

Useful Information

(Energy Required to Heat Air)



At the heart of a side vented coating pan is the need for large volumes of heated air. In order to calculate the energy required for heating this air, the following table can be used.

Heating Air (Sensible Heat)

Using the table below, identify the volume of air along the bottom, and the required change in temperature from the left hand side.

For CSI TechniCota machines 200/400, nominal values have been identified.

Change in Temperature	°C	Power required to heat (kW)															m3/hr
		TechniCota 200							TechniCota 400								
	100	16.8	33.6	50.4	67.2	84.0	100.8	117.6	134.4	151.3	168.1	184.9	201.7	218.5	235.3		
95	16.0	31.9	47.9	63.9	79.8	95.8	111.8	127.7	143.7	159.7	175.6	191.6	207.5	223.5			
90	15.1	30.3	45.4	60.5	75.6	90.8	105.9	121.0	136.1	151.3	166.4	181.5	196.6	211.8			
85	14.3	28.6	42.9	57.1	71.4	85.7	100.0	114.3	128.6	142.8	157.1	171.4	185.7	200.0			
80	13.4	26.9	40.3	53.8	67.2	80.7	94.1	107.6	121.0	134.4	147.9	161.3	174.8	188.2			
75	12.6	25.2	37.8	50.4	63.0	75.6	88.2	100.8	113.4	126.0	138.6	151.3	163.9	176.5			
70	11.8	23.5	35.3	47.1	58.8	70.6	82.3	94.1	105.9	117.6	129.4	141.2	152.9	164.7			
65	10.9	21.8	32.8	43.7	54.6	65.5	76.5	87.4	98.3	109.2	120.2	131.1	142.0	152.9			
60	10.1	20.2	30.3	40.3	50.4	60.5	70.6	80.7	90.8	100.8	110.9	121.0	131.1	141.2			
55	9.2	18.5	27.7	37.0	46.2	55.5	64.7	73.9	83.2	92.4	101.7	110.9	120.2	129.4			
50	8.4	16.8	25.2	33.6	42.0	50.4	58.8	67.2	75.6	84.0	92.4	100.8	109.2	117.6			
45	7.6	15.1	22.7	30.3	37.8	45.4	52.9	60.5	68.1	75.6	83.2	90.8	98.3	105.9			
40	6.7	13.4	20.2	26.9	33.6	40.3	47.1	53.8	60.5	67.2	73.9	80.7	87.4	94.1			
35	5.9	11.8	17.6	23.5	29.4	35.3	41.2	47.1	52.9	58.8	64.7	70.6	76.5	82.3			
30	5.0	10.1	15.1	20.2	25.2	30.3	35.3	40.3	45.4	50.4	55.5	60.5	65.5	70.6			
25	4.2	8.4	12.6	16.8	21.0	25.2	29.4	33.6	37.8	42.0	46.2	50.4	54.6	58.8			
20	3.4	6.7	10.1	13.4	16.8	20.2	23.5	26.9	30.3	33.6	37.0	40.3	43.7	47.1			
15	2.5	5.0	7.6	10.1	12.6	15.1	17.6	20.2	22.7	25.2	27.7	30.3	32.8	35.3			
10	1.7	3.4	5.0	6.7	8.4	10.1	11.8	13.4	15.1	16.8	18.5	20.2	21.8	23.5			
5	0.8	1.7	2.5	3.4	4.2	5.0	5.9	6.7	7.6	8.4	9.2	10.1	10.9	11.8			
0	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000			
	0.14	0.28	0.42	0.56	0.69	0.83	0.97	1.11	1.25	1.39	1.53	1.67	1.81	1.94	m3/s		
Air Volume																	
Heating Air (Sensible Heat)						Change in Air Temperature (°C) x 1.21x Volume of Air (m3/sec)											

Note Information supplied in the leaflet is intended as a guide only.