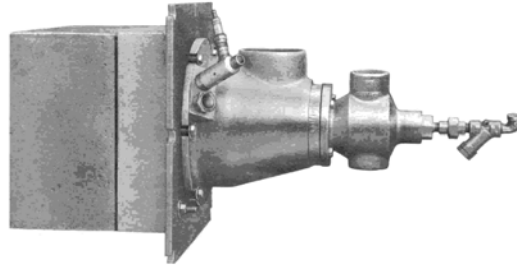


1466 SERIES COLD AIR GAS/OIL BURNER

CAPABILITIES

- High or low temperature furnace
- High excess air 800% or more
- Ratio or tempered flame operation
- Nominal capacity range 100,000 to 3.5 MM Btu/hour
- Suitable for light wall construction



FEATURES

- Refractory baffle design
- Provides positive flame stabilization
- Shields burner internals from furnace temperature
- Extra rugged port block and mounting plate construction
- Fired high alumina blocks
- Thicker block refractory
- Cast metal mounting plate with integral port container
- Hook bolt anchor system
- Simplified mounting requirements
- Heat resistant gas nozzle
- Cast body construction
- Integral fuel construction
- Suitable for operation at furnace temperatures up to 2600°F (1427°C)

CONTROL

- Cross Connected Regulator
- Metered Flow

FLAME MONITORING

- U.V. Detector

APPLICATIONS

- Heat Treat Furnaces
- Forge Furnaces
- Tundish and Ladle Preheat or Drying
- Continuous Strip Lines
- Roller Hearths
- Plate Heat Treat Furnaces
- Recirculating Car Type Heat Treat Furnaces
- Ceramic Kilns
- Air and Forced Draft Heaters
- Many other Applications

BURNER IGNITION

- Pilot

FUEL CAPABILITIES

- Natural Gas
- Coke Gas
- LP Gas
- Low BTU Mixed Gas
- Coal Gases
- #2 Oil through #6 Oil

OPTIONS

- Tile lengths
- Direct spark if dual fuel

CAUTION: The improper use of combustion equipment can result in a condition hazardous to people and property. Users are urged to comply with National Safety Standards and/or Insurance Underwriters recommendations

1466 SERIES COLD AIR GAS/OIL BURNER

CAPACITY CHART

Catalog No. 1466-	Air Pressure at Burner (1)		Gas Pressure at Burner (2)		Air Capability 100°F (38°C)		Flame Length 10% Excess Air		Direct Spark Igniter Part No. (optional)	Pilot Part No.
	inches wc	mbar	inches wc	mbar	scfh	Nm ³ /hr	feet	mm		
015	7	17.4	4.0	10.0	2,200	59	1.5	457	3500-146	3001-030
	10	24.9	5.7	14.2	2,630	71				
	15	37.3	8.6	21.4	3,220	86				
	20	49.6	11.4	28.4	3,720	100				
	28	69.7	16.0	39.8	4,400	118				
020	7	17.4	4.0	10.0	3,300	88	2.0	610	3500-146	3001-030
	10	24.9	5.7	14.2	3,940	106				
	15	37.3	8.6	21.4	4,830	129				
	20	49.8	11.4	28.4	5,580	150				
	28	69.7	16.0	39.8	6,600	177				
025	7	17.4	4.0	10.0	5,500	147	3.0	914	3500-146	3001-030
	10	24.9	5.7	14.1	6,570	176				
	15	37.3	8.6	21.4	8,050	216				
	20	49.8	11.4	28.4	9,300	249				
	28	69.7	16.0	39.8	11,000	295				
030	7	17.4	4.0	10.0	8,250	221	3.5	1067	3500-146	3001-040
	10	24.9	5.7	14.2	9,860	264				
	15	37.3	8.6	21.4	12,100	324				
	20	49.8	11.4	28.4	13,950	374				
	28	69.7	16.0	39.8	16,500	442				
03X	7	17.4	4.0	10.0	11,000	295	4.0	1219	3500-146	3001-040
	10	24.9	5.7	14.2	13,150	356				
	15	37.3	8.6	21.4	16,100	432				
	20	49.8	11.4	28.4	18,600	499				
	28	69.7	16.0	39.8	22,000	590				
040	7	17.4	4.0	10.0	22,000	590	4.5	1372	3500-146	3001-060
	10	24.9	5.7	14.2	26,300	705				
	15	37.3	8.6	21.4	32,200	863				
	20*	49.8	11.4	28.4	37,200	997				
04X	7	17.4	4.0	10.0	33,000	885	5.0	1524	3500-146	3001-060
	10**	24.9	4.0	10.0	39,400	1,056				

*Not Recommended Above 20" wc

**Not Recommended Above 10" wc

- (1) Piping system should be reviewed to insure delivery of this pressure. On occasion the approach to the burner should be increased one size including valves, flexible nipples, etc.
- (2) Gas orifices for pressures other than those shown are available at additional cost. (Basis: natural gas with 10% excess air.)

