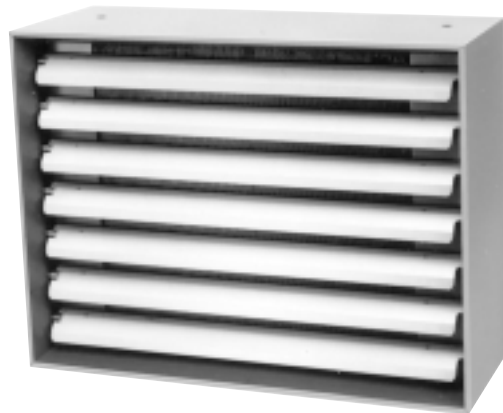




Propeller Unit Heaters/Unitary

17.4 to 705.6 MBh
Two Versatile Models - Various Sizes
Easy Installation



October 1999

UH-PRC001-EN

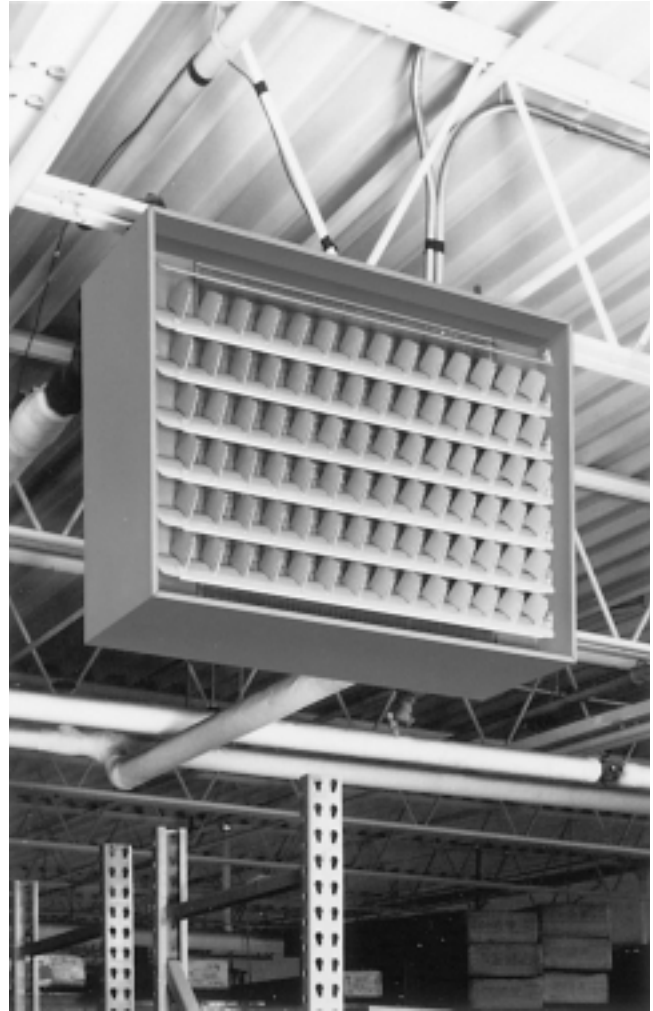
Introduction



The Industrial Designed Model P Unit Heater

The square, compact design of the Model P and rectangular Model S allow easy handling and installation. In most cases, only one person is needed to carry a unit. And because both feature compact Sigma-Flo® fins they're lightweight, making them easy to hoist and put into place.

What's more, the Model P can be stored standing on end. This means several units can be loaded on a single skid for moving from one point to another. Trane maintains a complete stock of both Model P and S units that are available to ship anywhere in the United States.



The Clean-Line Appearance of the Model S Unit Heater

Yet, the benefits of this compact design go beyond ease of installation. They continue with attractive styling. The Model S unit's simple, clean-line symmetry and the Model P unit's classic modern shape enhance any industrial facility.

Contents

Introduction	2
Features and Benefits	4
Application Considerations	8
Selection Procedure	11
Manual Selection Procedure	19
Model Number Description	21
Performance Data	23
Electric Power	44
Dimension and Weights	47
Mechanical Specifications	50

Features and Benefits

Trane propeller unit heaters feature the largest selection of standard sizes from any line in the industry. In fact, vertical Model P and horizontal Model S unit heaters provide enough 'off-the-shelf' selections to fit almost any application. The versatile two-in-one Model P is available in 15 sizes with capacities from 41.3 MBh to 705.6 MBh while the companion standard and bypass Model

S is available in 29 sizes with the capacities from 17.4 MBh up to 404 MBh. Both are designed for durability, attractiveness and compactness. These features combined with economical operation, give strategically sized Trane unit heaters an edge unmatched by any other manufacturer.

Two Units in One – the Versatile Model P

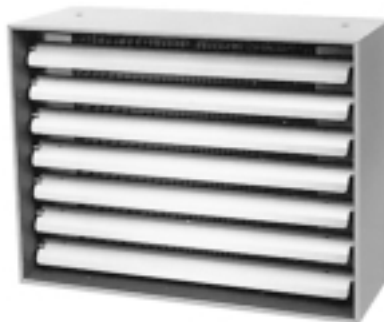
The Trane Model P can be quickly field converted from standard to low final temperature PL design simply by removing the unit's patented knockout air ports. This unique two-in-one design allows the stocking wholesaler to cut inventories in half and still meet most customer application requirements.



Patented Trane louver cone diffusers allow directional flexibility of heated air.

The Space-Saving Model S

The Model S features attractive, functional styling in a space-saving, compact design. In addition, Trane offers an exclusive bypass Model S design to meet low final temperature, high cfm requirements. This design uses a modified coil which allows some of the air to flow over the top of the coil without being heated. This cooler band of air prevents the heated air from rising so warm air throw is increased while efficiency is improved.



Trane Model S features louvered discharge as standard.

Put Heat Where It's Needed

Exclusive louver fin diffusers featured on Trane unit heaters put heat where it's needed.

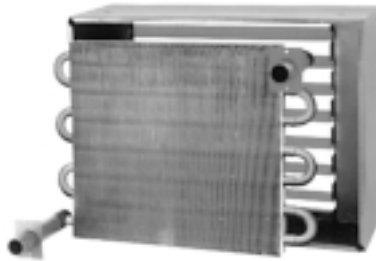


These patented Trane diffusers provide an unlimited combination of air diffusion patterns as well as greater air throw distance. In fact, when the louver cone diffuser is added to the Model P, up to 45 percent greater air throw distance is possible. On Model S units, the combination of horizontal louver blades and patented vertical diffuser fins provide four-directional control of air delivery. Optional low cost louver fin diffusers can be adjusted to provide up to 25 percent more air throw.

Features and Benefits

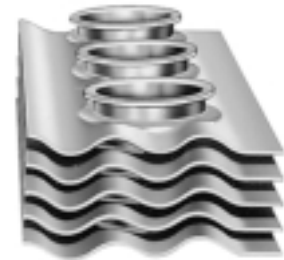
The Model S Coil

The Model S unit heater features a unique single tube serpentine coil. This compact, efficient coil has piping connections at the back for added space savings, convenience and appearance. Model S single circuit coils use threaded connectors at the back of the unit.



Compact Design

Trane designed Model S and P propeller unit heaters for easy installation and low maintenance. The Trane Sigma-Flo® fin design allows coil size to be reduced while maintaining high capacity performance equal to larger flat-fin coils. Reduced size and weight makes Trane unit heaters easy to handle and install.



The Model P Motor

The Model P motor is mounted below the top panel inside the heater casing. This reduces unit height and permits the unit to be installed closer to the ceiling for added headroom.



Rectangular Draw-Thru Coils

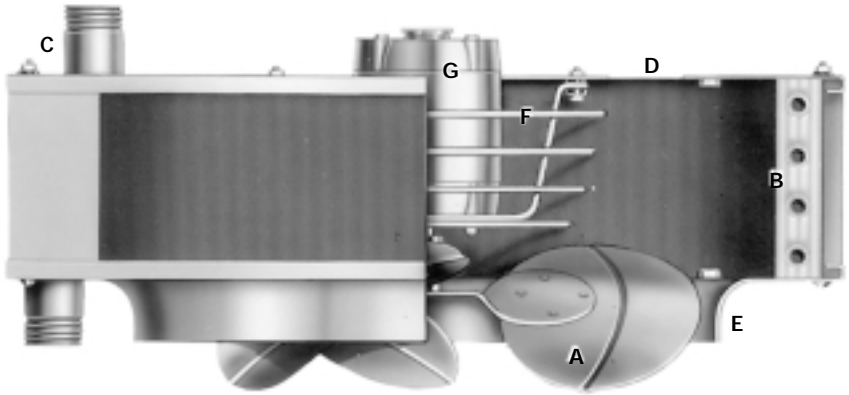
The Model P draw-thru coils use short lengths of steel pipe threaded for supply and return connections. These features make piping connections much easier for the installer.



Features and Benefits

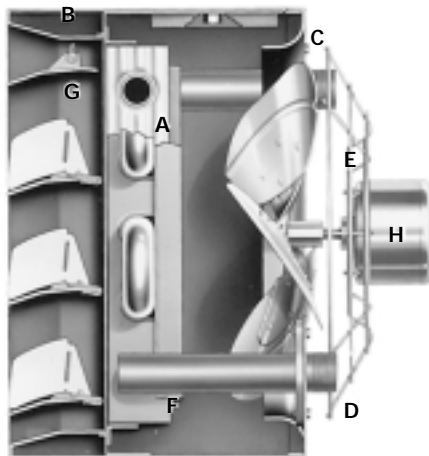
Model P

- A**
Exclusive Trane designed aluminum fans provide smooth, nonsurge performance. This, in turn, provides efficient, quiet operation.
- B**
High performance Sigma-Flo® fins in a one-row coil have more efficient heat transfer characteristics than flat fin coils.
- C**
Steel pipe headers are electrically induction-brazed to coil tubes.
- D**
Top panel features knockout air ports that, when removed, convert the unit from standard to low final air temperature, higher cfm operation.
- E**
Bottom plate provides drawn fan orifice to assure smooth airflow.
- F**
Sturdy motor mounts absorb vibration and anchor the motor securely.
- G**
Totally enclosed industrial designed motors feature built-in overload protection.

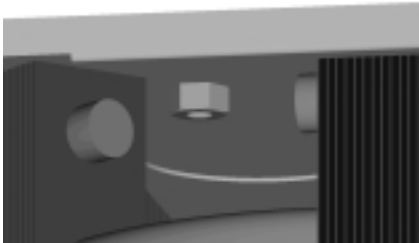


Model S

- A**
Exclusive, compact one-row serpentine coil features high performance Sigma-Flo fins.
- B**
One-piece wraparound casing with picture-frame front panel combines attractiveness with durability.
- C**
Heavy-gauge, one-piece back panel can be easily removed for quick coil access.
- D**
Rear connections and a compact design provide more headroom than conventional units.
- E**
Sturdy fan guard provides stronger motor mount and quiet operation.
- F**
Unique coil supports anchor coil tubes without restricting expansion.
- G**
Trane horizontal louvers stay in position with the exclusive louver keeper design.
- H**
Totally enclosed industrial design motors feature built-in overload protection.



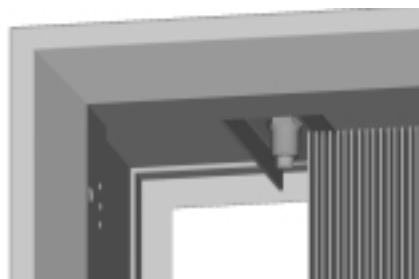
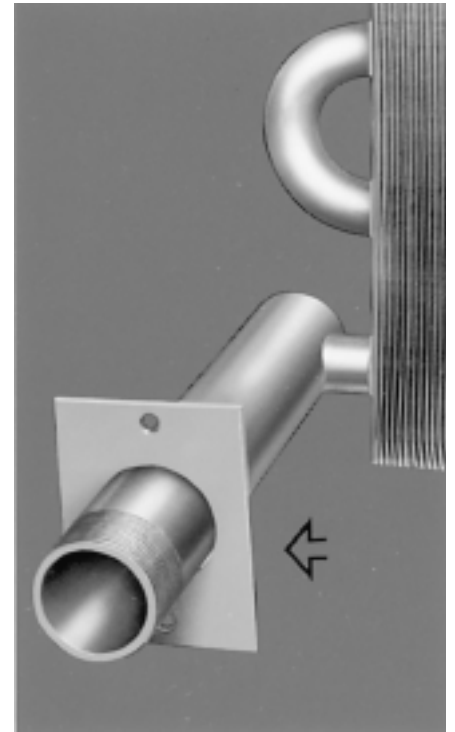
Features and Benefits



Model P

Simple Hanger and Piping Connections

The Model P uses weldnut type hanger connections, while the Model S uses a nutsert type hanger connection. Hanger rods screw easily into threaded anchor points. Piping connections can be made equally as easy. Model P units provide threaded connections for inlet and outlet, top and bottom.



Model S

Fully Accessible for Easy Maintenance

Model S and P unit heaters are fully accessible for maintenance. Only four main bolts are needed to disassemble the Model P. And when quick access is needed, the Model S features a one-piece back that can be easily removed and slid over pipes without breaking connections. Motors can also be easily removed. Both units feature totally enclosed motors with thermal overload protection. As an added benefit, Model P fan-motor assemblies can be conveniently removed from below through the fan outlet.

External Couplings

The Model S provides threaded connections for supply and return on the back of its casing. In addition, back connections reduce the amount of space needed for installation.

Application Considerations

General Rules

In locating or spotting Trane Propeller Unit Heaters – either the Model S Horizontal or Model P Projection Unit Heater – the following general rules should be considered.

1. Spot units at points of greatest heat loss. Blanket outside doorways effectively and provide ample coverage for exposed window areas.
2. Units, especially in the case of the Model S Horizontal Unit Heater, should be arranged to blow toward or along exposed walls, preferably striking the wall at a slight angle so that the heated air exerts a wiping effect along the wall. Balance of units required to supply Btu requirements should be spaced strategically in balance of the area.
3. Unit heaters should be arranged to blow into open spaces such as aisles and not directly at any worker. An exception to this rule involves the use of the Model P Unit Heater equipped with the Louver Cone Diffuser. This combination can be used effectively over closely spaced bins or machines without regard for open space. But not even the Model P Unit Heater with Louver Cone Diffuser should be in such close proximity to the workers to cause discomfort.
4. The Trane solid-state speed control will provide maximum capacity flexibility and quieter operation. Note that this speed controller is available only on selected models.
5. Mounting heights and distance of throw recommendations as given elsewhere in this catalog should be carefully observed.
6. In the case of Model P Units, they should be spotted so that they will most effectively prevent stratification of excessively warm air at the ceiling. By carefully observing this rule, this type of unit may be used between seasons to tap waste heat at the ceiling and drive it down to occupied zones, thereby eliminating the need for added heat on the system.
7. Do not spot units close to any obstruction that will impede the full and natural air delivery of the unit.

Typical Factory

In the typical industrial building, where ceilings are high, Model P Unit Heaters may be used without diffusers.

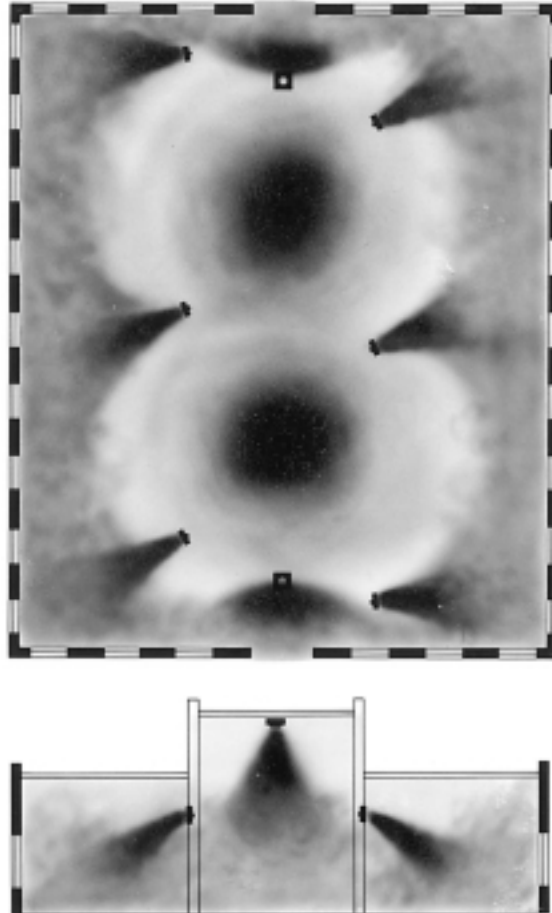


Figure AC-1 – The floor plan and elevation of a typical industrial building showing how a Trane Unit Heater System will heat various parts. Where ceilings are high in the main manufacturing section, large Projection Heaters without diffusers are used. Where ceilings are exceptionally high, as in crane bays, Model P Units with Louver Cone Diffusers provide up to 45% greater throw to top the “ceiling heat reservoir.” Model P Units with half closed Louver Cones blanket doorways. Model S Units with Louver Fins blanket windows.

In plants where the ceilings are exceptionally high, such as in crane bays as illustrated in Figure AC-1, Model P Units with Louver Cone Diffusers can increase the downward projection of heat by as much as 45% over units without diffusers.

Model P Units with the Louver Cone Diffusers can also be used to blanket doorways effectively, as shown in Figure AC-1 by simply adjusting half of the louvers vertically, and half closed.

Model S horizontal-type units are ideal for mounting in plant areas where ceilings are low. In fact, due to the

extremely small height of the Model S, and because all piping connections are made at the back of the unit, the Model S provides a greater saving in headroom than other horizontal unit heater makes. As illustrated in Figure AC-1, the Model S Unit Heaters may be mounted conveniently from the ceiling, or from building structural supports and beams. With Louver Fin Diffusers, they are ideal for blanketing windows, and Model S “Bypass” Unit Heaters, provide further flexibility of application where greater throw and more effective distribution of air in the living zone is required.

Application Considerations

General Notes

The following general notes on piping propeller unit heaters are presented based on competent engineering and installation practice:

1. Suspend unit heaters securely with provisions for easy removal.
2. Make certain units hang level vertically and horizontally.
3. Provide for expansion in supply lines (note swing joints in suggested piping arrangements).
4. Provide unions adjacent to unit heaters in both supply and return laterals. Also provide shut-off valves in all supply laterals.
5. Use 45° angle runoffs from all supply and return mains.
6. Provide at least 7" (more if necessary) clearance above tops of Model P Projection Unit Heaters. Motors are removable from below on all sizes. It is desirable to form dirt pockets with pipe tapping of the unit heater. Pipe in the branch-off should be the same size as the return tapping in the trap. Beyond the trap, the return lateral should be increased one size to the return main.

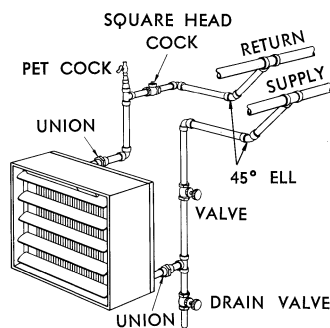


Figure AC-2

Hot Water System – Using Circulating Pump

Overhead supply and return mains are used with bottom connections to mains. Manual vent (pet cock) is used at high point on return main. Automatic air vent may be substituted if desired. Refer to Figure AC-2.

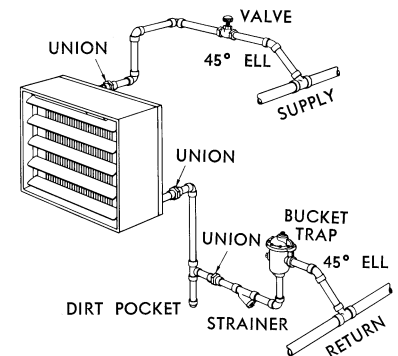


Figure AC-3

High Pressure Steam System

Overhead supply main is used with lower return main. Where steam pressure fluctuates over a wide range, a swing check valve should be placed in the return lateral between strainer and bucket trap to prevent reverse flow of condensate or flash steam when pressure drops suddenly. Top of bucket trap must be located below return outlet of coil for complete drainage of condensate. Refer to Figure AC-3.

Application Considerations

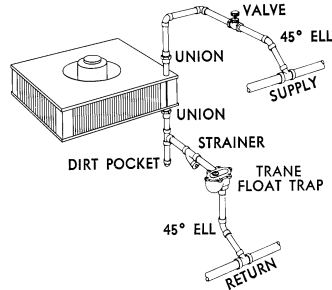


Figure AC-4

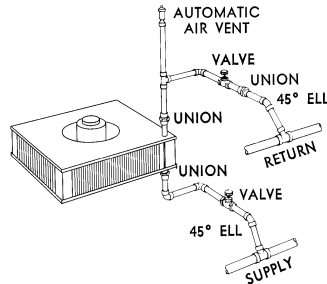


Figure AC-5

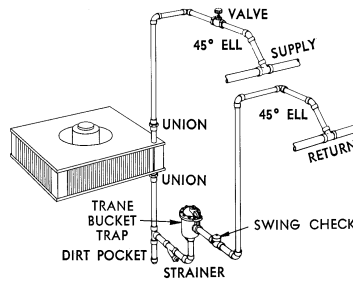


Figure AC-6

Table AC-1 - Model P Coil Face Area

Unit Numbers	Fin Area In Sq. Ft
42-P & P-L	1.20
64-P & P-L	1.49
80-P & P-L	1.98
102-P & P-L	3.28
122-P & P-L	3.28
146-P & P-L	3.88
166-P & P-L	4.85
202-P & P-L	4.85
252-P & P-L	6.52
280-P & P-L	6.52
336-P & P-L	6.52
384-P & P-L	7.82
500-P & P-L	8.72
600-P & P-L	11.63
720-P & P-L	13.08

Table AC-2 - Supply and Return Sizes at 2 Psi

Capacity In Lbs. Of Steam Per Hour	Size Of Supply	Size Of Gravity Return
39	1"	3/4"
87	1 1/4"	3/4"
134	1 1/2"	1"
272	2"	1 1/4"
449	2 1/2"	1 1/2"
822	3"	2"

Note: This table is based on 1/2 lb. drop per 100 ft. of equivalent run of steam line and approximately 1/4 lb. drop in the return line per 100 ft. Increase steam run-outs one size if more than 8 ft. long.

Vapor or Vacuum System

Lower supply and return mains are used. Piping should be similar to that used with overhead supply main if it is separately vented and trapped. Bottom supply for steam mains may be used if steam is dry. Refer to Figure AC-4. For proper pipe size, refer to Table AC-2.

Hot Water System with Circulating Pump

Lower supply and return mains are shown. Overhead supply and return main connections, similar to those in Figure AC-2 may be used. The automatic air vent is shown here but a manual vent (pet cock) may be substituted. Refer to Figure AC-5.

High Pressure Steam System

Overhead supply and return mains are used. The top of the bucket trap must be located below bottom return outlet of coil for complete drainage of condensate. Refer to Figure AC-6.

Selection Procedure

Trane Propeller Unit Heaters

Both Model S and Model P Propeller Unit Heaters are ideally suited to such a wide variety of installations that there can be no hard and fast rules regulating their selection.

In determining the type and size of the units for any building, the following points are generally considered:

BTU Requirements

While the choice of units depends upon several important factors, the total Btu requirement is usually determined first. In calculating heat loss, methods as recommended by the ASHRAE Guide may be used, or any other procedure which is known to be acceptable.

Type of Building

Once the total Btu requirement is known, the type of building together with its architecture and its purpose is considered.

In the many cases where a combination of space characteristics is found, a combination of Model S and Model P Unit Heaters may be used to create the most satisfactory heating system.

The Model P Unit Heater has the natural ability to tap the reservoir of heated air which collects at the ceiling level and return it to active service in the floor zone.

The Model P can be used on either high or low ceilings. From high mounting positions the Model P will allow ample clearance for moving objects and can project heat down into occupied areas regardless of obstacles which would restrict the flow of air from horizontal units.

From low mounting positions the Model P, with proper diffusion, can be used without disturbing nearby occupants with direct blasts of high velocity heated air, or requiring return lines so low as to leave insufficient head room.

The superior horizontal action of the Model S, on the other hand, is ideal for creating a wiping effect of warm air along exposed walls which neutralizes drafts at their source, beaming heat down narrow aisles and production lines, and blanketing large windows, doors and other points of high heat loss.

Spacing of Units

It is the usual practice to divide the building into areas with like exposures, or in relation to heat load distribution desired.

In general, Model S Unit Heaters may be selected for buildings where direct horizontal air currents are desired and where there are no obstacles to interrupt the flow of air from the heaters.

Model P Unit Heaters are successfully used where high or low mounting heights are required and should ordinarily be specified with diffusers, depending upon the mounting height and application.

Mounting Heights

The *maximum* effective mounting height is determined by the outlet temperature of the air, the outlet velocity, the cfm for which the heater is designed, and if a diffuser is used – the setting of its blades.

The higher the outlet temperature of the air, the more difficult it is to force it down into the living zone.

The cfm also affects the mounting height as a large volume of air will travel farther than a small volume under the same initial conditions of temperature and velocity.

In the preliminary planning stages, it is well to remember that the lowest possible mounting height is desirable in order to get the most heat down to the floor line and to allow the greatest possible diffusion adjustment to provide tailor-made distribution for each area.

In providing for the use of diffusers please remember, adjustment of a Louver Cone Diffuser to deflect the air toward the horizontal immediately lowers the mounting height limit. Adjustment for lateral deflection with the Louver Fin Diffuser shortens the distance of throw.

Diffusion

The use of Trane Louver Cone or Louver Fin Diffusers influences the selection of units in two principal ways:

First: It is seldom necessary to install

oversized heaters to extend the maximum effective mounting height of the Model P or the distance of throw of the Model S. Conversely, Trane Diffusers enable extremely low mounting since the adjustable blades direct heat where it is wanted without creating uncomfortable hot spots near the units.

Second: After the original selection has been made, units may be located with confidence because adjustments in heat distribution are possible to accommodate future changes or unforeseen draft conditions.

Air Changes

Better diffusion and more even temperatures can be maintained in a heated space when the rate of air recirculation through the heaters is relatively high. For buildings where large numbers of people are engaged, it is desirable to provide for a greater number of air changes than for sparsely occupied areas.

A greater number of small units are used where wide diffusion and even temperatures are necessary. A few centrally located units of large capacity would be used where there are few occupants.

Comfort Conditions and Economy

Air circulation, diffusion and spacing of units are closely related to economy and comfort in the selection of unit heaters.

The more units used to provide the required number of Btu's, the more comfortable will be the conditions for personnel. On the other hand, a few large units can be selected to provide plenty of heat at low first cost, but may be slower in response and thorough distribution of heat.

Here again, adjustable diffusion equipment can go a long way toward saving the buyer first cost expense while still providing completely satisfactory comfort conditions.



Selection Procedure

Formula

The following formula is used to arrive at final air temperature volume when 70 F (Standard Air Basis) is known or vice versa:

$$\text{Cfm at final temp.} = \text{Cfm at 70 F} \times \frac{460 + \text{Final temp.}}{460 + 70}$$

$$\text{Cfm at 70 F} = \text{Cfm final air} \times \frac{460 + 70}{460 + \text{Final temp.}}$$

Determining Special Steam Capacities

Where capacity of the unit under standard conditions is known – 2 lbs. steam, 60 F entering air – and it is desired to know the capacity of this same unit under different steam and air conditions, follow instructions given in Example 1 below.

Where a set of conditions is given – Btu, temperature rise, final temperature, cfm, steam pressure available, etc. Refer to Example 2.

Useful Data

$$\frac{\text{Btu}}{240} = \text{Sq. ft. of radiation (EDR)}$$

$$\frac{\text{Sq. ft. of radiation}}{4} = \text{Lbs. of condensate per hour}$$

$$\frac{\text{Btu}}{\text{Latent heat}} = \text{Lbs. of water per hour}$$

$$\text{Cfm} \times \text{Temp. rise} \times 1.085 = \text{Btu.}$$

$$\text{Specific heat of air (70 F)} = .241$$

$$\text{Specific weight of one cubic foot of air (70 F)} = .075.$$

$$\text{Cfm} \times 60 = \text{cfh.}$$

$$\text{Therefore, } .241 \times .075 \times 60 = 1.085$$

Example 1

Given: Model 60S Horizontal Propeller Unit Heater with a rated capacity of 60,500 Btu at 2 lbs. steam with 60 F entering air.

Desired: Capacity of this unit using 15 lbs. steam and 40 F entering air.

Under 40 F and across from 15 lbs. in SP-2, page 14, we find the factor 1.34. $60,500 \times 1.34 = 81,070$ Btu per hour.

Equivalent Direct Radiation

If working in EDR, rather than Btu, multiply the EDR by the same factor in the same way. Thus:

$$252 \text{ (From Table 3)} \times 1.34 =$$

$$338 \text{ sq. ft. or } \frac{81,070}{240}$$

Determining Amount of Condensate

To determine the amount of condensate, divide the capacity in BTU by the latent heat of steam:

$$\frac{81,070}{945} = 86 \text{ lbs per hour.}$$

$$945 = \text{Latent Heat of Steam at 15 psi. (See Table SP-9, page 18.)}$$

Determining Final Temperature

Final temperature of air leaving Trane Unit Heaters may be determined as follows:

$$\text{Inlet AirTemp.} + \frac{\text{Btu rating}}{\text{Cfm at 70F} \times 1.085} = \text{FinalTemp}$$

$$\text{Inlet AirTemp. } 40\text{F} + \frac{81,070}{815 \text{ (from table 3)} \times 1.085} = \text{FinalTemp}$$

Example 2:

Problem: A Trane Model S Horizontal Unit Heater is desired to deliver 280,000 Btu per hour in a garage where ventilation is required. Entering air temperature is 40 F. Steam at 30 lbs. pressure is available. Temperature to be maintained is 70 F.

Solution: Under 40 F and across from 30 lbs. in Table SP-2 page 14, find the factor 1.51.

Equivalent capacity of required unit at 2 lbs. steam 60 F entering air is

$$\frac{\text{Required Btu per hour}}{\text{F}} = \frac{280,000}{1.51} = 185,400 \text{ Btu}$$

From Table SP-3, page 15, select a Number 186S Unit Heater with a capacity of 185,200 Btu per hour with standard coil, and at 2 lbs. steam and 60 F entering air.

The capacity of this unit at 30 lbs. steam and 40 F entering air is $1.51 \times 185,200 = 279,650$ Btu per hour.

Surplus Capacity

While the ventilation load is being handled, any air entering the space over the desired room temperature should be considered in the heating calculations. This surplus capacity can be found by multiplying the difference between the final temperature leaving the heater and the room temperature to be maintained by 1.085 and that by the cfm. That amount of heat can be used to offset heat losses.



Selection Procedure

Model S Nomenclature

UHS A 018 S 2 E A A 1 T A W D A D B E
 123 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Digits 1,2,3 – Product Type

Digit 4 – Development Sequence

Digits 5,6,7 – Unit Size

Digit 8 – Coil Type

S = Hot Water or Steam
 W = Hot Water with Turbulators

Digit 9 – Fin Series

2 = 132
 8 = 108

Digit 10 – Design Sequence

Digit 11 – Tube Material

Digit 12 – Fin Material

Digit 13 – Voltage

Digit 14 – Motor Type

Digit 15 – Motor Mount/Fan Guard

Digit 16 – Special Coatings

Digit 17 – Diffuser

Digit 18 – Manual Starter

Digit 19 – Speed Controller (115/60/1 standard motors)

Digit 20 – Thermostats

Digit 21 – Subbase

Digit 22 – Voltage

Table SP-1 – Max. Mounting Heights and Distance of Throw for Model S Units
 (Based on 2 Lbs. Steam Pressure 60 F Entering Air)

Unit	Outlet Velocity	CFM	Final Temp. (F)	Mounting Height	Maximum Throw	
					Without Diffuser	With Louver Fin Set for Maximum Throw
18-S	162	280	117	8	12	15
20-S2	186	318	118	8	15	18
38-S	319	544	126	9	18	22
42-S	347	590	125	9	20	25
60-S	343	815	129	9	22	27
70-S	454	1100	117	10	28	35
90-S	382	1214	127	11	28	35
100-S	476	1535	118	12	28	35
126-S	411	1760	126	13	32	40
168-6	452	2380	127	14	40	50
186-S	528	2808	121	14	45	56
230-S	431	3300	124	15	40	50
260-S	529	4100	118	15	50	62
320-S	442	4480	127	15	50	62
354-S	550	5660	118	15	60	75
400-S	583	6017	122	15	65	80
19-S2	220	390	106	8	18	22
31-S	359	635	104	8	20	25
45-S	363	897	107	9	25	31
53-S	439	1090	105	10	28	35
69-S	407	1337	108	12	30	37
77-S	458	1510	107	13	32	40
91-S	394	1740	108	14	32	40
127-S	448	2440	108	15	40	50
137-S	495	2700	107	15	45	56
181-S	430	3392	109	15	42	52
207-S	514	4059	107	15	48	60
243-S	439	4607	108	15	55	68
273-S	536	5644	105	15	60	75



Selection Procedure

Model S

Maximum mounting heights for Model S Unit Heaters are given in Table SP-1. When equipped with standard Louver Fin Diffusers the distance of throw may be increased as much as 25% by "toeing-in" the vertical blades. *Distance of throw decreases in proportion to the amount of deflection given the airstream to either side of the heater.* Mounting the unit at or below maximum mounting height will insure that heated air reaches the living zone.

Model P

Maximum mounting heights for Model P Unit Heaters are given in Table SP-10, page 19. These distances are figured from the floor line to the bottom plate of the unit heater. Where ceilings are unusually low, a nearly horizontal flow of air can be obtained by equipping these units with Louver Cone Diffusers. The individually adjustable blades of the Louver Cone permit an infinite variety of adjustments to meet any on-the-job problems. By setting the blades vertically to straighten the airstream, as much as 45% increase in throw can be obtained.

