



**BBG BETA BURNER  
GAS SERIES**

**NATURAL GAS OPERATION**

| BBG 1000 AND 2000 SERIES |                       | BURNER MODEL |        |         |         |         |
|--------------------------|-----------------------|--------------|--------|---------|---------|---------|
| SPECIFICATIONS           |                       | xx04         | xx06   | xx08    | xx10    | xx12    |
| Capacity                 | (MMBTU/hr)            | 3.1          | 6.1    | 12      | 19      | 26      |
|                          | (kW)                  | 820          | 1,610  | 3,170   | 5,050   | 6,770   |
| Air Capacity             | (scfh)                | 32,000       | 63,500 | 124,500 | 198,000 | 265,000 |
|                          | (nm <sup>3</sup> /hr) | 857          | 1,701  | 3,335   | 5,304   | 7,099   |
| Air Inlet Pressure       | (in. w.c.)            | 27.7         | 27.7   | 27.7    | 27.7    | 27.7    |
|                          | (mbar)                | 68.9         | 68.9   | 68.9    | 68.9    | 68.9    |
| Gas Inlet Pressure       | (in. w.c.)            | 1.5          | 11.6   | 12.0    | 3.7     | 5.8     |
|                          | (mbar)                | 3.7          | 28.9   | 29.9    | 9.2     | 14.4    |
| Flame Length             | (ft)                  | 5.8          | 8.0    | 10.0    | 12.0    | 14.0    |
|                          | (m)                   | 1.8          | 2.4    | 3.0     | 3.7     | 4.3     |
| Flame Diameter           | (ft)                  | 1.5          | 2.0    | 3.0     | 4.0     | 4.0     |
|                          | (m)                   | 0.5          | 0.6    | 0.9     | 1.2     | 1.2     |

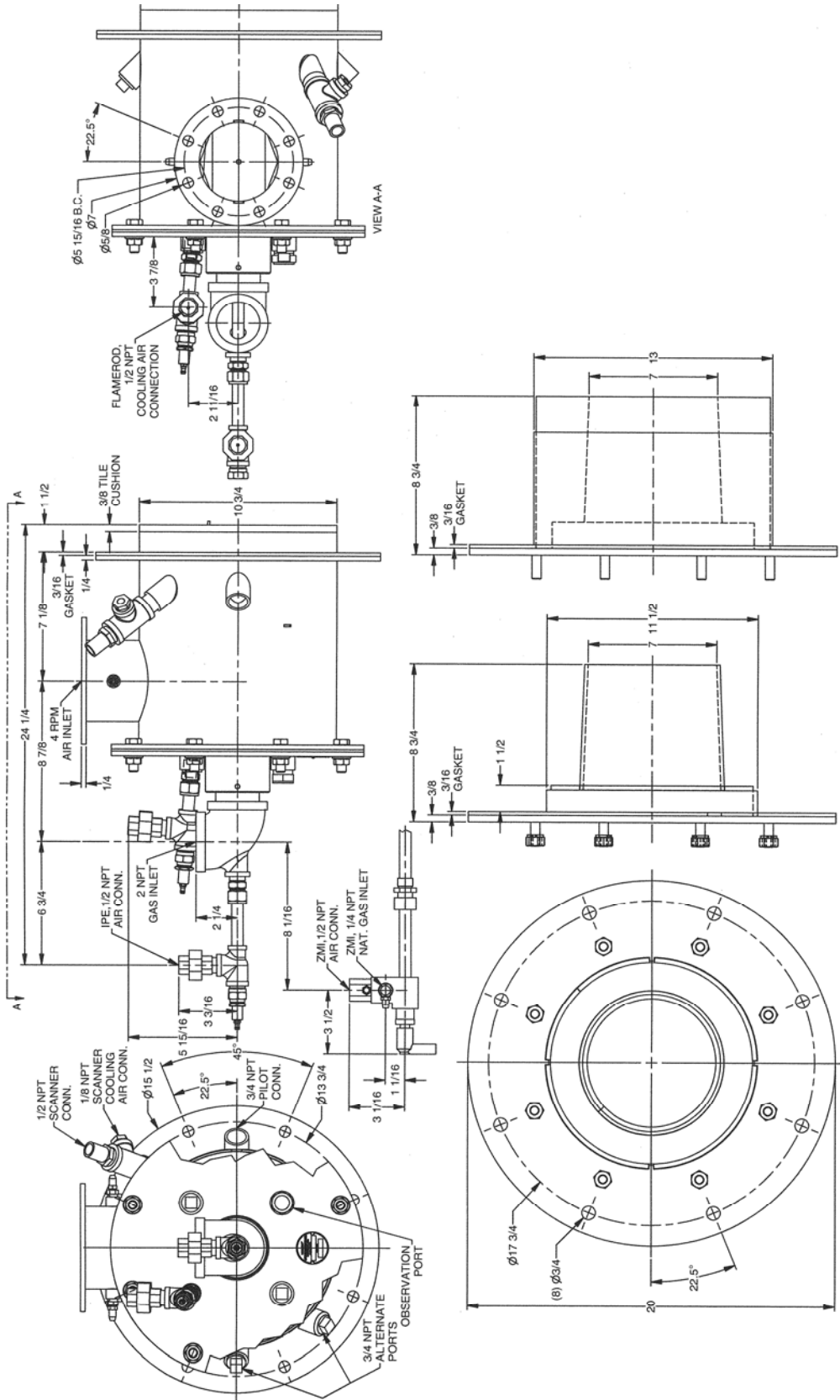
| BBG 1000 AND 2000 SERIES |                       | BURNER MODEL |         |         |           |  |
|--------------------------|-----------------------|--------------|---------|---------|-----------|--|
| SPECIFICATIONS           |                       | xx14         | xx18    | xx20    | xx24      |  |
| Capacity                 | (MMBTU/hr)            | 38           | 65      | 87      | 123       |  |
|                          | (kW)                  | 10,130       | 17,110  | 23,010  | 32,530    |  |
| Air Capacity             | (scfh)                | 397,000      | 670,000 | 898,025 | 1,275,000 |  |
|                          | (nm <sup>3</sup> /hr) | 10,635       | 17,948  | 24,056  | 34,155    |  |
| Air Inlet Pressure       | (in. w.c.)            | 27.7         | 27.7    | 27.7    | 27.7      |  |
|                          | (mbar)                | 68.9         | 68.9    | 68.9    | 68.9      |  |
| Gas Inlet Pressure       | (in. w.c.)            | 1.5          | 11.8    | 2.2     | 2.9       |  |
|                          | (mbar)                | 3.7          | 29.4    | 5.5     | 7.1       |  |
| Flame Length             | (ft)                  | 15.0         | 17.0    | 18.0    | 25.0      |  |
|                          | (m)                   | 4.6          | 5.2     | 5.5     | 7.6       |  |
| Flame Diameter           | (ft)                  | 4.5          | 5.0     | 4.5     | 5.0       |  |
|                          | (m)                   | 1.4          | 1.5     | 1.4     | 1.5       |  |

**NOTES:**

- Capacities based on Natural Gas with HHV of 1034 BTU/ft<sup>3</sup> (Standard), and LHV of 10.21 kWh/nm<sup>3</sup> (Metric), 0.59 S.G., and a stoichiometric ratio of 9.74:1 with burner firing into chamber under no pressure at 10% excess air.
- Air and fuel flows based on STP operating conditions at sea level and industry standard air and gas piping practices.
- Gas inlet pressure given for reference only and should not be used for measuring fuel flow to the burner.
- Flame lengths measured from end of the combustion tile.
- Burner is suitable for use on gaseous fuels other than Natural Gas and with combustion air other than ambient temperature, consult Hauck.

In accordance with Hauck's commitment to Total Quality Improvement, Hauck reserves the right to change the specifications of products without prior notice.

## BBG BETA BURNER BBG\_04



NOTE:  
 1) DIMENSIONS ARE IN INCHES.  
 2) UV SCANNER MUST BE MOUNTED ABOVE HORIZONTAL CENTER LINE OF BURNER ON SAME SIDE AS IPG PILOT.

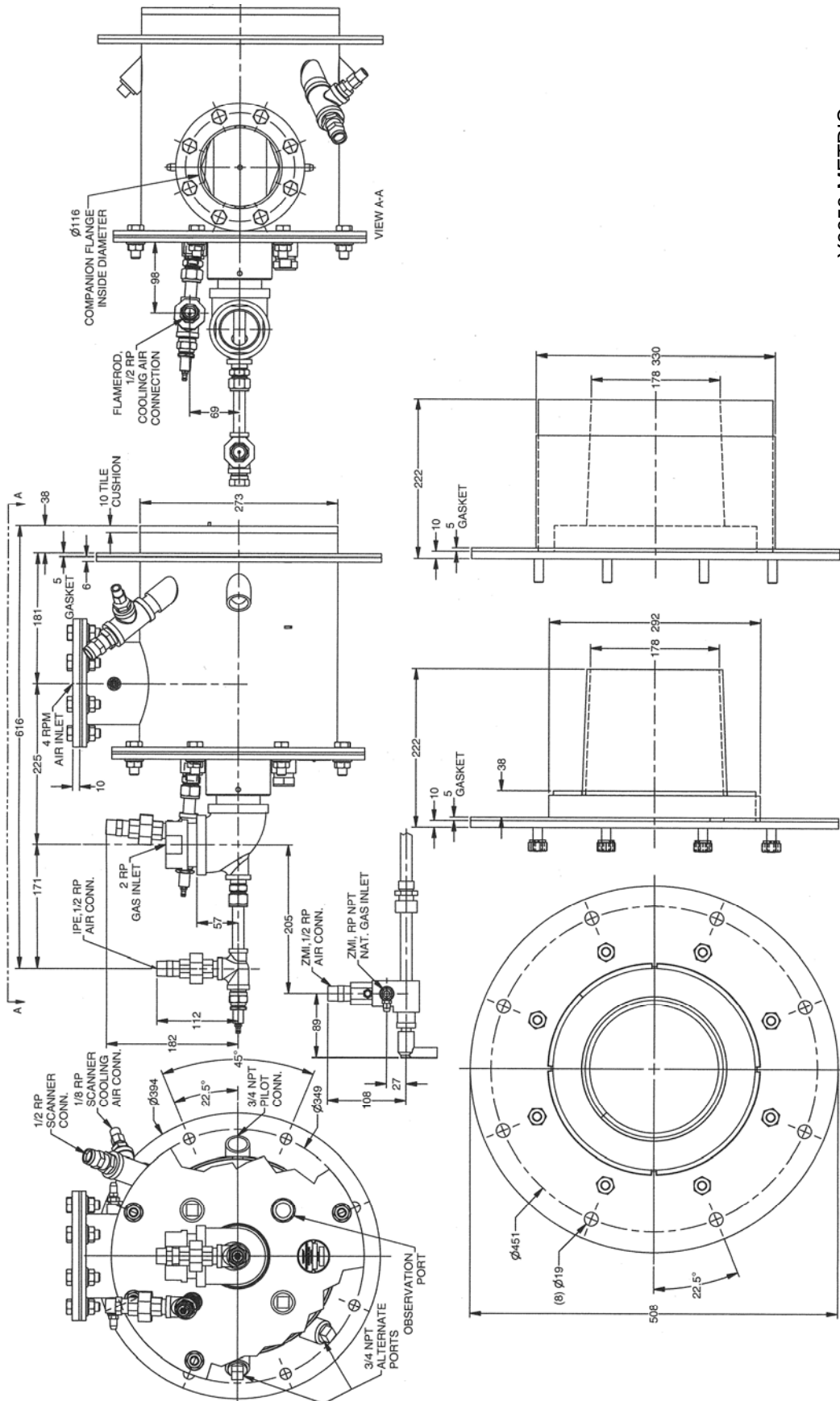
Y8958  
(NOT TO SCALE)

(See Reverse Side For Metric Dimensions)

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# BBG BETA BURNER BBG\_04

## METRIC DIMENSIONS



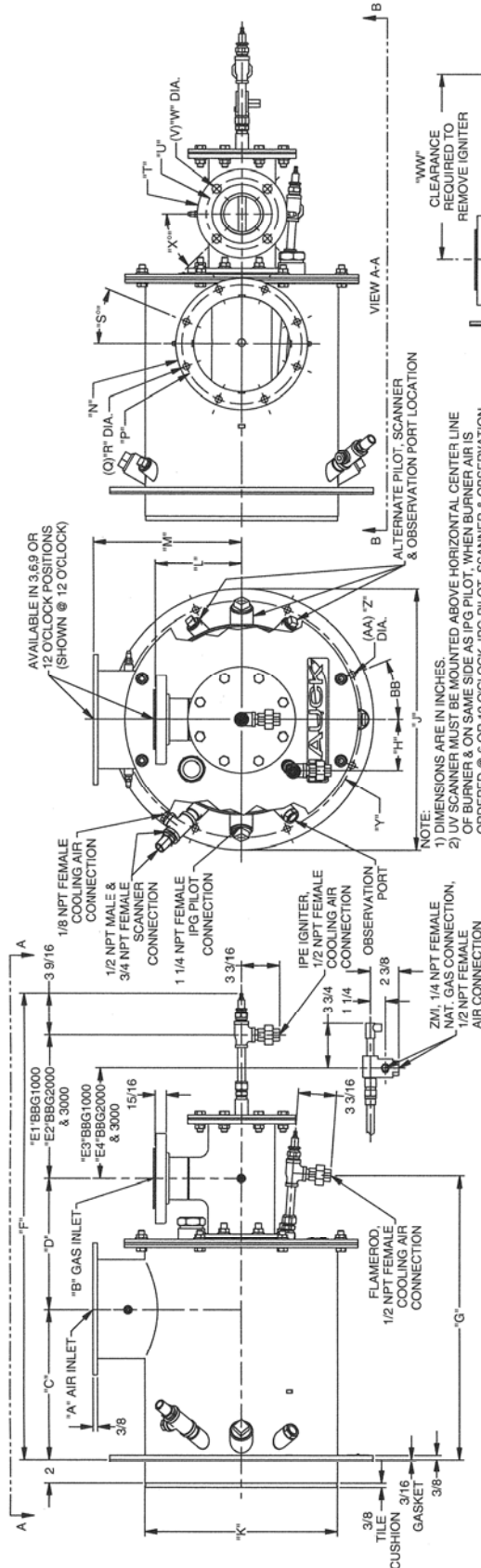
Y8958 METRIC  
(NOT TO SCALE)

NOTE:  
 1) DIMENSIONS ARE IN MM.  
 2) UV SCANNER MUST BE MOUNTED ABOVE HORIZONTAL CENTER LINE OF BURNER ON SAME SIDE AS IPG PILOT.

