

Spirit series^{by}

Thermo Products, LLC

OIL FIRED LOWBOY FURNACE SPECIFICATIONS

MODEL NO.	VL8FA119P60B / VL8RA119P60B (BECKETT AFG)		
HEATING CAPACITY	High Fire	* Med Fire	Low Fire
HEAT INPUT RATE (BTUH)	156,250	140,000	119,000
OUTPUT BTUH ¹	132,000	119,000	101,000
SEASONAL EFFICIENCY ²	* 85.0%		
LARGEST REC A/C ³	5 Tons		
NOMINAL TEMP RISE	66°	66°	66°
CASING HEIGHT (IN.):	38-1/2"		
CASING WIDTH (IN.):	24-1/2"		
CASING DEPTH (IN.):	55-1/2"		
NOMINAL FLUE OUTLET DIA.	7"		
APPROX SHIPPING WEIGHT (LBS)	320 / 322		
APPROVAL AGENCY	ETL		
QTY AND SIZE OF PERMANENT FILTERS	(2) 11-3/4" X 21-3/4"		
ELECTRICAL REQUIREMENTS	120/60/1		
MAX FUSE SIZE	20		
TOTAL CURRENT(AMPS)	19.3 / 18.7		
HEIGHT FROM FLOOR TO CENTER OF FLUE	29-1/2"		
SUPPLY AIR OUTLET SIZE (W-IN. X D-IN.)	20" X 20"		
RETURN AIR INLET SIZE (W-IN. X D-IN.)	20" X 16"		
FIELD VENT TERMINATION KIT	AOPS8414		
SIDEWALL VENT ACCESSORIES KIT	AOPS8394		
COMBUSTION AIR KIT FOR BECKETT	AOPS8397		
BLOCKED VENT KIT ⁴	AOPS2686		

* AS SHIPPED SETTING

- SEE NEXT PAGE FOR MORE DATA -

¹ OUTPUT BTUH BASED ON ANNUAL FUEL UTILIZATION EFFICIENCY RATED BY MANUFACTURER.

² SEASONAL EFFICIENCY (ALSO CALLED AFUE - ANNUAL FUEL UTILIZATION EFFICIENCY) RATINGS ARE BASED ON TESTS FOLLOWING U.S. DEPARTMENT OF ENERGY TEST PROCEDURES.

³ TO PERMIT LARGEST RECOMMENDED AIR CONDITIONING (AT .5 STATIC PRESSURE), SELECTION OF THE HIGHEST MOTOR SPEED IS REQUIRED.

ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

⁴ NOT TO BE USED IN SIDEWALL VENT APPLICATIONS. USE ONLY WHEN CHIMNEY VENTED.

OIL FIRED LOWBOY FURNACE SPECIFICATIONS

Model Number Digit	1	2	3	4	5	6	7	8	9	10	11	12
	Brand	Configuration	Heat Exchanger Identifier	Flue	Design Change	Capacity	Capacity	Capacity	Blower Motor Type	Airflow Capacity for Cooling	Airflow Capacity for Cooling	Burner
Oil Furnace Model Nomenclature	V	L	8	F	A	1	1	9	P	6	0	B
Example Model Numbers	V	L	8	R	A	1	1	9	P	6	0	B
V= Spirit	V											
L = Lowboy		L										
8= Heat Exchanger Identifier			8									
F = Vertical Front Flue, R = Rear Flue				F								
Design Change					A							
Heating Output MBTUH (000's) – factory shipped						1	1	9				
P = PSC¹									P			
Airflow: 60MBTUH = 5 Tons @ 400cfm/ton										6	0	
B = Beckett AFG												B

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¹ PSC = PERMANENT SPLIT CAPACITOR

OIL FIRED LOWBOY FURNACE SPECIFICATIONS

BLOWER DATA:	VL8FA119P60B	VL8RA119P60B
BLOWER MODEL	DD 12-11T	DD 12-11T
MOTOR H.P.	1 HP	3/4 HP
MOTOR TYPE & NUMBER OF SPEEDS	PSC - 4	PSC - 4
HIGH SPEED AIRFLOW (SCFM) @ 0.5 IN. W.G. EXTERNAL STATIC PRESSURE:	2012	1998
Diameter x Width	11 x 11	11 x 11