Table SP-2 – Factors for Determining Steam Capacity of Model S Horizontal Unit Heaters at Various Pressures and Temperatures
Table Based on 2 PSIG and 60 F Entering Air

Steam Pressure PSIG	Temperature of Entering Air (F)												
	-10	0	10	20	30	40	50	60	70	80	90	100	
Blow-Through Type	0	1.54	1.45	1.37	1.27	1.19	1.11	1.03	0.96	0.88	0.81	0.74	0.67
	2	1.59	1.50	1.41	1.32	1.24	1.16	1.08	1.00	0.93	0.85	0.78	0.71
	5	1.64	1.55	1.46	1.37	1.29	1.21	1.13	1.05	0.97	0.90	0.83	0.76
	10	1.73	1.64	1.55	1.46	1.38	1.29	1.21	1.13	1.06	0.98	0.91	0.84
	15	1.80	1.71	1.61	1.53	1.44	1.34	1.28	1.19	1.12	1.04	0.97	0.90
	20	1.86	1.77	1.68	1.58	1.50	1.42	1.33	1.25	1.17	1.10	1.02	0.95
	30	1.97	1.87	1.78	1.68	1.60	1.51	1.43	1.35	1.27	1.19	1.12	1.04
	40	2.06	1.96	1.86	1.77	1.68	1.60	1.51	1.43	1.35	1.27	1.19	1.12
	50	2.13	2.04	1.94	1.85	1.76	1.67	1.58	1.50	1.42	1.34	1.26	1.19
	60	2.20	2.09	2.00	1.90	1.81	1.73	1.64	1.56	1.47	1.39	1.31	1.24
	70	2.26	2.16	2.06	1.96	1.87	1.78	1.70	1.61	1.53	1.45	1.37	1.29
	75	2.28	2.18	2.09	1.99	1.90	1.81	1.72	1.64	1.55	1.47	1.40	1.32

Notes:
To determine the Btu per hour capacity of a Model S Horizontal Unit Heater at any steam pressure and entering air temperature multiply rated capacity at 2 psig steam 60 F entering air (Table SP-3) by factor from above table. Factors in italics: Units should not be operated when entering air is below freezing at steam pressures below 10 psig.



Selection Procedure

Table SP-3 – Model S Horizontal Unit Heater Steam Capacities

2 Lbs. Steam 60 F Entering Air Temp

Size	Motor HP	Motor RPM	BTU Per Hour	FDR	Condensate Lbs Per Hr. Standard Units	Final Temp	CFM 70 F Air Basis	Outlet Velocity	Oper. Weight
18-S	1/50	1050	17,400	72	18	117	280	162	40
		950	16,600	69	17	118	266	154	
		800	13,900	58	14	118	224	130	
20-S2	1/50	1050	20,000	84	21	118	318	186	40
		950	19,000	79	20	120	298	173	
		800	15,500	64	17	120	250	145	
38-S	1/20	1550	38,700	162	40	126	544	319	40
		1300	35,900	150	37	130	472	279	
		1100	32,700	136	33	135	399	238	
42-S	1/20	1550	41,600	174	43	125	590	347	40
		1300	38,000	158	39	130	495	294	
		1100	34,700	145	35	136	420	251	
60-S	1/20	1550	60,500	252	64	129	815	343	55
		1300	56,000	234	58	133	706	300	
		1100	51,200	214	52	139	597	256	
70-S	1/8	1550	68,200	285	70	117	1100	454	60
		1300	64,900	271	67	123	953	397	
		1100	59,700	248	61	128	806	339	
90-S	1/8	1550	87,600	366	90	127	1214	382	75
		1300	81,200	340	84	131	1053	334	
		1100	74,200	310	76	137	891	285	
100-S	1/8	1550	96,000	400	99	118	1535	476	85
		1300	91,500	380	94	123	1330	417	
		1100	84,000	350	86	128	1126	356	
126-S	1/6	1100	125,700	525	130	126	1760	411	100
168-S	1/6	1100	172,000	716	178	127	2380	452	145
186-S	1/4	1100	185,200	775	191	121	2808	528	145
230-S	1/4	1100	229,700	957	237	124	3300	431	190
260-S	1/2	1100	256,300	1070	265	118	4100	529	195
320-S	1/2	1100	324,000	1350	335	127	4480	442	245
354-S	1/2	1100	355,500	1480	368	118	5660	550	250
400-S	3/4	1145	404,073	1684	418	122	6017	583	260

Notes:

1. Constant speed units are rated at capacities shown in regular type; Capacities in italic faced type apply only to units with multi-speed motors.
2. Capacities based on 2 psi steam and 60 F entering air.



Selection Procedure

Table SP-4 – Model S Horizontal Unit Heater Steam Capacities con't

2 Lbs. Steam 60 F Entering Air Temp

Size	Motor HP	Motor RPM	BTU Per Hour	EDR	Condensate Lbs Per Hr	Final Temp	CFM 70 F Air Basis	Outlet Velocity	Oper. Weight
Low Final Temp. "Bypass" Units									
19-S2	1/25	1050	19,300	80	20	106	390	220	40
		<i>950</i>	<i>18,300</i>	<i>77</i>	<i>19</i>	<i>108</i>	<i>360</i>	<i>205</i>	
		<i>800</i>	<i>16,300</i>	<i>68</i>	<i>17</i>	<i>110</i>	<i>300</i>	<i>173</i>	
31-S	1/20	1550	30,400	127	31	104	635	359	40
		<i>1300</i>	<i>27,800</i>	<i>116</i>	<i>29</i>	<i>109</i>	<i>520</i>	<i>302</i>	
		<i>1100</i>	<i>25,300</i>	<i>106</i>	<i>26</i>	<i>112</i>	<i>450</i>	<i>257</i>	
45-S	1/20	1550	45,800	191	47	107	897	363	55
		<i>1300</i>	<i>41,300</i>	<i>173</i>	<i>43</i>	<i>112</i>	<i>740</i>	<i>304</i>	
		<i>1100</i>	<i>37,300</i>	<i>156</i>	<i>39</i>	<i>116</i>	<i>630</i>	<i>259</i>	
53-S	1/8	1550	53,300	223	55	105	1090	439	55
		<i>1300</i>	<i>50,200</i>	<i>209</i>	<i>52</i>	<i>109</i>	<i>940</i>	<i>383</i>	
		<i>1100</i>	<i>46,200</i>	<i>192</i>	<i>48</i>	<i>114</i>	<i>795</i>	<i>327</i>	
69-S	1/8	1550	69,400	290	72	108	1337	407	70
		<i>1300</i>	<i>63,400</i>	<i>264</i>	<i>66</i>	<i>112</i>	<i>1125</i>	<i>346</i>	
		<i>1100</i>	<i>57,600</i>	<i>240</i>	<i>60</i>	<i>116</i>	<i>955</i>	<i>295</i>	
77-S	1/8	1550	76,600	320	79	107	1510	458	80
		<i>1300</i>	<i>71,700</i>	<i>299</i>	<i>74</i>	<i>111</i>	<i>1304</i>	<i>300</i>	
		<i>1100</i>	<i>65,800</i>	<i>274</i>	<i>68</i>	<i>116</i>	<i>1100</i>	<i>341</i>	
91-S	1/6	1100	91,000	380	94	108	1740	394	95
127-S	1/6	1100	125,800	524	130	108	2440	448	135
137-S	1/4	1100	135,800	567	140	107	2700	495	135
181-S	1/4	1100	180,700	755	187	109	3392	430	180
207-S	1/2	1100	206,900	863	214	107	4059	514	185
243-S	1/2	1100	238,700	995	248	108	4607	439	230
273-S	1/2	1100	272,200	1135	283	105	5644	536	235

Notes:

1. Constant speed units are rated at capacities shown in regular type; Capacities in italic faced type apply only to units with multi-speed motors.
2. Capacities based on 2 psi steam and 60 F entering air.



Selection Procedure

Table SP-5 – Model P Projection Unit Heater Steam Capacities

2 Lbs. Steam 60 F Entering Air Temperature										
Size	Motor HP	Motor RPM	BTU Per Hour	EDR	Condensate Lbs Per Hr	Final Temp.	CFM 70 F Air Basis	CFM at FinalTemp.	Outlet Velocity	Oper. Weight Lbs.
Standard Models										
42-P	1/25	1550	41,300	172	43	124	595	660	877	30
		<i>1150</i>	<i>33,600</i>	<i>140</i>	<i>35</i>	<i>131</i>	<i>436</i>	<i>495</i>	<i>658</i>	
64-P	1/20	1550	65,500	273	68	121	989	1085	1005	35
		<i>1150</i>	<i>52,800</i>	<i>220</i>	<i>55</i>	<i>129</i>	<i>706</i>	<i>785</i>	<i>727</i>	
80-P	1/20	1550	80,600	336	83	122	1200	1320	1220	40
		<i>1150</i>	<i>65,100</i>	<i>271</i>	<i>67</i>	<i>130</i>	<i>858</i>	<i>954</i>	<i>894</i>	
102-P	1/8	1070	101,800	424	106	123	1490	1635	980	55
		<i>850</i>	<i>87,900</i>	<i>366</i>	<i>91</i>	<i>129</i>	<i>1180</i>	<i>1315</i>	<i>783</i>	
122-P	1/6	1070	124,400	518	129	124	1790	1970	1170	55
146-P	1/6	1070	152,000	633	157	123	2220	2440	1045	80
166-P	1/6	1070	173,000	720	179	121	2620	2870	1230	80
202-P	1/4	1070	210,200	838	208	118	3200	3490	1495	85
252-P	1/4	1070	249,800	1040	260	115	4180	4550	1205	135
280-P	1/2	1070	283,800	1180	294	119	4430	4840	1275	135
336-P	3/4	1120	333,400	1390	345	119	5210	5690	1500	135
384-P	3/4	1120	386,000	1610	400	118	6140	6700	1770	175
500-P	1-1/2	1120	496,000	2070	514	117	8020	8750	1640	250
600-P	1-1/2	1120	585,000	2440	605	117	9450	10,300	1930	260
720-P	3	1120	705,000	2940	729	119	11,000	12,020	2250	325
Low Final Temperature Models - Standard Model P Units With All Air Ports Open										
42-P-L	1/25	1150	34,800	145	36	108	668	716	950	30
		<i>1150</i>	<i>26,000</i>	<i>108</i>	<i>27</i>	<i>111</i>	<i>470</i>	<i>506</i>	<i>672</i>	
64-P-L	1/20	1550	57,200	238	59	104	1200	1280	1190	35
		<i>1150</i>	<i>45,800</i>	<i>191</i>	<i>48</i>	<i>109</i>	<i>862</i>	<i>925</i>	<i>858</i>	
80-P-L	1/20	1550	68,000	283	71	106	1360	1455	1350	40
		<i>1150</i>	<i>55,000</i>	<i>229</i>	<i>57</i>	<i>111</i>	<i>995</i>	<i>1070</i>	<i>992</i>	
102-P-L	1/8	1070	85,400	356	89	108	1640	1760	1050	55
		<i>850</i>	<i>71,200</i>	<i>296</i>	<i>74</i>	<i>111</i>	<i>1290</i>	<i>1390</i>	<i>827</i>	
122-P-L	1/6	1070	111,000	462	115	107	2180	2330	1390	55
146-P-L	1/6	1070	125,800	524	130	109	2360	2530	1080	80
166-P-L	1/6	1070	149,000	620	154	107	2920	3130	1340	80
202-P-L	1/4	1070	176,800	736	183	108	3390	3640	1560	85
252-P-L	1/4	1070	214,900	895	224	104	4500	4800	1270	135
280-P-L	1/2	1070	251,800	1050	260	106	5040	5380	1420	135
336-P-L	3/4	1120	291,000	1210	302	107	5700	6100	1610	135
384-P-L	3/4	1120	344,000	1430	356	108	6600	7080	1870	175
500-P-L	1-1/2	1120	428,000	1785	446	102	9380	9940	1860	250
600-P-L	1-1/2	1120	515,000	2140	533	106	10,300	11,000	2060	260
720-P-L	3	1120	620,000	2580	642	108	11,900	12,750	2380	325

Notes:

Constant speed units are rated at capacities shown in regular type; capacities in italic faced type apply only to units with multi-speed motors. To determine BTU per hour capacities at various steam pressures and entering air temperatures, use conversion factors from Table SP-7, page 18. Final temperatures at new conditions can be calculated by applying basic formula.

Table SP-6 – Maximum Spread (Ft.)

Unit No.	42P	64P	80P	102P	122P	146P	166P	202P	252P	280P	336P	384P	500P	600P	720P
Spread (Ft.)	15	17	20	24	26	27	28	32	35	37	45	50	54	57	60

Note:

The "spread" is the diameter of the comfort zone at floor level, projected by the Model P unit without the louver cone diffuser, based on two pounds steam pressure and 60 F entering air.



Selection Procedure

Model P Nomenclature

UHP A 042 P 4 C A A 1 T A R C A D B E
 123 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Digits 1,2,3 – Product Type

Digit 10 – Design Sequence

Digit 15 – Fan Guard

Digit 16 – Unit Coating

Digit 4 – Development Sequence

Digit 11 – Tube Material

Digit 17 – Diffuser

Digit 18 – Manual Starter

Digits 5,6,7 – Unit Size

Digit 12 – Fin Material

Digit 19 – Speed Controller (115/60/1 standard motors)

Digit 8 – Coil Type

Digit 13 – Voltage

Digit 20 – Thermostats

Digit 9 – Fin Series

Digit 14 – Motor Type

Digit 21 – Subbase

Table SP-7 – Factors For Determining Steam Capacity Of Model P Projection Unit Heaters At Various Pressures And Temperatures

Table Based on 2 PSIG and 60 F Entering Air

Steam Pressure PSIG	Temperature of Entering Air (F)											
	-10	0	10	20	30	40	50	60	70	80	90	100
0	1.49	1.41	1.33	1.25	1.18	1.11	1.03	0.96	0.90	0.83	0.76	0.69
2	1.52	1.45	1.37	1.29	1.22	1.15	1.07	1.00	0.93	0.86	0.80	0.73
5	1.58	1.50	1.42	1.34	1.27	1.20	1.12	1.05	0.98	0.91	0.85	0.78
10	1.64	1.57	1.49	1.41	1.34	1.27	1.19	1.12	1.05	0.98	0.91	0.85
15	1.70	1.62	1.55	1.47	1.40	1.32	1.25	1.18	1.11	1.04	0.97	0.90
Draw-Through Unit												
20	1.75	1.67	1.60	1.52	1.45	1.37	1.30	1.23	1.16	1.09	1.02	0.96
30	1.83	1.75	1.68	1.61	1.53	1.46	1.39	1.32	1.25	1.18	1.11	1.04
40	1.90	1.82	1.75	1.68	1.61	1.53	1.46	1.39	1.32	1.25	1.18	1.11
50	1.96	1.87	1.81	1.74	1.67	1.59	1.52	1.45	1.38	1.31	1.24	1.17
60	2.02	1.94	1.87	1.79	1.72	1.64	1.57	1.50	1.43	1.36	1.29	1.22
70	2.07	1.99	1.92	1.84	1.76	1.69	1.62	1.55	1.47	1.40	1.33	1.27
75	2.10	2.02	1.94	1.86	1.79	1.71	1.64	1.57	1.49	1.42	1.36	1.29

Note: To determine the Btu per hour capacity of a Model P projection unit heater at any steam pressure and entering air temperature, multiply rated capacity at 2 psig steam 60 F entering air (Table SP-5) by factor from above table.

Additional Selection Data

Motor and Fan Speeds

Motor and fan speeds are selected to provide efficient performance. The solid-state speed control will provide an infinite number of speeds between the highest and the lowest cataloged fan speeds. The speed control is not calibrated in specific fan speeds. For use on units with 115 volt/60 cycle/ 1 phase, 1/8 hp and smaller standard motors only.

Standard and Bypass Units

Standard models meet most requirements and are most economical. Bypass units meet conditions as mentioned above, and are also used where low final temperature is specified.

25 and 50 Cycle Unit Heat Capacities

Table SP-8 shows the Btu, cfm, and the hp required on unit heaters when operated on 25 or 50 cycle circuits.

The multipliers in Table SP-8 may be applied to standard 60 cycle unit capacities to determine the capacities of the same unit when operating on 25 or 50 cycle current. These multipliers may be used on units cataloged at 1050 to 1150 RPM.

For the smaller Trane Unit Heaters cataloged at 1550 RPM, the capacity data in the catalog may be applied to either 25 or 50 cycle service.

Table SP-8 – Factors for Determining Unit Heater Capacities at 25 or 50 Cycles

RPM	Multiplier To Be Applied To 60-Cycle 1100 RPM Ratings			
	25 CY	50 CY	BTU	CFM
1425	1.17	1.17	1.25	1.95
	950	87	833	.572
710	710	.7	.623	.242

Table SP-9 – Properties of Steam

Gauge Pressure	Temp.	Latent
Lbs.	F	Heat
2	219	965
5	227	960
10	239	952
15	250	945
20	259	939
25	267	933
30	274	928
40	287	919
50	298	911
60	307	904
70	316	897
75	320	891

Selection Procedure

Table SP-10 - Maximum Mounting Heights in Feet for Model P Unit Heaters with and without Louver Cone Diffuser

Unit Size	Steam Pressure (PSI)				
	2	5	10	50	75
42-P	10.5	10.0	10.0	9.0	8.0
42-P LS*	12.5	12.0	12.0	11.0	10.0
42-P LS*	8.0	8.0	8.0	8.0	8.0
42-P LS*	9.0	8.5	8.5	8.0	8.0
42-P-L**	12.5	12.0	12.0	10.5	9.5
42-P-L**	14.5	14.0	13.5	12.0	11.5
42-P-L LS	9.0	8.5	8.5	8.0	8.0
42-P-L LS	10.5	10.0	10.0	9.0	8.5
64-P	12.0	11.5	11.5	10.0	9.5
64-P	14.5	14.0	14.0	12.0	11.5
64-P-LS	9.5	9.0	9.0	8.0	8.0
64-P-LS	11.5	11.0	11.0	9.5	9.0
64-P-L	15.0	14.5	14.5	12.5	12.0
64-P-L	19.0	18.5	18.5	16.5	16.0
64-P-L LS	11.5	11.0	11.0	9.5	8.0
64-P-L LS	14.0	13.5	13.5	12.0	11.5
80-P	15.0	14.5	14.0	12.0	4.5
80-P	18.5	18.0	17.5	15.5	13.5
80-P-LS	11.0	10.5	10.5	9.0	8.5
80-P-LS	13.5	13.0	13.0	11.5	11.0
80-P-L	18.0	17.5	17.5	15.0	14.0
80-P-L	22.0	21.0	21.0	19.0	18.0
80-P-L LS	13.0	12.5	12.0	11.0	10.5
80-P-L LS	17.0	16.5	16.0	14.0	13.5
102-P	14.0	13.5	13.0	11.5	11.0
102-P	17.0	16.5	16.0	14.0	13.5
102-P-LS	11.0	10.5	10.5	9.5	9.0
102-P-LS	13.5	13.0	13.0	12.0	11.5
102-P-L	17.5	17.0	16.5	15.0	14.5
102-P-L	21.5	21.0	20.5	18.5	17.5
102-P-L LS	15.0	14.5	14.5	13.0	12.5
102-P-L LS	18.5	18.0	18.0	16.0	15.0
122-P	16.0	15.5	15.5	14.0	13.5
122-P	19.5	19.0	18.5	17.0	16.0
122-P-L	21.0	20.5	20.0	17.5	17.0
122-P-L	26.0	25.5	25.0	22.5	21.5
146-P	15.5	15.0	14.5	13.0	12.0
146-P	19.0	18.5	18.0	16.0	15.5

Unit Size	Steam Pressure (PSI)				
	2	5	10	50	75
146-P-L	18.0	17.5	17.5	15.0	14.0
146-P-L	22.5	22.0	21.5	18.5	18.0
166-P	18.0	17.5	17.0	14.5	14.0
166-P	22.5	22.0	21.5	19.0	18.0
166-P-L	22.0	21.5	21.0	18.5	17.5
166-P-L	27.5	27.0	26.5	23.5	22.5
202-P	22.0	21.5	21.0	18.5	17.5
202-P	27.5	27.0	26.5	24.0	23.0
202-P-L	25.5	25.0	24.5	22.0	21.0
202-P-L	31.5	31.0	30.5	27.0	26.0
252-P	20.0	19.5	19.0	17.0	16.0
252-P	25.0	24.0	23.5	20.5	19.5
252-P-L	24.0	23.5	23.0	20.0	19.0
252-P-L	29.5	28.5	28.0	24.5	23.5
280-P	21.0	20.5	20.0	17.5	17.0
280-P	26.0	25.5	25.0	22.0	21.0
280-P-L	25.5	25.0	24.5	21.0	20.0
280-P-L	32.0	31.0	30.0	26.0	25.0
336-P	24.0	23.0	22.0	20.0	19.0
336-P	30.0	29.0	28.0	25.0	24.0
336-P-L	29.0	28.5	28.0	25.0	24.0
336-P-L	36.0	35.0	34.0	30.0	29.0
384-P	28.5	28.0	27.5	24.0	23.0
384-P	35.5	35.0	34.0	30.0	29.0
384-P-L	32.5	31.5	30.5	27.5	26.5
384-P-L	41.0	40.0	39.0	35.0	33.5
500-P	29.5	29.0	28.5	25.0	24.0
500-P	36.5	36.0	35.5	32.0	30.5
500-P-L	35.0	34.0	33.0	29.0	28.0
500-P-L	43.5	42.5	41.5	35.0	34.0
600-P	34.0	33.0	32.0	28.0	27.0
600-P	42.5	41.5	40.5	36.0	34.5
600-P-L	37.0	36.0	35.0	31.0	30.0
600-P-L	46.5	45.5	44.5	39.0	37.0
720-P	38.5	37.5	36.5	32.0	30.5
720-P	48.0	47.0	46.0	40.0	39.0
720-P-L	42.5	41.5	40.5	35.0	33.5
720-P-L	53.0	52.0	51.0	44.0	42.0

Notes:

*LS = Low speed.

**PL = Model P low final temperature model with all air ports open.

Figures in bold face show maximum mounting height with louver cone diffusers set vertically.

To meet CSA and OSHA requirements, Model P Unit Heaters mounted lower than 8.0 ft. from the floor must be equipped with an OSHA fan guard. Above table based on 60 F entering air temperature. In providing for the use of diffusers, it must be remembered that adjustment of a LCD to deflect air toward horizontal immediately lowers the mounting height limit.

Hot Water Selection Example

Selection Procedure

Select the proper size of unit heater for whatever application desired, as illustrated by the following examples.

Example 1:

Select a Model S horizontal unit heater to deliver 95 MBH with 220°F entering water temperature (EWT), 70°F entering air temperature (EAT) and a 30°F water temperature drop (WTD).

Step 1.

Determine GPM:

$$\text{GPM} = \frac{\text{Btu/hr}}{(485) \text{WTD}} = \frac{95000}{485 \times 30} = 6.53$$

Step 2.

Refer to Table SP-11 to select the conversion factor at 220° EWT and 70° EAT. Factor is 1.058.

Step 3.

Determine equivalent MBH at standard conditions (200° EWT, 60° EAT).

$$\text{Equiv. MBH} = \frac{\text{MBH}}{\text{Factor}} = \frac{95}{1.058} = 89.8$$

Step 4.

Select unit size by entering the hot water tables at the 200 °F EWT column. Select the unit which will provide 89.8 MBH at 6.53 GPM. In this example, the selection indicates a Model S 126W2 unit heater, from Table PD-2, page 28.

To determine the actual capacity of this Model S 126W2 at operating conditions (220° EWT and 70° EAT) proceed as follows.

Step 1.

Determine the MBH at 6.53 GPM by interpolation in the 200° column. (In this case 90.8 MBH.) Multiply this MBH by the conversion factor 90.8 MBH x 1.058 = 96 MBH.

Step 2.

The GPM remains constant = 6.53 GPM.

Step 3.

$$\text{WTD} = \frac{\text{Btu/hr}}{\text{GPM} \times 485} = \frac{96000}{6.53 \times 485} = 30.3$$



Selection Procedure

Step 4.

Determine the pressure drop at 6.53 GPM. Pressure drops are cataloged for both standard wall (SWT) and heavy wall. (HWT) tube coils. In this example, if a SWT coil is selected the pressure drop, by interpolation is 2.38 feet of water.

Step 5.

Calculate the final air temperature

$$F.T. = E.A.T. + \frac{\text{Btu/hr}}{\text{CFM} \times 1.085}$$

$$= 70 + \frac{96000}{1661 \times 1.085} = 70 + 53.2 = 123.2^\circ$$

Example 2

Determine the capacity of a Model 336P unit heater operating at 180° (EWT), 100° (EAT) and 15° (WTD).

Step 1.

Find conversion factor (in Table SP-11) = 0.546

Step 2.

Adjust the water temperature drop

$$\text{Adj. WTD} = \frac{15}{.546} = 27.5^\circ$$

Step 3.

Multiply the MBH (interpolated) at 27.5° WTD, 200° EWT and 60° EAT by the factor to obtain the MBH at desired conditions.

$$0.546 \times 224.9 = 123.0 \text{ MBH}$$

Step 4.

$$\text{WTD} = 27.5 \times 0.546 = 15^\circ$$

Step 5.

$$\text{GPM} = \frac{\text{Btu/hr}}{485 \times \text{WTD}} = \frac{123,000}{(485)(15)} = 16.9$$

Step 6.

Pressure drop interpolated at 27.5° WTD for a SWT coil is 1.82 feet of water.

Step 7.

Calculate final temperature

$$F.T. = E.A.T. + \frac{\text{Btu/hr}}{\text{CFM} \times 1.085}$$

$$= 100^\circ + \frac{123,000}{5210 \times 1.085} = 121.8^\circ$$

Note:
If a constant water temperature drop is desired, apply the conversion factor to the WTD and to the desired MBH and enter 200° EWT column at these conditions. Select the unit which will provide the equivalent MBH at the adjusted WTD. The GPM can then be interpolated from the table at the adjusted WTD. To determine the actual capacity at operating conditions proceed as outlined in example #2.
If a constant GPM is desired, enter the 200° EWT column at the given or calculated GPM. Select the unit which will provide the equivalent MBH at this GPM. To determine the actual capacity at operating conditions in this case proceed as outlined in example #1.

Table SP-11 – Unit Heater Hot Water Conversion Factors (Applies To Tables PD-1 - PD-5)

Ent. Air Temp	Entering Water Temperature																								
	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400
30	.962	1.036	1.110	1.182	1.259	1.331	1.408	1.482	1.554	1.627	1.702	1.780	1.850	1.925	2.000	2.070	2.142	2.220	2.295	2.370	2.440	2.515	2.590	2.660	2.735
40	.880	.954	1.024	1.100	1.171	1.249	1.318	1.391	1.468	1.539	1.612	1.686	1.759	1.831	1.909	1.976	2.048	2.120	2.193	2.268	2.348	2.417	2.488	2.560	2.632
50	.795	.869	.940	1.011	1.085	1.158	1.230	1.301	1.374	1.448	1.520	1.590	1.664	1.735	1.809	1.882	1.953	2.024	2.095	2.168	2.242	2.312	2.388	2.459	2.530
60	.715	.785	.859	.929	1.000	1.071	1.141	1.215	1.285	1.359	1.429	1.500	1.571	1.642	1.715	1.785	1.858	1.930	2.000	2.070	2.140	2.215	2.285	2.360	2.430
70	.634	.704	.774	.845	.917	.988	1.058	1.129	1.200	1.270	1.340	1.410	1.482	1.552	1.622	1.694	1.764	1.838	1.907	1.976	2.045	2.116	2.188	2.258	2.332
80	.568	.628	.698	.768	.838	.908	.978	1.048	1.118	1.188	1.258	1.328	1.398	1.468	1.538	1.604	1.674	1.742	1.815	1.884	1.952	2.020	2.091	2.162	2.230
90	.484	.552	.622	.690	.760	.829	.898	.967	1.036	1.106	1.173	1.244	1.311	1.380	1.450	1.515	1.585	1.655	1.723	1.795	1.862	1.930	1.998	2.067	2.137
100	.410	.478	.546	.615	.684	.753	.820	.889	.957	1.025	1.095	1.161	1.230	1.300	1.368	1.433	1.499	1.569	1.638	1.705	1.776	1.843	1.910	1.977	2.046

Apply to the 200 F entering water capacities only.

Table SP-12 – Trane Unit Heater Nomenclature (Applies To Tables PD-1 - PD-5)

Abbreviations	Definitions
MBH	1000 BTU Per Hour
GPM	Gallons Per Minute
FT	Final Temperature °F
PD-S.W.T	Feet Of Water Pressure Drop - Standard Wall Tubes.
PD-H.W.T	Feet Of Water Pressure Drop - Heavy Wall Tubes

Correction Factors for Propylene Glycol/Water

When sizing equipment for systems that will utilize a propylene glycol solution, consider the following factors:

1. Heat transfer @180F with no increase in flow rate

Propylene Glycol

20% solution .97*
50% solution .90*

	Propylene Glycol	Propylene Glycol
2. GPM required @180F, 20°Δ (no correction to pump curve)	1.10%	7. pH@50% by volume. 9.5
3. Pump head required @180F w/increase in GPM	1.23%*	8. Freezing Point 55% by volume — 50% -28F 40% -13F 30% +28F 20% +17F
4. Specific gravity (water = 1.0)	1.045-1.055*	**Compared to water
5. Pounds/Gallons@60F (water = 8.3453 Pounds/Gallons)	8.77	



Model Number Description

MODEL P UNIT HEATER

UHP A 042 P 4 C A A 1 T A R C A D B E
 123 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Digits 1,2,3 — Product Type

UHP

Digit 4 — Development Sequence

A

Digits 5,6,7 — Unit Size

042
064
080
102
122
146
166
202
252
280
336
384
500
600
720

Digit 8 — Coil Type

P = Steam or Hot Water*

Digit 9 — Fin Series

4 = 144*

Digit 10 — Design Sequence

C

Digit 11 — Tube Material

A = Copper*
C = Red Brass
F = Steel

Digit 12 — Fin Material

A = Aluminum*
C = Copper

Digit 13 — Voltage

1 = 115/60/1*
2 = 208/60/3
3 = 230/60/3
4 = 460/60/3
5 = 575/60/3 (Totally Enclosed)

Digit 14 — Motor Type

T = Totally Enclosed*
E = Explosion Proof

Digit 15 — Fan Guard

0 = Standard*
A = OSHA Guard**

Digit 16 — Unit Coating

0 = None
R = Epoxy
T = Epoxy Phenolic
W = Baked Phenolic

Digit 17 — Diffuser

0 = None
A = Fin Diffuser
C = Fin Diffuser w/coating

Digit 18 — Manual Starter

0 = None
A = Manual Starter w/o overload protection

Digit 19 — Speed Controller (115/60/1 standard motors)

0 = None
D = Solid-State Speed Controller
(only available up to unit size 102)

Digit 20 — Thermostats

0 = None
B = Light-Duty T-stat
C = Heavy-Duty T-stat

Digit 21 — Subbase

0 = None
E = Light-Duty
F = Heavy-Duty

Motors

Standard motors are 115/60/1, totally enclosed, with thermal overload protection for all units through size 280P. Standard motors for 42P, 64P and 80P are standard pole, sleeve bearing. The 102P motor is permanent split capacitor type with sleeve bearings. Motor for unit sizes 122P through 280P are permanent split capacitor type with permanently lubricated ball bearings. Motors used on unit sizes 336P through 720P are 230/460/60/3, totally enclosed, with permanently lubricated ball bearings. Unit sizes smaller than 336P are also available with 230/460/60/3 motors.

All motors, fractional hp and integral hp, have Class "B" insulation. The 115/60/1 motors used as standard on unit sizes 42P through 102P can be operated at multiple speeds with the addition of a solid-state control.

All units available with explosion-proof motors.

* Standard features of stock vertical heaters.
**For the 3-phase and explosion-proof motors, the OSHA guard ships separately.



Model Number Description

MODEL S UNIT HEATER

UHS A 018 S 2 E A A 1 T A W D A D B E
 123 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Digits 1,2,3 — Product Type

UHS

Digit 4— Development Sequence

A

Digits 5,6,7 — Unit Size

Standard	Modified
018	019
020	031
038	045
042	053
060	069
070	077
090	091
100	127
126	137
168	181
186	207
230	243
260	273
320	
354	
400	

Digit 8 — Coil Type

S = Steam or Hot Water*
 W = Hot Water (Adds a Spiral)

Digit 9 — Fin Series

2 = 132
 8 = 108**

DIGIT 10 — Design Sequence

E

Digit 11 — Tube Material

A = Copper*
 C = Red Brass
 F = Steel

Digit 12 — Fin Material

A = Aluminum*
 C = Copper

Digit 13 — Voltage

1 = 115/60/1*
 2 = 208/60/3
 3 = 230/60/3
 4 = 460/60/3
 5 = 575/60/3 (Totally Enclosed)

Digit 14 — Motor Type

T = Totally Enclosed*
 E = Explosion Proof

Digit 15 — Motor Mount/Fan Guard

0 = Standard**
 A = OSHA Fan Guard/Motor Mount (115 volt totally enclosed motors ONLY)
 B = Standard Fan Guard with Motor Base (3 phase or explosion proof motors ONLY)

Digit 16 — Special Coatings

0 = No Special Coatings
 R = Epoxy Coating
 T = Epoxy Phenolic Coating
 W = Baked Phenolic Coating

Digit 17 — Diffuser

0 = None
 B = Fin Diffuser
 D = Fin Diffuser w/coating

Digit 18 — Manual Starter

0 = None
 A = Manual Starter w/o overload protection (Single Phase Only)

Digit 19 — Speed Controller (115/60/1 standard motors)

0 = None
 D = Solid-State Speed Controller (only available up to unit size 100)

Digit 20 — Thermostats

0 = None
 B = Light-Duty T-stat
 C = Heavy-Duty T-stat

Digit 21 — Subbase

0 = None
 E = Light-Duty
 F = Heavy-Duty

Motors

Totally enclosed, 115/60/1 Class "B" insulated, shaded pole and PSC motors are STD. 1/25 through 1/8 hp are sleeve bearing. 1/6 through 3/4 hp are ball bearing. All single phase motors have built-in overload protection. Sleeve bearing motors can be oiled. Ball bearing motors are permanently lubricated. The 115/60/1 motors used as standard on unit sizes 18S through 100S can be operated at multiple speeds with the addition of a solid-state control. All units available with explosion-proof motors.

