SeasonMaker® ThinLine Fan-coil Units

Type TSH & TSC Horizontal Design TSS, TPF, TSF & TSB Vertical Design









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Computer fan-coil selection program

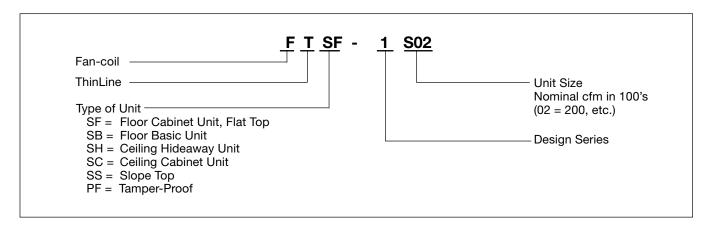
To provide optimal fan coil unit selection, McQuay International provides McQuayTools™ and SelectTools™ for Fan Coil for computer fan coil selection capability. These computer programs aid in the selection of the most economical unit size and coil option to meet the specification. The program capabilities include hot and chilled water, hot and chilled water with glycol, electric heat, supplemental steam heat, and unit external static pressure.

To operate the McQuayTools and SelectTools software the user needs a computer using Windows® 2000 or higher. McQuay will provide the software to run McQuayTools and SelectTools for Fan Coil.

Contact your nearest McQuay representative for a copy of SelectTools or for a fan coil selection that meets the most exacting specifications.



Nomenclature



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Total fan-coil flexibility



TSH hideaway unit



TSC ceiling unit; exposed cabinet



TSB basic unit; (Top discharge shown)

TSH hideaway unit

The TSH hideaway unit is designed for fully concealed installation in areas where a ceiling enclosure is furnished by others. Unit features include:

- 6 unit sizes from 300 to 1200 cfm.
- Heavy-gauge galvanized steel base casing.
- · Standard or high capacity cooling coil.
- Quiet, 3-speed permanent split capacitor motor(s).
- High performance, forward curved centrifugal fan wheels.
- Rigid, self-locking fan deck with split design, die-formed fan housings for exceptional serviceability.
- Single power location for field wiring connections in unit electrical raceway.
- ARI certified performance.
- ETL and CETL safety agency approval listing.

TSC ceiling unit

The TSC ceiling unit is designed for exposed or recessed ceiling applications. An optional trim flange ceiling frame allows installation with the TSC hinged bottom panel flush with the ceiling. The unit includes all of the features listed above for the TSH unit plus the following:

- 6 unit sizes from 300 to 1200 cfm.
- Heavy 18 gauge steel decorative cabinet with stamped discharge grille.
- Attractive Antique Ivory electrostatically applied, baked-on finish.
- Hinged bottom panel for total accessibility to the unit, controls and filter.
- Stamped return air grille in bottom access panel or back return duct opening.
- Optional telescoping trim flange ceiling frame to accommodate any ceiling type.
- Cabinet design permits complete removal of the basic unit for installation in steps coinciding with the various trades.

TSB basic unit

The TSB basic unit is designed for fully concealed or fully recessed applications. The unit can be installed in a custom enclosure or behind a McQuay wall plate. Decorative wall plates include stamped return air grilles and access door. They are available with or without stamped discharge grille. Wall plates are finished with an attractive Antique Ivory electrostatically applied, baked-on finish. TSB basic unit features include:

- 7 unit sizes form 200 to 1200 cfm.
- Heavy-gauge galvanized steel basic cabinet.
- Standard or low flow cooling coil.
- Quiet, 3-speed permanent split capacitor motor.
- High performance forward curved centrifugal fan wheels.
- Split design fan housings or single-piece fan housings with separate inlets for exceptional serviceability.
- Single power location for field wiring connections in unit electrical box.
- ARI certified performance.
- ETL and CETL safety agency approval listing.

Total fan-coil flexibility





TSF floor unit

The TSF floor unit is designed for use in different installations as a floor console most frequently installed below a window for draft free performance or as a wall hung console. The TSF unit is provided with a flat top discharge. The standard discharge grille is made of a heavy gauge steel. The unit includes all of the features listed for the TSB unit incorporated in an attractive cabinet painted with electrostatically applied, bakedon, Antique Ivory finish.

TPF floor unit-Tamper Proof

The TPF floor unit is designed for use as a floor console unit, as the floor console units above. The TPF unit is standard with a 16 gauge front panel, tamper-proof screws and locking access doors.

TSS floor unit

The TSS floor unit is designed for use as a floor console unit, as the TSF unit and is provided with a slope top discharge grille made of heavy gauge steel. The standard slope top discharge grille directs the air into the room and not into the curtains.

McQuay SeasonMaker® ThinLine fan-coil units

ARI certification, ETL & CETL listing

McQuay ThinLine fan-coil units are tested and rated in accordance with Air Conditioning and Refrigeration Institute (ARI) Standard 440 and certified in accordance with the ARI certification program. ARI certification assures you full rated performance and offers confidence in unit selection.

ThinLine fan-coil units are listed by ETL and CETL as complying with nationally recognized safety standards for fan-coil air conditioning units.

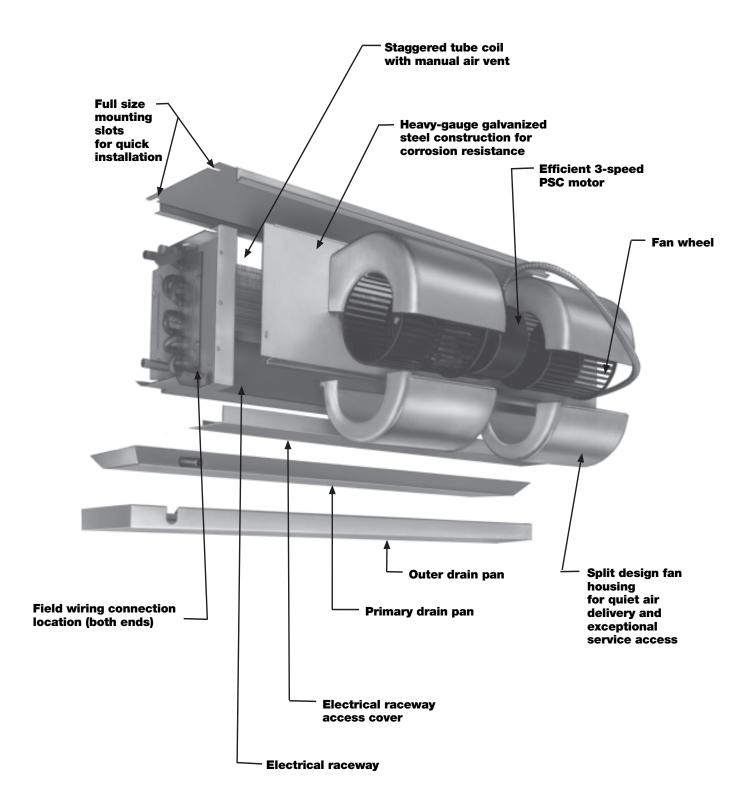








Design features — TSH & TSC ceiling units



A Complete Line of Ceiling Fan-coils For Optional Design Flexibility

Quality, efficiency & reliability built into every unit

Coils

Standard and optional high capacity cooling coils are available with manual air vents for all unit sizes. Optional water heating and steam coils are available for 4-pipe systems. Field installed automatic air vents are optional for water cooling coils.

Coils are constructed of seamless copper tubes with headers and aluminum fins. Full depth collars, drawn in the fin stock, provide accurate control of fin spacing and completely cover the copper tubes to lengthen coil life. Tubes are mechanically expanded into the fins for a permanent primary to secondary surface bond, assuring maximum heat transfer efficiency.

The vertical position of the coil assures rapid condensate drainage to provide even airflow and full rated capacity at all conditions.

Motors

Tap wound, three-speed, permanent split capacitor motors are standard for TSH and TSC units. Motors have sleeve bearings with oilers, inherent thermal overload protection and automatic reset. Motors are resiliently mounted to assure quiet, vibration-free operation and are easily removed.

Fan Wheels

All fan wheels are forward curved, double width, double inlet, centrifugal type and are statically and dynamically balanced for smooth, quiet operation.

Fan Housings

Split design fan housings allow quick service of fans and motors.

Fan Deck

Heavy-gauge continuous galvanized steel rigidly supports motors, fan assembly, and fan housings as a single unit. The fan deck is self-locking to the basic chassis and is easily removed for service.

Casing and Cabinet

All units are constructed of heavy gauge steel for long life and durability. TSC units and optional trim flange ceiling frames are finished with an electrostatically applied, baked-on Antique Ivory paint.

Single Power Location

All electrical components of the TSH and TSC units are factory wired to an electric raceway accessible from the bottom of the unit. All field wiring connections can be made at the electrical raceway. Electric heaters, depending on amperage, may require more than one field circuit, all of which can be brought to the raceway.

Speed Controller

A three-speed switch with off position is available for all sizes. The speed switch must be field mounted in a 2 x 4 x $2\frac{1}{2}$ " deep electrical box by others.

Controls Systems

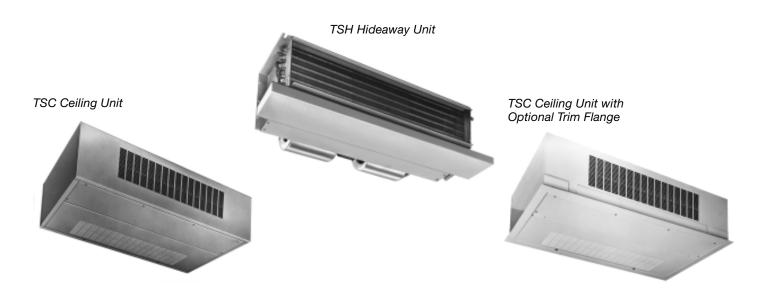
A wide variety of two- and four-pipe control systems are available with wall mounted thermostats or combination thermostat/speed switches (see page 10).

