



Tranquility® Vertical Stack (TSM) Series

Models TSM09 - 36 - 60Hz - HFC -410A

The Tranquility® Vertical Stack (TSM) Series offers an innovative, labor-saving solution for spaces where individual, quiet control of the heating and cooling system is important. Using EarthPure® (HFC-410A) refrigerant, the Tranquility® Vertical Stack (TSM) Series not only protects the environment, it does so while delivering unprecedented comfort, efficiency, and reliability.

Advantages of the Vertical TSM Series:

- Exceeds ASHRAE 90.1 efficiencies
- Removable chassis allows staged installation and ease of maintenance
- Double isolation compressor mounting for quiet operation
- TXV metering device
- Unit or remote-mounted controls available
- Choice of high efficiency constant volume ECM, constant torque ECM, or PSC fan motors
- Cabinet can slide over riser ball valve easily, allowing riser stack to be completed first
- Microprocessor controls standard (optional DXM2 communicating controls)
- LonWorks, BACnet, Modbus and Johnson N2 compatibility options for DDC controls
- Unit Performance Sentinel performance monitoring system
- Multiple discharge air configurations with the option to have knock outs configured at the factory with dust covers on discharge air outlet and return air panel
- Stainless steel braided hose kits for connection from piping risers to chassis
- Wide variety of options including disconnect switch and extended range
- Optional industry leading Ultra-Quiet sound package
- Eight standard safeties
- Optional modulating motorized water valve in lieu of auto flow regulator and normal on/off motorized water valve
- Optional internal 200 PSI load matching pump (single pipe)
- Riser options for sweat or crimped connections
- Available with aesthetically designed Flush Mounted Return Air Panel

Unit Size

Model		W*	D*	H **
09 - 12	in.	17.0	17.0	88.0
	cm	43.8	43.8	223.5
15 - 18	in.	19.25	19.0	88.0
	cm	48.3	48.3	223.5
24 - 36	in.	24.0	24.0	88.0
	cm	61.0	61.0	223.5

* Not Including Riser

** Optional 80" Cabinet

Physical Data

Model	09	12	15	18	24	30	36
Compressor (1 Each)	Rotary				Scroll		
Factory Charge HFC-410A (oz) [kg]	35 [.99]		43 [2.69]	53 [3.31]	71 [4.44]	66 [4.13]	75 [2.13]
Motor & Blower							
PSC (HP) [W]	1/30 [25]	1/15 [50]	1/8 [93]		1/6 [124]	1/3 [249]	
ECM Constant Volume (HP) [W]	1/8 [93]		1/3 [249]		1/3 [249]	1/2 [373]	
ECM Constant Torque (HP) [W]	1/4 [186]		1/3 [249]		1/2 [373]		3/4 [560]
Blower Wheel Size (diam x w) - (in) [mm]	6.75 x 7.25 [165 x 184]		9.5 x 7.12 [241 x 180]		10.63 x 8.0 [270 x 203]		
Chassis Air Coil							
Air Coil Dimensions (h x w) - (in) [mm]	28 x 12.625 [711 x 321]		28 x 14 [711 x 356]		30 x 18 [762 x 457]		
Standard Filter - 1" [25.4 mm], (w x h) - (in) [mm]	14 x 30 [356 x 762]		16 x 30 [406 x 762]		20 x 32 [508 x 813]		
Coax Volume (Gallons) [l]	0.26 [.98]		0.36 [1.4]		0.60 [2.3]		
Hose Size (in)	1/2		3/4		1		
Weight							
Chassis - (lbs) [kg]	110 [50]	117 [53]	123 [56]	125 [57]	186 [84]	190 [86]	192 [87]
Cabinet - (lbs) [kg]	125 [57]		189 [86]		243 [110]		

Tested To ASHRAE/AHRI/ISO 13256-1 English (I-P) Units

Model with ECM Motor	Water Loop Heat Pump				Ground Loop Heat Pump			
	Cooling 86°F		Heating 68°F		Cooling 77°F		Heating 32°F	
	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
TSM09	9200	14.3	12200	5.4	9700	16.2	7100	3.3
TSM12	11800	14.1	15200	5.3	12100	16.8	9000	3.2
TSM15	14600	15.9	17500	5.3	15500	18.8	11000	3.6
TSM18	18000	15.2	22200	5.1	18500	17.3	13200	3.3
TSM24	25000	15.7	32500	5.1	26500	18.5	18200	3.5
TSM30	28000	15.1	34500	5.0	29000	17.6	22200	3.6
TSM36	35000	14.6	40500	5.0	36000	16.5	25500	3.5

Model with PSC Motor	Water Loop Heat Pump				Ground Loop Heat Pump			
	Cooling 86°F		Heating 68°F		Cooling 77°F		Heating 32°F	
	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
TSM09	9200	13.5	12200	5.0	9700	14.9	7100	3.2
TSM12	11800	13.7	15200	4.9	12100	15.0	9000	3.2
TSM15	14300	13.3	18000	4.8	15200	15.6	11500	3.3
TSM18	17300	13.2	22500	4.8	18400	15.1	13500	3.2
TSM24	25000	14.4	32500	4.9	26500	16.8	18400	3.4
TSM30	27500	13.4	34500	4.7	28500	15.2	22000	3.3
TSM36	35000	14.1	40500	4.9	36000	16.2	25500	3.4

Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature
 Heating capacities based upon 68°F DB, 59°F WB entering air temperature
 All units AHRI/ISO/ASHRAE 13256-1 rated on high speed motor TAP
 All ratings based upon operation at lower voltage of dual voltage rated models



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