*Standard features of stock horizontal unit heaters.
 **Units equipped with 115 volt totally enclosed motors come with a standard fan guard/motor mount. Units equipped with 3 phase or explosion proof motors come with no guard and the motors are base mounted.



Performance Data

Table PD-1 – Model S Unit Heater Hot Water Capacities – 60°F Ent. Air Temp.
 (Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																							
		180 F						200 F						220 F						240 F					
		MBH	GPM	FT S	W/T	H/W/T	PD	MBH	GPM	FT S	W/T	H/W/T	PD	MBH	GPM	FT S	W/T	H/W/T	PD	MBH	GPM	FT S	W/T	H/W/T	PD
18-S	5	9.9	4.07	92.4	.17	.21	12.0	4.94	99.4	.24	.28	14.1	5.81	106.4	.31	.37	16.2	6.69	113.3	.39	.47				
CFM 280	10	7.0	1.45	83.1	.03	.03	9.2	1.89	90.1	.04	.05	11.3	2.32	97.0	.06	.07	13.4	2.76	104.0	.08	.10				
RPM 1075 HP 1/50	15	4.2	.58	73.8	.01	.01	6.3	.87	80.8	.01	.01	8.4	1.16	87.7	.02	.02	10.6	1.45	94.7	.03	.03				
20-S2	5	11.8	4.86	94.5	.24	.28	14.3	5.90	101.9	.33	.39	16.9	6.95	109.4	.43	.51	19.4	8.00	116.8	.54	.64				
CFM 315	10	8.3	1.71	84.2	.04	.04	10.8	2.23	91.7	.06	.07	13.4	2.76	99.1	.08	.10	15.9	3.28	106.6	.11	.13				
RPM 1075 HP 1/50	15	4.8	.66	74.0	.01	.01	7.3	1.01	81.5	.01	.02	9.9	1.36	88.9	.02	.03	12.4	1.71	96.4	.04	.04				
38-S	5	25.0	10.30	102.4	1.23	1.48	29.8	12.27	110.5	1.64	1.96	34.5	14.23	118.6	2.09	2.50	39.3	16.19	126.7	2.58	3.09				
CFM 543	10	21.4	4.42	96.4	.28	.33	26.2	5.40	104.5	.38	.46	31.0	6.38	112.5	.51	.61	35.7	7.36	120.6	.64	.77				
RPM 1550 HP 1/20	15	17.9	2.46	90.3	.10	.12	22.6	3.11	98.4	.14	.17	27.4	3.76	106.5	.20	.24	32.2	4.42	114.6	.26	.31				
42-S	20	14.3	1.47	84.3	.04	.05	19.1	1.97	92.4	.06	.08	23.8	2.46	100.5	.09	.11	28.6	2.95	108.5	.13	.15				
CFM 591	25	10.8	.89	78.2	.02	.02	15.5	1.28	86.3	.03	.04	20.3	1.67	94.4	.05	.06	25.0	2.06	102.5	.07	.08				
RPM 1550 HP 1/20	30	—	—	—	—	—	11.9	.82	80.3	.01	.02	16.7	1.15	88.4	.02	.03	21.5	1.47	96.4	.04	.05				
60-S	5	26.2	10.81	100.9	1.34	1.61	31.2	12.87	108.7	1.78	2.13	36.2	14.93	116.5	2.28	2.72	41.2	16.98	124.3	2.81	3.36				
CFM 815	10	22.5	4.64	95.1	.30	.36	27.5	5.67	102.9	.42	.50	32.5	6.69	110.7	.55	.66	37.5	7.72	118.4	.70	.84				
RPM 1550 HP 1/20	15	18.8	2.58	89.3	.11	.13	23.8	3.26	97.1	.16	.19	28.8	3.95	104.8	.22	.26	33.7	4.64	112.6	.28	.34				
70-S	20	15.0	1.55	83.5	.04	.05	20.0	2.06	91.2	.07	.09	25.0	2.58	99.0	.10	.12	30.0	3.09	106.8	.14	.17				
CFM 1100	25	11.3	.93	77.6	.02	.02	16.3	1.34	85.4	.03	.04	21.3	1.76	93.2	.05	.06	26.3	2.17	101.0	.07	.09				
RPM 1550 HP 1/20	30	—	—	—	—	—	12.6	.86	79.6	.02	.02	17.6	1.21	87.4	.03	.03	22.6	1.55	95.2	.04	.05				
90-S	5	39.0	16.09	104.1	3.40	4.07	46.2	19.03	112.2	4.46	5.33	53.3	21.98	120.3	5.65	6.76	—	—	—	—	—				
CFM 1214	10	35.2	7.25	99.8	.83	1.00	42.3	8.72	107.8	1.12	1.34	49.5	10.19	115.9	1.45	1.74	56.6	11.67	124.0	1.81	2.17				
RPM 1550 HP 1/20	15	31.3	4.30	95.4	.33	.40	38.4	5.28	103.5	.46	.55	45.6	6.26	111.6	.62	.74	52.7	7.25	119.6	.78	.94				
100-S	20	27.4	2.83	91.0	.16	.19	34.6	3.56	99.1	.23	.28	41.7	4.30	107.2	.32	.38	48.9	5.04	115.3	.41	.49				
CFM 1535	25	23.6	1.94	86.7	.08	.10	30.7	2.53	94.7	.13	.15	37.9	3.12	102.8	.18	.22	45.0	3.71	110.9	.24	.29				
RPM 1550 HP 1/8	30	19.7	1.35	82.3	.04	.05	26.9	1.84	90.4	.07	.09	34.0	2.34	98.5	.11	.13	41.1	2.83	106.5	.15	.18				
126-S	40	12.0	.62	73.5	.01	.01	19.1	.99	81.6	.02	.03	26.3	1.35	89.7	.04	.05	33.4	1.72	97.8	.06	.07				
CFM 1760	5	45.7	18.84	98.3	4.49	5.38	54.1	22.29	105.3	5.90	7.06	—	—	—	—	—	—	—	—	—					
RPM 1100 HP 1/8	10	41.1	8.48	94.5	1.10	1.32	49.5	10.21	101.5	1.48	1.77	57.9	11.93	108.5	1.92	2.30	66.3	13.66	115.5	2.40	2.87				
150-S	15	36.6	5.03	90.7	.44	.52	45.0	6.18	97.7	.61	.73	53.3	7.33	104.7	.81	.97	61.7	8.48	111.7	1.03	1.24				
CFM 2114	20	32.1	3.30	86.9	.21	.25	40.4	4.17	93.9	.30	.36	48.8	5.03	100.9	.42	.50	57.2	5.89	107.9	.54	.65				
RPM 1550 HP 1/8	25	27.5	2.27	83.0	.11	.13	35.9	2.96	90.1	.17	.20	44.3	3.65	97.1	.24	.28	52.6	4.34	104.1	.32	.38				
180-S	30	23.0	1.58	79.2	.06	.07	31.3	2.15	86.2	.10	.11	39.7	2.73	93.3	.14	.17	48.1	3.30	100.3	.20	.23				
CFM 2514	40	13.9	.71	71.6	.01	.02	22.2	1.15	78.6	.03	.04	30.6	1.58	85.6	.05	.06	39.0	2.01	92.7	.08	.10				
200-S	10	53.9	11.10	100.9	2.14	2.56	64.3	13.25	108.8	2.84	3.40	74.7	15.39	116.7	3.64	4.36	85.1	17.54	124.6	4.50	5.39				
CFM 3114	15	49.6	6.81	97.6	.91	1.08	60.0	8.24	105.5	1.23	1.47	70.4	9.67	113.4	1.60	1.92	80.8	11.10	121.3	2.01	2.40				
RPM 1550 HP 1/8	20	45.3	4.67	94.4	.47	.56	55.7	5.74	102.3	.65	.78	66.1	6.81	110.2	.86	1.03	76.5	7.88	118.1	1.10	1.32				
250-S	25	41.0	3.38	91.1	.26	.32	51.4	4.24	99.0	.38	.45	61.8	5.09	106.9	.52	.62	72.2	5.95	114.8	.67	.80				
CFM 3514	30	36.7	2.52	87.9	.16	.19	47.1	3.24	95.8	.24	.28	57.5	3.95	103.7	.33	.40	67.9	4.67	111.6	.44	.52				
RPM 1550 HP 1/8	40	28.1	1.45	81.3	.06	.07	38.5	1.98	89.2	.10	.12	48.9	2.52	97.1	.15	.18	59.3	3.06	105.0	.21	.25				
300-S	50	19.5	.80	74.8	.02	.03	29.9	1.23	82.7	.04	.05	40.3	1.66	90.6	.07	.09	50.7	2.09	98.5	.11	.13				
CFM 4114	10	60.6	12.48	96.4	2.63	3.15	72.3	14.90	103.4	3.50	4.19	84.0	17.32	110.5	4.49	5.37	95.8	19.74	117.5	5.55	6.64				
RPM 1550 HP 1/8	15	55.7	7.65	93.4	1.11	1.33	67.4	9.26	100.5	1.51	1.81	79.1	10.87	107.5	1.97	2.36	90.9	12.48	114.6	2.47	2.96				
350-S	20	50.8	5.23	90.5	.57	.68	62.5	6.44	97.5	.80	.95	74.2	7.65	104.6	1.06	1.27	86.0	8.86	111.6	1.35	1.62				
CFM 4514	25	45.9	3.78	87.5	.32	.39	57.6	4.75	94.6	.47	.56	69.3	5.72	101.6	.63	.76	81.1	6.68	108.7	.82	.98				
RPM 1550 HP 1/8	30	41.0	2.82	84.6	.19	.23	52.7	3.62	91.6	.29	.35	64.4	4.43	98.7	.40	.48	76.2	5.23	105.7	.53	.64				
400-S	40	31.2	1.61	78.7	.07	.09	42.9	2.21	85.8	.12	.15	54.6	2.82	92.8	.18	.22	66.4	3.42	99.9	.25	.30				
CFM 5114	50	21.4	.88	72.8	.03	.03	33.1	1.37	79.9	.05	.06	44.8	1.85	86.9	.09	.10	56.6	2.33	94.0	.13	.15				
RPM 1100 HP 1/6	60	—	—	—	—	—	23.3	.80	74.0	.02	.02	35.0	1.20	81.0	.04	.05	46.8	1.61	88.1	.07	.08				
500-S	10	80.0	16.48	101.9	5.29	6.33	95.0	19.58	109.7	6.97	8.34	110.0	22.68	117.6	8.88	10.62	—	—	—	—	—				
CFM 6114	15	74.9	10.29	99.2	2.31	2.76	89.9	12.36	107.1	3.09	3.70	104.9	14.42	115.0	3.99	4.78	120.0	16.48	122.8	4.97	5.95				
RPM 1100 HP 1/6	20	69.8	7.20	96.6	1.23	1.47	84.9	8.74	104.4	1.68	2.01	99.9	10.29	112.3	2.20	2.64	114.9	11.84	120.2	2.77	3.32				
600-S	25	64.8	5.34	93.9	.73	.87	79.8	6.58	101.8	1.02	1.22	94.8	7.82	109.6	1.36	1.62	109.8	9.05	117.5	1.73	2.07				
CFM 7114	30	59.7	4.10	91.3	.46	.55	74.7	5.13	99.1	.66	.79	89.7	6.16	107.0	.89	1.07	104.7	7.20	114.9	1.15	1.38				
RPM 1100 HP 1/6	40	49.5	2.55	85.9	.20	.24	64.6	3.33	93.8	.31	.37	79.6	4.10	101.7	.44	.52	94.6	4.87	109.5	.58	.70				
700-S	50	39.4	1.62	80.6	.09	.11	54.4	2.24	88.5	.15	.19	69.4	2.86	96.4	.23	.28	84.4	3.48	104.2	.32	.39				
CFM 8114	60	29.2	1.00	75.3	.04	.05	44.3	1.52	83.2	.08	.09	59.3	2.04	91.0	.13	.15	74.3	2.55	98.9	.19	.22				



Performance Data

Table PD-1 (Continued) — Model S Unit Heater Hot Water Capacities – 60°F Ent. Air Temp.

(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																			
		180 F				200 F				220 F				240 F							
		MBH	GPM	FT	PD	MBH	GPM	FT	PD	MBH	GPM	FT	PD	MBH	GPM	FT	PD				
168-S CFM 2381 RPM 1100 HP 1/6	15	101.4	13.93	99.2	4.60	5.51	121.2	16.66	106.9	6.12	7.33	141.1	19.39	114.6	7.87	9.41	161.0	22.12	122.3	9.75	11.67
	20	95.5	9.84	97.0	2.50	2.99	115.3	11.88	104.6	3.37	4.04	135.2	13.93	112.3	4.39	5.26	155.0	15.98	120.0	5.50	6.58
	25	89.6	7.38	94.7	1.51	1.81	109.4	9.02	102.4	2.08	2.48	129.3	10.66	110.0	2.74	3.28	149.1	12.29	117.7	3.47	4.15
	30	83.6	5.75	92.4	.97	1.17	103.5	7.11	100.1	1.37	1.63	123.4	8.47	107.7	1.83	2.19	143.2	9.84	115.4	2.34	2.80
	40	71.8	3.70	87.8	.45	.54	91.7	4.72	95.5	.67	.80	111.5	5.75	103.2	.92	1.11	131.4	6.77	110.9	1.21	1.45
	50	60.0	2.47	83.2	.22	.27	79.8	3.29	90.9	.36	.43	99.7	4.11	98.6	.51	.61	119.5	4.93	106.3	.69	.83
60	48.1	1.65	78.6	.11	.13	68.0	2.34	86.3	.20	.23	87.9	3.02	94.0	.30	.36	107.7	3.70	101.7	.42	.50	
186-S CFM 2808 RPM 1100 HP 1/4	15	110.2	15.14	96.2	5.33	6.38	131.7	18.10	103.2	7.09	8.48	153.2	21.05	110.3	9.10	10.89	—	—	—	—	—
	20	103.9	10.70	94.1	2.90	3.47	125.4	12.92	101.2	3.91	4.68	146.9	15.14	108.2	5.09	6.09	168.4	17.36	115.3	6.37	7.62
	25	97.5	8.04	92.0	1.76	2.10	119.1	9.81	99.1	2.41	2.88	140.6	11.59	106.1	3.18	3.80	162.1	13.36	113.2	4.02	4.81
	30	91.2	6.27	89.9	1.14	1.36	112.7	7.74	97.0	1.59	1.90	134.3	9.22	104.1	2.13	2.54	155.8	10.70	111.1	2.72	3.25
	40	78.6	4.05	85.8	.53	.63	100.1	5.16	92.8	.78	.93	121.6	6.27	99.9	1.08	1.29	143.1	7.37	107.0	1.41	1.69
	50	65.9	2.72	81.6	.26	.32	87.4	3.60	88.7	.42	.50	109.0	4.49	95.8	.60	.72	130.5	5.38	102.8	.81	.97
60	53.3	1.83	77.5	.13	.16	74.8	2.57	84.5	.23	.28	96.3	3.31	91.6	.35	.42	117.8	4.05	98.7	.49	.59	
230-S CFM 3299 RPM 1100 HP 1/4	15	142.7	19.61	99.9	1.98	2.37	171.3	23.53	107.8	2.65	3.18	199.8	27.46	115.8	3.43	4.10	228.4	31.38	123.8	4.26	5.10
	20	133.2	13.72	97.2	1.06	1.27	161.7	16.67	105.2	1.44	1.73	190.3	19.61	113.2	1.89	2.26	218.8	22.55	121.1	2.38	2.85
	25	123.6	10.19	94.5	.63	.75	152.2	12.54	102.5	.88	1.05	180.7	14.90	110.5	1.17	1.40	209.3	17.25	118.5	1.49	1.78
	30	114.1	7.84	91.9	.40	.47	142.6	9.80	99.8	.57	.68	171.2	11.76	107.8	.77	.92	199.7	13.72	115.8	.99	1.19
	40	95.0	4.89	86.5	.17	.21	123.5	6.36	94.5	.27	.32	152.1	7.84	102.5	.38	.45	180.6	9.31	110.5	.50	.60
	50	75.8	3.13	81.2	.08	.10	104.4	4.30	89.2	.13	.16	133.0	5.48	97.1	.20	.24	161.5	6.66	105.1	.28	.33
60	56.7	1.95	75.9	.03	.04	85.3	2.93	83.8	.07	.08	113.9	3.91	91.8	.11	.13	142.4	4.89	99.8	.16	.19	
70	—	—	—	—	—	66.2	1.95	78.5	.03	.04	94.8	2.79	86.5	.06	.07	123.3	3.63	94.5	.10	.11	
260-S CFM 4099 RPM 1100 HP 1/2	15	160.0	21.98	96.0	2.43	2.91	192.1	26.40	103.2	3.25	3.89	224.3	30.81	110.4	4.20	5.03	256.4	35.23	117.7	5.23	6.26
	20	149.0	15.35	93.5	1.29	1.55	181.1	18.67	100.7	1.77	2.11	213.3	21.98	108.0	2.32	2.77	245.4	25.29	115.2	2.92	3.49
	25	138.0	11.38	91.0	.76	.92	170.2	14.03	98.3	1.07	1.28	202.3	16.68	105.5	1.42	1.70	234.5	19.33	112.7	1.82	2.17
	30	127.1	8.73	88.6	.48	.58	159.2	10.94	95.8	.69	.82	191.4	13.15	103.0	.94	1.12	223.5	15.35	110.3	1.21	1.45
	40	105.1	5.42	83.6	.21	.25	137.3	7.07	90.9	.32	.38	169.4	8.73	98.1	.46	.55	201.6	10.39	105.3	.61	.73
	50	83.2	3.43	78.7	.09	.11	115.3	4.75	85.9	.16	.19	147.5	6.08	93.2	.24	.29	179.6	7.40	100.4	.34	.40
60	61.3	2.10	73.8	.04	.05	93.4	3.21	81.0	.08	.10	125.6	4.31	88.2	.13	.16	157.7	5.42	95.5	.19	.23	
70	—	—	—	—	—	71.5	2.10	76.1	.04	.05	103.6	3.05	83.3	.07	.09	135.8	4.00	90.5	.11	.14	
320-S CFM 4481 RPM 1100 HP 1/2	15	205.7	28.26	102.3	4.47	5.35	245.6	33.75	110.5	5.93	7.09	285.6	39.24	118.7	7.60	9.10	325.5	44.73	127.0	9.41	11.27
	20	194.4	20.03	100.0	2.44	2.92	234.3	24.15	108.2	3.28	3.93	274.3	28.26	116.4	4.26	5.10	314.2	32.38	124.6	5.33	6.37
	25	171.7	11.79	95.3	.97	1.16	211.6	14.54	103.5	1.34	1.61	251.6	17.28	111.7	1.79	2.15	291.5	20.03	120.0	2.29	2.74
	30	149.0	7.68	90.6	.46	.55	189.0	9.74	98.9	.67	.80	228.9	11.79	107.1	.92	1.10	268.9	13.85	115.3	1.20	1.43
	40	126.3	5.21	86.0	.23	.28	166.3	6.85	94.2	.36	.43	206.2	8.50	102.4	.52	.62	246.2	10.15	110.6	.69	.83
	50	103.7	3.56	81.3	.12	.14	143.6	4.93	89.5	.20	.24	183.6	6.31	97.8	.30	.36	223.5	7.68	106.0	.42	.51
60	81.0	2.38	76.7	.06	.07	120.9	3.56	84.9	.12	.14	160.9	4.74	93.1	.18	.22	200.8	5.91	101.3	.27	.32	
80	—	—	—	—	—	98.3	2.53	80.2	.06	.08	138.2	3.56	88.4	.11	.13	178.2	4.59	96.6	.17	.21	
354-S CFM 5661 RPM 1100 HP 1/2	15	232.6	31.96	97.9	5.55	6.65	277.8	38.17	105.2	7.37	8.82	323.1	44.38	112.6	9.46	11.32	—	—	—	—	—
	20	219.6	22.63	95.8	3.03	3.63	264.9	27.30	103.1	4.08	4.88	310.1	31.96	110.5	5.30	6.34	355.4	36.62	117.9	6.62	7.92
	25	193.7	13.31	91.5	1.20	1.43	239.0	16.42	98.9	1.67	1.99	284.2	19.53	106.3	2.22	2.66	329.5	22.63	113.6	2.84	3.40
	30	167.8	8.65	87.3	.56	.67	213.1	10.98	94.7	.83	.99	258.3	13.31	102.1	1.13	1.36	303.5	15.64	109.4	1.48	1.77
	40	141.9	5.85	83.1	.28	.34	187.2	7.71	90.5	.45	.53	232.4	9.58	97.8	.64	.76	277.6	11.44	105.2	.86	1.03
	50	116.0	3.99	78.9	.15	.17	161.3	5.54	86.3	.25	.30	206.5	7.09	93.6	.38	.45	251.7	8.65	101.0	.52	.63
60	90.1	2.65	74.7	.07	.09	135.3	3.99	82.0	.14	.17	180.6	5.32	89.4	.23	.27	225.8	6.65	96.8	.33	.40	
80	—	—	—	—	—	109.4	2.82	77.8	.08	.09	154.7	3.99	85.2	.14	.16	199.9	5.15	92.5	.21	.25	
400-S CFM 6017 RPM 1140 HP 3/4	15	278.0	38.21	101.6	7.36	8.69	335.0	46.18	110.3	10.06	11.81	391.0	53.74	118.5	12.80	15.14	—	—	—	—	—
	20	263.5	27.16	99.4	4.06	4.95	321.0	33.09	108.0	5.79	6.91	379.0	39.07	116.7	7.65	9.02	435.5	44.89	125.1	9.60	11.28
	25	229.0	15.73	94.3	1.52	1.73	286.0	19.66	102.8	2.29	2.59	345.0	23.71	111.6	3.16	3.83	403.0	27.69	120.8	4.21	5.13
	30	198.0	10.20	89.5	.68	.88	256.0	13.19	98.3	1.11	1.32	314.0	16.18	107.0	1.61	1.82	372.0	19.17	115.6	2.17	2.47
	40	168.0	6.93	85.1	.37	.43	227.0	9.36	94.0	.60	.73	283.0	11.67	102.3	.89	1.07	341.0	14.06	111.0	1.26	1.45
	50	143.0	4.91	81.4	.21	.28	196.0	6.74	89.3	.34	.42	252.0	8.66	97.7	.53	.65	314.0	10.79	107.0	.78	.92
60	118.0	3.47	77.7	.11	.13	166.0	4.89	84.8	.21	.28	222.0	6.54	93.2	.32	.41	285.0	8.39	102.6	.51	.62	
80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

See Table SP-12 for abbreviations.



Performance Data

Table PD-1 (Continued) — Model S Unit Heater Hot Water Capacities – 60°F Ent. Air Temp.
(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																			
		260 F				300 F					340 F					380 F					
		MBH	GPM	FT S.W.T.	H.W.T.	MBH	GPM	FT S.W.T.	H.W.T.	MBH	GPM	FT S.W.T.	H.W.T.	MBH	GPM	FT S.W.T.	H.W.T.	MBH	GPM	FT S.W.T.	H.W.T.
18-S	10	15.5	3.19	111.0	.10	.12	19.7	4.07	124.9	.15	.18	24.0	4.94	138.8	.21	.25	28.2	5.81	152.7	.27	.32
CFM 280	20	9.8	1.01	92.3	.01	.02	14.1	1.45	106.3	.02	.03	18.3	1.89	120.2	.04	.05	22.5	2.32	134.1	.05	.06
RPM 1075	30	—	—	—	—	—	8.4	.58	87.6	.00	.01	12.6	.87	101.5	.01	.01	16.9	1.16	115.5	.02	.02
HP 1/50	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.2	.58	96.8	.00	.01
38-S	10	40.5	8.34	128.7	.79	.94	50.0	10.30	144.9	1.10	1.32	—	—	—	—	—	—	—	—	—	—
CFM 543	20	33.4	3.44	116.6	.16	.20	42.9	4.42	132.8	.25	.30	—	—	—	—	—	—	—	—	—	—
RPM 1550	30	26.2	1.80	104.5	.05	.06	35.7	2.46	120.7	.09	.10	45.3	3.11	136.8	.13	.15	—	—	—	—	—
HP 1/20	40	19.1	.98	92.4	.02	.02	28.6	1.47	108.6	.04	.04	38.1	1.97	124.7	.06	.07	47.7	2.46	140.9	.08	.10
	50	—	—	—	—	—	21.5	.89	96.5	.01	.02	31.0	1.28	112.7	.03	.03	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	23.9	.82	100.6	.01	.01	33.4	1.15	116.7	.02	.03
42-S	10	42.5	8.75	126.2	.86	1.02	52.4	10.81	141.8	1.20	1.43	—	—	—	—	—	—	—	—	—	—
CFM 591	20	35.0	3.61	114.6	.18	.21	45.0	4.64	130.2	.27	.32	55.0	5.67	145.7	.37	.44	—	—	—	—	—
RPM 1550	30	27.6	1.89	103.0	.06	.07	37.5	2.58	118.5	.10	.11	47.5	3.26	134.1	.14	.17	—	—	—	—	—
HP 1/20	40	20.1	1.04	91.3	.02	.02	30.1	1.55	106.9	.04	.05	40.1	2.06	122.5	.06	.07	50.1	2.58	138.1	.09	.11
	50	—	—	—	—	—	22.6	.93	95.3	.02	.02	32.6	1.34	110.9	.03	.04	42.6	1.76	126.4	.05	.05
	60	—	—	—	—	—	—	—	—	—	—	25.2	.86	99.2	.01	.02	35.1	1.21	114.8	.02	.03
60-S	20	56.0	5.77	123.4	.51	.62	70.3	7.25	139.5	.74	.89	—	—	—	—	—	—	—	—	—	—
CFM 815	30	48.3	3.32	114.6	.19	.23	62.6	4.30	130.8	.30	.35	—	—	—	—	—	—	—	—	—	—
RPM 1550	40	40.6	2.09	105.9	.09	.10	54.9	2.83	122.0	.14	.17	69.2	3.56	138.2	.20	.25	—	—	—	—	—
HP 1/20	50	32.8	1.35	97.1	.04	.05	47.1	1.94	113.3	.07	.09	61.4	2.53	129.5	.11	.13	75.7	3.12	145.6	.16	.19
	60	25.1	.86	88.4	.02	.02	39.4	1.35	104.6	.04	.05	53.7	1.84	120.7	.06	.08	68.0	2.34	136.9	.09	.11
	80	—	—	—	—	—	—	—	—	—	—	38.3	.99	103.3	.02	.03	52.5	1.35	119.4	.04	.04
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.1	.76	101.9	.01	.02
70-S	20	65.5	6.75	114.9	.68	.81	82.3	8.48	129.0	.98	1.17	99.0	10.21	143.0	1.31	1.56	—	—	—	—	—
CFM 1100	30	56.4	3.88	107.3	.26	.31	73.2	5.03	121.3	.39	.47	89.9	6.18	135.4	.54	.65	—	—	—	—	—
RPM 1550	40	47.4	2.44	99.7	.11	.14	64.1	3.30	113.7	.19	.22	80.8	4.17	127.7	.27	.32	97.6	5.03	141.8	.36	.43
HP 1/8	50	38.3	1.58	92.1	.05	.06	55.0	2.27	106.1	.10	.12	71.8	2.96	120.1	.15	.18	88.5	3.65	134.2	.21	.25
	60	29.2	1.00	84.4	.02	.03	45.9	1.58	98.5	.05	.06	62.7	2.15	112.5	.08	.10	79.4	2.73	126.5	.12	.15
	80	—	—	—	—	—	27.7	.71	83.2	.01	.02	44.5	1.15	97.2	.03	.03	61.2	1.58	111.3	.05	.06
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.89	96.0	.02	.02
90-S	40	69.7	3.59	112.9	.27	.32	90.6	4.67	128.7	.41	.50	—	—	—	—	—	—	—	—	—	—
CFM 1214	50	61.1	2.52	106.4	.15	.17	82.0	3.38	122.2	.24	.28	102.8	4.24	138.0	.34	.40	—	—	—	—	—
RPM 1550	60	52.6	1.81	99.9	.08	.10	73.4	2.52	115.7	.14	.17	94.2	3.24	131.5	.21	.25	115.0	3.95	147.3	.29	.34
HP 1/8	80	35.4	.91	86.9	.02	.03	56.2	1.45	102.7	.05	.06	77.0	1.98	118.5	.09	.11	97.8	2.52	134.3	.13	.16
	100	—	—	—	—	—	39.0	.80	89.6	.02	.02	59.8	1.23	105.4	.04	.05	80.7	1.66	121.2	.06	.08
	120	—	—	—	—	—	—	—	—	—	—	42.7	.73	92.4	.02	.02	63.5	1.09	108.2	.03	.04
100-S	40	78.1	4.02	106.9	.33	.40	101.6	5.23	121.0	.51	.61	125.0	6.44	135.1	.71	.84	—	—	—	—	—
CFM 1535	50	68.3	2.82	101.0	.18	.21	91.8	3.78	115.1	.29	.34	115.2	4.75	129.2	.41	.49	138.7	5.72	143.3	.55	.66
RPM 1550	60	58.5	2.01	95.1	.10	.12	82.0	2.82	109.2	.17	.20	105.4	3.62	123.3	.26	.31	128.9	4.43	137.4	.35	.42
HP 1/8	80	38.9	1.00	83.4	.03	.03	62.4	1.61	97.4	.06	.08	85.8	2.21	111.5	.11	.13	109.3	2.82	125.6	.16	.19
	100	19.3	.40	71.6	.01	.01	42.8	.88	85.7	.02	.03	66.2	1.37	99.8	.05	.06	89.7	1.85	113.9	.08	.09
	120	—	—	—	—	—	—	—	—	—	—	46.6	.80	88.0	.02	.02	70.1	1.20	102.1	.04	.04
	140	—	—	—	—	—	—	—	—	—	—	27.0	.40	76.2	.01	.01	50.5	.74	90.3	.02	.02
126-S	50	99.5	4.10	112.1	.42	.51	129.5	5.34	127.8	.65	.78	159.6	6.58	143.6	.90	1.08	—	—	—	—	—
CFM 1760	60	89.3	3.07	106.8	.25	.30	119.4	4.10	122.5	.41	.49	149.4	5.13	138.2	.59	.70	—	—	—	—	—
RPM 1100	80	69.0	1.78	96.1	.10	.12	99.1	2.55	111.9	.18	.21	129.1	3.33	127.6	.27	.33	159.2	4.10	143.3	.38	.46
HP 1/6	100	48.7	1.00	85.5	.04	.04	78.8	1.62	101.3	.08	.10	108.8	2.24	117.0	.14	.17	138.9	2.86	132.7	.20	.24
	120	28.4	.49	74.9	.01	.01	58.5	1.00	90.6	.03	.04	88.5	1.52	106.4	.07	.08	118.6	2.04	122.1	.11	.14
	140	—	—	—	—	—	—	—	—	—	—	68.2	1.00	95.7	.03	.04	98.3	1.45	111.5	.06	.07
	160	—	—	—	—	—	—	—	—	—	—	47.9	.62	85.1	.01	.02	78.0	1.00	100.8	.03	.04
168-S	40	151.2	7.79	118.5	1.53	1.83	191.0	9.84	133.9	2.23	2.66	—	—	—	—	—	—	—	—	—	—
CFM 2381	50	139.4	5.75	114.0	.90	1.07	179.1	7.38	129.3	1.35	1.61	218.8	9.02	144.7	1.84	2.21	—	—	—	—	—
RPM 1100	60	127.6	4.38	109.4	.56	.67	167.3	5.75	124.8	.87	1.04	207.0	7.11	140.1	1.22	1.46	—	—	—	—	—
HP 1/6	80	103.9	2.68	100.2	.23	.28	143.6	3.70	115.6	.40	.48	183.3	4.72	131.0	.60	.71	223.0	5.75	146.3	.81	.97
	100	80.2	1.65	91.1	.10	.12	120.0	2.47	106.4	.20	.24	159.7	3.29	121.8	.32	.38	199.4	4.11	137.2	.45	.54
	120	56.6	.97	81.9	.04	.05	96.3	1.65	97.3	.10	.12	136.0	2.34	112.6	.17	.21	175.7	3.02	128.0	.26	.32
	140	—	—	—	—	—	72.6	1.07	88.1	.05	.05	112.3	1.65	103.5	.10	.11	152.1	2.24	118.9	.16	.19
	160	—	—	—	—	—	49.0	.63	79.0	.02	.02	88.7	1.14	94.3	.05	.06	128.4	1.65	109.7	.09	.11
	180	—	—	—	—	—	—	—	—	—	—	65.0	.74	85.2	.02	.03	104.7	1.20	100.5	.05	.06



