

# **Q SERIES**

**TECHNICAL DATA INFORMATION PACKET**

**INDUSTRIAL  
COMBUSTION**

# Technical Data

## Q Series

**Q: Gas Only Configuration**

**UL/ cUL listed**

**.375 - 2.5 MM BTU/H**

Standard equipment:	Combustion Control System options:	Fuel options:
5600 RPM motor, panel signal lights (Power, Fuel, Ignition, Failure), combustion air proving switch, safety shutoff valves, 120/1/60 control circuit, burner mounted panel, and a shipped loose gas train (where applicable).	Flame safety controls and parallel positioning	Main Fuel: Natural or propane gas  Igniter Fuel: Natural gas and/or propane.

## Series Features

◊ *Optional Feature*

	Q6-037	Q6-055	Q6-075	Q6-100	Q6-130	Q6-150	Q6-175	Q6-200	Q6-250
<b>Flame Safeguard</b>									
Open Damper Purge Control with Flame Rod	•	•	•	•	•	•	•	•	•
Open Damper Purge Control with UV Scanner	◊	◊	◊	◊	◊	◊	◊	◊	◊
<b>Mode of Operation</b>									
On/Off Firing	•	•	•	•	•	•	•	•	•
Low-High-Low Firing	-	◊	◊	◊	◊	◊	◊	◊	◊
Full Modulation Firing	-	◊ <sup>1</sup>	◊ <sup>1</sup>	◊ <sup>1</sup>	◊ <sup>1</sup>	◊ <sup>1</sup>	◊ <sup>1</sup>	◊ <sup>1</sup>	◊ <sup>1</sup>
<b>Turndown</b>									
Turndown on Natural Gas	1:1	1.5:1	2:1	2.7:1	3.3:1	4:1	3.5:1	4:1	5:1
<b>Combustion Control System</b>									
Parallel Positioning System	-	◊	◊	◊	◊	◊	◊	◊	◊
<b>Ignition</b>									
Direct Spark	•	•	•	•	•	•	•	•	•
<b>Gas Components</b>									
Butterfly Rate Control Valve	◊ <sup>2</sup>	◊ <sup>2</sup>	◊ <sup>2</sup>	◊ <sup>2</sup>	◊ <sup>2</sup>	◊ <sup>2</sup>	◊ <sup>2</sup>	◊ <sup>2</sup>	◊ <sup>2</sup>
Gas Shutoff Cock	•	•	•	•	•	•	•	•	•
Solenoid Valve	•	•	•	•	•	•	•	•	•
Motorized w/POC (1)	◊	◊	◊	◊	◊	◊	◊	◊	◊
Motorized Valve w/POC	◊	◊	◊	◊	◊	◊	◊	◊	◊
Ratio Regulator	• <sup>3</sup>	• <sup>3</sup>	• <sup>3</sup>	• <sup>3</sup>	• <sup>3</sup>	• <sup>3</sup>	• <sup>3</sup>	• <sup>3</sup>	• <sup>3</sup>

<sup>1</sup> The load control device must be capable of providing a programmable 4-20 mA or 3 position output signal, (i.e. programmable temperature or pressure control) to the linkageless modulation control.

<sup>2</sup> Standard for full modulation operation.

<sup>3</sup> Standard for low-high-low operation only.

# Standard Ratings

## Q Series

### Q: Gas Only Configuration

	Gas Input MBH	BHP @ 80% Eff.	Blower Motor HP	Furnace Pressure ("w.c.)	Standard Gas Train Pipe Size (in.)	Min. Gas Pressure ("w.c.)	Low Pressure Gas Train Pipe Size (in.)	Low Gas Pressure Inlet ("w.c.)	Fresh Air Inlet Size (in.)	Air Inlet Orifice Size (in.)
<b>Model No. &amp; Frame Size</b>										
Q6-037	375	9	1/2	1.0	1.5	4.0	1.5	4.0	4.0	1.25
Q6-055	550	13	1/2	1.0	1.5	4.0	1.5	4.0	4.0	1.50
Q6-075	750	18	1/2	1.0	1.5	4.0	1.5	4.0	4.0	1.80
Q6-100	1,000	24	1/2	1.0	1.5	4.0	1.5	4.0	4.0	2.25
Q6-130	1,250	30	1/2	1.0	1.5	4.0	1.5	4.0	4.0	2.95
Q6-150	1,500	36	1/2	0.75	1.5	6.0	2.0	4.0	4.0	-
Q8-175	1,750	42	3/4	1.0	1.5	6.0	2.0	4.0	5.75	3.45
Q8-200	2,000	48	3/4	1.0	1.5	6.0	2.0	4.0	5.75	3.80
Q8-250	2,500	60	3/4	0.75	1.5	10.0	2.0	4.5	5.75	-