BURNER DATA	BECKETT "AFG" S - PLATE 3383 (2-3/4U) 31517 CERAMIC		
AIR TUBE LENGTH (IN.)	4 ½"		
BURNER HEAD TYPE:	F6		
FUEL TYPE:	#2		
NOZZLE RATING (GPH):	1.10	1.00	0.85
SPRAY ANGLE (DEG.):	80°	80°	80°
SPRAY PATTERN:	HOLLOW (A)	HOLLOW (A)	HOLLOW (A)
OIL PUMP PRESSURE (PSIG):	120 PSI		
COMBUSTION CHAMBER TYPE:	REFRACTORY (SOFT FIBER)		

CLEARANCES	
	MINIMUM CLEARANCES TO COMUSTIBLE MATERIALS:
SIDES	0"
FRONT (SERVICE ACCESS)	24"
REAR	0"
FLUE	8"
TOP PLENUM	1"

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OIL FIRED LOWBOY FURNACE SPECIFICATIONS

VL8FA119P60B

ALTERATIONS REQ'D FOR A/C @ DESIGN EXTERNAL STATIC PRESSURE				
COOLING UNIT	HTG Speed by Input			Recommended CLG Speed
	Low Fire	Mid Fire	High Fire	
36,000	Low	ML	MH	Low
42,000	Low	ML	MH	Med Low
48,000	Low	ML	MH	Med High
60,000	Low	ML	MH	High

AS SHIPPED CLG. →

Speed Tap\ Static Pressure	Furnace Airflow (CFM) vs. External Static pressure (in. WC.)						
	0.1	0.2	0.3	0.4	0.5	0.6	0.7
Low	1362	1344	1293	1256	1234	1167	1111
ML	1645	1611	1599	1556	1496	1445	1389
MH	1896	1868	1818	1779	1710	1643	1561
High	2356	2235	2168	2087	2012	1919	1845
Furnace Motor Current Draw (Amps/Watts) vs. External Static pressure (in. WC.)							
Low	6.8 649	6.5 639	6.4 620	6.1 610	6.0 595	5.9 589	5.6 574
ML	8.4 819	8.3 801	7.9 793	7.8 781	7.6 765	7.3 741	6.9 710
MH	9.9 977	9.6 961	9.1 915	8.5 885	8.3 857	7.8 833	7.5 798
High	12.2 1280	11.6 1220	11.1 1160	10.7 1130	10.4 1090	10.0 1050	9.8 1020

Speed Tap\ Static Pressure	High Fire Temperature Rise vs. External Static pressure (in. WC.)						
	0.1	0.2	0.3	0.4	0.5	0.6	0.7
Low	90	91	95	98	100	105	111
ML	75	76	77	79	82	85	89
MH	65	66	68	69	72	75	79
High	52	55	57	59	61	64	67

AS SHIPPED HTG. →

Speed Tap\ Static Pressure	Mid Fire Temperature Rise vs. External Static pressure (in. WC.)						
	0.1	0.2	0.3	0.4	0.5	0.6	0.7
Low	81	82	85	88	89	94	99
ML	67	68	69	71	74	76	79
MH	58	59	61	62	64	67	71
High	47	49	51	53	55	57	60

Speed Tap\ Static Pressure	Low Fire Temperature Rise vs. External Static pressure (in. WC.)						
	0.1	0.2	0.3	0.4	0.5	0.6	0.7
Low	69	70	72	75	76	80	84
ML	57	58	59	60	63	65	67
MH	49	50	52	53	55	57	60
High	40	42	43	45	47	49	51

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OIL FIRED LOWBOY FURNACE SPECIFICATIONS

VL8RA119P60B

ALTERATIONS REQ'D FOR A/C @ DESIGN EXTERNAL STATIC PRESSURE				
COOLING UNIT	HTG Speed by Input			Recommended CLG Speed
	Low Fire	Mid Fire	High Fire	
36,000	Low	ML	MH	Low
42,000	Low	ML	MH	Med Low
48,000	Low	ML	MH	Med High
60,000	Low	ML	MH	High

AS SHIPPED CLG. →

Speed Tap\ Static Pressure	Furnace Airflow (CFM) vs. External Static pressure (in. WC.)							
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	
Low	1329	1330	1315	1282	1238	1189	1158	
ML	1598	1576	1572	1546	1489	1404	1355	
MH	1863	1842	1829	1787	1730	1690	1604	
High	2218	2160	2136	2066	1998	1942	1845	
Furnace Motor Current Draw (Amps/Watts) vs. External Static pressure (in. WC.)								
Low	7.0 649	6.7 635	6.3 611	6.2 596	6.0 579	5.8 560	5.7 551	
ML	8.5 816	7.9 769	8.2 786	7.9 739	7.3 715	6.9 677	6.6 657	
MH	9.9 960	9.4 938	9.1 903	8.8 883	8.7 870	8.5 853	8.0 804	
High	12.0 1210	11.3 1150	11.0 1110	10.5 1070	10.3 1040	10.1 1010	9.5 958	