Performance Data

Table PD-1 (Continued) — Model S Unit Heater Hot Water Capacities – 60°F Ent. Air Temp.
(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																			
		260 F				300 F				340 F				380 F							
		MBH	GPM	FT S	WT HWT	PD	PD	MBH	GPM	FT S	WT HWT	PD	PD	MBH	GPM	FT S	WT HWT	PD	PD		
186-S CFM 2808 RPM 1100 HP 1/4	40	164.7	8.48	114.0	1.78	2.13	207.7	10.70	128.2	2.58	3.09	250.8	12.92	142.3	3.47	4.15	—	—	—	—	
	50	152.0	6.27	109.9	1.04	1.25	195.1	8.04	124.0	1.56	1.87	238.1	9.81	138.2	2.14	2.56	—	—	—	—	
	60	139.4	4.79	105.7	.65	.78	182.4	6.27	119.9	1.01	1.21	225.5	7.74	134.0	1.42	1.69	—	—	—	—	
	80	114.1	2.94	97.4	.28	.33	157.1	4.05	111.6	.47	.56	200.2	5.16	125.7	.70	.83	243.2	6.27	139.8	.94	1.13
	100	88.8	1.83	89.1	.12	.14	131.8	2.72	103.3	.23	.28	174.9	3.60	117.4	.37	.45	217.9	4.49	131.5	.53	.63
	120	63.5	1.09	80.8	.05	.06	106.5	1.83	95.0	.12	.14	149.6	2.57	109.1	.21	.25	192.6	3.31	123.2	.31	.37
	140	—	—	—	—	—	81.2	1.20	86.7	.06	.07	124.3	1.83	100.8	.11	.14	167.3	2.46	114.9	.19	.22
160	—	—	—	—	—	55.9	.72	78.4	.02	.03	99.0	1.28	92.5	.06	.07	142.0	1.83	106.6	.11	.13	
180	—	—	—	—	—	—	—	—	—	—	73.7	.84	84.2	.03	.04	116.7	1.34	98.3	.06	.08	
230-S CFM 3299 RPM 1100 HP 1/4	40	209.2	10.78	118.4	.64	.76	266.3	13.72	134.4	.94	1.13	—	—	—	—	—	—	—	—	—	
	50	190.1	7.84	113.1	.36	.44	247.2	10.19	129.1	.56	.67	304.3	12.54	145.0	.78	.93	—	—	—	—	
	60	171.0	5.87	107.8	.22	.26	228.1	7.84	123.7	.35	.42	285.2	9.80	139.7	.50	.60	—	—	—	—	
	80	132.8	3.42	97.1	.09	.10	189.9	4.89	113.1	.15	.19	247.0	6.36	129.0	.24	.28	304.1	7.84	145.0	.33	.39
	100	94.6	1.95	86.4	.03	.04	151.7	3.13	102.4	.07	.08	208.8	4.30	118.3	.12	.14	265.9	5.48	134.3	.18	.21
	120	—	—	—	—	—	113.5	1.95	91.7	.03	.04	170.6	2.93	107.7	.06	.07	227.7	3.91	123.6	.10	.12
	140	—	—	—	—	—	—	—	—	—	—	13.4	1.95	97.0	.03	.04	189.5	2.79	112.9	.05	.07
160	—	—	—	—	—	—	—	—	—	—	94.2	1.21	86.3	.01	.02	151.3	1.95	102.3	.03	.04	
260-S CFM 4099 RPM 1100 HP 1/2	40	233.7	12.04	112.5	.78	.93	298.0	15.35	127.0	1.15	1.38	362.3	18.67	141.5	1.57	1.87	—	—	—	—	
	50	211.8	8.73	107.6	.44	.53	276.1	11.38	122.1	.68	.81	340.3	14.03	136.5	.95	1.14	—	—	—	—	
	60	189.8	6.52	102.7	.26	.32	254.1	8.73	117.1	.43	.51	318.4	10.94	131.6	.61	.73	382.7	13.15	146.1	.82	.98
	80	146.0	3.76	92.8	.10	.12	210.3	5.42	107.3	.19	.22	274.6	7.07	121.7	.29	.34	338.8	8.73	136.2	.40	.48
	100	102.1	2.10	83.0	.04	.04	166.4	3.43	97.4	.08	.10	230.7	4.75	111.9	.14	.17	295.0	6.08	126.3	.21	.25
	120	—	—	—	—	—	122.5	2.10	87.6	.04	.04	186.8	3.21	102.0	.07	.09	251.1	4.31	116.5	.12	.14
	140	—	—	—	—	—	—	—	—	—	—	143.0	2.10	92.1	.03	.04	207.2	3.05	106.6	.06	.08
160	—	—	—	—	—	—	—	—	—	—	99.1	1.28	82.3	.01	.02	163.4	2.10	96.7	.03	.04	
320-S CFM 4481 RPM 1100 HP 1/2	40	308.8	15.91	123.5	1.50	1.80	388.7	20.03	140.0	2.17	2.60	—	—	—	—	—	—	—	—	—	
	50	286.1	11.79	118.9	.89	1.06	366.0	15.09	135.3	1.32	1.58	—	—	—	—	—	—	—	—	—	
	60	263.5	9.05	114.2	.56	.67	343.4	11.79	130.6	.86	1.03	—	—	—	—	—	—	—	—	—	
	80	218.1	5.62	104.9	.24	.29	298.0	7.68	121.3	.41	.49	377.9	9.74	137.7	.59	.71	—	—	—	—	
	100	172.8	3.56	95.5	.11	.13	252.7	5.21	112.0	.21	.25	332.6	6.85	128.4	.32	.39	412.5	8.50	144.8	.45	.54
	120	127.4	2.19	86.2	.05	.06	207.3	3.56	102.6	.11	.13	287.2	4.93	119.1	.18	.22	367.1	6.31	135.5	.27	.32
	140	—	—	—	—	—	162.0	2.38	93.3	.05	.06	241.9	3.56	109.8	.10	.12	321.8	4.74	126.2	.16	.20
160	—	—	—	—	—	116.6	1.50	84.0	.02	.03	196.5	2.53	100.4	.06	.07	276.4	3.56	116.9	.10	.12	
180	—	—	—	—	—	—	—	—	—	—	151.2	1.73	91.1	.03	.04	231.1	2.65	107.5	.06	.07	
354-S CFM 5661 RPM 1100 HP 1/2	50	322.9	13.31	112.6	1.10	1.32	413.4	17.04	127.3	1.64	1.96	503.8	20.77	142.0	2.24	2.68	—	—	—	—	
	60	297.0	10.20	108.4	.69	.83	387.5	13.31	123.1	1.06	1.27	477.9	16.42	137.8	1.48	1.78	—	—	—	—	
	80	245.2	6.32	99.9	.30	.36	335.6	8.65	114.6	.50	.60	426.1	10.98	129.4	.74	.88	516.6	13.31	144.1	.99	1.19
	100	193.4	3.99	91.5	.13	.16	283.8	5.85	106.2	.25	.30	374.3	7.71	120.9	.40	.48	464.8	9.58	135.7	.56	.67
	120	141.5	2.43	83.0	.06	.07	232.0	3.99	97.8	.13	.15	322.5	5.54	112.5	.22	.27	413.0	7.09	127.2	.33	.40
	140	—	—	—	—	—	180.2	2.65	89.3	.06	.08	270.7	3.99	104.1	.13	.15	361.2	5.32	118.8	.20	.24
	160	—	—	—	—	—	128.4	1.65	80.9	.03	.03	218.9	2.82	95.6	.07	.08	309.4	3.99	110.4	.12	.15
180	—	—	—	—	—	—	—	—	—	—	167.1	1.91	87.2	.03	.04	257.6	2.95	101.9	.07	.09	
400-S CFM 6017 RPM 1140 HP 3/4	50	400.0	16.49	119.8	1.67	1.88	520.0	21.44	137.8	2.66	3.11	641.0	26.43	155.9	3.88	4.71	—	—	—	—	
	60	371.0	12.75	115.5	1.02	1.23	490.0	16.83	133.3	1.71	1.94	610.0	20.96	151.7	2.56	2.96	—	—	—	—	
	80	306.0	7.88	105.8	.46	.54	425.0	10.95	123.6	.81	.95	540.0	13.91	140.8	1.22	1.42	662.0	17.06	159.0	1.80	2.61
	100	244.0	5.03	96.5	.21	.28	362.0	7.46	114.1	.41	.52	478.0	9.85	131.5	.67	.80	596.0	12.28	149.1	.98	1.18
	120	180.0	3.09	86.9	.18	.19	300.0	4.15	104.9	.22	.30	415.0	7.13	122.1	.37	.48	530.0	9.10	139.3	.57	.71
	140	—	—	—	—	—	235.0	3.46	95.1	.13	.15	350.0	5.15	112.3	.21	.29	461.0	6.78	129.0	.35	.42
	160	—	—	—	—	—	171.0	2.20	85.6	.04	.05	285.0	3.67	102.6	.13	.15	394.9	5.08	118.9	.21	.30
180	—	—	—	—	—	—	—	—	—	—	220.0	2.52	92.9	.04	.05	325.0	3.72	108.6	.12	.13	



Performance Data

Table PD-2 – Model S Unit Heater Hot Water Capacities – 60°F Ent. Air Temp. Hot Water with Turbulators and 132 Fin Series
(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																			
		180 F				200 F				220 F				240 F							
		MBH	GPM	FT S.W.T	PD H.W.T	MBH	GPM	FT S.W.T	PD H.W.T	MBH	GPM	FT S.W.T	PD H.W.T	MBH	GPM	FT S.W.T	PD H.W.T				
20-W2	5	13.2	5.45	98.7	.46	.56	15.7	6.47	106.0	.66	.72	18.2	7.50	113.2	.75	.90	20.7	8.53	120.5	.91	1.08
CFM 315	10	11.5	2.36	93.6	.11	.14	14.0	2.88	100.9	.15	.18	16.5	3.39	108.2	.20	.23	18.9	3.91	115.4	.24	.29
RPM 1075	15	9.7	1.34	88.5	.04	.05	12.2	1.68	95.8	.06	.07	14.7	2.02	103.1	.08	.10	17.2	2.36	110.4	.10	.12
HP 1/50	20	8.0	.82	83.4	.02	.02	10.5	1.08	90.7	.03	.04	13.0	1.34	98.0	.04	.05	15.5	1.59	105.3	.05	.06
	25	6.3	.52	78.3	.01	.01	8.7	.72	85.6	.01	.02	11.2	.93	92.9	.02	.03	13.7	1.13	100.2	.03	.04
	30	—	—	—	—	—	7.0	.48	80.5	.01	.01	9.5	.65	87.8	.01	.01	12.0	.82	95.1	.02	.02
38-W2	5	28.4	11.71	110.9	2.70	3.22	33.5	13.80	120.0	3.41	4.07	38.6	15.89	129.1	4.21	5.03	43.6	17.99	138.3	5.05	6.03
CFM 514	10	26.3	5.42	107.2	.75	.89	31.4	6.47	116.3	.96	1.15	36.5	7.52	125.4	1.20	1.43	41.6	8.56	134.5	1.45	1.74
RPM 1550	15	24.2	3.33	103.4	.33	.40	29.3	4.03	112.5	.44	.52	34.4	4.72	121.6	.55	.66	39.5	5.42	130.8	.68	.81
HP 1/20	20	22.1	2.28	99.7	.18	.21	27.2	2.80	108.8	.24	.28	32.3	3.33	117.9	.31	.37	37.4	3.85	127.0	.38	.46
	25	20.0	1.65	95.9	.11	.13	25.1	2.07	105.0	.14	.17	30.2	2.49	114.1	.19	.23	35.3	2.91	123.2	.24	.29
	30	17.9	1.23	92.2	.07	.08	23.0	1.58	101.3	.09	.11	28.1	1.93	110.4	.13	.15	33.2	2.28	119.5	.16	.19
42-W2	5	28.8	11.89	110.2	2.77	3.31	34.0	14.02	119.1	3.50	4.18	39.2	16.14	128.1	4.32	5.16	44.3	18.27	137.1	5.18	6.19
CFM 530	10	26.7	5.51	106.5	.77	.92	31.9	6.57	115.4	.99	1.18	37.0	7.63	124.4	1.23	1.47	42.2	8.70	133.4	1.49	1.78
RPM 1550	15	24.6	3.38	102.8	.34	.41	29.8	4.09	111.8	.45	.53	34.9	4.80	120.7	.57	.68	40.1	5.51	129.7	.70	.83
HP 1/20	20	22.5	2.32	99.1	.18	.22	27.6	2.85	108.1	.24	.29	32.8	3.38	117.0	.32	.38	38.0	3.91	126.0	.39	.47
	25	20.4	1.68	95.4	.11	.13	25.5	2.10	104.4	.15	.18	30.7	2.53	113.4	.20	.23	35.8	2.95	122.3	.25	.29
	30	18.2	1.25	91.7	.07	.08	23.4	1.61	100.7	.10	.11	28.6	1.96	109.7	.13	.15	33.7	2.32	118.6	.17	.20
	40	14.0	.72	84.3	.03	.03	19.2	.99	93.3	.04	.05	24.3	1.25	102.3	.06	.07	29.5	1.52	111.3	.08	.10
60-W2	10	40.4	8.33	109.3	2.10	2.50	47.9	9.88	118.5	2.66	3.17	55.5	11.43	127.7	3.30	3.94	63.0	12.99	136.9	3.97	4.73
CFM 755	15	38.0	5.22	106.4	.97	1.16	45.5	6.25	115.6	1.24	1.48	53.1	7.29	124.8	1.56	1.86	60.6	8.33	134.0	1.89	2.26
RPM 1550	20	35.6	3.67	103.4	.54	.65	43.1	4.44	112.6	.71	.84	50.6	5.22	121.8	.90	1.07	58.2	6.00	131.0	1.10	1.31
HP 1/20	25	33.1	2.73	100.5	.34	.40	40.7	3.35	109.7	.44	.53	48.2	3.98	118.9	.57	.68	55.8	4.60	128.1	.71	.85
	30	30.7	2.11	97.5	.22	.26	38.3	2.63	106.7	.30	.36	45.8	3.15	115.9	.39	.46	53.3	3.67	125.1	.49	.58
	40	25.9	1.33	91.6	.10	.13	33.4	1.72	100.8	.15	.18	41.0	2.11	110.0	.20	.24	48.5	2.50	119.2	.26	.31
	50	21.1	.87	85.7	.05	.06	28.6	1.18	94.9	.08	.10	36.1	1.49	104.1	.11	.14	43.7	1.80	113.3	.15	.18
70-W2	10	46.3	9.54	102.5	2.63	3.14	54.9	11.32	110.4	3.33	3.98	63.5	13.10	118.3	4.14	4.94	72.2	14.87	126.2	4.97	5.94
CFM 1004	15	43.6	5.99	100.0	1.22	1.45	52.2	7.17	107.9	1.56	1.86	60.8	8.36	115.8	1.96	2.34	69.4	9.54	123.7	2.38	2.84
RPM 1550	20	40.8	4.21	97.5	.68	.82	49.5	5.10	105.4	.89	1.06	58.1	5.99	113.3	1.13	1.35	66.7	6.88	121.2	1.38	1.65
HP 1/8	25	38.1	3.14	95.0	.42	.51	46.7	3.85	102.9	.56	.67	55.4	4.56	110.8	.72	.86	64.0	5.28	118.7	.89	1.06
	30	35.4	2.43	92.5	.28	.33	44.0	3.02	100.4	.38	.45	52.6	3.62	108.3	.49	.59	61.3	4.21	116.2	.61	.73
	40	30.0	1.54	87.5	.13	.16	38.6	1.99	95.4	.19	.23	47.2	2.43	103.3	.26	.31	55.8	2.88	111.2	.33	.39
	50	24.5	1.01	82.5	.07	.08	33.1	1.37	90.4	.10	.12	41.8	1.72	98.3	.15	.17	50.4	2.08	106.2	.19	.23
	60	19.1	.65	77.5	.03	.04	27.7	.95	85.4	.06	.07	36.3	1.25	93.3	.09	.10	44.9	1.54	101.3	.12	.14



Performance Data

Table PD-2 (Continued) – Model S Unit Heater Hot Water Capacities – 60°F Ent. Air Temp. Hot Water with Turbulators and 132 Fin Series
(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																							
		180 F						200 F						220 F						240 F					
		MBH	GPM	FT	SWT	HWT	PD	MBH	GPM	FT	SWT	HWT	PD	MBH	GPM	FT	SWT	HWT	PD	MBH	GPM	FT	SWT	HWT	PD
90-W2 CFM 1162 RPM 1550 HP 1/8	10	60.9	12.56	108.3	5.44	6.49	72.1	14.85	117.2	6.84	8.17	83.2	17.15	126.0	8.45	10.08	—	—	—	—	—	—	—	—	
	15	58.0	7.97	106.0	2.58	3.08	69.1	9.50	114.8	3.27	3.90	80.3	11.03	123.7	4.07	4.86	91.4	12.56	132.5	4.91	5.85	—	—		
	20	55.1	5.67	103.7	1.48	1.77	66.2	6.82	112.5	1.89	2.26	77.3	7.97	121.3	2.38	2.84	88.5	9.12	130.2	2.89	3.45	—	—		
	25	52.1	4.30	101.3	.94	1.12	63.3	5.22	110.2	1.22	1.45	74.4	6.13	119.0	1.55	1.85	85.5	7.05	127.8	1.90	2.26	—	—		
	30	49.2	3.38	99.0	.64	.76	60.3	4.14	107.9	.84	1.00	71.5	4.91	116.7	1.07	1.28	82.6	5.67	125.5	1.33	1.58	—	—		
	40	43.3	2.23	94.4	.33	.39	54.5	2.81	103.2	.45	.53	65.6	3.38	112.0	.58	.70	76.7	3.95	120.9	.73	.88	—	—		
100-W2 CFM 1427 RPM 1550 HP 1/8	50	37.5	1.54	89.7	.18	.22	48.6	2.00	98.5	.26	.31	59.7	2.46	107.4	.35	.42	70.9	2.92	116.2	.45	.53	—	—		
	60	31.6	1.09	85.1	.10	.12	42.7	1.47	93.9	.16	.19	53.9	1.85	102.7	.22	.26	65.0	2.23	111.6	.29	.35	—	—		
	10	67.3	13.87	103.5	6.42	7.66	79.6	16.40	111.4	8.07	9.63	—	—	—	—	—	—	—	—	—	—	—	—		
	15	64.0	8.79	101.3	3.04	3.62	76.3	10.49	109.3	3.85	4.60	88.6	12.18	117.2	4.80	5.73	100.9	13.87	125.2	5.79	6.90	—	—		
	20	60.7	6.26	99.2	1.74	2.08	73.0	7.53	107.2	2.23	2.66	85.3	8.79	115.1	2.91	3.35	97.7	10.06	123.1	3.41	4.07	—	—		
	25	57.5	4.74	97.1	1.11	1.32	69.8	5.75	105.1	1.43	1.71	82.1	6.77	113.0	1.82	2.17	94.4	7.78	121.0	2.23	2.66	—	—		
126-W2 CFM 1661 RPM 1100 HP 1/6	30	54.2	3.72	95.0	.75	.89	66.5	4.57	102.9	.98	1.17	78.8	5.41	110.9	1.26	1.51	91.1	6.26	118.8	1.56	1.86	—	—		
	40	47.6	2.45	90.8	.38	.46	59.9	3.09	98.7	.52	.63	72.3	3.72	106.7	.68	.82	84.6	4.36	114.6	.86	1.03	—	—		
	50	41.1	1.69	86.5	.21	.25	53.4	2.20	94.5	.30	.36	65.7	2.71	102.4	.41	.49	78.0	3.22	110.4	.53	.63	—	—		
	60	34.6	1.19	82.3	.12	.14	46.9	1.61	90.3	.18	.22	59.2	2.03	98.2	.26	.30	71.5	2.45	106.2	.34	.40	—	—		
	15	84.8	11.66	107.1	6.44	7.68	100.8	13.86	116.0	8.10	9.66	116.8	16.05	124.8	10.04	11.98	132.8	18.25	133.7	12.05	14.38	—	—		
	20	81.1	8.36	105.0	3.75	4.47	97.1	10.01	113.9	4.75	5.66	113.1	11.66	122.8	5.93	7.03	129.1	13.31	131.6	7.17	8.55	—	—		
168-W2 CFM 2267 RPM 1100 HP 1/6	25	77.4	6.38	102.9	2.42	2.88	93.4	7.70	111.8	3.09	3.69	109.4	9.02	120.7	3.90	4.65	125.4	10.34	129.6	4.74	5.65	—	—		
	30	73.7	5.06	100.9	1.66	1.98	89.7	6.16	109.8	2.15	2.57	105.7	7.26	118.6	2.73	3.26	121.7	8.36	127.5	3.35	3.99	—	—		
	40	66.2	3.41	96.7	.88	1.05	82.2	4.24	105.6	1.18	1.41	98.2	5.06	114.5	1.52	1.81	114.2	5.88	123.4	1.89	2.25	—	—		
	50	58.8	2.42	92.6	.51	.61	74.8	3.08	101.5	.71	.85	90.8	3.74	110.4	.93	1.11	106.8	4.40	119.2	1.18	1.41	—	—		
	60	51.3	1.76	88.5	.31	.37	67.3	2.31	97.3	.45	.54	83.3	2.86	106.2	.60	.72	99.3	3.41	115.1	.78	.93	—	—		
	20	108.7	11.20	104.2	7.45	8.89	129.8	13.37	112.8	9.39	11.20	150.9	15.55	121.4	11.70	13.95	172.1	17.73	130.0	14.09	16.81	—	—		
25	104.1	8.58	102.3	4.85	5.78	125.3	10.33	110.9	6.16	7.34	146.4	12.07	119.5	7.73	9.22	167.5	13.81	128.1	9.36	11.17	—	—			
30	99.6	6.84	100.5	3.37	4.01	120.7	8.29	109.1	4.32	5.15	141.9	9.75	117.7	5.45	6.50	163.0	11.20	126.3	6.65	7.93	—	—			
40	90.5	4.66	96.8	1.82	2.17	111.6	5.75	105.4	2.41	2.87	132.8	6.84	114.0	3.07	3.66	153.9	7.93	122.6	3.80	4.53	—	—			
50	81.4	3.36	93.1	1.08	1.29	102.6	4.23	101.7	1.48	1.76	123.7	5.10	110.3	1.91	2.27	144.8	5.97	118.9	2.40	2.86	—	—			
60	72.4	2.49	89.4	.67	.80	93.5	3.21	98.0	.96	1.14	114.6	3.94	106.6	1.26	1.50	135.8	4.66	115.2	1.61	1.92	—	—			



Performance Data

Table PD-2 (Continued) – Model S Unit Heater Hot Water Capacities – 60°F Ent. Air Temp. Hot Water with Turbulators and 132 Fin Series
(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																							
		180 F						200 F						220 F						240 F					
		MBH	GPM	FT S.W.T	PD H.W.T	MBH	GPM	FT S.W.T	PD H.W.T	MBH	GPM	FT S.W.T	PD H.W.T	MBH	GPM	FT S.W.T	PD H.W.T	MBH	GPM	FT S.W.T	PD H.W.T	MBH	GPM	FT S.W.T	PD H.W.T
186-W2	20	117.6	12.12	100.3	8.49	10.12	140.5	14.48	108.1	10.71	12.77	163.4	16.84	116.0	13.33	15.90	—	—	—	—	—	—	—	—	
186-W2	25	112.7	9.29	98.6	5.52	6.59	135.6	11.18	106.5	7.01	8.36	158.5	13.06	114.3	8.81	10.50	181.3	14.95	122.1	10.67	12.73	—	—		
186-W2	30	107.8	7.41	96.9	3.83	4.57	130.7	8.98	104.8	4.92	5.87	153.5	10.55	112.6	6.21	7.41	176.4	12.12	120.4	7.58	9.04	—	—		
CFM 2690	40	98.0	5.05	93.6	2.08	2.47	120.9	6.23	101.4	2.74	3.27	143.7	7.41	109.2	3.50	4.17	166.6	8.58	117.1	4.33	5.16	—	—		
RPM 1100	50	88.2	3.63	90.2	1.23	1.47	111.0	4.58	98.0	1.68	2.01	133.9	5.52	105.9	2.17	2.59	156.8	6.46	113.7	2.73	3.26	—	—		
HP 1/4	60	78.3	2.69	86.8	.76	.91	101.2	3.48	94.7	1.09	1.30	124.1	4.26	102.5	1.43	1.70	147.0	5.05	110.4	1.83	2.19	—	—		
HP 1/4	70	68.5	2.02	83.5	.48	.58	91.4	2.69	91.3	.73	.87	114.3	3.36	99.1	.98	1.17	137.1	4.04	107.0	1.28	1.53	—	—		
HP 1/4	80	—	—	—	—	—	81.6	2.10	87.9	.49	.59	104.4	2.69	95.8	.69	.82	127.3	3.28	103.6	.92	1.09	—	—		
230-W2	15	163.8	22.50	107.2	5.82	6.94	194.7	26.75	116.1	7.32	8.73	225.6	30.99	125.0	9.07	10.81	256.4	35.24	133.9	10.88	12.97	—	—		
230-W2	20	156.6	16.14	105.1	3.39	4.04	187.5	19.32	114.0	4.29	5.12	218.4	22.50	122.9	5.36	6.40	249.2	25.69	131.8	6.47	7.72	—	—		
230-W2	25	149.4	12.32	103.0	2.19	2.61	180.3	14.86	111.9	2.80	3.33	211.2	17.41	120.8	3.52	4.20	242.1	19.96	129.7	4.28	5.11	—	—		
CFM 3200	30	142.2	9.77	101.0	1.51	1.80	173.1	11.89	109.9	1.95	2.33	204.0	14.01	118.7	2.47	2.95	234.9	16.14	127.6	3.03	3.61	—	—		
RPM 1100	40	127.8	6.59	96.8	.80	.96	158.7	8.18	105.7	1.07	1.28	189.6	9.77	114.6	1.38	1.64	220.5	11.36	123.5	1.71	2.04	—	—		
HP 1/4	50	113.4	4.68	92.7	.46	.55	144.3	5.95	101.6	.65	.77	175.2	7.22	110.5	.84	1.00	206.1	8.50	119.4	1.07	1.27	—	—		
HP 1/4	60	99.0	3.40	88.5	.28	.33	129.9	4.46	97.4	.41	.49	160.8	5.52	106.3	.55	.65	191.7	6.59	115.2	.71	.84	—	—		
HP 1/4	70	84.7	2.49	84.4	.17	.20	115.6	3.40	93.3	.27	.32	146.4	4.31	102.2	.37	.44	177.3	5.22	111.1	.49	.58	—	—		
HP 1/4	80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	162.9	4.20	106.9	.34	.41	—	—		
260-W2	20	173.1	17.84	100.6	4.00	4.77	207.4	21.37	108.6	5.07	6.05	241.6	24.90	116.6	6.34	7.56	275.8	28.42	124.6	7.65	9.13	—	—		
260-W2	25	165.1	13.61	98.7	2.58	3.08	199.3	16.43	106.7	3.30	3.93	233.5	19.25	114.7	4.16	4.96	267.8	22.07	122.7	5.06	6.05	—	—		
260-W2	30	157.0	10.79	96.8	1.78	2.12	191.2	13.14	104.8	2.30	2.74	225.5	15.49	112.8	2.92	3.48	259.7	17.84	120.9	3.57	4.26	—	—		
CFM 3933	40	140.9	7.26	93.0	.94	1.12	175.1	9.02	101.0	1.26	1.50	209.4	10.79	109.1	1.62	1.93	243.6	12.55	117.1	2.02	2.40	—	—		
RPM 1100	50	124.8	5.14	89.2	.54	.65	159.0	6.56	97.3	.76	.90	193.3	7.97	105.3	.99	1.18	227.5	9.38	113.3	1.26	1.50	—	—		
HP 1/2	60	108.7	3.73	85.5	.33	.39	142.9	4.91	93.5	.48	.57	177.1	6.08	101.5	.64	.76	211.4	7.26	109.5	.83	.99	—	—		
HP 1/2	70	92.6	2.73	81.7	.20	.24	126.8	3.73	89.7	.31	.37	161.0	4.74	97.7	.43	.51	195.3	5.75	105.8	.57	.68	—	—		
HP 1/2	80	—	—	—	—	—	110.7	2.85	85.9	.20	.24	144.9	3.73	94.0	.30	.35	179.1	4.62	102.0	.40	.48	—	—		
320-W2	20	223.0	22.98	107.2	7.98	9.51	266.2	27.43	116.4	10.02	11.95	309.4	31.89	125.6	12.45	14.95	352.7	36.34	134.7	14.96	17.84	—	—		
320-W2	25	213.9	17.63	105.3	5.21	6.21	257.1	21.20	114.5	6.59	7.86	300.3	24.76	123.6	8.25	9.84	343.6	28.32	132.8	9.97	11.89	—	—		
320-W2	30	204.8	14.07	103.4	3.63	4.33	248.0	17.04	112.5	4.64	5.53	291.2	20.01	121.7	5.84	6.96	334.5	22.98	130.9	7.10	8.47	—	—		
CFM 4350	40	186.6	9.61	99.5	1.98	2.36	229.8	11.84	108.7	2.60	3.10	273.0	14.07	117.8	3.30	3.94	316.3	16.30	127.0	4.07	4.86	—	—		
RPM 1100	50	168.4	6.94	95.7	1.18	1.41	211.6	8.72	104.8	1.60	1.91	254.8	10.50	114.0	2.06	2.46	298.1	12.29	123.2	2.58	3.08	—	—		
HP 1/2	60	150.2	5.16	91.8	.74	.88	193.4	6.64	101.0	1.05	1.25	236.6	8.13	110.1	1.36	1.63	279.9	9.61	119.3	1.74	2.08	—	—		
HP 1/2	70	132.0	3.89	88.0	.47	.56	175.2	5.16	97.1	.70	.84	218.5	6.43	106.3	.94	1.12	261.7	7.70	115.4	1.22	1.46	—	—		
HP 1/2	80	—	—	—	—	—	157.0	4.05	93.3	.48	.57	200.3	5.16	102.4	.67	.80	243.5	6.27	111.6	.88	1.05	—	—		
354-W2	20	249.7	25.73	101.6	9.61	11.46	298.1	30.72	109.7	12.07	14.40	346.5	35.71	117.8	15.00	17.89	—	—	—	—	—	—	—		
354-W2	25	239.5	19.75	99.9	6.28	7.48	287.9	23.74	108.0	7.93	9.46	336.4	27.73	116.1	9.94	11.85	384.8	31.72	124.2	12.01	14.33	—	—		
354-W2	30	229.3	15.76	98.2	4.37	5.21	277.8	19.08	106.3	5.59	6.66	326.2	22.41	114.4	7.03	8.38	374.6	25.73	122.5	8.55	10.20	—	—		
CFM 5528	40	209.0	10.77	94.8	2.38	2.84	257.4	13.26	102.9	3.13	3.73	305.8	15.76	111.0	3.97	4.74	354.2	18.25	119.1	4.90	5.85	—	—		
RPM 1100	50	188.6	7.77	91.4	1.42	1.69	237.0	9.77	99.5	1.93	2.30	285.4	11.76	107.6	2.48	2.96	333.8	13.76	115.7	3.11	3.71	—	—		
HP 1/2	60	168.2	5.78	88.0	.89	1.06	216.6	7.44	96.1	1.26	1.50	265.0	9.10	104.2	1.64	1.96	313.4	10.77	112.3	2.10	2.50	—	—		
HP 1/2	70	147.8	4.35	84.6	.57	.68	196.2	5.78	92.7	.85	1.01	244.6	7.20	100.8	1.13	1.35	293.1	8.63	108.9	1.47	1.75	—	—		
HP 1/2	80	—	—	—	—	—	175.8	4.53	89.3	.58	.69	224.3	5.78	97.4	.80	.96	272.7	7.02	105.5	1.06	1.26	—	—		
400-W2	20	282.5	29.12	102.3	10.88	12.90	340.0	35.05	110.8	14.25	17.23	396.0	40.92	119.2	17.59	21.10	454.0	46.80	127.9	21.25	26.20	—	—		
400-W2	25	270.0	22.27	100.4	7.10	8.47	324.0	26.72	108.5	9.53	11.25	382.0	31.51	117.1	12.25	14.62	440.0	36.29	125.8	14.95	18.10	—	—		
400-W2	30	260.0	17.87	98.9	4.91	5.84	313.0	21.51	106.8	6.66	7.97	369.0	25.36	115.2	8.82	10.36	428.0	29.42	124.0	11.05	13.10	—	—		
CFM 6017	40	235.0	12.11	95.1	2.61	3.06	289.0	14.90	103.2	3.65	4.24	346.0	17.84	111.7	4.88	5.81	405.0	20.88	120.6	6.32	7.61	—	—		
RPM 1140	50	213.0	8.78	91.9	1.56	1.94	266.0	10.97	99.8	2.21	2.62	323.0	13.32	108.3	3.03	3.51	381.0	15.71	117.0	3.97	4.60	—	—		
HP 3/4	60	190.0	6.53	88.4	1.04	1.31	243.0	8.35	96.3	1.43	1.82	298.0	10.24	104.6	1.96	2.39	357.0	12.27	113.4	2.65	3.14	—	—		
HP 3/4	70	168.0	4.95	85.1	.75	.96	221.0	6.51	93.1	1.04	1.28	276.0	8.13	101.3	1.37	1.72	335.0	9.87	110.1	1.87	2.30	—	—		
HP 3/4	80	—	—	—	—	—	197.0	5.08	89.5	.77	.98	252.0	6.49	97.7	1.05	1.30	312.0	8.04	106.7	1.35	1.71	—	—		



