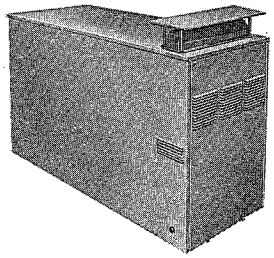
bryant®

ALL WEATHER HEATING UNIT

with chilled water coil option



Product Data Sheet 379

SIZE 125
36D

PDS 379.125.3 12/1/69

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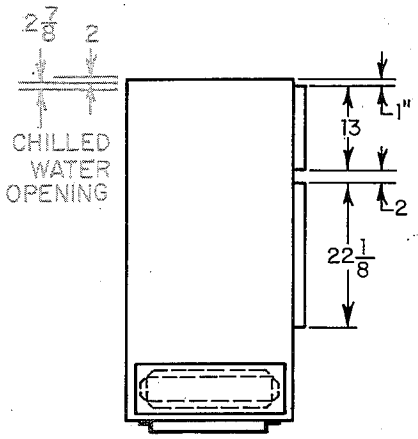
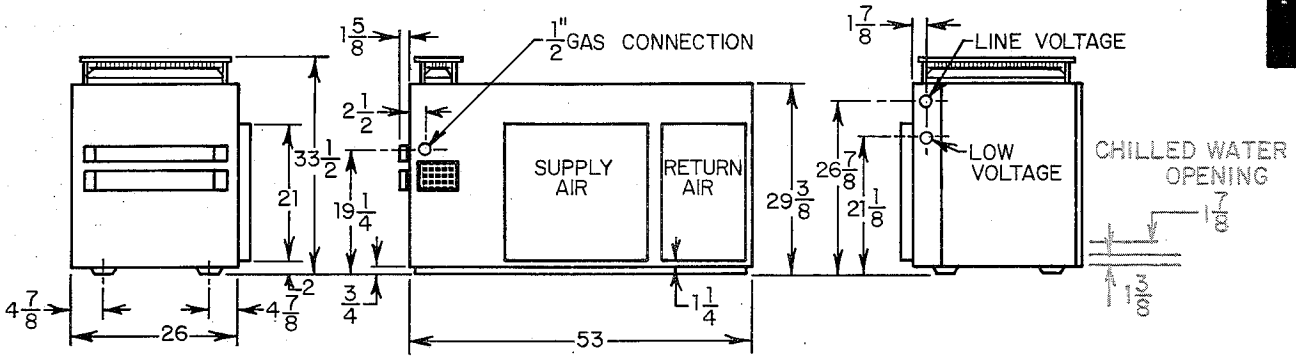
COMPLIES WITH NATIONAL SAFETY STANDARDS AMERICAN GAS ASSOCIATION CERTIFIED



Approximate shipping weight
325 lbs

Allowable clearances from combustibles
6" from duct side
24" on other sides
0" on bottom
Allow clearance for drainage under the unit



SPECIFICATIONS

The Model 125-379, a 125,000 Btuh furnace, is AGA listed for outdoor installation. The unit is also available with a factory installed chilled water coil. The 36D-379 is rated at 36,000 Btuh cooling capacity.

This equipment has been specifically designed for use on applications where a heating unit suitable for outdoor installation has been specified.

Rated at 125,000 Btuh heating input, this unit is constructed and tailored for commercial duty - yet it is ideally suited for residential applications.

Installation does not interfere with other building trades - no inside floor space and no special vents are required. Just set unit on slab or adequate roof support then connect duct, gas supply, and electric supply.

The insulated weatherproof cabinet is made from heavy gauge zinc coated steel; the finish is baked-on enamel. Removable panels allow easy access to all components and controls. Automatic pilot reignition eliminates the need for service calls just to light the pilot. A stainless chromized steel heat exchanger promises long life.

Standard equipment includes:

- Blower relay • Condensate pan • Hi-limit control • Adjustable fan control
- Weatherproof insulated cabinet • Combination manual A & B valve and regulator
- Natural D1 and Propane D9 controls • Stainless steel chromized heat exchangers
- Bryant automatic pilot • Blower motor direct drive • Bryant diaphragm gas valve
- Chilled water coil • Electric re-ignition • Slotted port burners • Cooling fan relay

File: Application PDS 300-399
Specifications Subject To Change Without Notice

HEATING CAPACITY

Input	BTUH	125,000
Output	BTUH	93,750
Approved Temp Rise	°F	45 - 75

Air Flow for Indicated Temp Rise at Rated Input

Temp Rise °F	45	50	55	60	65	70	75
CFM	1930	1740	1580	1445	1338	1240	1160

CONNECTIONS

Electrical Power Supply		115-60-1
Min Branch Circuit Size		14
Branch Circuit Fuse		15
External Control Power Available:		
	Heating	20 VA
	Cooling	None
Gas Supply	NPT	1/2"
Chilled Water Supply (Iron Pipe - female)		3/4"

