

07A-3250

07A-3375

07A-3500

07A-3564

07A-3625

07A-3750

250

375

500

564

625

750

3'

750

1125

1500

1690

1875

2250

3.6

5.4

7.2

8.1

9.0

11.0

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-

4.7

5.2

6.5

# **Pedestal Convection Heater**



**TABLE A. Specifications** 

Model CPH05	A, DPH05/	A (H=5-1/2";	D=3")														
Model APH05	A (H=5-3/4	"; D=3")							Model CPH	)7A, DPH	07A (H=7";	; D=5") (	Cont.)				
Catalog	Length		Total			Amp	perage		Model APH	)7A (H=7·	-1/4"; D=5"	)					
Number*	"L"	Watts/Ft.	Watts	120	)V 2	208V	240V	277V	Catalog	Length		Total		A	mperag	je	
05A-2125		125	250	2.4	4	1.2	1.0	0.9	Number*	"L"	Watts/Ft.	Watts	20	8V	24	<u>ov</u>	277V
05A-2188	28"	188	375	3.	1	1.8	1.6	1.4					1Ø	3Ø	1Ø	3Ø	1Ø
05A-2250		250	500	4.3	2	2.4	2.1	1.8	07A-4125		125	500	2.4	-	2.1	-	1.8
05A-3125		125	375	3.	1	1.8	1.6	1.4	07A-4188		188	750	3.6	-	3.1	-	2.7
05A-3188	3'	188	564	4.	7	2.7	2.4	2.0	07A-4250		250	1000	4.8	-	4.2	-	3.6
05A-3250		250	750	6.	2	3.6	3.1	2.7	07A-4375		375	1500	7.2	-	6.2	-	5.4
05A-4125		125	500	4.2	2	2.4	2.1	1.8	07A-4500	4'	500	2000	9.6	-	8.3	-	7.2
05A-4188	4'	188	750	6.	2	3.6	3.1	2.7	07A-4564		564	2250	10.8	6.2	9.4	5.4	8.0
05A-4250		250	1000	8.3	3	4.8	4.2	3.6	07A-4625		625	2500	12.0	6.9	10.4	6.2	9.0
05A-5125		125	625	5.	2	3.0	2.6	2.2	07A-4750		750	3000	14.4	8.3	12.5	7.2	10.8
05A-5188	5'	188	940	7.	3	4.5	3.9	3.4	07A-5125		125	625	3.0	-	2.6	-	2.2
05A-5250		250	1250	10	4	6.0	5.2	4.5	07A-5188		188	940	4.5	-	3.9	-	3.4
05A-6125		125	750	6.	2	3.6	3.1	2.7	07A-5250		250	1250	6.0	-	5.2	-	4.5
05A-6188	6'	188	1125	9.4	4	5.4	4.7	4.1	07A-5375	5'	375	1875	9.0	-	7.8	-	6.7
05A-6250		250	1500	12	5	7.2	6.2	5.4	07A-5500		500	2500	12.0	-	10.4	-	9.0
05A-8125		125	1000	-		4.8	4.2	3.6	07A-5564		564	2820	13.5	7.8	11.8	6.8	10.2
05A-8188	8'	188	1500	-		7.2	6.2	5.4	07A-5625		625	3125	15.0	8.6	13.0	7.5	11.3
05A-8250		250	2000	-		9.6	8.3	7.2	07A-5750		750	3750	18.0	10.4	15.6	9.0	13.5
05A-10125		125	1250	-		6.0	5.2	4.5	07A-6125		125	750	3.6	-	3.1	-	2.7
05A-10188	10'	188	1875	-		9.0	7.8	6.7	07A-6188		188	1125	5.4	-	4.7	-	4.0
05A-10250		250	2500	-		12.0	10.4	9.0	07A-6250		250	1500	7.2	-	6.2	-	5.4
	1	1							07A-6375	6'	375	2250	10.8	-	9.4	-	8.1
Model CPH07	A, DPH07/	A (H=7"; D=5	;")						07A-6500		500	3000	14.4	-	12.5	-	10.8
Model APH07	A (H=7-1/4	"; D=5")							07A-6564		564	3380	16.2	9.4	14.1	8.1	12.2
Catalog	Length		Total			Amper	age		07A-6625		625	3750	18.0	10.4	15.6	9.3	13.5
Number*	"L"	Watts/Ft.	Watts	20	8V		240V	277V	07A-6750		750	4500	21.6	12.5	18.7	10.8	16.2
				1Ø	3Ø	1Ø	3Ø	1Ø	07A-8125		125	1000	4.8	-	4.2	-	3.6
07A-2125		125	250	1.2	-	1.0	-	0.9	07A-8188		188	1500	7.2	-	6.2	-	5.4
07A-2188		188	375	1.8	-	1.6	-	1.4	07A-8250		250	2000	9.6	-	8.3	-	7.2
07A-2250		250	500	2.4	-	2.1	-	1.8	07A-8375	8'	375	3000	14.4	-	12.5	-	10.8
07A-2375		375	750	3.6	-	3.1	-	2.7	07A-8500		500	4000	19.2	-	16.7	-	14.4
07A-2500	28"	500	1000	4.8	-	4.2	-	3.6	07A-8564		564	4500	21.6	12.5	18.7	10.8	16.2
07A-2564		564	1125	5.4	3.1	4.7	2.7	4.0	07A-8625		625	5000	24.0	13.9	20.8	12.4	18.0
07A-2625		625	1250	6.0	3.5	5.2	3.0	4.5	07A-8750		750	6000	28.6	16.5	25.0	14.4	21.6
07A-2750		750	1500	7.2	4.2	6.2	3.6	5.4	07A-10125		125	1250	6.0	-	5.2	-	4.5
07A-3125		125	375	1.8	-	1.6	-	1.4	07A-10188		188	1875	9.0	-	7.8	-	6.7
07A-3188		188	564	2.7	-	2.4	-	2.0	07A-10250		250	2500	12.0	-	10.4	-	9.0