Performance Data

Table PD-2 (Continued) – Model S Unit Heater Hot Water Capacities – 60°F Ent. Air Temp. Hot Water with Turbulators and 132 Fin Series
(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																			
		260 F				300 F				340 F				380 F							
		MBH	GPM	FT S.W.T	PD H.W.T	MBH	GPM	FT S.W.T	PD H.W.T	MBH	GPM	FT S.W.T	PD H.W.T	MBH	GPM	FT S.W.T	PD H.W.T				
20-W2	20	18.0	1.85	112.6	.07	.08	22.9	2.36	127.1	.10	.11	27.9	2.88	141.7	.13	.15	—	—	—	—	
CFM 315	30	14.5	.99	102.4	.02	.03	19.5	1.34	116.9	.04	.04	24.4	1.68	131.5	.05	.06	29.4	2.02	146.1	.07	.08
RPM 1075	40	11.0	.57	92.2	.01	.01	16.0	.82	106.8	.02	.02	21.0	1.08	121.3	.02	.03	26.0	1.34	135.9	.03	.04
HP 1/50	50	—	—	—	—	—	12.5	.52	96.6	.01	.01	17.5	.72	111.2	.01	.01	22.5	.93	125.7	.02	.02
	60	—	—	—	—	—	—	—	—	—	—	14.0	.48	101.0	.01	.01	19.0	.65	115.6	.01	.01
	40	34.1	1.76	121.1	.10	.12	44.2	2.28	139.3	.15	.18	—	—	—	—	—	—	—	—	—	—
	50	29.9	1.23	113.6	.06	.07	40.1	1.65	131.8	.09	.10	—	—	—	—	—	—	—	—	—	—
38-W2	60	25.7	.88	106.1	.03	.04	35.9	1.23	124.3	.05	.06	46.0	1.58	142.5	.08	.09	—	—	—	—	—
CFM 514	80	17.3	.45	91.1	.01	.01	27.5	.71	109.3	.02	.03	37.7	.97	127.5	.03	.04	47.8	1.23	145.8	.05	.06
RPM 1550	100	—	—	—	—	—	19.1	.39	94.3	.01	.01	29.3	.60	112.5	.02	.02	39.5	.81	130.8	.02	.03
HP 1/20	120	—	—	—	—	—	—	—	—	—	—	20.9	.36	97.5	.01	.01	31.1	.53	115.7	.01	.01
	140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22.7	.33	100.7	.01	.01
	40	34.6	1.78	120.2	.10	.12	45.0	2.32	138.2	.15	.18	—	—	—	—	—	—	—	—	—	—
	50	30.4	1.25	112.9	.06	.07	40.7	1.68	130.8	.09	.11	—	—	—	—	—	—	—	—	—	—
42-W2	60	26.2	.90	105.5	.03	.04	36.5	1.25	123.4	.06	.07	46.8	1.61	141.4	.08	.09	—	—	—	—	—
CFM 530	80	17.7	.46	90.7	.01	.01	28.0	.72	108.7	.02	.03	38.3	.99	126.6	.04	.04	48.6	1.25	144.6	.05	.06
RPM 1550	100	—	—	—	—	—	19.5	.40	93.9	.01	.01	29.8	.61	111.9	.02	.02	40.2	.83	129.8	.03	.03
HP 1/20	120	—	—	—	—	—	—	—	—	—	—	21.4	.37	97.1	.01	.01	31.7	.54	115.1	.01	.02
	140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23.2	.34	100.3	.01	.01
	40	56.1	2.89	128.4	.32	.38	71.1	3.67	146.8	.45	.54	—	—	—	—	—	—	—	—	—	—
	50	51.2	2.11	122.5	.19	.23	66.3	2.73	140.9	.28	.33	—	—	—	—	—	—	—	—	—	—
60-W2	60	46.4	1.59	116.6	.12	.14	61.5	2.11	135.0	.18	.22	—	—	—	—	—	—	—	—	—	—
CFM 755	80	36.7	.95	104.8	.05	.06	51.8	1.33	123.2	.09	.10	66.9	1.72	141.6	.12	.15	—	—	—	—	—
RPM 1550	100	27.1	.56	93.0	.02	.03	42.1	.87	111.4	.04	.05	57.2	1.18	129.8	.07	.08	72.3	1.49	148.2	.09	.11
HP 1/20	120	17.4	.30	81.2	.01	.01	32.5	.56	99.6	.02	.03	47.5	.82	118.0	.04	.04	62.6	1.08	136.4	.05	.07
	140	—	—	—	—	—	22.8	.34	87.8	.01	.01	37.9	.56	106.2	.02	.02	52.9	.78	124.6	.03	.04
	160	—	—	—	—	—	—	—	—	—	—	28.2	.36	94.4	.01	.01	43.3	.56	112.8	.02	.02
	40	64.4	3.32	119.2	.40	.48	81.7	4.21	135.0	.57	.67	—	—	—	—	—	—	—	—	—	—
	50	59.0	2.43	114.2	.24	.29	76.3	3.14	130.0	.35	.42	93.5	3.85	145.8	.46	.55	—	—	—	—	—
70-W2	60	53.6	1.84	109.2	.15	.18	70.8	2.43	125.0	.23	.27	88.1	3.02	140.8	.31	.37	—	—	—	—	—
CFM 1004	80	42.7	1.10	99.2	.07	.08	59.9	1.54	115.0	.11	.13	77.2	1.99	130.8	.16	.19	94.4	2.43	146.7	.20	.24
RPM 1550	100	31.8	.65	89.2	.03	.03	49.0	1.01	105.0	.06	.07	66.3	1.37	120.8	.09	.10	83.5	1.72	136.7	.12	.14
HP 1/8	120	20.9	.36	79.2	.01	.01	38.1	.65	95.0	.03	.03	55.4	.95	110.8	.05	.06	72.6	1.25	126.7	.07	.08
	140	—	—	—	—	—	27.2	.40	85.0	.01	.01	44.5	.65	100.8	.03	.03	61.7	.91	116.7	.04	.05
	160	—	—	—	—	—	—	—	—	—	—	33.6	.43	90.8	.01	.02	50.8	.65	106.7	.02	.03
	50	82.0	3.38	125.0	.55	.66	104.3	4.30	142.7	.77	.92	—	—	—	—	—	—	—	—	—	—
	60	76.1	2.62	120.4	.37	.44	98.4	3.38	138.0	.52	.63	—	—	—	—	—	—	—	—	—	—
90-W2	80	64.4	1.66	111.1	.17	.21	86.7	2.23	128.7	.27	.32	108.9	2.81	146.4	.37	.44	—	—	—	—	—
CFM 1162	100	52.7	1.09	101.8	.09	.11	74.9	1.54	119.4	.15	.18	97.2	2.00	137.1	.21	.25	—	—	—	—	—
RPM 1550	120	40.9	.70	92.5	.04	.05	63.2	1.09	110.1	.08	.10	85.5	1.47	127.8	.13	.15	107.7	1.85	145.4	.18	.21
HP 1/8	140	29.2	.43	83.2	.02	.02	51.5	.76	100.8	.05	.06	73.7	1.09	118.5	.08	.10	96.0	1.41	136.1	.12	.14
	160	17.5	.23	73.9	.01	.01	39.7	.51	91.5	.03	.03	62.0	.80	109.2	.05	.06	84.3	1.09	126.8	.08	.09
	180	—	—	—	—	—	28.0	.32	82.2	.01	.01	50.3	.58	99.9	.03	.03	72.5	.83	117.5	.05	.06
	40	96.9	4.99	122.6	1.05	1.25	121.5	6.26	138.5	1.43	1.71	—	—	—	—	—	—	—	—	—	—
	50	90.3	3.72	118.3	.65	.78	114.9	4.74	134.2	.91	1.09	—	—	—	—	—	—	—	—	—	—
100-W2	60	83.8	2.88	114.1	.43	.51	108.4	3.72	130.0	.62	.73	133.0	4.57	145.9	.81	.96	—	—	—	—	—
CFM 1427	80	70.7	1.82	105.6	.20	.24	95.3	2.45	121.5	.31	.37	119.9	3.09	137.4	.43	.51	—	—	—	—	—
RPM 1550	100	57.6	1.19	97.2	.10	.12	82.2	1.69	113.1	.17	.21	106.8	2.20	129.0	.25	.30	131.4	2.71	144.9	.33	.39
HP 1/8	120	44.5	.76	88.7	.05	.06	69.1	1.19	104.6	.10	.12	93.7	1.61	120.5	.15	.18	118.3	2.03	136.4	.21	.25
	140	31.4	.46	80.3	.02	.03	56.0	.82	96.2	.05	.06	80.6	1.19	112.1	.09	.11	105.2	1.55	128.0	.13	.16
	160	18.3	.24	71.8	.01	.01	42.9	.55	87.7	.03	.03	67.5	.87	103.6	.06	.07	92.1	1.19	119.5	.09	.11
	180	—	—	—	—	—	29.8	.34	79.3	.01	.02	54.4	.62	95.2	.03	.04	79.0	.91	111.1	.06	.07
	60	115.3	3.96	124.0	.97	1.16	147.3	5.06	141.7	1.36	1.62	—	—	—	—	—	—	—	—	—	—
	80	100.4	2.59	115.7	.49	.58	132.4	3.41	133.5	.72	.86	164.4	4.24	151.2	.97	1.15	—	—	—	—	—
126-W2	100	85.5	1.76	107.4	.26	.31	117.5	2.42	125.2	.42	.50	149.5	3.08	143.0	.58	.69	—	—	—	—	—
CFM 1661	120	70.6	1.21	99.2	.14	.17	102.6	1.76	116.9	.25	.30	134.6	2.31	134.7	.37	.44	—	—	—	—	—
RPM 1100	140	55.7	.82	90.9	.08	.09	87.7	1.29	108.7	.15	.18	119.7	1.76	126.4	.24	.29	151.7	2.23	144.2	.33	.39
HP 1/6	160	40.8	.53	82.6	.04	.05	72.8	.94	100.4	.09	.11	104.8	1.35	118.2	.16	.19	136.8	1.76	135.9	.23	.27
	180	25.9	.30	74.4	.02	.02	57.9	.66	92.1	.05	.06	89.9	1.03	109.9	.10	.12	121.9	1.40	127.6	.16	.19



Performance Data

Table PD-2 (Continued) – Model S Unit Heater Hot Water Capacities – 60°F Ent. Air Temp. Hot Water with Turbulators and 132 Fin Series
(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																			
		260 F				300 F				340 F				380 F							
		MBH	GPM	FT S.W.T	H.W.T	PD	PD	MBH	GPM	FT S.W.T	H.W.T	PD	PD	MBH	GPM	FT S.W.T	H.W.T	PD	PD		
168-W2 CFM 2267 RPM 1100 HP 1/6	60	156.9	5.39	123.8	1.98	2.36	199.2	6.84	141.0	2.75	3.28	—	—	—	—	—	—	—	—		
	80	138.8	3.57	116.4	1.02	1.22	181.0	4.66	133.6	1.49	1.77	—	—	—	—	—	—	—	—		
	100	120.6	2.49	109.9	.57	.68	162.9	3.36	126.2	.88	1.05	205.2	4.23	143.4	1.20	1.43	—	—	—		
	120	102.5	1.76	101.7	.33	.39	144.7	2.49	118.8	.55	.65	187.0	3.21	136.0	.78	.93	—	—	—		
	140	84.3	1.24	94.3	.19	.23	126.6	1.86	111.5	.35	.41	168.9	2.49	128.7	.52	.62	211.1	3.11	145.8	.70	.83
186-W2 CFM 2690 RPM 1100 HP 1/4	60	179.7	7.41	121.6	3.31	3.95	225.4	9.29	137.2	4.51	5.38	—	—	—	—	—	—	—	—		
	80	169.8	5.83	118.2	2.25	2.69	215.6	7.41	133.9	3.13	3.73	—	—	—	—	—	—	—	—		
	100	150.2	3.87	111.5	1.17	1.39	195.9	5.05	127.1	1.69	2.02	241.7	6.23	142.8	2.24	2.67	—	—	—		
	120	130.6	2.69	104.7	.65	.78	176.3	3.63	120.4	1.00	1.20	222.1	4.58	136.1	1.37	1.63	—	—	—		
	140	110.9	1.90	98.0	.38	.45	156.7	2.69	113.7	.62	.74	202.4	3.48	129.4	.89	1.06	248.2	4.26	145.0	1.16	1.38
230-W2 CFM 3200 RPM 1100 HP 1/4	60	222.6	7.65	124.1	.88	1.05	284.4	9.77	141.9	1.23	1.47	—	—	—	—	—	—	—	—		
	80	193.8	4.99	115.8	.44	.53	255.6	6.59	133.6	.65	.78	—	—	—	—	—	—	—	—		
	100	165.1	3.40	107.5	.24	.28	226.9	4.68	125.3	.38	.45	288.6	5.95	143.1	.53	.63	—	—	—		
	120	136.3	2.34	99.3	.13	.16	198.1	3.40	117.1	.23	.27	259.9	4.46	134.8	.33	.40	—	—	—		
	140	107.5	1.58	91.0	.07	.08	169.3	2.49	108.0	.14	.17	231.1	3.40	126.6	.22	.26	292.9	4.31	144.4	.30	.36
260-W2 CFM 3933 RPM 1100 HP 1/2	60	245.6	8.44	117.6	1.03	1.23	314.0	10.79	133.6	1.45	1.73	—	—	—	—	—	—	—	—		
	80	213.4	5.50	110.0	.52	.62	281.8	7.26	120.6	.77	.92	350.3	9.02	142.1	1.03	1.23	—	—	—		
	100	181.2	3.73	102.5	.28	.33	249.6	5.14	118.5	.44	.53	318.1	6.56	134.5	.62	.74	—	—	—		
	120	148.9	2.56	94.9	.15	.18	217.4	3.73	110.9	.27	.32	285.8	4.91	127.0	.39	.47	354.3	6.08	143.0	.52	.62
	140	116.7	1.72	87.3	.08	.10	185.2	2.73	103.4	.16	.19	253.6	3.73	119.4	.25	.30	322.1	4.74	135.5	.35	.42
320-W2 CFM 4350 RPM 1100 HP 1/2	60	323.1	11.10	128.5	2.14	2.55	—	—	—	—	—	—	—	—	—	—	—	—	—		
	80	286.7	7.39	120.7	1.11	1.33	373.2	9.61	139.1	1.61	1.92	—	—	—	—	—	—	—	—		
	100	250.3	5.16	113.0	.63	.75	336.8	6.94	131.4	.96	1.14	—	—	—	—	—	—	—	—		
	120	213.9	3.67	105.3	.37	.44	300.4	5.16	123.0	.60	.71	386.8	6.64	142.0	.85	1.01	—	—	—		
	140	177.5	2.61	97.6	.21	.25	264.0	3.89	115.9	.38	.46	350.4	5.16	134.3	.57	.68	—	—	—		
354-W2 CFM 5528 RPM 1100 HP 1/2	60	440.0	18.14	125.8	5.00	5.92	559.0	23.05	143.5	7.55	8.97	—	—	—	—	—	—	—	—		
	80	417.0	14.33	122.4	3.41	3.95	535.0	18.38	140.0	5.13	6.16	—	—	—	—	—	—	—	—		
	100	372.0	9.59	115.6	1.78	2.18	489.0	12.60	133.1	2.79	3.26	620.0	15.98	152.7	4.09	4.77	—	—	—		
	120	326.0	6.72	108.8	1.08	1.33	443.0	9.13	126.3	1.62	2.03	590.0	11.96	146.7	2.58	3.03	—	—	—		
	140	280.0	4.81	101.9	.70	.92	397.0	6.82	119.4	1.10	1.37	540.0	9.28	140.8	1.69	2.04	—	—	—		
400-W2 CFM 6017 RPM 1140 HP 3/4	60	440.0	18.14	125.8	5.00	5.92	559.0	23.05	143.5	7.55	8.97	—	—	—	—	—	—	—	—		
	80	417.0	14.33	122.4	3.41	3.95	535.0	18.38	140.0	5.13	6.16	—	—	—	—	—	—	—	—		
	100	372.0	9.59	115.6	1.78	2.18	489.0	12.60	133.1	2.79	3.26	620.0	15.98	152.7	4.09	4.77	—	—	—		
	120	326.0	6.72	108.8	1.08	1.33	443.0	9.13	126.3	1.62	2.03	590.0	11.96	146.7	2.58	3.03	—	—	—		
	140	280.0	4.81	101.9	.70	.92	397.0	6.82	119.4	1.10	1.37	540.0	9.28	140.8	1.69	2.04	—	—	—		



Performance Data

Table PD-3 – Model P Unit Heater Hot Water Capacities – 60°F Ent. Air Temp.
(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																			
		180 F				200 F				220 F				240 F							
		MBH	GPM	FT S.W.T.	PD H.W.T.	MBH	GPM	FT S.W.T.	PD H.W.T.	MBH	GPM	FT S.W.T.	PD H.W.T.	MBH	GPM	FT S.W.T.	PD H.W.T.				
42-P	10	23.8	4.90	96.9	.26	.34	28.8	5.93	104.6	.37	.49	33.7	6.95	112.2	.49	.65	38.7	7.98	119.9	.64	.84
42-P	15	20.8	2.86	92.2	.09	.12	25.7	3.54	99.9	.14	.18	30.7	4.22	107.6	.19	.25	35.7	4.90	115.3	.25	.33
CFM 595	20	17.8	1.83	87.5	.04	.05	22.7	2.34	95.2	.06	.08	27.7	2.86	102.9	.09	.12	32.7	3.37	110.6	.12	.16
RPM 1550	25	14.8	1.22	82.9	.02	.02	19.7	1.63	90.6	.03	.04	24.7	2.04	98.3	.05	.06	29.7	2.45	105.9	.07	.09
HP 1/40	30	—	—	—	—	—	16.7	1.15	85.9	.02	.02	21.7	1.49	93.6	.03	.03	26.7	1.83	101.3	.04	.05
HP 1/40	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.6	1.06	91.9	.01	.02
42-P	10	18.9	3.90	100.0	.17	.22	22.9	4.71	108.3	.24	.31	26.8	5.52	116.6	.32	.42	30.7	6.33	125.0	.41	.54
42-P	15	16.6	2.27	95.0	.06	.08	20.5	2.82	103.3	.09	.12	24.4	3.36	111.6	.12	.16	28.4	3.90	120.0	.16	.21
CFM 436	20	14.2	1.46	90.0	.03	.03	18.1	1.87	98.3	.04	.05	22.1	2.27	106.7	.06	.08	26.0	2.68	115.0	.08	.10
RPM 1150	25	—	—	—	—	—	15.8	1.30	93.3	.02	.03	19.7	1.63	101.7	.03	.04	23.7	1.95	110.0	.04	.06
HP 1/40	30	—	—	—	—	—	13.4	.92	88.4	.01	.01	17.4	1.19	96.7	.02	.02	21.3	1.46	105.0	.02	.03
HP 1/40	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16.6	.85	95.0	.01	.01
64-P	10	40.0	8.25	97.3	.75	1.00	48.1	9.92	104.8	1.05	1.40	56.2	11.58	112.4	1.40	1.86	64.3	13.25	119.9	1.80	2.39
64-P	15	35.8	4.91	93.3	.28	.37	43.9	6.03	100.9	.41	.54	51.9	7.14	108.4	.56	.74	60.0	8.25	115.9	.73	.97
CFM 989	20	31.5	3.25	89.4	.13	.17	39.6	4.08	96.9	.19	.26	47.7	4.19	104.4	.27	.36	55.8	5.75	112.0	.36	.49
RPM 1550	25	27.3	2.25	85.4	.06	.08	35.3	2.91	92.9	.10	.14	43.4	3.58	100.5	.15	.20	51.5	4.25	108.0	.21	.27
HP 1/20	30	23.0	1.58	81.4	.03	.04	31.1	2.14	89.0	.06	.08	39.2	2.69	96.5	.09	.12	47.3	3.25	104.0	.12	.16
HP 1/20	40	—	—	—	—	—	22.6	1.16	81.0	.02	.02	30.7	1.58	88.6	.03	.04	38.8	2.00	96.1	.05	.07
HP 1/20	50	—	—	—	—	—	—	—	—	—	—	22.2	.91	80.7	.01	.02	30.2	1.25	88.2	.02	.03
64-P	10	31.7	6.53	101.4	.48	.64	38.1	7.85	109.7	.67	.90	44.5	9.17	118.1	.90	1.19	50.9	10.48	126.4	1.15	1.53
64-P	15	28.4	3.90	97.1	.18	.24	34.8	4.78	105.4	.26	.35	41.2	5.66	113.7	.36	.48	47.5	6.53	122.1	.47	.62
CFM 706	20	25.1	2.58	92.7	.08	.11	31.5	3.24	101.1	.13	.17	37.8	3.90	109.4	.18	.23	44.2	4.56	117.7	.23	.31
RPM 1150	25	21.8	1.79	88.4	.04	.06	28.2	2.32	96.7	.07	.09	34.5	2.85	105.1	.10	.13	40.9	3.37	113.4	.13	.18
HP 1/20	30	18.5	1.27	84.1	.02	.03	24.8	1.71	92.4	.04	.05	31.2	2.15	100.8	.06	.08	37.6	2.58	109.1	.08	.11
HP 1/20	40	—	—	—	—	—	—	—	—	—	—	24.6	1.27	92.1	.02	.03	31.0	1.60	100.5	.03	.04
HP 1/20	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24.4	1.00	91.8	.01	.02
80-P	10	48.9	10.07	97.5	.70	.90	58.7	12.11	105.1	.98	1.27	68.6	14.14	112.7	1.31	1.69	78.5	16.17	120.3	1.68	2.16
80-P	15	43.7	6.01	93.6	.26	.34	53.6	7.36	101.2	.38	.49	63.5	8.72	108.7	.52	.67	73.3	10.07	116.3	.68	.87
CFM 1200	20	38.6	3.97	89.6	.12	.15	48.4	4.99	97.2	.18	.23	58.3	6.01	104.8	.25	.33	68.2	7.02	112.3	.34	.44
RPM 1550	25	33.4	2.75	85.7	.06	.08	43.3	3.57	93.2	.10	.12	53.1	4.38	100.8	.14	.18	63.0	5.19	108.4	.19	.25
HP 1/20	30	28.2	1.94	81.7	.03	.04	38.1	2.62	89.3	.05	.07	48.0	3.30	96.8	.08	.10	57.8	3.97	104.4	.11	.15
HP 1/20	40	—	—	—	—	—	27.8	1.43	81.3	.02	.02	37.7	1.94	88.9	.03	.04	47.5	2.45	96.5	.05	.06
HP 1/20	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.2	1.53	88.6	.02	.02
80-P	10	38.7	7.99	101.6	.45	.58	46.5	9.59	110.0	.63	.81	54.3	11.20	118.4	.84	1.08	62.1	12.81	126.7	1.07	1.38
80-P	15	34.7	4.77	97.3	.17	.22	42.5	5.84	105.7	.24	.31	50.3	6.91	114.1	.33	.43	58.1	7.99	122.4	.43	.56
CFM 858	20	30.7	3.16	93.0	.08	.10	38.5	3.97	101.4	.12	.15	46.3	4.77	109.7	.16	.21	54.1	5.57	118.1	.22	.28
RPM 1150	25	26.7	2.20	88.7	.04	.05	34.5	2.84	97.0	.06	.08	42.3	3.49	105.4	.09	.12	50.1	4.13	113.8	.12	.16
HP 1/20	30	22.7	1.56	84.4	.02	.03	30.5	2.09	92.7	.03	.04	38.3	2.63	101.1	.05	.07	46.1	3.16	109.5	.07	.10
HP 1/20	40	—	—	—	—	—	—	—	—	—	—	30.2	1.56	92.5	.02	.03	38.0	1.96	100.9	.03	.04
HP 1/20	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.0	1.24	92.2	.01	.02

See Table SP-12 for abbreviations.



Performance Data

Table PD-3 (Continued) – Model P Unit Heater Hot Water Capacities – 60°F Ent. Air Temp.
(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																							
		180 F						200 F						220 F						240 F					
		MBH	GPM	FT	S.W.T	H.W.T	PD	MBH	GPM	FT	S.W.T	H.W.T	PD	MBH	GPM	FT	S.W.T	H.W.T	PD	MBH	GPM	FT	S.W.T	H.W.T	PD
102-P CFM 1528 RPM 1070 HP 1/8	10	64.9	13.38	99.1	1.50	1.96	77.2	15.91	106.6	2.06	2.68	89.5	18.45	114.0	2.69	3.50	101.8	20.98	121.4	3.40	4.42				
	15	60.4	8.30	96.4	.61	.80	72.7	9.99	103.9	.85	1.11	85.0	11.68	111.3	1.13	1.48	97.3	13.38	118.7	1.45	1.88				
	20	56.0	5.77	93.8	.31	.40	68.3	7.03	101.2	.44	.58	80.6	8.30	108.6	.59	.78	92.9	9.57	116.0	.77	1.00				
	25	51.5	4.24	91.1	.17	.23	63.8	5.26	98.5	.25	.33	76.1	6.27	105.9	.35	.46	88.4	7.29	113.3	.46	.60				
	30	47.0	3.23	88.4	.10	.14	59.3	4.08	95.8	.16	.21	71.6	4.92	103.2	.22	.29	83.9	5.77	110.6	.30	.39				
	40	38.1	1.96	83.0	.04	.05	50.4	2.60	90.4	.07	.09	62.7	3.23	97.8	.10	.13	75.0	3.86	105.2	.14	.18				
50	—	—	—	—	—	41.5	1.71	85.0	.03	.04	53.8	2.22	92.4	.05	.07	66.1	2.72	99.9	.07	.09					
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	57.1	1.96	94.5	.04	.05					
102-P CFM 1208 RPM 850 HP 1/8	10	53.6	11.04	100.9	1.04	1.36	63.7	13.13	108.6	1.43	1.86	73.8	15.22	116.3	1.87	2.43	84.0	17.31	124.1	2.36	3.07				
	15	50.0	6.86	98.1	.43	.56	60.1	8.26	105.8	.59	.78	70.2	9.65	113.6	.79	1.03	80.4	11.04	121.3	1.01	1.31				
	20	46.3	4.77	95.4	.22	.28	56.5	5.82	103.1	.31	.40	66.6	6.86	110.8	.41	.54	76.7	7.91	118.6	.53	.70				
	25	42.7	3.52	92.6	.12	.16	52.9	4.36	100.3	.18	.23	63.0	5.19	108.1	.24	.32	73.1	6.03	115.8	.32	.42				
	30	39.1	2.69	89.8	.07	.10	49.2	3.38	97.6	.11	.15	59.4	4.08	105.3	.16	.20	69.5	4.77	113.0	.21	.27				
	40	31.9	1.64	84.3	.03	.04	42.0	2.16	92.0	.05	.06	52.1	2.69	99.8	.07	.09	62.3	3.21	107.5	.10	.13				
50	—	—	—	—	—	34.8	1.43	86.5	.02	.03	44.9	1.85	94.2	.04	.05	55.0	2.27	102.0	.05	.07					
60	—	—	—	—	—	—	—	—	—	—	37.6	1.29	88.7	.02	.02	47.8	1.64	96.5	.03	.04					
122-P CFM 1790 RPM 1100 HP 1/6	10	79.7	16.43	101.1	2.22	2.89	94.9	19.55	108.9	3.04	3.96	110.0	22.68	116.7	3.99	5.18	125.2	25.80	124.5	5.04	6.55				
	15	74.1	10.19	98.2	.90	1.17	89.3	12.27	106.0	1.26	1.64	104.4	14.35	113.8	1.67	2.18	119.6	16.43	121.6	2.14	2.78				
	20	68.6	7.06	95.3	.45	.59	83.7	8.63	103.1	.65	.85	98.9	10.19	110.9	.87	1.14	114.0	11.75	118.7	1.13	1.48				
	25	63.0	5.19	92.4	.25	.33	78.1	6.44	100.2	.37	.49	93.3	7.69	108.0	.51	.67	108.4	8.94	115.8	.68	.88				
	30	57.4	3.94	89.5	.15	.20	72.5	4.98	97.3	.23	.30	87.7	6.02	105.1	.32	.42	102.8	7.06	112.9	.43	.57				
	40	46.2	2.38	83.8	.06	.08	61.4	3.16	91.6	.10	.13	76.5	3.94	99.4	.15	.19	91.7	4.72	107.2	.20	.27				
50	—	—	—	—	—	50.2	2.07	85.8	.04	.06	65.3	2.69	93.6	.07	.09	80.5	3.32	101.4	.10	.14					
60	—	—	—	—	—	39.0	1.34	80.1	.02	.03	54.2	1.86	87.9	.04	.05	69.3	2.38	95.7	.06	.07					
146-P CFM 2220 RPM 1100 HP 1/6	10	99.0	20.41	101.1	3.18	4.27	117.6	24.24	108.8	4.32	5.81	136.2	28.07	116.5	5.61	7.54	154.8	31.89	124.2	7.05	9.47				
	15	92.8	12.76	98.5	1.32	1.77	111.4	15.31	106.3	1.83	2.45	130.0	17.86	114.0	2.40	3.23	148.6	20.41	121.7	3.04	4.09				
	20	86.7	8.93	96.0	.68	.91	105.2	10.84	103.7	.96	1.29	123.8	12.76	111.4	1.28	1.72	142.4	14.67	119.1	1.64	2.20				
	25	80.5	6.63	93.4	.39	.52	99.0	8.16	101.1	.56	.76	117.6	9.70	108.8	.77	1.03	136.2	11.23	116.5	.99	1.33				
	30	74.3	5.10	90.8	.24	.32	92.8	6.38	98.5	.36	.48	111.4	7.65	106.3	.49	.66	130.0	8.93	114.0	.65	.87				
	40	61.9	3.19	85.7	.10	.14	80.5	4.15	93.4	.16	.22	99.0	5.10	101.1	.23	.31	117.6	6.06	108.8	.31	.42				
50	49.5	2.04	80.6	.04	.06	68.1	2.81	88.3	.08	.10	86.6	3.57	96.0	.12	.16	105.2	4.34	103.7	.17	.23					
60	—	—	—	—	—	55.7	1.91	83.1	.04	.05	74.3	2.55	90.8	.06	.09	92.8	3.19	98.5	.10	.13					
166-P CFM 2620 RPM 1100 HP 1/6	10	111.5	22.98	99.2	2.70	3.59	132.4	27.29	106.6	3.67	4.88	153.3	31.59	113.9	4.77	6.34	174.2	35.89	121.3	6.00	7.96				
	15	104.6	14.38	96.8	1.12	1.49	125.5	17.24	104.1	1.55	2.06	146.4	20.11	111.5	2.04	2.71	167.3	22.98	118.8	2.59	3.44				
	20	97.7	10.07	94.4	.58	.77	118.6	12.22	101.7	.81	1.08	139.5	14.38	109.1	1.09	1.45	160.4	16.53	116.4	1.39	1.95				
	25	90.8	7.49	92.0	.33	.44	111.7	9.21	99.3	.48	.64	132.6	10.93	106.6	.65	.87	153.5	12.65	114.0	.85	1.12				
	30	84.0	5.77	89.5	.20	.27	104.8	7.20	96.9	.30	.40	125.7	8.64	104.2	.42	.56	146.6	10.07	111.6	.55	.79				
	40	70.2	3.62	84.7	.09	.11	91.1	4.69	92.0	.14	.18	111.9	5.77	99.4	.20	.26	132.8	6.84	106.7	.27	.36				
50	56.4	2.32	79.8	.04	.05	77.3	3.19	87.2	.07	.09	98.2	4.05	94.5	.10	.14	119.0	4.91	101.9	.14	.19					
60	—	—	—	—	—	63.5	2.18	82.3	.03	.04	84.4	2.90	89.7	.06	.07	105.3	3.62	97.0	.08	.11					

See Table SP-12 for abbreviations.



Performance Data

Table PD-3 (Continued) – Model P Unit Heater Hot Water Capacities – 60°F Ent. Air Temp.