Speed Tap\ Static Pressure	High Fire Temperature Rise vs. External Static pressure (in. WC.)							
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	
Low	93	92	94	96	99	103	106	
ML	77	78	78	80	83	88	91	
MH	66	67	69	69	71	73	77	
High	55	57	58	60	62	63	67	

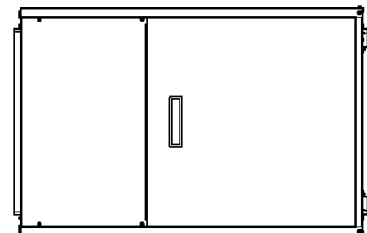
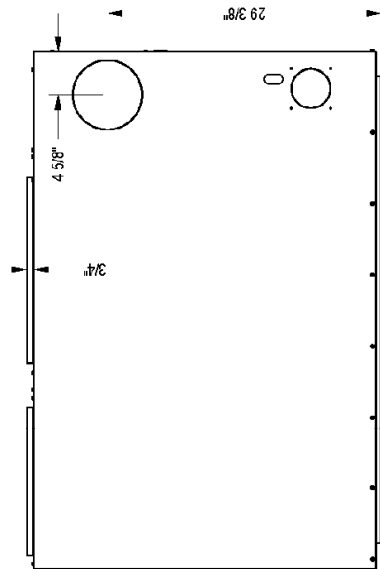
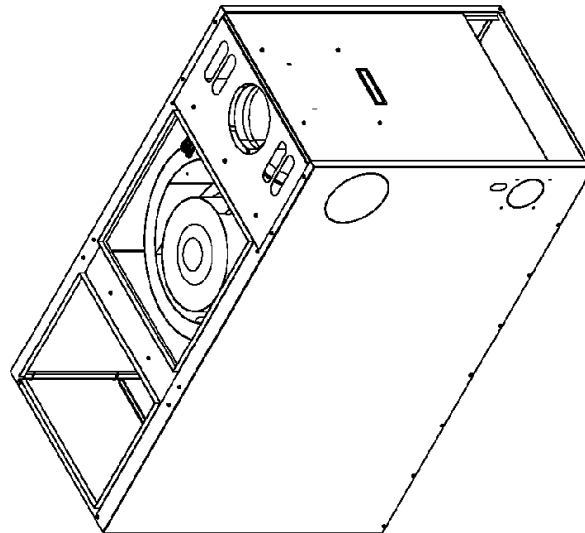
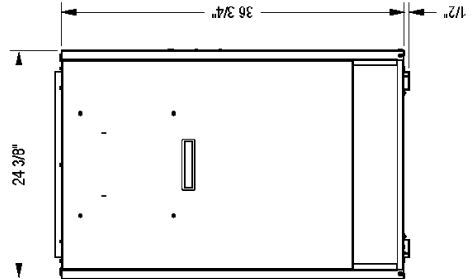
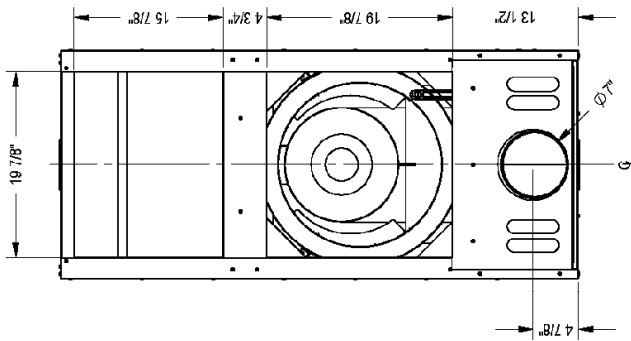
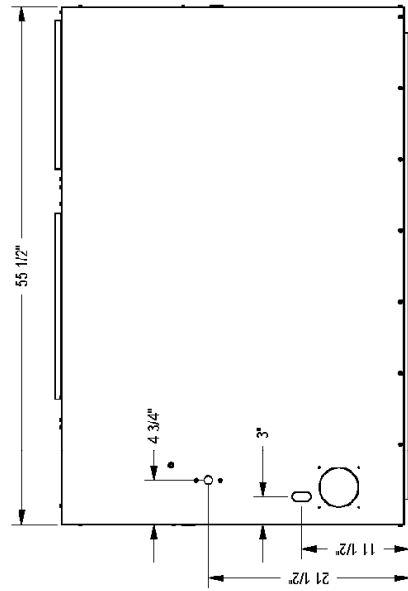
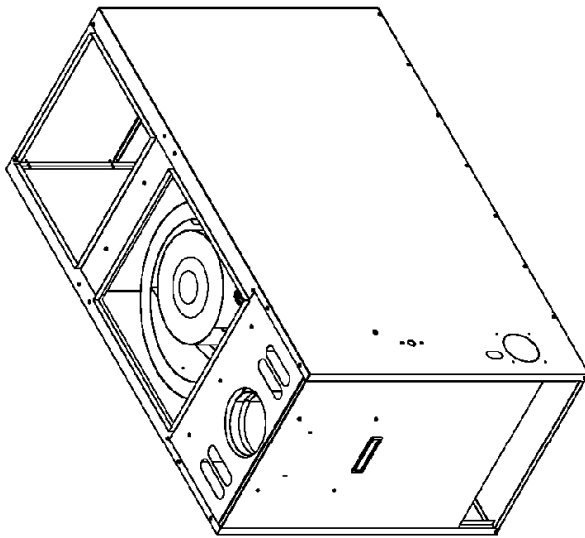
AS SHIPPED HTG. →

