

# **MTH SERIES**

**TECHNICAL DATA INFORMATION PACKET**

**INDUSTRIAL  
COMBUSTION**

# Technical Data

## MTH Series

### MTH: Gas Only Configuration

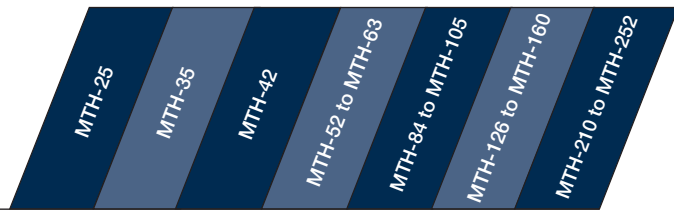
2.5 - 25.2 MM BTU/H

UL listed with choice of NFPA, CSD-1, GAP, and FM for U.S. or Canadian units

Standard equipment:	Combustion Control System options:	Fuel options:
3450 RPM motor, panel signal lights (Power On, Main Fuel, Ignition, Flame Failure), combustion air proving switch, safety shutoff valves, 120/1/60 control circuit, burner mounted panel, and a shipped loose gas train (where applicable).	O <sub>2</sub> Trim and Variable Frequency Drive (VFD)	Main Fuel: Natural or propane gas  Igniter Fuel: Natural gas and/or propane.

## Series Features

◇ Optional Feature



Flame Safeguard	MTH-25	MTH-35	MTH-42	MTH-52 to MTH-63	MTH-84 to MTH-105	MTH-126 to MTH-160	MTH-210 to MTH-252
Open Damper Purge Control with UV Scanner	•	•	•	•	•	•	•
<b>Mode of Operation</b>							
Full Modulation Firing	•	•	•	•	•	•	•
Auto-Manual Firing Rate Control	•	•	•	•	•	•	•
<b>Turndown</b>							
Up to 5:1 on Natural Gas	•	•	•	•	•	•	•
<b>Refractory</b>							
Dry Oven & Gasket	◇ <sup>1</sup>	◇ <sup>1</sup>	◇ <sup>1</sup>	◇ <sup>1</sup>	◇ <sup>1</sup>	◇ <sup>1</sup>	◇ <sup>1</sup>
<b>Combustion Control System</b>							
Parallel Positioning System	• <sup>2</sup>	• <sup>2</sup>	• <sup>2</sup>	• <sup>2</sup>	• <sup>2</sup>	• <sup>2</sup>	• <sup>2</sup>
<b>Ignition</b>							
Gas/Electric Pilot and Ignition Transformer	•	•	•	•	•	•	•
<b>Gas Components</b>							
Butterfly Rate Control Valve	•	•	•	•	•	•	•
High & Low Gas Pressure Interlocks	◇	•	•	•	•	•	•
Gas Shutoff Cocks (2)	•	•	•	•	•	•	•
Motorized w/POC (1)	•	•	•				
Motorized Valve w/ POC & Solenoid Valve	◇	◇	◇	•	•		
Motorized Valve w/POC (2)	◇	◇	◇	◇	◇	◇	◇
Dual Motorized w/POC (1)	◇	◇	◇	◇	◇	•	•
Normally Open Vent Valve	◇	◇	◇	◇	◇	•	•

<sup>1</sup> Refractory dry ovens are required for burner mounting, consult factory for options

<sup>2</sup> A Honeywell Controlinks parallel positioning system is standard, consult factory for alternative options

Note: UL/cUL Listed from 2.5 to 16.0 MM BTU/H only.

