



## VERTICAL STACKED FAN COIL UNITS



*High Quality Engineered Fan Coils Since 1931*



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**INSULATED RISERS**  
Type M Copper  
Swaged On Top

**SUPPLY AIR KNOCKOUTS**  
Field selectable.

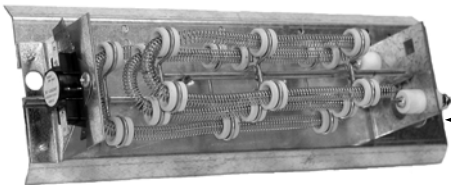
**FULLY INSULATED INTERIOR**  
1/2" 2 lb. Density erosion  
resistant glass fiber  
insulation for quiet operation.

**OPTIONAL CONTROLS**  
May be unit or wall mounted.

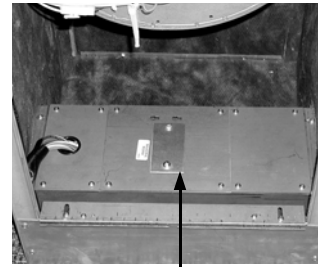
**COILS**—Both sides are  
accessible for cleaning. An  
optional 4-pipe system hot  
water heating coil may be  
factory installed on the  
leaving air side of the  
primary coil.

**ENERGY EFFICIENT**  
Permanent Split  
Capacitor Motor

**OUTSIDE AIR KNOCKOUTS.**  
Field selectable.  
Optional dampers are  
available.

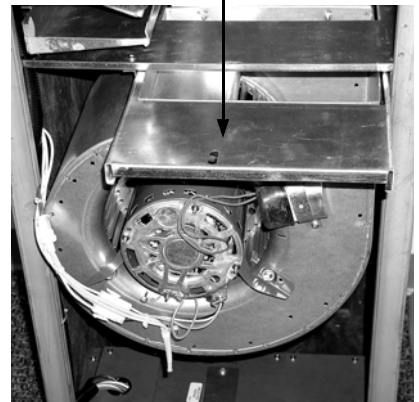


**Optional electric heat.**



**Easy access electrical  
control box.**

**Removable fan deck assembly  
with motor quick disconnect.**





**MODEL GO**  
Galvanized Furred-In

**6 SIZES**  
**300—1200 CFM**  
**2 OR 4 PIPE SYSTEMS**  
**ELECTRIC HEAT**  
**UL LISTED**

Designed to stack one above the other. Installation costs are reduced. Coil piping, insulated risers, condensate drains installed in a factory fabricated package.

*These features let you adapt standard units to specific job requirements.*

- 3 Riser positions, rear, left or right.
- Fan or valve control option.
- Master/slave arrangement with one common set of risers.
- Outside air dampers.
- Electric heat control systems.



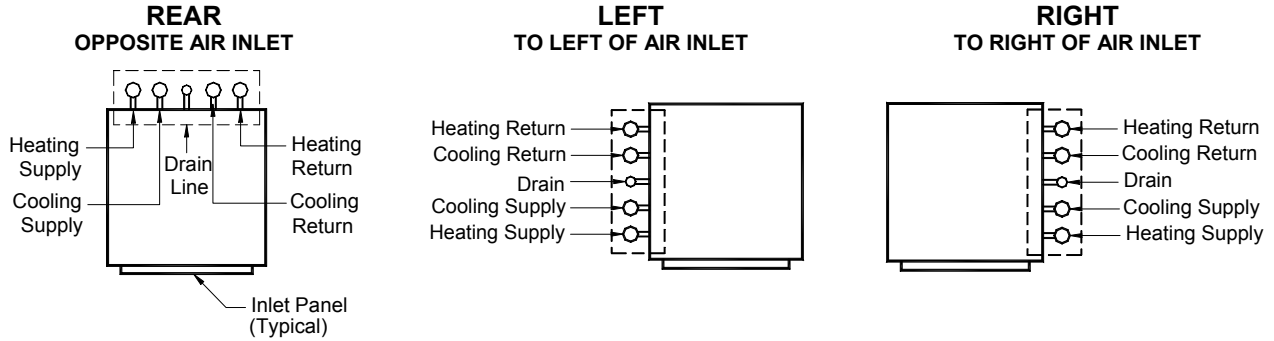
**MODEL GS**  
SLAVE UNIT



**MODEL GM**  
MASTER UNIT

Connecting piping between units furnished and installed by the contractor

## STANDARD CONSTRUCTION FEATURES RISER LOCATIONS—PLAN VIEWS



Riser location determined by facing air inlet panel

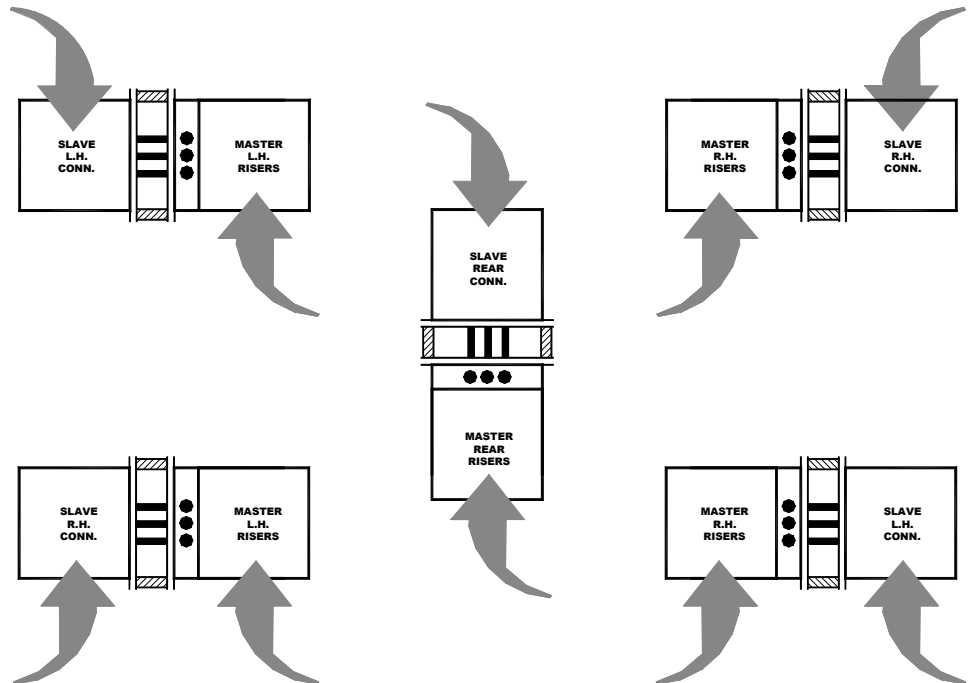
## TYPICAL MASTER/SLAVE UNIT ARRANGEMENTS

A Master/Slave installation consists of two separate units, served by a common set of risers in the master unit.

Master unit factory installed risers have stubs for field installation of copper connection tubing to the Slave unit.

Slave units have no risers, but have piping packages positioned to accept contractor installed connecting tubing.

Each unit of the Master/Slave combination operates independently with its own motor and controls.





**Vertical stacked fan coil units meet the requirements of Underwriters Laboratories (UL), Standard 1995. Heating and cooling performance is certified by ARI, Standard 440.**

**MODEL G**—Furred-in units will accept up to 5/8" furring material fastened with adhesive or screws (1/4" maximum screw penetration).

The interior of Model G is insulated with 1/2" 2 lb. Density erosion resistant glass fiber insulation.

**COILS**—May be No. 1A standard, or No. 2 high capacity, for 2-pipe systems. An optional 1-row heating coil, No. 3, is used in combination with the above for 4-pipe systems. Manual air vents are supplied on all coils. Expansion compensators absorb ± 1/2" vertical riser movement.

**RISERS**—Supply and return risers are type M copper swaged at the top, and insulated with tubular closed cell flexible insulation. Condensate risers are PVC, (polyvinyl chloride), furnished with a coupling.

Standard riser length is 9' 0". Insulated-riser extension pieces in even lengths 1' through 4' are available for field installation to achieve total overall riser length required.

**MASTER/SLAVE ARRANGEMENT**—A Master/Slave installation consists of two separate units, served by a common set of risers in the Master unit.

Master unit factory installed risers have stubs for field installation of copper connecting tubing to the slave unit.

Slave units have no risers, but have piping packages positioned to accept contractor installed connection tubing.

Each unit of the Master/Slave combination operates independently with its own motor and controls.

The Slave unit drain is field connected to the master unit condensate riser.

**SERVICE VALVES**—Ball valves are installed in coil supply piping. Ball valves with memory stop are installed in coil return piping. Access to valves is through air discharge opening. On top discharge units, unit installer must provide access.

**MOTOR SPEED CONTROL**—A 3-speed motor switch with off position is supplied for all control systems. On electric heat models, the off position de-energizes the fan motor, electric element and hydronic valve.

**WIRING**—U. L. approved cable assembly with quick disconnect plugs.

**MOTORS**—115/60/1 PSC 3-speed tap wound with integral thermal overload protection and automatic reset. Minimum power factor is .83.

Motors have quick disconnect plugs.

**MOTORBOARD**—The entire assembly slides out for motor and fan access. Constructed of 16 gauge steel.

**DRAIN PAN** — U.L. approved sloped drain pan with overflow relief notch to avoid electrical components.

**FANS**—Fan wheels are centrifugal, DWDI, forward curved, dynamically balanced. Fan housings are constructed of corrosion protected steel with streamlined air inlets.

**RETURN AIR GRILLE**—and access panel is constructed of 18 gauge steel, phosphatized and finished with a durable light beige baked powder finish. It is fastened to the unit with easily removed machine screws. Tamperproof screws requiring a special tool for removal are available.

**FILTERS**—1" throwaway type is mounted behind the inlet grille. It is accessible by removing the return air grille-access panel.

**ELECTRIC HEATING ELEMENTS**—The AIRTHERM electric heating element has been designed especially for commercial and institutional space heating applications. Surface temperatures are a minimum of 30% below allowable operating temperatures.

Electric heating elements are constructed of Nikrothal NXT resistance wire with a maximum operating temperature of 1850°F. The electric resistance wire is closely controlled during processing to obtain a metallurgically balanced combination of physical and electrical properties.

Electric heating elements are designed for 60Hz, single phase, with supply voltages of 120, 208, 240 and 277.

**COIL TERMINALS**—Coil terminals are constructed of nickel plated steel with ceramic terminal insulators and bracket bushings. Terminals are machine staked and brazed to the heater.



**LIMIT SWITCH**—The limit switch is an automatic reset thermally operated safety device (primary safety protection).

If the limit senses an excessive temperature, the electric element is de-energized. The break temperature is factory preset and is non-adjustable. The switch automatically re-energizes the electric heating element after the temperature returns to normal.

The switch is designed for low radio and T.V. interference, and is rated for 100,000 cycle duty.

**FIELD WIRING CONNECTIONS**—provides a means to easily connect with a single power source where electric heating element and motor voltage is the same.

**GROUNDING**—Pressure type grounding terminals are provided for each power source

**MAGNETIC CONTACTORS**—Line break, de-energizing magnetic contactors are furnished to break all undergrounded conductors.

**FACTORY WIRING**—All factory connections are made with plastic insulated copper wires rated at 105°C.

**CONTROL BOX**—All units have a heavy-gauge galvanized steel control box to house contactors, field wiring terminals, transformer, automatic changeover and relay where required. The control box is furnished with a solid cover and contains properly sized knockouts, conveniently located.

### PHYSICAL DATA

			UNIT SIZE						
Unit Size with No. 1A Standard			003-1A	004-1A	006-1A	008-1A	010-1A	012-1A	
CFM		High	320	430	640	820	1000		
		Med	285	380	565	760	850		
		Low	225	305	505	657	555		
Unit Size with No. 2 High Capacity			003-2	004-2	006-2	008-2	010-2	012-2	
CFM		High	310	400	600	800	940		
		Med	270	380	550	740	850		
		Low	215	325	420	675	560		
PSC Motor Data High Speed 115/60/1		RPM	1050	1065	800	825	790	1080	
		Amps	.56	1.05	1.90	2.50	3.50	5.0	
		Watts	60	104	180	250	360	450	
		Power Factor	.93	.86	.82	.87	.89	.7	
Air Opening	Inlet-Free Area, SQ. IN.	Minimum	126		165				
	Outlet-Free Area, SQ. IN.	Minimum	113		141				
Filters 1" Thick	Throwaway and Cleanable	Size L x W, In.	12 x 24		16 x 20				
Fans 1 Per Unit	Wheel	Diameter (In.)	5.75	6.31	9.50	9.50	10.63		
		Width (In.)	7.00	6.31	7.13	7.13	7.13		
		Type	Double Width – Double Inlet – Forward Curve						
	Housing	Construction	Aluminum		Painted Steel				
		Width (In.)	8.25	7.50	9.19	9.19	9.69		
		Construction	Galvanized		Painted Steel				
Coils No. 1A—2-Row No. 2—3-Row	Air Vent		Manual Air Vent Furnished On All Coils						
	Connection Size		5/8" O.D. Sweat						
	Tube—Diameter, Material		5/8" Seamless Copper						
	Aluminum Fins—No. Per Inch		14						
	Test Pressure—Maximum Working Pressure		Tested at 300 PSI—200 PSIG Max. W.P.						
	Size	Length-Inches	Coil No. 1A	15	18	21	27	31.5	
			Coil No. 2	16.5	19.5	19.5	31.5	31.5	
		Width-Inches	Coil No. 1A	12	12	15	15	15	
			Coil No. 2	12	12	15	15	15	
		Depth-Inches	Coil No. 1A	2.6	2.6	2.6	2.6	2.6	
Coil No. 2			3.9	3.9	3.9	3.9	3.9		
Face Area-Sq. Ft.	Coil No. 1A	1.25	1.5	2.19	2.81	3.28			
	Coil No. 2	1.38	1.63	2.03	3.28	3.28			
Motorboard			16 GA. Galvanized Steel						
Risers	Standard Length		9' 0"						
	Material	Supply and Return	Type "M" Copper						
		Condensate	PVC (Polyvinyl Chloride)						



**BASIC UNIT**

003 - 1A - GO - O - 4 - IN101 - DP101

**Unit Size**

003,004,006  
008, 010, 012

**Coil Number**

2-Pipe System

1A - Standard  
2 - High Capacity

4-Pipe System

W/No. 3 Auxiliary Coil

1A3 - No. 1A + No. 3 Coil  
23 - No. 2 + No. 3 Coil

**Model**

Hydronic Models, 2 or 4-pipe

GO - Standard Unit  
GM - Master Unit  
GS - Slave Unit

Electric Heat Models  
2-Pipe Only

EO - Standard Unit  
EM - Master Unit  
ES - Slave Unit

**Riser Position**

(Coil Connection Slave Units)

O - Rear  
L - Left  
R - Right

**Furring Material**

0 - None  
2 - 1/4"  
3 - 3/8"  
4 - 1/2"  
5 - 5/8"

**Insulation (options)**

IN101 - Foil Faced

**Drain Pan (options)**

DP101 - Stainless Steel Drain Pan

**ACCESSORIES**

G109 - F101 - D3 - P100 - U100,U104,U107 - V108, V112

**Manual Valve Packages (optional)**

V108 - Pre-set Flow Control  
V112 - Circuit Setter on Return

**Basic Unit Options**

U100 - Tamperproof Fasteners in Return Air Panel  
U107 - Plaster Guard Frame for Return Air Panel

**Line of Sight Baffles**

U104 - 2 Discharge Positions  
U105 - 3 Discharge Positions  
U106 - 3 Discharge Positions

**Decorator Color (optional)**

P100 - Baked Powder Coat on Return Air Panel  
Color Selection from AIRTHERM Color Chart

**Outside Air Damper Assembly (optional)**

D1 - Air Inlet Position No. 1  
D2 - Air Inlet Position No. 2  
D3 - Air Inlet Position No. 3  
D4 - Air Inlet Position No. 4  
D5 - Air Inlet Position No. 5  
D6 - Air Inlet Position No. 6

**Filters (optional)**

F101 - 1" Aluminum Mesh Cleanable Filter  
F200 - 1" Spare Throw Away Filter

**Duct Collars (optional)**

G101 - (1) Air Discharge  
G105 - (2) Air Discharge  
G108 - (3) Air Discharge

**Double Deflection Grilles (optional)**

G109 - (1) Air Discharge  
G112 - (2) Air Discharge  
G113 - (3) Air Discharge

**Single Deflection Grilles (optional)**

G120 - (1) Air Discharge  
G121 - (2) Air Discharge  
G122 - (3) Air Discharge





**ACCESSORIES**

V150 - T103E - S100 - T106E - VSM-25 - DS100

**Electric Valve Packages (optional)**

V150 - 2-Way Valve  
 V150X - 2-Way Valve w/Bleed Line  
 V151 - 3-Way Valve

**Hydronic Control Packages (optional)**

**Unit Mounted**

T103E - Valve Control  
 T104E - 4-Pipe System Control

**Wall Mounted**

T103EW - Valve Control  
 T103EWL - Valve Control  
 T104EW - 4-Pipe System Control  
 T104EWL - 4-Pipe System Control

**Fan Motor Speed Control Switch**

(optional for units without electric thermostat package)  
 S100 - Fan Control Switch - Unit Mounted  
 S100W - Fan Control Switch - Wall Mounted

**Electric Heat Control Packages (optional)**  
**Single Stage Electric Heating**

Control Package No.	Control Location	Summer/Winter Changeover
Total Electric Heating		
T106E	Unit Mtd.	Auto-Dead Band
T106EW	Wall Mtd.	Auto-Dead Band
T106EWL	Wall Mtd.	Auto-Dead Band

**Alternate Voltages**

VSM-25 - For 208/60/1 power supply  
 VSM-26 - For 230/60/1 power supply  
 VSM-27 - For 277/60/1 power supply

**Disconnect Switch (optional)**

Toggle Disconnect Switch  
 DS100 - 20 Amp Max. 120/277 V  
 DS101 - 30 Amp Max. 120/244 V  
 DS102 - 20 Amp Max. 208/240 V  
 DS103 - 30 Amp Max. 208/240 V  
 DS104 - Fused disconnect 120 V Hydronic units only