Speed Tap\ Static Pressure	Mid Fire Temperature Rise vs. External Static pressure (in. WC.)							
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	
Low	81	83	84	86	89	93	95	
ML	69	70	70	71	74	78	81	
MH	59	60	60	62	64	65	69	
High	50	51	52	53	55	57	60	

Speed Tap\ Static Pressure	Low Fire Temperature Rise vs. External Static pressure (in. WC.)							
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	
Low	70	70	71	73	76	79	81	
ML	59	59	60	61	63	67	69	
MH	50	51	52	52	54	55	58	
High	42	43	44	45	47	48	51	

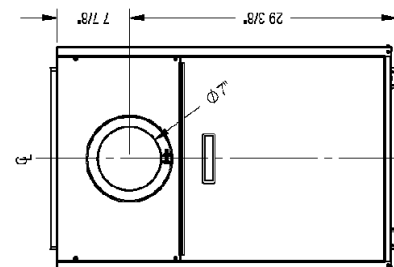
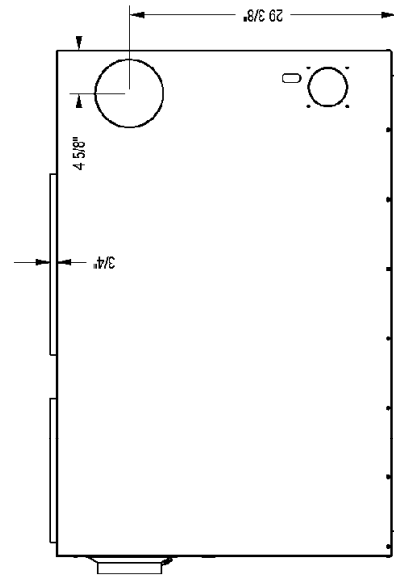
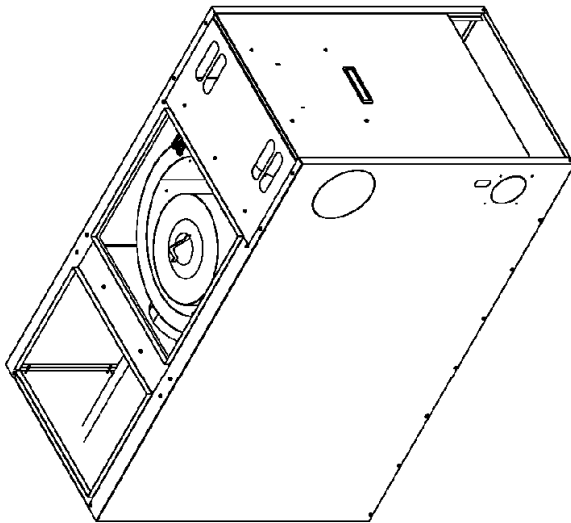
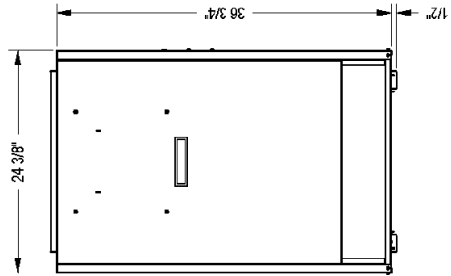
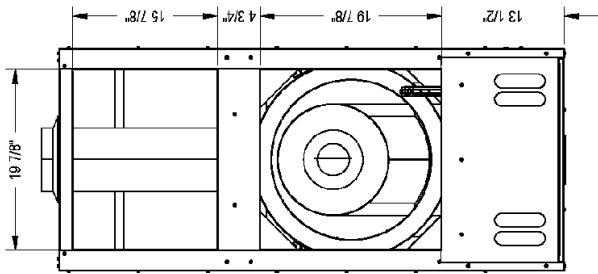
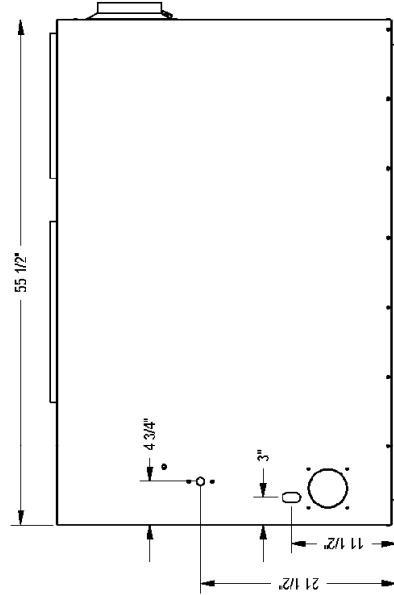
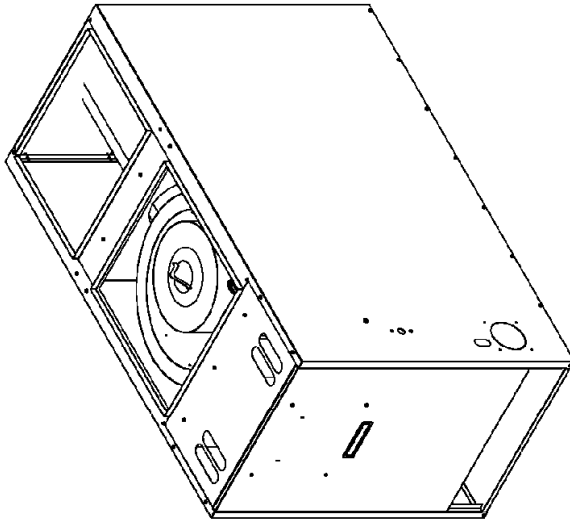
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OIL FIRED LOWBOY FURNACE SPECIFICATIONS (VL8FA119P60B)



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OIL FIRED LOWBOY FURNACE SPECIFICATIONS (VL8RA119P60B)



