

## Chinook Gas Furnace

### Multi-Position High Efficiency Condensing Furnace



- 1 stage PSC    CXX-1-D**
- 1 stage ECM    CXX-1-X**
- 2 stage PSC    CXX-2-D**
- 2 stage ECM    CXX-2-V**
- Modulating    CXX-M-V, CXX-M-S**
- Modulating Compact    CC15-M-V**

#### Features

- Certified for altitude up to 4500 ft without any derating
- Ultra-compact size, featuring the industry’s smallest footprint
- Right-sized for today’s more efficient homes and new codes
- Ideally suited to the replacement market
- Allows the Right-Sized System® in combination with the Alizé cooling unit
- Stainless steel primary and secondary heat exchangers
- Part of our HVAC in a box solution

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## SPECIFICATION TABLES

Model		CC15-M-V	C15-M-V	C30-M-V	C45-M-V	C60-M-V	C75-M-V	C105-M-V	C120-M-V
INPUT (BTU/hr)	HIGH (100%)	15 000	15 000	30 000	45 000	60 000	75 000	105 000	120 000
	LOW (40%)	6 000	6 000	12 000	18 000	24 000	30 000	42 000	48 000
OUTPUT (BTU/hr)	HIGH (100%)	14 445	14 595	28 860	43 515	58 080	72 000	101 430	116 400
	LOW (40%)	5 778	5 838	11 544	17 406	23 232	28 800	40 572	46 560
EFFICIENCY (%)		96.3	97.3	96.2	96.7	96.8	96	96.6	97
TEMP. RISE		20 - 55°F (11 - 30°C)		50 - 80°F (27-44 °C)	40 - 70 °F (22 -38°C)				
AIRFLOW (CFM)	HEATING HIGH (100%)	330	360	420	730	1 000	1 200	1 735	1 835
	HEATING LOW (40%)	85	295	300	360	430	480	630	645
	MAX <sup>1</sup>	400	1 000	1 200	1 285	1 750	1 760	1 961	2 138
	MAX <sup>2</sup>	400	600	720	770	1 235	1 260	N/A	N/A
MAX COOLING CAPACITY (TONS)		1	2.5	3	3	4.5	4.5	5	5
MOTOR HP		1/3	1/2	1/2	1/2	3/4	3/4	1	1
BLOWE SIZE		9" X 4"	12" X 6"	12" X 6"	12" X 6"	12" X 8"	12" X 9"	12" X 11"	12" X 11"

<sup>1</sup> Maximum CFM for total external static pressure of 0.5" w.c.

<sup>2</sup> Maximum CFM for Smart Duct™

Model		C15-M-S	C30-M-S	C45-M-S	C60-M-S
INPUT (BTU/hr)	HIGH (100%)	15 000	30 000	45 000	60 000
	LOW (40%)	6 000	12 000	18 000	24 000
OUTPUT (BTU/hr)	HIGH (100%)	14 595	28 860	43 515	58 080
	LOW (40%)	5 838	11 544	17 406	23 232
EFFICIENCY (%)		97.3	97.3	96.2	96.7
TEMP. RISE		20 - 55°F (11 - 30°C)	50 - 80°F (27-44 °C)	40 - 70 °F (22 -38°C)	
AIRFLOW (CFM)	HEATING HIGH (100%)	360	420	780	970
	HEATING LOW (40%)	295	300	355	350
	MAX <sup>1</sup>	1 200	1 345	1 400	1 950
	MAX <sup>2</sup>	860	950	980	1 450
MAX COOLING CAPACITY (TONS)		3	3	3.5	5
MOTOR HP		3/4	3/4	3/4	1
BLOWE SIZE		12" X 6"	12" X 6"	12" X 6"	12" X 8"

<sup>1</sup> Maximum CFM for total external static pressure of 0.5" w.c.

