

SELECTION AND CAPACITIES

Recommended Coil Selection Data

The table at the right describes the maximum recommended kW capacities and number of stages available for Titus single duct terminals.



To make a coil selection:

1. Check the desired kW is available in desired unit size and number of stages. (Required to prevent excessive watt density and current draw, while taking into account unit size limitations.)
2. Check the desired minimum airflow limit is within recommended operating range. (Ensures velocity pressure will be sufficient to close airflow sensing switch.)
3. Multiply desired minimum airflow limit by a factor of 0.0142 and check the result is equal to or greater than desired kW. (Limits temperature rise across the coil to 45°F.)

Titus electric heating coils are specifically designed for use with VAV terminal units. They include an extended plenum section and diffuser plate to minimize stratification. The heating elements are designed to minimize hot spots and nuisance tripping of the thermal cutouts.

$$kW \leq cfm \times 0.0142$$

must be within recommended ranges to ensure proper operation and long service life. For optimum diffuser performance and maximum thermal comfort, coil discharge temperatures should not be more than 15°F above desired room temperatures. For proper coil operation it is recommended that coil discharge temperatures do not to exceed 100°F.

These requirements established to prevent excessive temperature rise caused by low airflow and/or oversized coils. Minimum airflow limits

Note: The Titus 480V, 3-phase electric heat configuration is 4-wire wye. 3-wire configuration is available.

PESV, AESV, DESV / APPLICATION DATA (STAGED HEAT)

Inlet Size	Heating cfm Range	Number of Steps Available	120V 1 Phase kW Range		208V 1 Phase kW Range		240V 1 Phase kW Range		277V 1 Phase kW Range		208V 3 Phase kW Range		480V 3 Phase kW Range	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
4	55-225	1	0.5		0.5		1.0		1.0		1.5	3.0	2.5	3.0
		2	1.0	5.0	1.0	3.0	1.5	3.0	1.5	3.0	1.5	3.0	2.5	3.0
		3	1.5		1.5		2.0		2.5		2.5			
5	85-350	1	0.5		0.5		1.0		1.0		1.5	5.0	2.5	5.0
		2	1.0	5.0	1.0	5.0	1.5	5.0	1.5	5.0	1.5	5.0	2.5	5.0
		3	1.5		1.5		2.0		2.5		2.5			
6	105-500	1	0.5		0.5		1.0		1.0		1.5	7.5	2.5	7.5
		2	1.0	5.0	1.0	7.5	1.5	7.5	1.5	7.5	1.5	7.5	2.5	7.5
		3	1.5		1.5		2.0		2.5		2.5			
7	135-650	1	0.5		0.5		1.0		1.0		1.5	9.5	2.5	9.5
		2	1.0	5.0	1.0	9.5	1.5	9.5	1.5	9.5	1.5	9.5	2.5	9.5
		3	1.5		1.5		2.0		2.5		2.5			
8	190-900	1	0.5		0.5		1.0		1.0		1.5	13.0	2.5	13.0
		2	1.0	5.0	1.0	9.5	1.5	11.0	1.5	13.0	1.5	13.0	2.5	13.0
		3	1.5		1.5		2.0		2.5		2.5			
9	225-1050	1	0.5		0.5		1.0		1.0		1.5	16.0	2.5	16.0
		2	1.0	5.0	1.0	9.5	1.5	11.0	1.5	13.0	1.5	16.0	2.5	16.0
		3	1.5		1.5		2.0		2.5		2.5			
10	300-1400	1	0.5		0.5		1.0		1.0		1.5	21.0	2.5	21.0
		2	1.0	5.0	1.0	9.5	1.5	11.0	1.5	13.0	1.5	16.0	2.5	21.0
		3	1.5		1.5		2.0		2.5		2.5			
12	425-2000	1	0.5		0.5		1.0		1.0		1.5	30.0	2.5	30.0
		2	1.0	5.0	1.0	9.5	1.5	11.0	1.5	13.0	1.5	16.0	2.5	30.0
		3	1.5		1.5		2.0		2.5		2.5			
14	575-3000	1	0.5		1.0		1.0		1.5		1.5	36.0	3.0	36.0
		2	1.0	5.0	2.0	9.5	2.0	11.0	2.0	13.0	2.0	16.0	3.0	36.0
		3	1.5		3.0		3.0		3.0		3.0			
16	750-4000	1	0.5		1.0		1.0		1.5		1.5	36.0	3.0	36.0
		2	1.0	5.0	2.0	9.5	2.0	11.0	2.0	13.0	2.0	16.0	3.0	36.0
		3	1.5		3.0		3.0		3.0		3.0			
24x16	1800-8000	1	1.0		1.0		1.0		1.5		1.5	36.0	4.0	36.0
		2	2.0	5.0	2.0	9.5	2.0	11.0	3.0	13.0	2.0	16.0	4.0	36.0
		3	3.0		3.0		3.0		4.5		3.0			

Useful formulas:

$$kW = \frac{cfm \times \Delta T}{3160} \quad \text{or} \quad \Delta T = \frac{kW \times 3160}{cfm} \quad \text{or} \quad cfm = \frac{kW \times 3160}{\Delta T}$$

Where ΔT = air temperature rise.

PESV, AESV, DESV / APPLICATION DATA (LYNERGY HEAT)

Inlet Size	Heating cfm Range	120V 1 Phase kW Range		208V 1 Phase kW Range		240V 1 Phase kW Range		277V 1 Phase kW Range		208V 3 Phase kW Range		480V 3 Phase kW Range	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
4	55-225	0.5	2.5	0.5	3.0	1.0	3.0	1.0	3.0	1.5	3.0	2.5	3.0
5	85-350	0.5	4.5	0.5	5.0	1.0	5.0	1.0	5.0	1.5	5.0	2.5	5.0
6	105-500	0.5	5.0	0.5	7.5	1.0	7.5	1.0	7.5	1.5	7.5	2.5	7.5
7	135-650	0.5	5.0	0.5	9.5	1.0	9.5	1.0	9.5	1.5	9.5	2.5	9.5
8	190-900	0.5	5.0	0.5	9.5	1.0	11.0	1.0	13.0	1.5	10.5	2.5	13.0
9	225-1050	0.5	5.0	0.5	9.5	1.0	11.0	1.0	13.0	1.5	10.5	2.5	16.0
10	300-1400	0.5	5.0	0.5	9.5	1.0	11.0	1.0	13.0	1.5	10.5	2.5	21.0
12	425-2000	0.5	5.0	0.5	9.5	1.0	11.0	1.0	13.0	1.5	10.5	2.5	25.0
14	575-3000	0.5	5.0	1.0	9.5	1.0	11.0	1.5	13.0	1.5	10.5	3.0	25.0
16	750-4000	0.5	5.0	1.0	9.5	1.0	11.0	1.5	13.0	1.5	10.5	3.0	25.0
24x16	1800-8000	2.0	5.0	1.0	9.5	1.0	11.0	1.5	13.0	1.5	10.5	4.0	25.0

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