

## OIL FIRED UPFLOW FURNACE SPECIFICATIONS

MODEL NO.	THV1C072A948SA (BECKETT AFG)			THV1C072A9V4SA (BECKETT AFG)		
	High Fire	Med Fire	Low Fire	High Fire	Med Fire	Low Fire
HEATING CAPACITY						
HEAT INPUT RATE (BTUH)	106,250	85,000	70,000	106,250	85,000	70,000
OUTPUT BTUH <sup>1</sup>	90,000	72,000	60,000	90,000	72,000	60,000
SEASONAL EFFICIENCY <sup>2</sup>	85.0%			85.0%		
LARGEST REC A/C <sup>3</sup>	4 Tons			4 Tons		
NOMINAL TEMP RISE	70°	70°	70°	70°	70°	70°
HEAT EXCHANGE AREA						
CASING HEIGHT (IN.):	45"			45"		
CASING WIDTH (IN.):	21"			21"		
CASING DEPTH (IN.):	30"			30"		
NOMINAL FLUE OUTLET DIA.	5"			5"		
APPROX SHIPPING WEIGHT	270			270		
APPROVAL AGENCY	ETL			ETL		
QTY AND SIZE OF PERMANENT FILTERS	(1) 25" X 16" X 1"			(1) 25" X 16" X 1"		
ELECTRICAL REQUIREMENTS	120/60/1			120/60/1		
MAX FUSE SIZE	15			15		
TOTAL CURRENT (AMPS)	8.7			12.1		
HEIGHT FROM FLOOR TO CENTER OF FLUE	40-11/16"			40-11/16"		
SUPPLY AIR OUTLET SIZE (W-IN. X D-IN.)	19" X 19"			19" X 19"		
RETURN AIR DUCTWORK CONNECTION FLANGE SIZE ON FILTER RACK (D-IN. X H-IN.)	24 X 14-1/4"			24" X 14-1/4"		
RETURN AIR INLET OPENING SIZE IN SIDE CASING (TO BE CUT-OUT BY DEALER) (D-IN. X H-IN.)	23" X 14"			23" X 14"		
FIELD VENT TERMINATION KIT	AOPS8393			AOPS8393		
SIDEWALL VENT ACCESSORIES KIT	AOPS8394			AOPS8394		
COMBUSTION AIR KIT FOR BECKETT	AOPS8397			AOPS8397		
BLOCKED VENT KIT <sup>4</sup>	AOPS2687			AOPS2687		

- SEE NEXT PAGE FOR MORE DATA -

<sup>1</sup> OUTPUT BTUH BASED ON ANNUAL FUEL UTILIZATION EFFICIENCY RATED BY MANUFACTURER.

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

<sup>3</sup> 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.

<sup>4</sup> NOT TO BE USED IN SIDEWALL VENT APPLICATIONS, USE ONLY WHEN CHIMNEY VENTED.

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Model Number Digit	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Brand	Configuration	Flue	Heating Stages	Cabinet Width	Capacity	Capacity	Capacity	Major Modification	Voltage	Airflow Capacity for Cooling	Airflow Capacity for Cooling	Efficiency	Minor Modification
<b>Oil Furnace Model Nomenclature</b>	T	H	V	1	C	0	7	2	A	9	4	8	S	A
<b>Example Model Numbers</b>	T	H	V	1	C	0	7	2	A	9	V	4	S	A
<b>T= Trane</b>	T													
<b>H = Highboy</b>		H												
<b>V = Vertical Front Flue</b>			V											
<b>1= Single Stage</b>				1										
<b>Cabinet Width: C=21"</b>					C									
<b>Heating Output MBTUH (000's) – factory shipped</b>						0	7	2						
<b>Major Design Change</b>									A					
<b>Voltage (9= 115 Volts)</b>										9				
<b>Airflow: 48MBTUH = 4 Tons</b>											4	8		
<b>Airflow: V4=4 Tons Variable Speed</b>											V	4		
<b>S= Standard Efficiency</b>													S	
<b>Minor Design Change</b>														A

- SEE NEXT PAGE FOR MORE DATA -

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<b>BLOWER DATA:</b>	<b>THV1C072A948SA</b>	<b>THV1C072A9V4SA</b>
<b>BLOWER MODEL<sup>5</sup></b>	<b>DD 100-9R</b>	<b>DD 100-9R</b>
<b>MOTOR H.P.</b>	½ HP	¾ HP
<b>MOTOR TYPE &amp; NUMBER OF SPEEDS</b>	PSC - 4	ECM
<b>HIGH SPEED AIRFLOW (SCFM) @ 0.5 IN. W.G. EXTERNAL STATIC PRESSURE:</b>	1569	1600
<b>Diameter x Width</b>	10 x 9	10 x 9

