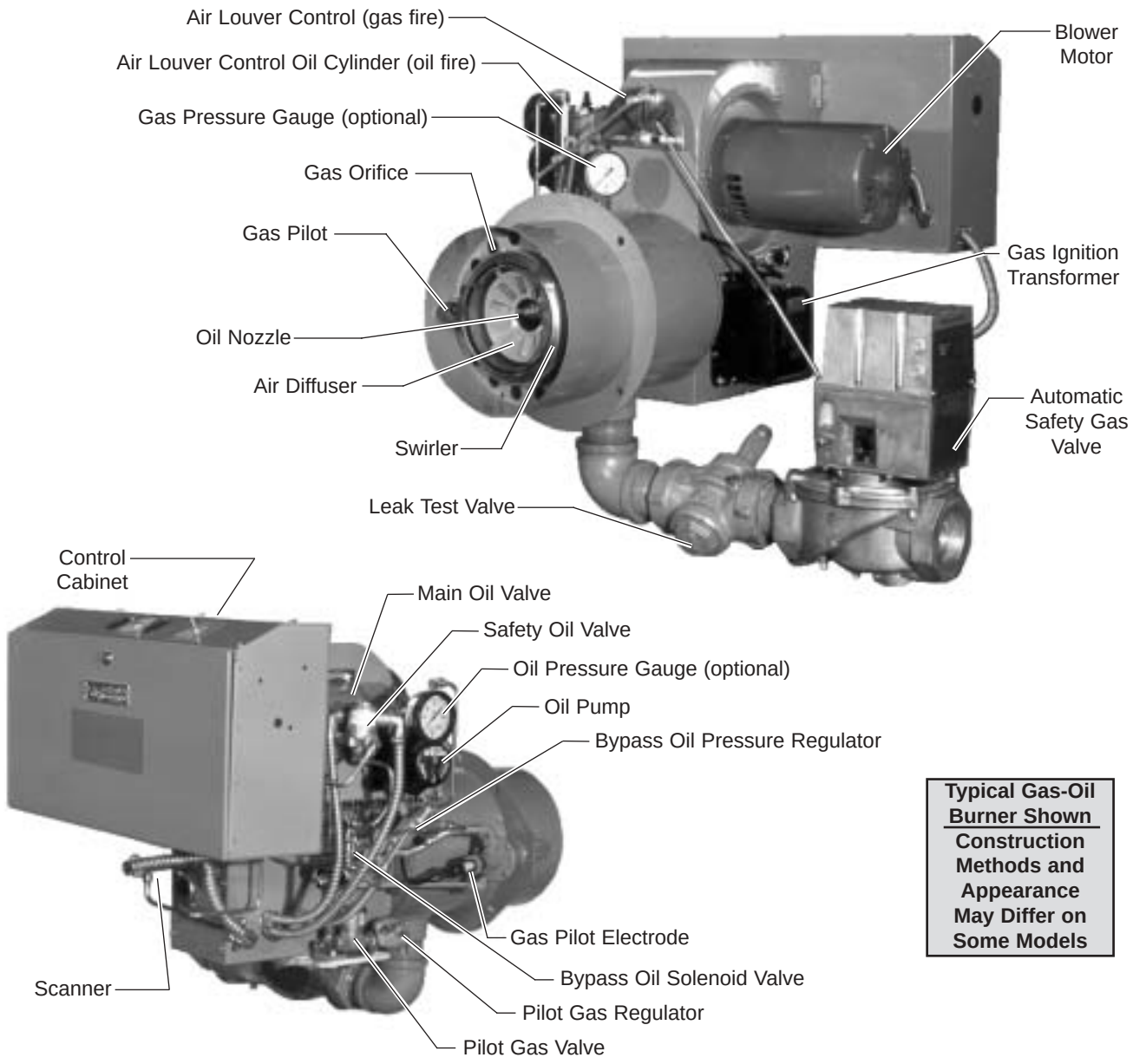
Specification Data

1	R	15.1	Rev. 22
1-03	Replaces	5-01	

TYPE R *TURBO-RING FORCED DRAFT BURNERS*

Patented*

USING GAS AND LIGHT OIL-MECHANICAL PRESSURE ATOMIZATION



Typical Gas-Oil Burner Shown

Construction Methods and Appearance May Differ on Some Models

Burner Numbering System

R - 8 - GO - 10 - XXXX - H. 20 - F4S

- R — Burner Type
- 8 — Burner Size
- GO — Fuel (Gas - Oil)
- 10 — Blower Motor HP (1.0 HP)
- XXXX — Flame Safeguard Control
- H. — Gas Control System
- 20 — Gas Train Size
- F4S — Oil Control System

1 See Catalog Sheet 1-gen-10.1 for burner numbering.

2 Use Order Entry and Equipment Pricing Form 1196 when placing order.

*Covered by one or more of the following patents: U.S. patent numbers 4785680; 4932274; 5441404; 5722821; 5944506; 5957682. Canadian patent number 1279632 and Canadian patents pending.

