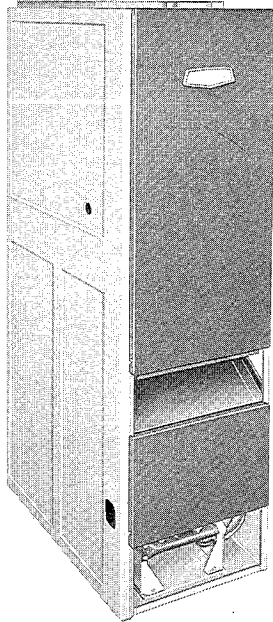


bryant®



A73023

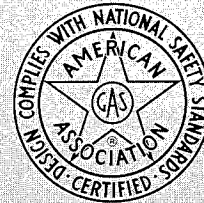
FEATURES

- **VERSATILE APPLICATION** — Space-saving design make the Model 396D perfect for utility room or closet installation with the ductwork below floor level.
- **STYLISH CABINET** — With two-tone baked enamel finish and modern design, this furnace blends with almost any housing interior. The heating compartment is fully insulated for maximum operating efficiency and economy.
- **HEAT EXCHANGER** — This new design minimizes airflow restriction for improved air delivery and heat extraction. Each exchanger tube is individually mounted to a heavy-gauge interfront panel and the entire assembly is installed and removed from the furnace front.
- **UNIVERSAL BURNER** — A new cross port burner with improved carryover gives positive Quietline® ignition. This new burner will operate on either natural or liquified petroleum gas.
- **GAS CONTROLS** — Dependable ignition of the main burner is provided by a 24-volt combination gas valve and incinerating-type safety pilot. All internal wiring and gas controls are factory installed.

PRODUCT DATA

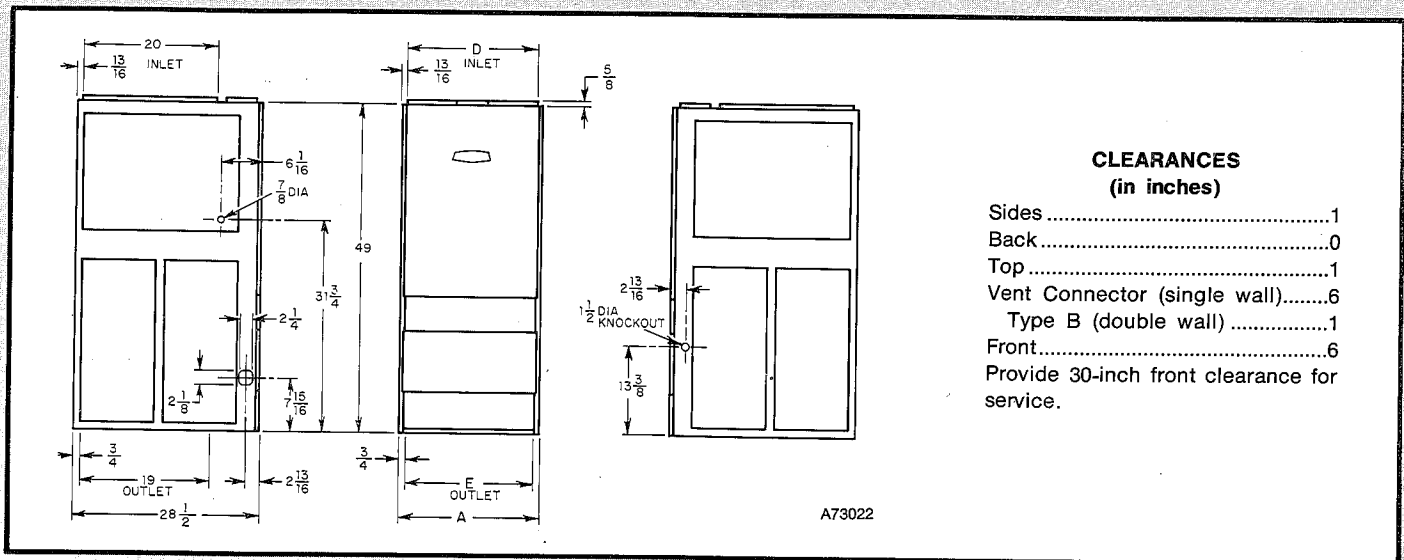
Model 396D Series A GAS-FIRED COUNTERFLOW FURNACE

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- **DIRECT-DRIVE BLOWERS** — Multispeed motors provide air handling for both heating and air conditioning, with quick-change Molex speed connectors. The carefully selected blowers are dynamically balanced and cushioned in rubber for Quietline® operation.
- **FAN LIMIT CONTROL** — To provide positive time-on and temperature-off fan control, a new one-piece unit has been developed. This unit features an adjustable time-on temperature-off control and provides fan operation after the burners are extinguished. The new control is easier to adjust and more responsive to specific application selections.
- **TERMINAL STRIP** — Each air conditioning model has a low-voltage terminal strip and cooling fan relay factory installed, cutting both installation time and error to an absolute minimum.
- **AIR FILTERS** — Two filters are shipped with each furnace. Sizes 024050 thru 042100 have standard size throwaway-type and 000125 thru 060150 have permanent-type.