Drain Pans

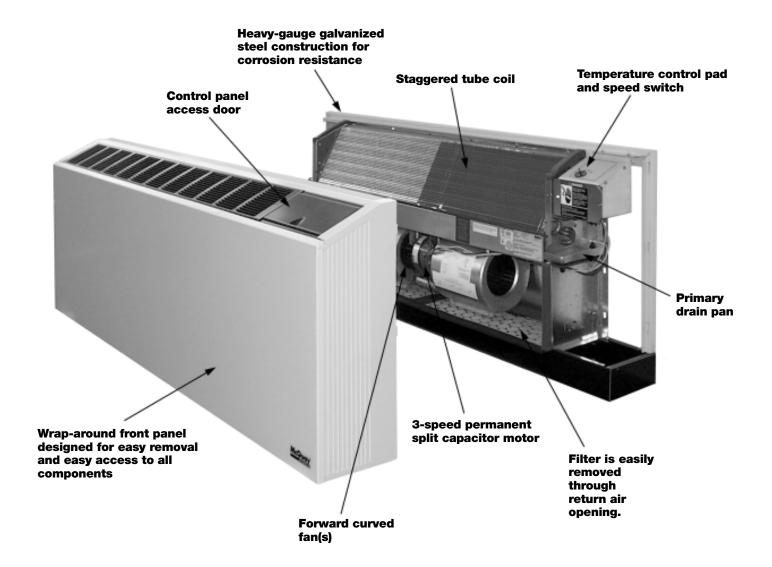
The galvanized steel drain pan with copper connection is insulated on the external surface with fire rated closed cell foam. The drain pan extends under the entire coil and coil connections. An optional galvanized steel secondary drain pan provides complete condensate drainage from valve package components.

Filter

TSC units have as standard a 1" throwaway filter. The filter is easily removable through the bottom access panel. For TSH units a filter is supplied only with the optional return air plenum.



Design features — TSS, TPF, TSF & TSB floor units



High Performance Coils and Motors For Exceptional Energy Economy

Quiet, dependable, trouble-free performance

Coils

Standard and optional low flow cooling coils are available with manual air vents for all unit sizes. Optional water heating and steam coils are available for 4-pipe systems. Field installed automatic air vents are optional for water cooling coils.

Coils are constructed of seamless copper tubes and headers with aluminum fins. Full depth collars, drawn in the fin stock, provide accurate control of fin spacing and completely cover the copper tubes to lengthen coil life. Tubes are mechanically expanded into the fins for a permanent primary to secondary surface bond, assuring maximum heat transfer efficiency.

The position of the coil assures rapid condensate drainage to provide even airflow and full rated capacity at all conditions.

Motors

Tap wound, three-speed, permanent split capacitor motors are standard for TSS, TPF, TSF and TSB units. Motors have sleeve or ball bearings with oilers, inherent thermal overload protection with an automatic reset. Motors are resiliently mounted to assure quiet, vibration-free operation and are easily removed.

Fan Wheels

All fan wheels are forward curved, double width, double inlet, centrifugal type and are statically and dynamically balanced for smooth, quiet operation.

Fan Housings

Split design fan housings or single-piece fan housings with separate inlets offer exceptional serviceability.

Fan Deck

Heavy-gauge continuous galvanized steel rigidly supports motors, fan assembly and fan housings as a single unit.

Casing and Cabinet

All units are constructed of heavy-gauge steel for long life and durability. TSS sizes S02 through S06 are provided with Hi-impact plastic sides. TSS sizes S08 through S12 are provided with metal sides. TSS, TPF, TSF units and TSB wall plates are finished with an electrostatically applied, baked-on Antique Ivory paint. TPF units have 16 gauge front panel and locking access door.

Discharge Grille

TSS, TPF and TSF units are furnished with a stamped metal discharge grille. Matching access door offers a distinctive appearance that complements any room decor.

Single Power Location

All electrical components of the TSS, TPF, TSF and TSB units are factory wired to a single electrical box on the unit. All field wiring connections can be made at the electrical box. Electric heaters, depending on amperage, may require more than one field circuit, all of which can be brought to the electrical box.

Speed Controller

A three-speed switch with off position is provided for all unit sizes. The speed switch is available unit mounted or for field installation in a wall mounted 2 x 4 x $2\frac{1}{2}$ inch deep electrical box by others.

Controls Systems

A wide variety of two- and four-pipe control systems are available with unit mounted or remote thermostats. Unit mounted controls are provided with an access door, 3-speed fan with off switch, and optional temperature control knob.

Drain Pans

The galvanized steel primary drain pan is provided with copper connections, and is insulated on the external surface with fire rated closed cell foam. The primary drain pan extends under the entire coil and coil connections. An injection molded secondary drain pan provides complete condensate drainage from valve package components. The secondary drain pan rotates 180° to accommodate field piping.

Filter

TPF, TSF and TSB units have as standard a ½" throwaway filter. The filter is easily removable through the return air toe space of TPF, TSF units and wall plate return air grille for TSB units.

TSB basic unit (Top discharge shown)



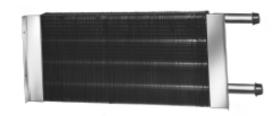
TSS slope top metal Floor Unit



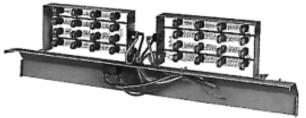
TPF, TSF flat top Floor Unit



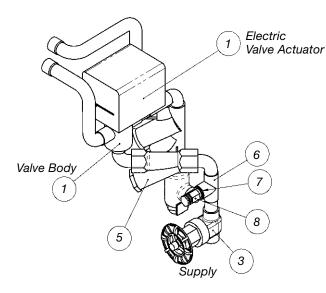
Optional features and accessories

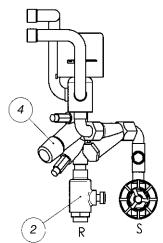


TSH Heating Coil



TSH Electric Heater





Deluxe Valve Packages

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Optional Coils

In addition to the standard cooling coil, an optional low flow water coil is available for TSS, TPF, TSF and TSB floor units for use in a two-pipe system. A standard capacity coil or a high capacity coil is available for TSH and TSC ceiling units for use in two-pipe systems. A separate one-row heating coil can be factory installed with any of the above coils for four-pipe systems. A steam coil is also available for installation with the standard cooling coil. (Manual air vents supplied with water heating coils must be field mounted.)

Motors

Tap wound, three-speed 115/60/1 or 265/60/1 permanent split capacitor motors are available on all unit types and sizes. All motors have sleeve bearings with oilers and inherent thermal overload protection with automatic reset. Motors are resiliently mounted to assure quiet, vibration-free operation and are easily removed for service.

Electric Heat

Electric heat is offered in a wide variety of sizes and voltages. Each is equipped with an automatic thermal overload switch. Electric heaters can be used for supplementary between-season heating when chilled water is being supplied to the system, or for year-round electric heat.

Return Plenum (TSH Units Only)

A galvanized steel plenum section is available to enclose the motor and fans. It facilitates making the return air connection to the unit without interfering with the piping for the unit supply, return or drain connections. It is equipped with a 1" throwaway filter holding frame with side or bottom filter access. A ³/₄" duct collar offers easy field duct connections. The plenum is available factory mounted or as a field mounted kit. The filter frame and bottom panel can be interchanged for back or bottom return air.

Valve Packages

Two-way and three-way electric valves are available with hand valves for factory or field mounting opposite hand on all units. When valve packages are supplied, a secondary drain pan is also supplied to assure positive drainage of condensate from valves and piping manifolds (unit types TSS, TPF, TSF and TSB have a secondary drain pan as standard). Basic package includes ① electric valve with hand valves ②③. Basic package with P/T plugs includes above with pressure/temperature taps ⑥⑦⑧. Deluxe package includes all the above plus a strainer ⑤ and a flow control device ④. See Table 1 on page 11 for a brief description of control systems.

Wall Plates (TSB units only)

Decorative wall plates have rounded corners and an Antique lvory finish for an attractive appearance.



TSB Wall Plate

Fresh Air Damper

A fresh air intake that will provide up to 25% dilution air with insect air screen and damper blade, can be ordered either factory installed or as a field installed kit. The kit consists of an intake with damper blade and insect screen. The damper may be manually controlled through the return air opening or with an optional field installed damper motor. If freezing air temperatures are expected, the damper must be closed or outside air must be tempered before entering the unit.



TSS/TPF, TSF/TSB Manual Fresh Air Damper

Rear Cabinet Extension

For applications requiring additional cabinet depth, TSS, TPF and TSF have available a 4" extension kit. Kit is available for applications where additional depth is necessary for piping or electrical routing. This kit is not designed to be an air duct or outside air plenum.



Vertical ThinLine 4" Cabinet Rear Extension

Ceiling Flange (TSC Units Only)

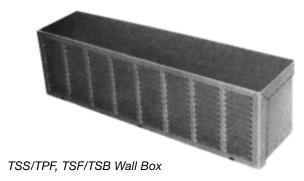
Optional field installed ceiling flange accommodates acoustic type ceiling panels in drop ceiling applications and has an Antique Ivory finish.



TSC Unit Shown with Ceiling Flange

Fresh Air Wall Intake Box

Fabricated of aluminum with weep holes and a double set of louvers in series to prevent moisture draw-through.



Leveling Legs (TSF, TPF, TSS Units Only)

Field installed kits are available with 0 to 1" adjustment for positive leveling of floor-mounted units.



TSS, TPF and TSF Leveling Legs

Thermostats

Wall-mounted thermostats for all application requirements are available as either thermostats only or combination thermostat and three-speed switch. Unit mounted thermostats are available for TSF, TPF, TSS and TSB units.