Specifications and Capacities

BASIC BURNER MODEL NO.		MAXIMUM FIRING RATE COMBUSTION CHAMBER PRESSURE								BURNER BLOWER MOTOR	
		DRAFT-.05" W.C.		LOW PRESSURE			HIGH PRESSURE				
		NATURAL GAS	NO. 2 OIL	PRESS.	NATURAL GAS	NO.2 OIL	PRESS.	NATURAL GAS	NO. 2 OIL	3450 RPM	
		BTU/HR 1000s	GPH	INCHES W.C.	BTU/HR 1000s	GPH	INCHES W.C.	BTU/HR 1000s	GPH	VOLTAGE	HP
R6.9	03	630	4.5	0.2	560	4.0	----	----	----	120/60/1	1/3
R6	03	910	6.5		840	6.0					
R6.1	03	1120	8.0		990	7.0					
R6.2	03	1190	8.5	0.3	1120	8.0					
R6.3	05	----	----	0.4	1190	8.5					1/2
R8	05	2100	15.0	0.2	1960	14.0					
R8.1	07	2250	16.0		2100	15.0					3/4
R8.2	10	2380	17.0	0.3	2100	15.0	----			240/60/1	1
R8.3	15	2800	20.0		2520	18.0	1.0	2030	14.5	240/60/3	1½
R8.4	20	----	----		2800	20.0		2520	18.0		2
R10.9	10	2800	20.0	----	----	----	----	----	----	240/60/1	1
R10	15	3650	26.0		3200	22.8		2800	20.0		1½
R10	20	4200	30.0	0.2	3800	27.1	1.0	3080	22.0		2
R10.1	30	4500	32.0		4200	30.0		3920	28.0		3
R10.2	50	6300	45.0	0.6	5700	41.0		5600	40.0	240/60/3	5
R12.9	30	6000	43.0		5700	41.0		5450	39.0		3
R12.9	50	6000	43.0		5700	41.0		5450	39.0		5
R12	30	6400	46.0		6300	45.0	.75	6000	43.0		3
R12	50	7100	51.0	0.3	6900	49.0		6700	48.0		5
R12.1	50	8100	58.0		7800	55.7		7550	54.0		
		[1] [2]			[1] [2]			[1] [2]			

Fuel

Gas = G

Oil = O

Gas/Oil = GO

[1] Capacity based on an elevation of 2,000 feet. Capacity will be reduced 4% for each additional 1,000 feet of elevation.

[2] Oil burners - No. 2 oil, GPH based upon 140,000 BTU/U.S. gallon. Maximum viscosity 38 SSU at 100°F average 31 Redwood seconds. Mechanical pressure atomization.

[3] Oil burners supplied with burner mounted oil pump as standard except for R12-50 and R12.1-50. Modulating burners with burner mounted pumps limited to 35.0 GPH with 3.0 HP blower motor and 45.0 GPH with 5.0 HP blower motor. See catalog Sheet 6-10-2.2 for further data on burner high pressure pump sets.

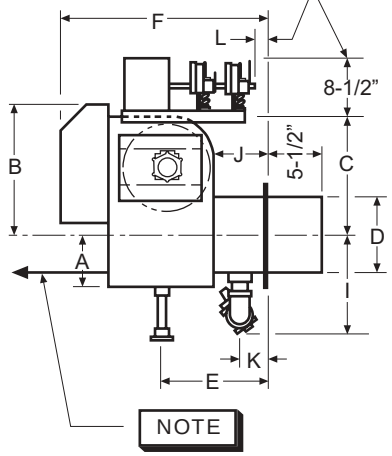
Dimensions

BASIC BURNER MODEL NO.		SHIPPING WEIGHT	OVERALL BURNER DIMENSIONS (INCHES)											
		LBS. APPROX.	A	B	C	D	E	F	G	H	I	J	K	L
R6.9	03	160	6	19	12-1/8	6	14-1/4	26	11-5/8	11-7/8	9	8-1/8	6	----
R6	03													
R6.1	03													
R6.2	03													
R6.3	05	165												
R8	05	200												
R8.1	07	230												
R8.2	10	250									12		6-5/16	
R8.3	15	270	6-1/2	19-3/4	13-3/4	8	13-7/16	28-1/2	13-1/2	14-1/2				
R8.4	20	280												
R10.9	10	300												
R10	15	320				10					14			3
R10	20	360												
R10.1	30	410												
R10.2	50	430					14-9/16	30-1/4		16	16			4-1/4
R12.9	30													
R12.9	50	650	8-1/2	21-1/8	15-3/8	12	15-3/16	30-1/4				8-11/16	6-1/2	5-1/4
R12	30													
R12	50	700							16	SEE NOTE				
R12.1	50													
		4	5											