FILE: PDS 396D.50.1



**CLEARANCES
(in inches)**

- Sides1
 - Back0
 - Top1
 - Vent Connector (single wall).....6
 - Type B (double wall)1
 - Front6
- Provide 30-inch front clearance for service.

A73022

DIMENSIONS IN INCHES

MODEL & SIZE	A	D	E	Ship. Wt	Vent
396D-024050	14-3/16	12-9/16	12-11/16	131	4
396D-000080	17-1/2	15-7/8	16	138	4
396D-036080	17-1/2	15-7/8	16	143	4
396D-000100	17-1/2	15-7/8	16	165	5
396D-042100	17-1/2	15-7/8	16	170	5
396D-000125	21	19-3/8	19-1/2	207	5
396D-048125	21	19-3/8	19-1/2	212	5
396D-060150	24-1/2	22-13/16	23	240	6

RATINGS AND PERFORMANCE*

MODEL	Natural and LP		Temp Rise Range	Heating		Cooling	
	Input Btuh	Output Btuh		Ext Static Pressure	CFM	Ext Static Pressure	CFM
396D-024050	50,000	40,000	45-75	—	617	0.5	800
396D-000080			70-100	0.12	700	—	—
396D-036080	80,000	64,000	45-100	—	855	0.5	1200
396D-000100			70-100	0.15	870	—	—
396D-042100	100,000	80,000	45-100	—	910	0.5	1400
396D-000125			70-100	0.2	1100	—	—
396D-048125	125,000	100,000	45-100	—	1206	0.5	1600
396D-060150			45-75	0.2	1736	0.5	2000

*The above ratings are approved for altitudes to 2000 ft. For elevations above 2000 ft, reduce ratings 4% for each 1000 ft above sea level.

COMPONENT INFORMATION

MODEL		396D-024050	396D-000080	396D-036080	396D-000100	396D-042100
Burners (Cross Port)	No.	2	3	3	4	4
Gas Valve*	C Nat	Bryant A643 Current Draw 0.4 Amps @ 24 Volts				
Pilot Assy*	C Nat	Bryant 732	Bryant 732	Bryant 732	Bryant 732	Bryant 732
Combination Fan Limit	Type	SPST	SPST	SPST	SPST	SPST
Switch Rating @ 120V	FLA	13.8	13.8	13.8	13.8	13.8
Heater Asst (current draw)	Amps	0.1 Amps @ 24 Volts				
Heat Exchanger		20-ga Plain Steel				
Gas Connection	in.	1/2	1/2	1/2	1/2	1/2
Manual Shutoff	Nat	Part of Gas Valve				
Regulator	Nat	Part of Gas Valve				
Blower Motor (Direct Drive)	Type HP	SP 1/6	SP 1/10	SP 1/3	SP 1/6	PSC 1/2
Voltage-Freq-Phase		115-60-1	115-60-1	115-60-1	115-60-1	115-60-1
Full Load Amps		6.8	5.7	10.5	6.7	8.5
Speeds	No.	4	3	4	3	4
RPM (Nominal)		1050	1050	1050	1050	1050
Rotation		CCW (as viewed from opposite end of shaft)				
Blower Wheel (WxD)	in.	4 x 10	6 x 9	6 x 10	7 x 9	7 x 10
Filters	in.	(2) 10x20x1	(2) 16x20x1	(2) 16x20x1	(2) 16x20x1	(2) 16x20x1
External Control	VA Heating	30	10	30	10	30
Power Available	Cooling	36	None	36	None	36
Cooling Relay Rating @ 120V	FLA	12	None	12	None	12
OPTIONAL EQUIPMENT						
Combustible Floor Base	P/N	COR89089-1	COR89089-2	COR89089-2	COR89089-2	COR89089-2
Air Conditioning Conversion Kit	P/N	COR79960-2	COR79960-2	COR79960-2	COR79960-2	COR79960-2

*D Controls (100% Shutoff Natural) consist of Essex Gas Valve and Thermocouple Pilot.
 B Controls (100% Shutoff Propane) consist of Essex Gas Valve and Thermocouple Pilot.