Wall mounted three-speed fan switch and thermostats

Control Systems

Table 1. Electric valve package kits

System	Fan Control ①	Control Valve Type ②	Changeover Control and Location	Thermostat Type
Two-Pipe Valve Cycle. (Water Cooling or Heating)	Manual (Constant Fan)	Motorized 2-way or 3-way. Normally closed. Factory or Field installed	Automatic. Field installed on supply line. Manual. Unit mounted on control plate or wall mounted on subbase of thermostat.	Unit or wall mounted heating/cooling, SPDT.
Two-Pipe Valve Cycle. With Electric Heat.	Manual (Constant Fan)	Motorized 2-way or 3-way. Normally closed.	None	Unit or wall mounted. DPDT. Neutral dead- band for sequenced heating/cooling.
(Water Cooling and Electric Heating) ③		Factory or Field installed.	Manual. Unit mounted on control plate or wall mounted on subbase of thermostat.	Unit or wall mounted heating/cooling, SPDT.
Four-Pipe Valve Cycle (Water Cooling and Heating)	Manual (Constant Fan)	Motorized 2-way or 3-way. Normally closed. Factory or Field installed.	None	Unit or wall mounted, DPDT. Neutral dead- band for sequenced heating/cooling.
Two-Pipe Valve Cycle With Intermediate Heat	Manual (Constant Fan)	Motorized 2-way or 3-way. Normally closed. Factory or Field installed.	Two automatic Changeovers (ACO's) required on supply line to provide ACO and lock out electric heater when hot water is available.	Unit or wall mounted, DPDT. Neutral dead- band for sequenced heating/cooling.

- $\textbf{NOTES:} \quad \textcircled{1} \text{ A three-speed fan switch is supplied on all vertical units.}$
 - 2 Valve packages are factory mounted or field installed.
 - ® Available for supplementary between-season electric heating when chilled water is in the system or for year-round full electric heat.

Unit selection

Selection of unit type

General

The achievement of an efficient fan-coil system is dependent upon accurate system design and proper equipment selection. Variations, limitations and control of fan-coil systems, design conditions and design load calculations are not described in detail in this catalog. More detailed information may be found in the ASHRAE Guide. This catalog contains ARI certified ratings and application ratings for ThinLine SeasonMaker fan-coil units from which the design engineer can make initial unit selections to meet the requirements of the system.

The mechanical system designer must select the unit types best suited to the overall system before the actual unit sizes can be determined. The factors that generally influence this decision are intended building usage, building layout, architectural and aesthetic values, economics, geographical location, and type of maintenance service available. The general results may be a mixture of various unit types within a given system. McQuay International manufactures a fan-coil unit to meet your every need including ThinLine, HiLine and Large Capacity models.

Basic design data

Prior to selecting the individual unit sizes, the design engineer must fix or determine the following factors:

- 1. Inside and outside wet and dry bulb design temperatures.
- 2. Method of introducing the ventilation air.
- Wet and dry bulb temperatures of the air mixture entering the unit coil.
- Total and sensible heat gains and losses of the area to be served.
- 5. Properties of the heating and cooling medium.
- 6. Available electric power service.
- Any special design requirements of the building or system.

Selection of unit size

The capacity ratings presented in this catalog are provided for initial unit selection only. Unit size selection should be determined by using the SelectTools for Fan-coil computer selection program. Water cooling and heating capacities, unit air flow, static pressure, electric heat, and glycol solutions are all incorporated into the program to provide the best possible selection. Consult your McQuay representative for a selection tailored to your application.

Unit sizes for the ideal system should be selected by cal-

culating the peak load requirements due to unusually high occupancy or severe climatic conditions and with fan operating at high speed. Ordinary day to day cooling and heating requirements are then achieved at low and medium speeds.

Ventilation requirements should be considered along with heating and cooling capacity to determine the proper unit size. Outside fresh air must be tempered before entering the unit if freezing conditions are expected.

Cooling coil requirements

Having checked the minimum unit size to meet the ventilation requirement, the unit size is generally selected on the basis of matching the sensible cooling capacity of the unit with the calculated requirements when operating at high speed.

Coil Types

Standard and low flow coil types are available for all TSF and TSB floor unit sizes. Standard and high capacity coil types are available for all TSH and TSC ceiling unit sizes to permit unit selections for optimum performance.

- Standard coils are designed to meet both the cooling and heating requirements in a typical system.
- Low flow coils are designed to meet both the normal cooling and heating requirements while operating with reduced gpm and correspondingly higher water temperature rises.
 Their use is enhanced by the lower first cost of both riser piping and pump, plus lower overall fan-coil unit and water pump operating cost.
- High capacity coils are designed to meet cooling and heating loads that exceed typical system requirements for ceiling units.

Heating requirements

Heating requirements for two-pipe systems are generally met by employing the same water flow rate as cooling and adjusting the entering hot water temperature to obtain a matching unit heat output at low fan speed. Four-pipe systems are generally designed by specifying the flow rate through the separate heating coil to meet the required heat load with the fan operating at low speed.

Electric heaters are available for primary year-round heating or intermediate between-seasons heat loads for two-pipe systems when chilled water is in the system.

ARI approved standard ratings - ceiling units

Table 2. Standard coil water cooling capacity ratings ①

TSH Hideaway Units					TSC Ceiling Units			
Unit	Cooling C	apacity ②	Water	Water	Cooling C	Cooling Capacity ②		Water
Size	Total (BTUH)	Sensible (BTUH)	Flow (GPM)	P.D. (FT. W.C.)	TOTAL BTUH	SENSIBLE BTUH	Flow (GPM)	P.D. (FT. W.C.)
S03	8,100	6,800	1.7	3.7	5,800	4,600	1.2	2.0
S04	11,900	10,100	2.5	8.0	10,900	9,100	2.2	6.5
S06	19,100	15,200	4.0	3.0	17,100	13,000	3.4	2.4
S08	22,100	17,600	4.6	3.9	19,900	15,200	3.9	2.8
S10	29,000	23,500	6.2	11.5	26,500	20,300	5.3	8.8
S12	38,300	29,700	7.8	21.6	34,500	25,300	6.9	17.2

NOTES:

- ① Rated in accordance with ARI Standard 440. Cooling capacities based on 80°F DB/67°F WB entering air, 45°F entering water, 10°F water temperature rise and high fan speed with standard 115/60/1 motor. See tables 10 and 11 for air volume capacities.
- ② For cooling coil capacity ratings at conditions other than those listed refer to the SelectTools for Fan-coil computer selection program or consult your McQuay representative.

Table 3. High capacity coil water cooling capacity ratings ①

TSH Hideaway Units					TSC Ceiling Units				
Unit	Cooling Capacity ②		Water	Water	Cooling C	apacity ②	Water	Water	
Size	Total (BTUH)	Sensible (BTUH)	Flow (GPM)	P.D. (FT. W.C.)	Total (BTUH)	Ssnsible (BTUH)	Flow (GPM)	P.D. (FT. W.C.)	
S03	10,200	7,700	2.1	6.3	7,300	5,400	1.5	3.6	
S04	15,100	11,000	3.2	4.5	14,000	10,100	2.8	3.6	
S06	24,200	17,500	5.0	8.0	21,800	15,400	4.4	5.7	
S08	28,000	20,000	5.8	10.4	24,700	17,400	5.1	8.3	
S10	37,800	26,700	7.7	14.7	35,700	24,700	7.2	12.3	
S12	43,200	30,200	8.6	21.6	39,400	26,800	7.8	17.6	

NOTES:

- ① Rated in accordance with ARI Standard 440. Cooling capacities based on 80°F DB/67°F WB entering air, 45°F entering water, 10°F water temperature rise and high fan speed with standard 115/60/1 motor. See tables 10 and 11 for air volume capacities.
- ② For cooling coil capacity ratings at conditions other than those listed refer to the SelectTools for Fan-coil computer selection program or consult your McQuay representative.

Water heating coil ratings - ceiling units

Table 4. Standard coil water heating capacity ratings ①

	TSH Hideaway U	nits	TSC Ceiling Units			
Unit	Heating Capacity ②	eating Capacity ② Water		Heating Capacity ②	Water	Water
Size	Sensible (BTUH)	Flow (GPM)	P.D. (FT. W.C.)	3erisible		P.D. (FT. W.C.)
S03	16,600	1.7	3.7	13,200	1.2	2.0
S04	22,500	2.5	8.0	19,900	2.2	6.5
S06	36,800	4.0	3.0	31,500	3.4	2.4
S08	42,800	4.5	3.8	37,500	3.9	2.8
S10	58,700	6.2	11.5	50,200	5.3	8.8
S12	72,100	7.8	21.6	59,500	6.9	17.2

① Water heating coils at 70°F DB entering air, 140°F entering water and high fan speed with standard 115/60/1 motor. See tables 10 and 11 for air volume capacities.

② For heating coil capacity ratings at conditions other than those listed refer to the SelectTools for Fan-coil computer selection program or consult your McQuay representative.

Table 5. High capacity coil water heating capacity ratings ①

	TSH Hideaway U	Inits	TSC Ceiling Units			
Unit	Heating Capacity ②	Water	Water	Heating Capacity ②	Water	Water
Size	Ssnsible (BTUH)	Flow (GPM)	P.D. (FT. W.C.)	Sensible		P.D. (FT. W.C.)
S03	18,600	2.1	6.3	14,800	1.5	3.6
S04	28,100	3.2	4.5	24,400	2.8	3.6
S06	41,600	5.0	8.0	35,600	4.4	5.7
S08	49,400	5.8	10.4	43,800	5.1	8.3
S10	68,800	7.7	14.7	1.7 58,800		12.3
S12	75,700	8.6	21.6	61,600	7.8	17.6

① Water heating coils at 70°F DB entering air, 140°F entering water and high fan speed with standard 115/60/1 motor. See tables 10 and 11 for air volume capacities.

Table 6. Standard coil water heating capacity ratings ①

	TSH Hideaway Ur	nits	TSC Ceiling Units			
Unit	Heating Capacity ②	Water	Water	Heating Capacity ②	Water	Water
Size	Sensible (BTUH)	Flow (GPM)	P.D. (FT. W.C.)	Sensible (BTUH)	Flow (GPM)	P.D. (FT. W.C.)
S03	27,272	1.86	5.88	23,177	1.58	4.18
S04	36,189	2.47	10.61	32,095	2.19	8.3
S06	60,155	4.1	2.15	51,283	3.5	1.73
S08	70,391	4.8	2.91	61,519	4.2	2.13
S10	95,483	6.51	8.78	82,518	5.63	6.61
S12	115,984	7.91	16.28	94,829	6.47	11.25

① Water heating coils at 70°F DB entering air, 180°F entering water, 30°F water temperature drop, and high fan speed with standard 115/60/1 motor. See tables 10 and 11 for air volume capacities.

