

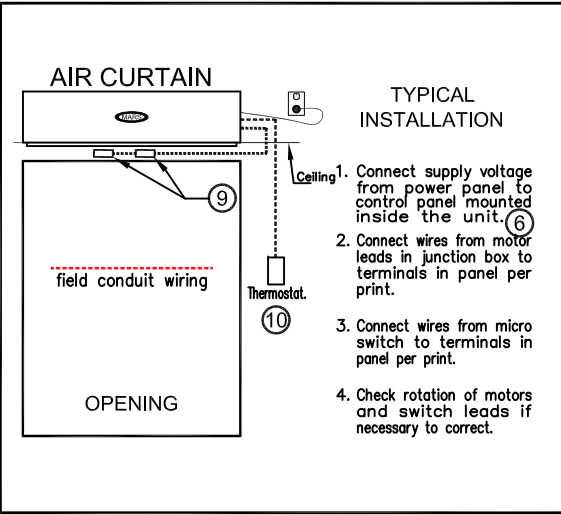
NOTES:

- ① This product is designed to meet the National Electric Code (NEC) and is ETL Listed for the US and Canada.
- ② (4) 1/2" threaded rod required for overhead installation.
- ③ All units have a self contained one piece cabinet, fire retardant and corrosion proof paint lock metal, double protected with baked on white color rust preventative electrostatic polyurethane powder coating.
- ④ Trim pieces included to match air curtains and ceilings.
- ⑤ Units greater than 72" are double units joined with a 2" mounting bracket located in the center, field installed. The speed controller will be located on the right hand unit and controls both units.
- ⑥ Circuit protection as per NEC by others.
- ⑦ Units to be installed such that air flow is unobstructed. Air Discharge nozzle containing adjustable air directional vanes with 40 deg sweep front and back.
- ⑧ Optional filters available for all models. Specify 1" or 2" washable Aluminum or throwaway pleated when ordering.
- ⑨ Normally closed door limit switch(es) is optional and field installed. Switch to be mounted so the air curtain turns on as the door begins to open.
- ⑩ Wall mounted 24 volt thermostat with remote "heat/off" switch is shipped loose and field installed. Terminal block provided on the control panel mounted inside the unit.



Note: Drawing not to scale

MODEL NUMBER	NOZZLE WIDTH Ⓐ	UNIT WIDTH Ⓑ	MOUNTING WIDTH Ⓒ	HEIGHT Ⓓ
PH12 42-1E	42"	42 1/8"	41 1/8"	16 1/2"
PH12 48-1E	48"	48 1/8"	47 1/8"	16 1/2"
PH12 60-1E	60"	60 1/8"	59 1/8"	16 1/2"
PH12 72-2E	72"	72 1/8"	71 1/8"	16 1/2"
PH12 84-2E	86"	86 1/8"	85 1/8"	16 1/2"
PH12 96-2E	98"	98 1/8"	97 1/8"	16 1/2"
PH12 120-2E	122"	122 1/8"	121 1/8"	16 1/2"
PH12 144-3E	148"	148 1/8"	147 1/8"	16 1/2"
PH12 144-4E	150"	150 1/8"	149 1/8"	16 1/2"



PROJECT	Model No.:
LOCATION	Drawing No.:
ARCHITECT	Date
ENGINEER	Sheet of
	Drawn By:
	Checked By:

MARS AIR SYSTEMS

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JOB:

ARCHITECT/ENGINEER:

DRWG.: _____

CONTRACTOR:

SHEET _____ **of** _____ **DATE:** _____

MARK	MODEL NUMBER ①	NO. REQ'D	LENGTH	WEIGHT (LBS)	MOTOR FAN DATA								REMARKS		
					MOTOR HP	MOTOR RPM **	VOLTS & PHASE ②	HEATER INPUT, kW ②	TOTAL AMPS ②	TEMP RISE °F ②	MAX FPM** @ NOZZLE	MAX CFM** @ NOZZLE		dBA Measured 10 ft. from Nozzle	
	PH12 42-1E		42"	75	1	1750						4000	4000	70	
	PH12 48-1E		48"	80	1	1750						4000	4000	70	
	PH12 60-1E		60"	85	1	1750						3200	4000	70	
	PH12 72-2E		72"	160	Two 1	1750						5140	8000	73	
	PH12 84-2E		84"	180	Two 1	1750						4570	8000	73	
	PH12 96-2E		96"	185	Two 1	1750						4000	8000	73	
	PH12 120-2E		120"	240	Two 1	1750						3200	8000	73	
	PH12 144-3E		144"	255	Three 1	1750						4200	12000	75	
	PH12 144-4E		144"	255	Four 1	1750						5140	16000	77	

NOTES: ① Refer to model chart. ② Refer to heater availability chart for parameter values.

EQUIPMENT SPECIFICATIONS - Standard Features

GENERAL: Air curtain shall be a Mars® Air Doors brand air curtain: Type Phantom 12 Electric Heated Models.

APPROVALS: Air curtain shall meet the requirements of the National Electric Code (N.E.C.) and shall be Canadian and U.S. Engineering Testing Laboratories (ETL) Certified.

