



MARS (MH) VERTICAL STACK
CHASSIS REPLACEMENT SERIES

PRODUCT CATALOG

Part#: LC3045 | Created: December 20, 2024

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60 Hz - R-454B

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MARS® (MH) VERTICAL STACK CHASSIS REPLACEMENT SERIES

The MARS (MH) Vertical Stack Chassis Replacement Series offers quick replacements for select water-source heat pump installations without having to tear out existing cabinets or modifying riser stacks. Keeping your old cabinet means no sheet rock removal and repair. MARS MH replacement chassis slide into most existing California Heat Pump (CHP) and ClimateMaster cabinets. The MARS MH exceeds ASHRAE 90.1 efficiencies. Using R-454B low Global Warming Potential (GWP) refrigerant, the MARS MH not only protects the environment, it does so while delivering unprecedented comfort, efficiency, and reliability.

Available in sizes ¾ ton (2.6 kW) through 3 tons (10.6 kW). MARS's double-isolation compressor mounting system makes the MARS MH one of the quietest vertical stack units on the market.

Compressors are mounted on specially engineered sound-tested EPDM rubber grommets to a heavy gauge mounting plate, which is then isolated from the cabinet base with EPDM rubber grommets for maximized vibration/sound attenuation.

Accessory kits available: water adapter kit to convert hard-union water piping to hose connection, cabinet kit to upgrade deck, blower assembly, motor, sheet metal block off for stock chassis conversions, and hose kit.

The MARS MH serves as the replacement product for legacy ClimateMaster 816, 817, TRM, TSM/TSL Rev C, and TSM/TSL 09-12 Rev A-B vertical stack chassis products. Please contact your local MARS representative for additional support in determining replacement chassis model numbers.

Features, Options, and Accessories

Models:
MH
09-36

UNIT FEATURES

- Sizes 09 (¾ ton, 2.6 kW) through 36 (3 ton, 10.6 kW)
- Environmentally-friendly R-454B low-GWP refrigerant
- High-efficiency rotary and scroll compressors
- Unique double-isolation compressor mounting for quiet operation
- TXV metering device

OPTIONS

- 816-817 series "S", "M" and "P" controls
- TSM-TSL sizes 09-12 Rev A-B replacement chassis (19" x 19.25")
- Easy-to-clean rust-prohibitive stainless-steel drain pans
- Sound Attenuation package
- Return-air sensor
- Motor harnesses for:
 - PSC motors
 - Intelligent Constant Volume (CV) EC motors
 - Entry-level Constant Torque (CT) EC motors

ACCESSORY KITS

- Deck kits for external blower motor and controls replacements in the existing cabinet
- Accessory sheet metal block offs to allow for stock, off-the-shelf chassis conversions
- Hose adapter fittings for field compatibility

NOTE: Many different styles of return air panels have been applied to these products over time. Some panels will require field modification for attachment to the new chassis series. Purchase current-model return air panels to avoid field modification. MARS is not responsible or liable for any modifications to panels or walls required to securely attach return air panel.

Glossary of Abbreviations

Models:
MH
09-36

Conversion Table - to convert inch-pound (English) to S-I (Metric)

Airflow	Water Flow	External Static Pressure	Water Pressure Drop
Airflow (L/s) = CFM x 0.472	Water Flow (L/s) = GPM x 0.0631	ESP (Pa) = ESP (in of wg) x 249	PD (kPa) = PD (ft of hd) x 2.99

Legend and Glossary of Abbreviations

Abbreviations	Descriptions
Btuh	Btu (British Thermal Unit) per hour
BMS	Building Management System
CDT	Compressor discharge temperature
CFM	Airflow, cubic feet per minute
COP	Coefficient of performance = Btuh output/Btuh input
CT EC	Electronically commutated constant torque blower motor
CV EC	Electronically commutated constant volume blower motor
DB	Dry bulb temperature, °F
DT	Delta T
EAT	Entering air temperature
EER	Energy efficient ratio = Btuh output/Watt input
ESP	External static pressure, inches w.g.
EWT	Entering water temperature
FPT	Female pipe thread
GPM	Water flow in U.S., gallons per minute
HC	Air heating capacity, Btuh
HE	Total heat of extraction, Btuh
HR	Total heat of rejection, Btuh

Abbreviations	Descriptions
HWG	Hot water generator (desuperheater) capacity, MBtuh
kW	Total power unit input, kilowatts
LAT	Leaving air temperature, °F
LC	Latent cooling capacity, Btuh
LOC	Loss of charge
LWT	Leaving water temperature, °F
MBtuh	1,000 Btu per hour
MPT	Male pipe thread
MWV	Motorized water valve
PSC	Permanent split capacitor
RDS	Refrigerant Detection System
SC	Sensible cooling capacity, Btuh
S/T	Sensible to total cooling ratio
TC	Total cooling capacity, Btuh
TD or delta T	Temperature differential
VFD	Variable frequency drive
WB	Wet bulb temperature, °F
WPD	Waterside pressure drop, psi or feet of head
WSE	Waterside economizer

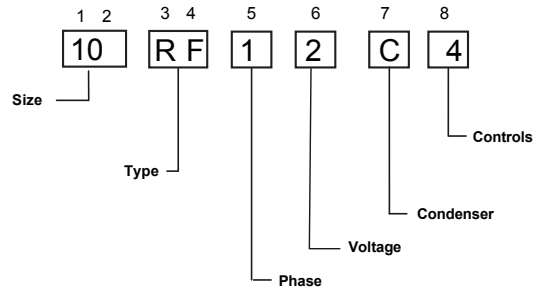
Model Nomenclature for Old Models

Models:
MH
09-36

Legacy model nomenclature is for reference only.

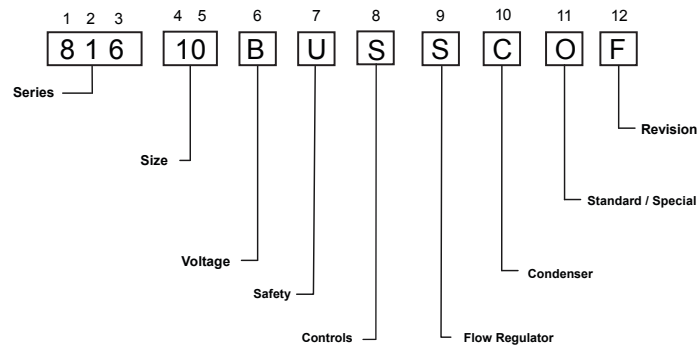
NOTE: DO NOT TRY TO USE THE ATTACHED MODEL NOMENCLATURE

CHP Models - (8 digits)



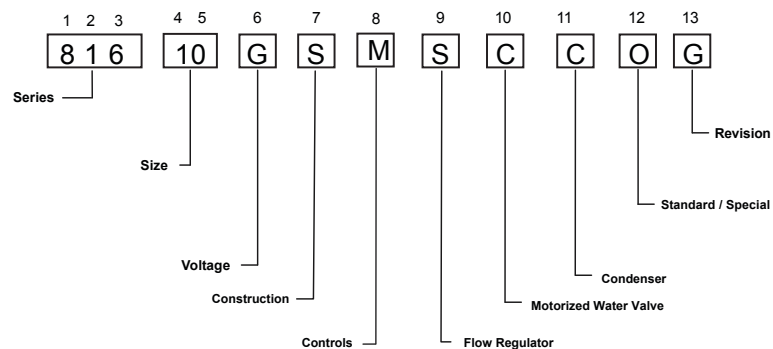
Decoder for reference only - Use 816 to 817(TRM) Conversion Program to obtain correct replacement model and required accessories.

816 Rev A - G (12 digits)



Decoder for reference only - Use 816 to 817(TRM) Conversion Program to obtain correct replacement model and required accessories.

816 Rev G - S (13 digits)



Decoder for reference only - Use 816 to 817(TRM) Conversion Program to obtain correct replacement model and required accessories.

Model Nomenclature for Old Models

Chassis

Series
817 = TRANQUILITY
HIGH RISE
REPLACEMENT CHASSIS

Unit Size
09
12
24
30
36

Voltage
E = 265/60/1
G = 208-230/60/1

OPTION	S.S. Drain Pan	MUTE
A	X	-
S	-	-
1	-	X
2	X	X

Controls
P = Standard (24V N.C. Safeties) for use with CXM2 or DXM2.5
M = Combination Controls (24V N.C. Safeties) For use w/either Electro-Mechanical or CMC Controls. (Compare with Cabinet Decoder for Compatibility)
S = Standard (Line Voltage, Pilot Duty Lock-Out Relay, Original chassis had N.O. Switches. Replacement has N.C. High Pressure Switch, Low Pressure Switch or High Discharge Temp Switch, FreezeStat and Quick Connect cord. (Compare with Cabinet Decoder for Compatibility)

Heat Exchanger Options
C = Copper Coax w/Coated Air Coil
N = Cupro-Nickel Coax w/Coated Air Coil
D = Copper Coax w/Coated Air Coil & Insulated Tubing
E = Cupro-Nickel Coax w/Coated Air Coil & Insulated Tubing
F = Copper Coax w/Non-Coated Air Coil & Insulated Tubing
G = Cupro-Nickel Coax w/Non-Coated Air Coil & Insulated Tubing
L = Copper Coax w/Non-Coated Air Coil
M = Cupro-Nickel Coax w/Non-Coated Air Coil
H = Copper, RV Energized in Heating w/Coated Air Coil (Replacement Only)
J = Cupro-Nickel, RV Energized in Heating w/Coated Air Coil

Water Valve & Pump Option
S = No Water valve
M = 2-Way Water Valve (Fail Closed)
N = 2-Way Water Valve (Fail Opened)

Revision Level
A = Revision Level

Standard
S = Standard
A = Special #1
B = Special #2
Etc.....