Excess air = 1000%

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1466 SERIES COLD AIR GAS/OIL BURNER

Gas Firing Nominal Flame Dimensions at 10% Excess Air

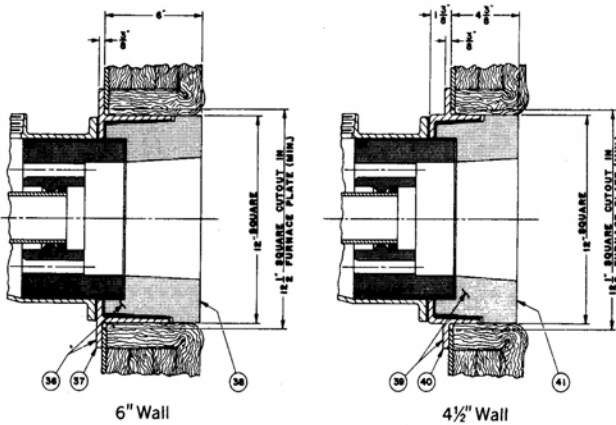
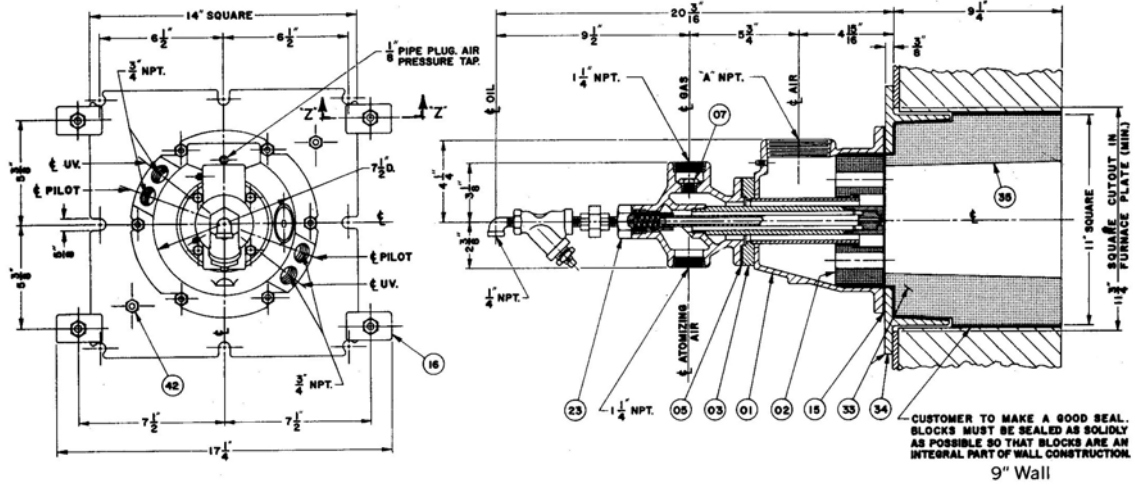
Catalog No. 1466-	7" wc (17.4 mbar)				28" wc (69.7 mbar)			
	Length		Diameter		Length		Diameter	
	feet	mm	feet	mm	feet	mm	feet	mm
015	1.5	457	1	305	2.0	610	1	305
020	2.0	610	1	305	2.5	762	1	305
025	2.5	762	1	305	3.0	914	1	305
030	3.0	914	1	305	3.5	1067	1	305
03X	3.0	914	1	305	4.0	1219	1	305
040	4.5	1372	1	305	0	0	1	305
04X	5.0	1524	1	305	0	0	1	305

Oil Firing Nominal Flame Dimensions at 10% Excess Air

Catalog No. 1466-	7" wc (17.4 mbar)				28" wc (69.7 mBar)			
	Length		Diameter		Length		Diameter	
	feet	mm	feet	mm	feet	mm	feet	mm
015	1.5	457	1	305	1.5	457	1	305
020	1.5	457	1	305	3.0	914	1	305
025	3.0	914	1	305	3.0	914	1	305
030	4.0	1219	1	305	4.5	1372	1	305
03X	4.0	1219	1	305	5.0	1524	1	305
040	4.5	1372	1	305	0	0	1	305
04X	5.5	1676	1	305	0	0	1	305

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1466 SERIES COLD AIR GAS/OIL BURNER -015 THRU -03X



PARTS LIST FOR ALL BURNERS

Part Number	Description
01	Body
02	Baffle
03	Gas Nozzle Assembly
05	Gasket (gas nozzle)
06	Observation Port (not shown)
07	Gas Orifice
15	Gasket (burner body)
16	Clamp
+23	LP Oil Burner Assembly
32	Pilot (not shown)
33	Mounting Plate and Block Assembly – 9" Wall
34	Mounting Plate – 9" Long Block
35	Block – 9" Wall
36	Mounting Plate and Block Assembly – 6" Wall
37	Mounting Plate – 6" Long Block
38	Block – 6" Wall
39	Mounting Plate and Block Assembly – 4 1/2" Wall
40	Mounting Plate – 4 1/2" Long Block
41	Block – 4 1/2" Wall
42	Wedge Bolt

+See 1900 Series Bulletin for Parts List

Fold blanket towards furnace plate to allow for shrinkage of blanket and maintain seal to prevent furnace gases from traveling along furnace plate.