**RISERS**

M100S-CC375, M100R-CC375 - AMO75S-000, AMO75R-000 - CP125-000 - EMO75-1

**Insulated Riser Extensions**

Extension No.			Length				Nom. Size
Type "M" Copper	Type "L" Copper	PVC	1'	2'	3'	4'	
EM075	EL075	----	1'	2'	3'	4'	3/4"
EM100	EL100	----	1'	2'	3'	4'	1"
EM125	EL125	EP125	1'	2'	3'	4'	1 1/4"
EM150	EL150	----	1'	2'	3'	4'	1 1/2"
EM200	EL200	----	1'	2'	3'	4'	2"
EM250	EL250	----	1'	2'	3'	4'	2 1/2"

◆ = Riser Material PVC - No Insulation

**Condensate Risers**  
**9 Ft. Standard Length**

Riser No.		Insulation			Nom. Size
Type "M" Copper	Type "L" Copper	None	3/8"	1/2"	
CP125	----	000	----	----	1 1/4"
----	CM100	000	CC375	CC500	1"
----	CM125	000	CC375	CC500	1 1/4"

**Auxiliary Heating Coil Risers**  
**9 Ft. Standard Length**

Riser No.		Insulation			Nom. Size
Type "M" Copper	Type "L" Copper	None	3/8"	1/2"	
AM075S AM075R	AL075S AL075R	000 000	CC375 CC375	CC500 CC500	3/4"
AM100S AM100R	AL100S AL100R	000 000	CC375 CC375	CC500 CC500	1"
AM125S AM125R	AL125S AL125R	000 000	CC375 CC375	CC500 CC500	1 1/4"
AM150S AM150R	AL150S AL150R	000 000	CC375 CC375	CC500 CC500	1 1/2"
AM200S AM200R	AL200S AL200R	000 000	CC375 CC375	CC500 CC500	2"
AM250S AM250R	AL250S AL250R	000 000	CC375 CC375	CC500 CC500	2 1/2"

"S" suffix indicates supply riser  
 "R" suffix indicates return riser

**Supply and Return Risers**  
**9 Ft. Standard Length**

Riser No.		Insulation		Nom. Size
Type "M" Copper	Type "L" Copper	3/8"	1/2"	
M075S M075R	L075S L075R	CC375 CC375	CC500 CC500	3/4"
M100S M100R	L100S L100R	CC375 CC375	CC500 CC500	1"
M125S M125R	L125S L125R	CC375 CC375	CC500 CC500	1 1/4"
M150S M150R	L150S L150R	CC375 CC375	CC500 CC500	1 1/2"
M200S M200R	L200S L200R	CC375 CC375	CC500 CC500	2"
M250S M250R	L250S L250R	CC375 CC375	CC500 CC500	2 1/2"

"S" suffix indicates supply riser  
 "R" suffix indicates return riser



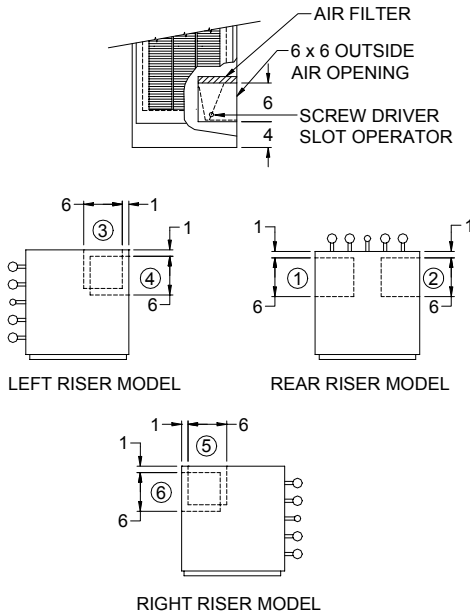
**DUCT COLLARS** - Permit complete design flexibility when it is desired to serve more than one room with the same unit. **Field Installed.**

**DISCHARGE GRILLES** - Aluminum single deflection or double deflection discharge grilles are optionally available. Single deflection grilles are built with adjustable louvers parallel to the unit width. Double deflection discharge grilles are constructed with front louvers parallel to the unit width and rear louvers parallel to the unit height.

Full Size grilles are supplied for single discharge arrangement. Discharge grilles are field installed.

**FILTERS** - Cleanable filters are available in lieu of standard throw away filters.

**OUTSIDE AIR DAMPER ASSEMBLY** - Includes manually adjustable damper assembly and separate permanent washable outside air filter. It is recommended that wall mounted thermostats be used to control units handling outside air. A choice of six damper positions, shown below, is available.



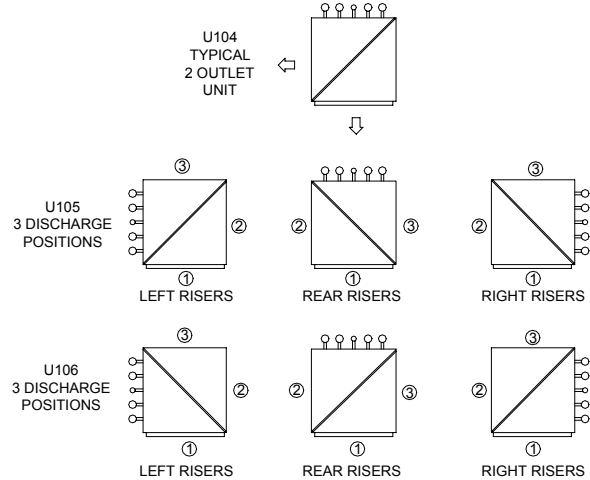
**DECORATOR COLOR** - Special colors are available on removable access/return panel in lieu of standard light beige. Color selection from AIRTHERM color chart.

**TAMPERPROOF FASTENERS** - May be specified for the removable access/return panel.

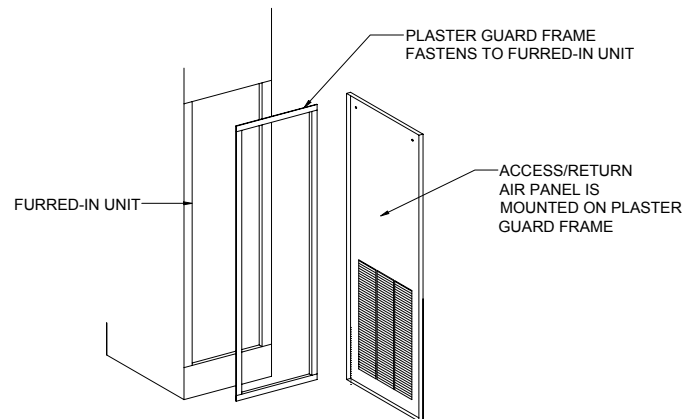
**FAN MOTOR SPEED CONTROL SWITCH - With off position** - is optionally available for units furnished less an electric thermostat control system. May be unit or wall mounted.

**FOIL FACED INSULATION** - 1/2", 2 lb. density foil faced glass fiber insulation is optionally available in place of the standard 1/2", 2 lb. density erosion resistant insulation.

**LINE OF SIGHT BLOCKOFF** - An insulated metal block off between discharge openings insures privacy when a single unit is set in a common wall between rooms. A choice of 3 block offs is available as indicated below.



**PLASTER GUARD FRAME** - Allows removal of the access/return panel without breaking the paint seal at the wall.



**DISCONNECT SWITCH** - Non-fused type is optionally available on units with electric heating element and electric heat control package. Mounted inside the control box.

**TYPE "L" COPPER SUPPLY and RETURN RISERS** - Insulated with tubular closed cell flexible insulation in standard 9 ft. lengths are optionally available. These risers do not have swaged ends. They are furnished with a slip coupling for joining risers. Two solder joints are required.

**RISER EXTENSIONS** - Insulated riser extension pieces are available in even 1', 2', 3' and 4' lengths for field installation to achieve total riser length required.

Type "M" copper extension pieces have one end swaged. Type "L" copper and PVC condensate riser extension pieces are furnished with an additional coupling.

**STAINLESS STEEL DRAIN PAN** - 18 gauge stainless steel drain pan.



<b>MANUAL VALVE PACKAGES</b>	
CODE	DESCRIPTION
<b>V108</b>	<b>Pre-Set Flow Control</b> Specify from available GPM's (.25, .33, .50, 1.00, 1.50, 2.00, 2.50, 3.00)
<b>V112</b>	<b>Circuit Setter on Return</b>

Above valve packages apply to one coil only. On 4-pipe systems, a separate valve package must be selected individually for the cooling coil and the heating coil.

Ball valves are installed in coil supply piping. Ball valves with memory stop are installed in coil return piping. Access to valves is through air discharge opening. On top discharge units, unit installer must provide access.

<b>ELECTRIC VALVE PACKAGES</b>	
Valves are piped <u>Normally Closed</u> to the coil	
CODE	DESCRIPTION
<b>V150</b>	<b>2-Way Motorized Valve</b>
<b>V150X</b>	<b>2-Way Motorized Valve with Bleed Line</b>
<b>V151</b>	<b>3-Way Motorized Valve</b>

Above valve packages apply to one coil only. On 4-pipe systems, a separate valve package must be selected individually for the cooling coil and the heating coil.

Valves will be 120 volt unless a 24 volt thermostat package (T103EWL, T104EWL or T106EWL) listed on pages 12-13 is selected. If any of these control packages are selected, valves will then be 24 volt.

<b>MANUAL VALVE DATA</b>	
<b>Ball Valve</b>	250 PSI rated. Ball valves have low resistance to water flow—quarter turn from fully open to closed. Ball valves can be used to balance system at start up. Balancing and shutoff valve has memory stop so balance position can be locked in.
<b>Pre-Set Flow Control</b>	150 PSI rated. Delivers one specified flow rate of chilled or hot water.
<b>Circuit Setter</b>	Used to balance and meter flow of water to coils by measuring pressure drop across an orifice. Circuit setter has Ball Valve construction and can be used for shut-off. Adjustable port handles a wide range of GPM/pressure drop conditions.
<b>ELECTRIC VALVE DATA</b>	
<b>Electric Valves</b>	2-Way and 3-Way electric valves are 300 PSIG static rated, have 5/8" O.D. sweat connections and are opened by a built in electric motor, closed by spring return. 2-Way valves have two ports, inlet and outlet. 3-Way valves have three ports, inlet, outlet and bypass.  Valve package V150X requires a bleed line between the supply and the return when used with an automatic change-over thermostat package.  Valves are piped normally closed to the coil.  All electric valves are "pop top" type construction.



## TWO PIPE CONTROL - VALVE CYCLE

AIRTHERM furnishes a control system that includes an electric thermostat and summer/winter changeover control. A manually operated fan motor speed control switch is furnished when thermostat voltage is 120V and is optionally available for 24V controls. The thermostat cycles a two-position electric valve (valve is not included in the control package).

### MANUAL SUMMER/WINTER CHANGEOVER

Thermostat operation is manually selected for heating or cooling. The fan runs continuously at selected speed. The fan motor speed control

switch "off" position opens the power circuit to the fan; however, the thermostat will cycle the valve in the heating mode.

### AUTOMATIC SUMMER/WINTER CHANGEOVER

A manual "on-off" switch located on the thermostat controls power to the thermostat and fan speed switch. The fan runs continuously at selected speed.

All 24V thermostats are wall mounted.

PACKAGE NUMBER	VOLTAGE	THERMOSTAT LOCATION	CHANGEOVER CONTROLS		SPEED SWITCH LOCATION	CONTROL VALVES	JUNCTION BOX SIZE
			TYPE	SWITCH LOCATION			
T103E	120	Unit Mtd.	Automatic	Factory Mounted on Coil Supply Line	Integral with Thermostat	2-Way with Bleed Line or 3-Way	—
T103WE	120	Wall Mtd.			Unit Mounted		2 x 4 x 2 1/8
T103WLE	24						

Wiring between unit and wall mounted thermostat should be enclosed in conduit when 120V thermostats are supplied. Junction boxes for wall mounted thermostats are furnished by the installer. All wall mounted thermostats mount horizontally.

## FOUR PIPE CONTROL - VALVE CYCLE

AIRTHERM furnishes a control system that includes sequenced electric thermostat with center dead band. A manually operated fan motor speed switch is furnished when thermostat voltage is 120V and is optionally available for 24V controls. The thermostat opens a two position electric control valve on either the cooling coil or the heating coil as required to satisfy the thermostat setting. The dead band between the cooling and heating positions prevents valve cycling (valves are not included in control packages).

A manual on-off system switch, mounted on the thermostat, controls power to the fan motor speed switch and cooling circuit of the thermostat. The system switch off position opens the fan and cooling circuits only. The heating valve will operate on space demand.

All 24V thermostats are wall mounted.

PACKAGE NUMBER	VOLTAGE	THERMOSTAT LOCATION	CHANGEOVER CONTROL SWITCH	SPEED SWITCH LOCATION	CONTROL VALVES	JUNCTION BOX SIZE
T104E	120	Unit Mtd.	None	Integral with Thermostat	2-Way or 3-Way	—
T104WE	120	Wall Mtd.		Unit Mounted		2 x 4 x 2 1/8
T104WLE	24					

Wiring between unit and wall mounted thermostat should be enclosed in conduit when 120V thermostats are supplied. Junction boxes for wall mounted thermostats are furnished by the installer. All wall mounted thermostats mount horizontally.



## ELECTRIC HEAT CONTROL SYSTEMS

### CHILLED WATER COOLING - SINGLE STAGE ELECTRIC HEATING AUTOMATIC COOL-HEAT CHANGEOVER ON SPACE TEMPERATURE

AIRTHERM furnishes a control system that includes an electric thermostat, magnetic contactor(s), ground lug(s), field wiring terminals, control box with cover, PSC motor and summer/winter changeover control. A manually operated fan motor speed control switch is furnished when thermostat voltage is 120V and is optionally available for 24V controls.

**COOLING CYCLE** - Space temperature rises to thermostat set point. The thermostat opens the two or three position electric chilled water valve until the space temperature is satisfied. Thermostat features a center dead band to allow electric chilled water valve to close and prevent energizing of electric element (valve is not included in control package).

**HEATING CYCLE** - Space temperature falls to thermostat set point. The thermostat energizes electric heating element until the space temperature is satisfied. Thermostat features a center dead band to allow electric heating element to be de-energized and prevent opening of electric chilled water valve.

**FAN OPERATED** - Manual fan speed switch with high, medium, low and off positions controls fan speed and thermostat. Switch in any speed position energizes fan motor(s) and thermostat. Switch on off position de-energizes fan and thermostat, closing electric water valve and breaking electric heating circuit.

**THERMOSTATS** - Factory mounted and wired on T106E. Wall mounted and field wired on T106WE and T106WLE

PACKAGE NUMBER	COMPONENT VOLTAGE				CONTROL LOCATION	SUMMER WINTER CHANGEOVER	CONTROL VALVES
	VALVE	MOTOR	CONTROL VOLTAGE	ELEMENT VOLTAGE			
T106E	120	120	120	120/208/240/277	Unit Mtd.	AUTO-DEAD BAND	2-Way or 3-Way
T106WE	120		120		Wall Mtd.		
T106WLE	24		24				

Wiring between unit and wall mounted thermostat should be enclosed in conduit when 120V thermostats are supplied. Junction boxes for wall mounted thermostats are furnished by the installer. All wall mounted thermostats mount horizontally.



Before unit size can be selected, system design criteria must be accomplished. Detailed information for doing this may be found in the ASHRAE guide.

**ARRANGEMENT**

Vertical Stacked Fan Coil Units are designed for maximum arrangement flexibility. Complete arrangement data is shown on page 5. You have a choice of:

- 3 riser positions, rear, right or left.
- Master/Slave arrangement - two units installed back-to-back in adjacent rooms supplied by a common set of risers.
- Single units to serve multiple areas. Line of sight block offs ( page 10) are available to ensure privacy between rooms.

**SOUND**

Sound power data and data for calculation NC level is on page 16. To achieve low sound levels, units can be selected to produce required cooling and heating capacities at medium or low fan speeds.

**CONTROLS**

Vertical Stacked Fan Coil Units can control the flow of air or water. Optional control packages are listed on pages 12-13. All factory-furnished control systems include a three speed motor switch with off position. A three speed switch is optionally available for units supplied less a factory-furnished electric control system.

Room arrangements and airflow patterns will determine whether unit or wall mounted thermostats should be used. It is recommended that an automatic means for shutting off chilled water flow, within the unit, be provided when the fan is off.

When two separate areas are being served by a single unit with multiple discharge, the thermostat should be located in the primary living space.

**COOLING COIL SELECTION**

Unit size is usually selected by selecting coils that match room sensible load at high speed. Use capacities shown in the A.R.I. Approved Standard Ratings Table on page 17 to make initial selection. The initial selection should be checked at actual operating conditions. Intermediate capacity ratings between entering water temperatures, entering air temperatures and water flow rates may be determined by interpolation.

**COIL TYPES**

Two coil selections are available for each unit size for optimum performance and economy. Type 1A coil is the standard coil designed to meet average air conditioning requirements. Coil No. 2 is designed for either high capacity at normal water flow rates or average capacity at low water flow rates.

**HEATING SELECTION**

Vertical Stacked Fan Coil Units selected to meet specific cooping requirements will most often provide heating requirements, without the use of high water temperatures, at the same water flow rate as for cooling. Separate auxiliary hot water heating coils are available for 4-pipe systems. Heating capacity data is on page 30.

**ELECTRIC HEAT**

A specially designed electric heater is available to provide season heating or full electric heating. Electric heat can provide the same comfort control flexibility as a 4-pipe system with 2-pipe system installation savings.

**RISER SELECTION**

Information for selecting riser piping may be found in the ASHRAE guide. Riser water velocity between 4 FPS and 6 FPS is best for system economy, consistent with minimizing riser erosion and noise.

Vertical Stacked Fan Coil Units have been designed to permit ± 1/2" riser expansion. For systems exceeding this, field provisions for expansion must be installed in the riser system. To eliminate stress, a riser system must be anchored at least once to the building structure. More detailed information regarding riser expansion, contraction and anchoring may be found in the ASHRAE guide.

The chart on page 15 shows allowable riser length between system expansion loops. Assuming water heating temperature of 150°F and 45°F chilled water, temperature difference is 105°F. The chart on page 15 indicates 83' of riser will expand or contract 1" for a 105°F temperature change.