	5/8 SWEAT		7/8 SWEAT			
	UNIT 09	UNIT 12	UNIT 15 & 18	UNIT 24	UNIT 30	UNIT 36
C	1.5	-	-	-	-	-
D	2.0	2.0	-	-	-	-
E	2.5	2.5	2.5	-	-	-
F	3.0	3.0	3.0	-	-	-
G	3.5	3.5	3.5	-	-	-
H	4.0	4.0	4.0	-	-	-
J	5.0	5.0	5.0	5.0	-	-
K	-	6.0	6.0	6.0	6.0	-
L	-	7.0	7.0	7.0	7.0	-
M	-	-	8.0	8.0	8.0	-
N	-	-	9.0	9.0	9.0	-
P	-	-	-	10.0	10.0	-

S = STANDARD - NO FLOW REGULATOR

Series
TRM = Tranquility® High Rise Chassis

Unit Size
9, 12, 15, 18, 24, 30, 36

Voltage
G = 208-230/60/1
E = 265/60/1

OPTION	S.S. Drain Pan	MUTE	RAS
A	X	-	-
D	-	-	X
E	X	-	X
1	-	X	-
2	X	X	-
5	-	X	X
6	X	X	X
S	-	-	-

Options
RAS = Return Air Sensor

Heat Exchanger Options

	Non Coated Air Coil		Tin-Plated Air Coil	
	Copper	Cupro-nickel	Copper	Cupro-nickel
Standard	L	M	C	N
Extended Range	F	G	D	E

Water Valve & Pump Option
S = No Water valve
M = 2-Way Water Valve (Fail Closed)
N = 2-Way Water Valve (Fail Opened)
P = Secondary Circulating Pump

Revision Level
A = 24, 30, 36
B = 09, 12, 15, 18

Standard
S = Standard

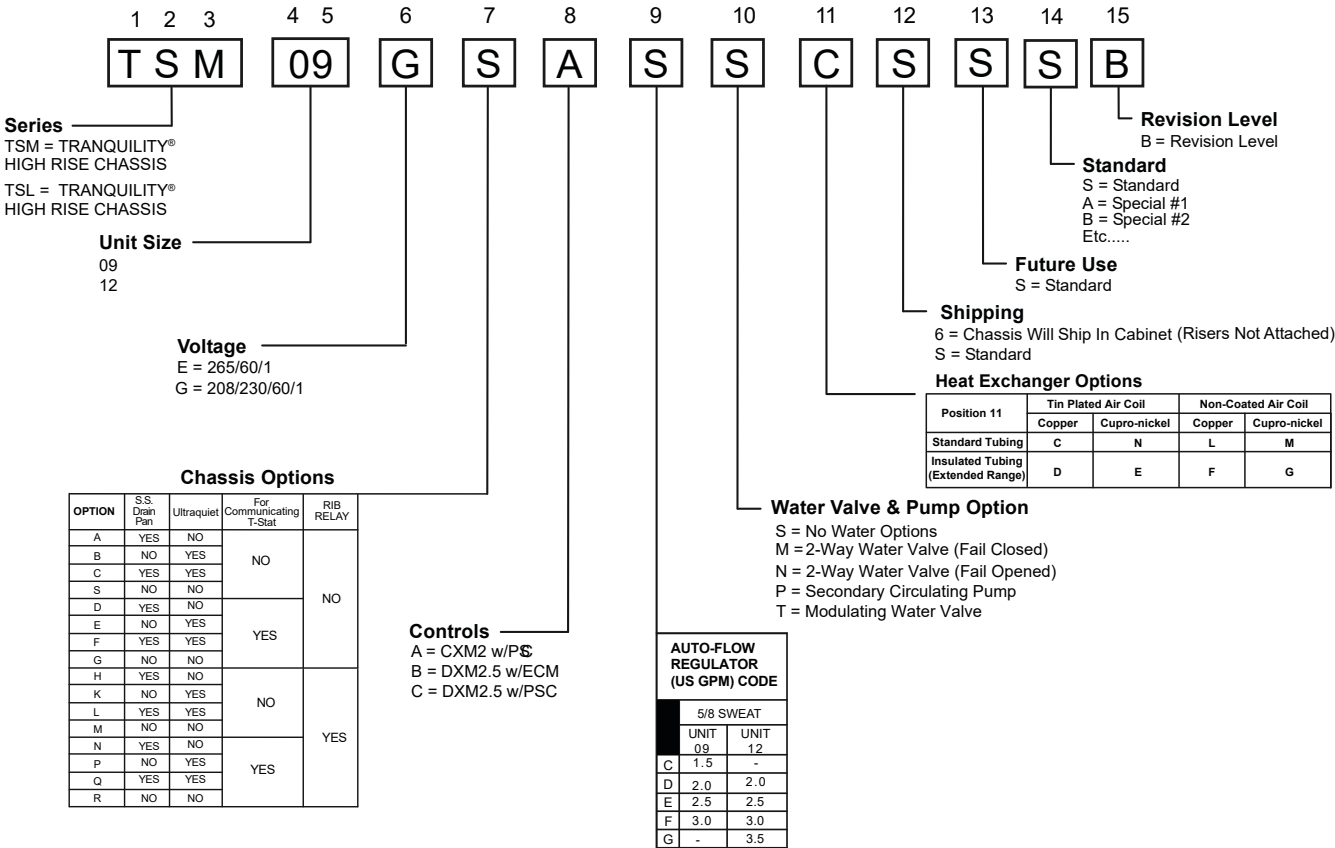
	5/8 SWEAT		7/8 SWEAT			
	UNIT 09	UNIT 12	UNIT 15	UNIT 18	UNIT 24	UNIT 30
C	1.5	-	-	-	-	-
D	2.0	2.0	-	-	-	-
E	2.5	2.5	2.5	-	-	-
F	3.0	3.0	3.0	3.0	-	-
G	-	3.5	3.5	3.5	-	-
H	-	-	4.0	4.0	4.0	-
J	-	-	-	5.0	5.0	5.0
K	-	-	-	-	6.0	6.0
L	-	-	-	-	7.0	7.0
M	-	-	-	-	-	8.0
N	-	-	-	-	-	9.0
P	-	-	-	-	-	10.0

S = STANDARD - NO FLOW REGULATOR

Model Nomenclature for Old Models

Models:
MH
09-36

Chassis



Model Nomenclature for Old Models

Chassis

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Series — T S L
TSL = Tranquility® High Rise Chassis
TSM = Tranquility® High Rise Chassis

Unit Size — 09
12
15
18
24
30
36

Voltage — E = 265/60/1
G = 208/230/60/1

Chassis Options

OPTION	S.S. Drain Pan	Ultraquiet	For Communicating T-Stat	RIB RELAY
A	YES	NO	NO	NO
B	NO	YES		
C	YES	YES		
S	NO	NO		
D	YES	NO	YES	NO
E	NO	YES		
F	YES	YES		
G	NO	NO		
H	YES	NO	NO	YES
K	NO	YES		
L	YES	YES		
M	NO	NO		
N	YES	NO	YES	YES
P	NO	YES		
Q	YES	YES		
R	NO	NO		

Controls
A = CXM
B = DXM2
2 = CXM w/MPC
D = DXM2 w/MPC

Revision Level
C = Revision Level

Standard
S = Standard
A = Special #1
B = Special #2
Etc.....