2.7

4.0

5.4

6.1

6.7

8.1

07A-10375

07A-10500

07A-10564

07A-10625

07A-10750

10'

375

500

564

625

750

3750

45000

5640

6250

7500

18.0

24.0

27.2

30.0

36.6

-

-

15.7

17.4

20.8

15.6

20.8

23.5

26.0

31.3

-

-

13.6

15.0

18.1

13.5

18.0

20.4

22.6

27.0

\*Prefix with APH for Architectural Pedestal Heater; prefix with DPH for Decorative Pedestal Heater; prefix with CPH for Commercial Pedestal Heaters. IMPORTANT: READ CAUTION NOTES AT TOP OF PAGE 2 BEFORE INSTALLING.

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4.3

4.5

5.4

3.1

4.7

6.2

7.4

7.8

9.4

## **INSTALLATION INSTRUCTIONS**

**Read Carefully** - These instructions are written to help you prevent difficulties that might arise during installation of Pedestal Heaters. Studying the instructions first may save you considerable time and money later. QMark Pedestal Heaters are designed for easy and economical installation. When properly assembled, they make a beautiful heating installation. Observe the following procedures, and cut your mounting time to a minimum.

### CAUTION

TO AVOID POSSIBLE ELECTRICAL SHOCK, BE SURE ELECTRICITY IS TURNED OFF AT MAIN SWITCH FIRST BEFORE WIRING. ALL WIRING MUST BE IN ACCORDANCE WITH LOCAL ELECTRICAL CODES AND THE ENTIRE HEATER INSTALLATION MUST BE GROUNDED AS A PRECAUTION AGAINST POSSIBLE ELECTRICAL SHOCK.

DO NOT INSTALL THE HEATER IN AN EXPLOSIVE OR CORROSIVE ENVIRONMENT, OR UPSIDE DOWN, OR WHERE WATER IS PRESENT.

DO NOT LOCATE THE HEATER BELOW AN ELECTRI-CAL CONVENIENCE RECEPTACLE.