(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																			
		260 F				300 F				340 F				380 F							
		MBH	GPM	FT	PD	MBH	GPM	FT	PD	MBH	GPM	FT	PD	MBH	GPM	FT	PD				
SWT	HWT	SWT	HWT	SWT	HWT	SWT	HWT	SWT	HWT	SWT	HWT	SWT	HWT	SWT	HWT						
42-P	50	19.6	.81	90.3	.01	.01	29.5	1.22	105.7	.02	.02	39.4	1.63	121.1	.03	.04	49.4	2.04	136.5	.04	.06
CFM 595	60	—	—	—	—	—	23.5	.81	96.4	.01	.01	33.4	1.15	111.8	.02	.02	43.4	1.49	127.2	.02	.03
RPM 1550	80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	31.3	.81	108.5	.01	.01
HP 1/40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
42-P	50	—	—	—	—	—	23.7	.98	110.0	.01	.02	31.5	1.30	126.7	.02	.03	39.4	1.63	143.4	.03	.04
CFM 436	60	—	—	—	—	—	—	—	—	—	—	26.8	.92	116.7	.01	.01	34.7	1.19	133.4	.02	.02
RPM 1150	80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
HP 1/40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
64-P	50	38.3	1.58	95.7	.03	.04	54.5	2.25	110.8	.06	.08	70.7	2.91	125.9	.10	.13	86.9	3.58	141.0	.14	.19
CFM 989	60	29.8	1.02	87.8	.01	.02	46.0	1.58	102.9	.03	.04	62.2	2.14	117.9	.05	.07	78.4	2.69	133.0	.08	.11
RPM 1550	80	—	—	—	—	—	29.0	.75	87.0	.01	.01	45.2	1.16	102.1	.02	.02	61.3	1.58	117.2	.03	.04
HP 1/20	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	44.3	.91	101.3	.01	.01
64-P	50	30.8	1.27	100.1	.02	.03	43.5	1.79	116.8	.04	.05	56.3	2.32	133.5	.06	.08	69.1	2.85	150.2	.09	.12
CFM 706	60	24.1	.83	91.5	.01	.01	36.9	1.27	108.2	.02	.03	49.7	1.71	124.9	.03	.05	62.5	2.15	141.5	.05	.07
RPM 1150	80	—	—	—	—	—	—	—	—	—	—	36.4	.94	107.6	.01	.02	49.2	1.27	124.2	.02	.03
HP 1/20	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	36.0	.74	106.9	.01	.01
80-P	50	47.1	1.94	96.2	.03	.04	66.8	2.75	111.3	.06	.07	86.5	3.57	126.5	.09	.12	106.3	4.38	141.6	.13	.17
CFM 1200	60	36.8	1.26	88.2	.01	.02	56.5	1.94	103.4	.03	.04	76.2	2.62	118.5	.05	.06	96.0	3.30	133.7	.08	.10
RPM 1550	80	—	—	—	—	—	—	—	—	—	—	55.6	1.43	102.7	.02	.02	75.3	1.94	117.9	.03	.04
HP 100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	54.7	1.13	102.0	.01	.01
80-P	50	37.8	1.56	100.6	.02	.02	53.4	2.20	117.3	.04	.05	69.0	2.84	134.1	.06	.08	84.6	3.49	150.8	.08	.11
CFM 858	60	29.8	1.02	92.0	.01	.01	45.3	1.56	108.7	.02	.02	60.9	2.09	125.5	.03	.04	76.5	2.63	142.2	.05	.06
RPM 1150	80	—	—	—	—	—	—	—	—	—	—	44.9	1.16	108.2	.01	.01	60.5	1.56	125.0	.02	.02
HP 1/20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
102-P	50	78.4	3.23	107.3	.10	.13	103.0	4.24	122.1	.16	.21	127.6	5.26	137.0	.24	.31	152.2	6.27	151.8	.33	.42
CFM 1528	60	69.4	2.39	101.9	.06	.07	94.0	3.23	116.7	.10	.13	118.7	4.08	131.6	.15	.19	143.3	4.92	146.4	.21	.27
RPM 1070	80	51.6	1.33	91.1	.02	.02	76.2	1.96	105.9	.04	.05	100.8	2.60	120.8	.06	.08	125.4	3.23	135.6	.09	.12
HP 1/8	100	—	—	—	—	—	58.3	1.20	95.2	.02	.02	82.9	1.71	110.0	.03	.04	107.5	2.22	124.9	.05	.06
120	—	—	—	—	—	—	—	—	—	—	—	65.0	1.12	99.2	.01	.02	89.6	1.54	114.1	.02	.03
140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	71.8	1.06	103.3	.01	.02
102-P	50	65.2	2.69	109.7	.07	.09	85.4	3.52	125.2	.11	.15	105.7	4.36	140.6	.17	.22	126.0	5.19	156.1	.23	.30
CFM 1208	60	57.9	1.99	104.2	.04	.05	78.2	2.69	119.7	.07	.09	98.5	3.38	135.1	.10	.13	118.7	4.08	150.6	.14	.19
RPM 850	80	43.4	1.12	93.1	.01	.02	63.7	1.64	108.6	.03	.04	84.0	2.16	124.1	.04	.06	104.3	2.69	139.5	.07	.09
HP 1/8	100	—	—	—	—	—	49.2	1.01	97.6	.01	.01	69.5	1.43	113.0	.02	.03	89.8	1.85	128.5	.03	.04
120	—	—	—	—	—	—	—	—	—	—	—	55.0	.95	102.0	.01	.01	75.3	1.29	117.4	.02	.02
122-P	50	95.6	3.94	109.2	.14	.19	125.9	5.19	124.8	.24	.31	156.2	6.44	140.4	.35	.45	186.5	7.69	156.0	.48	.62
CFM 1790	60	84.5	2.90	103.5	.08	.11	114.8	3.94	119.1	.14	.18	145.1	4.98	134.7	.21	.28	175.4	6.02	150.3	.30	.39
RPM 1100	80	62.1	1.60	92.0	.03	.03	92.4	2.38	107.6	.05	.07	122.7	3.16	123.2	.09	.12	163.0	3.94	138.8	.14	.18
HP 1/6	100	—	—	—	—	—	70.1	1.44	96.1	.02	.03	100.4	2.07	111.7	.04	.05	130.7	2.69	127.3	.07	.09
120	—	—	—	—	—	—	—	—	—	—	—	78.0	1.34	100.2	.02	.02	108.3	1.86	115.8	.03	.04
140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	86.0	1.27	104.3	.02	.02
146-P	50	123.8	5.10	111.4	.23	.30	160.9	6.63	126.8	.36	.48	198.1	8.16	142.2	.52	.70	235.2	9.70	157.7	.70	.94
CFM 2220	60	111.4	3.83	106.2	.13	.18	148.5	5.10	121.7	.22	.30	185.7	6.38	137.1	.33	.44	222.8	7.65	152.5	.45	.61
RPM 1100	80	86.6	2.23	96.0	.05	.07	123.8	3.19	111.4	.09	.12	160.9	4.15	126.8	.15	.20	198.1	5.10	142.2	.21	.29
HP 1/6	100	61.9	1.28	85.7	.02	.02	99.0	2.04	101.1	.04	.05	136.1	2.91	116.5	.07	.10	173.3	3.57	131.9	.11	.15
120	—	—	—	—	—	—	74.2	1.28	90.8	.02	.02	111.4	1.91	106.2	.04	.05	148.5	2.55	121.7	.06	.08
140	—	—	—	—	—	—	—	—	—	—	—	86.6	1.28	96.0	.02	.02	123.8	1.82	111.4	.03	.04
160	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	99.0	1.28	101.1	.02	.02
166-P	50	139.9	5.77	109.2	.19	.26	181.7	7.49	123.9	.31	.41	223.5	9.21	138.6	.44	.59	265.2	10.93	153.3	.60	.80
CFM 2620	60	126.2	4.33	104.4	.11	.15	167.9	5.77	119.1	.19	.25	209.7	7.20	133.8	.28	.37	251.4	8.64	148.4	.39	.51
RPM 1100	80	98.6	2.54	94.7	.04	.06	140.4	3.62	109.4	.08	.11	182.1	4.69	124.1	.13	.17	223.9	5.77	138.8	.18	.24
HP 1/6	100	—	—	—	—	—	112.8	2.32	99.7	.03	.05	154.6	3.19	114.4	.06	.08	196.3	4.05	129.1	.09	.12
120	—	—	—	—	—	—	85.3	1.46	90.0	.01	.02	127.0	2.18	104.7	.03	.04	168.8	2.90	119.4	.05	.07
140	—	—	—	—	—	—	—	—	—	—	—	99.5	1.46	95.0	.01	.02	141.2	2.08	109.7	.03	.04
160	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	113.7	1.46	100.0	.01	.02



Performance Data

Table PD-4 (Continued) – Model P Unit Heater Hot Water Capacities – 60°F Ent. Air Temp.

(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																			
		260 F				300 F					340 F				380 F						
		MBH	GPM	FT S	PD	MBH	GPM	FT S	PD	PD	MBH	GPM	FT S	PD	PD	MBH	GPM	FT S	PD	PD	
202-P CFM 3200 RPM 1100 HP 1/4	50	164.2	6.77	107.3	.26	.35	213.6	8.80	121.5	.42	.55	263.0	10.84	135.7	.60	.80	312.3	12.87	150.0	.82	1.08
	60	147.7	5.07	102.6	.15	.20	197.1	6.77	116.8	.25	.34	246.4	8.47	131.0	.38	.50	295.8	10.16	145.2	.52	.70
	80	114.7	2.96	93.0	.06	.07	164.1	4.23	107.3	.11	.14	213.4	5.50	121.5	.17	.23	262.8	6.77	135.7	.25	.33
	100	—	—	—	—	—	131.1	2.70	97.8	.05	.06	180.4	3.72	112.0	.08	.11	229.8	4.74	126.2	.13	.17
	120	—	—	—	—	—	98.1	1.68	88.2	.02	.03	147.4	2.53	102.5	.04	.05	196.8	3.38	116.7	.07	.09
	140	—	—	—	—	—	—	—	—	—	—	114.4	1.68	92.9	.02	.03	163.8	2.41	107.2	.04	.05
252-P CFM 4162 RPM 1100 HP 1/4	50	219.9	9.06	108.7	.53	.71	281.4	11.60	122.3	.82	1.09	342.8	14.13	135.9	1.16	1.54	404.3	16.66	149.5	1.55	2.06
	60	202.4	6.95	104.8	.33	.43	263.9	9.06	118.4	.52	.69	325.3	11.18	132.0	.75	1.00	386.8	13.29	145.7	1.01	1.35
	80	167.5	4.31	97.1	.13	.18	228.9	5.90	110.7	.23	.31	290.4	7.48	124.3	.36	.47	351.8	9.06	137.9	.50	.66
	100	132.5	2.73	89.3	.06	.08	194.0	4.00	103.0	.11	.15	255.4	5.26	116.6	.19	.25	316.9	6.53	130.2	.27	.36
	120	—	—	—	—	—	159.0	2.73	95.2	.06	.08	220.5	3.79	108.8	.10	.14	281.9	4.84	122.4	.16	.21
	140	—	—	—	—	—	124.1	1.83	87.5	.03	.04	185.5	2.73	101.1	.06	.07	247.0	3.64	114.7	.09	.12
280-P CFM 4430 RPM 1100 HP 1/2	50	250.3	10.32	112.1	.68	.90	320.5	13.21	126.7	1.04	1.39	390.6	16.10	141.3	1.48	1.97	460.8	19.00	155.9	1.98	2.63
	60	230.2	7.91	107.9	.41	.55	300.3	10.32	122.5	.66	.88	370.5	12.73	137.1	.95	1.27	440.7	15.14	151.7	1.30	1.72
	80	189.9	4.89	99.5	.17	.23	260.1	6.70	114.1	.30	.40	330.3	8.51	128.7	.45	.60	400.5	10.32	143.3	.63	.85
	100	149.7	3.08	91.1	.07	.10	219.9	4.53	105.7	.14	.19	290.0	5.98	120.3	.24	.31	360.2	7.42	134.9	.34	.46
	120	109.4	1.88	82.8	.03	.04	179.6	3.08	97.4	.07	.10	249.8	4.29	112.0	.13	.17	320.0	5.50	126.6	.20	.26
	140	—	—	—	—	—	139.4	2.05	89.0	.03	.05	209.5	3.08	103.6	.07	.09	279.7	4.12	118.2	.12	.16
336-P CFM 5210 RPM 1140 HP 3/4	50	295.5	12.18	112.3	.92	1.23	378.7	15.61	127.0	1.43	1.90	461.8	19.04	141.7	2.02	2.69	544.9	22.46	156.4	2.71	3.60
	60	271.5	9.33	108.0	.56	.75	354.6	12.18	122.7	.90	1.20	437.8	15.04	137.4	1.30	1.74	520.9	17.89	152.1	1.77	2.36
	80	223.4	5.76	99.5	.23	.31	306.6	7.90	114.2	.40	.54	389.7	10.04	128.9	.62	.82	472.9	12.18	143.6	.87	1.15
	100	175.4	3.61	91.0	.10	.13	258.5	5.33	105.7	.20	.26	341.7	7.04	120.4	.32	.43	424.8	8.76	135.1	.47	.63
	120	127.3	2.19	82.5	.04	.05	210.5	3.61	97.2	.10	.13	293.6	5.04	111.9	.17	.23	376.7	6.47	126.6	.27	.36
	140	—	—	—	—	—	162.4	2.39	88.7	.04	.06	245.6	3.61	103.4	.09	.12	328.7	4.84	118.1	.16	.21



Performance Data

Table PD-4 (Continued) – Model P Unit Heater Hot Water Capacities – 60°F Ent. Air Temp.
 (Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																							
		260 F						300 F						340 F						380 F					
		MBH	GPM	FT	S.W.T	H.W.T	PD	MBH	GPM	FT	S.W.T	H.W.T	PD	MBH	GPM	FT	S.W.T	H.W.T	PD	MBH	GPM	FT	S.W.T	H.W.T	PD
384-P CFM 6140 RPM 1140 HP 3/4	50	341.8	14.09	111.3	.88	1.19	437.9	18.05	125.7	1.37	1.84	534.0	22.01	140.2	1.94	2.61	630.0	25.97	154.6	2.61	3.50				
	60	314.1	10.79	107.1	.54	.72	410.2	14.09	121.6	.86	1.16	506.2	17.39	136.0	1.25	1.68	602.3	20.69	150.4	1.70	2.28				
	80	258.6	6.66	98.8	.22	.30	354.7	9.14	113.2	.39	.52	450.8	11.61	127.7	.59	.79	546.9	14.09	142.1	.83	1.12				
	100	203.2	4.19	90.5	.09	.13	299.3	6.17	104.9	.19	.25	395.4	8.15	119.3	.31	.41	491.4	10.13	133.8	.45	.60				
	120	147.8	2.54	82.2	.04	.05	243.8	4.19	96.6	.09	.12	339.9	5.84	111.0	.17	.22	436.0	7.49	125.4	.26	.35				
	140	—	—	—	—	—	188.4	2.77	88.3	.04	.06	284.5	4.19	102.7	.09	.12	380.6	5.60	117.1	.15	.20				
	160	—	—	—	—	—	—	—	—	—	—	229.1	2.95	94.4	.05	.06	325.1	4.19	108.8	.09	.10				
180	—	—	—	—	—	—	—	—	—	—	173.6	1.99	86.1	.02	.03	269.7	3.09	100.5	.05	.07					
200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	214.3	2.21	92.2	.03	.04					
500-P CFM 8020 RPM 1160 HP 1-1/2	50	451.9	18.63	111.9	1.49	2.03	576.8	23.78	126.3	2.28	3.11	701.7	28.92	140.6	3.21	4.37	826.6	34.07	155.0	4.28	5.82				
	60	417.4	14.34	108.0	.92	1.25	542.3	18.63	122.3	1.45	1.98	667.2	22.92	136.7	2.09	2.84	792.1	27.21	151.0	2.81	3.83				
	80	348.3	8.97	100.0	.39	.53	473.2	12.19	114.4	.66	.90	598.1	15.41	128.7	1.00	1.36	723.0	18.63	143.1	1.39	1.90				
	100	279.3	5.76	92.1	.17	.23	404.2	8.33	106.5	.33	.45	529.1	10.90	120.8	.53	.72	654.0	13.48	135.2	.77	1.04				
	120	210.3	3.61	84.2	.07	.10	335.2	5.76	98.5	.17	.23	460.1	7.90	112.9	.29	.40	585.0	10.05	127.2	.45	.61				
	140	—	—	—	—	—	266.1	3.92	90.6	.08	.11	391.0	5.76	104.9	.16	.22	515.9	7.60	119.3	.27	.36				
	160	—	—	—	—	—	197.1	2.54	82.7	.04	.05	322.0	4.15	97.0	.09	.12	446.9	5.76	111.4	.16	.22				
180	—	—	—	—	—	—	—	—	—	—	253.0	2.90	89.1	.05	.06	377.9	4.33	103.4	.10	.13					
200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	308.8	3.18	95.5	.05	.07					
600-P CFM 9450 RPM 1160 HP 1-1/2	50	529.9	21.84	111.7	1.21	1.58	676.0	27.86	125.9	1.86	2.42	822.1	33.89	140.2	2.61	3.41	968.2	39.91	154.4	3.48	4.54				
	60	489.7	16.82	107.8	.75	.98	635.8	21.84	122.0	1.18	1.54	781.9	26.86	136.3	1.70	2.22	928.1	31.88	150.5	2.29	2.99				
	80	409.4	10.55	99.9	.32	.41	555.5	14.31	114.2	.54	.71	701.6	18.08	132.4	.82	1.07	847.8	21.84	142.7	1.14	1.48				
	100	329.1	6.78	92.1	.14	.18	475.2	9.79	106.3	.27	.35	621.3	12.81	120.6	.43	.56	767.5	15.82	134.8	.63	.82				
	120	248.8	4.27	84.3	.06	.08	394.9	6.78	98.5	.14	.18	541.0	9.29	112.8	.24	.31	687.1	11.80	127.0	.36	.48				
	140	—	—	—	—	—	314.6	4.63	90.7	.07	.09	460.7	6.78	104.9	.13	.18	606.8	8.93	119.2	.22	.29				
	160	—	—	—	—	—	234.3	3.02	82.8	.03	.04	380.4	4.90	97.1	.07	.10	526.5	6.78	111.4	.13	.17				
180	—	—	—	—	—	—	—	—	—	—	300.1	3.44	89.3	.04	.05	446.2	5.11	103.5	.08	.10					
200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	365.9	3.77	95.7	.04	.06					
720-P CFM 11,000 RPM 1165 HP 3	50	638.0	26.30	113.5	1.36	1.85	814.1	33.56	128.2	2.08	2.85	990.3	40.82	143.0	2.93	4.02	1166.4	48.08	157.7	3.89	5.36				
	60	589.4	20.25	109.4	.84	1.14	765.6	26.20	124.1	1.32	1.81	941.7	32.35	138.9	1.90	2.61	1117.8	38.40	153.7	2.56	3.52				
	80	492.3	12.68	101.2	.35	.48	668.5	17.22	116.0	.61	.83	844.6	21.76	130.8	.91	1.25	1020.7	26.30	145.5	1.27	1.74				
	100	395.2	8.15	93.1	.16	.21	571.4	11.78	107.9	.30	.41	747.5	15.41	122.6	.48	.66	923.6	19.04	137.4	.70	.96				
	120	298.1	5.12	85.0	.07	.09	474.2	8.15	99.7	.15	.21	650.4	11.17	114.5	.27	.36	826.5	14.20	129.3	.41	.56				
	140	—	—	—	—	—	377.1	5.55	91.6	.08	.10	553.3	8.15	106.4	.15	.20	729.4	10.74	121.1	.24	.33				
	160	—	—	—	—	—	280.0	3.61	83.5	.03	.05	456.2	5.88	98.2	.08	.11	632.3	8.15	113.0	.15	.20				
180	—	—	—	—	—	—	—	—	—	—	359.1	4.11	90.1	.04	.06	535.2	6.13	104.8	.09	.12					
200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	438.1	4.51	96.7	.05	.07					



Performance Data

Table PD-5 – Model P-L Unit Heater Hot Water Capacities – 60°F Ent. Air Temp. (Capacities shown are for units with all Air Ports open)
(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																			
		180 F				200 F				220 F				240 F							
		MBH	GPM	FT S.W.T	PD H.W.T	MBH	GPM	FT S.W.T	PD H.W.T	MBH	GPM	FT S.W.T	PD H.W.T	MBH	GPM	FT S.W.T	PD H.W.T				
42-P.L	10	19.7	4.07	87.2	.18	.24	23.9	4.92	92.9	.26	.34	28.0	5.77	98.61	.34	.46	32.1	6.61	104.3	.44	.59
	15	17.3	2.37	83.8	.06	.09	21.4	2.94	89.5	.10	.13	25.5	3.50	95.2	.13	.18	29.6	4.07	100.9	.18	.23
CFM 668	20	14.8	1.53	80.4	.03	.04	18.9	1.95	86.1	.04	.06	23.0	2.37	91.8	.06	.08	27.1	2.80	97.5	.09	.11
RPM 1550	25	12.3	1.02	77.0	.01	.02	16.4	1.36	82.7	.02	.03	20.6	1.69	88.4	.03	.04	24.7	2.03	94.0	.05	.06
HP 1/40	30	—	—	—	—	—	14.0	.96	79.3	.01	.02	18.1	1.24	85.0	.02	.02	22.2	1.53	90.6	.03	.04
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.3	.89	83.8	.01	.01
42-P.L	10	13.9	2.86	87.2	.09	.12	16.7	3.45	92.8	.13	.17	19.6	4.04	98.4	.17	.23	22.5	4.63	104.1	.22	.30
	15	12.2	1.68	84.0	.03	.04	15.1	2.08	89.6	.05	.07	18.0	2.47	95.2	.07	.09	20.8	2.86	100.8	.09	.12
CFM 470	20	10.6	1.09	80.8	.01	.02	13.5	1.39	86.4	.02	.03	16.3	1.68	92.0	.03	.04	19.2	1.98	97.6	.04	.06
RPM 1150	25	—	—	—	—	—	11.8	.98	83.2	.01	.02	14.7	1.21	88.8	.02	.02	17.6	1.45	94.4	.02	.03
HP 1/40	30	—	—	—	—	—	—	—	—	—	—	13.1	.90	85.6	.01	.01	15.9	1.09	91.2	.01	.02
64-P.L	10	34.6	7.12	86.5	.57	.76	41.5	8.56	91.9	.80	1.06	48.5	10.00	97.2	1.06	1.41	55.5	11.43	102.6	1.36	1.80
	15	30.9	4.25	83.7	.21	.28	37.9	5.21	89.1	.31	.41	44.9	6.16	94.5	.42	.56	51.8	7.12	99.8	.55	.73
CFM 1200	20	27.3	2.81	81.0	.10	.13	34.2	3.53	86.3	.15	.20	41.2	4.25	91.7	.21	.28	48.2	4.97	97.0	.28	.37
RPM 1550	25	23.6	1.95	78.2	.05	.06	30.6	2.52	83.5	.08	.10	37.6	3.10	88.9	.11	.15	44.6	3.67	94.2	.16	.21
HP 1/20	30	20.0	1.37	75.4	.03	.03	27.0	1.85	80.7	.04	.06	33.9	2.33	86.1	.07	.09	40.9	2.81	91.4	.09	.12
	40	—	—	—	—	—	19.7	1.01	75.1	.01	.02	26.7	1.37	80.5	.02	.03	33.6	1.73	85.8	.04	.05
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.4	1.09	80.2	.02	.02
64-P.L	10	27.0	5.56	88.9	.35	.47	32.4	6.68	94.7	.50	.66	37.8	7.80	100.4	.66	.88	43.3	8.91	106.2	.84	1.12
	15	24.2	3.33	85.9	.13	.18	29.6	4.07	91.7	.19	.26	35.1	4.82	97.5	.26	.35	40.5	5.56	103.3	.34	.46
CFM 862	20	21.4	2.21	82.9	.06	.08	26.9	2.77	88.7	.09	.12	32.3	3.33	94.5	.13	.17	37.7	3.89	100.3	.17	.23
RPM 1150	25	18.7	1.54	80.0	.03	.04	24.1	1.99	85.8	.05	.07	29.5	2.43	91.5	.07	.10	34.9	2.88	97.3	.10	.13
HP 1/20	30	15.9	1.09	77.0	.02	.02	21.3	1.46	82.8	.03	.04	26.7	1.84	88.6	.04	.06	32.2	2.21	94.4	.06	.08
	40	—	—	—	—	—	—	—	—	—	—	21.2	1.09	82.6	.02	.02	26.6	1.37	88.4	.02	.03
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21.1	.87	82.5	.01	.01
80-P.L	10	40.7	8.40	87.6	.49	.64	48.9	10.09	93.2	.69	.89	57.1	11.78	98.7	.92	1.19	65.4	13.47	104.3	1.18	1.52
	15	36.5	5.02	84.7	.18	.24	44.7	6.14	90.3	.27	.35	52.9	7.27	95.9	.37	.47	61.1	8.40	101.4	.48	.62
CFM 1360	20	32.3	3.33	81.9	.08	.11	40.5	4.17	87.4	.13	.17	48.7	5.02	93.0	.18	.23	56.9	5.86	98.6	.24	.31
RPM 1550	25	28.1	2.31	79.0	.04	.05	36.3	2.99	84.6	.07	.09	44.5	3.66	90.1	.10	.13	52.7	4.34	95.7	.14	.18
HP 1/20	30	23.8	1.64	76.1	.02	.03	32.0	2.20	81.7	.04	.05	40.2	2.76	87.3	.06	.07	48.4	3.33	92.8	.08	.11
	40	—	—	—	—	—	—	—	—	—	—	31.8	1.64	81.5	.02	.03	40.0	2.06	87.1	.03	.04
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	31.5	1.30	81.3	.01	.02
80-P.L	10	32.1	6.61	89.7	.31	.40	38.5	7.94	95.7	.44	.56	44.9	9.26	101.6	.58	.75	51.4	10.59	107.6	.74	.96
	15	28.8	3.96	86.7	.12	.15	35.2	4.84	92.6	.17	.22	41.7	5.73	98.6	.23	.30	48.1	6.61	104.6	.30	.39
CFM 995	20	25.5	2.63	83.6	.05	.07	32.0	3.29	89.6	.08	.11	38.4	3.96	95.6	.11	.15	44.8	4.62	101.5	.15	.20
RPM 1150	25	22.2	1.83	80.6	.03	.04	28.7	2.36	86.6	.04	.06	35.1	2.89	92.5	.06	.08	41.6	3.43	98.5	.09	.11
HP 1/20	30	—	—	—	—	—	25.4	1.75	83.5	.02	.03	31.8	2.19	89.5	.04	.05	38.3	2.63	95.5	.05	.07
	40	—	—	—	—	—	—	—	—	—	—	25.3	1.30	83.4	.01	.02	31.7	1.63	89.4	.02	.03

See Table SP-12 for abbreviations.



Performance Data

Table PD-5 (Continued) – Model P-L Unit Heater Hot Water Capacities – 60°F Ent. Air Temp. (Capacities shown are for units with all Air Ports open)
(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																																																																																																																																																																										
		180 F						200 F						220 F						240 F																																																																																																																																																								
		MBH	GPM	FT S	WT	H	WT	MBH	GPM	FT S	WT	H	WT	MBH	GPM	FT S	WT	H	WT	MBH	GPM	FT S	WT	H	WT																																																																																																																																																			
102-PL CFM 1752 RPM 1070 HP 1/8	10	53.6	11.04	88.2	1.04	1.36	63.7	13.13	93.5	1.43	1.86	73.8	15.22	98.8	1.87	2.43	84.0	17.31	104.2	2.36	3.07	15	50.0	6.86	86.3	.43	.56	60.1	8.26	91.6	.59	.78	70.2	9.65	96.9	.79	1.03	80.4	11.04	102.3	1.01	1.31	20	46.3	4.77	84.4	.22	.23	56.5	5.82	89.7	.31	.40	66.6	6.86	95.0	.41	.54	76.7	7.91	100.4	.53	.70	25	42.7	3.52	82.5	.12	.16	52.9	4.36	87.8	.18	.23	63.0	5.19	93.1	.24	.32	73.1	6.03	98.5	.32	.42	30	39.1	2.69	80.6	.07	.10	49.2	3.38	85.9	.11	.15	59.4	4.08	91.2	.16	.20	69.5	4.77	96.6	.21	.27	40	31.9	1.64	76.8	.03	.04	42.0	2.16	82.1	.05	.06	52.1	2.69	87.4	.07	.09	62.3	3.21	92.8	.10	.13	50	—	—	—	—	—	34.8	1.43	78.3	.02	.03	44.9	1.85	83.6	.04	.05	55.0	2.27	88.9	.05	.07	60	—	—	—	—	—	—	—	—	—	—	37.6	1.29	79.8	.02	.02	47.8	1.64	85.1	.03	.04				
	102-PL CFM 1499 RPM 850 HP 1/8	10	45.9	9.45	88.2	.78	1.02	54.5	11.24	93.5	1.06	1.39	63.2	13.02	98.8	1.39	1.81	71.8	14.80	104.2	1.75	2.28	15	42.8	5.89	86.3	.32	.42	51.5	7.07	91.7	.44	.58	60.1	8.26	97.0	.59	.77	68.8	9.45	102.3	.75	.98	20	39.8	4.10	84.5	.16	.21	48.5	4.99	89.8	.23	.30	57.1	5.89	95.1	.31	.40	65.8	6.78	100.4	.40	.52	25	36.8	3.03	82.6	.09	.12	45.4	3.75	87.9	.13	.18	54.1	4.46	93.3	.18	.24	62.7	5.17	98.6	.24	.31	30	33.8	2.32	80.8	.06	.07	42.4	2.91	86.1	.08	.11	51.1	3.51	91.4	.12	.15	59.7	4.10	96.7	.16	.20	40	—	—	—	—	—	36.4	1.87	82.4	.04	.05	45.0	2.32	87.7	.05	.07	53.7	2.76	93.0	.07	.10	50	—	—	—	—	—	—	—	—	—	—	39.0	1.61	84.0	.03	.04	47.6	1.96	89.3	.04	.05	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	41.6	1.43	85.5	.02	.03			
		122-PL CFM 2180 RPM 1100 HP 1/6	10	70.3	14.49	89.7	1.75	2.28	83.7	17.24	95.4	2.40	3.12	97.0	19.99	101.0	3.14	4.08	110.4	22.74	106.7	3.97	5.15	15	65.5	8.99	87.7	.71	.93	78.8	10.83	93.3	.99	1.30	92.1	12.66	99.0	1.32	1.72	105.5	14.49	104.6	1.69	2.19	20	60.6	6.24	85.6	.36	.47	73.9	7.62	91.3	.51	.67	87.3	8.99	96.9	.69	.90	100.6	10.37	102.5	.89	1.16	25	55.7	4.59	83.6	.20	.26	69.1	5.69	89.2	.30	.39	82.4	6.79	94.8	.41	.53	95.8	7.89	100.5	.53	.70	30	50.9	3.49	81.5	.12	.16	64.2	4.41	87.1	.18	.24	77.6	5.33	92.8	.26	.34	90.9	6.24	98.4	.34	.45	40	41.1	2.12	77.4	.05	.06	54.5	2.81	83.0	.08	.10	67.8	3.49	88.7	.12	.15	81.2	4.18	94.3	.16	.21	50	31.4	1.29	73.3	.02	.02	44.8	1.84	78.9	.04	.05	58.1	2.39	84.6	.06	.08	71.4	2.94	90.2	.08	.11	60	—	—	—	—	—	—	—	—	—	—	48.4	1.66	80.4	.03	.04	61.7	2.12	86.1	.05	.06		
			146-PL CFM 2360 RPM 1100 HP 1/6	10	80.4	16.56	91.4	2.15	2.89	95.4	19.66	97.3	2.92	3.92	110.4	22.76	103.1	3.78	5.08	125.5	25.86	109.0	4.75	6.37	15	75.4	10.36	89.5	.89	1.20	90.5	12.43	95.3	1.23	1.66	105.5	14.50	101.2	1.62	2.18	120.5	16.56	107.1	2.05	2.76	20	70.5	7.26	87.5	.46	.62	85.5	8.81	93.4	.65	.87	100.6	10.36	99.3	.87	1.16	115.6	11.91	105.0	1.11	1.49	25	65.5	5.40	85.6	.27	.36	80.6	6.64	91.5	.38	.52	95.6	7.88	97.3	.52	.70	110.7	9.12	103.2	.67	.90	30	60.6	4.16	83.7	.16	.22	75.6	5.20	89.5	.24	.33	90.7	6.23	95.4	.34	.45	105.7	7.26	101.3	.44	.59	40	50.7	2.61	79.8	.07	.09	65.8	3.39	85.7	.11	.15	80.8	4.16	91.6	.16	.21	95.8	4.94	97.4	.21	.29	50	40.9	1.68	76.0	.03	.04	55.9	2.30	81.8	.05	.07	70.9	2.92	87.7	.08	.11	86.0	3.54	93.6	.12	.16	60	—	—	—	—	—	46.0	1.58	78.0	.03	.04	61.1	2.10	83.8	.04	.06	76.1	2.61	89.7	.07	.09	
				166-PL CFM 2920 RPM 1100 HP 1/6	10	94.6	19.50	89.9	1.98	2.64	112.3	23.15	95.4	2.70	3.58	130.0	26.80	101.0	3.50	4.65	147.7	30.44	106.6	4.40	5.83	15	88.8	12.21	88.0	.82	1.10	106.5	14.64	93.6	1.14	1.52	124.2	17.07	99.2	1.50	1.99	141.9	19.50	104.8	1.90	2.52	20	83.0	8.56	86.2	.43	.57	100.7	10.38	91.8	.60	.80	118.4	12.21	97.4	.80	1.06	136.1	14.03	103.0	1.02	1.36	25	77.3	6.37	84.4	.25	.33	95.0	7.83	90.0	.35	.47	112.7	9.29	95.6	.48	.64	130.4	10.75	101.1	.62	.83	30	71.5	4.91	82.6	.15	.20	89.2	6.13	88.1	.22	.30	106.9	7.34	93.7	.31	.41	124.6	8.56	99.3	.41	.54	40	59.9	3.09	78.9	.06	.09	77.6	4.00	84.5	.10	.14	95.3	4.91	90.1	.15	.20	113.0	5.82	95.7	.20	.26	50	—	—	—	—	—	66.0	2.72	80.8	.05	.07	83.7	3.45	86.4	.08	.10	101.4	4.18	92.0	.11	.14	60	—	—	—	—	—	54.5	1.87	77.2	.02	.03	72.2	2.48	82.8	.04	.06	89.9	3.09	88.4	.06	.08

See Table SP-12 for abbreviations.