Blower Motor
A = PSC High Static*
B = PSC**
C = Constant Torque ECM
D = Constant Volume ECM

Shipping
6 = Chassis Will Ship In Cabinet (Risers Not Attached)
S = Standard

Heat Exchanger Options

Position 11	Tin Plated Air Coil		Non-Coated Air Coil	
	Copper	Cupro-nickel	Copper	Cupro-nickel
Standard Tubing	C	N	L	M
Insulated Tubing (Extended Range)	D	E	F	G

Water Valve & Pump Option
S = No Water Options
M = 2-Way Water Valve (Fail Closed)
N = 2-Way Water Valve (Fail Opened)
P = Secondary Circulating Pump
T = Modulating Water Valve
G = Standard 3-Way Water Valve
H = Hybrid with Standard Water Valve (Fail Closed)*
J = Hybrid with Standard Water Valve (Fail Opened)*
L = Hybrid with 3-Way Water Valve*
K = Hybrid with Secondary Water Pump and 3-Way Water Valve*

AUTO-FLOW REGULATOR (US GPM) CODE

	5/8 SWEAT			7/8 SWEAT			
	UNIT 09	UNIT 12	UNIT 15	UNIT 18	UNIT 24	UNIT 30	UNIT 36
C	1.5	-	-	-	-	-	-
D	2.0	2.0	-	-	-	-	-
E	2.5	2.5	2.5	-	-	-	-
F	3.0	3.0	3.0	3.0	-	-	-
G	-	3.5	3.5	3.5	-	-	-
H	-	-	4.0	4.0	4.0	-	-
J	-	-	-	5.0	5.0	5.0	-
K	-	-	-	-	6.0	6.0	6.0
L	-	-	-	-	7.0	7.0	7.0
M	-	-	-	-	-	8.0	8.0
N	-	-	-	-	-	-	9.0
P	-	-	-	-	-	-	10.0

S = STANDARD - NO FLOW REGULATOR

****TSM only *TSL only**

MARS MH Model Nomenclature

Models:
MH
09-36

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
| M | H | C | 0 | 9 | G | G | S | 0 | S | S | C | A | A | A |

SERIES

MH = R-454B Replacement High-Rise Chassis

REPLACEMENT CHASSIS MODEL

8 = 816-817 Chassis
R = TRM Chassis
M = TSM Rev A-B Chassis (Sizes 09-12 Only)
S = TSL Rev A-B Chassis (Sizes 09-12 Only)
C = TSM Rev C Chassis
D = TSL Rev C Chassis

UNIT SIZE

09 24
12 30
15 36
18

VOLTAGE

E = 265-60-1
G = 208/230-60-1

CONTROLS & MOTORS

Controls	Motor			
	PSC	EC CT	EC CV	N/A
24V	-	-	-	A
Electro-Mechanical	-	-	-	B
Line-Voltage	-	-	-	C
CXM2	D	F	-	-
DXM2.5	E	G	J	-

OPTIONS

Option	Stainless Steel Drain Pan	UltraQuiet
S	-	-
A	X	-
1	-	X
2	X	X

REVISION

A = Current Revision

FUTURE

A = Not Used

OTHER OPTIONS

A = Standard
M = MPC

HEAT EXCHANGER OPTIONS

C = Copper Coax with Non-Coated Air Coil
N = Copper Coax with Non-Coated Air Coil & Insulated Tubing

WATER VALVE & PUMP OPTIONS

S = No Water Valve
M = Standard Water Valve (Fail Closed)
N = Standard Water Valve (Fail Open)
P = Internal Secondary Pump
G = Standard 3-way Water Valve
T = Modulating Water Valve
H = Hydronic Heating with Standard Water Valve (Fail Closed)
J = Hydronic Heating with Standard Water Valve (Fail Open)
L = Hydronic Heating with 3-Way Water Valve

CONTROLS OPTIONS

	RA Sensors	Communicating Thermostat	RIB Relay
S	-	-	-
A	X	-	-
B	-	X	-
C	-	-	X
D	-	X	X

AUTO-FLOW REGULATOR (US GPM) CODE

Option	09	12	15	18	24	30	36
0	NO FLOW REGULATOR						
C	1.5						
D	2.0						
E	2.5						
F		3.0					
G		3.5					
H			4.0				
J				5.0			
K					6.0		
L					7.0		
M						8.0	
N							9.0
P							10.5

Performance Data MH8/MHR

Models:
MH
09-36

Tested in Accordance with AHRI/ASHRAE/ISO 13256-1

English (I-P) Units

Model	Rated CFM	Rated GPM	Water Loop Heat Pump			
			Cooling 86°F		Heating 68°F	
			Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
MH8/MHR 09	300	2.63	8,900	14.7	11,700	4.7
MH8/MHR 12	400	3.50	11,100	14.8	14,800	4.9
MHR 15	500	3.75	14,700	16.3	18,500	5.5
MH8/MHR 18	600	4.50	18,200	14.9	22,300	5.2
MH8/MHR 24	800	6.00	24,700	17.0	29,100	5.3
MH8/MHR 30	1,000	7.50	30,800	16.7	31,200	5.2
MH8/MHR 36	1,200	9.00	35,300	15.4	34,200	4.6

- Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature
- Heating capacities based upon 68°F DB, 59°F WB entering air temperature
- All ratings based upon operation at lower voltage of dual-voltage rated models

Metric (S-I) Units

Model	Rated CFM	Rated GPM	Water Loop Heat Pump			
			Cooling 30°C		Heating 20°C	
			Capacity W	EER W/W	Capacity W	COP
MH8/MHR 09	300	2.63	2,608	4.3	3,429	4.7
MH8/MHR 12	400	3.50	3,253	4.3	4,338	4.9
MHR 15	500	3.75	4,308	4.8	5,422	5.5
MH8/MHR 18	600	4.50	5,334	4.4	6,536	5.2
MH8/MHR 24	800	6.00	7,239	5.0	8,529	5.3
MH8/MHR 30	1,000	7.50	9,027	4.9	9,144	5.2
MH8/MHR 36	1,200	9.00	10,346	4.5	10,023	4.6

- Cooling capacities based upon 27°C DB, 19°C WB entering air temperature
- Heating capacities based upon 20°C DB, 15°C WB entering air temperature
- All ratings based upon operation at lower voltage of dual-voltage rated models

Performance Data MHM/MHS

Models:
MH
09-36

Tested in Accordance with AHRI/ASHRAE/ISO 13256-1

English (I-P) Units

Model	Rated CFM	Rated GPM	Motor	Water Loop Heat Pump				Ground Loop Heat Pump			
				Cooling 86°F		Heating 68°F		Cooling 77°F		Heating 32°F	
				Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
MHM 09	300	2.25	EC CT	8,800	15.2	11,400	5.1	8,800	17.1	6,600	3.4
			EC CV	8,800	14.9	11,400	5.0	8,800	16.8	6,600	3.4
MHM 12	400	3.00	EC CT	11,200	14.5	14,700	5.0	11,700	16.7	8,500	3.5
			EC CV	11,200	14.2	14,700	5.0	11,700	16.4	8,500	3.4
MHS 09	300	2.25	EC CT	9,000	16.2	11,400	5.2	9,400	18.9	6,600	3.5
			EC CV	9,000	15.9	11,400	5.1	9,400	18.2	6,600	3.4
MHS 12	400	3.00	EC CT	11,500	15.5	14,600	5.1	12,200	18.3	8,400	3.5
			EC CV	11,500	15.1	14,600	5.0	12,200	17.0	8,400	3.4

- Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature
- Heating capacities based upon 68°F DB, 59°F WB entering air temperature
- All ratings based upon operation at lower voltage of dual voltage rated models

Metric (S-I) Units

Model	Rated CFM	Rated GPM	Motor	Water Loop Heat Pump				Ground Loop Heat Pump			
				Cooling 30°C		Heating 20°C		Cooling 25°C		Heating 0°C	
				Capacity W	EER W/W	Capacity W	COP	Capacity W	EER W/W	Capacity W	COP
MHM 09	300	2.25	EC CT	2,579	4.5	3,341	5.1	2,579	5.0	1,934	3.4
			EC CV	2,579	4.4	3,341	5.0	2,579	4.9	1,934	3.4
MHM 12	400	3.00	EC CT	3,283	4.2	4,308	5.0	3,429	4.9	2,491	3.5
			EC CV	3,283	4.2	4,308	5.0	3,429	4.8	2,491	3.4
MHS 09	300	2.25	EC CT	2,638	4.7	3,341	5.2	2,755	5.5	1,934	3.5
			EC CV	2,638	4.7	3,341	5.1	2,755	5.3	1,934	3.4
MHS 12	400	3.00	EC CT	3,370	4.5	4,279	5.1	3,576	5.4	2,462	3.5
			EC CV	3,370	4.4	4,279	5.0	3,576	5.0	2,462	3.4

- Cooling capacities based upon 27°C DB, 19°C WB entering air temperature
- Heating capacities based upon 20°C DB, 15°C WB entering air temperature
- All ratings based upon operation at lower voltage of dual voltage rated models