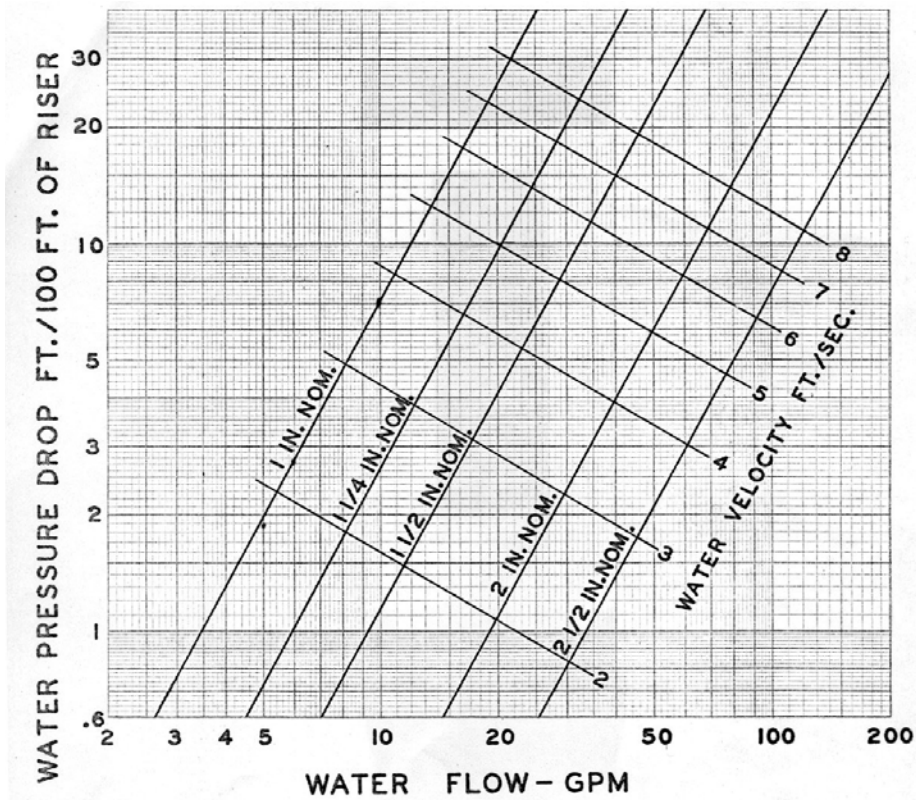
**PRESSURE RATINGS**

The following are pressure ratings for risers and other components. A vertical column of water 2.31' high develops a water pressure of 1 PSI. For every

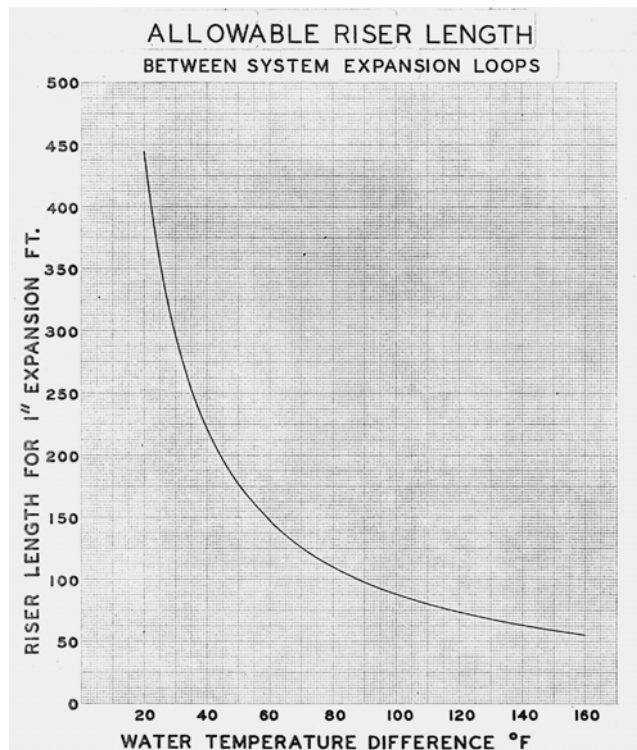
COMPONENTS	PRESSURE
1. Type M Copper Risers, All Sizes	250 PSIG
2. Electric Valves, V150, V150X, V151	200 PSIG
3. Valve Accessory, V108	150 PSIG
4. Ball Valve	300 PSIG

hundred feet of vertical height water pressure is 43.3 PSI. Assuming a 10' per floor, water pressure for a 10 story building would be 43.3 PSI, and for a 25 story building, it would be 108 PSI.

**RISER FLOW CHARACTERISTICS  
TYPE "M" COPPER**



**ALLOWABLE RISER LENGTHS  
BETWEEN SYSTEM EXPANSION LOOPS**





## SOUND DATA

### SOUND POWER RATINGS

The sound power ratings listed in the table below were obtained from tests made by a nationally recognized independent acoustical laboratory. The facilities and measurement techniques are in complete conformity with the methods of A.R.I. Standard 350.

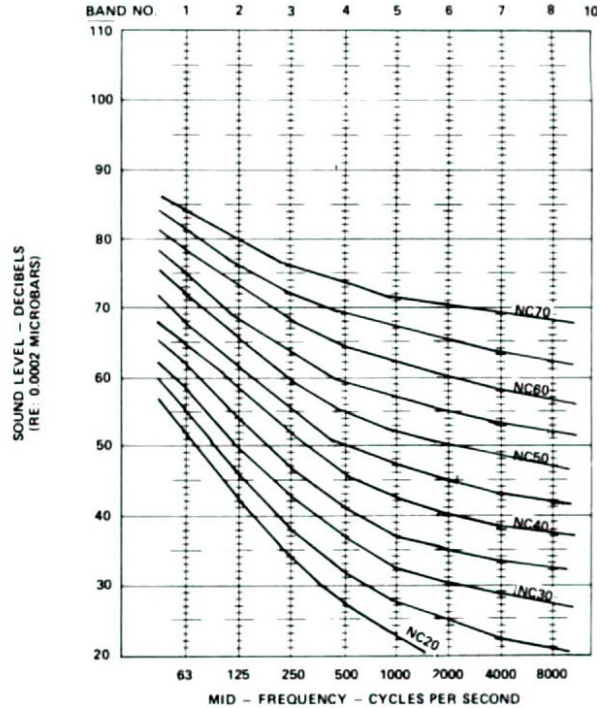
### ROOM EFFECT

This sound power data may be adapted for room effect based on room construction, furnishings and size. To do this, select the proper room effect and subtract it from the sound power ratings. Room effect can be calculated in accordance with procedures listed in the ASHRAE guide. For convenience, typical values are listed in the room effect table below.

### N.C. LEVEL DETERMINATION

1. List the sound power data by octave band for the unit size selected.
2. Select the proper room effect by octave band and subtract from it item 1 above.
3. Plot the resulting sound pressure values on an octave band analysis chart.
4. Compare contour of values plotted to the NC curves superimposed on the chart. This will indicate an NC level for the unit operation in the particular environment.

### OCTAVE BAND ANALYSIS



OCTAVE BAND SOUND POWER RATINGS (DB RE10 <sup>-12</sup> WATTS)								
UNITSIZE	SPEED	OCTAVE BAND						
		2	3	4	5	6	7	8
		BAND CENTER FREQUENCY HZ.						
		125	250	500	1000	2000	4000	8000
003	HIGH MED LOW	<b>CONTACT FACTORY</b>						
004	HIGH MED LOW							
006	HIGH MED LOW	64 60 55	60 56 52	63 57 52	59 54 49	57 51 44	53 46 37	46 37 28
008	HIGH MED LOW	<b>CONTACT FACTORY</b>						
010	HIGH MED LOW							
012	HIGH MED LOW	72 72 69	64 63 61	62 61 59	61 59 57	59 58 56	54 53 50	47 45 42

#### TYPICAL ROOM EFFECT

TYPE OF ROOM	OCTAVE BAND						
	2	3	4	5	6	7	8
	CENTER FREQUENCY (CPS)						
	125	250	500	1000	2000	4000	8000
Hard Room (Hospital Etc.)	0	.8	2.5	3.5	4.0	4.8	5.8
Medium Room (Motel Etc.)	3.0	6.9	7.5	8.5	8.5	8.6	8.5
Soft Room (Exec. Office Etc.)	3.3	7.2	10.3	11.0	10.5	10.5	10.7





### ARI APPROVED STANDARD RATINGS

APPROVED RATINGS ARE IN ACCORDANCE WITH INDUSTRY STANDARD 440 FOR EQUIPMENT TESTING AND RATING OF FAN COIL AIR CONDITIONERS

Unit Size (1)	Rated CFM (2)	Cooling Capacities (3)				Motor (5)			Filters	Min. Free Area	
		GPM	PD (4)	Sens. Heat MBH	Total Heat	Amps	Watts	RPM (High)	Size L x W In.	Inlet Sq. In.	Outlet Sq. In.
003-1A	320	1.9	10.8	4.9	6.9	.56	65	1070	12 x 24	126	113
003-2	310	2.4	7.7	5.3	8.1						
004-1A	430	2.5	18.9	6.6	9.2	1.05	104	1065			
004-2	400	3.2	9.6	6.9	9.9						
006-1A	640	3.6	16.2	9.8	13.3	1.90	180	800	16 x 20	165	141
006-2	600	4.6	29.0	10.7	14.4						
008-1A	820	4.9	32.6	13.2	17.8	2.50	250	825			
008-2	800	6.2	20.5	14.7	18.2						
010-1A	1000	5.8	31.7	15.1	21.3	3.50	360	800			
010-2	940	7.0	25.0	16.7	22.4						
012-1A	1250	PENDING				5.0	450	1150			
012-2	1200										

**NOTES:**

1. Capacity ratings apply to all models.
2. Air flow under dry coil conditions. Inlet air 70-80° F D.B.
3. Based on inlet air of 80° F D.B. and 67° F W.B., water inlet at 45° F, water outlet 55° F. High fan speed.
4. Pressure drop shown in feet of water. Maximum average water 50° F.
5. Permanent split capacitor motor at high fan speed 115/60/1 electrical supply.
6. Throw away filter thickness = 1".



















## CHILLED WATER COOLING CAPACITIES - HIGH SPEED

### COIL No. 2

### 42° F ENTERING WATER

Entering Air °F	Unit Size	Water Temperature Rise															
		12° F				14° F				16° F				20° F			
		TH	SH	GPM	PD	TH	SH	GPM	PD	TH	SH	GPM	PD	TH	SH	GPM	PD
76° DB 62° WB	003	8.6	7.4	1.5	3.2	7.9	7.1	1.2	2.1	7.2	6.8	.9	1.5	6.0	6.0	.6	.7
	004	11.9	9.9	2.0	13.1	11.2	9.6	1.7	9.0	10.6	9.3	1.4	6.4	9.4	8.8	1.0	3.5
	006	16.8	14.4	2.9	12.8	15.6	13.8	2.3	8.5	14.4	13.3	1.9	5.9	12.3	12.3	1.3	3.0
	008	23.0	19.7	4.0	8.9	21.2	18.9	3.1	5.8	19.6	18.2	2.5	4.0	16.5	16.5	1.7	2.0
	010	25.7	22.4	4.5	11.2	23.7	21.5	3.6	7.4	21.9	20.7	2.9	5.0	18.5	18.5	2.0	2.5
012	33.8	29.3	5.9	19.3	31.6	28.4	4.7	12.8	29.5	27.5	3.9	8.7	24.2	24.2	2.6	3.6	
76° DB 63° WB	003	9.1	7.3	1.6	3.5	8.3	6.9	1.2	2.3	7.6	6.6	1.0	1.6	6.2	6.0	.7	.8
	004	12.7	9.7	2.2	14.7	11.9	9.4	1.7	9.9	11.2	9.1	1.4	7.0	9.8	8.5	1.0	3.7
	006	17.9	14.2	3.1	14.3	16.5	13.6	2.4	9.4	15.1	13.0	2.0	6.4	12.7	11.9	1.3	3.2
	008	24.5	19.4	4.2	9.9	22.4	18.5	3.3	6.4	20.5	17.7	2.7	4.3	17.0	16.2	1.8	2.1
	010	27.4	22.0	4.8	12.5	25.1	21.0	3.7	8.1	22.9	20.1	3.0	5.4	19.0	18.4	2.0	2.6
012	35.2	28.4	6.2	20.8	32.6	27.3	4.9	13.5	30.2	26.4	4.0	9.1	25.6	24.5	2.7	4.5	
78° DB 63.5° WB	003	9.6	7.9	1.7	3.9	8.8	7.6	1.3	2.6	8.1	7.2	1.1	1.8	6.8	6.7	.7	.9
	004	13.2	10.5	2.3	15.9	12.5	10.2	1.8	10.9	11.8	9.8	1.5	7.7	10.5	9.3	1.1	4.2
	006	18.8	15.3	3.2	15.5	17.5	14.7	2.6	10.4	16.2	14.2	2.1	7.2	13.8	13.2	1.4	3.7
	008	25.8	21.0	4.4	10.9	23.8	20.1	3.5	7.2	22.0	19.3	2.8	4.9	18.7	17.9	1.9	2.4
	010	28.9	23.9	5.0	13.7	26.7	22.9	4.0	9.0	24.6	22.0	3.2	6.1	20.9	20.4	2.2	3.1
012	37.4	31.0	6.6	23.2	35.0	30.0	5.3	15.4	32.7	29.0	4.3	10.6	28.2	27.3	3.0	5.3	
78° DB 65° WB	003	10.6	7.8	1.8	4.6	9.7	7.4	1.4	3.0	8.8	7.0	1.1	2.0	7.2	6.4	.8	1.0
	004	14.6	10.4	2.5	18.8	13.7	10.0	2.0	12.8	12.9	9.6	1.6	9.0	11.3	8.9	1.2	4.7
	006	20.8	15.1	3.5	18.3	19.2	14.4	2.8	12.2	17.6	13.7	2.3	8.2	14.7	12.5	1.5	4.1
	008	28.5	20.7	4.9	13.0	26.2	19.7	3.8	8.5	23.9	18.7	3.1	5.6	19.8	17.1	2.1	2.7
	010	31.7	23.4	5.4	15.9	29.2	22.4	4.3	10.6	26.6	21.3	3.5	7.0	22.1	19.4	2.3	3.4
012	40.0	29.7	7.0	26.2	37.2	28.6	5.6	17.2	34.3	27.5	4.5	11.6	29.2	25.5	3.1	5.7	
78° DB 68° WB	003	13.2	7.7	2.2	6.5	12.1	7.3	1.8	4.4	11.0	6.8	1.4	3.0	8.6	5.9	.9	1.3
	004	17.8	10.2	3.0	26.4	16.9	9.8	2.5	18.4	15.8	9.4	2.0	12.8	13.5	8.4	1.4	6.6
	006	25.8	15.0	4.4	26.7	24.0	14.2	3.5	18.1	21.8	13.3	2.8	12.0	17.6	11.7	1.8	5.5
	008	35.5	20.6	6.0	19.1	32.7	19.4	4.8	12.6	29.7	18.2	3.8	8.3	23.7	15.8	2.4	3.7
	010	39.6	23.3	6.8	23.7	36.4	22.0	5.4	15.6	33.0	20.6	4.3	10.3	26.2	17.9	2.7	4.5
012	48.1	28.3	8.4	36.9	43.7	26.6	6.6	23.3	40.1	25.2	5.3	15.4	32.8	22.5	3.5	7.1	
80° DB 63.5° WB	003	9.8	8.6	1.7	4.0	9.1	8.3	1.4	2.7	8.5	8.0	1.1	1.9	7.3	7.3	.8	1.0
	004	13.4	11.3	2.3	16.2	12.8	11.0	1.9	11.3	12.2	10.7	1.6	8.1	11.0	10.2	1.1	4.6
	006	19.2	16.6	3.3	16.0	16.0	16.0	2.7	10.9	16.9	15.6	2.2	7.7	14.8	14.6	1.5	4.2
	008	26.3	22.7	4.5	11.3	24.6	22.0	3.6	7.6	23.0	21.3	3.0	5.3	20.0	20.0	2.1	2.7
	010	29.5	23.9	5.1	14.2	27.6	25.0	4.1	9.5	25.7	24.2	3.4	6.6	22.4	22.4	2.4	3.5
012	38.9	34.0	6.8	24.9	36.7	33.1	5.5	16.8	34.6	32.3	4.6	11.8	30.6	29.0	3.2	6.2	
80° DB 67° WB	003	12.3	8.5	2.1	5.8	11.3	7.9	1.7	3.9	10.3	7.5	1.3	2.6	8.4	6.7	.9	1.3
	004	16.7	11.0	2.8	23.8	15.8	10.6	2.5	14.8	10.2	19.9	1.9	11.5	13.0	9.4	1.3	6.1
	006	24.1	16.1	4.1	23.7	22.3	15.4	3.3	15.8	20.5	14.6	2.6	10.8	17.1	13.3	1.8	5.4
	008	33.0	22.1	5.6	16.9	30.4	21.0	4.5	11.1	27.9	20.0	3.6	7.4	23.1	18.0	2.4	3.5
	010	36.9	25.1	6.3	21.0	33.9	23.8	5.0	13.7	31.0	22.6	4.0	9.2	25.7	20.5	2.7	4.4
012	45.4	31.2	8.0	33.2	42.7	30.0	6.3	21.7	39.1	28.7	5.1	14.7	33.3	26.6	3.5	7.2	
80° DB 70° WB	003	15.2	8.3	2.6	8.3	14.0	7.8	2.0	5.6	12.8	7.3	1.6	3.8	10.3	6.4	1.1	1.8
	004	20.1	10.9	3.4	33.2	19.2	10.5	2.8	23.1	18.1	10.0	2.3	16.4	15.7	9.1	1.6	8.5
	006	29.4	16.1	5.0	33.5	27.5	15.3	4.0	22.7	25.4	14.4	3.2	15.6	21.0	12.7	2.2	7.5
	008	40.5	22.1	6.9	24.3	37.7	20.9	5.5	16.2	34.7	19.7	4.4	10.9	28.3	17.2	2.9	5.0
	010	45.3	25.0	7.7	30.3	42.1	23.7	6.2	20.1	38.6	22.2	5.0	13.5	31.3	19.4	3.2	6.2
012	55.1	30.2	8.7	47.3	51.0	28.6	7.7	30.8	46.3	26.8	6.1	20.1	38.5	24.0	4.0	9.4	
82° DB 66.5° WB	003	12.0	8.9	2.0	5.6	11.1	8.5	1.6	3.8	10.2	8.2	1.3	2.6	8.6	7.5	.9	1.3
	004	16.2	11.8	2.8	22.6	15.4	11.4	2.2	15.6	14.5	11.0	1.9	11.1	11.0	10.4	1.3	6.1
	006	23.3	17.3	4.0	22.4	21.8	16.6	3.2	15.1	20.2	16.0	2.6	10.5	17.4	14.8	1.8	5.5
	008	32.1	23.7	5.5	16.0	29.8	22.8	4.4	10.6	27.6	21.8	3.5	7.3	23.5	20.2	2.4	3.6
	010	35.9	27.0	6.2	20.0	33.3	25.8	4.9	13.2	30.8	24.8	4.0	9.0	26.3	22.9	2.7	4.6
012	45.3	34.4	7.9	32.9	42.4	33.2	6.4	21.9	39.8	32.2	5.2	15.2	34.7	30.2	3.4	7.8	
82° DB 69° WB	003	14.2	8.9	2.4	7.4	13.1	8.4	1.9	5.0	11.9	8.0	1.5	3.4	9.8	7.1	1.0	1.7
	004	18.9	11.7	3.2	29.8	18.0	11.2	2.6	20.6	16.9	10.8	2.2	14.6	14.9	10.0	1.5	7.8
	006	27.6	17.2	4.7	29.9	25.7	16.4	3.7	20.1	23.7	15.6	3.0	13.9	19.9	14.1	2.0	6.9
	008	37.9	23.6	6.4	21.6	35.2	22.4	5.1	14.3	32.3	21.3	4.1	9.6	26.9	19.1	2.8	4.6
	010	42.4	26.7	7.3	26.9	39.2	25.4	5.8	17.7	36.0	24.1	4.6	11.9	29.9	21.7	3.1	5.7
012	51.6	32.9	9.0	41.9	48.0	31.5	7.2	27.6	44.6	30.2	5.9	18.8	38.0	27.7	4.0	9.2	
82° DB 71.5° WB	003	16.6	8.9	2.8	9.7	15.5	8.4	2.3	6.6	14.3	7.9	1.8	4.6	11.7	6.9	1.2	2.2
	004	21.9	11.6	3.7	38.6	20.9	11.2	3.0	27.1	19.9	10.7	2.5	19.4	17.5	9.8	1.8	10.4
	006	32.2	17.1	5.5	39.2	30.3	16.3	4.4	26.9	28.3	15.5	3.6	18.8	23.7	13.7	2.4	9.4
	008	44.4	23.5	7.5	28.7	41.6	22.4	6.0	19.3	38.6	21.2	4.9	13.2	32.1	18.6	3.3	6.3
	010	49.7	26.7	8.5	35.7	46.5	25.3	6.8	23.9	43.0	23.9	5.5	16.3	35.6	21.0	3.7	7.8
012	60.6	32.2	10.6	56.4	56.5	30.6	8.5	37.2	52.4	29.1	6.9	25.2	43.6	25.9	4.6	11.9	
84° DB 68° WB	003	13.3	9.5	2.3	6.6	12.3	9.1	1.8	4.5	11.4	8.7	1.5	3.1	9.6	8.0	1.0	1.6
	004	17.8	12.4	3.0	26.7	16.9	12.0	2.5	18.5	16.0	11.7	2.0	13.2	14.4	11.0	1.5	7.3
	006	25.8	18.3	4.4	26.7	24.1	17.6	3.5	18.1	22.5	16.9	2.9	12.7	19.4	15.7	2.0	6.6
	008	35.5	25.2	6.0	19.2	33.1	24.1	4.8	12.8	30.7	23.1	3.9	8.8	26.3	21.3	2.7	4.4
	010	39.7	28.6	6.8	24.0	36.9	27.4	5.4	15.9	34.2	26.3	4.4	10.9	29.3	24.2	3.0	5.5
012	49.7	36.2	8.7	39.1	46.7	35.0	7.0	26.2	43.7	33.8	5.8	18.1	38.3	31.8	4.0	9.4	
84° DB 71° WB	003	16.1	9.4	2.7	9.2	15.0	9.0	2.2	6.2	13.8	8.5	1.8	4.3	11.5	7.6	1.2	2.2
	004	21.3	12.3	3.6	36.6	20.3	11.9	2.9	25.6	19.3	11.5	2.4	18.3	17.1	10.6	1.7	9.9
	006	31.2	18.2	5.3	37.1	29.3	17.4	4.3	25.4	27.3	16.6	3.5	17.7	23.1	15.0	2.4	9.0
	008	43.0	25.1	7.3	27.1	40.3	23.9	5.8	18.2	37.3	22.7	4.7	12.4	31.4	20.4	3.2	6.1
	010	48.2	28.4	8.2	33.7	44.9	27.1	6.6	22.5	41.5	25.7	5.3	15.4	34.8	23.1	3.6	7.5
012	58.9	34.8	10.3	53.5	54.4	33.1	8.2	34.7	50.7	31.7	6.7	23.7	43.5	29.1	4.6	11.8</	