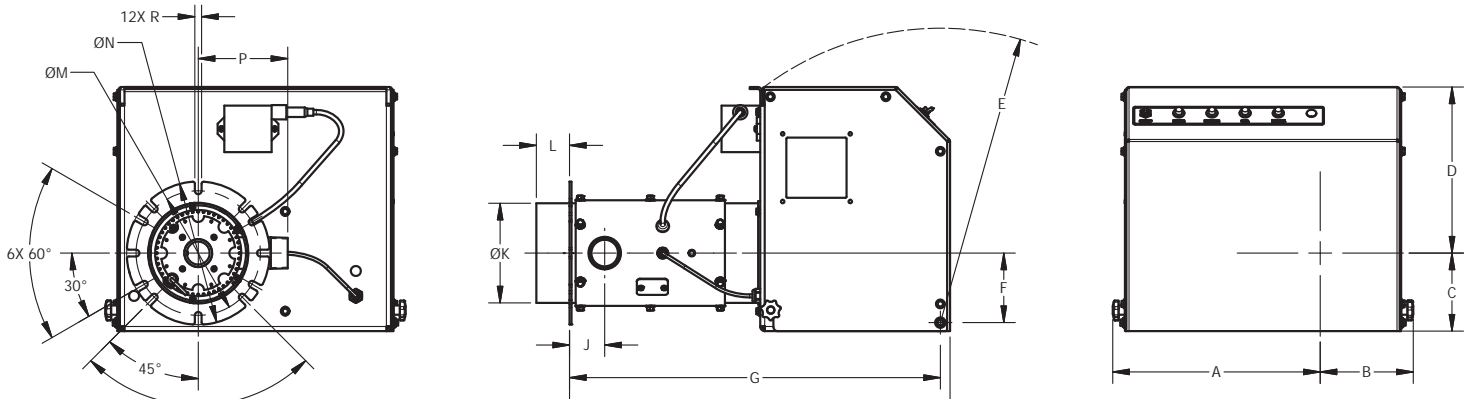
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Input is based on fuel BTU content, listed furnace pressure and altitude of 2,000 feet or less. If altitude > 2,000 feet and < 8,000 feet, derate capacity 4% per 1,000 feet over 2,000. Consult factory for higher altitudes. If furnace pressure exceeds 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.

# Standard Dimensions

## Q Series

### Q: Gas Only On-Off Configuration



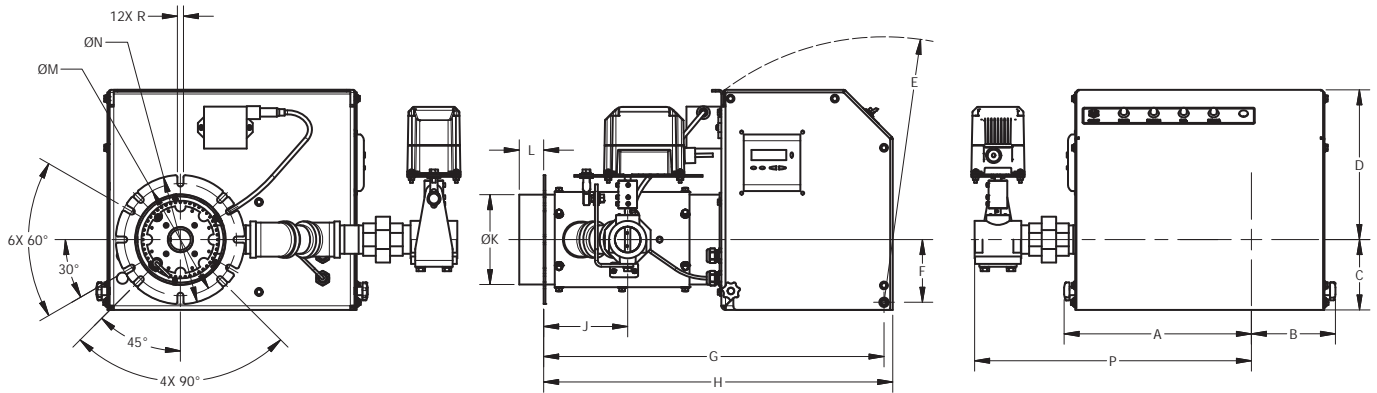
	DIM	Burner Model	
		Q6	Q8
Length in inches			
Overall burner length	H	22 7/8	25 5/8
Width in inches			
Center line to left side	A	12 1/2	15 5/16
Center line to right side	B	5 5/8	6 7/8
Height in inches			
Center line to top	D	10	11 7/8
Center line to bottom	C	4 11/16	4 3/8
Hinge pivot point in inches			
Mounting flange to hinge	G	22 3/8	25
Hinge swing radius	E	17 11/16	20 5/8
Center line to hinge	F	4 3/16	3 7/8
Blast tube in inches			
Extension	L	2	2
Diameter	K	6	8
Mounting flange dimensions in inches			
Outer diameter of mounting flange	N	12	11
Bolt circle diameter	M	7 1/2	9 1/2
Mounting flange slot width	R	3/8	1/2
Gas inlet dimensions in inches			
Mounting flange to main gas inlet	J	2 1/8	2 1/8
Center line to main gas inlet	P	5 3/8	6 3/8

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

# Standard Dimensions

## Q Series

### Q: Gas Only Full Modulation Configuration



	DIM	Burner Model	
		Q6	Q8
Length in inches			
Overall burner length	H	22 7/8	25 5/8
Width in inches			
Center line to left side	A	12 1/2	15 5/16
Center line to right side	B	5 5/8	6 7/8
Height in inches			
Center line to top	D	10	11 7/8
Center line to bottom	C	4 11/16	4 3/8
Hinge pivot point in inches			
Mounting flange to hinge	G	22 3/8	25
Hinge swing radius	E	17 11/16	20 5/8
Center line to hinge	F	4 3/16	3 7/8
Blast tube in inches			
Extension	L	2	2
Diameter	K	6	8
Mounting flange dimensions in inches			
Outer diameter of mounting flange	N	8 5/8	11
Bolt circle diameter	M	7 1/2	9 1/2
Mounting flange slot width	R	3/8	1/2
Gas inlet dimensions in inches			
Mounting flange to main gas inlet	J	5 5/8	5 5/8
Center line to main gas inlet	P	18 1/2	18 1/2

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

# INDUSTRIAL COMBUSTION

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