Performance Data MHC/MHD with EC CT Motor

Models:
MH
09-36

Tested in Accordance with AHRI/ASHRAE/ISO 13256-1

English (I-P) Units

Model with EC CT Motor	Rated CFM	Rated GPM	Water Loop Heat Pump				Ground Loop Heat Pump			
			Cooling 86°F		Heating 68°F		Cooling 77°F		Heating 32°F	
			Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
MHC 09	300	2.25	8,800	15.2	11,400	5.1	8,800	17.1	6,600	3.4
MHD 09			9,000	16.2	11,400	5.2	9,400	18.9	6,600	3.5
MHC 12	400	3	11,200	14.5	14,700	5.0	11,700	16.7	8,500	3.5
MHD 12			11,500	15.5	14,600	5.1	12,200	18.3	8,400	3.5
MHC 15	500	3.75	14,300	15.4	18,400	5.1	14,800	17.5	11,100	3.6
MHD 15			14,900	16.5	18,300	5.1	15,400	18.8	11,000	3.7
MHC 18	600	4.5	17,400	14.5	22,100	4.9	18,200	16.7	13,600	3.5
MHD 18			18,000	15.6	22,000	4.9	19,000	17.8	13,600	3.6
MHC 24	800	6	24,000	16.1	28,200	5.0	24,800	18.6	18,400	3.6
MHD 24			25,000	17.6	28,000	5.1	25,900	20.4	18,000	3.7
MHC 30	1000	7.5	29,100	15.2	36,200	5.0	28,900	17.0	22,800	3.5
MHD 30			30,000	17.0	35,500	5.3	30,000	19.0	22,300	3.7
MHC 36	1200	9	34,200	14.5	42,500	4.9	35,200	16.3	28,100	3.5
MHD 36			35,900	15.8	42,200	5.0	36,800	17.7	27,300	3.5

- Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature
- Heating capacities based upon 68°F DB, 59°F WB entering air temperature
- All ratings based upon operation at lower voltage of dual voltage rated models

Metric (S-I) Units

Model with EC CT Motor	Rated CFM	Rated GPM	Water Loop Heat Pump				Ground Loop Heat Pump			
			Cooling 30°C		Heating 20°C		Cooling 25°C		Heating 0°C	
			Capacity W	EER W/W	Capacity W	COP	Capacity W	EER W/W	Capacity W	COP
MHC 09	300	2.25	2,579	4.5	3,341	5.1	2,579	5.0	1,934	3.4
MHD 09			2,638	4.7	3,341	5.2	2,755	5.5	1,934	3.5
MHC 12	400	3	3,283	4.2	4,308	5.0	3,429	4.9	2,491	3.5
MHD 12			3,370	4.5	4,279	5.1	3,576	5.4	2,462	3.5
MHC 15	500	3.75	4,191	4.5	5,393	5.1	4,338	5.1	3,253	3.6
MHD 15			4,367	4.8	5,363	5.1	4,513	5.5	3,224	3.7
MHC 18	600	4.5	5,100	4.2	6,477	4.9	5,334	4.9	3,986	3.5
MHD 18			5,275	4.6	6,448	4.9	5,569	5.2	3,986	3.6
MHC 24	800	6	7,034	4.7	8,265	5.0	7,268	5.5	5,393	3.6
MHD 24			7,327	5.2	8,206	5.1	7,591	6.0	5,275	3.7
MHC 30	1000	7.5	8,529	4.5	10,610	5.0	8,470	5.0	6,682	3.5
MHD 30			8,792	5.0	10,404	5.3	8,792	5.6	6,536	3.7
MHC 36	1200	9	10,023	4.2	12,456	4.9	10,317	4.8	8,236	3.5
MHD 36			10,522	4.6	12,368	5.0	10,785	5.2	8,001	3.5

- Cooling capacities based upon 27°C DB, 19°C WB entering air temperature
- Heating capacities based upon 20°C DB, 15°C WB entering air temperature
- All ratings based upon operation at lower voltage of dual voltage rated models

Performance Data MHC/MHD with EC CV Motor

Models:
MH
09-36

Tested in Accordance with AHRI/ASHRAE/ISO 13256-1

English (I-P) Units

Model with EC CV Motor	Rated CFM	Rated GPM	Water Loop Heat Pump				Ground Loop Heat Pump			
			Cooling 86°F		Heating 68°F		Cooling 77°F		Heating 32°F	
			Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
MHC 09	300	2.25	8800	14.9	11400	5.0	8800	16.8	6600	3.4
MHD 09			9000	15.9	11400	5.1	9400	18.2	6600	3.4
MHC 12	400	3	11200	14.2	14700	5.0	11700	16.4	8500	3.4
MHD 12			11500	15.1	14600	5.0	12200	17.0	8400	3.4
MHC 15	500	3.75	14300	15.4	18400	5.1	14800	17.5	11000	3.6
MHD 15			14900	16.5	18200	5.1	15400	18.8	11000	3.7
MHC 18	600	4.5	17400	14.6	22100	4.9	18100	16.7	13600	3.5
MHD 18			18000	15.6	22000	4.9	18900	17.8	13500	3.6
MHC 24	800	6	24000	15.9	28300	4.9	24900	18.3	18600	3.5
MHD 24			25000	17.6	28000	5.1	25900	20.4	18000	3.7
MHC 30	1000	7.5	29100	15.2	36100	5.0	28900	17.0	22800	3.5
MHD 30			30000	16.9	35500	5.2	30000	19.0	22300	3.7
MHC 36	1200	9	34400	14.3	42600	4.8	35300	16.0	27800	3.4
MHD 36			35900	15.6	42200	4.9	36800	17.5	27300	3.5

- Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature
- Heating capacities based upon 68°F DB, 59°F WB entering air temperature
- All ratings based upon operation at lower voltage of dual voltage rated models

Metric (S-I) Units

Model with EC CV Motor	Rated CFM	Rated GPM	Water Loop Heat Pump				Ground Loop Heat Pump			
			Cooling 30°C		Heating 20°C		Cooling 25°C		Heating 0°C	
			Capacity W	EER W/W	Capacity W	COP	Capacity W	EER W/W	Capacity W	COP
MHC 09	300	2.25	2579	4.5	3341	5.1	2579	5.0	1934	3.4
MHD 09			2638	4.7	3341	5.2	2755	5.5	1934	3.5
MHC 12	400	3	3283	4.2	4308	5.0	3429	4.9	2491	3.5
MHD 12			3370	4.5	4279	5.1	3576	5.4	2462	3.5
MHC 15	500	3.75	4191	4.5	5393	5.1	4338	5.1	3253	3.6
MHD 15			4367	4.8	5363	5.1	4513	5.5	3224	3.7
MHC 18	600	4.5	5100	4.2	6477	4.9	5334	4.9	3986	3.5
MHD 18			5275	4.6	6448	4.9	5569	5.2	3986	3.6
MHC 24	800	6	7034	4.7	8265	5.0	7268	5.5	5393	3.6
MHD 24			7327	5.2	8206	5.1	7591	6.0	5275	3.7
MHC 30	1000	7.5	8529	4.5	10610	5.0	8470	5.0	6682	3.5
MHD 30			8792	5.0	10404	5.3	8792	5.6	6536	3.7
MHC 36	1200	9	10023	4.2	12456	4.9	10317	4.8	8236	3.5
MHD 36			10522	4.6	12368	5.0	10785	5.2	8001	3.5

- Cooling capacities based upon 27°C DB, 19°C WB entering air temperature
- Heating capacities based upon 20°C DB, 15°C WB entering air temperature
- All ratings based upon operation at lower voltage of dual voltage rated models

Electrical Data

Models:
MH
09-36

Size	Model	Voltage	Min/Max Voltage	Compressor			Pump	Branch Circuit Rating and Protection							
				MCC	RLA	LRA		FLA	No Pump				Internal Secondary Pump		
							Total Unit FLA		MCA	Max Fuse Size	Fuse HACR	Total Unit FLA	MCA	Max Fuse Size	Fuse HACR
09	MH8 / MHR	208/230-60-1	187/253	6.2	4.0	22.0	0.28	4.0	5.0	8.9	15	N/A	N/A	N/A	N/A
	MHM / MHS MHC / MHD											4.3	5.2	9.2	15
	MH8 / MHR	265-60-1	238/304	6.2	4.0	23.0	0.25	4.0	5.0	8.9	15	N/A	N/A	N/A	N/A
	MHM / MHS MHC / MHD											4.2	5.2	9.2	15
12	MH8 / MHR	208/230-60-1	187/253	7.2	4.6	25.0	0.49	4.6	5.8	10.4	15	N/A	N/A	N/A	N/A
	MHM / MHS MHC / MHD											5.1	6.3	10.9	15
	MH8 / MHR	265-60-1	238/304	6.1	3.9	21.0	0.33	3.9	4.9	8.8	15	N/A	N/A	N/A	N/A
	MHM / MHS MHC / MHD											4.2	5.2	9.1	15
15	MHR	208/230-60-1	187/253	8.1	5.2	26.0	0.49	5.2	6.5	11.7	15	N/A	N/A	N/A	N/A
	MHC / MHD											5.7	7.0	12.2	15
	MHR	265-60-1	238/304	7.4	4.7	21.0	0.33	4.7	5.9	10.7	15	N/A	N/A	N/A	N/A
	MHC / MHD											5.1	6.3	11.0	15
18	MH8 / MHR	208/230-60-1	187/253	14.3	9.2	35.0	0.49	9.2	11.5	20.6	20	N/A	N/A	N/A	N/A
	MHC / MHD											9.7	11.9	21.1	20
	MH8 / MHR	265-60-1	238/304	10.2	6.5	40.0	0.33	6.5	8.2	14.7	15	N/A	N/A	N/A	N/A
	MHC / MHD											6.9	8.5	15.0	15
24	MH8 / MHR	208/230-60-1	187/253	17.8	11.4	64.4	0.49	11.4	14.3	25.7	25	N/A	N/A	N/A	N/A
	MHC / MHD											11.9	14.8	26.2	25
	MH8 / MHR	265-60-1	238/304	16.0	10.3	60.5	0.33	10.3	12.8	23.1	20	N/A	N/A	N/A	N/A
	MHC / MHD											10.6	13.2	23.4	20
30	MH8 / MHR	208/230-60-1	187/253	19.8	12.7	75.6	0.49	12.7	15.9	28.6	25	N/A	N/A	N/A	N/A
	MHC / MHD											13.2	16.4	29.0	25
	MH8 / MHR	265-60-1	238/304	18.0	11.5	84.0	0.33	11.5	14.4	26.0	25	N/A	N/A	N/A	N/A
	MHC / MHD											11.9	14.8	26.3	25
36	MH8 / MHR	208/230-60-1	187/253	26.0	16.7	93.5	0.49	16.7	20.8	37.5	35	N/A	N/A	N/A	N/A
	MHC / MHD											17.2	21.3	38.0	35
	MH8 / MHR	265-60-1	238/304	21.0	13.5	90.8	0.33	13.5	16.8	30.3	30	N/A	N/A	N/A	N/A
	MHC / MHD											13.8	17.2	30.6	30