HIGH TEMPERATURE - KEEP ELECTRICAL CORDS, FURNITURE, DRAPERIES, OR ANY OTHER BLOCK-ING MATERIAL AT LEAST FOUR INCHES AWAY FROM TOP OR FRONT OF THE HEATER.

THE ENDS OF THE HEATER MUST BE FULLY CLOSED BY THE USE OF ADJOINING HEATERS, END CAPS, OR OTHER ACCESSORIES.

DO NOT INSTALL HEATERS AGAINST PAPERBOARD, VINYL OR LOW-DENSITY FIBERBOARD SURFACES.

CHECK THE SUPPLY VOLTAGE TO MAKE SURE IT IS THE SAME AS INDICATED ON THE HEATER NAME-PLATE.

DISCARD THE FOAM PACKING PADS BETWEEN THE HEATER GRILLE AND THE ELEMENT ASSEMBLY BEFORE THE HEATER IS USED.

### WARNING

TO REDUCE THE RISK OF FIRE, DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS HEATER.

### **STEP ONE - Receiving Instructions**

- 1. Each Pedestal Heater is shipped in two cartons. One carton contains the heater, the other contains the pedestals.
- 2. Material when shipped was in good order and Marley Engineered Products hold clear bill of lading, therefore any concealed damage must be reported at once to the carrier for inspection and settlement.

### **STEP TWO - Rough-In Wiring**

- 1. Branch circuits for the heaters shall be enclosed in 1" rigid conduit for 05A heaters, or 1-1/4" rigid conduit for 07A heaters.
- 2. Run branch circuit of proper voltage and wire size, in rigid conduit, to location of left or right junction box as indicated on heater wiring diagram. Wire entry to heater is through either end pedestal.

NOTE: When pedestal is not used for wire entry, pedestal base must be covered with cover plate (supplied with pedestal). See Figure 2.

- When installing heaters on existing floors, the threaded end of the rigid conduit must extend 7/8" to 1" above finished concrete. Conduit must be threaded a minimum of 3/8".
- 4. Basic heaters are prewired and can be connected to branch circuit at either end. Heaters with controls are prewired for connection to branch circuit at one end only (refer to heater wiring diagram), however, heater can be wired from opposite end by running wires through heater wireway.
- 5. If it is necessary to run wires through the heater wire way, use Table B to size the field installed wiring.
- 6. The factory installed wires in the heater wireway can be loaded up to 35 amps in 05A units and up to 45 amps in 07A units. Refer to Table C and D for maximum length of heater run when the heaters are connected in parallel.

### CAUTION

IF THE FACTORY INSTALLED WIRES IN THE WIRE WAY ARE USED TO CONNECT THE BUILT-IN CON-TROLS, LIMIT THE MAXIMUM CURRENT TO THE FOL-LOWING VALUES:

Thermostat	24 amps @ 120-240 VAC 22 amps @ 277 VAC
	Pilot duty - 125 VA (all voltages)
Transformer Relay	
05A Units:	22 amps @ 120-240 VAC
	19 amps @ 277 VAC
07A Units:	25 amps @ 120-240 VAC
	22 amps @ 277 VAC
Power Relay	25 amps @ 120-277 VAC- see
2	wiring diagram on heater
Disconnect Switch	20 amps @ 120-277 VAC

TABLE B. Sizing Field Installed Wiring

	Maximum No. of	Maximum Allowable Current						
Copper	Wires That May							
Wire Size	Be Installed	Up to 3	4 to 6	7 thru 9				
75°C	In Wireway	Conductors	Conductors	Conductors				
No. 12 AWG	9	11.5 Amps	9.3 Amps	8.1 Amps				
No. 10 AWG	8	17.4 Amps	14.0 Amps	12.1 Amps				
No. 8 AWG	4	24.0 Amps	21.0 Amps					

#### TABLE C. Maximum Length of Heater Run (05A - 1Ø)

Watts/Ft. of	Maximum Allowable Length of Heater Run (Feet)						
the Heaters	120 Volts	208 Volts	240 Volts	277 Volts			
125	33	58	67	77			
188	22	38	44	51			
250	16	29	33	38			

NOTE: For mix of watt densities, calculate amp draw. Do not exceed values indicated in step 6 above.