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OIL FIRED LOWBOY FURNACE SPECIFICATIONS

A/C Evaporator Coil Applications

Furnace Model Number	AC Tonnage	Line Set	Cond. Model Number	Coil Model Number	Capacity	EER	SEER	AHRI Reference Number
VL8FA119P60B VL8RA119P60B	3	LS01E-30	TC4B3621H	HE33636PA212	34400	11.70	14.00	9136139
				HE47636PA212	34600	12.20	14.50	9136140
		LS01E-50	TC7B3621S	HE33636PA212	34800	12.20	15.00	9136149
				HE47636PA212	36000	13.00	16.00	9136150
	3.5	LS02E-30	TC7B4221S	-	-	-	-	-
				HE50660PA212	41500	13.00	16.00	9136152
	LS02E-50	TC4B4821H	-	-	-	-	-	
			HE50660PA212	47500	12.20	14.50	9136144	
	4	LS02E-30	TC7B4821S	-	-	-	-	-
				HE50660PA212	45500	12.50	15.00	9136154
	LS02E-50	TC4B6021S	-	-	-	-	-	
			HE50660PA212	56000	12.20	14.00	10156162	
5	1 1/8" ¹	3/8"	-	-	-	-	-	
			HE50660PA212	56000	12.20	14.00	10156162	

¹ Adapter fitting must be field supplied to connect required 1 1/8" line set to 7/8" service valve connection.