



NP-Series

RapidTM *Engineering*

Negative Pressure Unitary Heaters and Multiburner Infrared Heating Systems

- Unitary heaters provide design flexibility with straight, U-tube or L configurations and a broad range of burner sizes and tube lengths
- Multiburner systems reduce building penetrations and installation cost as a result of multiple burners per pump
- Multiburner systems are custom engineered with a variety of zoning options
- Standard burner can be used for unitary heaters or heaters can be connected together to form a multiburner system of up to 1.6 million Btu/h
- Vacuum design with uniform tube temperature provides even heat distribution
- Minimal heat exposure to valuable electrical components provided by burner box design with protective enclosure for controls
- Longer life provided by durable components
- Heats effectively at high mounting heights and in high heat loss environments

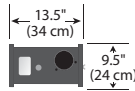
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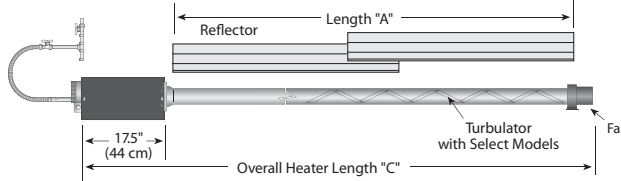
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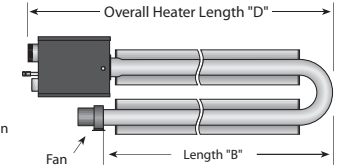
Burner End View



Burner Side View



Heater Bottom View



Unitary Models		CTHN-40	CTHN-60	CTHN-80	CTHN-100	CTHN-125	CTHN-150	CTHN-175	CTHN-200
Minimum Length of Straight Tube*	(ft) A	10	20	20	30	40	40	50	50
Minimum Length of U-Tube*	(ft, in) B	11,6	11,6	11,6	16,6	21,6	21,6	26,6	26,6
Overall Minimum Length of Straight Tube*	(ft, in) C	12,3	22,3	22,3	32,3	42,3	42,3	52,5	52,5
Overall Minimum Length of U-Tube*	(ft, in) D	13,2	13,2	13,2	18,2	23,2	23,2	28,2	28,2
Multiburner Models		CTHN-40	CTHN-60	CTHN-80	CTHN-100	CTHN-125	CTHN-150	CTHN-175	CTHN-200
Radiant Tube Length	(ft)	20	30	30	40	50	50	60	60
Manifold Length per Burner*	(ft)	See Installation, Operation and Service Manual							
Distance from Burner to Elbow or U-Tube	(ft)	10	10	10	15	15	20	20	20
Elbows Allowed per Burner		2	2	2	2	2	2	2	2
Number of Burners per EP-100 Pump**	(max)	4	4	4	4	4	3	2	2
Number of Burners per EP-200 Pump**	(max)	6	6	6	6	6	5	4	4
Number of Burners per EP-300 Pump**	(max)	16	16	14	12	12	10	8	8

*For additional lengths, please see the current Installation, Operation and Service Manual.

** For altitudes of up to 2000' (610 m); consult Installation, Operation and Service Manual for higher altitudes.

Input (Btu/h) x (1000)		40	60	80	100	125	150	175	200
Inlet Pressure	(in wc) NG min.	4.6	4.6	4.6	4.6	4.6	4.6	5	5
	LPG Propane min.	11	11	11	11	11	11	11	11
	NG & LPG Propane max.	14	14	14	14	14	14	14	14
Gas Connection	(NPT)	½"	½"	½"	½"	½"	¾"	¾"	¾"
Weights									
Overall Length of Tube and Accessory Packages	(ft)	10	20	30	40	50	60	70	80
Hot Rolled or Aluminized Tube with Aluminum Reflector	(lb)	52	86	120	161	206	240	281	322
Aluminized Tube with Stainless Steel Reflector	(lb)	66	113	152	208	265	304	360	416
Burner	(lb)	35							
Aluminized U-Tube with Aluminum End Caps	(lb)	19							
Aluminized U-Tube with Stainless Steel End Caps	(lb)	20							
Fuel		NG or LPG Propane							
Electric Supply		Unitary Heater - 120 V, 60 Hz, 1 A for 40 - 150; 120 V, 60 Hz, 2 A for 175 & 200 Multiburner Heater - 120 V, 60 Hz, .1A							
Heat Exchanger Tubing		10 ft Sections, 4" dia, 16 Gauge, First 10 ft ALUMI-THERM® Steel Tubing (Remaining Hot Rolled or Heat Treated Aluminized Steel Tubing)							
Exhaust Flue	(dia)	Unitary Heater - 4"; Multiburner Pump - 4", 5" or 6" See Installation, Operation and Service Manual for details.							
Reflector and End Caps		.024 Aluminum (Optional - .024 Stainless Steel Type 304)							
Control System		Fully Automatic, Three-Try, Direct Spark, 100% Shut-Off, Electric Ignition Control							
Approved As		Unitary Indoor (Vented or Unvented); Multiburner System - Indoor (Vented)							
Certification		ANSI Z83.20/CSA 2.34, 2.17							
Warranty		Three-Year Limited (Refer to Installation, Operation and Service Manual for Details)							

Clearances to Combustibles * (in)**

Model	CTHN-40	CTHN-60	CTHN-80	CTHN-100	CTHN-125	CTHN-150	CTHN-175	CTHN-200
Horizontal	5 8	5 8	5 9	5 10	5 10	5 10	8 10	8 10
45°	20 4	27 4	30 4	32 4	35 4	39 4	44 4	47 4
A	41 35	51 45	58 54	60 57	65 63	71 66	74 69	76 73
B	20 43	27 45	30 55	32 56	35 58	39 61	44 68	47 71
C								
D								

***Clearances B, C and D can be reduced by 50% for locations 25 ft (7 m) or more downstream of the burner. For other mounting options and associated clearances, complete installation, operation and service criteria, please see the current issue of the Installation, Operation and Service Manual.

Installation Code and Annual Inspections:

All installation and service of RAPID™ equipment must be performed by a contractor qualified in the installation and service of equipment sold and supplied by Rapid Engineering and conform to all requirements set forth in the RAPID™ manuals and all applicable governmental authorities pertaining to the installation, service and operation of the equipment. To help facilitate optimum performance and safety, Rapid Engineering recommends that a qualified contractor annually inspect your RAPID™ equipment and perform service where necessary, using only replacement parts sold and supplied by Rapid Engineering.

Further Information: Applications, engineering and detailed guidance on systems design, installation and equipment performance is available through RAPID™ representatives. Please contact us for any further information you may require, including the Installation, Operation and Service Manual.

This product is not for residential use.

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