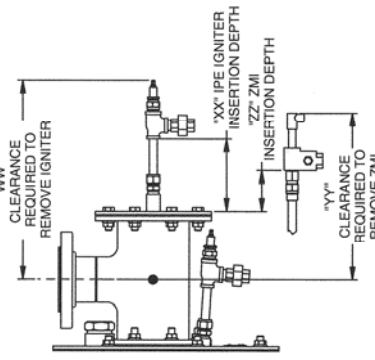


# DIMENSIONS

## BBG BETA BURNER BBG\_06 THROUGH\_14

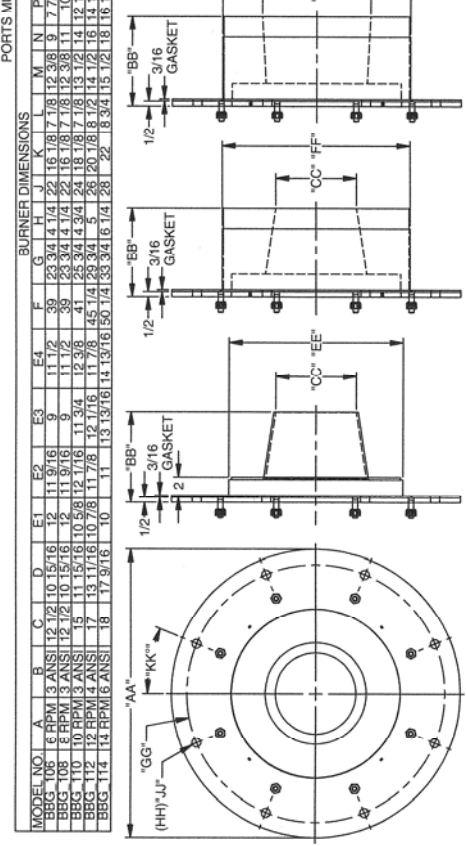


NOTE:  
 1) DIMENSIONS ARE IN INCHES.  
 2) UV SCANNER MUST BE MOUNTED ABOVE HORIZONTAL CENTER LINE OF BURNER & ON SAME SIDE AS I/P G PLOTT. WHEN BURNER AIR IS ORDERED @ 6 OR 12 O'CLOCK, I/P G PLOTT, SCANNER & OBSERVATION SIDE PORTS MUST BE ORDERED @ 3 OR 9 O'CLOCK. WHEN BURNER AIR IS ORDERED @ 3 OR 9 O'CLOCK, I/P G PLOTT, SCANNER & OBSERVATION PORTS MUST BE @ 12 O'CLOCK.



CLEARANCE REQUIRED TO REMOVE IGNITER  
 CLEARANCE REQUIRED TO REMOVE ZMI  
 VIEW B-B  
 SPARK/IGNITER & ZMI INSERTION DEPTH & REMOVAL CLEARANCE

| MODEL NO. | AA     | BB     | CC     | DD     | EE     | FF     | GG     | HH     | JJ     | KK     |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| BBG_106   | 18.374 | 17.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 |
| BBG_108   | 18.374 | 17.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 |
| BBG_110   | 18.374 | 17.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 |
| BBG_112   | 18.374 | 17.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 |
| BBG_114   | 18.374 | 17.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 | 16.127 |



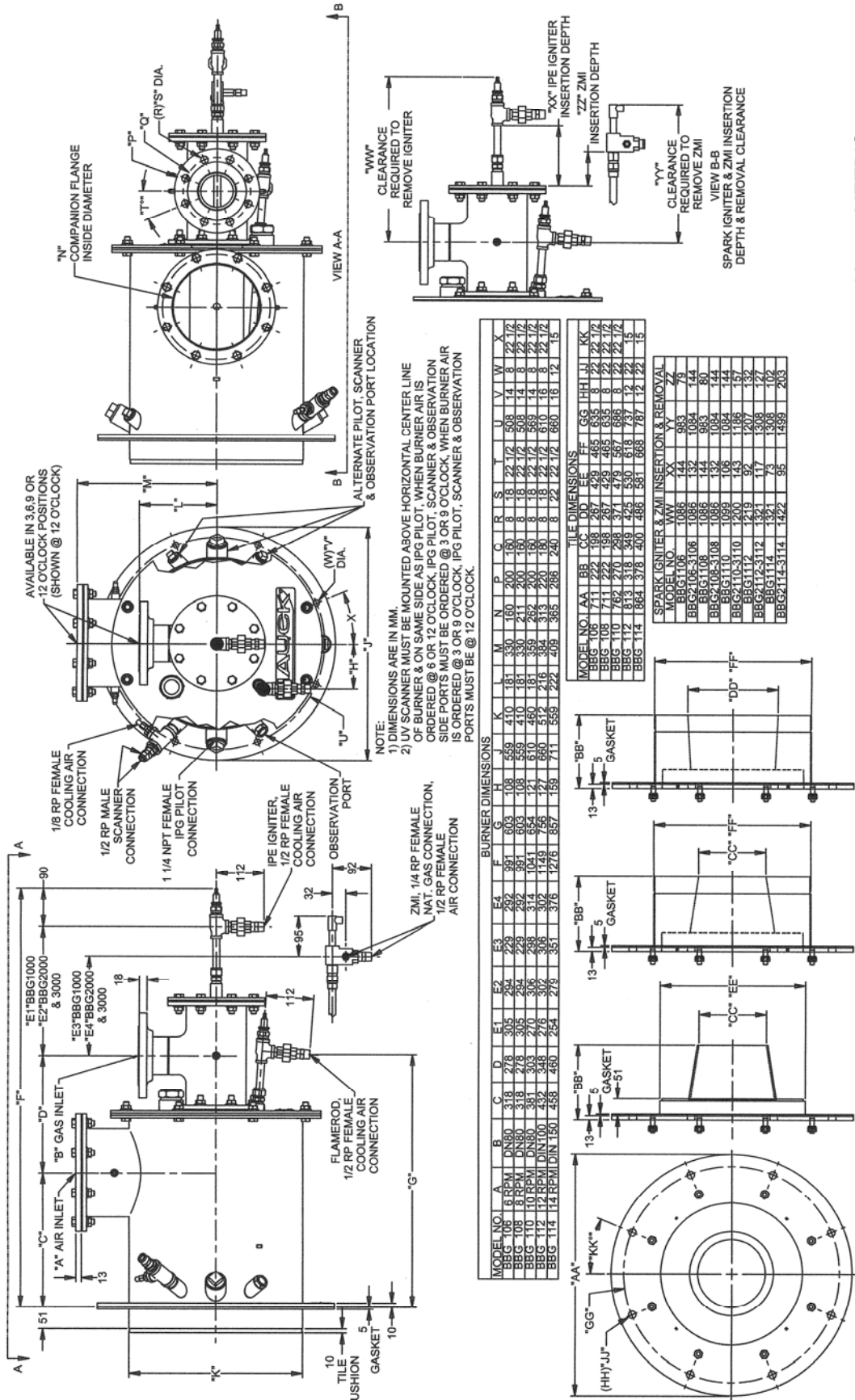
Y8895  
(NOT TO SCALE)

(See Reverse Side For Metric Dimensions)

In accordance with Hauck's commitment to Total Quality Improvement, Hauck reserves the right to change the specifications of products without prior notice.

# BBG BETA BURNER BBG\_06 THROUGH\_14

## METRIC DIMENSIONS



| BURNER DIMENSIONS |    |     |     |     |     |     |     |     |     |     |     |     |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| MODEL NO.         | A  | B   | C   | D   | E1  | E2  | E3  | E4  | F   | G   | H   | I   |
| BBG 106           | 15 | 278 | 318 | 305 | 294 | 293 | 292 | 291 | 290 | 289 | 288 | 287 |
| BBG 108           | 8  | 278 | 318 | 305 | 294 | 293 | 292 | 291 | 290 | 289 | 288 | 287 |
| BBG 110           | 10 | 278 | 318 | 305 | 294 | 293 | 292 | 291 | 290 | 289 | 288 | 287 |
| BBG 112           | 12 | 278 | 318 | 305 | 294 | 293 | 292 | 291 | 290 | 289 | 288 | 287 |
| BBG 114           | 14 | 278 | 318 | 305 | 294 | 293 | 292 | 291 | 290 | 289 | 288 | 287 |

| TILE DIMENSIONS |     |     |     |     |     |     |     |    |    |     |     |    |
|-----------------|-----|-----|-----|-----|-----|-----|-----|----|----|-----|-----|----|
| MODEL NO.       | AA  | BB  | CC  | DD  | EE  | FF  | GG  | HH | II | JJ  | KK  | LL |
| BBG 106         | 711 | 222 | 188 | 267 | 429 | 465 | 635 | 8  | 22 | 172 | 503 | 14 |
| BBG 108         | 711 | 222 | 188 | 267 | 429 | 465 | 635 | 8  | 22 | 172 | 503 | 14 |
| BBG 110         | 762 | 270 | 268 | 374 | 473 | 567 | 686 | 8  | 22 | 172 | 503 | 14 |
| BBG 112         | 813 | 318 | 343 | 425 | 530 | 618 | 737 | 12 | 22 | 172 | 503 | 14 |
| BBG 114         | 864 | 378 | 400 | 488 | 581 | 688 | 787 | 12 | 22 | 172 | 503 | 14 |

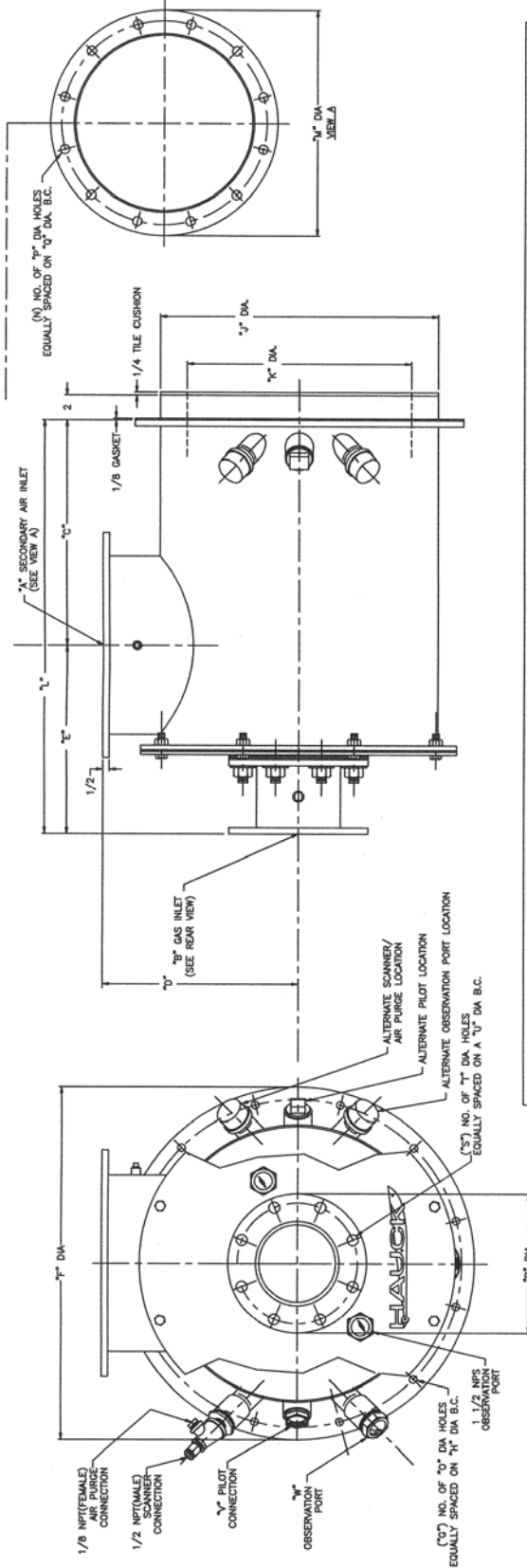
| SPARK IGNITER & ZMI INSERTION & REMOVAL |      |     |     |    |  |  |  |  |  |  |  |  |
|---|------|-----|-----|----|--|--|--|--|--|--|--|--|
| MODEL NO.                               | WW   | XX  | YY  | ZZ |  |  |  |  |  |  |  |  |
| BBG106                                  | 1036 | 144 | 383 | 79 |  |  |  |  |  |  |  |  |
| BBG108                                  | 1036 | 144 | 383 | 79 |  |  |  |  |  |  |  |  |
| BBG110                                  | 1036 | 144 | 383 | 79 |  |  |  |  |  |  |  |  |
| BBG112                                  | 1036 | 144 | 383 | 79 |  |  |  |  |  |  |  |  |
| BBG114                                  | 1036 | 144 | 383 | 79 |  |  |  |  |  |  |  |  |

Y8895 METRIC  
(NOT TO SCALE)

In accordance with Hauck's commitment to Total Quality Improvement, Hauck reserves the right to change the specifications of products without prior notice.