CABINET

Cabinet shall be a self contained one piece housing with sufficient strength for fastening to the ceiling on both ends without intermediate support for models up to 72" in length. Cabinet constructed of T6061-T6 brushed 20 gage aluminum. Bottom (intake screen) of the unit is double protected with Pearl White color, baked rust preventative, electrostatic polyurethane powder coating. Discharge air outlet nozzle is internal wedge shaped containing adjustable air direction aluminum vanes with 40' sweep front to back. Motor/fan assembly to be easily accessible for maintenance.

ELECTRIC HEATER COIL

The heating coils shall be an open coil type for rapid temperature rise to be located in the air curtain nozzle directly in the air stream. Thermal overload protection shall be provided by manual reset protectors, which shall directly disconnect the electric power from the heaters in the event of an overload. Secondary protectors in the heating contactor shall not be substituted.

MOTORS AND BLOWER WHEELS

Motor(s) shall be totally enclosed air over (TEAO) type suitable for continuous heavy duty, all angle operation. Construction shall include sealed lifetime pre-lubricated ball bearings, resilient mounted and protected by an automatic reset thermal overload switch. Motor(s) to have quick disconnect plug for fast and easy removal of motor/fan assembly for inspection and cleaning. Motor(s) to have double extended shaft and direct drive, double inlet, dynamically balanced, forward curved squirrel cage blower wheels.

ELECTRIC WIRING

Air curtain shall contain prewired, control panel ready for power connection. Panel is mounted on right hand side of unit unless otherwise specified. Control panel adds 4 inches to unit's overall length and requires an additional 20 inches of clearance from the end of the cabinet for access to panel. Unit shall include a 24 volt thermostat with "heat/off" switch, shipped loose and field installed. Terminal block provided inside panel.

GUARANTEE

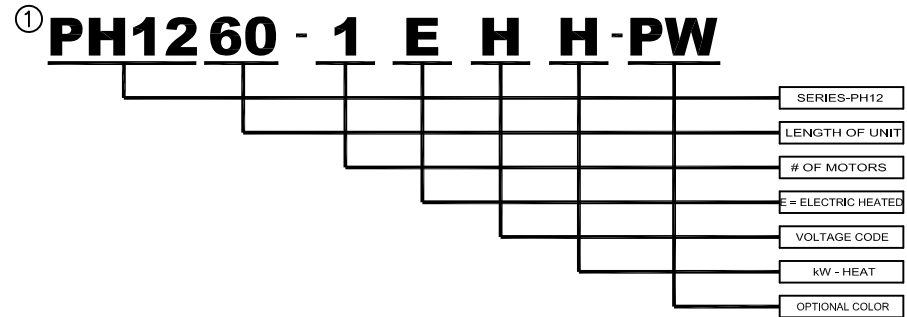
Shall be 18 months on all parts.

ACCESSORIES

Refer to the optional features and accessories page.