Notes:

- Verify electrical service is adequate for new chassis.

Physical Data

Models:
MH
09-36

MARS MH8/MHR

Model	09	12	15	18	24	30	36
Compressor (1 Each)	Rotary				Scroll		
Factory Charge R-454B (oz) [kg]	30 [0.85]	28 [0.79]	34 [0.96]	38 [1.08]	46 [1.3]	52 [1.47]	54 [1.53]
COAX							
Internal Volume (U.S. Gallon) [L]	0.26 [.98]		0.36 [1.4]		0.60 [2.3]		
Hose Kit (AHH Series Required)							
FPT (in) [cm]	1/2 [1.27]		3/4 [1.91]		1 [2.54]		
Drain Hose							
Internal Diameter in. [mm]	0.875 [22.2]						
Air Coil							
Standard Filter - 1" [25.4mm] Throwaway, qty (in) [mm]	14 x 24 [356 x 610]		16 x 30 [406 x 762]		20 x 32 [508 x 813]		
Weight							
Chassis - (lbs) [kg]	90 [41]	97 [44]	109 [49]	115 [52]	176 [80]	182 [83]	182 [83]

MARS MHM/MHS

Model	09	12
Compressor (1 Each)	Rotary	
Factory Charge R-454B (oz) [kg]	30 [0.85]	28 [0.79]
COAX		
Internal Volume (U.S. Gallon) [L]	0.26 (0.98)	
Hose Kit		
FPT (in) [cm]	1/2 [1.27]	
Drain Hose		
Internal Diameter in. [mm]	0.875 [22.2]	
Air Coil		
Standard Filter - 1" [25.4mm] Throwaway, qty (in) [mm]	16 x 30 [406 x 762]	
Weight		
Chassis - (lbs) [kg]	103 [47]	105 [48]

MH Unit Maximum Working Water Pressure

Options	Max Pressure PSIG [kPa]
Base Unit	300 [2,068]
Internal Secondary Pump (ISP)	200 [1,378]
Internal Motorized Water Valve (WMV)	300 [2,068]
Internal Auto Flow Valve	300 [2,068]

MARS MHC/MHD

Model	09	12	15	18	24	30	36
Compressor (1 Each)	Rotary				Scroll		
Factory Charge R-454B (oz) [kg]	30 [0.85]	28 [0.79]	34 [0.96]	38 [1.08]	46 [1.3]	52 [1.47]	54 [1.53]
COAX							
Internal Volume (U.S. Gallon) [L]	0.26 [.98]		0.36 [1.4]		0.60 [2.3]		
Hose Kit (AHH Series Required)							
FPT (in) [cm]	1/2 [1.27]		3/4 [1.91]		1 [2.54]		
Drain Hose							
Internal Diameter in. [mm]	0.875 [22.2]						
Air Coil							
Standard Filter - 1" [25.4mm] Throwaway, qty (in) [mm]	14 x 30 [356 x 762]		16 x 30 [406 x 762]		20 x 32 [508 x 813]		
Weight							
Chassis - (lbs) [kg]	110 [50]	117 [53]	123 [56]	125 [57]	186 [84]	190 [86]	192 [87]

Existing Chassis R-454B MH Replacement Models

Models:
MH
09-36

816 to MH8 Replacement

Old Chassis	New Chassis
*81610	MH8 09
*81615	MH8 12
*81620	MH8 18
*81628	MH8 24
*81630	MH8 30
*81636	MH8 36

* A hose adapter kit is required for replacement if the existing 816 chassis is revision A-L. See Hose Adapter Part Numbers table for reference.

817 to MH8 Replacement

Old Chassis	New Chassis
81709	MH8 09
81712	MH8 12
81724	MH8 24
81730	MH8 30
81736	MH8 36

TSM/TSL 09-12 Rev. A-B to MHM/MHS Replacement

Old Chassis	New Chassis
TSM/TSL09 (Rev A-B)	MHM/MHS 09
TSM/TSL12 (Rev A-B)	MHM/MHS 12

TRM to MHR Replacement

Old Chassis	New Chassis
TRM09	MHR 09
TRM12	MHR 12
TRM15	MHR 15
TRM18	MHR 18
TRM24	MHR 24
TRM30	MHR 30
TRM36	MHR 36

TSM/TSL 09-12 Rev C and TSM/TSL 15-36 Rev A-C to MHC/MHD Replacement

Old Chassis	New Chassis
TSM/TSL09 (Rev. C)	MHC/MHD 09
TSM/TSL12 (Rev. C)	MHC/MHD 12
TSM/TSL15 (Rev. A-C)	MHC/MHD 15
TSM/TSL18 (Rev. A-C)	MHC/MHD 18
TSM/TSL24 (Rev. A-C)	MHC/MHD 24
TSM/TSL30 (Rev. A-C)	MHC/MHD 30
TSM/TSL36 (Rev. A-C)	MHC/MHD 36

R-454B Chassis Conversions and Compatibility

Models:
MH
09-36

Field Conversion Series Compatibility

Legacy Chassis Series	R-454B Chassis Series	Potential Field Conversion	Are components required for this conversion?
TRM 09/12	MH809/12 (P controls only)	MHR09/12	All MH809/12 are shipped with a conversion block. When replacing a TRM 09/12, the conversion block should be kept on the MH809/12 chassis.
TRM 18	MH818 (P controls only)	MHR18	No. Standard configuration of both chassis are interchangeable if the MH8 has P controls.
TRM 24/30/36	MH824/30/36 (P controls only)	MHR24/30/36	
816 & 817 09/12	MHR09/12	MH809/12 (P controls only)	No parts required. The Block off shipped with MHR09/12 is removed and the chassis is interchangeable with MH809/12 chassis.
816 & 817 18/20	MHR18	MH818 (P controls only)	Yes. The MH818 accessory block-off accessory is required. The block-off accessory ships with the MH818 chassis and may be ordered separately.*
816 & 817 24/30/36	MHR24/30/36	MH824/30/36 (P controls only)	No parts required.
TSM Rev. A/B 9/12	MHM09/12	MHS09/12	No. TSM and TSL are interchangeable if the legacy installed chassis does not have features specific to that series. The series will need to be reconfigured on the communicating unit controller with service tool to function properly.
TSL Rev. A/B 9/12	MHS09/12	MHM09/12	
TSM Rev. C 9-36	MHC09-36	MHD09-36	
TSL Rev. C 9-36	MHD09-36	MHC09-36	

Notes:

- * This conversion only occurs if a R-454B MHR18 is replacing a 81620 chassis in the field.
- All options/features on the R-454B chassis should be verified before converting to another series to ensure the R-454B chassis is a compatible replacement.
- 816 products were offered with line voltage, electro-mechanical, and P-controls. The oldest of those were the line voltage and electro-mechanical options. For direct replacement of 816 chassis with line voltage or electro-mechanical controls, the MH8 series chassis must be used (cannot be field converted). Please consult the 816/817 and MH model nomenclature to determine the controls option.