## CHILLED WATER COOLING CAPACITIES - HIGH SPEED

COIL No. 2  
44° F ENTERING WATER

Entering Air °F	Unit Size	Water Temperature Rise															
		12° F				14° F				16° F				20° F			
		TH	SH	GPM	PD	TH	SH	GPM	PD	TH	SH	GPM	PD	TH	SH	GPM	PD
76° DB 62° WB	003	7.6	7.0	1.3	2.6	7.0	6.7	1.0	1.7	6.4	6.4	.8	1.2	5.3	5.3	.6	.6
	004	10.6	9.3	1.8	10.7	10.0	9.0	1.5	7.3	9.4	8.8	1.2	5.2	8.4	8.3	.9	2.8
	006	14.9	13.5	2.6	10.4	13.8	13.1	2.1	7.0	12.8	12.6	1.7	4.8	10.8	10.8	1.1	2.5
	008	20.4	18.6	3.6	7.3	18.8	17.9	2.8	4.8	17.3	17.2	2.3	3.2	14.6	14.6	1.5	1.6
	010	22.8	21.1	4.0	9.1	21.1	20.3	3.2	6.0	19.4	19.4	2.6	4.1	16.3	16.3	1.8	2.0
012	30.5	27.9	5.3	15.8	28.5	27.1	4.3	10.5	26.1	26.1	3.4	6.6	18.4	18.4	1.8	2.7	
76° DB 63° WB	003	8.0	6.8	1.4	2.9	7.3	6.5	1.1	1.9	6.6	6.2	.9	1.3	5.4	5.4	.6	.6
	004	11.3	9.1	1.9	11.9	10.5	8.8	1.5	8.0	9.9	8.5	1.3	5.7	8.6	8.0	.9	3.0
	006	15.8	13.3	2.7	11.6	14.5	12.7	2.2	7.6	13.3	12.2	1.7	5.1	11.1	11.1	1.2	2.6
	008	21.6	18.2	3.8	8.1	19.7	17.4	2.9	5.1	18.0	16.6	2.3	3.4	14.9	14.9	1.6	1.6
	010	24.2	20.6	4.2	10.1	22.1	19.7	3.3	6.5	20.1	18.9	2.7	4.3	16.6	16.6	1.8	2.1
012	31.6	26.9	5.5	16.9	29.3	26.0	4.4	11.0	26.9	25.1	3.5	7.4	18.8	18.8	2.0	3.8	
78° DB 63.5° WB	003	8.5	7.4	1.5	3.2	7.9	7.1	1.2	2.1	7.2	6.9	.9	1.5	6.1	6.1	.6	.8
	004	11.9	9.9	2.0	13.1	11.2	9.6	1.6	8.9	10.6	9.3	1.4	6.3	9.4	8.8	1.0	3.5
	006	16.8	14.4	2.9	12.7	15.5	13.9	2.3	8.5	14.4	13.4	1.9	5.9	12.3	12.3	1.3	3.0
	008	22.9	19.8	3.9	8.9	21.2	19.0	3.1	5.8	19.5	18.3	2.5	4.0	16.6	16.6	1.7	2.0
	010	25.7	22.5	4.5	11.1	23.7	21.6	3.6	7.3	21.9	20.8	2.9	5.0	18.5	18.5	2.0	2.5
012	33.8	29.5	5.9	19.2	31.6	28.6	4.8	12.7	29.5	27.8	3.9	8.7	24.6	24.6	2.6	3.8	
78° DB 65° WB	003	9.4	7.3	1.6	3.7	8.5	6.9	1.3	2.4	7.7	6.6	1.0	1.6	6.3	6.0	.7	.8
	004	13.1	9.7	2.2	15.5	12.3	9.3	1.8	10.5	11.5	9.0	1.5	7.3	10.0	8.4	1.0	3.8
	006	18.5	14.1	3.2	15.0	17.0	13.5	2.5	9.9	15.5	12.9	2.0	6.7	12.9	11.8	1.3	3.3
	008	25.3	19.3	4.3	10.5	23.1	18.4	3.4	6.8	21.0	17.6	2.7	4.5	17.3	16.1	1.8	2.1
	010	28.2	21.9	4.9	13.1	25.8	20.9	3.8	8.5	23.5	19.9	3.1	5.6	19.3	18.2	2.1	2.7
012	35.9	28.1	6.3	21.4	33.3	27.1	5.0	14.0	30.7	26.1	4.0	9.4	26.0	24.3	2.7	4.6	
78° DB 68° WB	003	11.9	7.2	2.0	5.5	10.7	6.7	1.6	3.5	9.5	6.2	1.2	2.3	7.4	5.4	.8	1.0
	004	16.2	9.6	2.8	22.6	15.2	9.1	2.2	15.2	14.0	8.7	1.8	10.5	11.8	7.8	1.2	5.2
	006	23.3	13.9	4.0	22.3	21.2	13.1	3.1	14.5	19.1	12.3	2.5	9.6	15.2	10.8	1.6	4.3
	008	31.9	19.1	5.4	15.9	28.9	17.9	4.2	10.1	25.9	16.7	3.3	6.5	20.3	14.6	2.1	2.8
	010	35.6	21.6	6.1	19.7	32.2	20.2	4.8	12.5	28.8	18.9	3.7	8.1	22.5	16.5	2.4	3.5
012	42.9	26.3	7.5	29.7	39.1	24.8	5.9	18.8	35.6	23.5	4.7	12.3	28.8	21.1	3.0	5.5	
80° DB 63.5° WB	003	8.8	8.1	1.5	3.4	8.2	7.9	1.2	2.3	7.7	7.6	1.0	1.6	6.6	6.6	.7	.9
	004	12.1	10.7	2.1	13.6	11.6	10.5	1.7	9.5	11.0	10.2	1.4	6.8	10.0	9.8	1.0	3.8
	006	17.3	15.7	3.0	13.4	16.2	15.3	2.4	9.1	15.2	14.8	2.0	8.5	13.3	13.3	1.4	3.5
	008	23.7	21.6	4.1	9.4	22.1	20.9	3.2	6.3	20.7	20.3	2.7	4.4	18.0	18.0	1.9	2.3
	010	26.5	24.5	4.6	11.8	24.8	23.8	3.7	7.9	23.2	23.1	3.0	5.5	20.2	20.2	2.1	2.9
012	35.5	32.6	6.2	20.9	33.6	31.8	5.0	14.2	31.7	31.1	4.2	9.9	27.7	26.3	2.9	4.9	
80° DB 67° WB	003	11.0	7.8	1.9	4.8	10.0	7.4	1.5	3.2	9.1	7.0	1.2	2.1	7.4	6.3	.8	1.0
	004	15.1	10.3	2.6	20.0	14.2	9.9	2.7	13.5	13.3	9.5	1.7	9.5	11.5	8.8	1.2	4.9
	006	21.6	15.1	3.7	19.6	19.8	14.4	2.9	12.9	18.1	13.7	2.3	8.7	15.0	12.4	1.6	4.3
	008	29.6	20.7	5.0	13.9	27.1	19.6	4.0	9.0	24.7	18.7	3.2	6.0	20.3	16.9	2.1	2.8
	010	33.0	23.4	5.7	17.3	30.1	22.3	4.5	11.1	27.4	21.2	3.6	7.4	22.6	19.2	2.4	3.5
012	41.2	29.6	7.2	27.6	38.1	28.4	5.7	17.9	35.1	27.2	4.6	12.0	29.7	25.2	3.1	5.8	
80° DB 70° WB	003	13.8	7.7	2.3	7.1	12.6	7.3	1.8	4.7	11.3	6.8	1.5	3.1	8.9	5.8	.9	1.4
	004	18.5	10.2	3.1	28.6	17.5	9.8	2.5	19.6	16.3	9.3	2.1	13.7	13.9	8.4	1.4	6.9
	006	26.9	15.0	4.6	28.6	24.9	14.2	3.6	19.1	22.7	13.3	2.9	12.8	18.2	11.6	1.9	5.9
	008	36.9	20.6	6.3	20.6	34.0	19.4	5.0	13.5	30.8	18.1	3.9	8.9	24.5	15.8	2.5	3.9
	010	41.2	23.3	7.1	25.6	37.8	21.9	5.6	16.6	34.2	20.5	4.4	10.9	27.1	17.8	2.8	4.8
012	50.2	28.3	8.8	39.6	45.3	26.5	6.8	24.7	41.5	25.1	5.5	16.3	34.0	22.4	3.6	7.5	
82° DB 66.5° WB	003	10.8	8.4	1.8	4.7	9.9	8.1	1.5	3.1	9.1	7.7	1.2	2.2	7.7	7.2	.8	1.1
	004	14.7	11.1	2.5	19.1	13.9	10.8	2.0	13.1	13.1	10.4	1.7	9.3	11.7	9.9	1.2	5.1
	006	21.0	16.3	3.6	18.7	19.5	15.7	2.9	12.6	18.1	15.1	2.3	8.7	15.5	14.1	1.6	4.5
	008	28.9	22.4	4.9	13.3	26.7	21.5	3.9	8.8	24.7	20.6	3.2	6.0	21.0	19.2	2.2	3.0
	010	32.3	25.4	5.6	16.6	29.8	24.4	4.4	10.9	27.5	23.4	3.6	7.5	23.5	21.8	2.5	3.8
012	41.3	32.8	7.2	27.7	38.7	31.8	5.8	18.4	36.2	30.8	4.8	12.7	31.5	29.0	3.3	6.5	
82° DB 69° WB	003	12.8	8.3	2.2	6.2	11.7	7.9	1.7	4.1	10.6	7.4	1.4	2.8	8.6	6.7	.9	1.3
	004	17.3	11.0	2.9	25.4	16.3	10.5	2.4	17.3	15.3	10.1	2.0	12.2	13.3	9.3	1.4	6.3
	006	25.0	16.1	4.3	25.3	23.1	15.3	3.4	16.8	21.2	14.6	2.7	11.4	17.6	13.2	1.8	5.6
	008	34.3	22.1	5.8	18.1	31.6	21.0	4.6	11.8	28.8	19.9	3.7	7.8	23.7	17.9	2.4	3.7
	010	38.3	25.0	6.6	22.5	35.2	23.8	5.2	14.6	32.1	22.5	4.2	9.7	26.4	20.3	2.8	4.6
012	46.9	31.1	8.2	35.0	43.5	29.8	6.5	22.9	40.2	28.5	5.3	15.4	34.1	26.3	3.6	7.5	
82° DB 71.5° WB	003	15.3	8.3	2.6	8.4	14.1	7.8	2.1	5.6	12.8	7.3	1.6	3.8	10.2	6.4	1.1	1.8
	004	20.3	10.9	3.4	33.7	19.3	10.5	2.8	23.3	18.2	10.0	2.3	16.5	15.7	9.1	1.6	8.5
	006	29.7	16.1	5.0	33.9	27.7	15.2	4.0	22.9	25.5	14.4	3.3	15.7	20.9	12.7	2.1	7.5
	008	40.8	22.1	6.9	24.7	37.9	20.9	5.5	16.3	34.7	19.6	4.4	10.9	28.2	17.2	2.9	5.0
	010	45.6	25.0	7.8	30.6	42.3	23.6	6.2	20.2	38.6	22.2	5.0	13.5	31.2	19.4	3.2	6.2
012	55.5	30.3	9.7	47.7	51.3	28.7	7.7	31.0	46.5	26.9	6.1	20.2	38.7	24.2	4.1	7.5	
84° DB 68° WB	003	12.0	8.9	2.1	5.6	11.1	8.6	1.6	3.8	10.2	8.2	1.3	2.6	8.6	7.6	.9	1.3
	004	16.3	11.8	2.8	22.8	15.4	11.4	2.2	15.7	14.6	11.0	1.9	11.1	13.0	10.4	1.3	6.1
	006	23.4	17.3	4.0	22.5	21.8	16.6	3.2	15.2	20.2	16.0	2.6	10.6	17.4	14.9	1.8	5.5
	008	32.2	23.7	5.5	16.1	29.8	22.8	4.4	10.6	27.6	21.9	3.5	7.3	23.5	20.3	2.4	3.7
	010	35.9	27.0	6.2	20.1	33.3	25.9	4.9	13.3	30.8	24.8	4.0	9.1	26.3	23.0	2.7	4.6
012	45.4	34.5	8.0	33.0	42.6	33.4	6.4	23.0	39.8	32.3	5.2	15.2	34.8	30.5	3.7	7.8	
84° DB 71° WB	003	14.7	8.9	2.5	7.9	13.6	8.4	2.0	5.3	12.4	7.9	1.6	3.6	10.1	7.1	1.0	1.8
	004	19.6	11.6	3.3	31.8	18.6	11.2	2.7	22.0	17.6	10.8	2.2	15.5	15.4	9.9	1.6	8.2
	006	28.7	17.2	4.9	32.0	26.7	16.3	3.9	21.5	24.6	15.5	3.1	14.8	20.6	14.0	2.1	7.3
	008	39.4	23.6	6.7	23.2	36.5	22.4	5.3	15.3	33.6	21.2	4.3	10.3	27.8	19.0	2.9	4.9
	010	44.1	26.7	7.5	28.8	40.7	25.4	6.0	19.								