Performance Data

Table PD-5 (Continued) – Model P-L Unit Heater Hot Water Capacities – 60°F Ent. Air Temp. (Capacities shown are for units with all Air Ports open)
(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																			
		260 F				300 F				340 F				380 F							
		MBH	GPM	FT S	WT H	WT	MBH	GPM	FT S	WT H	WT	MBH	GPM	FT S	WT H	WT	MBH	GPM	FT S	WT H	WT
42-PL CFM 668 RPM 1550 HP 1/40	50 60	— —	— —	— —	— —	— —	24.7 —	1.02 —	94.0 —	.01 —	.02 —	32.9 27.9	1.36 .96	105.4 98.6	.02 .01	.03 .01	41.1 36.2	1.69 1.24	116.7 109.9	.03 .02	.04 .02
42-PL CFM 470 RPM 1150 HP 1/40	50 60	— —	— —	— —	— —	— —	18.0 —	.74 —	95.2 —	.01 —	.01 —	23.7 —	.98 —	106.4 —	.01 —	.01 —	29.4 26.1	1.21 .90	117.6 111.2	.02 .01	.02 .01
64-PL CFM 1200 RPM 1550 HP 1/20	50 60 80 100	33.3 26.1 — —	1.37 .90 — —	85.6 80.0 — —	.02 .01 — —	.03 .01 — —	47.3 40.0 — —	1.95 1.37 — —	96.3 90.7 — —	.05 .02 — —	.06 .03 — —	61.2 53.9 39.4 —	2.52 1.85 1.01 —	107.0 101.4 90.3 —	.07 .04 .01 —	.10 .05 .02 —	75.2 67.9 53.3 38.8	3.10 2.33 1.37 .80	117.7 112.1 101.0 89.8	.11 .06 .02 .01	.14 .08 .03 .01
64-PL CFM 862 RPM 1150 HP 1/20	50 60 80	26.5 — —	1.09 — —	88.3 — —	.02 — —	.02 — —	37.3 31.8 —	1.54 1.09 —	99.9 94.0 —	.03 .02 —	.04 .02 —	48.2 42.6 31.5	1.99 1.46 .81	111.5 105.6 93.7	.05 .03 .01	.06 .03 .01	59.0 53.5 42.4	2.43 1.84 1.09	123.1 117.2 105.3	.07 .04 .01	.09 .05 .02
80-PL CFM 1360 RPM 1550 HP 1/20	50 60 80 100	39.7 31.2 — —	1.64 1.07 — —	86.9 81.2 — —	.02 .01 — —	.03 .01 — —	56.1 47.6 — —	2.31 1.64 — —	98.0 92.3 — —	.04 .02 — —	.05 .03 — —	72.5 64.0 47.1 —	2.99 2.20 1.21 —	109.1 103.4 91.9 —	.06 .04 .01 —	.08 .05 .01 —	88.9 80.4 63.5 46.6	3.66 2.76 1.64 .96	120.3 114.5 103.0 91.6	.09 .05 .02 .01	.12 .07 .03 .01
80-PL CFM 995 RPM 1150 HP 1/20	50 60 80	31.6 — —	1.30 — —	89.3 — —	.01 — —	.02 — —	44.5 37.9 —	1.83 1.30 —	101.2 95.1 —	.03 .01 —	.03 .02 —	57.4 50.8 37.7	2.36 1.75 .97	113.1 107.1 94.9	.04 .02 .01	.05 .03 .01	70.2 63.7 50.6	2.89 2.19 1.30	125.1 119.0 106.8	.06 .03 .01	.08 .04 .02
102-PL CFM 1752 RPM 1070 HP 1/8	50 60 80 100 120	65.2 57.9 43.4 — —	2.69 1.99 1.12 — —	94.3 90.5 82.9 — —	.07 .04 .01 — —	.09 .05 .02 — —	85.4 78.2 63.7 49.2 —	3.52 2.69 1.64 1.01 —	104.9 101.1 93.5 85.9 —	.11 .07 .03 .01 —	.15 .09 .04 .01 —	105.7 98.5 84.0 69.5 55.0	4.36 3.38 2.16 1.43 .95	115.6 111.8 104.2 96.6 88.9	.17 .10 .04 .02 .01	.22 .13 .06 .03 .01	126.0 118.7 104.3 89.8 75.3	5.19 4.08 2.69 1.85 1.29	126.3 122.5 114.8 107.2 99.6	.23 .14 .07 .03 .02	.30 .19 .09 .04 .02
102-PL CFM 1499 RPM 850 HP 1/8	50 60 80 100 120	56.3 50.2 — — —	2.32 1.72 — — —	94.6 90.9 — — —	.05 .03 — — —	.07 .04 — — —	73.6 67.5 55.4 — —	3.03 2.32 1.43 — —	105.2 101.5 94.1 — —	.09 .05 .02 — —	.11 .07 .03 — —	90.9 84.8 72.7 60.6 —	3.75 2.91 1.87 1.25 —	115.9 112.2 104.7 97.3 —	.12 .08 .03 .02 —	.16 .10 .04 .02 —	108.2 102.1 90.0 77.9 65.8	4.46 3.51 2.32 1.61 1.13	126.5 122.8 115.3 107.9 100.5	.17 .11 .05 .03 .01	.22 .14 .07 .03 .02
122-PL CFM 2180 RPM 1100 HP 1/6	50 60 80 100 120 140	84.8 75.1 55.6 — — —	3.49 2.58 1.43 — — —	95.8 91.1 83.5 — — —	.11 .06 .02 — — —	.15 .08 .03 — — —	111.5 101.7 82.3 62.8 —	4.59 3.49 2.12 1.29 —	107.1 103.0 94.8 86.6 —	.19 .11 .04 .02 — —	.24 .15 .06 .02 — —	138.2 128.4 109.0 89.5 70.0	5.69 4.41 2.81 1.84 1.20	118.4 114.3 106.1 97.8 89.6	.28 .17 .07 .03 .01	.36 .22 .10 .04 .02	164.8 155.1 135.7 116.2 96.7 77.3	6.79 5.33 3.49 2.39 1.66 1.14	129.7 125.6 117.4 109.1 100.9 92.7	.38 .24 .11 .05 .03 .01	.49 .31 .14 .07 .04 .02
146-PL CFM 2360 RPM 1100 HP 1/6	50 60 80 100 120 140 160	101.0 91.1 71.4 — — — —	4.16 3.13 1.84 — — — —	99.4 95.6 87.9 — — — —	.15 .09 .03 — — — —	.21 .12 .05 — — — —	131.1 121.2 101.5 81.7 —	5.40 4.16 2.61 1.68 —	111.2 107.3 99.6 91.9 —	.24 .15 .06 .03 — — —	.33 .20 .09 .04 — — —	161.2 151.3 131.5 111.8 92.0 72.3	6.64 5.20 3.39 2.30 1.58 1.06	122.9 119.1 111.4 103.7 95.9 88.2	.35 .22 .01 .05 .02 .01	.47 .30 .14 .07 .03 .02	191.2 181.4 161.6 141.9 122.1 102.4	7.88 6.23 4.16 2.92 2.10 1.51	134.7 130.8 123.1 115.4 107.7 100.0	.48 .31 .15 .08 .04 .02	.64 .41 .19 .10 .05 .03
166-PL CFM 2920 RPM 1100 HP 1/6	50 60 80 100 120 140 160	119.1 107.6 84.4 — — — —	4.91 3.69 2.17 — — — —	97.6 93.9 86.6 — — — —	.14 .08 .03 — — — —	.19 .11 .04 — — — —	154.5 142.9 119.8 96.7 —	6.37 4.91 3.09 1.99 —	108.8 105.1 97.8 90.5 —	.23 .14 .06 .03 — — —	.30 .19 .08 .03 — — —	189.9 178.3 155.2 132.1 108.9 85.8	7.83 6.13 4.00 2.72 1.87 1.26	119.9 116.3 109.0 101.7 94.4 87.1	.33 .21 .12 .05 .02 .01	.43 .27 .09 .06 .03 .01	225.3 213.7 190.6 167.5 144.3 121.2	9.29 7.34 4.91 3.45 2.48 1.78	131.1 127.5 120.2 112.9 105.6 98.2	.44 .28 .13 .07 .04 .02	.59 .38 .18 .09 .05 .03



Performance Data

Table PD-5 (Continued) – Model P-L Unit Heater Hot Water Capacities – 60°F Ent. Air Temp. (Capacities shown are for units with all Air Ports open)
(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																							
		180 F						200 F						220 F						240 F					
		MBH	GPM	FT S	WT	H	WT	MBH	GPM	FT S	WT	H	WT	MBH	GPM	FT S	WT	H	WT	MBH	GPM	FT S	WT	H	WT
202-PL CFM 3390 RPM 1100 HP 1/4	10	114.3	23.56	91.1	2.83	3.76	135.8	27.98	96.9	3.85	5.11	157.2	32.39	102.7	5.01	6.64	—	—	—	—	—	—	—	—	
	15	107.2	14.73	89.1	1.17	1.56	128.6	17.67	95.0	1.63	2.16	150.1	20.62	100.8	2.14	2.84	171.5	23.56	106.6	2.72	3.60	—	—		
	20	100.1	10.32	87.2	.60	.80	121.5	12.52	93.0	.85	1.13	142.9	14.73	98.9	1.14	1.51	164.4	16.94	104.7	1.46	1.94	—	—		
	25	93.0	7.67	85.3	.35	.46	114.4	9.43	91.1	.50	.67	135.8	11.20	96.9	.68	.91	157.3	12.96	102.8	.88	1.18	—	—		
	30	85.9	5.90	83.3	.21	.28	107.3	7.37	89.2	.32	.42	128.7	8.84	95.0	.44	.58	150.1	10.32	100.8	.58	.77	—	—		
	40	71.6	3.69	79.5	.09	.12	93.1	4.80	85.3	.14	.19	114.5	5.90	91.1	.21	.27	135.9	7.00	97.0	.28	.37	—	—		
252-PL CFM 4507 RPM 1100 HP 1/4	50	57.4	2.37	75.6	.04	.05	78.8	3.25	81.4	.07	.09	100.3	4.13	87.3	.11	.14	121.7	5.02	93.1	.15	.20	—	—		
	60	—	—	—	—	—	64.6	2.22	77.6	.03	.05	86.0	2.96	83.4	.06	.06	107.5	3.69	89.2	.09	.11	—	—		
	10	142.3	29.33	89.1	5.01	6.66	168.5	34.72	94.5	6.75	8.98	—	—	—	—	—	—	—	—	—	—	—	—		
	15	135.0	18.54	87.6	2.13	2.84	161.1	22.14	93.0	2.91	3.88	187.3	25.73	98.3	3.80	5.05	213.5	29.33	103.7	4.78	6.36	—	—		
	20	127.6	13.15	86.1	1.12	1.50	153.8	15.85	91.4	1.56	2.08	180.0	18.54	96.8	2.06	2.74	206.1	21.24	102.2	2.62	3.48	—	—		
	25	120.3	9.92	84.6	.67	.89	146.4	12.07	89.9	.94	1.26	172.6	14.23	95.3	1.26	1.68	198.8	16.39	100.6	1.61	2.15	—	—		
280-PL CFM 5040 RPM 1100 HP 1/2	30	112.9	7.76	83.1	.42	.57	139.1	9.56	88.4	.61	.82	165.3	11.35	93.8	.83	1.10	191.4	13.15	99.1	1.07	1.43	—	—		
	40	98.3	5.06	80.1	.19	.26	124.4	6.41	85.4	.29	.39	150.6	7.76	90.8	.41	.55	176.7	9.11	96.1	.54	.72	—	—		
	50	83.6	3.44	77.1	.09	.13	109.7	4.52	82.4	.15	.21	135.9	5.60	87.8	.22	.30	162.1	6.68	93.1	.31	.41	—	—		
	60	68.9	2.37	74.1	.05	.06	95.0	3.26	79.4	.08	.11	121.2	4.16	84.8	.13	.17	147.4	5.06	90.1	.18	.24	—	—		
	10	166.9	34.40	90.5	6.75	8.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	15	158.1	21.73	88.9	2.86	3.82	188.9	25.95	94.5	3.92	5.22	219.6	30.17	100.2	5.12	6.80	250.3	34.40	105.8	6.45	8.57	—	—		
336-PL CFM 5700 RPM 1140 HP 3/4	20	149.4	15.40	87.3	1.51	2.01	180.1	18.56	92.9	2.10	2.80	210.9	21.73	98.6	2.77	3.69	241.6	24.90	104.2	3.52	4.69	—	—		
	25	140.7	11.60	85.7	.89	1.19	171.4	14.13	91.3	1.26	1.68	202.1	16.66	97.0	1.69	2.25	232.9	19.20	102.6	2.17	2.89	—	—		
	30	131.9	9.06	84.1	.57	.75	162.7	11.18	89.7	.82	1.09	193.4	13.29	95.4	1.11	1.48	224.1	15.40	101.0	1.44	1.92	—	—		
	40	114.5	5.90	80.9	.26	.34	145.2	7.48	86.6	.39	.52	175.9	9.06	92.2	.55	.73	206.6	10.65	97.8	.73	.97	—	—		
	50	97.0	4.00	77.7	.12	.17	127.7	5.26	83.4	.20	.27	158.4	6.53	89.0	.30	.40	189.2	7.80	94.6	.41	.54	—	—		
	60	79.5	2.73	74.5	.06	.08	110.2	3.79	80.2	.11	.15	141.0	4.84	86.5	.17	.23	171.7	5.90	91.4	.24	.32	—	—		
384-PL CFM 6600 RPM 1140 HP 3/4	15	184.9	25.41	89.9	3.84	5.11	220.9	30.35	95.7	5.26	6.99	256.9	35.30	101.5	6.87	9.13	—	—	—	—	—	—	—		
	20	174.6	17.99	88.2	2.02	2.69	210.6	21.70	94.1	2.81	3.74	246.6	25.41	99.9	3.71	4.94	282.6	29.12	105.7	4.73	6.28	—	—		
	25	164.3	13.54	86.6	1.19	1.59	200.2	16.51	92.4	1.69	2.25	236.2	19.48	98.2	2.26	3.01	272.2	22.44	104.0	2.91	3.87	—	—		
	30	153.9	10.57	84.9	.75	1.00	189.9	13.05	90.7	1.09	1.46	225.9	15.52	96.5	1.48	1.98	261.9	17.99	102.3	1.92	2.56	—	—		
	40	133.3	6.87	81.5	.34	.45	169.2	8.72	87.4	.52	.69	205.2	10.57	93.2	.73	.97	241.2	12.43	99.0	.97	1.29	—	—		
	50	112.6	4.64	78.2	.16	.22	148.6	6.12	84.0	.27	.36	184.6	7.61	89.8	.40	.53	220.5	9.09	95.7	.54	.72	—	—		
500-PL CFM 9380 RPM 1160 HP 1-1/2	60	91.9	3.16	74.9	.08	.11	127.9	4.39	80.7	.15	.20	163.9	5.63	86.5	.23	.30	199.9	6.87	92.3	.32	.43	—	—		
	15	218.3	29.99	90.5	3.82	5.13	260.7	35.82	96.4	5.24	7.04	303.2	41.66	102.3	6.86	9.20	—	—	—	—	—	—	—		
	20	206.1	21.24	88.8	2.01	2.70	248.5	25.61	94.7	2.80	3.76	291.0	29.99	100.6	3.70	4.97	333.5	34.36	106.6	4.72	6.33	—	—		
	25	193.9	15.98	87.1	1.18	1.59	236.4	19.49	93.0	1.68	2.26	278.8	22.99	98.9	2.25	3.03	321.3	26.49	104.9	2.90	3.89	—	—		
	30	181.7	12.48	85.4	.75	1.00	224.2	15.40	91.3	1.09	1.46	266.6	18.32	97.2	1.48	1.98	309.1	21.24	103.2	1.92	2.57	—	—		
	40	157.3	8.11	82.0	.34	.45	199.8	10.30	87.9	.51	.69	242.3	12.48	93.8	.72	.97	284.7	14.67	99.8	.96	1.29	—	—		
600-PL CFM 10,300 RPM 1160 HP 1-1/2	50	133.0	5.48	78.6	.16	.22	175.4	7.23	84.5	.27	.36	217.9	8.98	90.4	.39	.53	260.4	10.73	96.4	.54	.72	—	—		
	60	108.6	3.73	75.2	.08	.11	151.1	5.19	81.1	.14	.20	193.6	6.65	87.0	.23	.30	236.0	8.11	93.0	.32	.43	—	—		
	15	272.3	37.42	86.8	5.77	7.85	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	20	257.9	26.58	85.3	3.06	4.16	310.5	32.00	90.5	4.23	5.76	363.1	37.42	95.7	5.57	7.58	—	—	—	—	—	—	—		
	25	243.5	20.07	83.9	1.82	2.47	296.1	24.41	89.1	2.56	3.49	348.7	28.75	94.3	3.41	4.65	401.3	33.08	99.4	4.37	5.94	—	—		
	30	229.1	15.74	82.5	1.16	1.58	281.7	19.35	87.7	1.67	2.27	334.3	22.97	92.8	2.25	3.07	386.9	26.58	98.0	2.91	3.96	—	—		
720-PL CFM 11,900 RPM 1165 HP 3	40	200.2	10.32	79.7	.53	.73	252.8	13.03	84.8	.80	1.09	305.4	15.74	90.0	1.12	1.52	358.0	18.45	95.2	1.48	2.01	—	—		
	50	171.4	7.06	76.8	.27	.36	224.0	9.23	82.0	.43	.58	276.6	11.40	87.2	.62	.84	329.2	13.57	92.3	.84	1.14	—	—		
	60	142.6	4.90	74.0	.14	.19	195.2	6.70	79.2	.24	.32	247.8	8.51	84.3	.36	.49	300.4	10.32	89.5	.51	.69	—	—		
	15	330.6	45.43	89.6	5.01	6.54	394.4	54.19	95.3	6.83	8.91	—	—	—	—	—	—	—	—	—	—	—	—		
	20	313.2	32.28	88.0	2.65	3.47	377.0	38.85	93.7	3.68	4.80	440.8	45.43	99.4	4.84	6.32	504.6	52.00	105.2	6.14	8.00	—	—		
	25	295.8	24.39	86.5	1.58	2.07	359.6	29.65	92.2	2.23	2.91	423.4	34.91	97.9	2.97	3.87	487.2	40.17	103.6	3.79	4.95	—	—		
720-PL CFM 11,900 RPM 1165 HP 3	30	278.4	19.13	84.9	1.01	1.32	342.2	23.51	90.6	1.45	1.90	406.0	27.89	96.3	1.96	2.56	469.8	32.28	102.0	2.53	3.30	—	—		
	40	243.6	12.55	81.8	.46	.61	307.4	15.84	87.5	.70	.92	371.2	19.13	93.2	.97	1.27	435.0	22.41	98.9	1.29	1.68	—	—		
	50	208.8	8.61	78.7	.23	.30	272.6	11.24	84.4	.37	.49	336.4	13.87	90.1	.54	.70	400.2	16.50	95.8	.73	.95	—	—		
	60	174.0	5.98	75.6	.12	.16	237.8	8.17	81.3	.21	.27	301.6	10.36	87.0	.31	.41	365.4	12.55	92.7	.44	.58	—	—		
	15	397.9	54.68	90.8	5.60	7.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	20	376.9	38.84	89.2	2.97	4.06	453.7	46.76	95.1	4.11	5.63	530.6	54.68	101.1	5.41	7.42	607.4	62.60	107.0	6.86	9.42	—	—		
25	355.9	29.34	87.6	1.77	2.41	432.7	35.67	93.5	2.49	3.40	509.6	42.01	99.5	3.32	4.54	586.4	48.34	105.4	4.24	5.82	—	—			
30	334.8	23.00	85.9	1.13	1.54	411.7	28.28	91.9	1.62	2.21	488.5	33.56	97.8	2.19	2.99	565.4	38.84	103.8	2.83	3.87	—	—			
40	292.7	15.08	82.7	.52	.70	369.6	19.04	88.6	.78	1.06	446.4	23.00	94.6	1.09	1.48	523.3	26.96	100.5	1.44	1.96	—	—			
50																									



Performance Data

Table PD-5 (Continued) – Model P-L Unit Heater Hot Water Capacities – 60°F Ent. Air Temp. (Capacities shown are for units with all Air Ports open)
(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																			
		260 F				300 F				340 F				380 F							
		MBH	GPM	FT S	PD HWT	MBH	GPM	FT S	PD HWT	MBH	GPM	FT S	PD HWT	MBH	GPM	FT S	PD HWT				
202-PL	50	143.1	5.90	98.9	.20	.27	186.0	7.67	110.6	.32	.43	228.8	9.43	122.2	.46	.61	271.7	11.20	133.9	.63	.83
	60	128.9	4.43	95.0	.12	.16	171.7	5.90	106.7	.20	.26	214.6	7.37	118.3	.29	.39	257.4	8.84	130.0	.40	.54
	80	100.4	2.59	87.3	.04	.06	143.3	3.69	99.0	.08	.11	186.1	4.80	110.6	.13	.17	229.0	5.90	122.3	.19	.25
CFM 3390	100	—	—	—	—	—	114.8	2.37	91.2	.04	.05	157.7	3.25	102.9	.06	.08	200.5	4.13	114.5	.10	.13
RPM 1100	120	—	—	—	—	—	86.4	1.48	83.5	.02	.02	129.2	2.22	95.1	.03	.04	172.1	2.96	106.8	.05	.07
HP 1/4	140	—	—	—	—	—	—	—	—	—	—	100.8	1.48	87.4	.01	.02	143.6	2.11	99.0	.03	.04
	160	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	115.2	1.48	91.3	.01	.02
252-PL	50	188.2	7.76	98.5	.40	.53	240.6	9.92	109.2	.61	.81	292.9	12.07	119.9	.86	1.15	345.2	14.23	130.6	1.15	1.53
	60	173.5	5.96	95.5	.24	.33	225.9	7.76	106.2	.39	.52	278.2	9.56	116.9	.56	.74	330.5	11.35	127.6	.76	1.01
	80	144.2	3.71	89.5	.10	.14	196.5	5.06	100.2	.18	.24	248.8	6.41	110.9	.27	.36	301.2	7.76	121.6	.37	.50
FM 4507	100	114.8	2.37	83.5	.04	.06	167.1	3.44	94.2	.09	.12	219.5	4.52	104.9	.14	.19	271.8	5.60	115.6	.20	.27
RPM 1100	120	—	—	—	—	—	137.8	2.37	88.2	.04	.06	190.1	3.26	98.9	.08	.10	242.4	4.16	109.6	.12	.16
HP 1/4	140	—	—	—	—	—	108.4	1.60	82.2	.02	.03	160.7	2.37	92.9	.04	.06	213.1	3.14	103.6	.07	.09
	160	—	—	—	—	—	—	—	—	—	—	131.4	1.69	86.9	.02	.03	183.7	2.37	97.6	.04	.06
	180	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	154.3	1.77	91.6	.02	.03
280-PL	50	219.9	9.06	100.2	.53	.71	281.4	11.60	111.5	.82	1.09	342.8	14.13	122.7	1.16	1.54	404.3	16.66	133.9	1.55	2.06
	60	202.4	6.95	97.0	.33	.43	263.9	9.06	108.3	.52	.69	325.3	11.18	119.5	.75	1.00	386.8	13.29	130.7	1.01	1.35
	80	167.5	4.31	90.6	.13	.18	228.9	5.90	101.9	.23	.31	290.4	7.48	113.1	.36	.47	351.8	9.06	124.3	.50	.66
FM 5040	100	132.5	2.73	84.2	.06	.08	194.0	4.00	95.5	.11	.15	255.4	5.26	106.7	.19	.25	316.9	6.53	117.9	.27	.36
RPM 1100	120	—	—	—	—	—	159.0	2.73	89.1	.06	.08	220.5	3.79	100.3	.10	.14	281.9	4.84	111.6	.16	.21
HP 1/2	140	—	—	—	—	—	124.1	1.83	82.7	.03	.04	185.5	2.73	93.9	.06	.07	247.0	3.64	105.2	.09	.12
	160	—	—	—	—	—	—	—	—	—	—	150.6	1.94	87.5	.03	.04	212.0	2.73	98.8	.05	.07
	180	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	177.1	2.03	92.4	.03	.04
	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	142.2	1.46	86.0	.02	.02
336-PL	50	256.5	10.57	101.5	.71	.94	328.5	13.54	113.1	1.09	1.46	400.5	16.51	124.8	1.55	2.06	472.5	19.48	136.4	2.07	2.76
	60	235.9	8.10	98.1	.43	.58	307.8	10.57	109.8	.69	.92	379.8	13.05	121.4	1.00	1.33	451.8	15.52	133.1	1.36	1.81
	80	194.5	5.01	91.5	.18	.24	266.5	6.87	103.1	.31	.41	338.5	8.72	114.7	.47	.63	410.5	10.57	126.4	.66	.89
CFM 5700	100	153.2	3.16	84.8	.08	.10	225.2	4.64	96.4	.15	.20	297.1	6.12	108.0	.25	.33	369.1	7.61	119.7	.36	.48
RPM 1140	120	111.8	1.92	78.1	.03	.04	183.8	3.16	89.7	.07	.10	255.8	4.39	101.4	.13	.18	327.8	5.63	113.0	.21	.28
HP 3/4	140	—	—	—	—	—	142.5	2.10	83.0	.04	.05	214.5	3.16	94.7	.07	.10	286.4	4.22	106.3	.12	.16
	160	—	—	—	—	—	—	—	—	—	—	173.1	2.23	88.0	.04	.05	245.1	3.16	99.6	.07	.10
	180	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	203.8	2.33	92.9	.04	.05
	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	162.4	1.67	86.3	.02	.03



Performance Data

Table PD-5 (Continued) – Model P-L Unit Heater Hot Water Capacities – 60°F Ent. Air Temp. (Capacities shown are for units with all Air Ports open)
(Conversion Factors in Table SP-11 Apply Only to 200 F Entering Water Temperature Columns)

Unit Size	Water Temp. Drop °F	Entering Water Temperature																			
		260 F				300 F				340 F				380 F							
		MBH	GPM	FT S	WT H	WT	PD	PD	MBH	GPM	FT S	WT H	WT	PD	PD	MBH	GPM	FT S	WT H	WT	PD
384-PL CFM 6600 RPM 1140 HP 3/4	50	302.8	12.48	102.3	.70	.95	387.8	15.98	114.2	1.09	1.46	472.7	19.49	126.0	1.55	2.08	557.6	22.99	137.9	2.07	2.78
	60	278.5	9.57	98.9	.43	.58	363.4	12.48	110.7	.69	.92	448.3	15.40	122.6	1.00	1.34	533.3	18.32	134.5	1.35	1.82
	80	229.8	5.92	92.1	.18	.24	314.7	8.11	103.9	.31	.42	399.6	10.30	115.8	.47	.63	484.6	12.48	127.7	.66	.89
	100	181.0	3.73	85.3	.08	.10	266.0	5.48	97.1	.15	.20	350.9	7.23	109.0	.24	.33	435.8	8.98	120.9	.36	.48
	120	132.3	2.27	78.5	.03	.04	217.2	3.73	90.3	.07	.10	302.2	5.19	102.2	.13	.18	387.1	6.65	114.1	.21	.28
	140	—	—	—	—	—	168.5	2.48	83.5	.03	.05	253.5	3.73	95.4	.07	.10	338.4	4.98	107.3	.12	.16
	160	—	—	—	—	—	—	—	—	—	—	204.7	2.64	88.6	.04	.05	289.7	3.73	100.4	.07	.10
180	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	240.9	2.76	93.6	.04	.05	
200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	192.2	1.98	86.8	.02	.03	
500-PL CFM 9380 RPM 1160 HP 1-1/2	50	381.8	15.74	97.5	1.09	1.48	487.0	20.07	107.9	1.66	2.26	592.2	24.41	118.2	2.34	3.19	697.4	28.75	128.5	3.11	4.24
	60	353.0	12.12	94.7	.67	.92	458.2	15.74	105.0	1.06	1.44	563.4	19.35	115.4	1.52	2.07	668.6	22.97	125.7	2.05	2.79
	80	295.3	7.61	89.0	.29	.39	400.5	10.32	99.3	.49	.66	505.7	13.03	109.7	.73	1.00	610.9	15.74	120.0	1.02	1.39
	100	237.6	4.90	83.3	.13	.17	342.8	7.06	93.7	.24	.33	448.0	9.23	104.0	.39	.53	553.2	11.40	114.4	.56	.76
	120	179.9	3.09	77.7	.06	.07	285.1	4.90	88.0	.12	.17	390.3	6.70	98.4	.22	.29	495.5	8.51	108.7	.33	.45
	140	—	—	—	—	—	227.4	3.35	82.3	.06	.08	332.6	4.90	92.7	.12	.17	437.8	6.45	103.0	.20	.27
	160	—	—	—	—	—	—	—	—	—	—	274.9	3.54	87.0	.07	.09	380.1	4.90	97.4	.12	.16
180	—	—	—	—	—	—	—	—	—	—	217.3	2.49	81.3	.04	.05	322.5	3.69	91.7	.07	.10	
200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	264.8	2.73	86.0	.04	.06	
600-PL CFM 10,300 RPM 1160 HP 1-1/2	50	464.0	19.13	101.5	.95	1.24	591.6	24.39	112.9	1.45	1.89	719.2	29.65	124.4	2.04	2.66	846.9	34.91	135.8	2.71	3.53
	60	429.2	14.74	98.4	.59	.77	556.8	19.13	109.8	.92	1.21	684.4	23.51	121.2	1.32	1.73	812.1	27.89	132.7	1.78	2.33
	80	359.6	9.26	92.2	.25	.33	487.2	12.55	103.6	.42	.56	614.8	15.84	115.0	.64	.83	742.4	19.13	126.4	.89	1.16
	100	290.0	5.98	86.0	.11	.15	417.6	8.61	97.4	.21	.28	545.2	11.24	108.8	.34	.44	672.8	13.87	120.2	.49	.64
	120	220.4	3.79	79.7	.05	.06	348.0	5.98	91.1	.11	.14	475.6	8.17	102.6	.19	.25	603.2	10.36	114.0	.29	.37
	140	—	—	—	—	—	278.4	4.10	84.9	.05	.07	406.0	5.98	96.3	.11	.14	533.6	7.86	107.8	.17	.23
	160	—	—	—	—	—	—	—	—	—	—	336.4	4.33	90.1	.06	.08	464.0	5.98	101.5	.10	.14
180	—	—	—	—	—	—	—	—	—	—	266.8	3.06	83.9	.03	.04	394.4	4.52	95.3	.06	.08	
200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	324.8	3.35	89.1	.04	.05	
720-PL CFM 11,900 RPM 1165 HP 3	50	558.0	23.00	103.2	1.06	1.44	711.7	29.34	115.1	1.62	2.21	865.4	35.67	127.0	2.27	3.12	1019.1	42.01	138.9	3.03	4.16
	60	516.0	17.72	100.0	.65	.89	669.6	23.00	111.9	1.03	1.41	823.3	28.28	123.8	1.48	2.03	977.0	33.56	135.7	1.99	2.74
	80	431.8	11.12	93.4	.28	.38	585.5	15.08	105.3	.47	.65	739.2	19.04	117.2	.71	.97	892.9	23.00	129.2	.99	1.36
	100	347.6	7.17	86.9	.12	.17	501.3	10.33	98.8	.24	.32	655.0	13.50	110.7	.38	.52	808.7	16.67	122.6	.55	.75
	120	263.5	4.53	80.4	.05	.07	417.2	7.17	92.3	.12	.16	570.9	9.80	104.2	.21	.29	724.5	12.44	116.1	.32	.43
	140	—	—	—	—	—	333.0	4.90	85.8	.06	.08	486.7	7.17	97.7	.12	.16	640.4	9.43	109.6	.19	.26
	160	—	—	—	—	—	—	—	—	—	—	402.5	5.19	91.2	.07	.09	556.2	7.17	103.1	.12	.16
180	—	—	—	—	—	—	—	—	—	—	318.4	3.65	84.7	.03	.05	472.1	5.41	96.6	.07	.09	
200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	387.9	4.00	90.0	.04	.05	



Electric Power

Table EP-1 Electric Power — Model S Unit Heater — Motor

Model Number	Motor Type	Accessory Operating Voltage	AMP	MCA	MAX FUSE	HP	RPM
18,19,20	Totally Enclosed	115/60/1	0.35	0.4	15	1/50*	1075
31,38,42,45,60	Totally Enclosed	115/60/1	2.1	2.6	15	1/20*	1550
53,69,70,77,90,100	Totally Enclosed	115/60/1	1.7**	2.1	15	1/8*	1550
91,126,127,168	Totally Enclosed	115/60/1	2.3**	2.9	15	1/6	1100
137,181,186,230	Totally Enclosed	115/60/1	3.6**	4.5	15	1/4	1100
207,243,260,273,320,354	Totally Enclosed	115/60/1	5.4**	6.8	15	1/2	1100
18,19,20	Totally Enclosed	208-230/460/60/3	0.98-1.1/0.55	1.2-1.4/0.7	15-15/15	1/6	1140
31,38,42,45,60	Totally Enclosed	208-230/460/60/3	0.98-1.1/0.55	1.2-1.4/0.7	15-15/15	1/6	1140
53,69,70,77,90,100	Totally Enclosed	208-230/460/60/3	0.98-1.1/0.55	1.2-1.4/0.7	15-15/15	1/6	1140
91,126,127,168	Totally Enclosed	208-230/460/60/3	0.98-1.1/0.55	1.2-1.4/0.7	15-15/15	1/6	1140
137,181,186,230	Totally Enclosed	208-230/460/60/3	1.2-1.4/0.7	1.5-1.8/0.9	15-15/15	1/4	1140
207,243,260,273,320,354	Totally Enclosed	208-230/460/60/3	1.8-2.0/1.0	2.3-2.5/1.3	15-15/15	1/2	1140
400	Totally Enclosed	208-230/460/60/3	3.1-3.2/1.6	3.9-4.0/2.0	15-15/15	3/4	1140

*Optional variable speed switch is available.