Table 7. High capcity coil water heating capacity ratings ①

	TSH Hideaway U	nits	TSC Ceiling Units			
Unit	Heating Capacity ②	Water	Water	Heating Capacity ②	Water	Water
Size	Sensible (BTUH)	Flow (GPM)	P.D. (FT. W.C.)	Sensible (BTUH)	Flow (GPM)	P.D. (FT. W.C.)
S03	29,660	2.02	5.02	24,627	1.68	4.67
S04	44,400	3.03	3.24	38,600	2.63	2.57
S06	64,852	4.42	4.63	55,299	3.77	3.26
S08	77,477	5.28	6.27	68,605	4.68	5.13
S10	108,772	7.42	10.1	91,712	6.26	7.05
S12	120,325	8.21	12.33	95,417	6.51	7.91

① Water heating coils at 70°F DB entering air, 180°F entering water, 30°F water temperature drop, and high fan speed with standard 115/60/1 motor. See tables 10 and 11 for air volume capacities.

② For heating coil capacity ratings at conditions other than those listed refer to the SelectTools for Fan-coil computer selection program or consult your McQuay representative.

② For heating coil capacity ratings at conditions other than those listed refer to the SelectTools for Fan-coil computer selection program or consult your McQuay representative.

② For heating coil capacity ratings at conditions other than those listed refer to the SelectTools for Fan-coil computer selection program or consult your McQuay representative.

Table 8. Separate 1-row heating coil capacity ratings ①

	TSH Hideaway U	nits	TSC Ceiling Units				
Unit	Heating Capacity ②	Water	Water	Heating Capacity ②	Water	Water	
Size	Sensible (BTUH)	Sensible Flow P.D.		Sensible (BTUH)	Flow (GPM)	P.D. (FT. W.C.)	
S03	12,300	0.8	1.9	12,300	0.8	1.9	
S04	16,800	1.1	3.8	16,500	1.0	3.1	
S06	22,200	1.5	1.7	18,000	1.2	0.8	
S08	23,100	1.6	1.8	21,800	1.5	1.4	
S10	36,100	2.4	3.9	31,800	2.1	2.9	
S12	46,900	3.2	8.0	46,100	3.1	7.6	

① Water heating coils at 70°F DB entering air, 180°F entering water, 30°F water temperature drop and high fan speed with standard 115/60/1 motor. See tables 10 and 11 for air volume capacities.

Steam coil ratings - ceiling units

Table 9. Separate 1-row steam coil capacity ratings ①

	TSH Hideaway Units					TSC Ceiling Units			
Unit Size	Heating Cap. Sensible (BTUH)	EDR ③	Air Temp. Rise °F	Condensate LB/HR.	Heat. Cap. ② Sensible (BTUH)	EDR ③	Air Temp. Rise °F	Condensate LB/HR.	
S03	20,300	84.6	62	21.0	20,300	84.6	62	21.0	
S04	28,300	117.9	65	29.3	27,900	116.3	64	28.8	
S06	36,100	150.4	54	37.4	31,000	129.2	51	32.1	
S08	50,000	208.3	57	51.8	48,100	200.4	58	49.8	
S10	65,100	271.3	53	67.4	61,300	255.4	57	63.4	
S12	71,400	297.5	51	73.9	70,400	293.3	55	72.9	

Steam coil capacity ratings based on 60°F DB entering air temperature, 2 psig steam pressure and high fan speed with standard 115/60/1 motor. See tables 10 and 11 for air volume capacities.

Air volume capacity data - ceiling units - Standard Coil

Table 10. Air volume versus external static pressure - Standard motors, high speed operation (cfm)

		External Static Pressure (inches of water)																			
Unit		TSH Unit Wc"					TSH With Plenum					TSC Unit Wc"									
Size	.00	.00 .05 .10 .15 .20 .25 .30					.30	.00	.05	.10	.15	.20	.25	.30	.00	.05	.10	.15	.20	.25	.30
S03	390	360	340	290	200	170	-	340	290	200	170	110	-	-	350	300	250	210	160	-	-
S04	520	510	500	480	460	450	430	500	480	460	450	430	410	390	480	460	450	430	420	400	390
S06	700	680	670	650	610	570	510	670	650	610	570	510	460	400	640	610	570	540	500	470	430
S08	880	860	830	800	760	710	670	830	800	760	710	670	620	580	790	750	710	680	640	610	570
S10	1300	1270	1220	1180	1120	1060	960	1220	1180	1120	1060	960	900	800	1160	1110	1060	1000	950	900	850
S12	1480	1440	1390	1340	1280	1210	1140	1390	1340	1280	1210	1140	1060	980	1190	1140	1090	1040	990	940	890

Note: Based on 115/60/1 electric service, standard unit options, and dry coils.

② For heating coil capacity ratings at conditions other than those listed refer to the SelectTools for Fan-coil computer selection program or consult your McQuay representative.

² For steam coil capacity ratings at conditions other than those listed, use the steam heating coil conversions found on page 20.

³ Equivalent Direct Radiation.

Air volume capacity data - ceiling units - Hi Capacity Coil

Table 11. Air volume versus external static pressure - Standard motors, high speed operation (cfm)

		External Static Pressure (inches of water)																			
UNIT			TSH	Unit V	Vc"			TSH With Plenum					TSC Unit Wc"								
SIZE	.00	00 .05 .10 .15 .20 .25 .3					.30	.00	.05	.10	.15	.20	.25	.30	.00	.05	.10	.15	.20	.25	.30
S03	370	340	310	270	170	150	-	310	270	170	150	130	100	-	320	280	240	190	150	110	-
S04	510	500	480	460	450	430	410	480	460	450	430	410	390	360	460	450	430	420	400	380	370
S06	710	690	670	640	590	550	500	670	640	590	550	500	460	400	650	610	570	540	500	460	420
S08	870	850	820	800	770	740	690	820	800	770	740	690	640	590	740	710	660	630	590	530	490
S10	1290	1240	1200	1150	1080	1020	950	1200	1150	1080	1020	930	880	820	1130	1070	1000	880	810	750	690
S12	1400	1320	1260	1200	1120	1050	950	1260	1200	1120	1050	950	900	850	1160	1100	1050	990	930	870	810

Note: Based on 115/60/1 electric service, standard unit options, and dry coils.

Motor Data - ceiling units

Table 12. Motor data - TSH & TSC units

						Unit Size												
Motor	Motor S03		S04		S06		S08			S10			S12					
Speed	Amps	Watts	RPM	Amps	Watts	RPM	Amps	Watts	RPM	Amps	Watts	RPM	Amps	Watts	RPM	Amps	Watts	RPM
								1	15/60/	1								
High	0.70	75	1080	1.4	185	1200	1.6	190	1070	2.30	250	1280	4.30	450	1350	3.80	395	1160
Medium	0.40	47	820	1.00	110	880	1.00	104	810	1.60	160	1030	2.30	209	1060	3.00	347	1020
Low	0.30	34	600	0.60	58	530	0.70	67	520	0.90	90	920	1.50	137	600	1.90	195	650
								2	265/60/ ⁻	1								
High	0.34	80	1080	0.50	135	1200	0.70	170	1070	1.00	220	1280	1.30	290	1360	1.40	305	1160
Medium	0.30	66	800	1.40	88	880	0.43	74	815	0.63	131	925	1.00	220	1050	1.30	260	1000
Low	0.29	60	600	0.25	45	530	0.32	50	520	0.36	73	630	0.90	180	600	0.70	145	650

Electric heat data - ceiling units

Table 13. Electric resistance heater capacities - TSH & TSC units

					Single St	age Heater	s - Electric	al Service				
Unit		120/60/1			208/60/1			240/60/1			265/60/1	
Size	Watts	BTUH	Amps	Watts	BTUH	Amps	Watts	BTUH	Amps	Watts	BTUH	Amps
	1000	3413	8.3	1000	3413	4.8	1000	3413	4.2	1000	3413	3.6
S03	2000	6826	16.6	2000	6826	9.6	2000	6826	8.3	2000	6826	7.2
	-	-	-	3000	10239	14.4	3000	10239	12.5	3000	10239	10.8
	1000	3413	8.3	1000	3413	4.8	1000	3413	4.2	1000	3413	3.6
S04	2000	6826	16.6	2000	6826	9.6	2000	6826	8.3	2000	6826	7.2
	-	-	-	3000	10239	14.4	3000	10239	12.5	3000	10239	10.8
	2000	6826	16.6	2000	6826	9.6	2000	6826	8.3	2000	6826	7.2
S06	-	-	-	4000	13652	19.2	4000	13652	16.7	4000	13652	14.4
	-	-	-	6000	20478	28.8	6000	20478	25.0	6000	20478	21.7
	2000	6826	16.6	2000	6826	9.6	2000	6826	8.3	2000	6826	7.2
S08	-	-	-	4000	13652	19.2	4000	13652	16.7	4000	13652	14.4
	-	-	-	6000	20478	28.8	6000	20478	25.0	6000	20478	21.7
S10	-	-	-	4000	13652	19.2	4000	13652	16.7	4000	13642	14.4
310	-	-	-	6000	20478	28.8	6000	20478	25.0	6000	20478	21.7
C10	-	-	-	4000	13652	19.2	4000	13652	16.7	4000	13652	14.4
S12	-	-	-	6000	20478	28.8	6000	20478	25.0	6000	20478	21.7

ARI approved standard ratings - floor units

Table 14. Standard coil water cooling capacity ratings TSS, TPF, TSF & TSB units $\ensuremath{\mathfrak{D}}$

Unit	Cooling C	apacity ②	Water	Water
Size	Total (BTUH)	Sensible (BTUH)	Flow (GPM)	P.D. (FT. W.C.)
S02	5,600	4,400	1.2	1.4
S03	8,000	6,100	1.7	1.1
S04	10,900	8,800	2.3	1.6
S06	15,600	11,700	3.1	6.4
S08	20,100	15,900	4.1	6.5
S10	28,300	21,600	6.0	6.6
S12	30,100	24,600	6.4	11.3

Table 15. Low flow coil water cooling capacity ratings TSS. TPF. TSF & TSB units ①

Unit	Cooling C	apacity ②	Water	Water
Size	Total (BTUH)	Sensible (BTUH)	Flow (GPM)	P.D. (FT. W.C.)
S02	6,800	5,200	1.4	2.7
S03	9,200	6,600	1.9	1.3
S04	13,500	10,200	2.7	3.1
S06	17,900	13,700	3.7	7.9
S08	29,800	19,800	6.1	12.9
S10	33,400	25,000	6.9	10.6
S12	35,600	25,900	7.7	13.2

NOTES:

- ① Rated in accordance with ARI Standard 440. Cooling capacities based on 80°F DB/67°F WB entering air, 45°F entering water, 10°F water temperature rise and high fan speed with standard 115/60/1 motor. See table 21 & 22 for air volume capacities.
- ② For cooling coil capacity ratings at conditions other than those listed refer to the SelectTools for Fan-coil computer selection program or consult your McQuay representative.