<sup>2</sup> Maximum CFM for Smart Duct™

Model		C45-2-V	C60-2-V	C75-2-V	C105-2-V	C120-2-V
INPUT (BTU/hr)	HIGH (100%)	45 000	60 000	75 000	105 000	120 000
	LOW (70%)	31 500	42 000	52 500	73 500	84 000
OUTPUT (BTU/hr)	HIGH (100%)	43 200	57 420	71 925	100 065	115 560
	LOW (70%)	30 240	40 194	50 348	70 046	80 892
EFFICIENCY (%)		96	95.7	95.9	95.3	96.3
TEMP. RISE		40 - 70°F (22 - 38°C)				
AIRFLOW (CFM)	HEATING HIGH (100%)	735	1 000	1 230	1 700	1 880
	HEATING LOW (70%)	535	690	830	1 200	1 400
	MAX	1 050	1 380	1 400	1 800	2 000
MAX COOLING CAPACITY		2.5	3.5	3.5	4.5	5
MOTOR HP		1/2	3/4	3/4	1	1
BLOWER SIZE		12" X 6"	12" X 8"	12" X 9"	12" X 11"	12" X 11"

Model		C45-2-D	C60-2-D	C75-2-D	C105-2-D	C120-2-D
INPUT (BTU/hr)	HIGH (100%)	45 000	60 000	75 000	105 000	120 000
	LOW (70%)	31 500	42 000	52 500	73 500	84 000
OUTPUT (BTU/hr)	HIGH (100%)	42 750	57 000	71 475	99 750	115 080
	LOW (70%)	29 925	39 900	50 033	69 825	80 556
EFFICIENCY (%)		95.0	95.0	95.3	95.0	95.9
TEMP. RISE		40 - 70°F (22 - 38°C)				
AIRFLOW (CFM)	HEATING HIGH (100%)	735	1 000	1 230	1 700	1 880
	HEATING LOW (70%)	535	690	830	1 200	1 400
	MAX	1 050	1 380	1 400	1 800	2 000
MAX COOLING CAPACITY (TONS)		2.5	3.5	3.5	4.5	5
MOTOR HP		1/2	1/2	3/4	1	1
BLOWER SIZE		12" X 6"	12" X 8"	12" X 9"	12" X 11"	12" X 11"

Model	PSC	C45-1-D	C60-1-D	C75-1-D	C105-1-D	C120-1-D
	X13	C45-1-X	C60-1-X	C75-1-X	C105-1-X	C120-1-X
<b>INPUT (BTU/hr)</b>	45 000	60 000	75 000	105 000	120 000	
<b>OUTPUT (BTU/hr)</b>	42 750	57 000	71 250	99 750	114 000	
<b>EFFICIENCY (%)</b>	95.0	95.0	95.0	95.0	95.0	
<b>TEMP. RISE</b>	40 - 70°F (22 - 38°C)					
<b>AIRFLOW HEATING (CFM)</b>	735	1 000	1 230	1 700	1 880	
<b>MAX AIRFLOW (CFM)</b>	1 000	1 200	1 400	1 600	1 900	
<b>MAX COOLING CAPACITY (TONS)</b>	2.5	3	3.5	4	5	
<b>MOTOR HP</b>	1/2	1/2	3/4	1	1	
<b>BLOWER SIZE</b>	12" X 6"	12" X 8"	12" X 9"	12" X 11"	12" X 11"	

## MAXIMUM EQUIVALENT STRAIGHT VENT LENGTH MODULATING AND 2 STAGE

Modulating and 2 stage unit			
Altitude (ft)	Unit size (BTU/hr)	Vent pipe diameter	
		2"	3"
0 to 4500	15,000	300	N/A
	30,000	180	N/A
	45,000	70	90
	60,000	70	90
	75,000	70	90
	105,000	15	80
	120,000	10	40