COMPONENT INFORMATION

MODEL		396D-000125	396D-048125	396D-060150
Burners (Cross Port)	No.	5	5	6
Gas Valve*	C Nat	Bryant A643 Current Draw 0.4 Amps @ 24 Volts		
Pilot Assy*	C Nat	Bryant 732	Bryant 732	Bryant 732
Combination Fan Limit	Type	SPST	SPST	SPST
Switch Rating @ 120V	FLA	13.8	13.8	13.8
Heater Asst (current draw)	Amps	0.1 Amps @ 24 Volts		
Heat Exchanger		20-ga Plain Steel		
Gas Connection	in.	1/2	1/2	1/2
Manual Shutoff	Nat	Part of Gas Valve		
Regulator	Nat	Part of Gas Valve		
Blower Motor (Direct Drive)	Type HP	SP 1/5	PSC 1/2	PSC 3/4
Voltage-Freq-Phase		115-60-1	115-60-1	115-60-1
Full Load Amps		9.0	8.5	11.8
Speeds	No.	3	4	4
RPM (Nominal)		1050	1050	1050
Rotation		CCW (as viewed from opposite end of shaft)		
Blower Wheel (WxD)	in.	8 x 9	8 x 10	10 x 12
Filters	in.	(2) 16x20x1	(2) 16x20x1	(2) 16x20x1
External Control Power Available	VA Heating Cooling	10 None	30 36	30 36
Cooling Relay Rating @ 120V	FLA	None	12	12
OPTIONAL EQUIPMENT				
Combustible Floor Base	P/N	COR89089-3	COR89089-3	COR89089-4
Air Conditioning Conversion Kit	P/N	COR79960-2	COR79960-2	COR79960-2

*D Controls (100% Shutoff Natural) consist of Essex Gas Valve and Thermocouple Pilot
 B Controls (100% Shutoff Propane) consist of Essex Gas Valve and Thermocouple Pilot.

CFM FOR INDICATED TEMPERATURE RISE

Btuh Input	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
50,000	808	727	661	606	559	519	484	454	427	404	382	363
80,000	1292	1163	1057	969	895	831	775	727	684	646	612	581
100,000	1616	1454	1322	1212	1118	1038	969	909	855	808	765	727
125,000	2020	1818	1652	1515	1398	1298	1212	1136	1069	1010	956	909
150,000	2424	2181	1983	1818	1678	1558	1454	1363	1283	1212	1148	1090

AIR DELIVERY PERFORMANCE

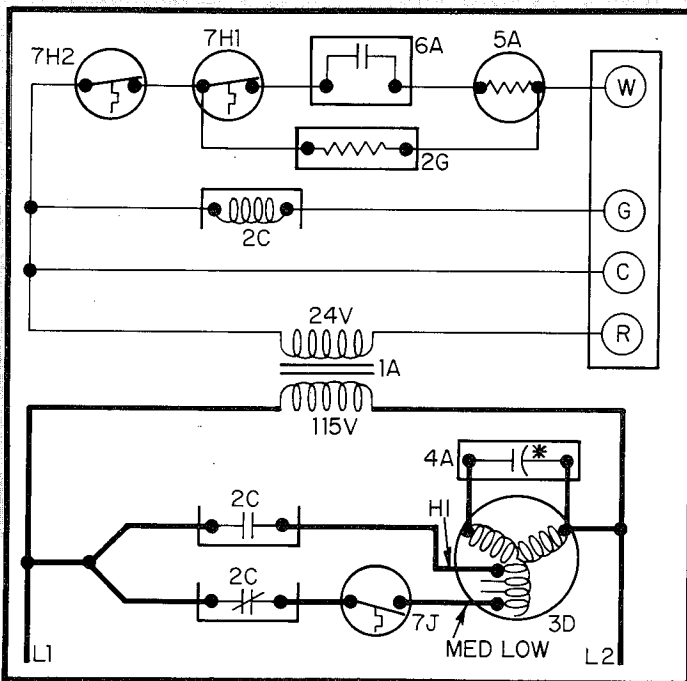
Air Delivery CFM	EXTERNAL STATIC PRESSURE AVAILABLE*																		
	396D-024050 1/6-HP Motor				396D-000080 1/10-HP Motor				396D-036080 1/3-HP Motor				396D-000100 1/6-HP Motor			396D-042100 1/2-HP Motor			
	Hi	Med	Med	Lo	Hi	Med	Lo	Hi	Hi	Med	Lo	Lo	Hi	Med	Lo	Hi	Hi	Med	Lo
400	—	—	—	0.75															
450	—	—	—	0.78															
500	—	—	0.75	—															
550	—	—	0.50	—	—	0.55	0.58												
600	—	0.65	—	—	0.54	0.47	0.35												
650	—	0.40	—	—	0.46	0.35	—												
700	0.75	—	—	—	0.37	0.18	—					—	—	0.64					
750	0.60	—	—	—	0.27	—	—					—	0.61	0.55					
800	0.50	—	—	—	0.10	—	—					0.71	—	0.55	0.45	—	—	—	0.74
900																			
1000								0.75	0.61	—	—	0.53	0.15	—	—	—	—	0.68	—
1100								0.66	—	—	—	—	—	—	—	—	0.68	0.43	—
1200								0.53	—	—	—	—	—	—	—	0.75	0.53	—	—
1300								0.32	—	—	—	—	—	—	—	0.64	0.30	—	—
1400																0.50	—	—	—
1500																0.33	—	—	—