**CHILLED WATER COOLING CAPACITIES - HIGH SPEED**  
**COIL No. 2**  
**45° F ENTERING WATER**

Entering Air °F	Unit Size	Water Temperature Rise															
		12° F				14° F				16° F				20° F			
		TH	SH	GPM	PD	TH	SH	GPM	PD	TH	SH	GPM	PD	TH	SH	GPM	PD
76° DB 62° WB	003	7.1	6.8	1.2	2.4	6.5	6.5	1.0	1.6	6.0	6.0	.8	1.1	5.0	5.0	.5	.5
	004	10.0	9.0	1.7	9.7	9.4	8.8	1.4	6.6	8.9	8.5	1.2	4.7	7.9	7.9	.8	2.6
	006	14.0	13.1	2.4	9.4	13.0	12.7	1.9	6.3	12.0	12.0	1.6	4.3	10.2	10.2	1.1	2.2
	008	19.1	18.0	3.3	6.4	7.7	17.4	2.6	4.2	16.3	16.3	2.1	2.9	13.7	13.7	1.4	1.4
	010	21.5	20.5	3.8	8.2	9.8	19.7	3.0	5.4	18.3	18.3	2.4	3.7	15.3	15.3	1.6	1.8
012	28.9	27.3	5.1	14.3	26.7	26.7	4.0	9.0	24.0	24.0	3.2	5.1	21.5	21.5	1.8	1.4	
76° DB 63° WB	003	7.5	6.6	1.3	2.6	6.8	6.3	1.0	1.7	6.2	6.0	.8	1.1	5.1	5.1	.5	.6
	004	10.6	8.8	1.8	10.7	9.9	8.5	1.5	7.2	9.3	8.3	1.2	5.1	8.1	7.8	.8	2.7
	006	14.8	12.8	2.6	10.3	13.6	12.3	2.0	6.8	12.4	11.8	1.6	4.6	10.3	10.3	1.1	2.3
	008	20.2	17.5	3.5	7.1	18.5	16.8	2.7	4.6	16.9	16.1	2.2	3.1	13.9	13.9	1.5	1.5
	010	22.6	19.9	4.0	8.9	20.6	19.1	3.1	5.8	18.8	18.3	2.5	3.9	15.5	15.5	1.7	1.8
012	29.8	26.2	5.2	15.2	27.6	25.3	4.2	9.9	25.5	24.5	3.4	6.6	22.1	22.1	2.0	3.4	
78° DB 63.5° WB	003	8.0	7.2	1.4	2.9	7.4	6.9	1.1	1.9	6.8	6.7	.9	1.3	5.7	5.7	.6	.7
	004	11.2	9.6	1.9	11.8	10.6	9.3	1.6	8.1	10.0	9.1	1.3	5.8	8.9	8.6	.9	3.1
	006	15.8	14.0	2.7	11.5	14.7	13.5	2.2	7.7	13.6	13.0	1.8	5.3	11.6	11.6	1.2	2.8
	008	21.6	19.2	3.8	8.1	20.0	18.5	3.0	5.3	18.4	17.8	2.4	3.6	15.6	15.6	1.6	1.8
	010	24.2	21.8	4.2	10.1	22.4	21.0	3.4	6.7	20.6	20.3	2.7	4.5	17.4	17.4	1.9	2.3
012	32.1	28.8	5.6	17.4	30.0	28.0	4.5	11.5	28.0	27.2	3.7	7.9	23.8	23.8	2.3	2.6	
78° DB 65° WB	003	8.8	7.0	1.5	3.3	8.0	6.7	1.2	2.2	7.3	6.4	.9	1.5	5.9	5.8	.6	.7
	004	12.3	9.4	2.1	13.9	11.5	9.0	1.7	9.4	10.8	8.7	1.4	6.6	9.4	8.2	1.0	3.5
	006	17.4	13.7	3.0	13.7	15.9	13.0	2.4	8.9	14.5	12.5	1.9	6.0	12.0	11.5	1.3	2.9
	008	23.7	18.7	4.1	9.3	21.7	17.8	3.2	6.1	19.7	17.0	2.6	4.0	16.2	15.6	1.7	1.9
	010	26.5	21.2	4.6	11.7	24.2	20.2	3.6	7.6	22.0	19.3	2.9	5.0	18.1	17.7	1.9	2.4
012	34.1	27.4	6.0	19.4	31.5	26.4	4.7	12.6	29.0	25.4	3.8	8.4	24.4	23.7	2.6	4.1	
78° DB 68° WB	003	11.1	6.9	1.9	4.9	10.0	6.4	1.5	3.2	8.8	6.0	1.1	2.1	6.8	5.2	.7	.9
	004	15.3	9.2	2.6	20.3	14.3	8.8	2.1	13.8	13.2	8.3	1.7	9.3	11.0	7.5	1.1	4.6
	006	21.8	13.4	3.7	19.7	19.9	12.6	2.9	13.0	17.8	11.8	2.3	8.5	14.0	10.3	1.5	3.8
	008	30.0	18.3	5.1	14.1	27.1	17.2	4.0	9.1	24.2	16.0	3.1	5.8	18.8	14.0	2.0	2.5
	010	33.4	20.7	5.7	17.5	30.1	19.4	4.5	11.2	26.8	18.1	3.5	7.1	20.8	15.9	2.2	3.1
012	40.4	25.3	7.1	26.5	36.8	24.0	5.5	16.8	33.4	22.7	4.4	10.9	26.8	20.4	2.8	4.8	
80° DB 63.5° WB	003	8.4	7.9	1.4	3.1	7.8	7.7	1.2	2.1	7.3	7.3	.9	1.5	6.3	6.3	.7	.8
	004	11.5	10.4	2.0	12.4	11.0	10.2	1.6	8.6	10.5	10.0	1.3	6.2	9.5	9.5	1.0	3.5
	006	16.4	15.3	2.8	12.2	15.4	14.9	2.3	8.3	14.4	14.4	1.9	5.9	12.6	12.6	1.3	3.2
	008	22.4	21.0	3.9	8.5	21.0	20.4	3.1	5.7	19.6	19.6	2.5	4.0	17.1	17.1	1.8	2.1
	010	25.2	23.9	4.4	10.7	23.5	23.2	3.5	7.2	22.0	22.0	2.9	5.1	19.1	19.1	2.0	2.6
012	33.9	32.0	5.9	19.2	32.1	31.2	4.8	13.0	30.3	30.3	4.0	9.1	25.8	25.8	2.7	4.0	
80° DB 67° WB	003	10.4	7.5	1.8	4.4	9.4	7.1	1.4	2.9	8.5	6.7	1.1	1.9	6.9	6.1	.7	.9
	004	14.3	10.0	2.4	18.2	13.4	9.6	2.0	12.2	12.5	9.2	1.6	8.5	10.8	8.6	1.1	4.4
	006	20.3	14.6	3.5	17.7	18.6	13.9	2.7	11.6	17.0	16.2	2.2	7.8	14.1	12.1	1.5	3.8
	008	27.9	20.0	4.8	12.5	25.4	19.0	3.7	8.0	23.1	18.0	3.0	5.3	18.9	16.4	2.0	2.5
	010	31.1	22.6	5.4	15.6	28.3	21.5	4.2	10.0	25.7	20.5	3.4	6.6	21.1	18.6	2.2	3.1
012	39.1	28.7	6.9	24.9	36.0	27.6	5.4	16.1	33.2	26.5	4.4	10.8	28.0	24.6	3.0	5.2	
80° DB 70° WB	003	13.1	7.4	2.2	6.4	11.8	7.0	1.7	4.2	10.6	6.5	1.4	2.8	8.2	5.6	.9	1.2
	004	17.7	9.9	3.0	26.4	16.6	9.4	2.4	17.9	15.4	9.0	2.0	12.4	13.0	8.0	1.3	6.1
	006	25.6	14.5	4.4	26.2	23.5	13.6	3.4	17.2	21.2	12.8	2.7	11.5	16.9	11.1	1.7	5.2
	008	35.1	19.8	6.0	18.8	32.0	18.6	4.7	12.1	28.9	17.4	3.7	7.9	22.7	15.1	2.3	3.4
	010	39.1	22.5	6.7	23.3	35.6	21.1	5.3	15.0	32.0	19.7	4.1	9.7	25.1	17.1	2.6	4.2
012	47.6	27.3	8.3	35.8	42.9	25.6	6.4	22.2	39.1	24.2	5.1	14.6	31.8	21.6	3.3	6.6	
82° DB 66.5° WB	003	10.2	8.2	1.7	4.2	9.4	7.8	1.4	2.8	8.6	7.5	1.1	2.0	7.3	7.0	.8	1.0
	004	14.0	10.8	2.4	17.4	13.2	10.5	1.9	11.9	12.4	10.2	1.6	8.4	11.1	9.6	1.1	4.6
	006	19.9	15.8	3.4	17.0	18.5	15.2	2.7	11.4	17.1	14.7	2.2	7.9	14.7	13.7	1.5	4.1
	008	27.3	21.7	4.7	12.0	25.2	20.9	3.7	7.9	23.3	20.1	3.0	5.4	19.8	18.7	2.1	2.7
	010	30.5	24.7	5.3	15.0	28.2	23.7	4.2	9.9	26.0	22.8	3.4	6.7	22.1	21.3	2.3	3.4
012	39.4	32.0	6.9	25.3	38.9	31.1	5.5	16.8	34.4	30.1	4.5	11.5	29.9	28.6	3.2	5.9	
82° DB 69° WB	003	12.1	8.0	2.1	5.7	11.0	7.6	1.6	3.7	10.0	7.2	1.3	2.5	8.1	6.5	.8	1.2
	004	16.5	10.6	2.8	23.3	15.5	10.2	2.3	15.8	14.5	9.8	1.9	11.1	12.5	9.0	1.3	5.7
	006	23.7	15.6	4.0	23.0	21.8	14.8	3.2	15.2	19.9	14.1	2.6	10.3	16.5	12.7	1.7	5.0
	008	32.5	21.3	5.5	16.4	29.8	20.2	4.4	10.6	27.1	19.2	3.5	7.0	22.2	17.3	2.3	3.3
	010	36.3	24.2	6.2	20.4	33.1	23.0	4.9	13.2	30.1	21.8	3.9	8.7	24.7	19.7	2.6	4.1
012	44.6	30.2	7.8	31.8	41.3	28.9	6.2	20.7	38.1	27.8	5.0	13.9	32.2	25.7	3.4	6.7	
82° DB 71.5° WB	003	14.6	8.0	2.5	7.7	13.3	7.5	2.0	5.1	12.1	7.0	1.5	3.4	9.5	6.1	1.0	1.6
	004	19.4	10.5	3.3	31.2	18.4	10.1	2.7	21.5	17.3	9.7	2.2	15.1	14.8	8.7	1.5	7.6
	006	28.3	15.5	4.8	31.4	26.3	14.7	3.8	21.0	24.0	13.8	3.1	14.2	19.5	12.2	2.0	6.7
	008	39.0	21.3	6.6	22.7	36.0	20.1	5.2	14.9	32.7	18.9	4.2	9.9	26.2	16.5	2.7	4.4
	010	43.5	24.1	7.4	28.2	40.1	22.8	5.9	18.4	36.4	21.3	4.7	12.1	29.0	18.7	3.0	5.4
012	52.9	29.3	9.3	43.5	48.0	27.5	7.2	27.3	44.1	26.1	5.8	18.2	36.3	23.4	3.8	8.4	
84° DB 68° WB	003	11.4	8.7	1.9	5.1	10.5	8.3	1.5	3.4	9.6	8.0	1.2	2.4	8.2	7.4	.8	1.2
	004	15.5	11.4	2.6	20.9	14.6	11.1	2.1	14.3	13.8	10.7	1.8	10.2	12.3	10.1	1.3	5.6
	006	22.2	16.8	3.8	20.6	20.6	16.2	3.0	13.8	19.1	15.6	2.5	9.6	16.4	14.5	1.7	5.0
	008	30.5	23.1	5.2	14.7	28.2	22.1	4.1	9.7	26.1	21.3	3.4	6.6	22.2	19.8	2.3	3.3
	010	34.1	26.2	5.9	18.3	31.5	25.1	4.7	12.1	29.1	24.2	3.8	8.2	24.8	22.5	2.6	4.1
012	43.4	33.7	7.6	30.2	40.7	32.7	6.1	20.2	38.1	31.7	5.0	13.9	33.3	29.9	3.5	7.2	
84° DB 71° WB	003	14.0	8.6	2.4	7.3	12.9	8.1	1.9	4.8	11.7	7.7	1.5	3.3	9.5	6.9	1.0	1.6
	004	18.8	11.3	3.2	29.5	17.8	10.8	2.6	20.2	16.7	10.4	2.1	14.2	14.5	9.6	1.5	7.4
	006	27.4	16.6	4.7	29.5	25.3	15.8	3.7	19.7	23.2	15.0	3.0	13.4	19.3	13.5	2.0	6.6
	008	37.6	22.8	6.4	21.3	34.7	21.6	5.1	13.9	31.7	20.5	4.1	9.3	26.1	18.4	2.7	4.4
	010	42.0	25.9	7.2	26.4	38.6	24.5	5.7	17.3	35.2	23.2	4.5	11.5	28.9	20.9	3.0	5.4
012	51.0	31.8	8.9	40.6	47.3	30.4	7.										