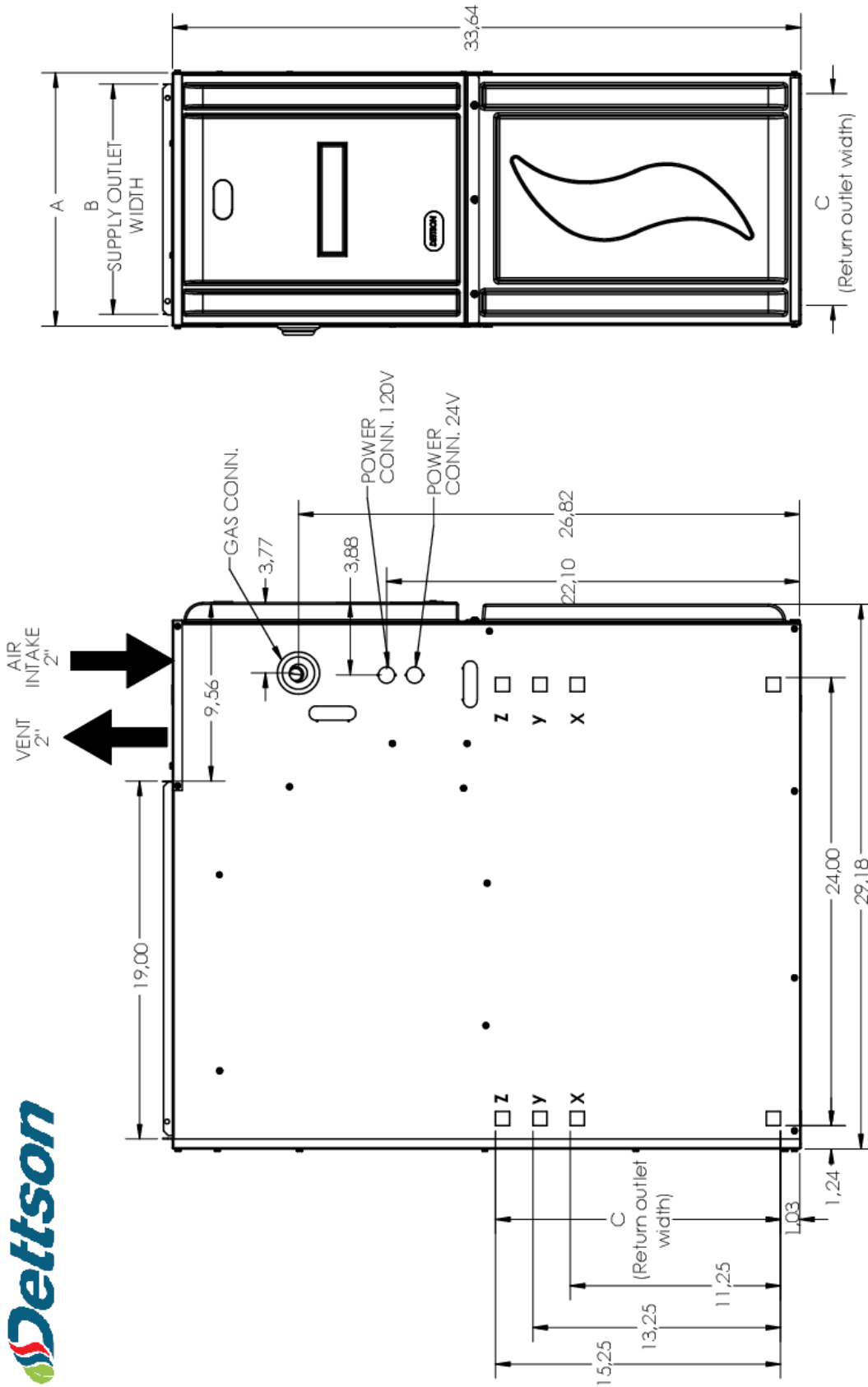
Single stage unit			
Altitude (ft)	Unit size (BTU/hr)	Vent pipe diameter	
		2"	3"
0 to 4500	45,000	70	90
	60,000	45	90
	75,000	30	90
	105,000	N/A	70
	120,000	N/A	40

## ELECTRICAL DATA

INPUT		15K COMPACT	15K	30K	45K	60K	75K	105K	120K
SHIP WEIGHT LB/KG		79 / 35.8	115 / 52.2	116 / 52.6	119 / 54.0	136 / 61.7	138 / 62.6	161 / 73.0	171 / 77.6
MAXIMUM CONSUMPTION (Amps/Breaker size)	MODULATING	8.6 / 10	10.7 / 15	10.7 / 15	12.6 / 15	15.6 / 20	15.6 / 20	19.0 / 20	19.0 / 20
	2 STAGE ECM	N/A	N/A	N/A	12.6 / 15	15.0 / 15	15.0 / 15	19.0 / 20	19.0 / 20
	2 STAGE PSC	N/A	N/A	N/A	15.3 / 20	15.3 / 20	15.0 / 15	19.1 / 20	19.1 / 20
	1 STAGE X13	N/A	N/A	N/A	11.9 / 15	11.9 / 15	13.5 / 15	16.6 / 20	16.6 / 20
	1 STAGE PSC	N/A	N/A	N/A	15.9 / 20	15.9 / 20	15.5 / 20	19.6 / 20	19.6 / 20
SUPPLY		115 Volts - 60 Hertz - 1 Phase							