Water heating coil ratings - floor units

Table 16. Standard coil water heating capacity ratings TSS, TPF, TSF & TSB units \odot

Unit Size	Heating Capacity ② (Sensible BTUH)	Water Flow (GPM)	Water P.D. (FT. W.C.)
S02	10,600	1.2	1.4
S03	15,400	1.7	1.1
S04	21,900	2.3	1.6
S06	27,300	3.1	6.4
S08	35,300	4.1	6.5
S10	50,700	6.0	6.6
S12	55,700	6.4	11.3

Table 17. Low flow coil water heating capacity ratings TSS, TPF, TSF & TSB units ①

Unit Size	Heating Capacity② (Sensible BTUH)	Water Flow (GPM)	Water P.D. (FT. W.C.)
S02	11,600	1.4	2.7
S03	17,100	1.9	1.3
S04	24,700	2.7	3.1
S06	31,000	3.7	7.9
S08	45,500	6.1	12.9
S10	55,100	6.9	10.6
S12	60,800	7.7	13.2

NOTES:

- ① Water heating coils at 70° F DB entering air, 140° F entering water and high fan speed with standard 115/60/1motor. See table 21 & 22 for air volume capacities.
- ② For heating coil capacity ratings at conditions other than those listed refer to the SelectTools for Fan-coil computer selection program or consult your McQuay representative.

Table 18. Water heating capacity ratings TSS, TPF, TSF & TSB units ①

	Standard Coil Wa	iter Heating Cap	acity Ratings	High Capacity Coi	Water Heating	Capacity Ratings
Unit	Heating			Heating		
Size	Capacity2	Water Flow	Water P.D.	Capacity2	Water Flow	Water P.D.
	(Sensible BTUH)	(GPM)	(FT.W.C.)	(Sensible BTUH)	(GPM)	(FT.W.C.)
S02	17,005	1.16	1.25	18,189	1.24	2.07
S03	24,798	1.69	1.03	27,183	1.85	1.19
S04	35,720	2.44	1.7	39,421	2.69	2.93
S06	43,671	2.98	5.68	48,789	3.33	6.24
S08	55,233	3.77	5.3	69,596	4.75	7.82
S10	79,854	5.45	5.28	84,637	5.77	7.34
S12	88,384	6.03	9.69	94,191	6.43	9.12

NOTES:

- ① Water heating coils at 70° F DB entering air, 180° F entering water, 30° F water temperature drop, and high fan speed with standard 115/60/1 motor. See table 21 & 22 for air volume capacities.
- ② For heating coil capacity ratings at conditions other than those listed refer to the SelectTools for Fan-coil computer selection program or consult your McQuay representative.

Table 19. Separate 1-row coil water heating capacity ratings TSS, TPF, TSF & TSB units ①

Unit Size	Heating Capacity② (Sensible BTUH)	Water Flow (GPM)	Water P.D. (FT. W.C.)
S02	11,400	0.8	1.8
S03	15,100	1.0	3.4
S04	20,500	1.4	6.1
S06	28,400	1.9	12.6
S08	38,900	2.6	7.2
S10	48,500	3.3	1.9
S12	55,300	3.8	2.5

NOTES:

- ① Water heating coils at 70° F DB entering air, 180° F entering water, 30° F water temperature drop and high fan speed with standard 115/60/1 motor. See table 21 & 22 for air volume capacities.
- ② For heating coil capacity ratings at conditions other than those listed refer to the SelectTools for Fan-coil computer selection program or consult your McQuay representative.

Steam coil ratings - floor units

Table 20. Standard steam coil heating capacity ratings TSS, TPF, TSF & TSB units 1

Unit Size	Heating Capacity② (Sensible BTUH)	EDR ③	Air Temp. Rise (°F)	Condensate (LB/HR)
S02	13.2	55.2	54	13.7
S03	16.9	70.8	56	17.5
S04	23.8	99.5	56	17.5
S06	32.7	136.8	56	33.8
S08	54.1	226.0	62	55.9
S10	65.1	274.6	65	67.9
S12	74.8	312.9	59	77.4

NOTES:

- ① Steam coil capacity ratings based on 60°F DB entering air temperature, 2 psig steam pressure and high fan speed with standard 115/60/1 motor.
- ② For steam coil capacity ratings at conditions other than those listed, use the steam heating coil conversion factors found on page 21.
- 3 Equivalent Direct Radiation.

Air volume capacity data – floor units Standard Coil

Table 21. Air volume versus external static pressure TSS, TPF, TSF & TSB units (cfm)

Unit		TSF Sta	ındard Uı	nit Wc"	
Size	.00	.05	.10	.15	.20
S02	240	200	160	120	80
S03	280	240	200	150	100
S04	430	370	320	250	180
S06	560	490	410	330	260
S08	770	710	650	590	520
S10	1080	1020	970	920	870
S12	1250	1210	1170	1130	1100

Air volume capacity data – floor units High Capacity Coil

Table 22. Air volume versus external static pressure TSS, TPF, TSF & TSB units (cfm)

Unit		TSF HiCap Unit Wc"											
Size	.00	.05	.10	.15	.20								
S02	230	180	150	110	60								
S03	290	240	200	120	70								
S04	480	410	360	300	220								
S06	670	640	580	530	480								
S08	700	640	580	520	450								
S10	1070	1020	980	930	880								
S12	1220	1190	1150	1110	1080								

NOTES:

- ① Air volumes based on 115/60/1 electric service, standard unit options and dry coils.
- ② The SelectTools for Fan-coil computer selection program will not allow cooling coil face velocities below 90 ft./min. Some of the airflows found on the chart are included for heating only or ventilating applications.

Motor data - floor units - Standard Coil

Table 23. Motor data - TSS, TPF, TSF & TSB units

		Unit Size																			
Motor		S02			S03			S04			S06			S08			S10			S12	
Speed	Amps	Watts	RPM	Amps	Watts	RPM	Amps	Watts	RPM	Amps	Watts	RPM	Amps	Watts	RPM	Amps	Watts	RPM	Amps	Watts	RPM
	115/60/1 PSC Motor																				
High	0.60	82	1050	0.60	75	1100	0.90	105	1000	2.00	212	1050	1.90	190	850	3.10	328	1000	8.00	356	1270
Medium	0.40	41	845	0.42	48	950	0.60	70	830	1.70	83	800	1.50	169	790	1.65	180	840	3.40	235	940
Low	0.30	35	600	0.36	36	700	0.55	63	600	1.65	75	600	1.40	155	570	1.60	162	650	2.30	175	650
								265	/60/1	PSC M	lotor										
High	0.40	57	1050	0.40	78	1100	0.48	86	1000	0.50	120	1050	0.80	180	850	1.40	731	1000	3.00	330	1270
Medium	0.30	54	845	0.31	60	990	0.44	85	905	0.43	86	1005	0.60	160	800	0.65	175	800	2.25	235	1000
Low	0.20	53	600	0.29	58	890	0.42	82	725	0.39	80	845	0.55	150	700	0.60	150	650	1.63	165	800

Electric heat data - floor units

Table 24. Electric resistance heater capacities - TSS, TPF, TSF & TSB units

					Single St	age Heater	s - Electric	al Service				
Unit		120/60/1			208/60/1			240/60/1*			265/60/1	
Size	Watts	BTUH	Amps	Watts	BTUH	Amps	Watts	BTUH	Amps	Watts	BTUH	Amps
S02	750	2560	6.3	750	2560	3.6	560	1911	2.3	750	2560	2.7
302	1000	3413	8.3	1000	3413	4.8	750	2560	3.1	1000	3413	3.6
	1500	5120	12.5	1500	5120	7.2	1125	3840	4.7	1500	5120	5.4
	750	2560	6.3	750	2560	3.6	560	1911	2.3	750	2560	2.7
S03	1000	3413	8.3	1000	3413	4.8	750	2560	3.1	1000	3413	3.6
	1500	5120	12.5	1500	5120	7.2	1125	3840	4.7	1500	5120	5.4
	2000	6826	16.6	2000	6826	9.6	1500	5120	6.3	2000	6826	7.2
	1000	3413	8.3	1000	3413	4.8	750	2560	3.1	1000	3413	3.6
	1500	5120	12.5	1500	5120	7.2	1125	3840	4.7	1500	5120	5.4
S04	2000	6826	16.6	2000	6826	4.8	1500	5120	6.3	2000	6826	7.2
	3000	10239	25.0	3000	10239	14.4	2250	7679	9.4	3000	10239	10.8
	1000	3413	8.3	1000	3413	4.8	750	2560	3.1	1000	3413	3.6
	1500	5120	12.5	1500	5120	7.2	1125	3840	4.7	1500	5120	5.4
S06	2000	6826	16.6	2000	6826	9.6	1500	5120	6.3	2000	6828	7.2
	3000	10239	25.0	3000	10239	14.4	2250	7679	9.4	3000	10239	10.8
	-	-	-	3000	10239	14.4	2250	7679	9.4	3000	10239	10.8
S08	-	-	-	4000	13652	19.2	3000	10239	12.5	4000	13652	14.4
	-	-	-	6000	20478	28.8	4500	15360	18.8	6000	20478	21.7
	-	-	-	3000	10239	14.4	2250	7679	9.4	3000	10239	10.8
640	-	-	-	4000	13652	19.2	3000	10239	12.5	4000	13652	14.4
S10	-	-	-	6000	20478	28.8	4500	15360	18.8	6000	20478	21.7
	-	-	-	3000	10239	14.4	2250	7679	9.4	3000	10239	10.8
640	-	-	-	4000	13652	19.2	3000	10239	12.5	4000	13652	14.4
S12	-	-	-	6000	20478	28.8	4500	15360	18.8	6000	20478	21.7

^{*240}V Heaters are derated 265V heaters.