## BBG BETA BURNER BBG\_118 THROUGH BBG\_120

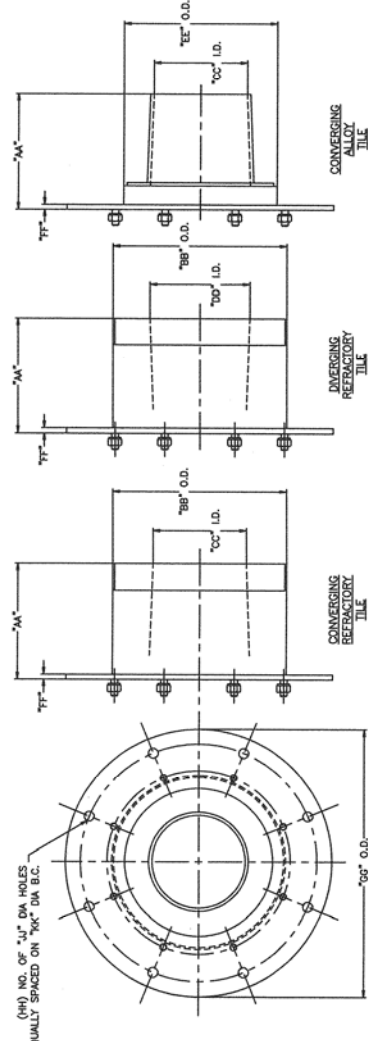


**BURNER DIMENSIONS**

| MODEL NO. | A  | B   | C    | D    | E  | F   | G  | H  | J     | K  | L   | M  | N   | O  | P   | Q   | R  | S   | T   | U   | V   | W   |     |     |     |     |       |     |       |     |     |       |     |       |     |
|-----------|----|-----|------|------|----|-----|----|----|-------|----|-----|----|-----|----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----|-------|-----|-----|-------|-----|-------|-----|
| BBG_118   | 18 | 8   | ANSI | 20   | 17 | 1/2 | 17 | 32 | 12    | 30 | 26  | 21 | 3/4 | 37 | 23  | 1/4 | 16 | 5/8 | 3/4 | 21  | 1/4 | 11  | 8   | 7/8 | 9   | 1/2 | 1-1/2 | NFS | 1-1/2 | NFS |     |       |     |       |     |
| BBG_120   | 20 | RPM | 8    | ANSI | 21 | 3/8 | 20 | 18 | 13/16 | 36 | 3/4 | 12 | 35  | 31 | 1/8 | 26  | 40 | 3/8 | 25  | 1/4 | 20  | 7/8 | 3/4 | 23  | 1/4 | 13  | 1/2   | 8   | 7/8   | 11  | 1/2 | 1-1/2 | NFS | 1-1/2 | NFS |

**TILE DIMENSIONS**

| MODEL NO. | AA | BB   | CC | DC   | EE | FF  | GG      | HH | JJ  | KK  |    |    |     |    |
|-----------|----|------|----|------|----|-----|---------|----|-----|-----|----|----|-----|----|
| BBG_118   | 18 | 9/16 | 30 | 5/16 | 19 | 3/4 | 24      | 28 | 7/8 | 1/2 | 38 | 12 | 7/8 | 35 |
| BBG_120   | 18 | 9/16 | 34 | 5/16 | 23 | 1/4 | PENDING | 31 | 7/8 | 1/2 | 42 | 12 | 7/8 | 39 |



Y6871  
(NOT TO SCALE)

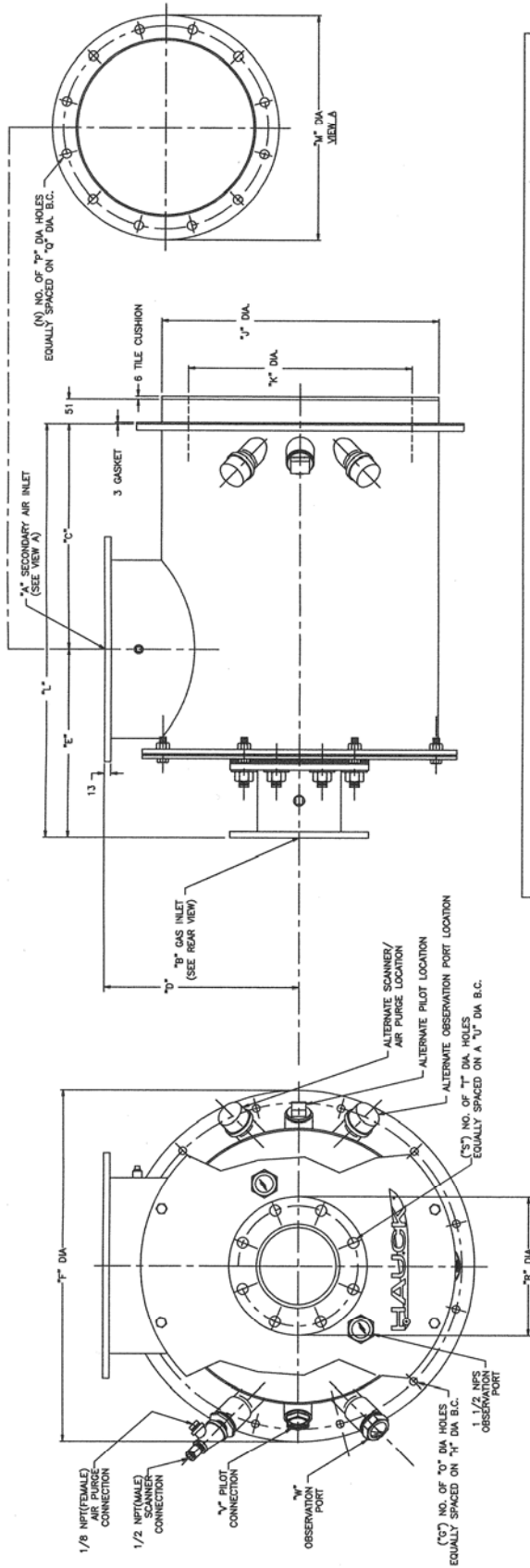
- NOTES:**
1. DIMENSIONS ARE IN INCHES.
  2. PILOT AND SCANNER MUST BE LOCATED ON SAME SIDE OF BURNER AND ABOVE HORIZONTAL CENTER LINE OF BURNER.

(See Reverse Side For Metric Dimensions)

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# BBG BETA BURNER

## BBG\_118 THROUGH BBG\_120

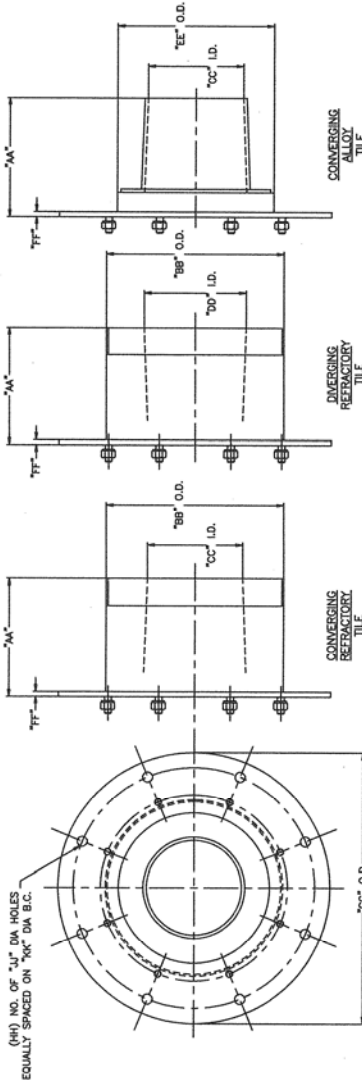


**BURNER DIMENSIONS**

| MODEL NO. | A      | B      | C   | D   | E   | F   | G  | H   | J   | K   | L    | M   | N  | P  | Q   | R   | S | T  | U   | V         | W         |
|-----------|--------|--------|-----|-----|-----|-----|----|-----|-----|-----|------|-----|----|----|-----|-----|---|----|-----|-----------|-----------|
| BBG_118   | 18 RPM | 6 ANSI | 508 | 445 | 432 | 813 | 12 | 762 | 660 | 552 | 940  | 591 | 16 | 19 | 540 | 279 | 8 | 22 | 241 | 1-1/2 NPS | 1-1/2 NPS |
| BBG_120   | 20 RPM | 6 ANSI | 543 | 508 | 478 | 933 | 12 | 889 | 791 | 660 | 1026 | 641 | 20 | 22 | 591 | 343 | 8 | 22 | 292 | 1-1/2 NPS | 1-1/2 NPS |

**TILE DIMENSIONS**

| MODEL NO. | AA  | BB  | CC  | DD      | EE  | FF | GG   | HH | JJ | KK  |
|-----------|-----|-----|-----|---------|-----|----|------|----|----|-----|
| BBG_118   | 472 | 770 | 502 | 610     | 683 | 13 | 985  | 12 | 22 | 889 |
| BBG_120   | 472 | 872 | 591 | PENDING | 810 | 13 | 1067 | 12 | 22 | 991 |



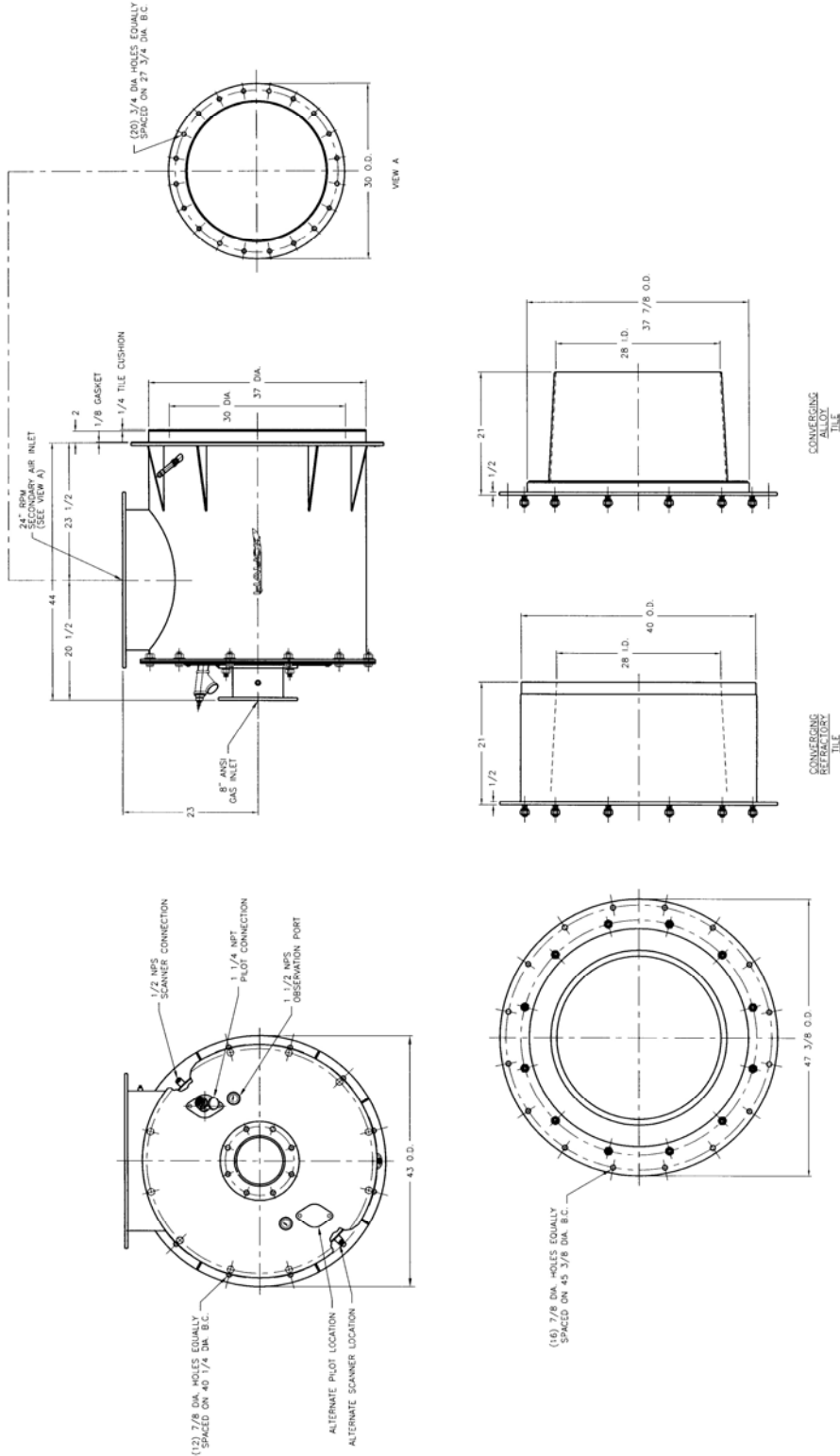
## METRIC DIMENSIONS

Y6871 METRIC  
(NOT TO SCALE)

- NOTES:**
1. DIMENSIONS ARE IN MILLIMETERS.
  2. PILOT AND SCANNER MUST BE LOCATED ON SAME SIDE OF BURNER AND ABOVE HORIZONTAL CENTER LINE OF BURNER.