#### TABLE D. Maximum Length of Heater Run (07A - 1Ø and 3Ø)

Watts/Ft. of	Maximum Allowable Length of Heater Run (Feet)							
the Heaters	208 Volts	208 Volts	240 Volts	240 Volts	277 Volts			
	1Ø	3Ø	1Ø`	3Ø	1Ø			
125	74	-	86	-	99			
188	49	-	57	-	66			
250	37	-	43	-	49			
376	24	-	28	-	33			
500	18	-	21	-	24			
564	16	27	19	32	22			
625	14	24	17	29	19			
750	12	20	14	24	16			

NOTE: For mix of watt densities, calculate amp draw. Do not exceed values indicated in step 6 above.

 Standard 75°C wiring must be used in junction boxes, wireway and blank sections.

### **STEP THREE - Room Layout**

Refer to heating plans for exact room arrangements of heaters (with or without thermostats and/or relays and/or switches and accessories.)

### **STEP FOUR - Mounting Height**

Refer to Figure 1a. for typical mounting of heaters and pedestals imbedded in floor; refer to Figure 1b. for surface-mounted heaters and pedestals.

NOTE: Up to 3/4" thick floor covering, such as carpet, tiles, linoleum, etc., may be installed around and under the heater without adversely affecting the performance of the heaters.



# NOTE: For ease of installation, it is important that the sequence of operations indicated below be followed in order.

- 1. Remove front cover by removing mounting screws (Fig. 2)
- 2. Remove the top lock nut and the leveling nut from each pedestal. (Do not loosen or remove the bottom lock nut.)
- 3. Screw one pedestal onto threaded rigid conduit protruding from floor.

- 4. Install remaining pedestal(s) in heater and secure by installing lock nut finger tight.
- 5. Install heater onto the pedestal which is screwed on the rigid conduit. Position heater in desired location and mark pedestal mounting hole locations on floor. Then remove the heater and the one pedestal from the rigid conduit.Remove the remaining pedestal(s) from the heater.
- 6. Drill holes in floor (Fig. 3b) and install threaded inserts (or equivalent for 1/4" mounting bolts (inserts and bolts supplied by installer.)
- 7. Reinstall the one pedestal on the rigid conduit, then secure all other pedestals (with cover plates) to the floor with four 1/4" bolts through each pedestal flange.



### STEP SIX - Pedestal Installation (Imbedded in New Concrete Floor)

When a heater installation is to be imbedded in a new concrete floor, the pedestals are first installed in the concrete, then the heater installed after the concrete has set. It is imperative that the pedestals be installed in perfect alignment so that the holes in order to achieve the required alignment, it is recommended that the pedestals be held in place by the use of jigs during the concrete pour. The jigs should be constructed of good quality 1" x 4" lumber as shown in Figure 4. The pedestals are installed in the jigs and then positioned for the concrete pour. One end pedestal must be screwed onto rigid wall conduit so that the mounting height requirements in Figure 1a are met after pouring of the finished floor. (The method of securing the pedestals and jigs in place during the pouring of the concrete is at the option of the installer.) After the concrete has set, remove the jigs from the pedestals and install the heater as indicated in steps Seven or Eight.

Ð

28-Inch Heater

 $\oplus$ 

3-Foot Heater

28"

25-1/8" (05A) 24-7/8" (07A)

36"

33-1/8" (05A) 32-7/8" (07A)

÷

 $\oplus$ 

1-7/16" (05A) 1-9/16" (07A)

1-7/16" (05A) 1-9/16" (07A)