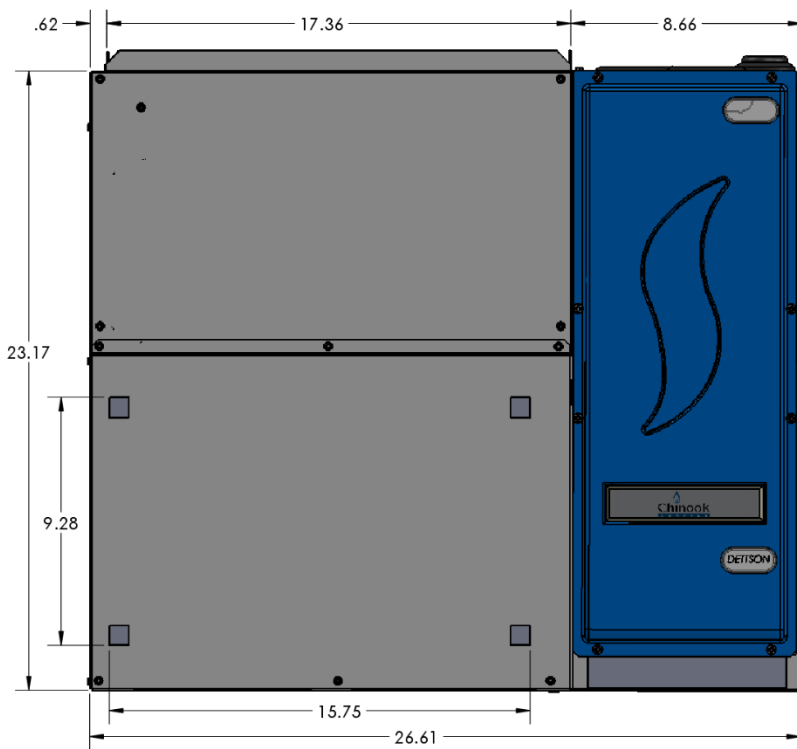
# DIMENSIONS



Air return	
Position	Furnace size
X	15 @ 45 000
Y	60 @ 75 000
Z	90 @ 120 000

Furnace size	A (Cabinet width)	B (Supply outlet width)	C (Return outlet width)	Filter size
15k	13.500	12.500	11.250	13 x 24
30k	13.500	12.500	11.250	13 x 24
45k	13.500	12.500	11.250	13 x 24
60k	15.750	14.750	13.250	15 x 24
75k	15.750	14.750	13.250	15 x 24
90k	21.188	20.000	15.250	17 x 24
105k	21.188	20.000	15.250	17 x 24
120k	21.188	20.000	15.250	17 x 24

## CHINOOK COMPACT DIMENSIONS



DNS1469 Rev.A

## MINIMUM CLEARANCE TO COMBUSTIBLE MATERIALS

Position	Clearance in (mm)
Rear	0
Front	0
Required for service	24" (610)
All sides of supply plenum <sup>1</sup>	1"(25) <sup>2</sup>
Sides	0
Vent	0
Top of furnace	1"(25) <sup>2</sup>

<sup>1</sup> For a distance of 3 ft

<sup>2</sup> The Chinook Compact (CC15-M-V) is certified zero clearance

# AIRFLOW CHARTS

PSC units

INPUT (BTU/hr)	Motor speed	Total External Static Pressure									
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
45000	HIGH	1120	1095	1045	1020	970	915	845	780	710	640
	MED-HI	1047	1045	980	940	880	835	775	715	665	585
	MED	935	950	910	865	820	780	730	670	600	565
	LOW	930	925	875	835	800	760	710	660	605	545
60000	HIGH	1374	1372	1370	1305	1230	1155	1085	1005	945	860
	MED-HI	1198	1195	1134	1085	1025	975	925	875	814	740
	MED	1155	1150	1100	1050	1000	955	905	860	795	725
	LOW	1026	1005	980	945	905	865	820	780	720	655
75000	HIGH	1617	1615	1540	1440	1355	1280	1204	1182	1060	980
	MED-HI	1675	1670	1590	1480	1382	1300	1219	1192	1065	982
	MED	1500	1496	1388	1289	1188	1133	1087	1083	1015	975
	LOW	1272	1197	1148	1108	1042	967	913	824	777	749
105000	HIGH	1748	1740	1615	1515	1430	1355	1285	1195	1110	1030
	MED-HI	1700	1655	1550	1435	1360	1285	1230	1150	1080	990
	MED	1415	1405	1325	1240	1180	1135	1070	1005	930	845
	LOW	1165	1130	1065	1025	975	935	870	830	775	705
120000	HIGH	1950	1950	1940	1940	1930	1930	1920	1920	1900	1900
	MED-HI	1473	1470	1465	1380	1315	1250	1180	1100	1010	930
	MED	1326	1325	1255	1185	1120	1050	970	915	855	790
	LOW	1188	1180	1135	1080	1025	970	930	890	830	790