816-817 to MH8/MHR Conversion Data

816 Chassis		R-454B Replacement Chassis			
		Without Cabinet Kit		With Cabinet Kit	
Digits 1-5	Digit 8	Digits 1-5	Digit 7	Digits 1-5	Digit 7
81610	S	MH809	C	MH8/R09	A
	M		B		
	P	MH8/R09	A		
81612	S	MH812	C	MH8/R12	A
	M		B		
	P	MH8/R12	A		
81620	S	MH818	C	MH8/R18	A
	M		B		
	P	MH8/R18	A		
81628	S	MH824 or 30	C	MH8/R24 or 30	A
	M		B		
	P	MH8/R24 or 30	A		
81630	S	MH830	C	MH8/R30	A
	M		B		
	P	MH8/R30	A		
81636	S	MH836	C	MH8/R36	A
	M		B		
	P	MH8/R36	A		

816-817 Controls to MH8 Controls Conversion

816-817 controls option	MH8 controls options
P- Standard (24V N.C. safeties) for use with CXM2 or DXM2.5	A-24V
M-Combination Controls	B-Electro-Mechanical
S-Standard (line voltage) 115V controls	C-Line-Voltage

Existing Chassis to Replacement MH Series Water Connection Dimensions Chart

Models:
MH
09-36

Existing Chassis Water Connection Sizes 816 to MH8

Existing Chassis		Replacement Chassis	
Model	Water Connection Size	Model	Water Connection Size
*81610	1/2"	MH809	1/2"
*81615		MH812	
*81620		**MH818	3/4"
*81628	3/4"	MH824	1"
*81630		MH830	
*81636		MH836	

*All 816 chassis revision A-L require hose adapters be ordered upon replacement. See the hose adapter table below for which part numbers should be ordered at each size.

**All SH818 chassis ship with 1/2" to 3/4" hose adapter

817 to MH8

Existing Chassis		Replacement Chassis	
Model	Water Connection Size	Model	Water Connection Size
81709	1/2"	MH809	1/2"
81712		MH812	
81724	1"	MH824	1"
81730		MH830	
81736		MH836	

TRM to MHR

Existing Chassis		Replacement Chassis	
Model	Water Connection Size	Model	Water Connection Size
TRM09	1/2"	MHR09	1/2"
TRM12		MHR12	
TRM15	3/4"	MHR15	3/4"
TRM18		MHR18	
TRM24	1"	MHR24	1"
TRM30		MHR30	
TRM36		MHR36	

TSM/L to MHM/S/C/D

Existing Chassis*		Replacement Chassis	
Model	Water Connection Size	Model	Water Connection Size
TSM/L09	1/2"	MHM/S/C/D09	1/2"
TSM/L12		MHM/S/C/D12	
TSM/L15	3/4"	MHM/S/C/D15	3/4"
TSM/L18		MHM/S/C/D18	
TSM/L24	1"	MHM/S/C/D24	1"
TSM/L30		MHM/S/C/D30	
TSM/L36		MHM/S/C/D36	

* All revisions

Hose Adapter Part Numbers

(applies when replacing existing 816 chassis Rev A-L only)

Existing chassis series and size	Replacement Series	Hose Adapter Part Number (required)	Hose Kit Part Number (optional)
81610-15 (rev A-L)	MH809-12	29S0019N01	AHH05024SC
*81620 (rev A-L)	MH818	29S0019N02	AHH07536SC
81628 (rev A-L)	MH824	29S0019N07	AHH10036SC
81630-36 (rev A-L)	MH830-36	29S0019N08	AHH10036SC

* All MH818 replacement chassis ship with hose adapter 29S0019N02 as standard.

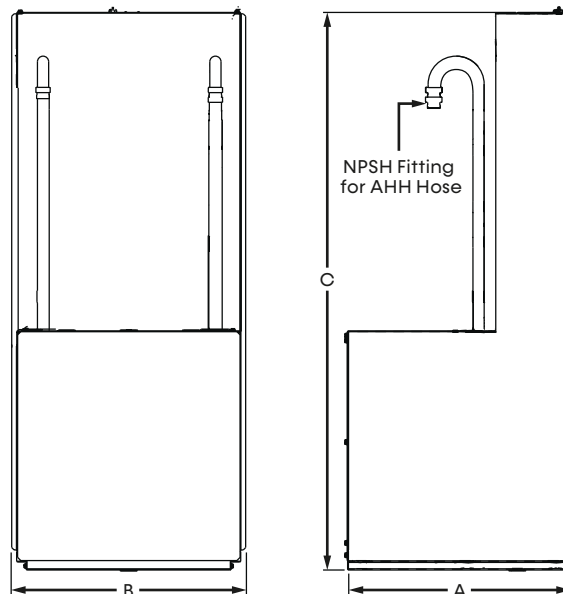
Chassis Dimensional Data

Models:
MH
09-36

MH Chassis Dimensions

Legacy Chassis Series	Size	A	B	C	Replacement Chassis Series	Size	A	B	C
816	10	14.75	15.62	36.81	MH8	9	14.75	15.62	36.81
	15	14.75	15.62	36.81		12	14.75	15.62	36.81
	20	17.56	18.62			18	17.56	18.62	
	28	21.56	22.56	41.5		24	21.56	22.56	41.5
	30	21.56	22.56	41.5		30	21.56	22.56	41.5
	36	21.56	22.56	41.5		36	21.56	22.56	41.5
817	9	14.75	15.62	36.81	MH8	9	14.75	15.62	36.81
	12	14.75	15.62	36.81		12	14.75	15.62	36.81
	24	21.56	22.56	41.5		24	21.56	22.56	41.5
	30	21.56	22.56	41.5		30	21.56	22.56	41.5
	36	21.56	22.56	41.5		36	21.56	22.56	41.5
TRM	9	14.75	15.62	39.53	MHR	9	14.75	15.62	*39.53
	12	14.75	15.62	39.53		12	14.75	15.62	*39.53
	15	17.56	18.62	43.56		15	17.56	18.62	43.56
	18	17.56	18.62	43.56		18	17.56	18.62	43.56
	24	21.56	22.56	41.5		24	21.56	22.56	41.5
	30	21.56	22.56	41.5		30	21.56	22.56	41.5
	36	21.56	22.56	41.5		36	21.56	22.56	41.5
TSM/L Rev A-B	9	17	17.63	43.48	MHS/M	9	17	17.63	43.48
	12	17	17.63	43.48		12	17	17.63	43.48
TSM/L Rev C	9	15.63	15.38	43.48	MHC/D	9	15.63	15.38	43.48
	12	15.38	15.38	43.48		12	15.38	15.38	43.48
	15	17	17.63	43.48		15	17	17.63	43.48
	18	17	17.63	43.48		18	17	17.63	43.48
	24	22	22.63	45.48		24	22	22.63	45.48
	30	22	22.63	45.48		30	22	22.63	45.48
	36	22	22.63	45.48		36	22	22.63	45.48

*With block off installed.



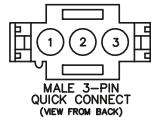
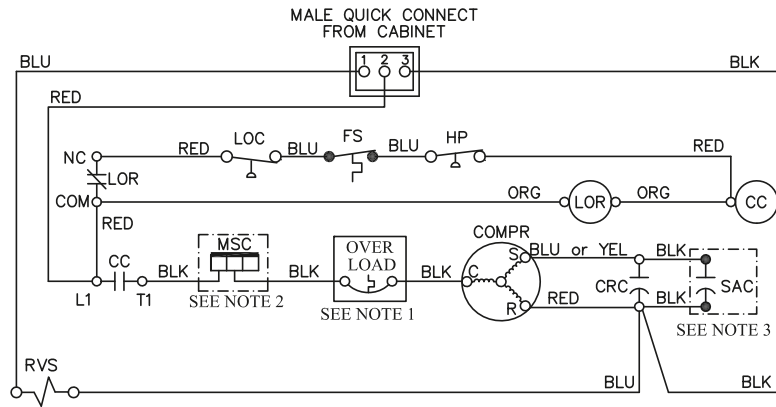
Models:
MH
09-36

www.marsdelivers.com

MH8 Wiring Diagram 96B0036N07 S Controls

Models:
MH
09-36

TITLE: 81709 - 36 "G" & "E" Voltage, "LINE VOLTAGE" "S" Controls		PCN NO: 16-0130	DATE: 03/18/16		DRAWING NO: 96B0036N07	REV: K
LEGEND: — Factory Line Voltage Wiring — Factory Low Voltage Wiring - - - Optional Wiring Option Box High Pressure Switch Loss of Charge Switch FREEZE STAT		 RV Solenoid Coil  RELAY/ACTUATOR COIL  CAPACITOR * OPTIONAL ITEMS  MULTI SPICE CONNECTOR	CRC Compressor Run Capacitor COMPR Compressor FS FREEZE STAT HP High Pressure Switch HPWS High Pressure Water Switch LTS LOW TEMP SWITCH LOC Loss of Charge LOR LOCK OUT RELAY RVS Reversing Valve Solenoid SAC Start Assist Capacitor TBLK Terminal Block		NOTES: 1. Ext. Compr. Overload on Sizes 09, 12, 15 & 18 Only. 2. Used with 81724/30/36 COMPR PLUG only. 3. START ASSIST CAPACITOR FOR SIZES 9-18 ONLY	