**BBG BETA BURNER – PILOT IGNITION**  
BBG \_124



Y6872  
(NOT TO SCALE)

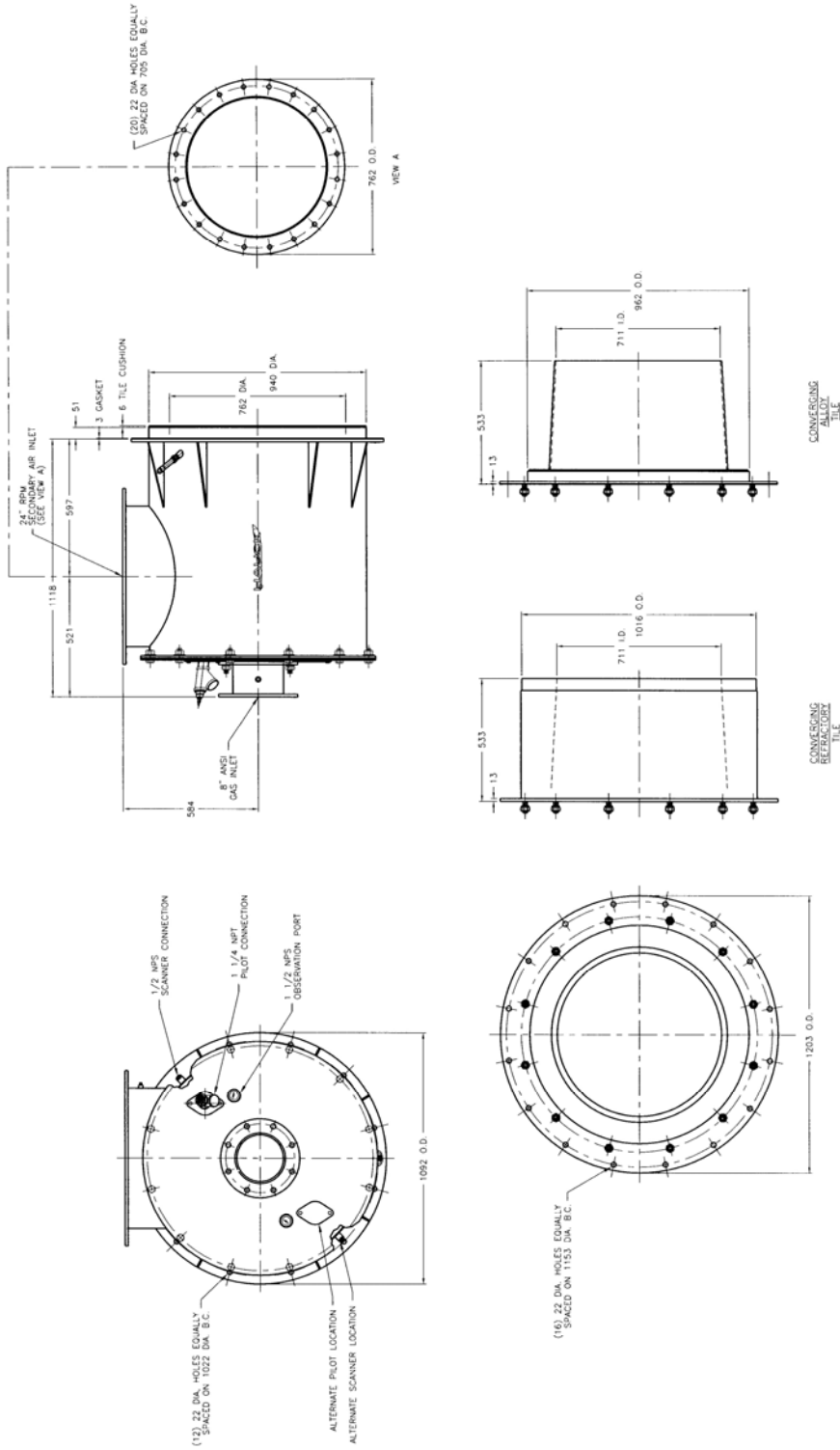
- NOTES:  
 1 DIMENSIONS ARE IN INCHES.  
 2 PILOT AND SCANNER MUST BE LOCATED ON SAME SIDE OF BURNER AND ABOVE HORIZONTAL CENTER LINE OF BURNER.

(See Reverse Side For Metric Dimensions)



# METRIC DIMENSIONS

## BBG BETA BURNERS – PILOT IGNITION BBG \_124



Y6872 METRIC  
(NOT TO SCALE)

- NOTES:
1. DIMENSIONS ARE IN MM.
  2. PILOT AND SCANNER MUST BE LOCATED ON SAME SIDE OF BURNER AND ABOVE HORIZONTAL CENTER LINE OF BURNER.



## BBG BETA BURNER GAS SERIES

### Burner Capacity Information, BBG 1004/2004

#### NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                  |                  |                  |                  |
|-------------------------------------|-----------------------|-------------------------|------------------|------------------|------------------|------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>320,000</b>          | <b>1,550,000</b> | <b>2,200,000</b> | <b>2,690,000</b> | <b>3,090,000</b> |
|                                     | (kW)                  | <b>80</b>               | <b>410</b>       | <b>580</b>       | <b>710</b>       | <b>820</b>       |
| Air Capacity                        | (scfh)                | 3,320                   | 16,100           | 22,800           | 27,900           | 32,000           |
|                                     | (nm <sup>3</sup> /hr) | 89                      | 431              | 611              | 747              | 857              |
| Air Inlet Pressure                  | (in.w.c.)             | 0.3                     | 6.9              | 13.9             | 20.8             | 27.7             |
|                                     | (mbar)                | 0.7                     | 17.2             | 34.5             | 51.7             | 68.9             |
| Gas Inlet Pressure                  | (in.w.c.)             | 0.1                     | 0.5              | 0.9              | 1.3              | 1.5              |
|                                     | (mbar)                | 0.1                     | 1.2              | 2.2              | 3.1              | 3.7              |
| Flame Length (at 10% Excess Air)    | (in)                  | 30                      | 40               | 55               | 65               | 70               |
|                                     | (mm)                  | 760                     | 1020             | 1400             | 1650             | 1780             |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 10                      | 15               | 15               | 20               | 20               |
|                                     | (mm)                  | 250                     | 380              | 380              | 510              | 510              |
| Maximum Operating Excess            | (Air)                 | 100%                    | 400%             | 600%             | 600%             | 600%             |
|                                     | (Fuel)                | 30%                     | 30%              | 30%              | 30%              | 30%              |
| Maximum Ignition Gas                | (scfh)                | 450                     | 2,250            | N/R              | N/R              | N/R              |
|                                     | (nm <sup>3</sup> /hr) | 12.1                    | 60.3             | N/R              | N/R              | N/R              |
| Minimum Ignition Gas                | (scfh)                | 175                     | 425              | N/R              | N/R              | N/R              |
|                                     | (nm <sup>3</sup> /hr) | 4.7                     | 11.4             | N/R              | N/R              | N/R              |

### Burner Capacity Information, BBG 3004

#### NATURAL GAS, 900°F/482°C PREHEATED COMBUSTION AIR OPERATION

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                |                  |                  |                  |
|-------------------------------------|-----------------------|-------------------------|----------------|------------------|------------------|------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>200,000</b>          | <b>960,000</b> | <b>1,400,000</b> | <b>1,710,000</b> | <b>1,980,000</b> |
|                                     | (kW)                  | <b>50</b>               | <b>250</b>     | <b>370</b>       | <b>450</b>       | <b>520</b>       |
| Air Capacity                        | (scfh)                | 2,055                   | 9,975          | 14,500           | 17,750           | 20,525           |
|                                     | (nm <sup>3</sup> /hr) | 55                      | 267            | 388              | 475              | 550              |
| Air Inlet Pressure                  | (in.w.c.)             | 0.3                     | 6.9            | 13.9             | 20.8             | 27.7             |
|                                     | (mbar)                | 0.7                     | 17.2           | 34.5             | 51.7             | 68.9             |
| Gas Inlet Pressure                  | (in.w.c.)             | 0.0                     | 0.4            | 0.7              | 0.9              | 1.1              |
|                                     | (mbar)                | 0.1                     | 0.9            | 1.7              | 2.4              | 2.8              |
| Flame Length (at 10% Excess Air)    | (in)                  | 25                      | 30             | 35               | 35               | 40               |
|                                     | (mm)                  | 640                     | 760            | 890              | 890              | 1020             |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 10                      | 10             | 15               | 15               | 15               |
|                                     | (mm)                  | 250                     | 250            | 380              | 380              | 380              |
| Maximum Operating Excess            | (Air)                 | 100%                    | 350%           | 500%             | 500%             | 500%             |
|                                     | (Fuel)                | 30%                     | 30%            | 30%              | 30%              | 30%              |
| Maximum Ignition Gas                | (scfh)                | 275                     | 725            | 1,450            | N/R              | N/R              |
|                                     | (nm <sup>3</sup> /hr) | 7.4                     | 19.4           | 38.8             | N/R              | N/R              |
| Minimum Ignition Gas                | (scfh)                | 110                     | 175            | 275              | N/R              | N/R              |
|                                     | (nm <sup>3</sup> /hr) | 2.9                     | 4.7            | 7.4              | N/R              | N/R              |

**NOTES:**

- Capacities based on Natural Gas with HHV of 1034 BTU/ft<sup>3</sup> (Standard), and LHV of 10.21 kWh/nm<sup>3</sup> (Metric), 0.59 S.G., and a stoichiometric ratio of 9.74:1 with burner firing into chamber under no pressure at 10% excess air.
- Air and fuel flows based on STP operating conditions at sea level and industry standard air and gas piping practices.
- Gas inlet pressure given for reference only and should not be used for measuring fuel flow to the burner.
- Flame lengths measured from end of the combustion tile.
- Flame detection via UV scanner.
- Ignition limits are established with (1) IPG5411 gas pilot, (2) IPE50 spark igniter, and (3) ZMI 16 gas pilot; with metered air and fuel flows and 5KV/15mA spark ignition transformer; for limits listed as N/R ignition is Not Recommended at this capacity.
- Burner is suitable for use on gaseous fuels other than Natural Gas and with combustion air other than ambient temperature, consult Hauck.