**CHILLED WATER COOLING CAPACITIES - HIGH SPEED**  
 COIL No. 2  
 46° F ENTERING WATER

Entering Air °F	Unit Size	Water Temperature Rise															
		12° F				14° F				16° F				20° F			
		TH	SH	GPM	PD	TH	SH	GPM	PD	TH	SH	GPM	PD	TH	SH	GPM	PD
76° DB 62° WB	003	6.7	6.6	1.2	2.1	6.2	6.2	.9	1.4	5.7	5.7	.7	1.0	4.7	4.7	.5	.5
	004	9.4	8.7	1.6	8.7	8.9	8.5	1.3	6.0	8.4	8.3	1.1	4.2	7.4	7.4	.8	2.3
	006	13.2	12.8	2.3	8.4	12.2	12.2	1.8	5.7	11.3	11.3	1.5	3.9	9.5	9.5	1.0	2.0
	008	18.0	17.5	3.1	5.8	16.6	16.6	2.5	3.8	15.3	15.3	2.0	2.6	12.8	12.8	1.4	1.3
	010	20.2	19.9	3.6	7.3	18.6	18.6	2.8	4.8	17.2	17.2	2.3	3.3	14.3	14.3	1.6	1.6
012	27.2	27.2	4.8	12.5	25.1	25.1	3.8	7.5	18.8	18.8	2.5	2.3	16.0	16.0	1.8	1.6	
76° DB 63° WB	003	7.0	6.4	1.2	2.3	6.4	6.1	1.0	1.5	5.8	5.8	.8	1.0	4.7	4.7	.5	.5
	004	9.9	8.5	1.7	9.6	9.3	8.3	1.4	6.5	8.7	8.0	1.1	4.5	7.6	7.6	.8	2.4
	006	13.8	12.4	2.4	9.2	12.7	11.9	1.9	6.1	11.6	11.5	1.5	4.1	9.6	9.6	1.0	2.0
	008	18.9	17.0	3.3	6.3	17.3	16.3	2.6	4.1	15.8	15.7	2.1	2.7	12.9	12.9	1.4	1.3
	010	21.1	19.3	3.7	8.0	19.3	18.5	2.9	5.1	17.6	17.6	2.3	3.4	14.4	14.4	1.6	1.6
012	28.2	25.5	4.9	13.6	26.1	24.7	3.9	8.9	22.6	22.6	3.0	4.5	17.9	17.9	2.0	1.6	
78° DB 63.5° WB	003	7.5	7.0	1.3	2.6	7.0	6.8	1.0	1.7	6.4	6.4	.8	1.2	5.3	5.3	.6	.6
	004	10.6	9.3	1.8	10.7	10.0	9.1	1.5	7.3	9.4	8.8	1.2	5.2	8.4	8.4	.9	2.8
	006	14.9	13.6	2.6	10.3	13.8	13.1	2.0	6.9	12.8	12.7	1.7	4.8	10.9	10.9	1.1	2.5
	008	20.3	18.6	3.5	7.2	18.8	18.0	2.8	4.7	17.3	17.3	2.3	3.2	14.6	14.6	1.5	1.6
	010	22.7	21.2	4.0	9.0	21.0	20.4	3.2	6.0	19.4	19.4	2.6	4.1	16.3	16.3	1.8	2.0
012	30.5	28.2	5.3	15.8	28.5	27.4	4.3	10.5	26.3	26.3	3.5	6.8	18.3	18.3	2.1	1.9	
78° DB 65° WB	003	8.2	6.8	1.4	3.0	7.5	6.5	1.1	2.0	6.8	6.2	.9	1.3	5.5	5.5	.6	.6
	004	11.6	9.1	2.0	12.5	10.8	8.7	1.6	8.4	10.1	8.4	1.3	5.9	8.8	7.9	.9	3.1
	006	16.3	13.2	2.8	12.1	14.9	12.6	2.2	7.9	13.6	12.1	1.8	5.3	11.2	11.1	1.2	2.6
	008	22.2	18.0	3.8	8.4	20.2	17.2	3.0	5.4	18.4	16.5	2.4	3.6	15.1	15.1	1.6	1.7
	010	24.8	20.5	4.3	10.5	22.6	19.6	3.4	6.7	20.5	18.7	2.7	4.5	16.8	16.8	1.8	2.1
012	32.2	26.6	5.6	17.4	29.7	25.7	4.5	11.2	27.3	24.8	3.6	7.6	21.4	21.4	2.3	2.8	
78° DB 68° WB	003	10.4	6.6	1.8	4.4	9.3	6.1	1.4	2.8	8.2	5.7	1.1	1.8	6.2	5.0	.7	.8
	004	14.5	8.8	2.5	18.6	13.4	8.4	2.0	12.3	12.3	8.0	1.6	8.3	10.2	7.2	1.1	4.0
	006	20.6	12.8	3.5	18.0	18.5	12.0	2.7	11.5	16.5	11.3	2.1	7.5	12.9	9.9	1.3	3.3
	008	28.1	17.6	4.8	12.7	25.2	16.4	3.7	7.9	22.3	15.3	2.9	5.0	17.2	13.4	1.8	2.1
	010	31.3	19.9	5.4	15.7	28.0	18.6	4.2	9.8	24.8	17.4	3.2	6.2	19.1	15.2	2.0	2.6
012	38.1	24.4	6.7	23.7	34.6	23.1	5.2	14.9	31.2	21.9	4.1	9.6	24.9	19.7	2.6	4.2	
80° DB 63.5° WB	003	7.9	7.7	1.4	2.8	7.4	7.4	1.1	1.9	6.9	6.9	.9	1.4	6.0	6.0	.6	.7
	004	10.9	10.2	1.9	11.3	10.4	10.0	1.5	7.9	9.9	9.8	1.3	5.7	9.0	9.0	.9	3.2
	006	15.5	15.0	2.7	11.1	14.6	14.6	2.2	7.6	13.7	13.7	1.8	5.4	12.0	12.0	1.3	2.9
	008	21.2	20.5	3.7	7.7	19.9	19.9	2.9	5.2	18.6	18.6	2.4	3.6	16.2	16.2	1.7	1.9
	010	23.9	23.4	4.2	9.8	22.3	22.3	3.4	6.6	20.9	20.9	2.8	4.6	18.1	18.1	1.9	2.4
012	32.6	31.4	5.7	17.7	30.6	30.6	4.6	11.9	29.1	29.1	3.8	8.4	23.0	23.0	2.4	2.9	
80° DB 67° WB	003	8.7	7.2	1.7	3.9	8.8	6.9	1.3	2.8	7.9	6.5	1.0	1.7	6.4	5.9	.7	.8
	004	13.5	9.6	2.3	16.4	12.6	9.3	1.8	11.0	11.8	8.9	1.5	7.7	10.2	8.3	1.0	4.0
	006	19.1	14.1	3.3	15.9	17.5	13.4	2.6	10.4	15.9	12.8	2.1	7.0	13.1	11.7	1.4	3.4
	008	26.2	19.3	4.5	11.2	23.8	18.3	3.5	7.1	21.6	17.4	2.8	4.7	17.7	15.9	1.8	2.2
	010	29.2	21.9	5.1	13.9	26.5	20.8	4.0	8.9	24.1	19.8	3.2	5.9	19.7	18.1	2.1	2.8
012	37.0	27.9	6.5	22.5	34.1	26.8	5.1	14.5	31.4	25.9	4.1	9.8	26.4	24.0	2.8	4.7	
80° DB 70° WB	003	12.3	7.2	2.1	5.9	11.1	6.7	1.6	3.8	9.9	6.2	1.3	2.5	7.6	5.4	.8	1.1
	004	16.8	9.5	2.9	24.1	15.7	9.1	2.3	16.2	14.5	8.6	1.9	11.1	12.2	7.7	1.3	5.4
	006	24.2	13.9	4.1	23.8	22.0	13.1	3.2	15.5	19.8	12.2	2.6	10.2	15.6	10.7	1.6	4.6
	008	33.2	19.1	5.6	17.0	30.1	17.9	4.4	10.8	26.9	16.7	3.5	7.0	20.9	14.5	2.2	3.0
	010	37.0	21.6	6.3	21.1	33.4	20.2	4.9	13.4	29.8	18.8	3.9	8.6	23.2	16.4	2.4	3.7
012	44.5	26.1	7.8	31.5	40.5	24.7	6.1	19.9	36.8	23.4	4.8	13.0	29.6	20.9	3.1	5.8	
82° DB 66.5° WB	003	9.6	7.9	1.6	3.8	8.8	7.6	1.3	2.6	8.1	7.3	1.1	1.8	6.9	6.8	.7	.9
	004	13.2	10.5	2.3	15.8	12.5	10.2	1.8	10.8	11.8	9.9	1.5	7.7	10.5	9.4	1.1	4.2
	006	18.8	15.4	3.2	15.4	17.4	14.8	2.6	10.3	16.1	14.3	2.1	7.2	13.8	13.4	1.4	3.7
	008	25.7	21.1	4.4	10.8	23.8	20.3	3.5	7.1	22.0	19.5	2.8	4.9	18.7	18.2	1.9	2.4
	010	28.8	24.0	5.0	13.6	26.6	23.1	4.0	9.0	24.5	22.2	3.2	6.1	20.9	20.8	2.2	3.1
012	37.5	31.3	6.6	23.0	35.0	30.3	5.3	15.2	32.8	29.5	4.3	10.5	28.4	27.9	3.0	5.4	
82° DB 69° WB	003	11.4	7.7	2.0	5.1	10.4	7.3	1.5	3.4	9.3	6.9	1.2	2.3	7.5	6.3	.8	1.1
	004	15.7	10.3	2.7	21.2	14.7	9.9	2.1	14.3	13.7	9.5	1.8	10.0	11.8	8.8	1.2	5.1
	006	22.4	15.0	3.8	20.9	20.5	14.3	3.0	13.7	18.7	13.6	2.4	9.2	15.4	12.3	1.6	4.5
	008	30.7	20.6	5.2	14.8	28.0	19.5	4.1	9.5	25.4	18.5	3.3	6.3	20.7	16.8	2.1	2.9
	010	34.2	23.4	5.9	18.4	31.2	22.2	4.6	11.8	28.3	21.0	3.7	7.8	23.1	17.9	2.4	3.6
012	42.4	29.3	7.4	28.8	39.1	28.1	5.9	18.7	36.0	27.0	4.7	12.5	30.3	25.0	3.2	6.0	
82° DB 71.5° WB	003	13.8	7.7	2.4	7.1	12.6	7.2	1.8	4.7	11.3	6.8	1.5	3.1	8.8	5.9	.9	1.4
	004	18.6	10.2	3.2	28.8	17.5	9.8	2.5	19.7	16.3	9.3	2.1	13.7	13.9	8.4	1.4	6.8
	006	27.0	15.0	4.6	28.8	24.9	14.2	3.6	19.1	22.6	13.3	2.9	12.8	18.1	11.7	1.9	5.9
	008	37.1	20.6	6.3	20.8	34.0	19.4	5.0	13.5	30.7	18.1	3.9	8.8	24.4	15.8	2.5	3.9
	010	41.4	23.3	7.1	25.7	37.8	21.9	5.6	16.6	34.1	20.5	4.4	10.9	26.9	17.9	2.8	4.8
012	50.3	28.3	8.8	39.5	45.5	26.6	6.8	24.7	41.6	25.2	5.5	16.3	33.9	22.6	3.6	7.4	
84° DB 68° WB	003	10.8	8.4	1.8	4.7	9.9	8.1	1.5	3.1	9.1	7.8	1.2	2.2	7.7	7.2	.8	1.1
	004	14.7	11.1	2.5	19.1	13.9	10.8	2.0	13.1	13.1	10.5	1.7	9.3	11.7	9.9	1.2	5.1
	006	21.0	16.3	3.6	18.7	19.5	15.7	2.9	12.6	18.1	15.1	2.3	8.7	15.5	14.1	1.6	4.5
	008	28.9	22.4	4.9	13.3	26.7	21.5	3.9	8.7	24.6	20.7	3.2	6.0	21.0	19.3	2.2	3.0
	010	32.3	25.4	5.6	16.6	29.8	24.5	4.4	10.9	27.5	23.5	3.6	7.4	23.5	21.9	2.5	3.8
012	41.5	32.9	7.3	27.7	38.8	32.0	5.8	18.4	36.2	31.0	4.8	12.6	31.7	29.3	3.3	6.5	
84° DB 71° WB	003	13.3	8.3	2.3	6.7	12.1	7.8	1.8	4.4	11.0	7.4	1.4	3.0	8.9	6.6	.9	1.4
	004	18.0	10.9	3.0	27.1	16.9	10.5	2.5	18.5	15.8	10.1	2.0	12.9	13.7	9.3	1.4	6.7
	006	26.0	16.1	4.4	27.0	24.0	15.3	3.5	17.9	21.9	14.5	2.8	12.1	18.1	13.1	1.9	5.9
	008	35.7	22.1	6.1	19.4	32.8	20.9	4.8	12.6	29.9	19.8	3.8	8.4	24.4	17.8	2.5	3.9
	010	39.8	25.0	6.8	24.1	36.5	23.7	5.4	15.6	33.2	22.4	4.3	10.3	27.1	20.2	2.8	4.8
012	48.6	30.9	8.5	37.0	45.0	29.6	6.8	24.2	44.5	28.4	5.5	16.3	35.0	26.1	3.7	7.8	
84° DB 73° WB	003	15.4	8.3	2.6	8.5	14.1	7.8	2.1	5.7								



**CHILLED WATER COOLING CAPACITIES - HIGH SPEED**  
**COIL No. 2**  
**48° F ENTERING WATER**

Entering Air °F	Unit Size	Water Temperature Rise															
		12° F				14° F				16° F				20° F			
		TH	SH	GPM	PD	TH	SH	GPM	PD	TH	SH	GPM	PD	TH	SH	GPM	PD
76° DB 62° WB	003	5.9	5.9	1.0	1.7	5.5	5.5	.8	1.2	5.0	5.0	.7	.8	4.0	4.0	.4	.4
	004	8.3	8.3	1.4	7.0	7.9	7.9	1.2	4.8	7.4	7.4	1.0	3.4	6.5	6.5	.7	1.8
	006	11.6	11.6	2.0	6.8	10.8	10.8	1.6	4.6	10.0	10.0	1.3	3.2	8.3	8.3	.9	1.6
	008	15.9	15.9	2.8	4.6	14.7	14.7	2.2	3.1	13.6	13.6	1.8	2.1	11.1	11.1	1.2	1.0
	010	17.8	17.8	3.2	6.0	16.5	16.5	2.5	3.9	15.2	15.2	2.0	2.7	12.4	12.4	1.4	1.3
012	24.9	24.9	4.4	10.8	23.3	23.3	3.5	7.2	21.5	21.5	2.8	4.8	17.7	17.7	1.9	2.3	
76° DB 63.5° WB	003	6.1	6.0	1.1	1.8	5.6	5.6	.8	1.2	5.1	5.1	.7	.8	4.0	4.0	.4	.4
	004	8.7	8.0	1.5	7.6	8.2	7.8	1.2	5.1	7.7	7.6	1.0	3.6	6.6	6.6	.7	1.9
	006	12.1	11.7	2.1	7.3	11.1	11.1	1.7	4.8	10.2	10.2	1.3	3.3	8.3	8.3	.9	1.6
	008	16.5	16.0	2.9	5.0	15.1	15.1	2.3	3.2	13.7	13.7	1.8	2.1	11.1	11.1	1.2	1.0
	010	18.4	18.2	3.3	6.3	16.9	16.9	2.6	4.1	15.4	15.4	2.1	2.7	12.4	12.4	1.4	1.3
012	25.1	24.4	4.4	11.0	23.3	23.3	3.5	7.2	21.5	21.5	2.8	4.8	17.7	17.7	1.9	2.3	
78° DB 63.5° WB	003	6.7	6.6	1.2	2.1	6.2	6.2	.9	1.4	5.7	5.7	.7	1.0	4.7	4.7	.5	.5
	004	9.4	8.8	1.6	8.6	8.9	8.6	1.3	5.9	8.4	8.4	1.1	4.2	7.4	7.4	.8	2.3
	006	13.1	12.9	2.3	8.4	12.2	12.2	1.8	5.6	11.3	11.3	1.5	3.9	9.5	9.5	1.0	2.0
	008	17.9	17.6	3.1	5.7	16.6	16.6	2.5	3.8	15.3	15.3	2.0	2.6	12.8	12.8	1.4	1.3
	010	20.1	20.1	3.5	7.3	18.6	18.6	2.8	4.8	17.2	17.2	2.3	3.3	14.4	14.4	1.6	1.6
012	27.5	27.0	4.8	13.0	25.8	24.4	3.9	8.6	24.1	24.1	3.2	6.0	20.4	20.4	2.1	2.9	
78° DB 65° WB	003	7.2	6.3	1.2	2.4	6.5	6.1	1.0	1.6	5.9	5.8	.8	1.1	4.7	4.7	.5	.5
	004	10.2	8.5	1.8	10.0	9.5	8.2	1.4	6.7	8.9	7.9	1.2	4.7	7.7	7.5	.8	2.4
	006	14.2	12.3	2.5	9.6	13.0	11.8	1.9	6.2	11.8	11.4	1.6	4.2	9.7	9.7	1.0	2.1
	008	19.3	16.9	3.3	6.6	17.6	16.2	2.6	4.2	16.0	15.5	2.1	2.8	13.0	13.0	1.4	1.3
	010	21.6	19.2	3.8	8.3	19.7	18.4	3.0	5.3	17.9	17.7	2.4	3.5	14.6	14.6	1.6	1.7
012	28.7	25.3	5.0	14.0	26.4	24.2	4.0	9.0	24.3	23.7	3.2	6.1	20.3	20.3	2.1	2.9	
78° DB 68° WB	003	9.0	6.0	1.6	3.5	7.9	5.6	1.2	2.1	6.9	5.2	.9	1.4	5.2	4.6	.6	.6
	004	12.8	8.2	2.2	14.8	11.7	7.7	1.7	9.7	10.7	7.3	1.4	6.4	8.8	6.6	.9	3.1
	006	17.9	11.8	3.1	14.2	15.9	11.0	2.4	8.8	14.0	10.3	1.8	5.7	10.8	9.1	1.1	2.5
	008	24.4	16.1	4.2	9.8	21.6	15.0	3.2	6.0	18.9	14.0	2.5	3.7	14.4	12.4	1.5	1.5
	010	27.0	18.2	4.7	12.2	23.9	17.0	3.6	7.5	21.0	15.9	2.8	4.7	16.0	14.0	1.7	1.9
012	33.5	22.8	5.9	18.6	30.2	21.6	4.5	11.6	27.0	20.5	3.6	7.4	21.2	18.5	2.2	3.1	
80° DB 63.5° WB	003	7.1	7.1	1.2	2.4	6.7	6.7	1.0	1.6	6.2	6.2	.8	1.2	5.3	5.3	.6	.6
	004	9.8	9.7	1.7	9.4	9.4	9.4	1.4	6.6	9.0	9.0	1.2	4.8	8.1	8.1	.8	2.7
	006	13.9	13.9	2.4	9.3	13.1	13.1	2.0	6.4	12.3	12.3	1.6	4.5	10.7	10.7	1.1	2.4
	008	19.1	19.1	3.3	6.4	17.9	17.9	2.7	4.3	16.8	16.8	2.2	3.0	14.5	14.5	1.5	1.6
	010	21.5	21.5	3.8	8.2	20.1	20.1	3.0	5.5	18.9	18.9	2.5	3.9	16.3	16.3	1.7	2.0
012	29.7	29.7	5.2	14.9	28.2	28.2	4.2	10.2	26.6	26.6	3.5	7.2	23.1	23.1	2.4	3.7	
80° DB 67° WB	003	8.5	6.7	1.5	3.2	7.7	6.4	1.1	2.0	6.9	6.1	.9	1.4	5.6	5.6	.6	.7
	004	12.0	9.0	2.0	13.2	11.1	8.7	1.6	8.8	10.3	8.4	1.3	6.1	8.9	7.8	.9	3.2
	006	16.7	13.1	2.9	12.7	15.2	12.5	2.3	8.2	13.9	12.0	1.8	5.5	11.4	11.0	1.2	2.7
	008	22.9	17.9	3.9	8.9	20.7	17.1	3.1	5.6	18.8	16.4	2.4	3.7	15.3	15.0	1.6	1.7
	010	25.5	20.4	4.4	11.0	23.1	19.5	3.5	7.0	21.0	18.6	2.8	4.6	17.1	17.1	1.8	2.2
012	33.0	26.4	5.8	18.1	30.3	25.5	4.6	11.6	27.9	24.6	3.7	7.8	23.2	22.9	2.4	3.7	
80° DB 70° WB	003	10.8	6.6	1.9	4.7	9.6	6.1	1.4	3.0	8.4	5.7	1.1	1.9	6.4	4.9	.7	.8
	004	15.1	8.8	2.6	19.9	13.9	8.4	2.0	13.1	12.7	7.9	1.6	8.8	10.5	7.1	1.1	4.2
	006	21.4	12.8	3.7	19.3	19.2	12.0	2.8	12.2	17.1	11.2	2.2	7.9	13.2	9.8	1.4	3.4
	008	29.2	17.5	5.0	13.6	26.1	16.4	3.8	8.4	23.1	15.2	3.0	5.3	17.6	13.3	1.8	2.2
	010	32.5	19.9	5.6	16.8	29.0	18.5	4.3	10.4	25.6	17.3	3.3	6.6	19.6	15.1	2.1	2.7
012	39.6	24.4	6.9	25.3	35.7	23.0	5.4	15.7	32.1	21.8	4.2	10.1	25.5	19.5	2.7	4.3	
82° DB 66.5° WB	003	8.5	7.5	1.5	3.2	7.8	7.2	1.2	2.1	7.2	7.0	.9	1.5	6.1	6.1	.6	.8
	004	11.8	9.9	2.0	12.9	11.1	9.6	1.6	8.9	10.5	9.4	1.4	6.3	9.4	8.9	1.0	3.4
	006	16.7	14.5	2.9	12.6	15.5	14.0	2.3	8.4	14.3	13.6	1.9	5.9	12.3	12.3	1.3	3.0
	008	22.8	19.9	3.9	8.7	21.1	19.2	3.1	5.8	19.5	18.6	2.5	3.9	16.6	16.6	1.7	2.0
	010	25.5	22.6	4.4	11.0	23.6	21.8	3.5	7.3	21.8	21.1	2.9	5.0	18.6	18.6	2.0	2.5
012	33.8	29.9	5.9	19.0	31.7	29.1	4.8	12.7	29.6	28.3	3.9	8.7	25.7	25.7	2.7	4.4	
82° DB 69° WB	003	10.1	7.2	1.7	4.2	9.1	6.8	1.3	2.7	8.2	6.5	1.1	1.8	6.5	5.9	.7	.9
	004	14.0	9.6	2.4	17.4	13.0	9.2	1.9	11.7	12.1	8.9	1.6	8.0	10.4	8.2	1.1	4.1
	006	19.8	14.0	3.4	16.8	18.0	13.3	2.7	10.9	16.3	12.7	2.1	7.3	13.4	11.6	1.4	3.5
	008	27.1	19.2	4.6	11.9	24.5	18.2	3.6	7.5	22.2	17.3	2.9	4.9	18.0	15.8	1.9	2.3
	010	30.2	21.8	5.2	14.8	27.3	20.7	4.1	9.4	24.7	19.7	3.2	6.2	20.0	17.9	2.1	2.9
012	38.0	27.7	6.7	23.5	35.0	26.7	6.1	19.9	36.8	23.6	4.8	12.9	29.6	21.2	3.1	5.7	
82° DB 71.5° WB	003	12.3	7.1	2.1	5.9	11.1	6.7	1.6	3.8	9.8	6.2	1.3	2.4	7.5	5.4	.8	1.1
	004	16.9	9.5	2.9	24.3	15.7	9.1	2.3	16.2	14.5	8.6	1.8	11.0	12.1	7.7	1.2	5.4
	006	24.2	13.9	4.1	23.8	22.0	13.1	3.2	15.4	19.7	12.2	2.5	10.1	15.5	10.7	1.6	4.5
	008	33.2	19.0	5.6	17.0	30.0	17.8	4.4	10.7	26.7	16.7	3.4	6.9	20.8	14.6	2.2	2.9
	010	36.9	21.6	6.3	21.0	33.3	20.2	4.9	13.3	29.6	18.9	3.8	8.5	23.0	16.5	2.4	3.6
012	44.6	26.3	7.8	31.5	40.6	24.9	6.1	19.9	36.8	23.6	4.8	12.9	29.6	21.2	3.1	5.7	
84° DB 68° WB	003	9.6	8.0	1.6	3.8	8.8	7.6	1.3	2.6	8.1	7.4	1.1	1.8	6.9	6.9	.7	.9
	004	13.2	10.5	2.3	15.8	12.5	10.2	1.8	10.8	11.7	9.9	1.5	7.6	10.5	9.4	1.1	4.2
	006	18.7	15.4	3.2	15.4	17.4	14.9	2.6	10.3	16.1	14.4	2.1	7.1	13.8	13.5	1.4	3.7
	008	25.7	21.1	4.4	10.8	23.7	20.3	3.5	7.1	21.9	19.6	2.8	4.8	18.7	18.4	1.9	2.4
	010	28.7	24.0	5.0	13.6	26.5	23.2	4.0	8.9	24.5	22.4	3.2	6.1	20.9	20.9	2.2	3.1
012	37.6	31.5	6.6	23.0	35.1	30.6	6.1	19.7	37.1	26.8	4.9	13.2	31.0	24.8	3.3	6.2	
84° DB 71° WB	003	11.9	7.7	2.0	5.5	10.7	7.3	1.6	3.6	9.6	6.9	1.2	2.4	7.7	6.2	.8	1.1
	004	16.2	10.2	2.8	22.6	15.2	9.8	2.2	15.2	14.1	9.4	1.8	10.5	12.1	8.7	1.2	5.4
	006	23.2	15.0	4.0	22.2	21.2	14.2	3.1	14.5	19.3	13.5	2.5	9.7	15.8	12.2	1.6	4.6
	008	31.9	20.6	5.4	15.8	29.0	19.5	4.2	10.1	26.2	18.5	3.4	6.7	21.2	16.7	2.2	3.0
	010	35.5	23.3	6.1	19.6	32.3	22.1	4.8	12.6	29.1	20.9	3.8	8.2	23.6	18.9	2.5	3.8
012	43.9	29.2	7.7	30.7	40.4	28.0	6.1	19.7	37.1	26.8	4.9	13.2	31.0	24.8	3.3	6.2	
84° DB 73° WB	003	13.9</															