AIR DELIVERY PERFORMANCE - Furnace without Coil

CFM	External Static Pressure Available *	
	Hi	Med
1000		.635
1100		.47
1200	.67	.18
1300	.58	
1400	.46	
1500	.32	

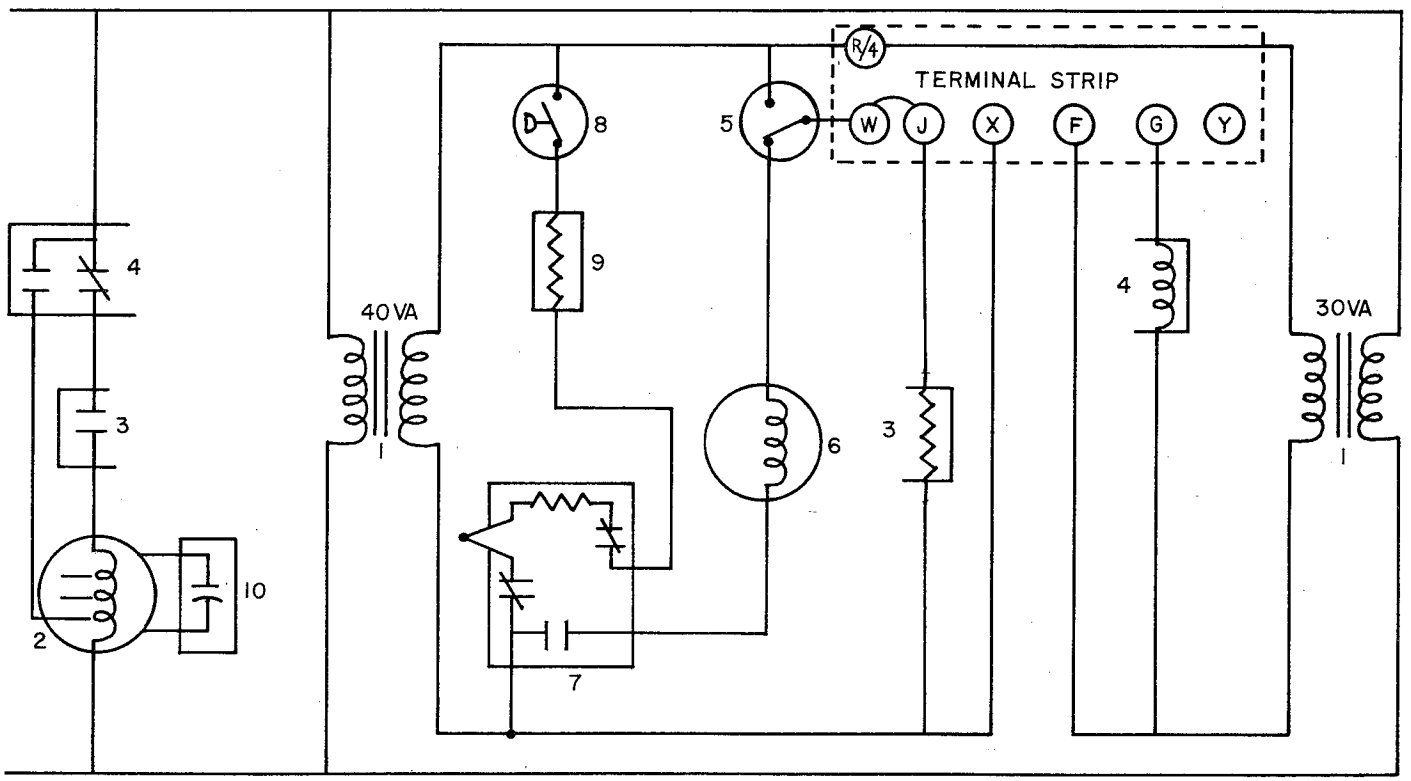
* At 120V without air filters.

COMPONENT INFORMATION

Blower Motor	
HP	1/3
Speed	4 speed 1075
Rotation	CCW (opp shaft end)
Voltage	120
Full Load Amps	6.5
Frame	48
Thermal Protection	Automatic
Blower Wheel	1
Diameter & Width	10 x 8
Transformer	115-230-24V 40 VA
Filters *None supplied with unit	700 sq in. min filter area
WATER COIL	
Water Coil	
High and wide	20-1/8 x 22-1/8
Rows	3
Tube, Copper	3/8" OD
Fins, Aluminum	12 per inch

GAS CONTROL INFORMATION

Burners (stainless chromized)	5 (steel slotted port)
Orifice Drill Size - Natural	#41
Propane	#54
D1 Control - Natural	
Regulator Comb. Shut-Off	1/2 Thermac VR1
Valve	Bryant 1/2 A639B
Pilot (non 100%)	Bryant 733
D9 Control - Propane	
Regulator	None
Valve	Bryant 1/2 A639B
Pilot (non 100%)	Bryant 733
Heat Exchanger	Stainless Chromized Steel
Fan Control - Heating	Delay Relay
Limit	SPDT Fixed