Steam heating coil conversion factors

Table 25. For ratings at other than base conditions, multiple coil capacity by proper conversion factor

Steam	Steam	Latent				Ente	ring Air Te	mperatur	e (°F)			
Pressure	Temp. (SAT.)	Heat	0	10	20	30	40	50	60	70	80	90
0	212.0	970.3	1.34	1.27	1.21	1.15	1.08	1.02	0.96	0.90	0.83	0.77
2	218.5	966.0	1.38	1.31	1.25	1.19	1.13	1.06	1.00	0.94	0.87	.081
5	227.1	960.6	1.43	1.37	1.31	1.24	1.18	1.12	1.06	0.99	0.93	0.87
10	239.4	952.6	1.51	1.45	1.38	1.32	1.26	1.20	1.13	1.07	1.01	0.94
15	249.7	945.6	1.57	1.51	1.45	1.38	1.32	1.26	1.20	1.13	1.07	1.01
20	258.8	939.6	1.63	1.57	1.51	1.44	1.38	1.32	1.25	1.19	1.13	1.06
25	266.8	934.0	1.68	1.62	1.56	1.50	1.43	1.37	1.31	1.24	1.17	1.12

To determine the capacity at conditions other than 2 PSIG steam and 60°F entering air, multiply the rated capacity by the proper conversion factor.

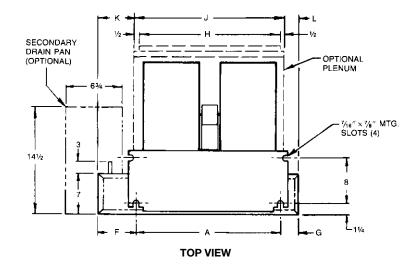
Dimensional data – Type TSH Series hideaway ceiling unit

TSH Unit	Return Plenum
Size	Filter Size
S03	201/8 x 91/8 x 1
S04	261/8×91/8×1
S06	35 ⁷ 8 x 9 ⁷ /8 x 1
S08	35 ⁷ 8 x 9 ⁷ /8 x 1
S10	437/8×97/8×1
S12	591/8 x 91/8 x 1

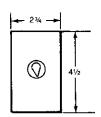
TSH Unit	Coil Connection Size							
Size	Cooling	Heating						
S03 Thru S12	5% O.D. SW	% O.D. SW						

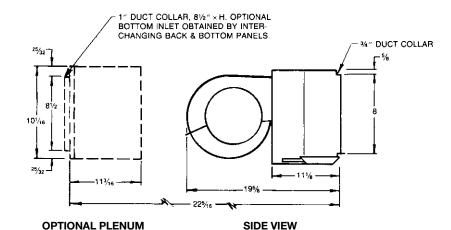
LEFT HAND UNIT SHOWN

Hand of unit determined by cooling connection when facing front of unit.









SECONDARY DRAIN PAN
(OPTIONAL)

101/2

DUCT COLLAR

C

SEE DETAIL OF DRAIN CONN.

93/4 COIL FACE

7/6" O.D. SWEAT DRAIN CONN.

FRONT VIEW

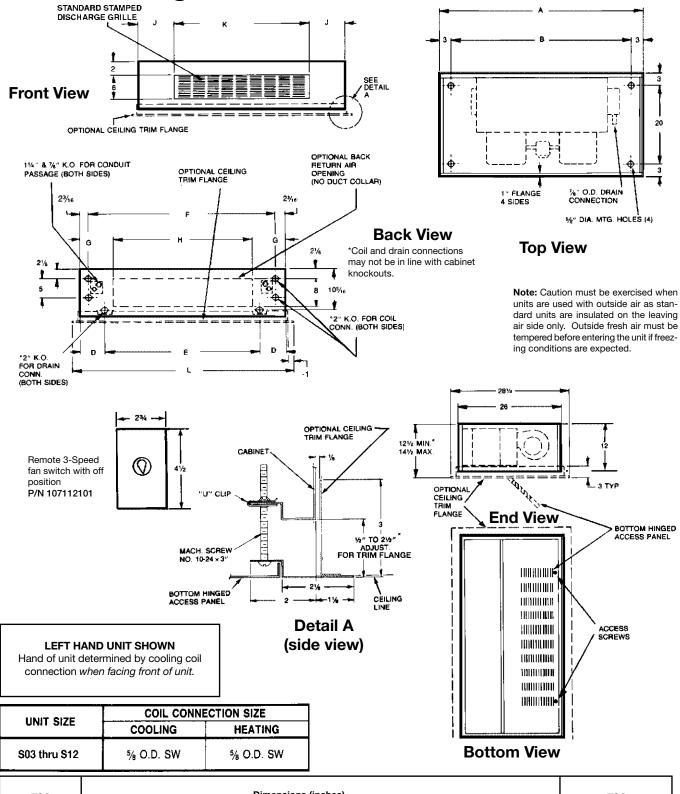
DRAIN CONN. DETAIL (FRONT VIEW)

TSH Unit		Dimensions (inches)														
Size	Α	В	С	D	E	F	G	Н	J	K	L					
S03	201/4	19	27	5½	2½	47/8	11//8	21	22	4	1					
S04	261/4	25	33	5½	21/2	47/8	1 ½	27	28	4	1					
S06	351/4	34	42	5½	21/2	47/8	11//8	36	37	4	1					
S08	351/4	34	42	5½	2½	47/8	11//8	36	37	4	1					
S10	431/4	42	50	51/2	21/2	47/8	11//8	44	45	4	1					
S12	591/4	58	68	6½	31/2	57/8	21//8	60	61	5	2					

(SIDE VIEW)

ALL DIMENSIONS APPROXIMATE. CERTIFIED DRAWINGS AVAILABLE ON REQUEST.

Dimensional data – Type TSC Series cabinet ceiling unit

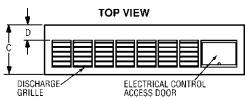


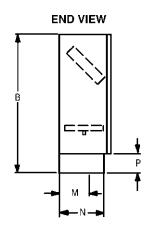
TSC		Dimensions (inches)												
Unit Size	Α	В	D	E	F	G	Н	J	K	L	Filter Size			
S03	43	37	611/16	2911/16	38⁵⁄8	87/ ⁶	2411/16	91/2	24	45 ¹ / ⁴	26 ⁷ /8 x 9 ⁷ /8 x 1			
S04	43	37	611/16	2911/16	385/8	87/8	2411/16	91/2	24	451/4	26 ⁷ /8 x 9 ⁷ /8 x 1			
S06	52	46	63/8	391/4	47%	8³/8	34	9	34	541/4	35 ⁷ /8 x 9 ⁷ /8 x 1			
S08	52	46	63/8	391/4	47%	8³/8	34	9	34	541/4	351/8×91/8×1			
S10	78	72	611/16	6411/16	73 ⁵ /8	113/8	58	10	58	801/4	59 ⁷ /8 x 9 ⁷ /8 x 1			
S12	78	72	611/16	6411/16	73 ⁵ /8	113/8	58	10	58	801/4	59 ⁷ /8 x 9 ⁷ /8 x 1			

Dimensional data Type TSF Series flat top cabinet floor unit

LEFT HAND UNIT SHOWN

Hand of unit determined by cooling coil connection when facing front of unit.





FRONT VIEW

RETURN AIR
OPENING

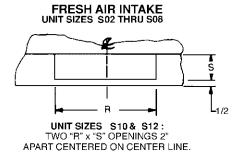
RETURN AIR OPENING

P/16" x 2" MTG: SLOTS
3 EACH SIDE

SECONDARY DRAIN PAN
% O.D. PLASTIC CLAMP
CONNECTION

NOTE: Outside fresh air must be tempered before entering the unit if freezing conditions are expected.

*Dimensions may vary for units with nonstandard valve packages.



