5	49.6	53.5	56.2	50.2	52.0	50.9	54.5	56.7
	S.C.	46.4	44.3	37.1	36.2	30.0	48.0	46.6	38.9	37.7	30.6	50.2	50.1	41.7	40.0	31.5
	kW	6.24	6.28	6.28	6.44	6.53	6.33	6.40	6.39	6.54	6.64	6.46	6.58	6.55	6.70	6.81
105	T.C.	43.2	45.0	44.3	48.5	49.5	44.5	45.0	44.5	48.1	49.1	46.6	45.0	44.9	47.5	48.5
	S.C.	43.2	41.9	35.4	34.4	28.2	44.5	43.1	37.0	39.7	36.3	46.6	45.0	39.5	47.5	48.5
	kW	6.44	6.64	6.73	6.74	6.50	6.46	6.67	6.76	6.73	6.29	6.50	6.72	6.79	6.72	5.97
115	T.C.	34.6	33.9	33.7	37.2	37.5	35.4	34.1	33.9	37.1	37.2	36.6	34.5	34.1	36.8	36.8
	S.C.	34.6	33.9	30.7	30.1	21.8	35.4	34.1	32.1	32.8	27.8	36.6	34.5	34.1	36.8	36.8
	kW	5.38	5	5.32	5.46	5.32	5.44	5.47	5.42	5.51	5.13	5.55	5.50	5.57	5.59	4.85

Note:

- All capacities include indoor fan heat. kW values are for the system (outdoor + indoor).
- Drive output is limited in the shaded area. Performance may vary and interpolation is not permissible.

Heating performance data - 5 ton

Table 16: Heating performance data - 5 ton - air temperature (°F) entering outdoor unit

Outdoor unit model: HMM72B601S										
Air temperature (°F)		ID CFM								
Entering outdoor unit	Entering indoor coil	1500			1750			2000		
		MBH	COP	kW	MBH	COP	kW	MBH	COP	kW
60	60	62.4	3.69	4.95	63.1	3.80	4.87	63.9	3.91	4.79
	70	59.6	3.29	5.30	60.8	3.41	5.23	64.0	3.64	5.16
	80	58.6	3.02	5.69	61.4	3.18	5.65	64.2	3.35	5.62
47	60	54.9	3.41	4.72	55.8	3.51	4.67	56.8	3.61	4.61
	70	52.1	3.04	5.02	53.2	3.13	4.98	54.3	3.22	4.94
	80	50.4	2.76	5.36	53.2	2.91	5.36	56.0	3.06	5.36
40	60	50.9	3.25	4.59	51.9	3.34	4.55	52.9	3.43	4.52
	70	48.1	2.89	4.87	49.1	2.97	4.85	52.2	3.18	4.82
	80	46.0	2.60	5.19	48.8	2.75	5.20	51.5	2.89	5.22
30	60	45.1	3.00	4.40	46.3	3.09	4.39	47.5	3.18	4.38
	70	42.4	2.67	4.66	43.3	2.72	4.65	46.4	2.92	4.65
	80	39.7	2.35	4.94	42.5	2.50	4.98	45.2	2.64	5.02

Table 16: Heating performance data - 5 ton - air temperature (°F) entering outdoor unit

Outdoor unit model: HMM72B601S										
Air temperature (°F)		ID CFM								
Entering outdoor unit	Entering indoor coil	1500			1750			2000		
		MBH	COP	kW	MBH	COP	kW	MBH	COP	kW
17	60	37.6	2.65	4.16	39.0	2.73	4.18	40.4	2.82	4.20
	70	34.9	2.34	4.38	35.7	2.37	4.41	38.7	2.56	4.43
	80	31.5	2.00	4.62	34.3	2.14	4.69	37.0	2.28	4.76
10	60	33.6	2.44	4.04	35.1	2.52	4.07	36.6	2.61	4.11
	70	30.9	2.14	4.23	31.6	2.17	4.27	34.6	2.35	4.31
	80	27.1	1.79	4.45	29.9	1.93	4.53	32.6	2.07	4.62
0	60	27.8	2.12	3.85	29.5	2.21	3.91	31.1	2.30	3.97
	70	25.2	1.84	4.02	25.7	1.85	4.08	28.7	2.03	4.14
	80	20.8	1.45	4.20	23.6	1.60	4.31	26.3	1.75	4.42

Note:

- All capacities include indoor fan heat. kW values are for the system (outdoor + indoor).