**These motors have automatic thermal overload protection or impedance protection.

Table EP-2 Electric Power — Model S Unit Heater — Motor

Model Number	Motor Type	Accessory Operating Voltage	AMP	MCA	MAX FUSE	HP	RPM
18,19,20	Explosion Proof with Thermal Overload	115/60/1	3.8	4.8	15	1/6	1140
31,38,42,45,60	Explosion Proof with Thermal Overload	115/60/1	3.8	4.8	15	1/6	1140
53,69,70,77,90,100	Explosion Proof with Thermal Overload	115/60/1	3.8	4.8	15	1/6	1140
91,126,127,168	Explosion Proof with Thermal Overload	115/60/1	3.8	4.8	15	1/6	1140
137,181,186,230	Explosion Proof with Thermal Overload	115/60/1	4.4	5.5	15	1/4	1140
207,243,260,273,320,354	Explosion Proof with Thermal Overload	115/60/1	7.8	9.8	15	1/2	1140
18,19,20	Explosion Proof with Thermal Overload	208-230/460/60/3	1.0-1.0/0.5	1.3-1.3/0.6	15-15/15	1/6	1140
31,38,42,45,60	Explosion Proof with Thermal Overload	208-230/460/60/3	1.0-1.0/0.5	1.3-1.3/0.6	15-15/15	1/6	1140
53,69,70,77,90,100	Explosion Proof with Thermal Overload	208-230/460/60/3	1.0-1.0/0.5	1.3-1.3/0.6	15-15/15	1/6	1140
91,126,127,168	Explosion Proof with Thermal Overload	208-230/460/60/3	1.0-1.0/0.5	1.3-1.3/0.6	15-15/15	1/6	1140
137,181,186,230	Explosion Proof with Thermal Overload	208-230/460/60/3	1.1-1.1/0.55	1.4-1.4/0.7	15-15/15	1/4	1140
207,243,260,273,320,354	Explosion Proof with Thermal Overload	208-230/460/60/3	3.1-3.2/1.6	3.9-4.0/2.0	15-15/15	3/4	1145
400	Explosion Proof with Thermal Overload	208-230/460/60/3	3.1-3.2/1.6	3.9-4.0/2.0	15-15/15	3/4	1145

Table EP-3 Electric Power — Model S Unit Heater — Motor

Model Number	Motor Type	Accessory Operating Voltage	AMP	MCA	MAX FUSE	HP	RPM
18-230	Totally Enclosed	575/60/3	0.6	0.8	15	1/3	1140
207,243,260,273,320,354	Totally Enclosed	575/60/3	0.8	1.0	15	1/2	1140
400	Totally Enclosed	575/60/3	1.3	1.6	15	3/4	1140

CAUTION: Select appropriate AMP, MCA, and MAX FUSE for the multiple voltage motors. For example, the AMP, MCA, and MAX FUSE for Model 18 with a 230 volt Totally Enclosed motor is 1.1, 1.4, and 15 respectively.



Electric Power

Table EP-4 Electric Power — Model P Unit Heater — Motor

Model Number	Motor Type	Accessory Operating Voltage	AMP	MCA	MAX FUSE	HP	RPM
42	Totally Enclosed	115/60/1	1.23**	1.6	15	1/40*	1550
64,80	Totally Enclosed	115/60/1	2.1	2.6	15	1/20*	1550
102	Totally Enclosed	115/60/1	1.2**	1.5	15	1/8*	1070
122,146,166	Totally Enclosed	115/60/1	2.3**	2.9	15	1/6	1100
202	Totally Enclosed	115/60/1	3.6**	4.5	15	1/4	1100
252	Totally Enclosed	115/60/1	3.6**	4.5	15	1/4	1100
280	Totally Enclosed	115/60/1	5.4**	6.8	15	1/2	1100
42	Totally Enclosed	208-230/460/60/3	0.98-1.1/0.55	1.2-1.4/0.7	15-15/15	1/6	1140
64,80	Totally Enclosed	208-230/460/60/3	0.98-1.1/0.55	1.2-1.4/0.7	15-15/15	1/6	1140
102	Totally Enclosed	208-230/460/60/3	0.98-1.1/0.55	1.2-1.4/0.7	15-15/15	1/6	1140
122,146,166	Totally Enclosed	208-230/460/60/3	0.98-1.1/0.55	1.2-1.4/0.7	15-15/15	1/6	1140
202	Totally Enclosed	208-230/460/60/3	1.2-1.4/0.7	1.5-1.8/0.9	15-15/15	1/4	1140
252	Totally Enclosed	208-230/460/60/3	1.2-1.4/0.7	1.5-1.8/0.9	15-15/15	1/4	1140
280	Totally Enclosed	208-230/460/60/3	1.8-2.0/1.0	2.3-2.5/1.3	15-15/15	1/2	1140
336,384	Totally Enclosed	208-230/460/60/3	3.1-3.2/1.6	3.9-4.0/2.0	15-15/15	3/4	1140
500,600	Totally Enclosed	208-230/460/60/3	5.3-5.0/2.5	6.6-6.3/3.1	15-15/15	1-1/2	1160
720	Totally Enclosed	208-230/460/60/3	9.9-9.8/4.9	12.4-12.3/6.1	20-20/15	3	1165

*Optional variable speed switch is available.

**These motors have automatic thermal overload protection or impedance protection.

CAUTION: Select appropriate AMP, MCA, and MAX FUSE for the multiple voltage motors. For example, the AMP, MCA, and MAX FUSE for Model 720 with a 230 volt Totally Enclosed motor is 9.8, 12.3, and 20 respectively.

Table EP-5 Electric Power — Model P Unit Heater — Motor

Model Number	Motor Type	Accessory Operating Voltage	AMP	MCA	MAX FUSE	HP	RPM
42	Explosion Proof with Thermal Overload	115/60/1	3.8	4.8	15	1/6	1140
64,80	Explosion Proof with Thermal Overload	115/60/1	3.8	4.8	15	1/6	1140
102	Explosion Proof with Thermal Overload	115/60/1	3.8	4.8	15	1/6	1140
122,146,166	Explosion Proof with Thermal Overload	115/60/1	3.8	4.8	15	1/6	1140
202	Explosion Proof with Thermal Overload	115/60/1	4.4	5.5	15	1/4	1140
252	Explosion Proof with Thermal Overload	115/60/1	4.4	5.5	15	1/4	1140
280	Explosion Proof with Thermal Overload	115/60/1	7.8	9.8	20	1/2	1140
42	Explosion Proof with Thermal Overload	208-230/460/60/3	1.0-1.0/0.5	1.3-1.3/0.6	15-15/15	1/6	1140
64,80	Explosion Proof with Thermal Overload	208-230/460/60/3	1.0-1.0/0.5	1.3-1.3/0.6	15-15/15	1/6	1140



Electric Power

Table EP - 6 Electric Power — Model P Unit Heater — Motor

Model Number	Motor Type	Accessory Operating Voltage	AMP	MCA	MAX FUSE	HP	RPM
102	Explosion Proof with Thermal Overload	208-230/460/60/3	1.0-1.0/0.5	1.3-1.3/0.6	15-15/15	1/6	1140
122,146,166	Explosion Proof with Thermal Overload	208-230/460/60/3	1.0-1.0/0.5	1.3-1.3/0.6	15-15/15	1/6	1140
202	Explosion Proof with Thermal Overload	208-230/460/60/3	1.1-1.1/0.55	1.4-1.4/0.7	15-15/15	1/4	1140
252	Explosion Proof with Thermal Overload	208-230/460/60/3	1.1-1.1/0.55	1.4-1.4/0.7	15-15/15	1/4	1140
280	Explosion Proof with Thermal Overload	208-230/460/60/3	1.9-1.9/0.95	2.4-2.4/1.2	15-15/15	1/2	1140
336,384	Explosion Proof with Thermal Overload	208-230/460/60/3	3.1-3.2/1.6	3.9-4.0/2.0	15-15/15	3/4	1145
500,600	Explosion Proof with Thermal Overload	230/460/60/3	5.2/2.6	6.5/3.3	15/15	1-1/2	1150
720	Explosion Proof with Thermal Overload	208-230/460/60/3	10.0-10.0/5.0	12.5-12.5/6.3	20-20/15	3	1150

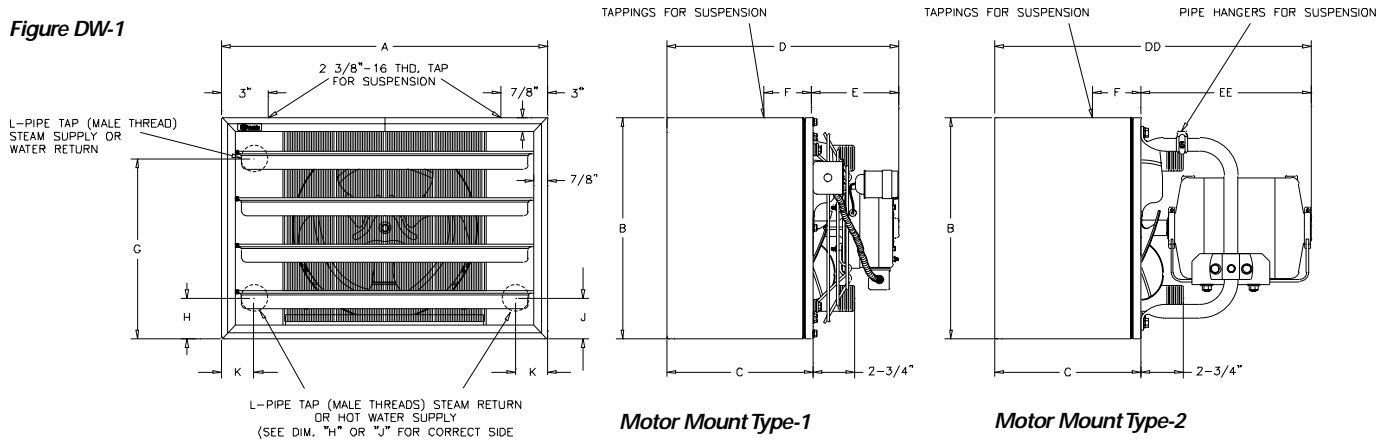
Table EP - 7 Electric Power — Model P Unit Heater — Motor

Model Number	Motor Type	Accessory Operating Voltage	AMP	MCA	MAX FUSE	HP	RPM
42-252	Totally Enclosed	575/60/3	0.6	0.8	15	1/3	1140
280	Totally Enclosed	575/60/3	0.8	1.0	15	1/2	1140
336,384	Totally Enclosed	575/60/3	1.3	1.6	15	3/4	1140
500,600	Totally Enclosed	575/60/3	2.0	2.5	15	1-1/2	1160
720	Totally Enclosed	575/60/3	3.75	4.7	15	3	1165

CAUTION: Select appropriate AMP, MCA, and MAX FUSE for the multiple voltage motors. For example, the AMP, MCA, and MAX FUSE for Model 720 with a 230 volt Explosion Proof motor is 10.0, 12.5, and 20 respectively.

Dimensions and Weights

Figure DW-1



Note:
 Motor Mount Type-1 is used on all standard single-phase motors.
 Motor Mount Type-2 is used on three-phase, explosion proof 1 or 3-phase, and other special motors.

Table DW-1 – Model S Unit Heater Roughing-In Dimensions (Figure DW-1)*

Model	Fan Dia.	A	B	C	D	DD	E	EE	F	G	H	J	K	L	Number Of Horizontal Louvers-Std.	Number Of Louver-Fin. Diffusers
18, 19 & 20	11 ¹ / ₄	20 ⁷ / ₈	14 ¹ / ₄	9 ³ / ₈	15 ³ / ₈	20 ⁵ / ₈	6	11 ¹ / ₄	3 ¹ / ₈	8 ³ / ₈	2 ⁵ / ₈	-	1 ³ / ₄	1 ¹ / ₄		
31	11 ¹ / ₄	20 ⁷ / ₈	14 ¹ / ₄	9 ³ / ₈	16 ¹ / ₈	20 ⁵ / ₈	6 ³ / ₄	11 ¹ / ₄	3 ¹ / ₈	8 ³ / ₈	-	2 ⁵ / ₈	1 ³ / ₄	1 ¹ / ₄	4	3
38 & 42	11 ¹ / ₄	20 ⁷ / ₈	14 ¹ / ₄	9 ³ / ₈	16 ¹ / ₈	20 ⁵ / ₈	6 ³ / ₄	11 ¹ / ₄	3 ¹ / ₈	11 ⁵ / ₈	2 ⁵ / ₈	-	1 ³ / ₄	1 ¹ / ₄		
45	13 ¹ / ₂	23 ³ / ₈	17 ¹ / ₄	10	17	21 ¹ / ₄	7	11 ¹ / ₄	3 ¹ / ₂	11 ⁵ / ₈	2 ⁵ / ₈	-	2	1 ¹ / ₄		
60	13 ¹ / ₂	23 ³ / ₈	17 ¹ / ₄	10	17	21 ¹ / ₄	7	11 ¹ / ₄	3 ¹ / ₂	14 ⁵ / ₈	-	2 ⁵ / ₈	2	1 ¹ / ₄	5	4
53	13 ¹ / ₂	23 ³ / ₈	17 ¹ / ₄	10	17 ¹ / ₄	21 ¹ / ₄	7 ¹ / ₄	11 ¹ / ₄	3 ¹ / ₂	11 ⁵ / ₈	2 ⁵ / ₈	-	2	1 ¹ / ₄		
70	13 ¹ / ₂	23 ³ / ₈	17 ¹ / ₄	10	17 ¹ / ₄	21 ¹ / ₄	7 ¹ / ₄	11 ¹ / ₄	3 ¹ / ₂	14 ⁵ / ₈	-	2 ⁵ / ₈	2	1 ¹ / ₄		
69	13 ¹ / ₂	26 ³ / ₄	20 ¹ / ₄	11 ¹ / ₄	18 ¹ / ₂	22 ¹ / ₂	7 ¹ / ₄	11 ¹ / ₄	4 ¹ / ₈	14 ⁵ / ₈	-	2 ⁵ / ₈	2	1 ¹ / ₄	6	5
90	13 ¹ / ₂	26 ³ / ₄	20 ¹ / ₄	11 ¹ / ₄	18 ¹ / ₂	22 ¹ / ₂	7 ¹ / ₄	11 ¹ / ₄	4 ¹ / ₈	17 ⁵ / ₈	2 ⁵ / ₈	-	2	1 ¹ / ₄		
77	16 ³ / ₄	26 ³ / ₄	20 ¹ / ₄	11 ¹ / ₄	18 ³ / ₄	22 ¹ / ₂	7 ¹ / ₂	11 ¹ / ₄	4 ¹ / ₈	14 ⁵ / ₈	-	2 ⁵ / ₈	2	1 ¹ / ₄	6	5
100	16 ³ / ₄	26 ³ / ₄	20 ¹ / ₄	11 ¹ / ₄	18 ³ / ₄	22 ¹ / ₂	7 ¹ / ₂	11 ¹ / ₄	4 ¹ / ₈	17 ⁵ / ₈	2 ⁵ / ₈	-	2	1 ¹ / ₄		
91	16 ³ / ₄	31 ¹ / ₈	23 ¹ / ₄	11 ¹ / ₄	21	22 ¹ / ₂	9 ³ / ₄	11 ¹ / ₄	4 ¹ / ₈	14 ⁵ / ₈	-	2 ⁵ / ₈	2 ¹ / ₂	1 ¹ / ₂		
126	16 ³ / ₄	31 ¹ / ₈	23 ¹ / ₄	11 ¹ / ₄	21	22 ¹ / ₂	9 ³ / ₄	11 ¹ / ₄	4 ¹ / ₈	20 ⁵ / ₈	-	2 ⁵ / ₈	2 ¹ / ₂	1 ¹ / ₂	7	6
168	19 ³ / ₄	33 ³ / ₄	26 ¹ / ₄	12 ⁵ / ₈	22 ¹ / ₈	23 ⁵ / ₈	9 ³ / ₄	11 ¹ / ₄	4 ⁵ / ₈	23 ⁵ / ₈	2 ⁵ / ₈	-	2 ¹ / ₂	1 ¹ / ₂		
186	19 ³ / ₄	33 ³ / ₄	26 ¹ / ₄	12 ⁵ / ₈	22 ¹ / ₈	24 ⁵ / ₈	9 ³ / ₄	12 ¹ / ₄	4 ⁵ / ₈	23 ⁵ / ₈	2 ⁵ / ₈	-	2 ¹ / ₂	1 ¹ / ₂	8	7
127	19 ³ / ₄	33 ³ / ₄	26 ¹ / ₄	12 ⁵ / ₈	22 ¹ / ₈	23 ⁵ / ₈	9 ³ / ₄	11 ¹ / ₄	4 ⁵ / ₈	17 ⁵ / ₈	2 ⁵ / ₈	-	2 ¹ / ₂	1 ¹ / ₂		
137	19 ³ / ₄	33 ³ / ₄	26 ¹ / ₄	12 ⁵ / ₈	22 ¹ / ₈	24 ⁵ / ₈	9 ³ / ₄	12 ¹ / ₄	4 ⁵ / ₈	17 ⁵ / ₈	2 ⁵ / ₈	-	2 ¹ / ₂	1 ¹ / ₂		
181	19 ³ / ₄	39 ³ / ₈	32 ¹ / ₄	13 ³ / ₄	23	25 ¹ / ₂	9 ³ / ₄	12 ¹ / ₄	5 ¹ / ₈	23 ⁵ / ₈	2 ⁵ / ₈	-	2 ¹ / ₂	1 ¹ / ₂		
230	19 ³ / ₄	39 ³ / ₈	32 ¹ / ₄	13 ³ / ₄	23	25 ¹ / ₂	9 ³ / ₄	12 ¹ / ₄	5 ¹ / ₈	22 ¹ / ₈	-	2 ⁵ / ₈	2	1 ¹ / ₂	10	9
207	25 ¹ / ₄	39 ³ / ₈	32 ¹ / ₄	13 ³ / ₄	24 ¹ / ₂	26	11 ¹ / ₄	12 ³ / ₄	5 ¹ / ₈	23 ⁵ / ₈	2 ⁵ / ₈	-	2 ¹ / ₂	1 ¹ / ₂		
260	25 ¹ / ₄	39 ³ / ₈	32 ¹ / ₄	13 ³ / ₄	24 ¹ / ₂	26	11 ¹ / ₄	12 ³ / ₄	5 ¹ / ₈	23 ⁵ / ₈	-	2 ⁵ / ₈	2	1 ¹ / ₂	10	9
320 & 354	25 ¹ / ₄	52 ¹ / ₈	32 ¹ / ₄	13 ³ / ₄	25	26 ¹ / ₂	11 ¹ / ₄	12 ³ / ₄	5 ³ / ₈	22 ¹ / ₈	-	2 ⁵ / ₈	2	1 ¹ / ₂	10	9
243 & 273	25 ¹ / ₄	52 ¹ / ₈	32 ¹ / ₄	13 ³ / ₄	25	26 ¹ / ₂	11 ¹ / ₄	12 ³ / ₄	5 ³ / ₈	23 ⁵ / ₈	2 ⁵ / ₈	-	2 ¹ / ₂	1 ¹ / ₂		
400	25 ¹ / ₄	52 ¹ / ₈	32 ¹ / ₄	13 ³ / ₄	-	26 ¹ / ₂	-	12 ³ / ₄	5 ³ / ₈	22 ¹ / ₈	-	2 ⁵ / ₈	2	1 ¹ / ₂	10	9

*Note: All dimensions approximate in inches for roughing-in purposes. Detailed certified drawings available on request.

Dimensions and Weights

Table DW-2 - Model P Unit Heater Roughing In Dimensions (Figure DW-2)*

Unit Size	Fan Dia.	A	B	C	D	E	F	G	H	K	L (Min.)	P (NPT)	R	S	T	U	V
102	16 ³ / ₄	25 ¹ / ₄	6 ¹ / ₈	2	17 ¹ / ₂	1 ¹ / ₈	3	17	1 ³ / ₈	2 ³ / ₄	7	1 ¹ / ₂	4 ¹ / ₈	9 ¹ / ₈	2 ³ / ₄	17	4 ¹ / ₈
122	16 ³ / ₄	25 ¹ / ₄	6 ¹ / ₈	2	17 ¹ / ₂	1 ³ / ₄	3	17	1 ³ / ₈	2 ³ / ₄	7	1 ¹ / ₂	4 ¹ / ₈	9 ³ / ₄	2 ³ / ₄	17	4 ¹ / ₈
146	19 ³ / ₄	29 ¹ / ₂	6 ¹ / ₈	2 ³ / ₈	20 ⁵ / ₈	1 ¹ / ₄	4	20 ¹ / ₂	1 ³ / ₄	3 ¹ / ₂	7	2	4 ¹ / ₂	9 ⁵ / ₈	2 ³ / ₄	20 ¹ / ₂	4 ¹ / ₂
166	19 ³ / ₄	29 ¹ / ₂	6 ¹ / ₈	2 ³ / ₈	20 ⁵ / ₈	1 ³ / ₄	4	20 ¹ / ₂	1 ³ / ₄	3 ¹ / ₂	7	2	4 ¹ / ₂	10 ¹ / ₈	2 ³ / ₄	20 ¹ / ₂	4 ¹ / ₂
202	19 ³ / ₄	29 ¹ / ₂	7 ⁵ / ₈	2 ³ / ₈	20 ⁵ / ₈	2	4	20 ¹ / ₂	1 ³ / ₄	3 ¹ / ₂	7	2	4 ¹ / ₂	12	2 ³ / ₄	20 ¹ / ₂	4 ¹ / ₂
252	25 ¹ / ₄	37 ¹ / ₂	7 ⁵ / ₈	3	26 ³ / ₈	1	3 ¹ / ₂	28	1 ³ / ₄	3 ¹ / ₂	7	2	4 ³ / ₄	11 ⁵ / ₈	2 ³ / ₄	18	9 ³ / ₄
280	25 ¹ / ₄	37 ¹ / ₂	7 ⁵ / ₈	3	26 ³ / ₈	1 ¹ / ₄	3 ¹ / ₂	28	1 ³ / ₄	3 ¹ / ₂	7	2	4 ³ / ₄	11 ³ / ₄	2 ³ / ₄	18	9 ³ / ₄
336	25 ¹ / ₄	37 ¹ / ₂	7 ⁵ / ₈	3	26 ³ / ₈	2 ¹ / ₈	4	28	1 ³ / ₄	3 ¹ / ₂	7	2	4 ³ / ₄	12 ³ / ₄	2 ³ / ₄	18	9 ³ / ₄
384	25 ¹ / ₄	37 ¹ / ₂	9 ¹ / ₈	3	26 ³ / ₈	2	3 ¹ / ₂	28	1 ³ / ₄	3 ¹ / ₂	7	2	4 ³ / ₄	14 ¹ / ₈	2 ³ / ₄	18	9 ³ / ₄
500	30	42	9 ¹ / ₈	3 ¹ / ₂	31 ¹ / ₄	1 ⁵ / ₈	3	30	2 ¹ / ₄	4 ¹ / ₄	7	2 ¹ / ₂	6	14 ¹ / ₄	3	30	6
600	30	42	12 ¹ / ₈	3 ¹ / ₂	31 ¹ / ₄	2 ¹ / ₈	3	30	2 ¹ / ₄	4 ¹ / ₄	7	2 ¹ / ₂	6	17 ³ / ₄	3	30	6
720	30	42	13 ⁵ / ₈	3 ¹ / ₂	31 ¹ / ₄	3	4	30	2 ¹ / ₄	4 ¹ / ₄	7	2 ¹ / ₂	6	20 ¹ / ₄	3	30	6

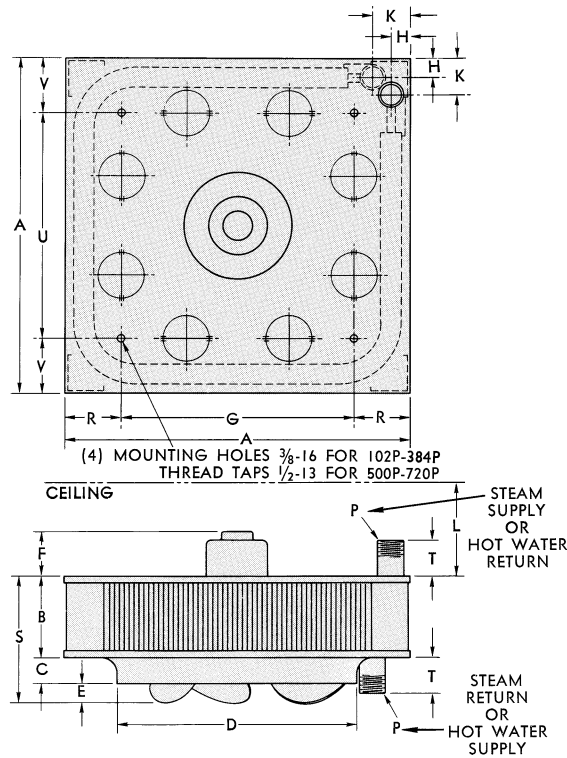


Figure DW-2

Dimensions and Weights

Table DW-3 - Model P Unit Heater Roughing In Dimensions (Figure DW-3)*

Unit Size	Fan Dia.	A	B	C	D	E	F	G	H	K	L (Min.)	P (NPT)	R	S	T	U	V
42	11 ¹ / ₄	18 ¹ / ₄	4 ⁵ / ₈	1 ¹ / ₄	11 ³ / ₄	3 ³ / ₄	4	11	1 ³ / ₈	1 ⁷ / ₈	7	1 ¹ / ₂	3 ³ / ₈	6 ⁵ / ₈	2 ³ / ₄	11	3 ⁵ / ₈
64	13 ¹ / ₂	21 ¹ / ₄	4 ⁵ / ₈	1 ⁵ / ₈	14	1	4	14	1 ³ / ₈	1 ⁷ / ₈	7	1 ¹ / ₂	3 ⁵ / ₈	7 ¹ / ₈	2 ³ / ₄	14	3 ⁵ / ₈
80	13 ¹ / ₂	21 ¹ / ₄	6 ¹ / ₈	1 ⁵ / ₈	14	1	3	14	1 ³ / ₈	1 ⁷ / ₈	7	1 ¹ / ₂	3 ⁵ / ₈	8 ⁵ / ₈	2 ³ / ₄	14	3 ⁵ / ₈

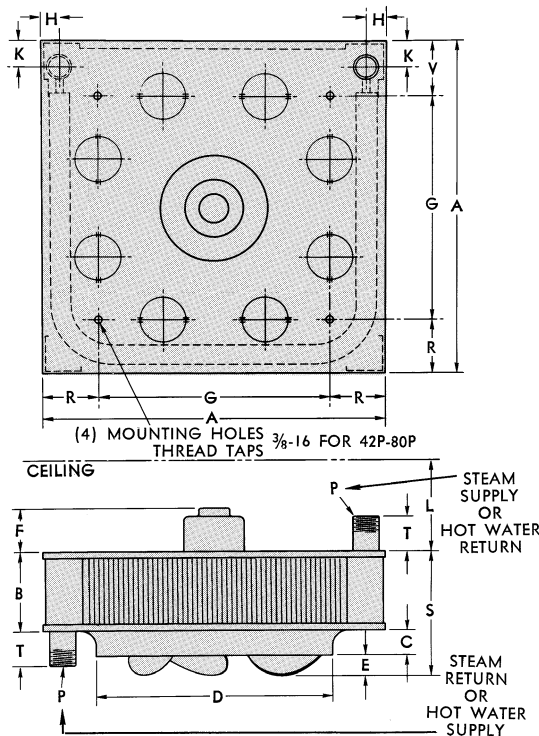


Figure DW-3

Table DW-4 - Louver Cone Diffuser Roughing In Dimensions (Figure DW-4)*

Unit Size	A	B	C	D	No. of Louvers
42	16 ¹ / ₂	14 ¹ / ₄	6 ¹ / ₂	2 ⁵ / ₈	8
64 & 80	20	17	8	3 ¹ / ₈	8
102 & 122	24 ¹ / ₄	21	9 ³ / ₄	3 ¹⁵ / ₁₆	8
146, 166 & 202	28 ³ / ₈	24 ³ / ₄	11 ¹ / ₂	4 ⁵ / ₈	8
252, 280, 336 & 384	35 ¹ / ₂	31 ¹ / ₂	13 ³ / ₄	4	12
500, 600 & 720	41 ¹ / ₂	37 ¹ / ₄	17	4 ³ / ₄	12

*Note:
All dimensions approximate in inches for roughing-in purposes. Detailed certified drawings available on request.

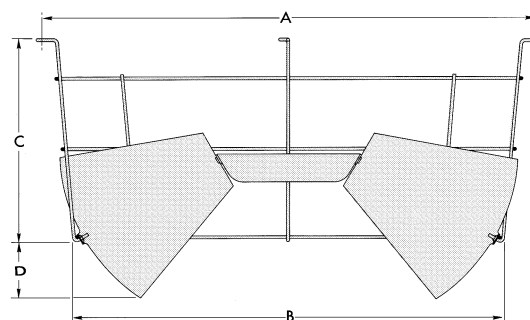


Figure DW-4



Mechanical Specifications

Model P

General

The "NRTL/C" indicator adjacent to the CSA mark signifies that the product has been evaluated to the applicable ANSI/UL and CSA Standards, for use in the U.S. and Canada.

NRTL, i.e. Nationally Recognized Testing Laboratory, is a designation granted by the U.S. Occupational Safety and Health Administration to laboratories which have been recognized to perform certification to U.S. Standards.

Casing

Formed by two square steel plates. Bottom plate forms orifice for air delivery. Air ports stamped in top plate as standard for easy removal for low final air temperature.

Fan

Trane high efficiency Model A fan with aluminum blades is quiet, factory balanced and sturdy for standard or spark-proof applications.

Model S

General

The "NRTL/C" indicator adjacent to the CSA mark signifies that the product has been evaluated to the applicable ANSI/UL and CSA Standards, for use in the U.S. and Canada.

NRTL, i.e. Nationally Recognized Testing Laboratory, is a designation granted by the U.S. Occupational Safety and Health Administration to laboratories which have been recognized to perform certification to U.S. Standards.

Casing

Two-piece with "picture frame" front formed into wraparound sides, top and bottom. Adjustable horizontal louvers are standard. 18 gauge back panel with deep-draw fan orifice for extreme rigidity. Steel supply and return pipe tap connectors bolted to back. Casings phosphatized to prevent corrosion and painted with blue gray baked enamel.

Fan

Trane designed and built high efficiency Model A fan with aluminum blades is quiet, factory balanced and sturdy for standard or sparkproof applications.

Coils

Hot water-steam coils are rectangular 3 or 4-sided, one-pass, multiple circuit, with aluminum Sigma-Flo® fins mechanically bonded to tubes. Standard coils are seamless copper tubing. Coils tested at 375 psi under water. Supply and return connections are steel pipe. Standard coils have .025 copper tubing suitable for use on steam pressure to 75 psi or hot water up to 225 psi or 325 F. When Specified) Heavy .049 red brass tubing suitable for 75 psi steam or up to 425 deg. F water at 300 psi – .049 cupronickel tubing suitable for 75 psi steam or up to 450 deg. F water at 400 psi – .049 steel tubing suitable for 450 deg. F water at 400 psi.

Motors

Standard motors are 115/60/1, totally enclosed, with thermal overload protection for all units through size 280P. Standard motors for 42P, 64P and 80P are shaded pole, sleeve bearing. The 102P motor is permanent split capacitor

Coils

Hot water-steam headerless coils are single tube, single serpentine on all sizes except 230 thru 354 which have two circuits. Fins are aluminum Sigma-Flo, mechanically bonded to seamless copper tubing. All coils one-row deep in air flow direction. Coils tested at 400 psi air under water. Standard coils have .031 copper tubing suitable for use on steam pressures to 75 psi or hot water up to 200 psi or 325 F.

(When Specified) Heavy .049 red brass tubing suitable for 75 psi steam or 390 deg. F water at 260 psi — .031 cupronickel tubing suitable for 450 deg. F water at 400 psi — .049 steel tubing suitable for 450 deg. F water at 400 psi. (When Specified) Coils with turbulators (Suffix W) available for high performance on hot water.

(When Specified) Coils with fin series 132 (Suffix 2) for high performance on hot water or steam.

(When Specified) Bypass Model S units with modified coils for air bypass. Unit

type with sleeve bearings. Motor for unit sizes 122P through 280P are permanent split capacitor types with permanently lubricated ball bearings. Motors used on unit sizes 336P through 720P are 230/460/60/3, totally enclosed, with permanently lubricated ball bearings. Unit sizes smaller than 336P are also available with 230/400/60/3 motors.

All motors fractional hp and integral hp, have Class "B" insulation. The (115/60/1) motors used as standard on unit sizes 42P through 102P can be operated at multiple speeds with the addition of a solid-state control.

All units available with explosion-proof motors. Only sizes 42P, 64P, 102P and 146P are available from stock with 115/60/1 explosion-proof motors.

Louver Cone Diffuser

(When Specified) Available for complete versatility in air diffusion patterns. Adjustable 18-gauge steel blades held in set position by spring steel clips.

sizes have odd numbers (19, 77, 243, etc.).

Motors

Totally enclosed, 115/60/1 Class "B" insulated shaded pole and PSC motors are STD. $\frac{1}{50}$ through $\frac{1}{8}$ hp are sleeve bearing, $\frac{1}{6}$ through $\frac{3}{4}$ hp are ball bearing. All single phase motors have built in overload protection. Sleeve bearing motors can be oiled. Ball bearing motors are permanently lubricated.

The 115/60/1 motors used as standard on unit sizes 18S through 100S can be operated at multiple speeds with the addition of a solid-state control. All units available with explosion-proof motors. Only sizes 18S, 42S, 90S and 126S are available from stock with 115/60/1 explosion-proof motors.

Louver Fin Diffuser

(When Specified) For versatility in lateral diffusion, used with standard louvers, provides four-direction control. Ships separately and clips onto horizontal louvers.



TRANE

The Trane Company
Unitary Products Group
2701 Wilma Rudolph Blvd.
Clarksville, TN 37040
www.trane.com

An American Standard Company

Literature Order Number	UH-PRC001-EN
File Number	PL-UN-UH-000-PRC001-10-99
Supersedes	UH-DS-1 8/96
Stocking Location	Inland - LaCrosse

The Trane Company has a policy of continuous product and product data improvement, it reserves the right to change product design and specifications without notice.

Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>