## Hot Water Heating Capacities

### Heating Capacities – Base Ratings

Heating Capacity = Base Rating x Initial Temperature Difference (Entering Water – Entering Air)

Unit Size	Fan Speed P.D.	Coil No. 1A											Coil No. 2										
		Water Flow Rate = GPM											Water Flow Rate = GPM										
		.5	1.0	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	.5	1.0	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
003	High	157	193	209	218	227	232	236	*	*	*	*	177	231	252	263	274	280	283	*	*	*	*
	Low	134	156	165	171	176	179	181	*	*	*	*	150	181	191	197	202	204	206	*	*	*	*
	P.D.	.7	2.5	5.3	9.0	19.0	32.4	49.0	*	*	*	*	.3	1.1	2.3	3.8	7.8	12.9	19.1	*	*	*	*
004	High	182	236	260	275	290	299	304	*	*	*	*	208	279	308	323	340	348	352	*	*	*	*
	Low	161	197	212	220	229	234	237	*	*	*	*	194	248	268	279	290	295	298	*	*	*	*
	P.D.	.8	2.7	5.6	9.5	20.0	33.8	50.8	*	*	*	*	.8	2.8	5.8	9.8	20.3	34.2	51.2	*	*	*	*
006	High	209	305	354	383	414	431	441	448	453	457	*	227	346	404	437	472	490	501	508	513	517	*
	Low	196	275	312	332	354	366	373	378	381	384	*	209	294	329	347	365	374	380	383	386	388	*
	P.D.	.4	1.2	2.6	4.3	9.0	15.1	22.6	31.3	41.4	52.7	*	.4	1.3	2.6	4.4	8.9	14.8	21.9	30.3	39.7	50.3	*
008	High	229	357	426	468	515	540	556	567	574	580	*	*	399	492	549	612	646	666	680	689	697	702
	Low	221	332	388	421	456	475	487	495	500	505	*	*	377	454	499	547	572	587	596	603	608	612
	P.D.	.5	1.7	3.3	5.4	10.8	17.6	25.8	35.2	45.8	57.5	*	*	.6	1.1	1.9	3.9	6.5	9.6	13.3	17.4	22.1	27.2
010	High	*	392	472	523	584	620	643	659	672	681	688	*	418	526	596	676	720	747	766	779	789	796
	Low	*	319	361	384	411	425	434	441	445	448	451	*	355	417	450	484	501	511	518	523	526	529
	P.D.	*	.8	1.7	3.1	6.8	12.1	18.8	27.0	36.7	47.8	60.4	*	.6	1.1	1.9	3.9	6.5	9.6	13.3	17.4	22.1	27.2
012	High	CONTACT FACTORY											CONTACT FACTORY										
	Low P.D.	CONTACT FACTORY											CONTACT FACTORY										

P.D. = Pressure Drop, Ft. of Water. Includes coil, internal piping, entrance and exit losses. Does not include risers and valves.  
 \* Not recommended for operation at these water flow rates.

Unit Size	Fan Speed P.D.	1-Row Auxiliary Heating Coil								
		Water Flow Rate - GPM								
		.5	1.0	1.5	2.0	3.0	4.0	5.0	6.0	
003	High	96	115	123	128	133	135	137	138	
	Low	83	97	102	105	108	110	111	112	
	P.D.	.4	1.4	3.0	5.2	11.2	11.2	29.2	41.1	
004	High	114	140	152	158	166	169	172	174	
	Low	103	123	131	136	141	144	145	147	
	P.D.	.4	1.6	3.3	5.7	12.3	21.1	32.2	45.4	
006	High	150	194	214	226	239	246	250	253	
	Low	140	178	195	204	215	220	224	226	
	P.D.	.5	1.8	3.9	6.7	14.4	24.9	37.9	53.6	
008	High	181	247	279	297	317	329	336	341	
	Low	174	233	260	275	293	302	308	312	
	P.D.	.6	2.3	4.9	8.5	18.3	31.6	48.3	68.3	
010	High	202	284	326	350	378	393	402	409	
	Low	179	236	262	276	291	300	305	308	
	P.D.	.7	2.5	5.6	9.6	20.8	36.1	55.2	78.1	
012	High	CONTACT FACTORY								
	Low P.D.	CONTACT FACTORY								

Pressure drop, feet of water, includes coil, internal piping, entrance and exit losses. Does not include risers and valves.

## Electric Heating Capacities

Unit Size	120/60/1			208/60/1			240/60/1			277/60/1		
	KW	MBH	AMPS	KW	MBH	AMPS	KW	MBH	AMPS	KW	MBH	AMPS
003	1.0	3.41	8.3	1.5	5.12	7.2	1.0	3.41	4.2	1.0	3.41	3.6
	2.0	6.82	16.7				2.0	6.82	8.3	2.0	6.82	7.2
004	1.0	3.41	8.3	1.5	5.12	7.2	1.0	3.41	4.2	1.0	3.41	3.6
	2.0	6.82	16.7	2.0	6.48	9.1	2.0	6.82	8.3	2.0	6.82	7.2
				3.0	10.24	14.4	3.0	10.24	12.5	3.0	10.24	10.8
							4.0	13.65	16.7	4.0	13.65	14.5
006				1.5	5.12	7.2	1.0	3.41	4.2	1.0	3.41	3.6
008	1.0	3.41	8.3	2.0	6.48	9.1	2.0	6.82	8.3	2.0	6.82	7.2
010	2.0	6.82	16.7	3.0	10.24	14.4	3.0	10.24	12.5	3.0	10.24	10.8
012							4.0	13.65	16.7	4.0	13.65	14.5

## AIR FLOW DATA

### Unit Air Flow Data at Free Delivery and External Static Pressures

Static Pressure	0			.05			.10			.15			.20			.25			
	Fan Speed	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
003-1A	320	285	225	300	265	215	265	235	195	230	210	180	185	170	150	—	—	—	
	003-2	315	270	215	290	255	205	260	230	190	220	200	170	175	165	145	—	—	—
004-1A	430	380	305	400	370	305	370	350	300	340	325	290	305	295	275	270	260	250	
	004-2	400	380	325	387	363	317	362	344	304	335	321	289	304	295	270	268	261	246
006-1A	640	565	505	610	550	490	590	530	475	555	505	455	510	475	430	465	440	400	
	006-2	600	550	420	575	430	415	550	500	410	510	470	395	470	435	380	420	395	355
008-1A	820	760	675	790	730	665	755	705	650	715	675	635	675	645	610	625	600	575	
	008-2	800	740	675	785	720	665	750	695	650	710	665	635	665	635	605	615	595	580
010-1A	1000	850	555	980	845	550	950	835	550	915	820	550	870	800	545	825	770	540	
	010-2	940	850	60	930	840	550	900	830	555	860	800	555	820	770	550	780	740	500
012-1A 012-2	CONTACT FACTORY																		

Medium and low air flow based on unit air delivery at high speed against the selected external static pressure.

When above coils are used in combination with 1-row auxiliary heating coils, reduce air flow capacity by the multiplier given below:

Auxiliary Coil Factor

Fan Speed	Multiplier
High	.94
Medium	.95
Low	.96

**SELECTION EXAMPLES:**

1. Find total BTU and Sensible BTU Correction Factors for size 006-2 unit with 1-row auxiliary heating coil.
  - a. Multiply CFM by auxiliary coil factor above:  
 High Speed = 600 x .94 = 564 CFM  
 Med. Speed = 550 x .95 = 523 CFM  
 Low Speed = 420 x .96 = 403 CFM

b. Calculate percent of high speed air flow:

High Speed	Med. Speed	Low Speed
$\frac{564}{600} = .94$	$\frac{523}{600} = .87$	$\frac{403}{600} = .67$

c. From capacity correction chart:

	Fan Speed		
	H	M	L
Total BTU Correction Factor	.975	.945	.840
Sensible BTU Correction Factor	.965	.925	.795

2. Find total BTU and Sensible BTU Correction Factors for size 004-2 unit operating at high speed and .10" external static pressure.

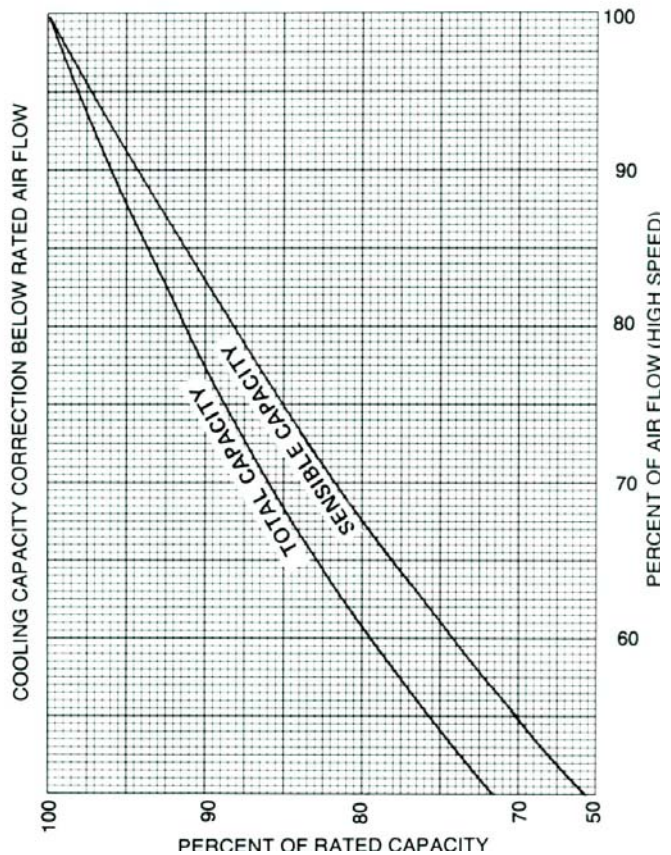
a. From Air Flow Data table above, free delivery CFM equals 400 and .10" external static pressure CFM equals 362.

$$\frac{362}{400} = .90 \text{ percent of high speed air flow}$$

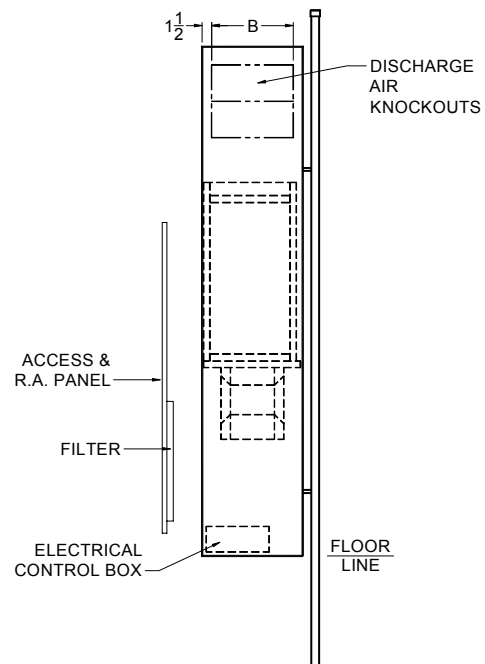
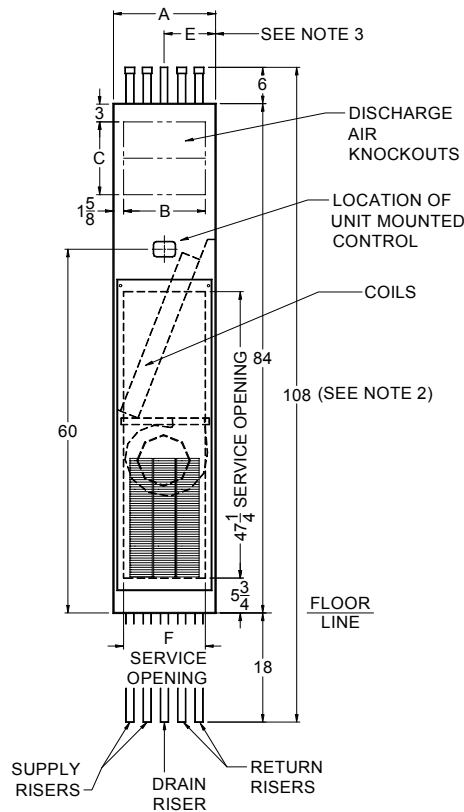
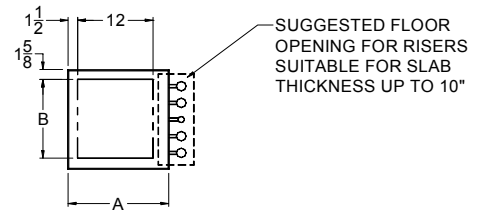
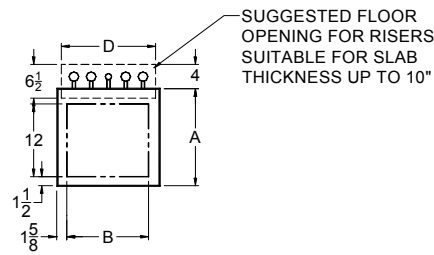
b. From capacity correction chart:

Total BTU Correction Factor = .960  
 Sensible BTU Correction Factor = .945

CAPACITY CORRECTION CHART



## REAR RISER UNITS



FRONT VIEW

R. H. SIDE VIEW

\* MULTI - DISCHARGE ARRANGEMENTS C = 6"

DIMENSIONS							
UNIT SIZE	A	B	C*	D 2-Pipe	D 4-Pipe	E	F
003	16 1/4	13	12	10	15	8 1/8	13
004	16 1/4	13	12	10	15	8 1/8	13
006	19 1/4	16	12	10	15	9 5/8	16
008	19 1/4	16	12	10	15	9 5/8	16
010	19 1/4	16	12	10	15	9 5/8	16
012	19 1/4	16	12	10	15	9 5/8	16

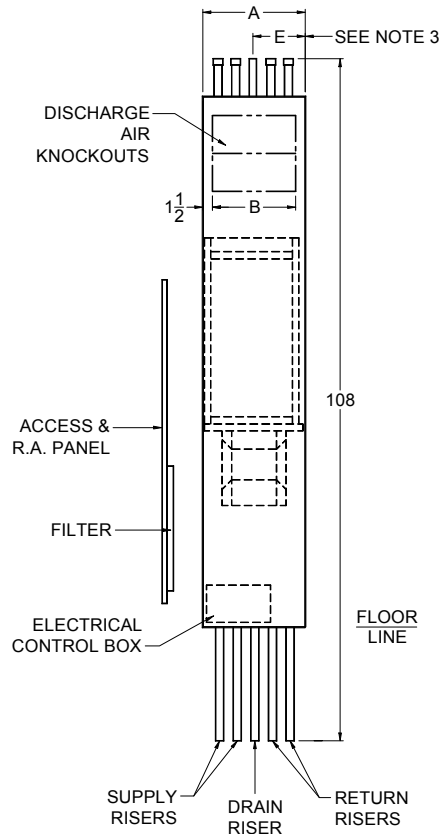
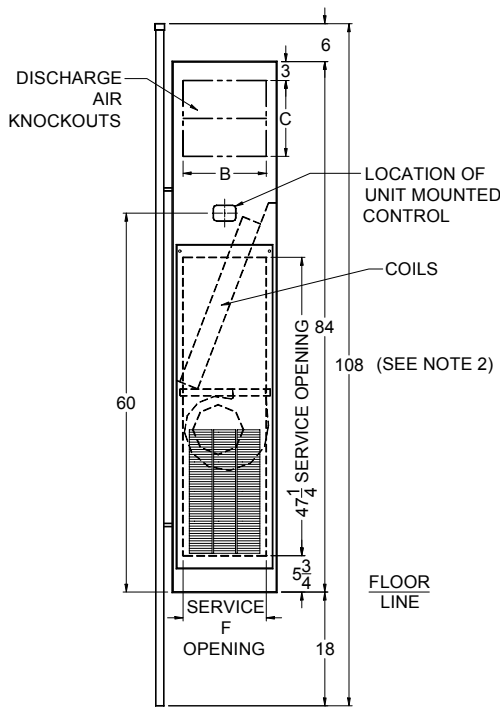
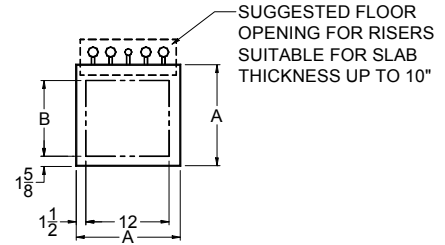
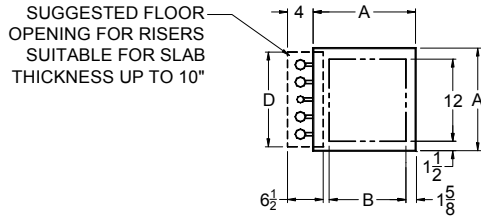
**NOTE 1:** Model G units will accept maximum 5/8" thickness furring material fastened either with adhesive or screws with maximum 1/4" cabinet penetration.