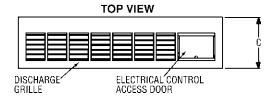
TSF Unit	Return Air
Size	Filter Size (IN.)
S02	7¾ x 18¾ x ½
S03	7 ³ / ₄ x 24 ³ / ₄ x ¹ / ₂
S04	7 ³ / ₄ x 33 ³ / ₄ x ¹ / ₂
S06	7 ³ / ₄ x 43 ³ / ₄ x ¹ / ₂
S08	10 x 43 ³ / ₄ x ¹ / ₂
S10	10 x 55¾ x ½
S12	10 x 55¾ x ½

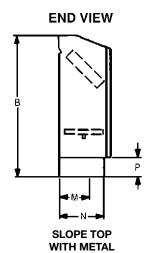
OPTIONAL BACK FRESH AIR / INTAKE WITH DAMPER AND INSECT SCREEN (SEE DETAIL)

TSH Unit	Coil Connection Size								
Size	Cooling	Heating							
S02 Thru S12	5/8 O.D. SW	% O.D. SW							

Unit	Unit Dimensions (inches)															
Size	Α	В	С	D	F	G	Н	J	K	M	N	Р	R	S	Т	U
TSF-S02	37	25	91/4	27/8	211//8	19¾	15 ⁷ / ₈	10 ⁷ / ₈	57/8	411/16	81/16	31/2	10	21/2	7%16	415/16
TSF-S03	43	25	91/4	27/8	277/8	19¾	151/8	101/8	57/8	411/16	81/16	31/2	10	21/2	7%16	415/16
TSF-S04	51	25	91/4	27/8	367/8	193/4	151/8	101/8	57/8	411/16	81/16	31/2	16	21/2	71/16	411/16
TSF-S06	61	25	91/4	27/8	467/8	193/4	151/8	101//8	57/8	411/16	81/16	31/2	16	21/2	71/16	411/16
TSF-S08	61	28	121/4	57/8	467/8	21%	17	12	6	77/16	1013/16	31/2	16	3	71/16	411/16
TSF-S10	75	28	121/4	57/8	587/8	21%	17	12	6	77/16	1013/16	31/2	16	3	81/16	57/16
TSF-S12	75	28	121/4	57/8	58 ⁷ / ₈	21%	17	12	6	77/16	1013/16	31/2	16	3	81/16	57/16

Dimensional data Type TSS Series slope top cabinet floor unit

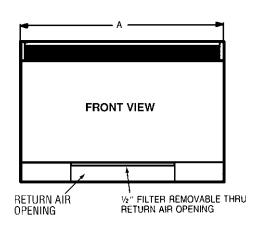


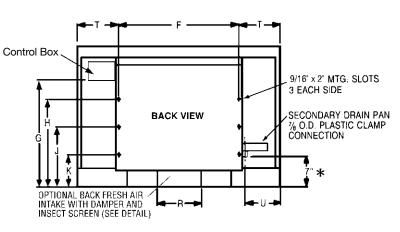


DISCHARGE GRILLE
TSS sizes S04 thru S06 have
hi-impact plastic sides.
S08-S12 have metal sides.

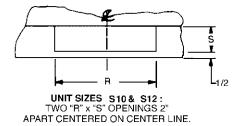
NOTE: Outside fresh air must be tempered before entering the unit if freezing conditions are expected.

*Dimensions may vary for units with nonstandard valve packages.





FRESH AIR INTAKE UNIT SIZES S02 THRU S08



TSS Unit	Return Air
Size	Filter Size (IN.)
S02	7 ³ / ₄ x 18 ³ / ₄ x ¹ / ₂
S03	7 ³ / ₄ × 24 ³ / ₄ × ¹ / ₂
S04	7¾ ×33¾ ×½
S06	7 ³ / ₄ × 43 ³ / ₄ × ¹ / ₂
S08	10 x 43 ³ / ₄ x ¹ / ₂
S10	10 x 55 ³ / ₄ x ¹ / ₂
S12	10 x 55 ³ / ₄ x ¹ / ₂

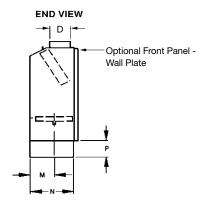
TSS Unit	Coil Conne	ection Size			
Size	Cooling	Heating			
S02 Thru S12	% O.D. SW	5% O.D. SW			

Unit	nit Unit Dimensions (inches)															
Size	Α	В	С	D	F	G	Н	J	K	М	N	Р	R	S	Т	U
TSS-S02	37	25	91/4	25½	211//8	19¾	15 ⁷ / ₈	101//8	57/8	411/16	81/16	31/2	10	21/2	7%16	415/16
TSS-S03	43	25	91/4	25½	271/8	19¾	15 ⁷ / ₈	10 ⁷ / ₈	57/8	411/16	81/16	31/2	10	21/2	7%16	415/16
TSS-S04	51	25	91/4	25½	367/8	19¾	151/8	101/8	57/8	411/16	81/16	31/2	16	21/2	71/16	411/16
TSS-S06	61	25	91/4	25½	467/8	19¾	157/8	107//8	57/8	411/16	81/16	3½	16	21/2	71/16	411/16
TSS-S08	61	28	121/4	281/2	467/8	21%	17	12	6	77/16	1013/16	31/2	16	3	71/16	411/16
TSS-S10	75	28	121/4	28½	581/8	21%	17	12	6	77/16	1013/16	31/2	16	3	81/16	57/16
TSS-S12	75	28	121/4	281/2	58 ⁷ / ₈	21%	17	12	6	77/16	1013/16	31/2	16	3	81/16	57/16

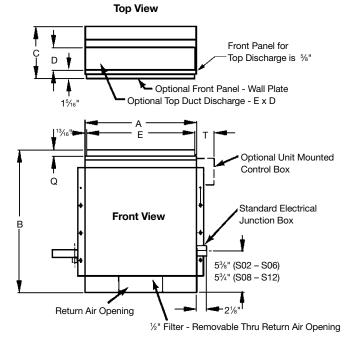
Dimensional data Type TSB Series basic floor unit

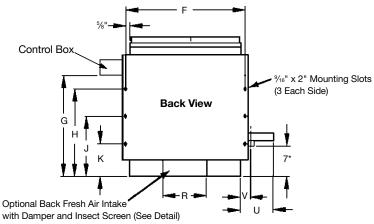
LEFT HAND UNIT SHOWN

Hand of unit determined by cooling coil connection when facing front of unit.



NOTE: Optional top duct discharge unit shown. Front discharge units are also available. Outside fresh air must be tempered before entering the unit if freezing conditions are expected.





*Dimensions may vary for units with nonstandard valve packages.

FRESH AIR INTAKE UNIT SIZES S02 THRU S08 S S I UNIT SIZES S10 & S12: TWO "R" x "S" OPENINGS 2" APART CENTERED ON CENTER LINE.

TSB Unit	Return Air
Size	Filter Size (IN.)
S02	7¾ x 18¾ x ½
S03	7¾ x 24¾ x ½
S04	7¾ x 33¾ x ½
S06	7¾ x 43¾ x ½
S08	10 x 43¾ x ½
S10, S12	10 x 55¾ x ½
S10*, S12*	(2) 10 x 27 ½ x ½

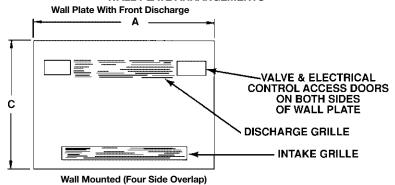
*Filter dimensions on sizes S10 and S12 change when ordered with a wall plate.

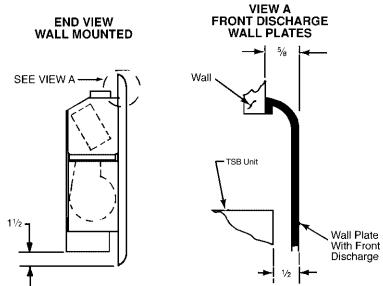
TSB Unit	Coil Conne	ection Size			
Size	Cooling	Heating			
S02 Thru S12	5% O.D. SW	5/8 O.D. SW			

Unit	Unit Dimensions (inches)											Overall Width								
Size	Α	A B C D E F G H J K M N P Q R S T U V W									with Drain Pan									
TSB-S02	205/8	257/16	93/4	41//8	19	211//8	19¾	15 ⁷ / ₈	1015/16	5 ¹⁵ / ₁₆	411/16	9	3½	1 ⁷ / ₁₆	10	21/2	73/4	81/16	41/16	30¾
TSB-S03	265/8	257/16	93/4	41/8	25	211/8	19¾	151/8	1015/16	5 ¹⁵ / ₁₆	411/16	9	3½	1 ⁷ / ₁₆	10	21/2	73/4	81/16	41/16	36¾
TSB-S04	35 1/8	257/16	93/4	41//8	34	367/8	19¾	151/8	10 ¹⁵ / ₁₆	5 ¹⁵ / ₁₆	411/16	9	3½	1 ⁷ / ₁₆	16	21/2	71/4	79/16	313/16	45¾
TSB-S06	45 1/8	257/16	93/4	41//8	44	467/8	19¾	151/8	1015/16	5 ¹⁵ / ₁₆	411/16	9	3½	1 ⁷ / ₁₆	16	21/2	71/4	79/16	313/16	553/4
TSB-S08	45%	283/16	12½	5½	44	467/8	21%	17	12	6	77/16	113/4	3½	1	16	3	71/4	79/16	313/16	55¾
TSB-S10	575/8	283/16	12½	5½	56	58 ⁷ / ₈	21%	17	12	6	77/16	113/4	3½	1	16	3	81/4	813/16	413/16	67¾
TSB-S12	575/8	283/16	12½	5½	56	587/8	21%	17	12	6	77/16	113/4	3½	1	16	3	81/4	813/16	413/16	673/4

Wall plate

WALL PLATE ARRANGEMENTS





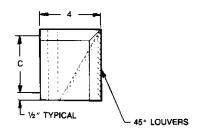
TSB	Wall Plate	Wall Plate Dimensions					
Unit Size	Α	С	Wall Opening				
S02	40	28	25¾×37				
S03	46	28	25¾×43				
S04	55	28	25¾ x 52				
S06	65	28	25¾×62				
S08	65	31	28¾×62				
S10 Thru S12	77	31	28¾×74				

NOTE:

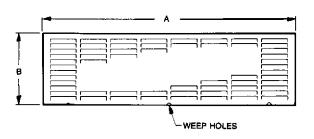
- 1. All dimensions in inches.
- 2. Wall plates for TSB unit sizes S10 and S12 are provided in two sections split vertically down the center.