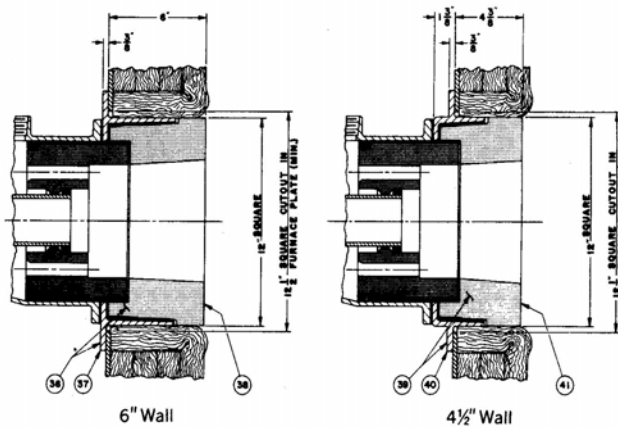
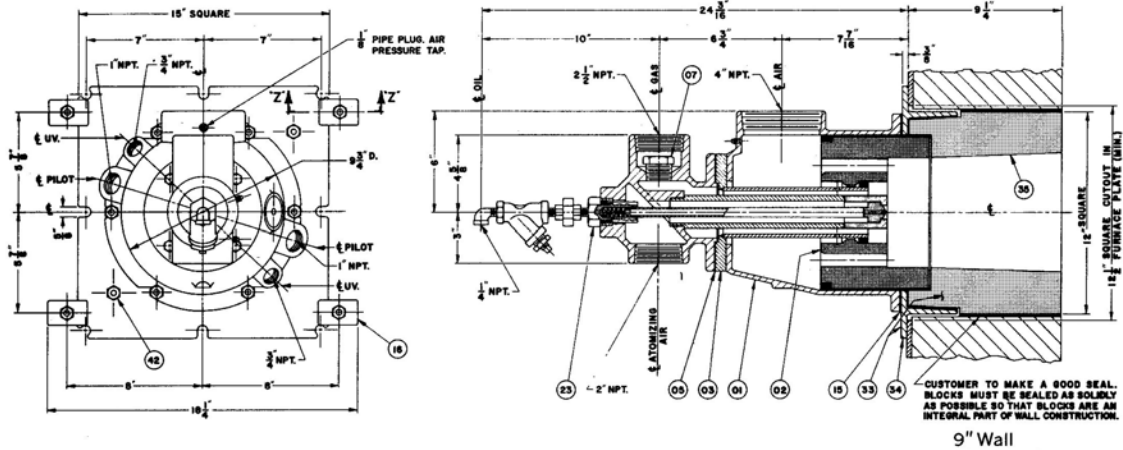
Part number must be preceded by catalog number.
 Example: To order Block Part 35 for 1466-030 Burner
 Specify 1466-030 -- 35
 (catalog number) (part number)

NOTE: GENERAL DIMENSION INFORMATION. SEE BLOOM REPRESENTATIVE FOR CERTIFIED DIMENSIONS FOR CONSTRUCTION

CAUTION: The improper use of combustion equipment can result in a condition hazardous to people and property. Users are urged to comply with National Safety Standards and/or Insurance Underwriters recommendations

1466 SERIES COLD AIR GAS/OIL BURNER

-040 AND -04X



PARTS LIST FOR ALL BURNERS

Part Number	Description
01	Body
02	Baffle
03	Gas Nozzle Assembly
05	Gasket (gas nozzle)
06	Observation Port (not shown)
07	Gas Orifice
15	Gasket (burner body)
16	Clamp
+23	LP Oil Burner Assembly
32	Pilot (not shown)
33	Mounting Plate and Block Assembly – 9" Wall
34	Mounting Plate – 9" Long Block
35	Block – 9" Wall
36	Mounting Plate and Block Assembly – 6" Wall
37	Mounting Plate – 6" Long Block
38	Block – 6" Wall
39	Mounting Plate and Block Assembly – 4 1/2" Wall
40	Mounting Plate – 4 1/2" Long Block
41	Block – 4 1/2" Wall
42	Wedge Bolt

+See 1900 Series Bulletin for Parts List

Fold blanket towards furnace plate to allow for shrinkage of blanket and maintain seal to prevent furnace gases from traveling along furnace plate.