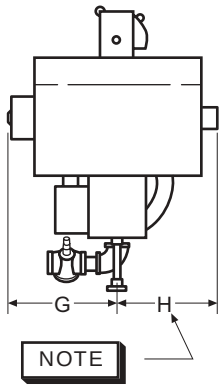
Fuel

Gas	= G
Oil	= O
Gas/Oil	= GO

If Characterized Linkage is used



Dimension F plus burner nose length (5-1/2" standard) is required behind the burner to remove the drawer assembly.



If remote oil pump set is used, dimension will be 1/2 width of control cabinet.

4 Weight will vary by burner depending on size and type of gas train, type of fuel control system, etc. The figures shown represent a burner with standard controls including gas train and burner oil pump set where applicable.

5 The dimensions shown are typical and subject to change without notice. For specific dimensions, request a certified print.

Standard Equipment

SINGLE OR COMBINATION FUEL BURNERS		[1] FUEL CONTROL SYSTEMS											
		ON - OFF FIXED AIR & FUEL			ON-OFF OR HI-LOW LOW FIRE START			MODULATING PROVEN LOW FIRE START			MODULATING PROVEN LOW FIRE START		
DESCRIPTION		GAS	OIL	GAS-OIL	GAS	OIL	GAS-OIL	GAS	OIL	GAS-OIL	GAS	OIL	GAS-OIL
		B	F1	B - F1	H	F4H	H-F4H	E2	F6R.2	E2-F6R.2	E2	F7.2	E2-F7.2
GENERAL	Blower Motor and Fan Air Inlet Register and Air Inlet Guard Flame Detector (UV Scanner)	X	X	X	X	X	X	X	X	X	X	X	X
	Air Flow Safety Switch (also on Oil Burners when required)	X		X	X		X	X		X	X		X
CONTROL CABINET	Combustion Flame Safeguard Control On - Off Switch Motor Contactor or Starter (½ HP and larger)	X	X	X	X	X	X	X	X	X	X	X	X
	Fuel Transfer Switch			X			X			X			X
	Modulating Sub-Panel with Manual-Auto Switch and Manual Potentiometer							X	X	X	X	X	X
	Two Indicator Lights	X	X	X	X	X	X						
	Four Indicator Lights							X	X	X	X	X	X
AIR-FUEL CONTROL	Fixed Air and Fuel	X	X	X									
	Low Fire Start, Motorized Gas Valve Air-Fuel Control				X		X						
	Low Fire Start, Oil Valving and Oil Cylinder Air-Fuel Control					X	X						
	Proven Low Fire Start, Modulating Motor Air-Fuel Control							X	X	X	X	X	X
GAS CONTROL	Safety Pilot Burner Ignition Transformer, 6000 Volt Pilot Solenoid Valve Pilot Shut-Off Cock Safety Test Cock Gas Orifices	X		X	X		X	X		X	X		X
OIL CONTROL	Oil Drawer Assembly with Air Diffuser Main Oil Solenoid Valve Safety Oil Solenoid Valve Low Oil Pressure Switch (When Required) Ignition Transformer, 10,000 Volts [2] Gas Pilot Ignition [3] Oil Pump		X	X		X	X		X	X		X	X
	Simplex Oil Nozzle(s)		X	X		X	X		X	X			
	By-Passing Oil Nozzle(s) Strainer Spring Loaded Check Valve											X	X
	By-Pass Oil Solenoid Valve By-Pass and 3-Way Solenoid Valve By-Pass Pressure Regulating Valve Oil Cylinder Assembly					X	X						
	Oil Metering Valve								X	X		X	X

[1] Natural gas and/or No. 2 oil.

[2] Spark ignition of oil standard on STRAIGHT OIL burners under 34 GPH.

[3] Proven gas pilot ignition is standard on all GAS and COMBINATION GAS/OIL burners and also for all sizes 12 OIL Burners.

Optional Equipment

■ Characterized Linkage available on sizes 10 and 12 Burners with Modulating Systems.