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## BBG BETA BURNER GAS SERIES

### Burner Capacity Information, BBG 1006/2006

NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                  |                  |                  |                  |
|-------------------------------------|-----------------------|-------------------------|------------------|------------------|------------------|------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>650,000</b>          | <b>3,140,000</b> | <b>4,330,000</b> | <b>5,260,000</b> | <b>6,130,000</b> |
|                                     | (kW)                  | <b>170</b>              | <b>830</b>       | <b>1,150</b>     | <b>1,390</b>     | <b>1,620</b>     |
| Air Capacity                        | (scfh)                | 6,750                   | 32,500           | 44,825           | 54,500           | 63,500           |
|                                     | (nm <sup>3</sup> /hr) | 181                     | 871              | 1,201            | 1,460            | 1,701            |
| Air Inlet Pressure                  | (in. w.c.)            | 0.3                     | 6.9              | 13.9             | 20.8             | 27.7             |
|                                     | (mbar)                | 0.7                     | 17.2             | 34.5             | 51.7             | 68.9             |
| Gas Inlet Pressure                  | (in. w.c.)            | 0.1                     | 2.7              | 5.6              | 8.6              | 11.6             |
|                                     | (mbar)                | 0.2                     | 6.7              | 13.9             | 21.3             | 28.8             |
| Flame Length (at 10% Excess Air)    | (in)                  | 36                      | 72               | 84               | 90               | 96               |
|                                     | (mm)                  | 910                     | 1830             | 2130             | 2290             | 2440             |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 18                      | 20               | 20               | 24               | 24               |
|                                     | (mm)                  | 460                     | 510              | 510              | 610              | 610              |
| Maximum Operating Excess            | (Air)                 | 200%                    | 400%             | 400%             | 400%             | 400%             |
|                                     | (Fuel)                | 30%                     | 30%              | 30%              | 30%              | 30%              |
| Maximum Ignition Gas                | (scfh)                | 975                     | 4,500            | N/R              | N/R              | N/R              |
|                                     | (nm <sup>3</sup> /hr) | 26.1                    | 120.5            | N/R              | N/R              | N/R              |
| Minimum Ignition Gas                | (scfh)                | 425                     | 750              | N/R              | N/R              | N/R              |
|                                     | (nm <sup>3</sup> /hr) | 11.4                    | 20.1             | N/R              | N/R              | N/R              |

### Burner Capacity Information, BBG 3006

NATURAL GAS, 900°F/482°C PREHEATED COMBUSTION AIR OPERATION

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                  |                  |                  |                  |
|-------------------------------------|-----------------------|-------------------------|------------------|------------------|------------------|------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>400,000</b>          | <b>1,950,000</b> | <b>2,680,000</b> | <b>3,250,000</b> | <b>3,800,000</b> |
|                                     | (kW)                  | <b>110</b>              | <b>520</b>       | <b>710</b>       | <b>860</b>       | <b>1,010</b>     |
| Air Capacity                        | (scfh)                | 4,152                   | 20,225           | 27,750           | 33,715           | 39,325           |
|                                     | (nm <sup>3</sup> /hr) | 111                     | 542              | 743              | 903              | 1,053            |
| Air Inlet Pressure                  | (in. w.c.)            | 0.3                     | 6.9              | 13.9             | 20.8             | 27.7             |
|                                     | (mbar)                | 0.7                     | 17.2             | 34.5             | 51.7             | 68.9             |
| Gas Inlet Pressure                  | (in. w.c.)            | 0.1                     | 2.0              | 4.2              | 6.5              | 8.8              |
|                                     | (mbar)                | 0.2                     | 5.1              | 10.5             | 16.1             | 21.9             |
| Flame Length (at 10% Excess Air)    | (in)                  | 25                      | 30               | 35               | 45               | 55               |
|                                     | (mm)                  | 640                     | 760              | 890              | 1140             | 1400             |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 15                      | 20               | 20               | 20               | 25               |
|                                     | (mm)                  | 380                     | 510              | 510              | 510              | 640              |
| Maximum Operating Excess            | (Air)                 | 150%                    | 300%             | 300%             | 300%             | 300%             |
|                                     | (Fuel)                | 30%                     | 30%              | 30%              | 30%              | 30%              |
| Maximum Ignition Gas                | (scfh)                | 600                     | 2,950            | N/R              | N/R              | N/R              |
|                                     | (nm <sup>3</sup> /hr) | 16.1                    | 79.0             | N/R              | N/R              | N/R              |
| Minimum Ignition Gas                | (scfh)                | 185                     | 525              | N/R              | N/R              | N/R              |
|                                     | (nm <sup>3</sup> /hr) | 5.0                     | 14.1             | N/R              | N/R              | N/R              |

**NOTES:**

- Capacities based on Natural Gas with HHV of 1034 BTU/ft<sup>3</sup> (Standard), and LHV of 10.21 kWh/nm<sup>3</sup> (Metric), 0.59 S.G., and a stoichiometric ratio of 9.74:1 with burner firing into chamber under no pressure at 10% excess air.
- Air and fuel flows based on STP operating conditions at sea level and industry standard air and gas piping practices.
- Gas inlet pressure given for reference only and should not be used for measuring fuel flow to the burner.
- Flame lengths measured from end of the combustion tile.
- Flame detection via UV scanner or flame rod (1000 series only).
- Ignition limits are established with (1) IPG5413 gas pilot, (2) IPE50 spark igniter, and (3) ZMI 16 gas pilot; with metered air and fuel flows and 5kV/15mA spark ignition transformer; for limits listed as N/R ignition is Not Recommended at this capacity.
- Burner is suitable for use on gaseous fuels other than Natural Gas and with combustion air other than ambient temperature, consult Hauck.

In accordance with Hauck's commitment to Total Quality Improvement, Hauck reserves the right to change the specifications of products without prior notice.



**BBG BETA BURNER  
GAS SERIES**  
**Burner Capacity Information, BBG 1008/2008**  
**NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION**

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                  |                  |                   |                   |
|-------------------------------------|-----------------------|-------------------------|------------------|------------------|-------------------|-------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>1,211,000</b>        | <b>5,991,000</b> | <b>8,507,000</b> | <b>10,486,000</b> | <b>12,015,000</b> |
|                                     | (kW)                  | <b>320</b>              | <b>1,580</b>     | <b>2,250</b>     | <b>2,770</b>      | <b>3,180</b>      |
| Air Capacity                        | (scfh)                | 12,550                  | 62,075           | 88,150           | 108,650           | 124,500           |
|                                     | (nm <sup>3</sup> /hr) | 336                     | 1,663            | 2,361            | 2,911             | 3,335             |
| Air Inlet Pressure                  | (in. w.c.)            | 0.3                     | 6.9              | 13.9             | 20.8              | 27.7              |
|                                     | (mbar)                | 0.7                     | 17.2             | 34.5             | 51.7              | 68.9              |
| Gas Inlet Pressure                  | (in. w.c.)            | 0.1                     | 3.2              | 6.4              | 9.3               | 12.2              |
|                                     | (mbar)                | 0.3                     | 8.0              | 15.9             | 23.1              | 30.4              |
| Flame Length (at 10% Excess Air)    | (in)                  | 60                      | 84               | 96               | 108               | 120               |
|                                     | (mm)                  | 1520                    | 2130             | 2440             | 2740              | 3050              |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 24                      | 30               | 30               | 36                | 36                |
|                                     | (mm)                  | 610                     | 760              | 760              | 910               | 910               |
| Maximum Operating Excess            | (Air)                 | 300%                    | 500%             | 500%             | 600%              | 600%              |
|                                     | (Fuel)                | 30%                     | 30%              | 30%              | 30%               | 30%               |
| Maximum Ignition Gas                | (scfh)                | 1,800                   | 9,000            | N/R              | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 48.2                    | 241.1            | N/R              | N/R               | N/R               |
| Minimum Ignition Gas                | (scfh)                | 375                     | 1,100            | N/R              | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 10.0                    | 29.5             | N/R              | N/R               | N/R               |

**Burner Capacity Information, BBG 3008**

**NATURAL GAS, 900°F/482°C PREHEATED COMBUSTION AIR OPERATION**

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                  |                  |                  |                  |
|-------------------------------------|-----------------------|-------------------------|------------------|------------------|------------------|------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>750,000</b>          | <b>3,708,000</b> | <b>5,269,000</b> | <b>6,493,000</b> | <b>7,438,000</b> |
|                                     | (kW)                  | <b>200</b>              | <b>980</b>       | <b>1,390</b>     | <b>1,720</b>     | <b>1,970</b>     |
| Air Capacity                        | (scfh)                | 7,775                   | 38,425           | 54,600           | 67,275           | 77,075           |
|                                     | (nm <sup>3</sup> /hr) | 208                     | 1,029            | 1,463            | 1,802            | 2,065            |
| Air Inlet Pressure                  | (in. w.c.)            | 0.3                     | 6.9              | 13.9             | 20.8             | 27.7             |
|                                     | (mbar)                | 0.7                     | 17.2             | 34.5             | 51.7             | 68.9             |
| Gas Inlet Pressure                  | (in. w.c.)            | 0.1                     | 2.3              | 4.6              | 6.8              | 9.1              |
|                                     | (mbar)                | 0.2                     | 5.7              | 11.3             | 17.0             | 22.6             |
| Flame Length (at 10% Excess Air)    | (in)                  | 48                      | 60               | 72               | 78               | 84               |
|                                     | (mm)                  | 1220                    | 1520             | 1830             | 1980             | 2130             |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 24                      | 24               | 30               | 30               | 36               |
|                                     | (mm)                  | 610                     | 610              | 760              | 760              | 910              |
| Maximum Operating Excess            | (Air)                 | 250%                    | 400%             | 400%             | 500%             | 500%             |
|                                     | (Fuel)                | 30%                     | 30%              | 30%              | 30%              | 30%              |
| Maximum Ignition Gas                | (scfh)                | 1,100                   | 5,500            | N/R              | N/R              | N/R              |
|                                     | (nm <sup>3</sup> /hr) | 29.5                    | 147.3            | N/R              | N/R              | N/R              |
| Minimum Ignition Gas                | (scfh)                | 250                     | 800              | N/R              | N/R              | N/R              |
|                                     | (nm <sup>3</sup> /hr) | 6.7                     | 21.4             | N/R              | N/R              | N/R              |

NOTES:

- Capacities based on Natural Gas with HHV of 1034 BTU/ft<sup>3</sup> (Standard), and LHV of 10.21 kWh/nm<sup>3</sup> (Metric), 0.59 S.G., and a stoichiometric ratio of 9.74:1 with burner firing into chamber under no pressure at 10% excess air.
- Air and fuel flows based on STP operating conditions at sea level and industry standard air and gas piping practices.
- Gas inlet pressure given for reference only and should not be used for measuring fuel flow to the burner.
- Flame lengths measured from end of the combustion tile.
- Flame detection via UV scanner or flame rod (1000 series only).
- Ignition limits are established with (1) IPG5413 gas pilot, (2) IPE50 spark igniter, and (3) ZMI 16 gas pilot; with metered air and fuel flows and 5kV/15mA spark ignition transformer; for limits listed as N/R ignition is Not Recommended at this capacity.
- Burner is suitable for use on gaseous fuels other than Natural Gas and with combustion air other than ambient temperature, consult Hauck.

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## BBG BETA BURNER GAS SERIES

### Burner Capacity Information, BBG 1010/2010

NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                  |                   |                   |                   |
|-------------------------------------|-----------------------|-------------------------|------------------|-------------------|-------------------|-------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>2,220,000</b>        | <b>9,460,000</b> | <b>13,220,000</b> | <b>16,310,000</b> | <b>19,110,000</b> |
|                                     | (kW)                  | <b>590</b>              | <b>2,500</b>     | <b>3,500</b>      | <b>4,310</b>      | <b>5,050</b>      |
| Air Capacity                        | (scfh)                | 23,000                  | 98,000           | 137,000           | 169,000           | 198,000           |
|                                     | (nm <sup>3</sup> /hr) | 616                     | 2,625            | 3,670             | 4,527             | 5,304             |
| Air Inlet Pressure                  | (in. w.c.)            | 0.3                     | 6.9              | 13.9              | 20.8              | 27.7              |
|                                     | (mbar)                | 0.7                     | 17.2             | 34.5              | 51.7              | 68.9              |
| Gas Inlet Pressure                  | (in. w.c.)            | 0.1                     | 1.2              | 2.2               | 3.0               | 3.7               |
|                                     | (mbar)                | 0.2                     | 3.1              | 5.3               | 7.4               | 9.3               |
| Flame Length (at 10% Excess Air)    | (in)                  | 72                      | 108              | 120               | 132               | 144               |
|                                     | (mm)                  | 1830                    | 2740             | 3050              | 3350              | 3660              |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 36                      | 42               | 48                | 48                | 48                |
|                                     | (mm)                  | 910                     | 1070             | 1220              | 1220              | 1220              |
| Maximum Operating Excess            | (Air)                 | 300%                    | 500%             | 500%              | 600%              | 600%              |
|                                     | (Fuel)                | 30%                     | 30%              | 30%               | 30%               | 30%               |
| Maximum Ignition Gas                | (scfh)                | 3,250                   | 14,250           | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 87.1                    | 381.7            | N/R               | N/R               | N/R               |
| Minimum Ignition Gas                | (scfh)                | 600                     | 1,700            | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 16.1                    | 45.5             | N/R               | N/R               | N/R               |