2 stage ECM units

45 000 BTU/hr	<b>1st stage - Heating</b>										
	<b>Motor speed</b>	<b>Total External Static pressure</b>									
		<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b>1</b>
	A	505	495	485	475	470	465	460	450	450	445
	B	620	600	590	585	580	580	570	570	560	555
	C	545	535	530	525	520	515	505	500	495	495
	D	440	430	420	415	410	405	400	400	395	385
	<b>2nd stage - Heating</b>										
	<b>Motor speed</b>	<b>Total External Static pressure</b>									
		<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b>1</b>
	A	730	715	705	690	690	685	680	670	670	665
	B	915	890	865	850	845	845	840	835	830	810
C	740	725	710	700	700	690	685	685	680	670	
D	655	640	635	630	625	620	615	605	600	590	

60 000 BTU/hr	<b>1st stage - Heating</b>										
	<b>Motor speed</b>	<b>Total External Static pressure</b>									
		<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b>1</b>
	A	744	745	735	725	720	705	705	695	685	675
	B	915	910	910	900	895	890	880	870	865	855
	C	835	835	825	820	815	805	795	790	780	775
	D	776	770	770	770	765	755	750	750	735	730
	<b>2nd stage - Heating</b>										
	<b>Motor speed</b>	<b>Total External Static pressure</b>									
		<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b>1</b>
	A	1127	1125	1120	1110	1100	1100	1090	1080	1075	1075
	B	1363	1352	1355	1350	1340	1335	1325	1315	1305	1265
C	1254	1250	1230	1230	1220	1220	1215	1205	1195	1190	
D	1183	1180	1180	1175	1165	1165	1160	1155	1150	1140	

45 000 BTU/hr	<b>1st stage -Heating</b>										
	<b>Motor speed</b>	<b>Total External Static pressure</b>									
		<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b>1</b>
	A	505	495	485	475	470	465	460	450	450	445
	B	620	600	590	585	580	580	570	570	560	555
	C	545	535	530	525	520	515	505	500	495	495
	D	440	430	420	415	410	405	400	400	395	385
	<b>2nd stage - Heating</b>										
	<b>Motor speed</b>	<b>Total External Static pressure</b>									
		<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b>1</b>
	A	730	715	705	690	690	685	680	670	670	665
	B	915	890	865	850	845	845	840	835	830	810
C	740	725	710	700	700	690	685	685	680	670	
D	655	640	635	630	625	620	615	605	600	590	

60 000 BTU/hr	<b>1st stage -Heating</b>										
	<b>Motor speed</b>	<b>Total External Static pressure</b>									
		<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b>1</b>
	A	744	745	735	725	720	705	705	695	685	675
	B	915	910	910	900	895	890	880	870	865	855
	C	835	835	825	820	815	805	795	790	780	775
	D	776	770	770	770	765	755	750	750	735	730
	<b>2nd stage - Heating</b>										
	<b>Motor speed</b>	<b>Total External Static pressure</b>									
		<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b>1</b>
	A	1127	1125	1120	1110	1100	1100	1090	1080	1075	1075
	B	1363	1352	1355	1350	1340	1335	1325	1315	1305	1265
C	1254	1250	1230	1230	1220	1220	1215	1205	1195	1190	
D	1183	1180	1180	1175	1165	1165	1160	1155	1150	1140	