*At 115 volts top inlet.

AIR DELIVERY PERFORMANCE

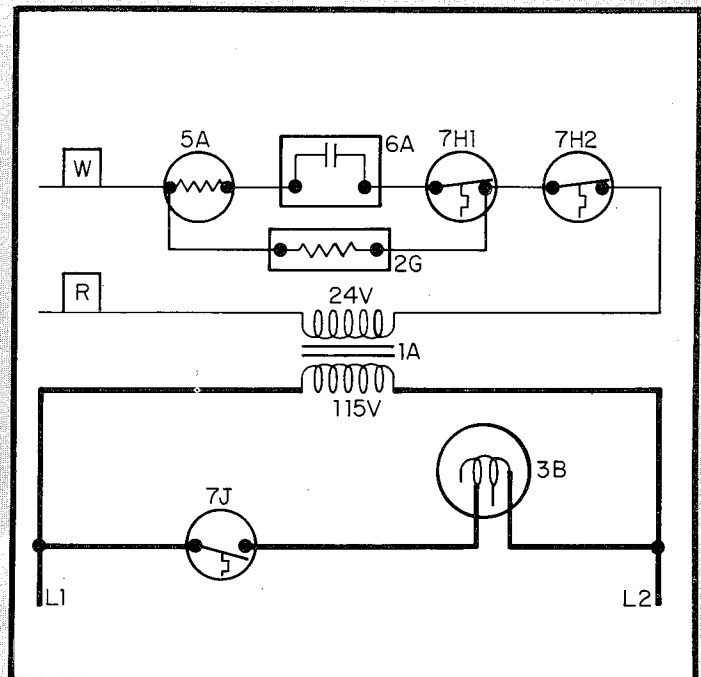
Air Delivery CFM	EXTERNAL STATIC PRESSURE AVAILABLE*										
	396D-000125 1/5-HP Motor			396D-048125 1/2-HP Motor				396D-060150 3/4-HP Motor			
	Hi	Med	Lo	Hi	Med-Hi	Med-Lo	Lo	Hi	Med-Hi	Med-Lo	Lo
800	—	—	0.50								
900	—	0.46	0.30								
1000	0.49	0.34	—	—	—	—	0.79				
1100	0.36	—	—	—	—	0.80	—				
1200	0.20	—	—	—	—	0.30	—				
1300				—	0.69	—	—				
1400				0.78	—	—	—	—	—	—	0.75
1500				0.65	—	—	—	—	—	—	0.64
1600				0.52	—	—	—	—	—	0.68	0.30
1700				0.35	—	—	—	—	0.73	0.50	—
1800				0.10	—	—	—	0.74	0.60	—	—
1900								0.65	0.40	—	—
2000								0.56	—	—	—
2100								0.44	—	—	—

*At 115 volts top inlet.



A73388

Units with Terminal Strip and Cooling Relay.



A73387

Units with no Terminal Strip nor Cooling Relay.

LEGEND

- 1A-Transformer
- 2C-Cooling Fan Relay
- 2G-Heating Fan Relay
- 3B-Fan Motor SP
- 3D-Fan Motor PSC
- 4A-Capacitor (only on 1/2-and 3/4-HP Motors)

- 5A-Gas Valve
- 6A-Pilot (None on LP)
- 7H1-Limit Control SPST N.C.
- 7H2-Limit Control SPST N.C. (Manual reset)
- 7J-Fan Control SPST N.O.



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