<b>BURNER DATA</b>	<b>BECKETT "AFG" S - PLATE 3912 (3-5/8U) 31517 CERAMIC</b>		
<b>AIR TUBE LENGTH (IN.)</b>	4 ½"		
<b>BURNER HEAD TYPE:</b>	F-3		
<b>FUEL TYPE:</b>	#2		
<b>NOZZLE RATING (GPH):</b>	.75	.60	.50
<b>SPRAY ANGLE (DEG.):</b>	80°	80°	80°
<b>SPRAY PATTERN:</b>	HOLLOW (A)	HOLLOW (A)	HOLLOW (A)
<b>OIL PUMP PRESSURE (PSIG):</b>	120 PSI		
<b>COMBUSTION CHAMBER TYPE:</b>	REFRACTORY (SOFT CHAMBER)		

<b>CLEARANCES</b>	
	<b>MINIMUM CLEARANCES TO COMUSTIBLE MATERIALS:</b>
<b>SIDES</b>	0"
<b>FRONT (SERVICE ACCESS)</b>	24"
<b>REAR</b>	0"
<b>FLUE</b>	7"
<b>TOP PLENUM</b>	1"

<sup>5</sup> DD = DIRECT DRIVE

- SEE NEXT PAGE FOR MORE DATA -

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## THV1C072A948SA

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	
24,000	Low	ML	MH	Low
30,000	Low	ML	MH	Med Low
36,000	Low	ML	MH	Med High
42,000	Low	ML	MH	Med High
48,000	Low	ML	MH	High

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
<b>Low</b>	930	915	912	910	822	774	730
<b>ML</b>	1155	1152	1130	1126	1085	1042	920
<b>MH</b>	1442	1432	1418	1382	1334	1293	1230
<b>High</b>	1802	1762	1705	1635	1569	1493	1428
Speed Tap\ Static Pressure	Furnace Motor Current Draw (Amps) vs. External Static pressure (in. WC.)						
	0.1	0.2	0.3	0.4	0.5	0.6	0.7
<b>Low</b>	3.28	3.1	3.02	2.91	2.64	2.49	2.36
<b>ML</b>	4.18	4.02	3.91	3.74	3.59	3.34	2.95
<b>MH</b>	5.44	5.17	4.95	4.72	4.43	4.21	3.95
<b>High</b>	6.61	6.36	6.04	5.73	5.46	5.17	4.9

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
<b>Low</b>	90	91	91	92	101	108	114
<b>ML</b>	72	72	74	74	77	80	91
<b>MH</b>	58	58	59	60	62	64	68
<b>High</b>	46	47	49	51	53	56	58

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
<b>Low</b>	72	73	73	73	81	86	91
<b>ML</b>	58	58	59	59	61	64	72
<b>MH</b>	46	47	47	48	50	52	54
<b>High</b>	37	38	39	41	42	45	47

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
<b>Low</b>	60	61	61	61	68	72	76
<b>ML</b>	48	48	49	49	51	53	60
<b>MH</b>	39	39	39	40	42	43	45
<b>High</b>	31	32	33	34	35	37	39

