

## **VERTICAL STACKED SPECIFICATIONS**



## STANDARD SPECIFICATIONS

AIRTHERM<sup>®</sup> Vertical Stacked Fan Coil Units meet the requirements of Underwriters Laboratories (UL) standard 883. 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). Eight field selectable air discharge knockouts are available with optional field installed duct collars or grilles. The interior of Model G is insulated with 1/2", 2lb. Density erosion resistant glass fiber insulation.

COILS - May be No. 1A, standard capacity, or No. 2, high capacity with an optional 1-row heating coil, No.3, used in combination with above for 4-pipe systems. Manual air vents are supplied on coils. Braided hoses connect the coil valve package to the riser stubs and compensate for vertical riser movement. Coils are constructed of 1/2" or 5/8" O.D. seamless copper tubes mechanically bonded to aluminum fins with continuous fin collars.

STANDARD RISERS - Supply and return risers are type M copper swaged at the top and insulated with tubular closed cell flexible insulation. Optional type "L" copper risers are furnished with a coupling. Condensate risers are PVC (polyvinyl chloride), furnished with a coupling. Risers are exposed and mounted to the exterior of the unit. Standard riser length is 9'0". Insulated riser extension pieces in even lengths 1' through 4' are available for field installation to achieve total riser length required.

MASTER/SLAVE ARRAINGEMENT - A master/slave installation consists of two separate units, served by a common set of risers on the master unit. Master units have factory installed risers stubs for field installation of copper connecting tubing to the slave unit through a field built fire rated 2 x 4 wall. Slave units have no risers, but have piping packages with braided hoses and ball shut off valves that are field connected to the master riser stubs. 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 with a hose clamp.

SERVICE VALVES - Ball valves are installed on the supply and return riser stubs. Access to valves is through an internal coil cover panel.

MOTOR SPEED CONTROL - A 3-speed motor switch with off position is supplied for all control systems. On electric heat models, the off position deenergizes the fan motor, electric heating element and hydronic control valve. A 3-speed motor switch with off position is optionally available for unit or wall mounting when units are supplied less a factory furnished control system.

WIRING - U.L. approved cable assembly with quick disconnect plugs for fan and control components is standard.

260 North Elm Street, Westfield, MA 01085 • Tel: (413) 568-9571 • Fax: (413) 562-8437 www.airthermhvac.com MOTORS - 115/60/1 PSC 3-speed tap wound with integral thermal overload protection and automatic reset. Minimum power factor is .83.

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

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 baked powder finish. It is fastened to the unit with easily removed machine screws. Tamperproof screws requiring a special tool for removal are optionally available.

FILTER - 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. ELEMENT 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 pre-set and is non-adjustable. The switch automatically re-energizes the electric heating element after the temperature returns to normal. The limit switch is designed for low radio and T.V. interference and is rated for 100,000-cycle duty.

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.

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 under grounded contactors.

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

				UNIT SIZE				
Unit Size with No. 1A High Capacity Coil				003-1A	004-1A	006-1A	008-1A	010-1A
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 Temperature Drop Coil				003-2	004-2	006-2	008-2	010-2
CFM	High Med		High	310	400	600	800	940
			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
	Amps		.56	1.05	1.90	2.50	3.50	
	Watts		Watts	60	104	180	250	360
			Power Factor	.93	.86	.82	.87	.89
Air Opening	Inlet-Free Area, SQ. IN. Minim		Minimum	12	26	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
		Туре		Double Width - Double Inlet - Forward Curve				
		Construction		Aluminum Painted Steel				
	Housing	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-So 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)				

## PHYSICAL DATA