1. Transformer
2. Blower Motor
3. Blower Delay Relay
4. Cooling Blower Relay
5. Limit Heating (SPDT)
6. Gas Valve
7. Reignition Pilot
8. Pilot Gas Pressure Switch
9. Resistor
10. Capacitor

36D-379 DETAILED COOLING CAPACITIES

Air Entering Chilled Water Coil 80° DB		Outdoor Ambient °F						WITH A FLOW RATE OF 7.5 GPM Enter Water Temperature of					
		85		95		105		40		45		50	
CFM	Entering Wet Bulb	Capacity Btuh x 1000		Capacity Btuh x 1000		Capacity Btuh x 1000		Capacity Btuh x 1000		Capacity Btuh x 1000		Capacity Btuh x 1000	
		Total	Sensible	Total	Sensible	Total	Sensible	Total	Sensible	Total	Sensible	Total	Sensible
1000	71	39.4	20.3	36.2	19.2	34.6	18.7	45.9	22.7	41.0	20.9	34.2	18.5
	67	38.5	24.8	35.1	23.5	33.1	22.8	37.7	24.5	32.7	22.6	25.9	20.1
	63	35.3	28.4	31.9	27.0	29.6	26.0	30.4	26.4	25.0	24.2	18.3	18.3
1100	71	39.4	20.9	36.4	19.9	34.8	19.3	48.3	24.0	43.1	22.2	35.9	19.7
	67	39.0	25.8	35.7	24.6	33.7	23.9	39.6	26.1	34.4	24.1	27.2	21.5
	63	36.3	29.9	32.7	28.4	30.4	27.5	32.0	28.2	26.3	25.9	19.3	19.3
1200	71	39.4	21.4	36.8	20.6	35.2	20.0	50.5	25.3	45.1	23.4	37.6	20.8
	67	39.2	26.8	36.0	25.6	34.0	24.9	41.4	27.6	36.0	25.6	28.5	22.9
	63	37.0	31.3	33.3	29.8	30.8	28.9	33.5	29.9	27.5	27.5	20.2	20.2
1300	71	39.5	22.0	37.5	21.4	35.6	20.8	52.5	26.5	46.9	24.5	39.1	21.9
	67	39.4	27.6	36.2	26.5	34.3	25.8	43.1	29.0	37.4	26.9	29.6	24.2
	63	37.6	32.7	33.9	31.2	31.5	30.3	34.8	31.6	28.6	28.6	21.0	21.0
1400	71	39.5	22.6	37.9	22.1	36.2	21.5	54.4	27.6	48.5	25.6	40.5	22.9
	67	39.4	28.5	36.2	27.3	34.4	26.7	44.6	30.4	38.8	28.3	30.7	25.4
	63	38.0	34.0	34.3	32.5	32.0	31.6	36.0	33.2	29.6	29.6	21.7	21.7

Notes:

1. Sensible heat capacities shown are based on 80 F entering air at the evaporator.
2. Direct interpolation is permissible. Do not extrapolate.
3. To interpolate:
   (a) below 80 F DB, subtract 872 Btuh per 1000 cfm for each degree below 80 F from the listed sensible capacity.
   (b) above 80 F DB, add 872 Btuh per 1000 cfm for each degree above 80 F from the listed sensible capacity.
4. Formula:

$$LDB = EDB - \frac{\text{Sensible Heat Capacity (Btuh)}}{1.08 \times \text{cfm}}$$

$$L_h = E_h - \frac{\text{Total Capacity (Btuh)}}{4.5 \times \text{cfm}}$$

where h = Enthalpy (Btu/lb)

36D-379 COOLING CAPACITY

Capacity Total, Btuh	36,000
Air Flow, CFM	1200
Ext. S. P., In. Wg.	.4
Ent. Temp, °F	95
Water Flow, GPM	7.5
Pressure Drop, Ft. Wg.	8.6
Ent. Temp, °F	45

36D-379 WATER PRESSURE DROP

Pressure drop in feet of water at the flow rates shown			
GPM	Pressure Drop	GPM	Pressure Drop
4 *	2.9	7.5	8.6
5 **	4.2	8.0	9.6
6.0	5.8	10.0	14.2
7.0	7.6		

* Priming rate for 3/4" vertical drop return.
** Priming rate for 1" vertical drop return.

AIR DELIVERY PERFORMANCE WITH COIL IN PLACE

CFM	External Static Pressure Available*
	Hi Tap
1000	.59
1100	.50
1200	.40
1300	.28
1400	.22
1500	.15

* At 120 V without air filters.