Fresh air wall intake box

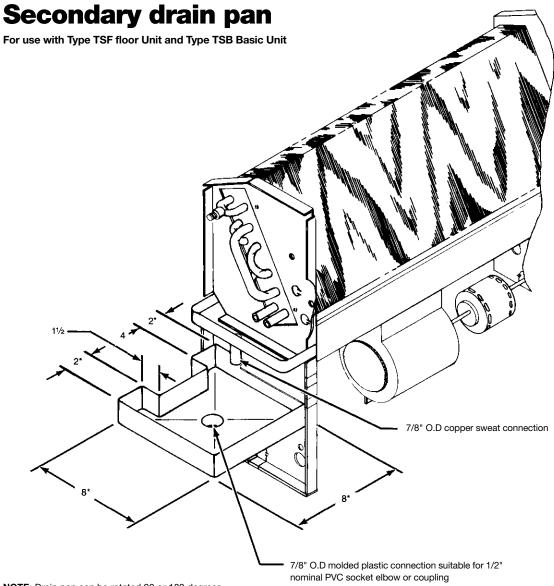
For use with Types TSF & TSB units



STYLE	DIMENSIONS (INCHES)								
SITLE	Α	В	С						
2 BRICK x 2 BRICK	16¾	43/4	33/4						
4 BRICK x 2 BRICK	33½	43/4	33/4						



ALL DIMENSIONS APPROXIMATE.
CERTIFIED DRAWINGS AVAILABLE ON REQUEST.



NOTE: Drain pan can be rotated 90 or 180 degrees.

ALL DIMENSIONS APPROXIMATE. CERTIFIED DRAWINGS AVAILABLE ON REQUEST.

Shipping weights

Table 28. Approximate shipping weights (lbs.) - TSH and TSC ceiling units

Unit Type		Unit Size										
Offic Type	S03	S04	S06	S08	S10	S12						
TSH LESS PLENUM	34	40	52	56	78	104						
TSH RETURN AIR PLENUM	23	27	31	31	38	52						
TSC	102	105	128	130	184	211						

NOTE: Approximate shipping weights do not include valve packages, hot water coils, electric heaters or other options.

Table 29. Approximate shipping weights (lbs.) – TSF and TSB floor units

Unit Type		Unit Size										
Onit Type	S02	S03	S04	S06	S08	S10	S12					
TSS, TPF, TSF	77	87	105	123	160	182	220					
TSB	58	62	80	101	131	151	187					

NOTE: Approximate shipping weights do not include valve packages, hot water coils, electric heaters or other options.

 $^{^{\}star}$ On sizes S04, and S08 the drain pan is 1/2" smaller. The 8" dimensions become $7\frac{1}{2}$ " and the 2" dimensions become $1\frac{3}{4}$ ".

Engineering guide specifications — ceiling units

Furnish and install where shown on the plans and specifications, McQuay (horizontal hideaway type) (ceiling exposed type) (ceiling recessed type) ThinLine SeasonMaker fan-coil units. Types, sizes and performance shall be tabulated in the schedule. Unit performance shall be substantiated by computer generated output data. Each unit shall be ARI certified and consist of and comply with the following:

Casing and Cabinets

Ceiling hideaway type (TSH) — Basic unit shall consist of a base casing and optional return air plenum fabricated of heavy gauge galvanized steel with four-sided 3/4" duct collar for ease of connecting discharge ductwork. Optional return air plenum shall have a filter frame with one-inch return air duct collar that can be interchanged for back or bottom return air. Plenum shall be fully insulated to prevent unit sweating and attenuate fan noise.

Ceiling (exposed) (recessed) cabinet type (TSC) — Unit shall consist of basic unit casing enclosed in an attractive heavy-gauge steel cabinet finished with an electrostatically applied, baked-on Antique Ivory paint. Cabinet shall have a stamped horizontal discharge grille with return air through the (bottom grille) (rear duct opening) of the unit. Cabinet shall include a bottom hinged access panel as standard.

Electrical Raceway — Unit shall have an electrical raceway providing a single location for all field wiring connections. All factory mounted electrical components shall have wire leads terminating in the unit raceway.

Coils — Coils shall have aluminum fins with copper tubes mechanically expanded for a permanent bond. Coils are tested at 320 psig. Water coils shall have a manual air vent. Unit performance shall be as tabulated in the schedule.

Fan assembly — Fans shall be DWDI forward curved, centrifugal type. Fan housing shall be of two-piece construction with a split fan housing that is easily removed, thus allowing complete service access to the fans and motors.

Motors — Units shall have (115/60/1) (265/60/1) three-speed, sleeve bearing, permanent split capacitor motors with oilers, inherent thermal overload protection with automatic reset and resilient mounts.

Drain pan — Drain pan shall be constructed of 20-gauge galvanized steel, insulated with 1/4" multi-density closed cell insulation.

Insulation — Ceiling model TSC shall be insulated with 1/2" multi-density glass fiber on the cabinet bottom panel and discharge transition between coil and discharge opening. Hideaway TSH return air plenum shall be insulated with 1/2" multi-density glass fiber.

Filters — Filters shall be throwaway type.

Optional accessories

Electric heat — Units shall be provided with (120/60/1)(265/60/1) electric heat. Heaters shall be fully protected by a high-limit thermal cut-out with automatic reset. All electric heat controls are to be unit mounted, wired and enclosed by the unit manufacturer at the factory. All ceiling models shall have heating elements located on the entering air side of the cooling coil.

Valve packages — Valve packages shall consist of 2-or 3-way motorized valve with gate hand valve on supply and ball hand valve on return piping, (P/T plugs), (strainer and flow control device). Two-way motorized valve packages shall have bypass capillary tubes to provide minimal flow to enable automatic changeover aquastats, where required, to sense system water temperature.

Secondary drain pan — Units with valve packages shall be provided with galvanized steel secondary drain pan to channel valve package condensate into primary pan.

Speed Control — Units shall have a three-speed switch with integral on/off switch suitable for wall mounting which shall provide high/medium/low fan speed control.

Engineering guide specifications — floor units

Furnish and install where shown on the plans and specifications, McQuay (floor type) (basic type) ThinLine SeasonMaker fan-coil units. Types, sizes and performance shall be tabulated in the schedule. Unit performance shall be substantiated by computer generated output data. Each unit shall be ARI certified and consist of and comply with the following:

Casing and cabinets

Flat top floor type (TSF) — Cabinet shall be a vertical console type enclosure fabricated of heavy gauge steel and finished with a electrostatically applied, baked-on Antique Ivory paint. Cabinet shall include a stamped metal discharge grille in the top panel and full width electrical and piping end compartments. Units provided with mounted controls shall have a single access door

Tamper-proof floor type (TPF) — Cabinet shall be a vertical console type enclosure fabricated of heavy gauge steel and finished with a electrostatically applied, baked-on Antique Ivory paint. Cabinet shall include a stamped metal discharge grille in the top panel and full width electrical and piping end compartments. Units provided with mounted controls shall have a single access door. Unit provides a 16 gauge front panel, tamper-proof screws and locking access doors.

Slope top floor type (TSS) (metal) — Cabinet shall be a vertical console type enclosure fabricated of heavy-gauge steel and finished with an electrostatically applied, baked on Antique Ivory paint. Side panels of S02 thru S06 will be hi-impact plastic. The discharge grille shall be made of stamped metal. Units provided with unit mounted controls shall have a single access door.

Basic type (TSB) — Basic unit shall consist of base casing fabricated of heavy-gauge galvanized steel with (top duct) (front discharge) opening for installation in custom enclosure furnished by contractor.

Basic type with wall plates (TSB) — Basic unit shall consist of base casing fabricated of heavy-gauge galvanized steel with (top duct) (front) discharge. Wall plates shall be fabricated of 18-gauge steel, finished with an electrostatically applied, baked-on Antique Ivory paint. Wall plates shall include stamped discharge grille, access doors and return air grille.

Electrical box — Unit shall have an electrical box providing a single location for all field wiring connections. All factory mounted electrical components shall have wire leads terminating in the unit electrical box.

Coils — Coils shall have aluminum fins with copper tubes mechanically expanded for a permanent bond. Coils are tested at 320 psig. Water coils shall have a manual air vent. Coil performance shall be as tabulated in the schedule.

Fan assembly — Fans shall be DWDI forward curved, centrifugal type. Fan housing shall be fabricated of heavy-gauge galvanized steel and of two-piece construction with a split fan housing that is easily removed, thus allowing complete service access to the fans and motors.

Motors — Units shall have (115/60/1) (265/60/1) three-speed, sleeve bearing, permanent split capacitor motors with oilers, inherent thermal overload protection with automatic reset and resilient mounts.

Speed control — **TSB/TSF with metal grille:** Units shall have a (unit)(wall) mounted three-speed switch with integral on/off switch which shall provide high/medium/low fan speed control.

Drain pan — Primary drain pan shall be constructed of 20-guage galvanized steel and insulated with closed cell insulation. Secondary drain pan shall be constructed of injection molded polystyrene and meet UL code 94V-2 for smoke and flame spread. Secondary drain pan shall be equipped with a drain connection suitable to receive a 1/2" PVC socket elbow or coupling.

Insulation — Cabinet insulation shall be 1/2" multi-density glass fiber.

Filters — Filters shall be throwaway type.

Optional accessories

Electric heat — Units shall be provided with (120/60/1) (265/60/1) electric heat. Heaters shall be fully protected by a high-limit thermal cut-out with automatic reset. All electric heat controls are to be unit mounted, wired and enclosed by the unit manufacturer at the factory. Floor and basic models through 600 cfm shall have fully sheathed elements located on the leaving air side of the cooling coil. Units 800 cfm and greater shall have open type heater elements located on the entering air side of the cooling coil.

Valve packages — Valve packages shall consist of 2- or 3-way motorized valve with gate hand valve on supply and ball hand valve on return piping, (P/T plugs), (strainer and flow control device). Two-way motorized valve packages shall have bypass capillary tubes to provide minimal flow to enable automatic changeover aquastats, where required, to sense system water temperature.

Fresh air kit — A manual fresh air intake damper shall be provided by the unit manufacturer for (factory) (field) installation. An electric, damper motor shall be provided by the unit manufacturer for field installation.

Aluminum wall box — An aluminum wall box with two sets of louvers shall be provided by the unit manufacturer for field installation into the outside wall of the building.

Warranty

All McQuay equipment is sold pursuant to its standard terms and conditions of sale, including Limited Product Warranty. Consult your local McQuay Representative for warranty details. Refer to Form 933-43285Y. To find your local McQuay Representative, go to www.mcquay.com.

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