75 000 BTU/hr	<b>1st stage -Heating</b>										
	<b>Motor speed</b>	<b>Total External Static pressure</b>									
		<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b>1</b>
	A	860	880	920	925	935	945	955	960	965	860
	B	885	930	935	940	960	970	975	980	980	885
	C	825	850	880	890	895	910	920	925	925	825
	D	805	820	850	860	870	875	885	890	900	805
	<b>2nd stage - Heating</b>										
	<b>Motor speed</b>	<b>Total External Static pressure</b>									
		<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b>1</b>
	A	1260	1295	1340	1350	1360	1370	1369	1370	1260	1295
	B	1280	1315	1350	1390	1405	1425	1420	1430	1280	1315
C	1205	1250	1280	1290	1290	1305	1320	1320	1205	1250	
D	1170	1205	1245	1250	1360	1265	1270	1275	1170	1205	

105 000 BTU/hr	<b>1st stage -Heating</b>										
	<b>Motor speed</b>	<b>Total External Static pressure</b>									
		<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b>1</b>
	A	1257	1255	1230	1225	1220	1220	1215	1210	1205	1205
	B	1499	1490	1475	1465	1460	1465	1460	1450	1445	1420
	C	1375	1350	1340	1345	1345	1345	1340	1340	1335	1325
	D	1155	1135	1130	1130	1125	1125	1125	1120	1115	1115
	<b>2nd stage - Heating</b>										
	<b>Motor speed</b>	<b>Total External Static pressure</b>									
		<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b>1</b>
	A	1765	1760	1750	1720	1725	1705	1665	1620	1565	1525
	B	1873	1854	1850	1830	1775	1700	1660	1610	1555	1515
C	1888	1874	1860	1825	1770	1705	1655	1610	1555	1520	
D	1655	1645	1650	1650	1650	1640	1625	1605	1555	1515	

120 000 BTU/hr	<b>1st stage -Heating</b>										
	<b>Motor speed</b>	<b>Total External Static pressure</b>									
		<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b>1</b>
	A	1664	1637	1590	1570	1560	1550	1525	1490	1450	1385
	B	2046	1993	1960	1880	1820	1770	1720	1675	1625	1570
	C	1912	1864	1795	1780	1730	1675	1630	1575	1525	1475
	D	1475	1455	1440	1425	1425	1425	1395	1385	1370	1325
	<b>2nd stage - Heating</b>										
	<b>Motor speed</b>	<b>Total External Static pressure</b>									
		<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b>1</b>
	A	2030	2026	1985	1905	1850	1790	1750	1705	1625	1580
	B	2020	2019	1955	1920	1850	1780	1730	1700	1615	1565
C	2030	2021	1955	1920	1850	1780	1730	1700	1615	1565	
D	2033	2019	1950	1920	1865	1780	1730	1710	1615	1565	

**Modulating units**

Model	INPUT (%)	Total External Static pressure									
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
		CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM
CC15-M-V compact	100%	330	330	330	330	330	330	330	330	330	330
	40%	85	85	85	85	85	85	85	85	85	85
C15-M-S	100%	360	360	360	360	360	360	360	360	360	360
	40%	295	295	295	295	295	295	295	295	295	295
C15-M-V	100%	360	360	360	360	360	360	360	360	360	360
	40%	295	295	295	295	295	295	295	295	295	295
C30-M-S	100%	420	420	420	420	420	420	420	420	420	420
	40%	300	300	300	300	300	300	300	300	300	300
C30-M-V	100%	420	420	420	420	420	420	420	420	420	420
	40%	275	280	290	300	300	280	275	265	265	265
C45-M-S	100%	710	710	710	745	780	785	795	800	805	810
	40%	385	385	385	370	355	345	325	335	335	330
C45-M-V	100%	675	675	675	715	730	750	760	780	775	780
	40%	325	325	355	360	360	365	360	365	360	350
C60-M-S	100%	925	925	925	925	970	980	975	990	1005	1010
	40%	380	380	380	370	350	305	290	280	265	255
C60-M-V	100%	850	900	950	975	1000	990	1015	1010	1020	1020
	40%	480	465	465	470	430	475	450	410	380	375
C75-M-V	100%	1235	1230	1215	1210	1200	1200	1180	1170	1160	1155
	40%	505	500	485	475	480	460	460	450	440	440
C105-M-V	100%	1790	1785	1775	1750	1735	1700	1660	1630	1595	1580
	40%	685	665	640	640	630	620	610	605	595	575
C120-M-V	100%	1935	1930	1925	1865	1835	1820	1815	1800	1795	1775
	40%	710	700	675	660	645	635	625	635	635	630