- SEE NEXT PAGE FOR MORE DATA -

# OIL FIRED UPFLOW FURNACE SPECIFICATIONS

## THV1C072A9V4SA ECM BLOWER

	outdoor unit size (tons)	airflow setting	dip switch setting					external static pressure					Performance Options		
			sw1	sw2	sw3	sw4		0.1	0.3	0.5	0.7	0.9	Comfort R	2-Stage Cooling	Comfort & Humid Climate
			CFM WATTS	CFM WATTS	CFM WATTS	CFM WATTS		CFM WATTS	CFM WATTS	CFM WATTS	CFM WATTS	CFM WATTS	CFM WATTS		
COOLING	4	LOW (350 CFM/TON)	OFF	OFF	OFF	ON	CFM WATTS	1401 315	1415 386	1424 467	1420 534	1392 601	OPTION PERMITTED	OPTION PERMITTED	OPTION PERMITTED
		NORMAL (400 CFM/TON)	OFF	OFF	OFF	OFF	CFM WATTS	1581 435	1597 517	1613 588	1617 680	1601 741			
		HIGH (450 CFM/TON)	OFF	OFF	ON	OFF	CFM WATTS	1803 605	1789 711	1810 800	1728 799	1644 795			
	3.5	LOW (350 CFM/TON)	ON	OFF	OFF	ON	CFM WATTS	1216 232	1258 286	1273 348	1222 425	1179 504			
		NORMAL (400 CFM/TON)	ON	OFF	OFF	OFF	CFM WATTS	1374 319	1411 382	1406 460	1401 530	1365 626			
		HIGH (450 CFM/TON)	ON	OFF	ON	OFF	CFM WATTS	1577 431	1585 512	1605 582	1589 655	1593 724			
	3	LOW (350 CFM/TON)	OFF	ON	OFF	ON	CFM WATTS	1071 173	1071 223	1053 284	1004 355	965 400			
		NORMAL (400 CFM/TON)	OFF	ON	OFF	OFF	CFM WATTS	1176 223	1208 284	1213 339	1197 396	1144 487			
		HIGH (450 CFM/TON)	OFF	ON	ON	OFF	CFM WATTS	1341 300	1355 366	1355 432	1355 496	1317 602			
	2.5	LOW (350 CFM/TON)	ON	ON	OFF	ON	CFM WATTS	847 118	854 163	861 227	824 271	785 298			
		NORMAL (400 CFM/TON)	ON	ON	OFF	OFF	CFM WATTS	951 170	971 200	984 282	955 333	925 365			
		HIGH (450 CFM/TON)	ON	ON	ON	OFF	CFM WATTS	1121 197	1127 254	1149 302	1076 396	1070 440			
2 *	NORMAL	ON	ON	OFF	ON	CFM WATTS	847 118	854 163	861 227	824 271	785 298			<b>NA</b>	

\* CONNECT Y - COOLING SIGNAL TO Y10 ON BOARD

	AIRFLOW SETTING	DIP SWITCH SETTING			EXTERNAL STATIC PRESSURE				
		SW7	SW8		0.1	0.3	0.5	0.7	0.9
		CFM WATTS	CFM WATTS		CFM WATTS	CFM WATTS	CFM WATTS	CFM WATTS	CFM WATTS
HEATING	LOW	ON	ON	CFM WATTS	791 103	822 148	749 209	732 245	723 281
	MEDIUM LOW	OFF	ON	CFM WATTS	938 141	958 189	971 237	875 302	882 337
	MEDIUM HIGH	ON	OFF	CFM WATTS	1124 210	1152 267	1163 330	1152 383	1101 463
	HIGH	OFF	OFF	CFM WATTS	1420 325	1424 447	1446 476	1428 536	1397 613

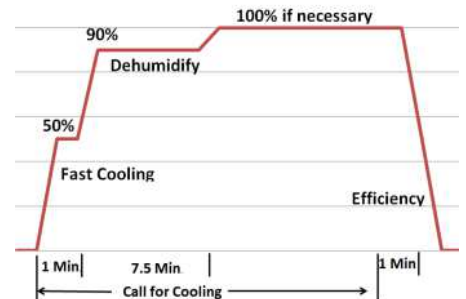
**NOTES:**

1. CONTINUOUS FAN SETTING: HEATING OR COOLING AIRFLOW IS APPROXIMATELY 50% OF SELECTED COOLING VALUE.
2. FOR VARIABLE SPEED: LOW SPEED AIRFLOWS ARE APPROXIMATELY 30% OF LISTED VALUES.
3. LOW 350 CFM/TON IS RECOMMENDED FOR VARIABLE SPEED APPLICATION FOR COMFORT & HUMID CLIMATE SETTING NORMAL IS 400 CFM/TON: HIGH 450 CFM/TON IS FOR DRY CLIMATE SETTING.

FACTORY SETTING

	DIP SWITCH SETTING		HEATING ON & OFF DELAY OPTIONS		COOLING DELAY OPTIONS
	SW5	SW6	DELAY ON	DELAY OFF	
HEATING	OFF	OFF	1 MIN	3 MIN	1 MIN OFF DELAY
	ON	OFF	1 MIN	4 MIN	1 MIN OFF DELAY
	OFF	ON	1 MIN	6 MIN	1 MIN OFF DELAY
	ON	ON	1 MIN	4 MIN	**

**\*\* Comfort R**



- SEE NEXT PAGE FOR MORE DATA -

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