REFERENCE SKETCHES. DO NOT SHIP WITH UNIT

K	ADDED NOTE FOR SAC USED ON 81709-18	NW	16-0130	03/18/16	TN
J	REMOVED MOTORIZED WATER VALVE OPTION	DR	14-0219	04/23/14	JIM T.
H	REMOVED HTPS & ADDED OPTION FOR MWV w/HPWS	DR	14-0013	01/20/14	JIM T.
G	ADDED START ASSIST CAPACITOR	DR	11-0545	11/01/11	JIM T.
F	UPDATED LEGEND, LOR & MWV. REMOVED MWV CHECK BOX	DR	11-0121	03/18/11	JIM T.
E	INITIAL RELEASE	DR	10-0380	08/10/10	JIM T.
REV	DESCRIPTION	BY	PCN	DATE	APPR

TITLE: 817 CHASSIS 09-36
LINE VOLTAGE
817 (S) CONTROLS
DRAWING NO: 96B0036N07

Models:
MH
09-36

MALE 9-PIN
QUICK CONNECT
(VIEW FROM BACK)

MALE 6-PIN
QUICK CONNECT
(VIEW FROM BACK)

MALE 4-PIN
QUICK CONNECT
(VIEW FROM BACK)

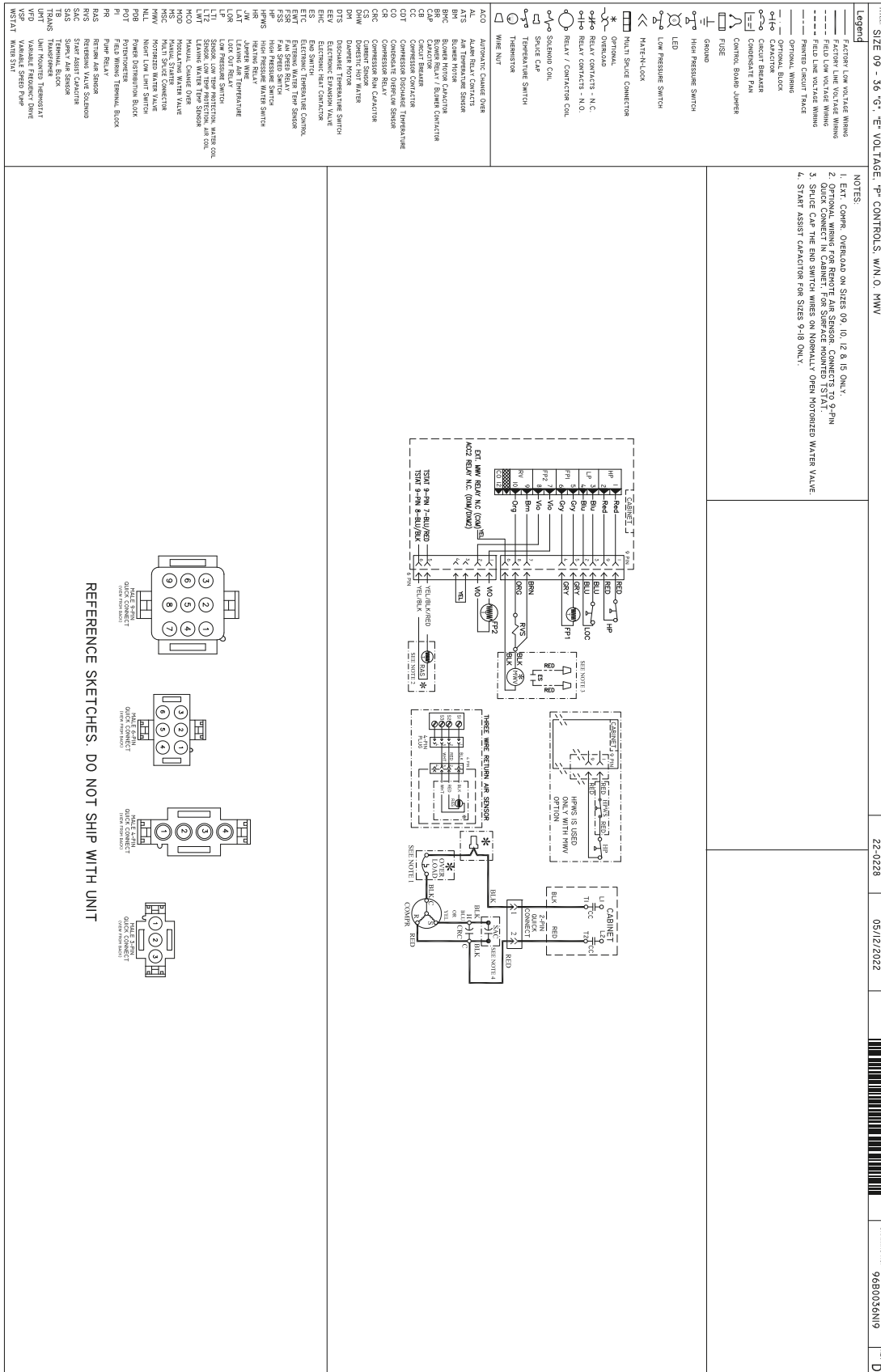
MALE 3-PIN
QUICK CONNECT
(VIEW FROM BACK)

REFERENCE SKETCHES. DO NOT SHIP WITH UNIT

MHR Wiring Diagram 96B0036N19

Standard 24V TRM Controls Fail-Open MWV

Models:
MH
09-36



Models:
MH
09-36



Models:
MH
09-36



Cabinet Kit (79S004 Series)

Models:
MH
09-36

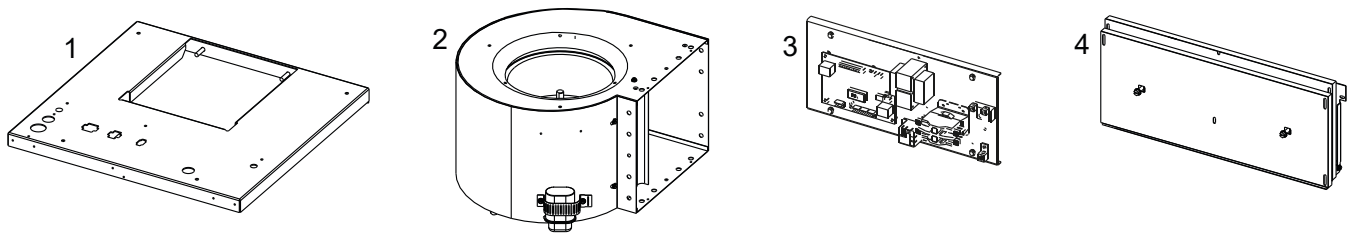
This kit upgrades the cabinet with new internal components. Your unit will now have latest compressor-protection technology.

Optional for all models. If your old cabinet has fuses, you must order the kit with the breaker option. Verify the wiring to the unit is the correct gauge for current codes — if not keep old fuses. If the old cabinet had a disconnect, order the kit with the disconnect option. The return air panel may require modifications.

KIT CONTENTS

1. Sheet metal assembly mounting deck
2. Blower assembly (motor, blower, housing, blower wheel and capacitor)
3. Control assembly (mounting plate, transformer, contactor, relay, terminal block CXM2 or DXM2.5 unit controller, and wiring)
4. Cabinet upper-airflow blockoff

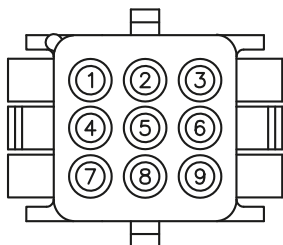
Kit Components



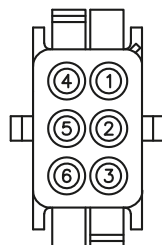
CONTROLS CONVERSION KIT (S11S0084N01)

When a replacement chassis is being used in an 816 style cabinet with "P" style controls only, a wire harness conversion kit is required. 816 style cabinets with "P" controls were offered with a singular 9-pin harness and utilized a gray FP1 thermistor for freeze protection in heating mode only. The later generation cabinets introduced a 6-pin wire harness combined with a 9-pin harness which added a violet FP2 thermistor for freeze protection during both heating and cooling modes of operation. The S11S0084N01 controls conversion kit includes a combination 12/9/6-pin wire harness, violet FP2 thermistor, and a wiring diagram for connection of the new replacement chassis to the existing legacy series cabinet.