### Burner Capacity Information, BBG 3010

NATURAL GAS, 900°F/482°C PREHEATED COMBUSTION AIR OPERATION

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                  |                  |                   |                   |
|-------------------------------------|-----------------------|-------------------------|------------------|------------------|-------------------|-------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>1,370,000</b>        | <b>5,850,000</b> | <b>8,170,000</b> | <b>10,090,000</b> | <b>11,800,000</b> |
|                                     | (kW)                  | <b>360</b>              | <b>1,550</b>     | <b>2,160</b>     | <b>2,670</b>      | <b>3,120</b>      |
| Air Capacity                        | (scfh)                | 14,205                  | 60,575           | 84,650           | 104,600           | 122,315           |
|                                     | (nm <sup>3</sup> /hr) | 381                     | 1,623            | 2,268            | 2,802             | 3,277             |
| Air Inlet Pressure                  | (in. w.c.)            | 0.3                     | 6.9              | 13.9             | 20.8              | 27.7              |
|                                     | (mbar)                | 0.7                     | 17.2             | 34.5             | 51.7              | 68.9              |
| Gas Inlet Pressure                  | (in. w.c.)            | 0.1                     | 0.9              | 1.6              | 2.3               | 2.8               |
|                                     | (mbar)                | 0.2                     | 2.3              | 4.1              | 5.6               | 7.1               |
| Flame Length (at 10% Excess Air)    | (in)                  | 60                      | 84               | 90               | 96                | 108               |
|                                     | (mm)                  | 1520                    | 2130             | 2290             | 2440              | 2740              |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 36                      | 42               | 42               | 48                | 48                |
|                                     | (mm)                  | 910                     | 1070             | 1070             | 1220              | 1220              |
| Maximum Operating Excess            | (Air)                 | 250%                    | 400%             | 400%             | 500%              | 500%              |
|                                     | (Fuel)                | 30%                     | 30%              | 30%              | 30%               | 30%               |
| Maximum Ignition Gas                | (scfh)                | 2,050                   | 8,800            | N/R              | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 54.9                    | 235.7            | N/R              | N/R               | N/R               |
| Minimum Ignition Gas                | (scfh)                | 450                     | 1,300            | N/R              | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 12.1                    | 34.8             | N/R              | N/R               | N/R               |

**NOTES:**

1. Capacities based on Natural Gas with HHV of 1034 BTU/ft<sup>3</sup> (Standard), and LHV of 10.21 kWh/nm<sup>3</sup> (Metric), 0.59 S.G., and a stoichiometric ratio of 9.74:1 with burner firing into chamber under no pressure at 10% excess air.
2. Air and fuel flows based on STP operating conditions at sea level and industry standard air and gas piping practices.
3. Gas inlet pressure given for reference only and should not be used for measuring fuel flow to the burner.
4. Flame lengths measured from end of the combustion tile.
5. Flame detection via UV scanner or flame rod (1000 series only).
6. Ignition limits are established with (1) IPG5413 gas pilot, (2) IPE50 spark igniter, and (3) ZMI 16 gas pilot; with metered air and fuel flows and 5kV/15mA spark ignition transformer; for limits listed as N/R ignition is Not Recommended at this capacity.
7. Burner is suitable for use on gaseous fuels other than Natural Gas and with combustion air other than ambient temperature, consult Hauck.

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## BBG BETA BURNER GAS SERIES

### Burner Capacity Information, BBG 1012/2012

#### NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                   |                   |                   |                   |
|-------------------------------------|-----------------------|-------------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>2,650,000</b>        | <b>12,790,000</b> | <b>18,070,000</b> | <b>22,200,000</b> | <b>25,570,000</b> |
|                                     | (kW)                  | <b>700</b>              | <b>3,380</b>      | <b>4,780</b>      | <b>5,870</b>      | <b>6,760</b>      |
| Air Capacity                        | (scfh)                | 27,500                  | 132,500           | 187,250           | 230,000           | 265,000           |
|                                     | (nm <sup>3</sup> /hr) | 737                     | 3,549             | 5,016             | 6,161             | 7,099             |
| Air Inlet Pressure                  | (in. w.c.)            | 0.3                     | 6.9               | 13.9              | 20.8              | 27.7              |
|                                     | (mbar)                | 0.7                     | 17.2              | 34.5              | 51.7              | 68.9              |
| Gas Inlet Pressure                  | (in. w.c.)            | 0.1                     | 1.8               | 3.2               | 4.6               | 5.8               |
|                                     | (mbar)                | 0.2                     | 4.5               | 8.0               | 11.4              | 14.4              |
| Flame Length (at 10% Excess Air)    | (in)                  | 72                      | 120               | 144               | 156               | 168               |
|                                     | (mm)                  | 1830                    | 3050              | 3660              | 3960              | 4270              |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 36                      | 42                | 42                | 48                | 48                |
|                                     | (mm)                  | 910                     | 1070              | 1070              | 1220              | 1220              |
| Maximum Operating Excess            | (Air)                 | 300%                    | 500%              | 500%              | 500%              | 500%              |
|                                     | (Fuel)                | 30%                     | 30%               | 30%               | 30%               | 30%               |
| Maximum Ignition Gas                | (scfh)                | 3,750                   | 19,000            | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 100.5                   | 509.0             | N/R               | N/R               | N/R               |
| Minimum Ignition Gas                | (scfh)                | 750                     | 2,300             | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 20.1                    | 61.6              | N/R               | N/R               | N/R               |

### Burner Capacity Information, BBG 3012

#### NATURAL GAS, 900°F/482°C PREHEATED COMBUSTION AIR OPERATION

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                  |                   |                   |                   |
|-------------------------------------|-----------------------|-------------------------|------------------|-------------------|-------------------|-------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>1,630,000</b>        | <b>7,910,000</b> | <b>11,180,000</b> | <b>13,700,000</b> | <b>15,830,000</b> |
|                                     | (kW)                  | <b>430</b>              | <b>2,090</b>     | <b>2,960</b>      | <b>3,620</b>      | <b>4,190</b>      |
| Air Capacity                        | (scfh)                | 16,900                  | 81,925           | 115,850           | 142,000           | 164,000           |
|                                     | (nm <sup>3</sup> /hr) | 453                     | 2,195            | 3,103             | 3,804             | 4,393             |
| Air Inlet Pressure                  | (in. w.c.)            | 0.3                     | 6.9              | 13.9              | 20.8              | 27.7              |
|                                     | (mbar)                | 0.7                     | 17.2             | 34.5              | 51.7              | 68.9              |
| Gas Inlet Pressure                  | (in. w.c.)            | 0.1                     | 1.4              | 2.4               | 3.5               | 4.4               |
|                                     | (mbar)                | 0.2                     | 3.4              | 6.0               | 8.7               | 10.9              |
| Flame Length (at 10% Excess Air)    | (in)                  | 66                      | 96               | 108               | 120               | 132               |
|                                     | (mm)                  | 1680                    | 2440             | 2740              | 3050              | 3350              |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 36                      | 42               | 42                | 48                | 48                |
|                                     | (mm)                  | 910                     | 1070             | 1070              | 1220              | 1220              |
| Maximum Operating Excess            | (Air)                 | 250%                    | 400%             | 400%              | 400%              | 400%              |
|                                     | (Fuel)                | 30%                     | 30%              | 30%               | 30%               | 30%               |
| Maximum Ignition Gas                | (scfh)                | 2,400                   | 11,500           | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 64.3                    | 308.1            | N/R               | N/R               | N/R               |
| Minimum Ignition Gas                | (scfh)                | 500                     | 1,700            | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 13.4                    | 45.5             | N/R               | N/R               | N/R               |

**NOTES:**

- Capacities based on Natural Gas with HHV of 1034 BTU/ft<sup>3</sup> (Standard), and LHV of 10.21 kWh/nm<sup>3</sup> (Metric), 0.59 S.G., and a stoichiometric ratio of 9.74:1 with burner firing into chamber under no pressure at 10% excess air.
- Air and fuel flows based on STP operating conditions at sea level and industry standard air and gas piping practices.
- Gas inlet pressure given for reference only and should not be used for measuring fuel flow to the burner.
- Flame lengths measured from end of the combustion tile.
- Flame detection via UV scanner.
- Ignition limits are established with (1) IPG5413 gas pilot, (2) IPE50 spark igniter, and (3) ZMI 16 gas pilot; with metered air and fuel flows and 5kV/15mA spark ignition transformer; for limits listed as N/R ignition is Not Recommended at this capacity.
- Burner is suitable for use on gaseous fuels other than Natural Gas and with combustion air other than ambient temperature, consult Hauck.

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**BBG BETA BURNER  
GAS SERIES**

**Burner Capacity Information, BBG 1114/2114**

**NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION**

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                   |                   |                   |                   |
|-------------------------------------|-----------------------|-------------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>3,860,000</b>        | <b>19,110,000</b> | <b>27,000,000</b> | <b>33,200,000</b> | <b>38,300,000</b> |
|                                     | (kW)                  | <b>1,020</b>            | <b>5,050</b>      | <b>7,140</b>      | <b>8,780</b>      | <b>10,130</b>     |
| Air Capacity                        | (scfh)                | 40,000                  | 198,000           | 280,000           | 343,500           | 397,000           |
|                                     | (nm <sup>3</sup> /hr) | 1,072                   | 5,304             | 7,501             | 9,202             | 10,635            |
| Air Inlet Pressure                  | (in.w.c.)             | 0.3                     | 6.9               | 13.9              | 20.8              | 27.7              |
|                                     | (mbar)                | 0.7                     | 17.2              | 34.5              | 51.7              | 68.9              |
| Gas Inlet Pressure                  | (in.w.c.)             | 0.3                     | 0.8               | 1.1               | 1.3               | 1.5               |
|                                     | (mbar)                | 0.6                     | 2.0               | 2.7               | 3.2               | 3.7               |
| Flame Length (at 10% Excess Air)    | (in)                  | 84                      | 120               | 154               | 168               | 180               |
|                                     | (mm)                  | 2130                    | 3050              | 3910              | 4270              | 4570              |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 36                      | 48                | 48                | 54                | 54                |
|                                     | (mm)                  | 910                     | 1220              | 1220              | 1370              | 1370              |
| Maximum Operating Excess            | (Air)                 | 200%                    | 400%              | 400%              | 500%              | 500%              |
|                                     | (Fuel)                | 30%                     | 30%               | 30%               | 30%               | 30%               |
| Maximum Ignition Gas                | (scfh)                | 5,500                   | 27,500            | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 147.3                   | 736.7             | N/R               | N/R               | N/R               |
| Minimum Ignition Gas                | (scfh)                | 1,400                   | 4,100             | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 37.5                    | 109.8             | N/R               | N/R               | N/R               |

**Burner Capacity Information, BBG 3114**

**NATURAL GAS, 900°F/482°C PREHEATED COMBUSTION AIR OPERATION**

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                   |                   |                   |                   |
|-------------------------------------|-----------------------|-------------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>2,490,000</b>        | <b>12,060,000</b> | <b>17,100,000</b> | <b>20,900,000</b> | <b>24,200,000</b> |
|                                     | (kW)                  | <b>660</b>              | <b>3,190</b>      | <b>4,520</b>      | <b>5,530</b>      | <b>6,400</b>      |
| Air Capacity                        | (scfh)                | 25,750                  | 125,000           | 177,000           | 216,750           | 250,375           |
|                                     | (nm <sup>3</sup> /hr) | 690                     | 3,349             | 4,741             | 5,806             | 6,707             |
| Air Inlet Pressure                  | (in.w.c.)             | 0.3                     | 6.9               | 13.9              | 20.8              | 27.7              |
|                                     | (mbar)                | 0.7                     | 17.2              | 34.5              | 51.7              | 68.9              |
| Gas Inlet Pressure                  | (in.w.c.)             | 0.2                     | 0.6               | 0.8               | 1.0               | 1.1               |
|                                     | (mbar)                | 0.5                     | 1.5               | 2.1               | 2.5               | 2.8               |
| Flame Length (at 10% Excess Air)    | (in)                  | 72                      | 96                | 108               | 120               | 132               |
|                                     | (mm)                  | 1830                    | 2440              | 2740              | 3050              | 3350              |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 36                      | 48                | 48                | 54                | 54                |
|                                     | (mm)                  | 910                     | 1220              | 1220              | 1370              | 1370              |
| Maximum Operating Excess            | (Air)                 | 150%                    | 300%              | 300%              | 400%              | 400%              |
|                                     | (Fuel)                | 30%                     | 30%               | 30%               | 30%               | 30%               |
| Maximum Ignition Gas                | (scfh)                | 3,500                   | 18,000            | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 93.8                    | 482.2             | N/R               | N/R               | N/R               |
| Minimum Ignition Gas                | (scfh)                | 1,100                   | 3,000             | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 29.5                    | 80.4              | N/R               | N/R               | N/R               |

**NOTES:**

- Capacities based on Natural Gas with HHV of 1034 BTU/ft<sup>3</sup> (Standard), and LHV of 10.21 kWh/nm<sup>3</sup> (Metric), 0.59 S.G., and a stoichiometric ratio of 9.74:1 with burner firing into chamber under no pressure at 10% excess air.
- Air and fuel flows based on STP operating conditions at sea level and industry standard air and gas piping practices.
- Gas inlet pressure given for reference only and should not be used for measuring fuel flow to the burner.
- Flame lengths measured from end of the combustion tile.
- Flame detection via UV scanner.
- Ignition limits are established with Hauck IPG5413 gas pilot, metered air and fuel flows and 5kV/15mA spark ignition transformer; for limits listed as N/R ignition is Not Recommended at this capacity and under other conditions consult Hauck.
- Burner is suitable for use on gaseous fuels other than Natural Gas and with combustion air other than ambient temperature, consult Hauck.