**** - 17% Reduction in Performance on units with 50Hz.**

EXAMPLE



KW	CODE
12	H
24	N
36	S

SIZE	VOLTAGE	CODE
48"-144"	208/3/60	E
48"-144"	230/3/60	F
48"-144"	460/3/60	H
48"-144"	575/3/60	I

COLOR	CODE
OBSIDIAN BLACK	OB
TITANIUM SILVER	TS
PEARL WHITE	PW
SPARTAN BRONZE	SB
BATTLESHIP GRAY	BG

MADE WITH PRIDE IN THE USA



PHANTOM 12 (PH12) MODEL HEATER CHART

3 Ø HEATER CHART

ELECTRIC HEATER AND MOTOR DATA

Model	kW	208V	230V	460V	575V	Δ T °F	kW	208V	230V	460V	575V	Δ T °F	kW	208V	230V	460V	575V	Δ T °F	kW	208V	230V	460V	575V	Δ T °F
		Heater Amp (Ampacity)						Heater Amp (Ampacity)						Heater Amp (Ampacity)						Heater Amp (Ampacity)				
PH12 42-1E	8	25.5 (31.9)	23.3 (29.1)	11.6 (14.6)	9.3 (11.7)	6.3	9.5	29.7 (37.1)	27 (33.8)	13.5 (16.9)	10.8 (13.5)	7.5	12	36.6 (45.8)	33.3 (41.7)	16.7 (20.8)	13.3 (16.7)	9.5	16	47.7 (59.6)	43.4 (54.2)	21.7 (27.1)	17.4 (21.7)	12.6
PH12 48-1E	8	25.5 (31.9)	23.3 (29.1)	11.6 (14.6)	9.3 (11.7)	6.3	9.5	29.7 (37.1)	27 (33.8)	13.5 (16.9)	10.8 (13.5)	7.5	12	36.6 (45.8)	33.3 (41.7)	16.7 (20.8)	13.3 (16.7)	9.5	16	47.7 (59.6)	43.4 (54.2)	21.7 (27.1)	17.4 (21.7)	12.6
PH12 60-1E	8	25.5 (31.9)	23.3 (29.1)	11.6 (14.6)	9.3 (11.7)	6.3	9.5	29.7 (37.1)	27 (33.8)	13.5 (16.9)	10.8 (13.5)	7.5	12	36.6 (45.8)	33.3 (41.7)	16.7 (20.8)	13.3 (16.7)	9.5	16	47.7 (59.6)	43.4 (54.2)	21.7 (27.1)	17.4 (21.7)	12.6
PH12 72-2E	16	51 (63.8)	46.6 (58.2)	23.3 (29.1)	18.7 (23.3)	6.3	19	59.3 (74.2)	54.1 (67.6)	27 (33.8)	21.7 (27.1)	7.5	24	73.2 (91.5)	66.6 (83.3)	33.3 (41.7)	26.7 (33.4)	9.5	32	95.4 (119.3)	86.7 (108.4)	43.4 (54.2)	34.7 (43.4)	12.6
PH12 84-2E	16	51 (63.8)	46.6 (58.2)	23.3 (29.1)	18.7 (23.3)	6.3	19	59.3 (74.2)	54.1 (67.6)	27 (33.8)	21.7 (27.1)	7.5	24	73.2 (91.5)	66.6 (83.3)	33.3 (41.7)	26.7 (33.4)	9.5	32	95.4 (119.3)	86.7 (108.4)	43.4 (54.2)	34.7 (43.4)	12.6
PH12 96-2E	16	51 (63.8)	46.6 (58.2)	23.3 (29.1)	18.7 (23.3)	6.3	19	59.3 (74.2)	54.1 (67.6)	27 (33.8)	21.7 (27.1)	7.5	24	73.2 (91.5)	66.6 (83.3)	33.3 (41.7)	26.7 (33.4)	9.5	32	95.4 (119.3)	86.7 (108.4)	43.4 (54.2)	34.7 (43.4)	12.6
PH12 120-2E	16	51 (63.8)	46.6 (58.2)	23.3 (29.1)	18.7 (23.3)	6.3	19	59.3 (74.2)	54.1 (67.6)	27 (33.8)	21.7 (27.1)	7.5	24	73.2 (91.5)	66.6 (83.3)	33.3 (41.7)	26.7 (33.4)	9.5	32	95.4 (119.3)	86.7 (108.4)	43.4 (54.2)	34.7 (43.4)	12.6
PH12 144-3E	24	76.5 (95.6)	69.8 (87.3)	34.9 (43.7)	28 (35)	6.3	29	89 (111.3)	81.1 (101.4)	40.6 (50.7)	32.5 (40.6)	7.5	36	109.8 (137.3)	100 (125)	50 (62.5)	40 (50.1)	9.5	48	143.1 (178.9)	130.1 (162.6)	65 (81.3)	52.1 (65.1)	12.6
PH12 144-4E	32	102 (127.5)	93.1 (116.4)	46.6 (58.2)	37.3 (46.7)	6.3	38	118.7 (148.4)	108.2 (135.2)	54.1 (67.6)	43.4 (54.2)	7.5	48	146.4 (183)	133.3 (166.6)	66.6 (83.3)	53.4 (66.7)	9.5	64	190.9 (238.6)	173.5 (216.8)	86.7 (108.4)	69.5 (86.8)	12.6



PHANTOM 12 (PH12) MODEL HEATER CHART

1 Ø HEATER CHART

ELECTRIC HEATER AND MOTOR DATA

Model	kW	208V	230V	ΔT °F	kW	208V	230V	ΔT °F	kW	208V	230V	ΔT °F	kW	208V	230V	ΔT °F
		Heater Amp (Ampacity)				Heater Amp (Ampacity)				Heater Amp (Ampacity)				Heater Amp (Ampacity)		
PH12 42-1E	6	33.8 (42.3)	31.1 (38.9)	4.7	9	48.3 (60.3)	44.1 (55.2)	7.1	12	62.7 (78.4)	57.2 (71.5)	9.5	-	-	-	-
PH12 48-1E	6	33.8 (42.3)	31.1 (38.9)	4.7	9	48.3 (60.3)	44.1 (55.2)	7.1	12	62.7 (78.4)	57.2 (71.5)	9.5	-	-	-	-
PH12 60-1E	6	33.8 (42.3)	31.1 (38.9)	4.7	9	48.3 (60.3)	44.1 (55.2)	7.1	12	62.7 (78.4)	57.2 (71.5)	9.5	-	-	-	-
PH12 72-2E	12	67.7 (84.6)	62.2 (77.7)	4.7	18	96.5 (120.7)	88.3 (110.3)	7.1	-	-	-	-	-	-	-	-
PH12 84-2E	12	67.7 (84.6)	62.2 (77.7)	4.7	18	96.5 (120.7)	88.3 (110.3)	7.1	-	-	-	-	-	-	-	-
PH12 96-2E	12	67.7 (84.6)	62.2 (77.7)	4.7	18	96.5 (120.7)	88.3 (110.3)	7.1	-	-	-	-	-	-	-	-
PH12 120-2E	12	67.7 (84.6)	62.2 (77.7)	4.7	18	96.5 (120.7)	88.3 (110.3)	7.1	-	-	-	-	-	-	-	-
PH12 144-3E	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PH12 144-4E	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-