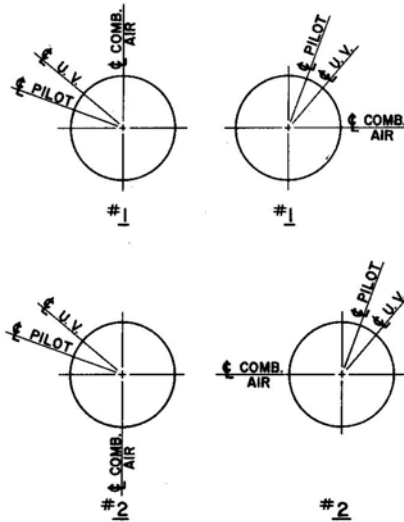
Part number must be preceded by catalog number.
 Example: To order Block Part 35 for 1466-040 Burner
 Specify 1466-040 -- 35
 (catalog number) (part number)

NOTE: GENERAL DIMENSION INFORMATION. SEE BLOOM REPRESENTATIVE FOR CERTIFIED DIMENSIONS FOR CONSTRUCTION

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1466 SERIES COLD AIR GAS/OIL BURNER

PILOT AND U.V. LOCATIONS FOR ALL SIZE BURNERS



- 1) When utilizing U.V. monitoring it is recommended that the U.V. be installed above the horizontal center line adjacent to pilot.
- 2) Pilot and U.V. connections will be located position #1 unless specified otherwise.

APPROXIMATE BURNER WEIGHTS

Catalog No. 1466-	A inches	9" Wall		6" Wall		4 ½" Wall	
		lbs	kg	lbs	kg	lbs	kg
015	1 ½	165	75	125	57	120	54
020	2	165	75	125	57	120	54
025	2 ½	165	75	125	57	120	54
030	3	165	75	125	57	120	54
03X	3	165	75	125	57	120	54
040	4	240	109	205	93	200	91
04X	4	240	109	205	93	200	91

NOTE: GENERAL DIMENSION INFORMATION. SEE BLOOM REPRESENTATIVE FOR CERTIFIED DIMENSIONS FOR CONSTRUCTION

CAUTION: The improper use of combustion equipment can result in a condition hazardous to people and property. Users are urged to comply with National Safety Standards and/or Insurance Underwriters recommendations

1466 SERIES COLD AIR GAS/OIL BURNER

LP OIL ATOMIZER CAPACITY DATA

COLD AIR OPERATION

Catalog No. 1466-	Air Static Pressure at Burner (inches wc)								
	Atomizer Size	7 gph (1)	Pressure psig (2)	Atomizer Size	15 gph (1)	Pressure psig (2)	Atomizer Size	28 gph (1)	Pressure psig (2)
014	LP-1	1.5	15	LP-1	2.2	32 / 15	LP-1	3.0	60 / 28
020	LP-1	2.2	15	LP-1	3.2	32 / 11	LP-3	4.4	15
024	LP-3	3.7	5	LP-3	5.4	10	LP-3	7.4	19
030	SLP-5	5.6	5	SLP-5	8.1	10	SLP-5	11.1	19
035	LP-8	7.4	5	LP-8	10.8	10	LP-8	14.8	19
040	SLP-8	14.8	15	SLP-8	21.7	32	----	----	----
045	LP-15	22.2	15	----	----	----	----	----	----
060	LP-020	23.7	15	LP-030	34.8	20 / 15	LP-045	47.5	16.7 / 15
	Use burners this column for oil flows up to flows in next column $P_2 = P_1 \frac{(\text{flow}_2)^2}{(\text{flow}_1)^2}$			Use burners this column for oil flows up to flows in next column $P_2 = P_1 \frac{(\text{flow}_2)^2}{(\text{flow}_1)^2}$					

1. Indicated oil gph based on 135, 000 BTU/gallon and allows for 10% excess air when used in noted burner size at noted burner air static pressure.
2. Any atomizer shown on this chart may be sized for 15 psig at nominal flows within the chart range. However, if not indicated in above chart, these would be special and should be limited to larger quantity orders.

ATOMIZER DATA TABLE

Atomizer Size	Atomizing Air Flow scfh at 24 osi	Cooling Air Flow scfh at Pressure
LP-001	300	65 @ 2" w.c.
LP-003	500	110 @ 2" w.c.
SLP-005	600	130 @ 2" w.c.
LP-008	1000	210 @ 2" w.c.
LP-015	1950	430 @ 2" w.c.
SLP-008	1150	400 @ 5" w.c.
SLP-015	2450	1360 @ 3" w.c.
LP-020	2600	810 @ 4" w.c.
LP-030	3900	1210 @ 4" w.c.
LP-045	3850	1820 @ 4" w.c.

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