In accordance with Hauck's commitment to Total Quality Improvement, Hauck reserves the right to change the specifications of products without prior notice.



**BBG BETA BURNER  
GAS SERIES**  
**Burner Capacity Information, BBG 1118/2118**  
**NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION**

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                   |                   |                   |                   |
|-------------------------------------|-----------------------|-------------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>6,660,000</b>        | <b>32,330,000</b> | <b>45,800,000</b> | <b>56,000,000</b> | <b>64,700,000</b> |
|                                     | (kW)                  | <b>1,760</b>            | <b>8,550</b>      | <b>12,110</b>     | <b>14,810</b>     | <b>17,110</b>     |
| Air Capacity                        | (scfh)                | 69,000                  | 335,000           | 474,500           | 580,000           | 670,000           |
|                                     | (nm <sup>3</sup> /hr) | 1,848                   | 8,974             | 12,711            | 15,537            | 17,948            |
| Air Inlet Pressure                  | (in.w.c.)             | 0.3                     | 6.9               | 13.9              | 20.8              | 27.7              |
|                                     | (mbar)                | 0.7                     | 17.2              | 34.5              | 51.7              | 68.9              |
| Gas Inlet Pressure                  | (in.w.c.)             | 0.3                     | 3.7               | 6.6               | 9.3               | 11.8              |
|                                     | (mbar)                | 0.6                     | 9.2               | 16.4              | 23.1              | 29.4              |
| Flame Length (at 10% Excess Air)    | (in)                  | 72                      | 168               | 180               | 192               | 204               |
|                                     | (mm)                  | 1830                    | 4270              | 4570              | 4880              | 5180              |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 36                      | 48                | 48                | 54                | 60                |
|                                     | (mm)                  | 910                     | 1220              | 1220              | 1370              | 1520              |
| Maximum Operating Excess            | (Air)                 | 250%                    | 400%              | 500%              | 600%              | 600%              |
|                                     | (Fuel)                | 30%                     | 30%               | 30%               | 30%               | 30%               |
| Maximum Ignition Gas                | (scfh)                | 10,000                  | 45,000            | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 267.9                   | 1,205.5           | NR                | N/R               | N/R               |
| Minimum Ignition Gas                | (scfh)                | 2,100                   | 6,900             | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 56.3                    | 184.8             | NR                | N/R               | N/R               |

**Burner Capacity Information, BBG 3118**

**NATURAL GAS, 900°F/482°C PREHEATED COMBUSTION AIR OPERATION**

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                   |                   |                   |                   |
|-------------------------------------|-----------------------|-------------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>3,940,000</b>        | <b>19,070,000</b> | <b>27,000,000</b> | <b>33,100,000</b> | <b>38,300,000</b> |
|                                     | (kW)                  | <b>1,040</b>            | <b>5,040</b>      | <b>7,140</b>      | <b>8,750</b>      | <b>10,130</b>     |
| Air Capacity                        | (scfh)                | 40,800                  | 197,600           | 280,000           | 343,000           | 396,400           |
|                                     | (nm <sup>3</sup> /hr) | 1,093                   | 5,293             | 7,501             | 9,188             | 10,619            |
| Air Inlet Pressure                  | (in.w.c.)             | 0.3                     | 6.9               | 13.9              | 20.8              | 27.7              |
|                                     | (mbar)                | 0.7                     | 17.2              | 34.5              | 51.7              | 68.9              |
| Gas Inlet Pressure                  | (in.w.c.)             | 0.2                     | 2.8               | 5.0               | 7.1               | 9.0               |
|                                     | (mbar)                | 0.5                     | 6.9               | 12.5              | 17.6              | 22.3              |
| Flame Length (at 10% Excess Air)    | (in)                  | 72                      | 132               | 144               | 156               | 168               |
|                                     | (mm)                  | 1830                    | 3350              | 3660              | 3960              | 4270              |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 36                      | 48                | 48                | 48                | 54                |
|                                     | (mm)                  | 910                     | 1220              | 1220              | 1220              | 1370              |
| Maximum Operating Excess            | (Air)                 | 200%                    | 300%              | 400%              | 500%              | 500%              |
|                                     | (Fuel)                | 30%                     | 30%               | 30%               | 30%               | 30%               |
| Maximum Ignition Gas                | (scfh)                | 5,500                   | 27,500            | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 147.3                   | 736.7             | N/R               | N/R               | N/R               |
| Minimum Ignition Gas                | (scfh)                | 1,400                   | 5,000             | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 37.5                    | 133.9             | N/R               | N/R               | N/R               |

NOTES:

- Capacities based on Natural Gas with HHV of 1034 BTU/ft<sup>3</sup> (Standard), and LHV of 10.21 kWh/nm<sup>3</sup> (Metric), 0.59 S.G., and a stoichiometric ratio of 9.74:1 with burner firing into chamber under no pressure at 10% excess air.
- Air and fuel flows based on STP operating conditions at sea level and industry standard air and gas piping practices.
- Gas inlet pressure given for reference only and should not be used for measuring fuel flow to the burner.
- Flame lengths measured from end of the combustion tile.
- Flame detection via UV scanner.
- Ignition limits are established with Hauck IPG5413 gas pilot, metered air and fuel flows and 5kV/15mA spark ignition transformer; for limits listed as N/R ignition is Not Recommended at this capacity and under other conditions consult Hauck.
- Burner is suitable for use on gaseous fuels other than Natural Gas and with combustion air other than ambient temperature, consult Hauck.

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## BBG BETA BURNER GAS SERIES

### Burner Capacity Information, BBG 1120/2120

#### NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                   |                   |                   |                   |
|-------------------------------------|-----------------------|-------------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>9,000,000</b>        | <b>43,330,000</b> | <b>61,300,000</b> | <b>75,000,000</b> | <b>86,700,000</b> |
|                                     | (kW)                  | <b>2,380</b>            | <b>11,460</b>     | <b>16,210</b>     | <b>19,840</b>     | <b>22,930</b>     |
| Air Capacity                        | (scfh)                | 93,288                  | 449,013           | 635,000           | 776,780           | 898,025           |
|                                     | (nm <sup>3</sup> /hr) | 2,499                   | 12,028            | 17,010            | 20,808            | 24,056            |
| Air Inlet Pressure                  | (in.w.c.)             | 0.3                     | 6.9               | 13.9              | 20.8              | 27.7              |
|                                     | (mbar)                | 0.7                     | 17.2              | 34.5              | 51.7              | 68.9              |
| Gas Inlet Pressure                  | (in.w.c.)             | 0.1                     | 0.6               | 1.1               | 1.7               | 2.2               |
|                                     | (mbar)                | 0.1                     | 1.4               | 2.7               | 4.1               | 5.5               |
| Flame Length (at 10% Excess Air)    | (in)                  | 48                      | 168               | 192               | 192               | 216               |
|                                     | (mm)                  | 1220                    | 4270              | 4880              | 4880              | 5490              |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 24                      | 48                | 48                | 54                | 54                |
|                                     | (mm)                  | 610                     | 1220              | 1220              | 1370              | 1370              |
| Maximum Operating Excess            | (Air)                 | 250%                    | 500%              | 600%              | 700%              | 800%              |
|                                     | (Fuel)                | 30%                     | 30%               | 30%               | 30%               | 30%               |
| Maximum Ignition Gas                | (scfh)                | 11,268                  | 54,235            | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 301.8                   | 1,452.9           | NR                | N/R               | N/R               |
| Minimum Ignition Gas                | (scfh)                | 2,737                   | 7,683             | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 73.3                    | 205.8             | NR                | N/R               | N/R               |

### Burner Capacity Information, BBG 3120

#### NATURAL GAS, 900°F/482°C PREHEATED COMBUSTION AIR OPERATION

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                   |                   |                   |                   |
|-------------------------------------|-----------------------|-------------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>5,570,000</b>        | <b>26,830,000</b> | <b>37,900,000</b> | <b>46,400,000</b> | <b>53,700,000</b> |
|                                     | (kW)                  | <b>1,470</b>            | <b>7,100</b>      | <b>10,020</b>     | <b>12,270</b>     | <b>14,200</b>     |
| Air Capacity                        | (scfh)                | 57,753                  | 277,975           | 393,116           | 480,889           | 555,949           |
|                                     | (nm <sup>3</sup> /hr) | 1,547                   | 7,446             | 10,531            | 12,882            | 14,893            |
| Air Inlet Pressure                  | (in.w.c.)             | 0.3                     | 6.9               | 13.9              | 20.8              | 27.7              |
|                                     | (mbar)                | 0.7                     | 17.2              | 34.5              | 51.7              | 68.9              |
| Gas Inlet Pressure                  | (in.w.c.)             | 0.0                     | 0.4               | 0.8               | 1.3               | 1.7               |
|                                     | (mbar)                | 0.1                     | 1.0               | 2.1               | 3.1               | 4.2               |
| Flame Length (at 10% Excess Air)    | (in)                  | 72                      | 132               | 144               | 156               | 168               |
|                                     | (mm)                  | 1830                    | 3350              | 3660              | 3960              | 4270              |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 36                      | 48                | 48                | 48                | 54                |
|                                     | (mm)                  | 910                     | 1220              | 1220              | 1220              | 1370              |
| Maximum Operating Excess            | (Air)                 | 325%                    | 463%              | 602%              | 741%              | 741%              |
|                                     | (Fuel)                | 30%                     | 30%               | 30%               | 30%               | 30%               |
| Maximum Ignition Gas                | (scfh)                | 5,500                   | 27,500            | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 147.3                   | 736.7             | N/R               | N/R               | N/R               |
| Minimum Ignition Gas                | (scfh)                | 1,400                   | 5,000             | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 37.5                    | 133.9             | N/R               | N/R               | N/R               |

**NOTES:**

1. Capacities based on Natural Gas with HHV of 1034 BTU/ft<sup>3</sup> (Standard), and LHV of 10.21 kWh/nm<sup>3</sup> (Metric), 0.59 S.G., and a stoichiometric ratio of 9.74:1 with burner firing into chamber under no pressure at 10% excess air.
2. Air and fuel flows based on STP operating conditions at sea level and industry standard air and gas piping practices.
3. Gas inlet pressure given for reference only and should not be used for measuring fuel flow to the burner.
4. Flame lengths measured from end of the combustion tile.
5. Flame detection via UV scanner.
6. Ignition limits are established with Hauck IPG5413 gas pilot, metered air and fuel flows and 5kV/15mA spark ignition transformer; for limits listed as N/R ignition is Not Recommended at this capacity and under other conditions consult Hauck.
7. Burner is suitable for use on gaseous fuels other than Natural Gas and with combustion air other than ambient temperature, consult Hauck.

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## BBG BETA BURNER GAS SERIES

### Burner Capacity Information, BBG 1124/2124

#### NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                   |                   |                    |                    |
|-------------------------------------|-----------------------|-------------------------|-------------------|-------------------|--------------------|--------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>12,550,000</b>       | <b>61,770,000</b> | <b>87,300,000</b> | <b>106,200,000</b> | <b>123,000,000</b> |
|                                     | (kW)                  | <b>3,320</b>            | <b>16,340</b>     | <b>23,090</b>     | <b>28,090</b>      | <b>32,530</b>      |
| Air Capacity                        | (scfh)                | 130,000                 | 640,000           | 905,000           | 1,100,000          | 1,275,000          |
|                                     | (nm <sup>3</sup> /hr) | 3,482                   | 17,144            | 24,243            | 29,467             | 34,155             |
| Air Inlet Pressure                  | (in.w.c.)             | 0.3                     | 6.9               | 13.9              | 20.8               | 27.7               |
|                                     | (mbar)                | 0.7                     | 17.2              | 34.5              | 51.7               | 68.9               |
| Gas Inlet Pressure                  | (in.w.c.)             | 0.3                     | 1.4               | 2.0               | 2.5                | 2.9                |
|                                     | (mbar)                | 0.6                     | 3.4               | 4.9               | 6.1                | 7.2                |
| Flame Length (at 10% Excess Air)    | (in)                  | 72                      | 250               | 275               | 285                | 300                |
|                                     | (mm)                  | 1830                    | 6350              | 6990              | 7240               | 7620               |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 36                      | 48                | 54                | 60                 | 60                 |
|                                     | (mm)                  | 910                     | 1220              | 1370              | 1520               | 1520               |
| Maximum Operating Excess            | (Air)                 | 100%                    | 400%              | 600%              | 600%               | 600%               |
|                                     | (Fuel)                | 15%                     | 15%               | 15%               | 15%                | 15%                |
| Maximum Ignition Gas                | (scfh)                | 15,000                  | 70,000            | N/R               | N/R                | N/R                |
|                                     | (nm <sup>3</sup> /hr) | 401.8                   | 1,875.2           | N/R               | N/R                | N/R                |
| Minimum Ignition Gas                | (scfh)                | 6,800                   | 13,500            | N/R               | N/R                | N/R                |
|                                     | (nm <sup>3</sup> /hr) | 182.2                   | 361.6             | N/R               | N/R                | N/R                |