### **STEP SEVEN - Installation of Single Unit**

## NOTE: For ease of installation, it is important that the sequence of operations below be followed in order.

- 1. Remove front cover by removing mounting screws (Fig. 2)
- Install end caps (must be purchased separately) on both ends of the heater housing. Refer to Figure 5a (Type APH) or 5b (Type CPH and DPH) for details of end cap installation.
- 3. Install leveling nut on each installed pedestal, then position heater on pedestals. Adjust the leveling nuts until the heater is level and at the desired mounting height. Then install and tighten the pedestal lock nuts.
- 4. Run proper size branch circuit to the junction box through the appropriate end pedestal.
- 5. Following the wiring diagram secured to the heater, make electrical connections.
- 6. Replace front cover and secure with mounting screws. (See Figure 2.)
- 7. If the heater is equipped with a built-in thermostat, adjust the shaft to the mid-range and let the heater run for a few hours. If the room temperature is too hot, rotate the shaft counterclockwise; if too cool, rotate the shaft clockwise until a comfortable temperature is obtained. Let room temperature stabilize after each setting change.

# NOTE: The thermostat adjustment shaft and the disconnect switch are accessible through the grille openings at the left end of the heater.



### STEP EIGHT - Installation of Multiple Units

NOTE: For ease of installation, it is important that the sequence of operations indicated below be followed in order.

- 1. Remove front cover by removing mounting screws (Figure 2.)
- 2. Install end caps on the outer end of the first and last heater (or blank section ) in a run using four No. 6 screws supplied with end caps. (Refer to Figure 5a or 5b for details of end cap installation.)
- 3. Run proper size branch circuit to the junction box through heaters and blank sections (if applicable) on pedestals.

NOTE (Type APH only): When butting heaters, use splice plate kit (Figure 6) to join the heaters. When installing a run of butted heaters, install a back/grille splice place on pedestals. Then attach back/grille splice plates to same end of remaining heaters in the run and position heaters on pedestals. Install left and right cover splice plates (Figure 6) on every other heater cover in the run. When positioning heaters, leave a 1/8" gap between heaters to allow for expansion. Position heaters carefully to insure proper alignment.

NOTE (Type CPH and DPH only): When butting heaters end-to-end, be sure to position heaters carefully to insure proper alignment. Leave a 1/16" gap between heaters to allow for expansion.





### End Cap and Splice Kit Data

Heater Catalog Number						
APH05A	APH07A					
ADB05-ECL(R)	ASH07-ECL(R)					
ADB05-ECR(R)	ASH07-ECL(R)					
ADB05-SP	ASH07-SP					
	Heater Cat APH05A ADB05-ECL(R) ADB05-ECR(R) ADB05-SP					

(R) Suffix on catalog number refers to accessories with 120 VAC receptacle.



### **End Cap Data**

	Heater Catalog Number							
Description	CPH05A	CPH07A	DPH05A	DPH07A				
End Cap Left	CPH05-ECL(R)	CPH07-ECL(R)	DSH05-ECL(R)	DSH07-ECL(R)				
End Cap Right CPH05-ECR(R) CPH07-ECR(R) DSH05-ECR(R) DSH07-ECR(								
(R) Suffix on catalog number refers to accessories with 120 VAC receptacle.								

### Figure 5b. (Type CPH and DPH Only)

4. Adjust the leveling nuts until the heaters are level and at the desired mounting height. Then install and tighten the pedestal lock nuts.

### CAUTION DO NOT OPERATE THE HEATERS UNLESS THE OUTER END OF THE LAST HEATERS (OR BLANK SECTIONS) IN THE RUN ARE CLOSED WITH END CAPS.

## NOTE: 75°C field wiring may be run through the blank section wireway.

- 5. Following the wiring diagram secured to the heater, make the electrical connections. Refer to Figure 7 to connect the other heaters in parallel. Grounding of the other heaters is accomplished by connecting a jumper wire (not supplied) between the two adjacent heaters.
- 6. Replace front covers, and secure with mounting screws. (Figure 2.)
- 7. If the heaters are equipped with built-in thermostat, adjust the shaft to the mid-range and let the heaters run for a few hours. If the room temperature is too hot, rotate the shaft counterclockwise; if too cool, rotate the shaft clockwise until a comfortable temperature is obtained. Let room temperature stabilize after each setting change.