9-pin Harness



6-pin Harness



Cabinet Deck Kits - PSC Blower

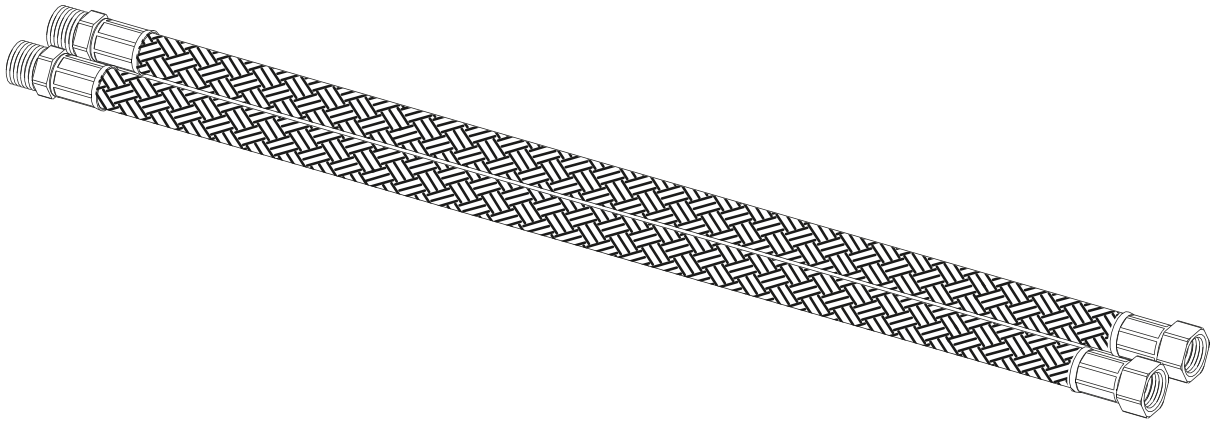
Unit Size	208 / 230V		265V	
	CXM2 Part Number	DXM2.5 Part Number	CXM2 Part Number	DXM2.5 Part Number
Cabinet Power Termination: Terminal Block Only - Digit 7: "0"				
9	79S0040N01	79S0040N06	79S0040N11	79S0040N16
12	79S0040N02	79S0040N07	79S0040N12	79S0040N17
18	79S0040N03	79S0040N08	79S0040N13	79S0040N18
24	79S0040N04	79S0040N09	79S0040N14	79S0040N19
30 - 36	79S0040N05	79S0040N10	79S0040N15	79S0040N20
Cabinet Power Termination: Disconnect - Digit 7: "A"				
9	79S0041N01	79S0041N06	79S0041N11	79S0041N16
12	79S0041N02	79S0041N07	79S0041N12	79S0041N17
18	79S0041N03	79S0041N08	79S0041N13	79S0041N18
24	79S0041N04	79S0041N09	79S0041N14	79S0041N19
30 - 36	79S0041N05	79S0041N10	79S0041N15	79S0041N20
Cabinet Power Termination: Circuit Breaker - Digit 7: "C"				
9	79S0042N01	79S0042N07	79S0042N21	79S0042N26
12	79S0042N02	79S0042N08	79S0042N22	79S0042N27
18	79S0042N03	79S0042N09	79S0042N23	79S0042N28
24	79S0042N04	79S0042N10	79S0042N24	79S0042N29
30	79S0042N05	79S0042N11	79S0042N25	79S0042N30
36	79S0042N06	79S0042N12		

AHH Series Stainless Steel Braided Hose Kit

Models:
MH
09-36

SPECIFICATIONS:

- Designed for water source heat pump applications.
- Reinforced EPDM core with ANSI 302/304 stainless steel outer braid.
- Fire rated materials per ASTM E 84-00 (NFPA 255, ANSI/UL 723 & UBC 8-1).
- NPT(E) (External Pipe Thread) fitting at one end; swivel with NPSH thread connector (Internal Thread) at the other end (seals via fiber or EPDM gasket, shipped inside connection).
- Swivel connection provides union between chassis and risers.
- Brass fittings, stainless steel ferrules.
- Temperature range of 15°F (9°C) to 180°F (82°C). (Operation below 32°F requires antifreeze)
- Max. working pressure of 300 psi (2,068 kPa).
- Min. burst pressure of four times working pressure.



Physical Data

Model	Part #	Inside Diameter inches	Length feet [cm]	Working Pressure psi [kPa]	Min. Burst Pressure psi [kPa]	Min. Bend Radius inches [mm]
MH809/12, MHR09/12	AHH05024SC	0.50	2 [61]	300 [2,068]	1,600 [11,024]	2.5 [63.5]
MH815/18, MHR15/18	AHH07536SC	0.75	3 [91]	300 [2,068]	1,600 [11,024]	4.5 [114.3]
MH824-36, MHR24-36	AHH10036SC	1.00	3 [91]	300 [2,068]	1,600 [11,024]	5.5 [139.7]

Hose Adapter Kit

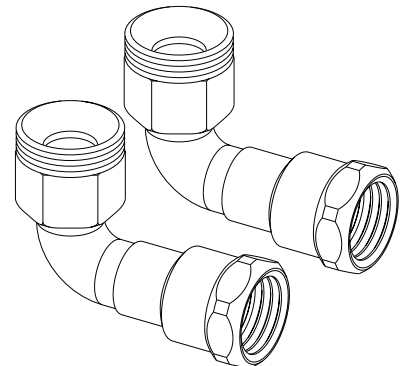
Connects hard union piping to hose.

Hose Adapter Part Numbers

(applies when replacing existing 816 chassis Rev A-L only)

Existing chassis series and size	Replacement Series	Hose Adapter Part Number (required)	Hose Kit Part Number (optional)
81610-15 (rev A-L)	MH809-12	29S0019N01	AHH05024SC
*81620 (rev A-L)	MH818	29S0019N02	AHH07536SC
81628 (rev A-L)	MH824	29S0019N07	AHH10036SC
81630-36 (rev A-L)	MH830-36	29S0019N08	AHH10036SC

* All MH818 replacement chassis ship with hose adapter 29S0019N02 as standard.

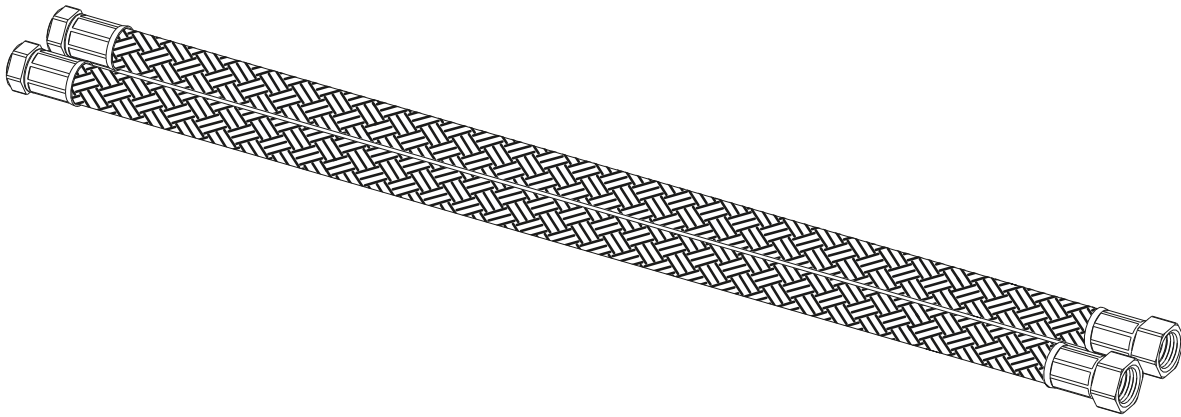


AHU Series Stainless Steel Braided Hose Kit

Models:
MH
09-36

SPECIFICATIONS:

- AHU hose kits used for connection with MARS standard ball valves.
- Designed for vertical high rise water-source heat pump applications.
- Reinforced EPDM core with ANSI 302/304 stainless steel outer braid.
- Fire rated materials per ASTM E 84-00 (NFPA 255, ANSI/UL 723 & UBC 8-1).
- Swivel connection provides union between chassis and riser shutoff.
- Brass fittings, stainless steel ferrules.
- Temperature range of 15°F [9°C] to 180°F [82°C]. (Operation below 32°F requires antifreeze)
- Max. working pressure of 300 psi [2,068 kPa].
- Min. burst pressure of four times working pressure.



Physical Data

Model	Part #	Inside Diameter inches	Length feet [cm]	Working Pressure psi [kPa]	Min. Burst Pressure psi [kPa]	Min. Bend Radius inches [mm]
SHM/S/C/D09/12	AHU05036SC	0.50	3 [91]	300 [2,068]	1,600 [11,024]	3.56 [91]
SHM/S/C/D15/18	AHU75036SC	0.75	3 [91]	300 [2,068]	1,600 [11,024]	3.56 [91]
SHM/S/C/D24-36	AHU10036SC	1.00	3 [91]	300 [2,068]	1,600 [11,024]	4.29 [109]

Revision History

Models:
MH
09-36

Date	Item	Action
12/20/24	All	Created



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www.marsdelivers.com



Due to ongoing product improvements, specifications and dimensions are subject to change and correction without notice or incurring obligations. Determining the application and suitability for use of any product is the responsibility of the installer. Additionally, the installer is responsible for verifying dimensional data on the actual product prior to beginning any installation preparations.

Incentive and rebate programs have precise requirements as to product performance and certification. All products meet applicable regulations in effect on date of manufacture; however, certifications are not necessarily granted for the life of a product. Therefore, it is the responsibility of the applicant to determine whether a specific model qualifies for these incentive/rebate programs.

Engineered and assembled in the USA.

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