### Burner Capacity Information, BBG 3124

#### NATURAL GAS, 900°F/482°C PREHEATED COMBUSTION AIR OPERATION

| SPECIFICATIONS                      |                       | OPERATIONAL INFORMATION |                   |                   |                   |                   |
|-------------------------------------|-----------------------|-------------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Capacity</b> (at 10% Excess Air) | (BTU/hr)              | <b>7,890,000</b>        | <b>37,350,000</b> | <b>52,800,000</b> | <b>64,800,000</b> | <b>74,800,000</b> |
|                                     | (kW)                  | <b>2,090</b>            | <b>9,880</b>      | <b>13,970</b>     | <b>17,140</b>     | <b>19,780</b>     |
| Air Capacity                        | (scfh)                | 81,720                  | 387,000           | 547,600           | 671,100           | 775,200           |
|                                     | (nm <sup>3</sup> /hr) | 2,189                   | 10,367            | 14,669            | 17,977            | 20,766            |
| Air Inlet Pressure                  | (in.w.c.)             | 0.3                     | 6.9               | 13.9              | 20.8              | 27.7              |
|                                     | (mbar)                | 0.7                     | 17.2              | 34.5              | 51.7              | 68.9              |
| Gas Inlet Pressure                  | (in.w.c.)             | 0.2                     | 1.0               | 1.5               | 1.9               | 2.2               |
|                                     | (mbar)                | 0.5                     | 2.6               | 3.7               | 4.7               | 5.5               |
| Flame Length (at 10% Excess Air)    | (in)                  | 72                      | 96                | 150               | 200               | 250               |
|                                     | (mm)                  | 1830                    | 2440              | 3810              | 5080              | 6350              |
| Flame Diameter (at 10% Excess Air)  | (in)                  | 36                      | 48                | 48                | 60                | 60                |
|                                     | (mm)                  | 910                     | 1220              | 1220              | 1520              | 1520              |
| Maximum Operating Excess            | (Air)                 | 100%                    | 300%              | 500%              | 500%              | 500%              |
|                                     | (Fuel)                | 15%                     | 15%               | 15%               | 15%               | 15%               |
| Maximum Ignition Gas                | (scfh)                | 9,750                   | 40,000            | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 261.2                   | 1,071.5           | N/R               | N/R               | N/R               |
| Minimum Ignition Gas                | (scfh)                | 4,500                   | 10,000            | N/R               | N/R               | N/R               |
|                                     | (nm <sup>3</sup> /hr) | 120.5                   | 267.9             | N/R               | N/R               | N/R               |

**NOTES:**

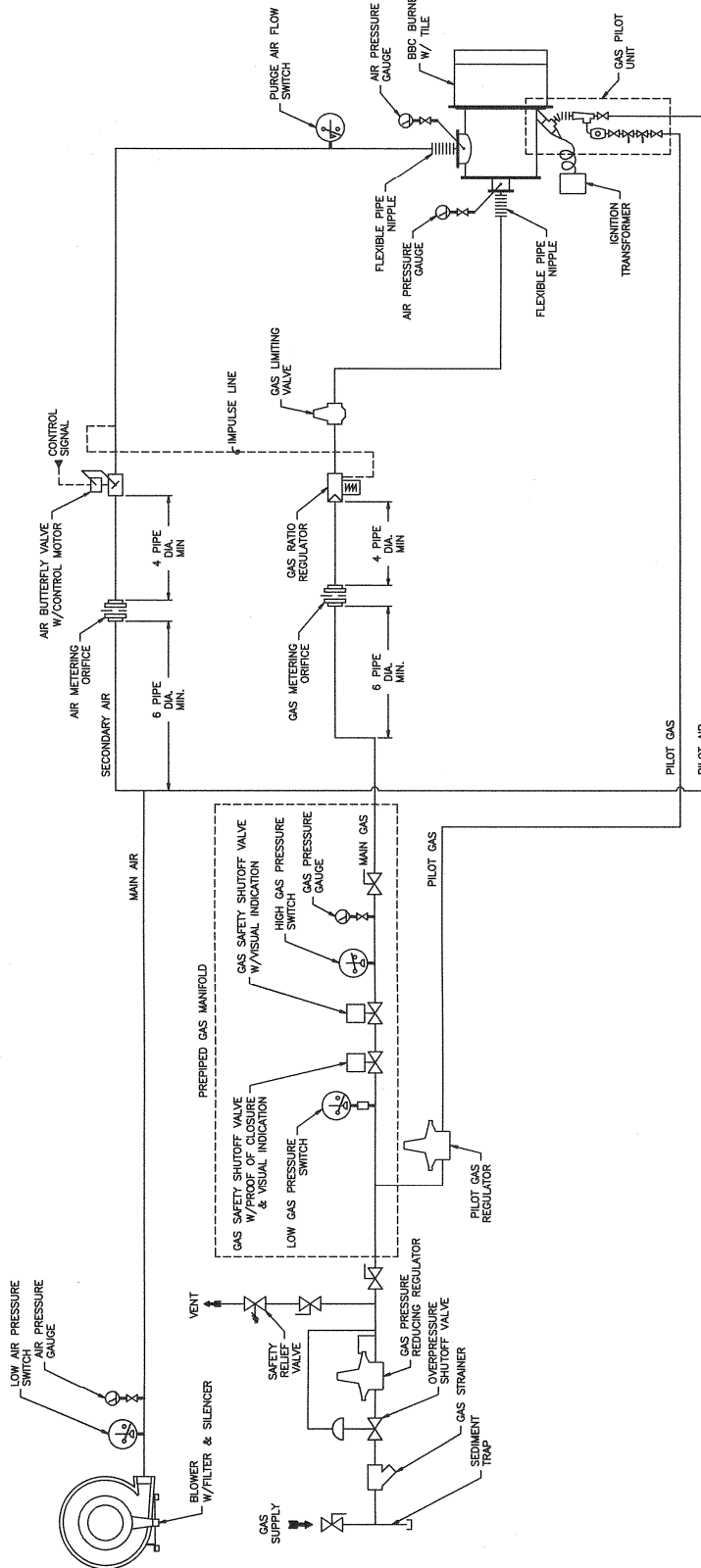
- Capacities based on Natural Gas with HHV of 1034 BTU/ft<sup>3</sup> (Standard), and LHV of 10.21 kWh/nm<sup>3</sup> (Metric), 0.59 S.G., and a stoichiometric ratio of 9.74:1 with burner firing into chamber under no pressure at 10% excess air.
- Air and fuel flows based on STP operating conditions at sea level and industry standard air and gas piping practices.
- Gas inlet pressure given for reference only and should not be used for measuring fuel flow to the burner.
- Flame lengths measured from end of the combustion tile.
- Flame detection via UV scanner.
- Ignition limits are established with Hauck 58155 gas pilot, metered air and fuel flows and 5kV/15mA spark ignition transformer; for limits listed as N/R ignition is Not Recommended at this capacity.
- Burner is suitable for use on gaseous fuels other than Natural Gas and with combustion air other than ambient temperature, consult Hauck.

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BBG BETA BURNER GAS SERIES

CROSS-CONNECTED RATIO CONTROL  
GAS W/PILOT IGNITION



Y7729  
(NOT TO SCALE)

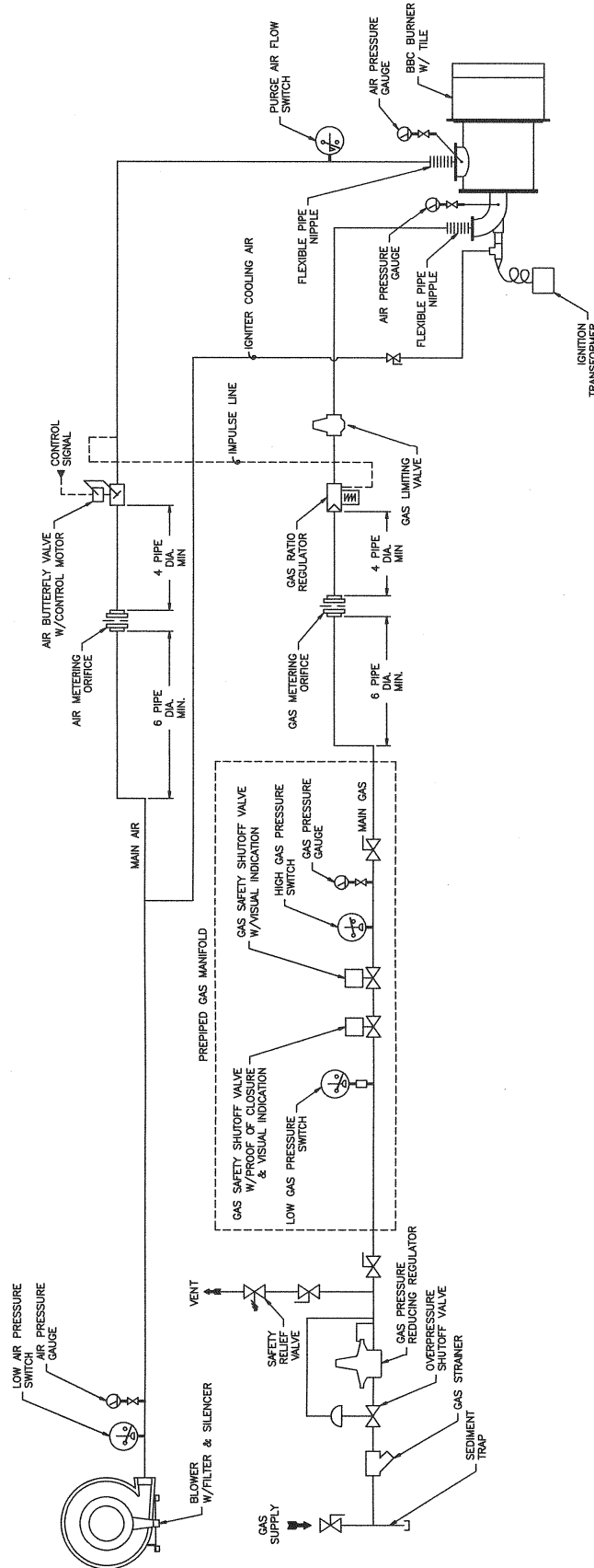
NOTE:  
1. PIPING SCHEMATIC SHOWN FOR PILOT IGNITED SINGLE BURNER FIRING GAS USING CROSS-CONNECTED RATIO CONTROL. CONSULT FACTORY FOR MULTIPLE BURNER APPLICATIONS.

(OVER)

In accordance with Hauck's commitment to Total Quality Improvement, Hauck reserves the right to change the specifications of products without prior notice.

BBG BETA BURNER GAS SERIES

CROSS-CONNECTED RATIO CONTROL  
GAS W/DIRECT SPARK IGNITION



NOTE:  
1. PIPING SCHEMATIC SHOWN FOR DIRECT SPARK IGNITED SINGLE BURNER FIRING GAS USING CROSS-CONNECTED RATIO CONTROL. CONSULT FACTORY FOR MULTIPLE BURNER APPLICATIONS.

Y7823  
(NOT TO SCALE)





**BBG BETA BURNER  
ORDERING INFORMATION**

|  | <u>BB</u> | <u>G</u> | <u>2</u> | <u>1</u> | <u>08</u> | <u>F - CR</u> | <u>S</u> | <u>-</u> | <u>LO</u> |
|--|-----------|----------|----------|----------|-----------|---------------|----------|----------|-----------|
| <b>Burner Type</b>   |           |          |          |          |           |               |          |          |           |
| <b>Type</b><br>G – Gaseous Fuel<br>C – Gaseous and Liquid Fuel<br>GE – Gaseous Fuel for Export<br>CE – Gaseous and Liquid Fuel For Export          |           |          |          |          |           |               |          |          |           |
| <b>Series</b><br>1 – Alloy Baffle<br>2 – Refractory Baffle<br>3 – Refractory Baffle With Insulated Body  |           |          |          |          |           |               |          |          |           |
| <b>Ignition</b><br>1 – IPG Pilot (Pilot Sold Separately)<br>2 – Direct Spark Igniter<br>3 – ZMI Pilot  |           |          |          |          |           |               |          |          |           |
| <b>Size</b><br>04<br>06<br>08<br>10<br>12<br>14<br>18<br>24  |           |          |          |          |           |               |          |          |           |
| <b>Burner Revision</b>   |           |          |          |          |           |               |          |          |           |
| <b>Tile Assembly</b><br>CA – Converging Alloy<br>CR – Converging Refractory<br>DR – Diverging Refractory<br>CW – Cast-In-Wall or Customer Supplied |           |          |          |          |           |               |          |          |           |
| <b>Flame Supervision</b><br>F – Flamerod (06-12 Sizes Only)<br>S – Scanner Assembly (Scanner Sold Separately)                                      |           |          |          |          |           |               |          |          |           |
| <b>Fuel</b><br>LO – Low Pressure Oil Atomization<br>HO – High Pressure Oil Atomization (Compressed Air)<br>LP – Liquid Propane                     |           |          |          |          |           |               |          |          |           |