**NOTE 2:** Standard cabinet height may impose restrictions where ceiling dimensions are less than 7' 10". Consult factory for special cabinet heights.

**NOTE 3:** All risers have a 2 3/4" center to center distance from the riser next to it. On 2-pipe systems, only the three middle risers will be installed on the unit.



**SIDE RISER UNITS**



FRONT VIEW

R. H. SIDE VIEW

L. H. RISER SHOWN, R. H. RISER OPPOSITE, RISER HAND DETERMINED WHEN FACING AIR INLET.

\* MULTI - DISCHARGE ARRANGEMENTS C = 6"

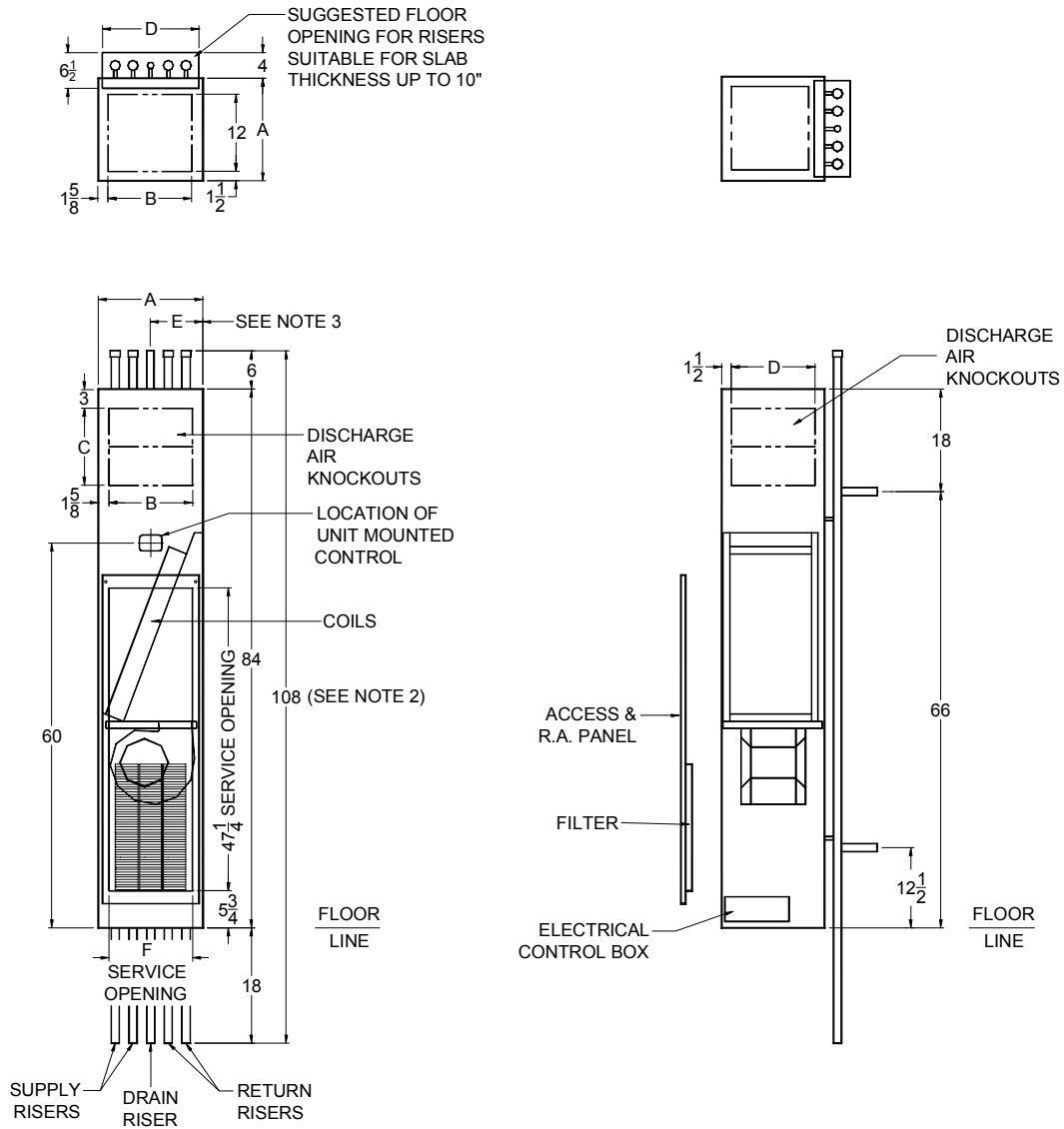
DIMENSIONS							
UNIT SIZE	A	B	C*	D 2-Pipe	D 4-Pipe	E	F
003	16 1/4	13	12	10	15	8 1/8	13
004	16 1/4	13	12	10	15	8 1/8	13
006	19 1/4	16	12	10	15	9 5/8	16
008	19 1/4	16	12	10	15	9 5/8	16
010	19 1/4	16	12	10	15	9 5/8	16
012	19 1/4	16	12	10	15	9 5/8	16

**NOTE 1:** Model G units will accept maximum 5/8" thickness furring material fastened either with adhesive or screws with maximum 1/4" cabinet penetration.

**NOTE 2:** Standard cabinet height may impose restrictions where ceiling dimensions are less than 7' 10". Consult factory for special cabinet heights.

**NOTE 3:** All risers have a 2 3/4" center to center distance from the riser next to it. On 2-pipe systems, only the three middle risers will be installed on the unit.

**MASTER UNITS**



**FRONT VIEW**

**R.H. SIDE VIEW**

**REAR RISER SHOWN, L. H. & R. H. RISERS AVAILABLE. RISER HAND DETERMINED WHEN FACING AIR INLET**

**\* MULTI - DISCHARGE ARRANGEMENTS C = 6"**

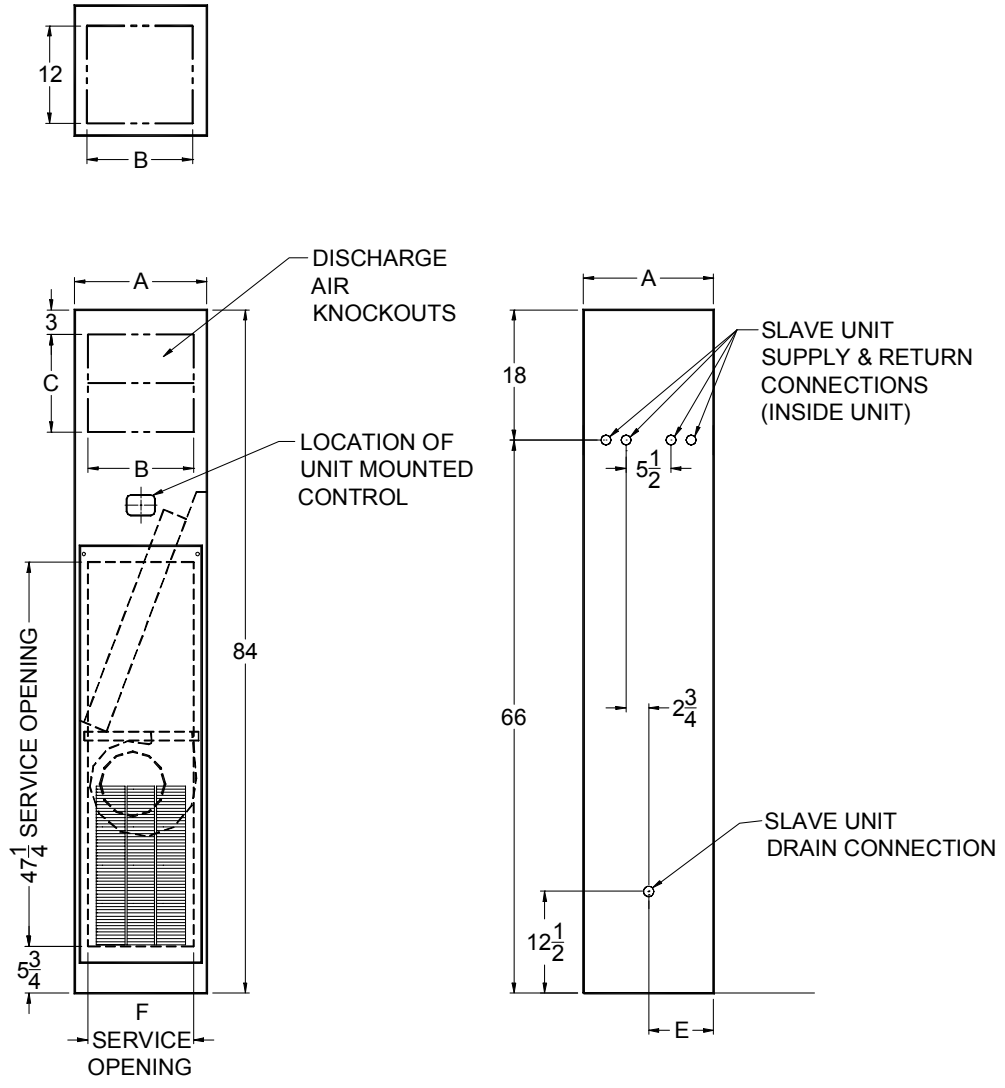
DIMENSIONS							
UNIT SIZE	A	B	C*	D 2-Pipe	D 4-Pipe	E	F
003	16 1/4	13	12	10	15	8 1/8	13
004	16 1/4	13	12	10	15	8 1/8	13
006	19 1/4	16	12	10	15	9 5/8	16
008	19 1/4	16	12	10	15	9 5/8	16
010	19 1/4	16	12	10	15	9 5/8	16
012	19 1/4	16	12	10	15	9 5/8	16

**NOTE 1:** Model G units will accept maximum 5/8" thickness furring material fastened either with adhesive or screws with maximum 1/4" cabinet penetration.

**NOTE 2:** Standard cabinet height may impose restrictions where ceiling dimensions are less than 7' 10". Consult factory for special cabinet heights.

**NOTE 3:** All risers have a 2 3/4" center to center distance from the riser next to it. On 2-pipe systems, only the three middle risers will be installed on the unit.

**SLAVE UNITS**



**FRONT VIEW**

**REAR VIEW**

REAR CONNECTIONS SHOWN, L. H. & R. H. CONNECTIONS AVAILABLE. CONNECTION HAND DETERMINED WHEN FACING AIR INLET

\* MULTI - DISCHARGE ARRANGEMENTS C = 6"

DIMENSIONS					
UNIT SIZE	A	B	C*	E	F
003	16 1/4	13	12	8 1/8	13
004	16 1/4	13	12	8 1/8	13
006	19 1/4	16	12	9 5/8	16
008	19 1/4	16	12	9 5/8	16
010	19 1/4	16	12	9 5/8	16
012	19 1/4	16	12	9 5/8	16

**NOTE 1:** Model G units will accept maximum 5/8" thickness furring material fastened either with adhesive or screws with maximum 1/4" cabinet penetration.

**NOTE 2:** Standard cabinet height may impose restrictions where ceiling dimensions are less than 7' 10". Consult factory for special cabinet heights.

**NOTE 3:** All risers have a 2 3/4" center to center distance from the riser next to it. On 2-pipe systems, only the three middle risers will be installed on the unit.



Furnish and install where shown on the plans, AIRTHERM Vertical Stacked Fan Coil Units. Sizes and performances shall be as tabulated in the schedule. Unit capacities shall be certified under ARI Standard 440 for room fan coil air conditioners. Units shall meet the requirements of Underwriters Laboratories (U.L.) Standard 1995. Units shall be sound tested and rated in accordance with the methods of ARI Standard 443-71 and ASHRAE 36-62.

**BASIC UNIT** - Furred-in Model "G". The basic unit casing shall be constructed of heavy gauge galvanized steel reinforced for maximum rigidity and internally insulated with a minimum of 1/2", 2lb. Density glass fiber thermal and acoustic insulation. Units shall be furnished with discharge openings as shown on the plans.

**MASTER/SLAVE UNITS** - Shall consist of two (2) basic units, each individually controlled, installed in adjacent rooms, served by a common set of risers installed in the master unit.

**PIPING RISERS** - Riser positions shall be rear, left or right of air inlets as shown on the plans.

Supply and return risers shall be 1 1/4" (3/4", 1", 1 1/2", 2", 2 1/2") nominal type "M" copper swaged at the top and insulated with closed cell flexible insulation. Supply and return risers shall be connected to the coil with flexible copper connections that allow  $\pm 1/2$ " vertical riser movement. Hot water supply and return risers for 4-pipe systems are not insulated.

Condensate risers shall be 1 1/4" PVC and shall be provided with a coupling. Master unit factory installed risers shall have stubs for jobsite installation of copper connecting tubing to the slave unit. Slave units shall have piping packages positioned to accept connecting tubing.

**RETURN AIR GRILLE** - The return air grille and access panel shall be constructed of 18 gauge steel, phosphatized and painted with a light beige powder coat finish.

**COILS** - Coils shall be suitable for 200 PSIG maximum working pressure and shall be factory tested with 300 PSIG air pressure when the coil is submerged in warm water. Coils shall have a manual air vent. The entering air side of the cooling coil shall be completely accessible for cleaning.

**SERVICE VALVES** - Ball valves shall be installed in the coil supply and return piping. Valves shall be accessible by removing the discharge grille or access panel.

**WIRING** - U. L. approved cable assembly with quick disconnect plugs.

**DRAIN PAN** - U.L. approved sloped drain pan with overflow relief notch to avoid electrical components.

**MOTORBOARD** - The entire assembly slides out for motor and fan access. Constructed of 16 gauge steel.

**FANS** - Fan wheels shall be centrifugal type, DWDI, forward curved, dynamically balanced. Fan housings shall be constructed of corrosion protected steel with streamlined air inlets.

**MOTOR** - Each unit shall be equipped with 115/60/1 PSC 3-speed tap wound motor with integral thermal overload protection and automatic reset, having a minimum power factor of .83.

**FILTER** - A throw away (or cleanable foam media, or cleanable aluminum mesh) shall be mounted into a frame directly behind the return air grille, and shall be accessible by removing the grille.

**ELECTRIC HEATING ELEMENTS** - Shall be constructed of Nikrothal NXT resistance wire with surface temperatures a minimum of 30% below allowable operating temperatures.

Electric heating elements shall be safety protected with an automatic reset thermally operated high limit switch.

**CONTROL BOX** - All units have a heavy-gauge galvanized steel control box to house contactors, field wiring terminals, transformer, automatic changeover and relay where required. The control box is furnished with a solid cover and contains properly sized knockouts, conveniently located.

**GROUNDING** - Pressure type grounding terminals shall provide a means to easily connect with a single power source where electric heating element and motor voltage is the same.

**MAGNETIC CONTACTORS** - Line break, de-energizing magnetic contactors shall be furnished to break all ungrounded conductors.

**FIELD WIRING TERMINALS** - Field wiring terminals shall provide a means to easily connect with a single power source where electric heating element and motor voltage is the same.

**FACTORY WIRING** - All factory connections shall be made with thermal plastic insulated copper wires rated at 105° C.



## LIMITED WARRANTY

Products are guaranteed against defects in material and workmanship to the extent that any product returned, with prior permission, and with transportation prepaid, to the factory and found to be defective, within one year from the date of installation, or 18 months from the date of shipment, will be repaired or replaced, and returned F.O.B. factory.

Under no conditions shall AIRTHERM be held liable for consequential damages or installation or repair costs.

Products of other manufacture, assembled with or accessory to these products, are subject to the warranty of their manufacturer.

AIRTHERM reserves the right to make changes in design or dimensions, to add or eliminate products without prior notice.



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**13-E-103E (3/1/17)**  
**Replaces 13-E-103D**