# Standard Ratings

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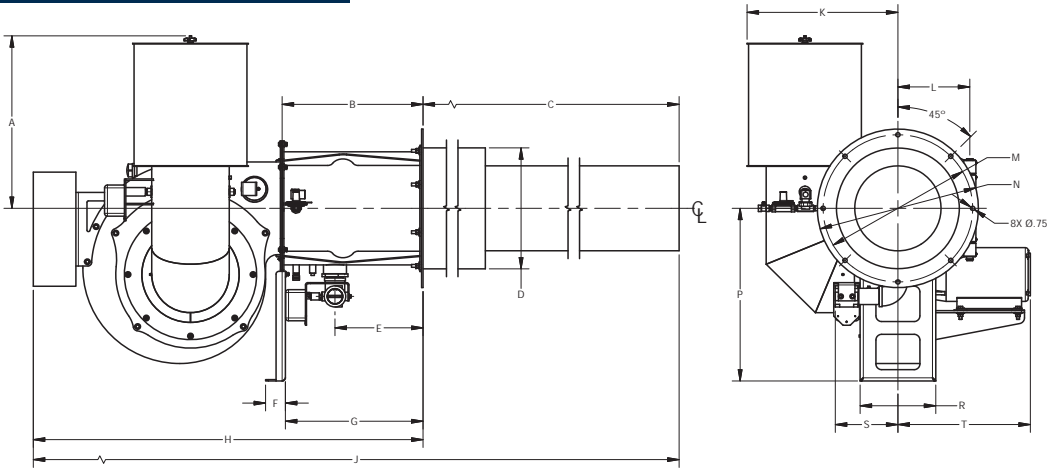
	Gas Input MBH	BHP @ 80% Eff.	Blower Motor HP	Furnace Pressure ("w.c.)	Standard Gas Train Pipe Size (in.)	Min. Gas Pressure (PSI)	
<b>Model No. &amp; Frame Size</b>							
MTH-25-2	2,500	60	2	2	2.0	1.0	115 / 230 / 1
MTH-35-2	3,500	83	5	2	2.0	1.5	
MTH-42-3	4,200	100	5	4	2.0	1.5	208 / 230 / 460 / 3
MTH-52-3	5,200	125	7 1/2	4	2.0	2.0	
MTH-63-3	6,300	150	10	4	2.0	1.5	
MTH-84-4	8,400	200	10	6	2.0	1.5	460 / 3
MTH-105-4	10,500	250	15	6	2.0	2.0	
MTH-126-4	12,600	300	15	6	2.0	3.0	
MTH-147-4	14,700	350	20	6	2.0	3.0	
MTH-160-4	16,000	380	20	6	2.0	3.5	
MTH-210-5	21,000	500	25	7	2.5	3.5	
MTH-252-5	25,200	600	40	12	2.5	3.5	

Input is based on fuel BTU content, listed furnace pressure and altitude of 2,000 feet or less. If altitude > 2,000 feet and < 8,000 feet, derate capacity 4% per 1,000 feet over 2,000. Consult factory for higher altitudes. If furnace pressure exceeds listed value, derate capacity 5% for every 0.5" w.c. of pressure in excess of stated. Consult factory if derate exceeds 20%. Gas input is based on natural gas with 1,000 BTU/cu.ft. and 0.60 gravity. For total pressure at manifold, add furnace pressure. Consult factory for 50 Hz. applications. UL/cUL Listed from 2,500 to 16,000 MBtu/hr.

# Standard Dimensions

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DIM	Burner Frame Size				
	Size 2	Size 3	Size 4	Size 5	
Length in inches					
Overall burner length	J	88 3/4	106 3/4	137 3/4	151 9/16
Length of element	C	38 3/8	49 1/4	70	77 1/4
Mounting flange to panel box	H	50	57 1/2	67 3/4	74 5/16
Width in inches					
Center line to right side	T	17 1/8	17 3/4	23	24
Center line to left side	K	23 7/8	24 1/2	26 1/4	35 1/2
Height in inches					
Center line to top	A	31 1/4	29 3/4	44	17
Center line to bottom	P	23 1/2	27 1/4	30 1/2	33
Hinge pivot point in inches					
Mounting flange to hinge	B	18 1/2	21 1/2	24 1/2	24 5/8
Center line to hinge	L	8 5/8	9 1/4	12 1/2	15
Burner support in inches					
Length of support	F	9	14 3/4	3 3/8	3 3/8
Width of support	R	23 1/2	27 1/4	30 1/2	13 3/16
Mounting flange to support	G	29 1/4	34 3/4	23 7/8	21 3/8
Mounting flange dimensions in inches					
Outer diameter	N	20 1/2	23	28	34
Bolt circle diameter	M	18 1/2	21	26	32
Gas inlet dimensions in inches					
Center line to main gas inlet	S	10 3/8	17 3/16	10 7/8	20 7/8
Mounting flange to main gas inlet	E	9 1/4	12 1/4	15 1/4	15 3/8
Dry oven dimensions in inches					
Diameter of dry oven	D	12 5/8	16 1/8	21 3/8	30

Accompanying dimensions, while sufficiently accurate for layout purposes, must be confirmed for construction.



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