# NOTE: The thermostat adjustment shaft and the disconnect switch are accessible through the grille openings at the left end of the heater.



### diagram label in the unit.

### LIMITED WARRANTY

All products covered by this instruction sheet are warranted against defects in workmanship and materials for one year from date of installation, except heating elements which are warranted against defects in workmanship and materials for five years from date of installation. This warranty does not apply to damage from accident, misuse, or alteration; not where the connected voltage is more than 5% above nameplate voltage; not to equipment improperly installed or wired or maintained in violation of this instruction sheet. All claims for warranty work must be accompanied by proof of the date of installation. The customer shall be responsible for all costs incurred in the removal or reinstallation of products, including labor costs, and shipping costs incurred to return products to a Marley Engineered Products Service Center. Within the limitations of this warranty, inoperative units should be returned to the nearest Marley authorized service center, or the Marley Engineered Products Service Center, and we will repair or replace; at our option, at no charge to you with return freight paid by Marley. It is agreed that such repair or replacement is the exclusive remedy available from Marley Engineered Products. THE ABOVE WARRANTIES ARE IN LIEU OF ALL

OTHER WARRANTIES EXPRESSED OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE AFORESAID EXPRESSED WARRANTIES ARE HEREBY DISCLAIMED AND EXCLUDED FROM THIS AGREEMENT. MARLEY ENGINEERED PROD-UCTS SHALL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES ARISING WITH RESPECT TO THE PROD-UCT, WHETHER BASED UPON NEGLIGENCE, TORT, STRICT LIABILITY OR CONTRACT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state. For the address of your nearest authorized service center contact Marley Engineered Products, 470 Beauty Spot Road E, Bennettsville, South Carolina 29512 (801/479-9063). Merchandise returned to the factory must be accompanied by a return authorization and service identification tag, both available form the above location. When requesting return authorization, include all catalog numbers shown on the products.





#### 1) Heating Element (Part No. Prefix 1802-2001)

		Heater Length						
Description	28"	3'	4'	5'	6'	8'	10'	
	120 Volts	085	087	089	091	093	-	-
125 W/Ft.	208 Volts	086	088	090	092	091	095	096
per Element	240 Volts	048	054	060	066	072	077	081
	277 Volts	049	055	061	067	073	078	082
	120 Volts	005	011	017	023	029	-	-
188 W/Ft.	208 Volts	002	008	014	020	026	032	036
per Element	240 Volts	001	007	013	019	025	031	035
	277 Volts	000	006	012	018	024	030	034
	120 Volts	004	010	016	022	028	-	-
250 W/Ft.	208 Volts	003	009	015	021	027	033	037
per Element	240 Volts	002	008	014	020	026	032	036
	277 Volts	001	007	013	019	025	031	035

Built-In Controls (Optional)

		Part Number				
Description		07A and 14A Units	05A Units			
③ Disconnect Switch		5216-0124-000	5216-0124-000			
0	120 Volt	R13700002B001	410043001			
④ Transformer Relay	208 Volt	R13700002B002	410043002			
-	240 Volt	R13700002B003	410043003			
	277 Volt	R13700002B004	410043004			
_	24 Volt	5018-2006-000	5018-2006-000			
⑤ Power Relay	120 Volt	5018-2006-001	5018-2006-001			
	208/240 Volt	5018-2006-002	5018-2006-002			
	277 Volt	5018-2006-003	5018-2006-003			
6 Thermostat	1 Pole	5813-0024-000	5813-0024-000			
	2 Pole	5812-0023-000	5813-0023-000			

### HOW TO ORDER REPAIR PARTS

When ordering repair parts, always give the following information as shown in this list:

1. The Part Number

Llaatar I anath

2. The Model Number

3. The Part Description

All parts listed herein may be ordered from:

Marley Engineered Products

470 Beauty Spot Road East

Bennettsville, SC 29512

Need technical or warranty assistance?

Please call toll-free 1-800-642-HEAT.



SPX Corporation 470 Beauty Spot Rd. East Bennettsville, SC 29512 USA