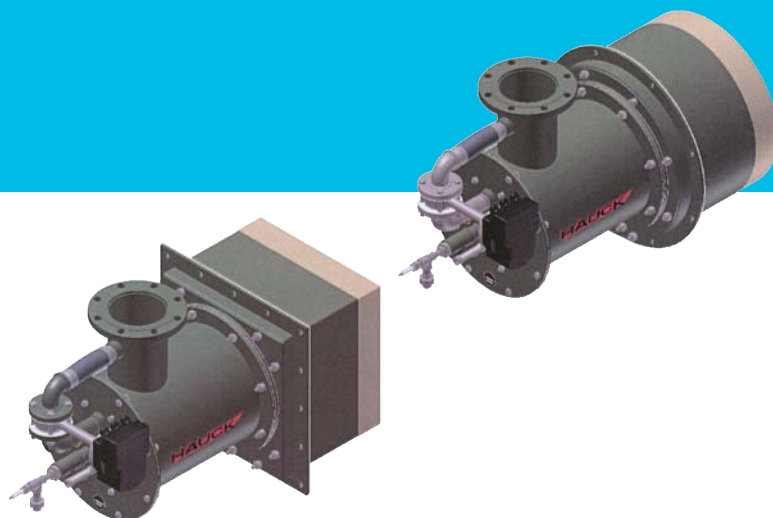




WHI

Wall Hugger Invisiflame® Gas Burner

WHI-1
Edition 09-08



Hauck, a product brand
of the Elster Group



- Ultra low NOx emissions of 20 ppm or less
- Low excess air operation (5%) for maximum fuel efficiency
- Flat flame profile throughout firing range with even heat distribution and no flame impingement
- Cold or preheated air up to 900°F (480°C)
- Direct spark or pilot ignition
- 8:1 on-ratio turndown
- Low CO emissions including on cold start
- Stable operation at ratio in cold furnace
- Adjustable flange for ease of installation
- Single air and fuel connections
- Available in round or square tile versions



Hauck's WHI Wall Hugger Invisiflame® burner is designed for applications requiring even heat distribution with no flame impingement and low NO_x emissions. The flame hugs the wall, even at high turndown ratios, allowing the burner to be placed close to the load.

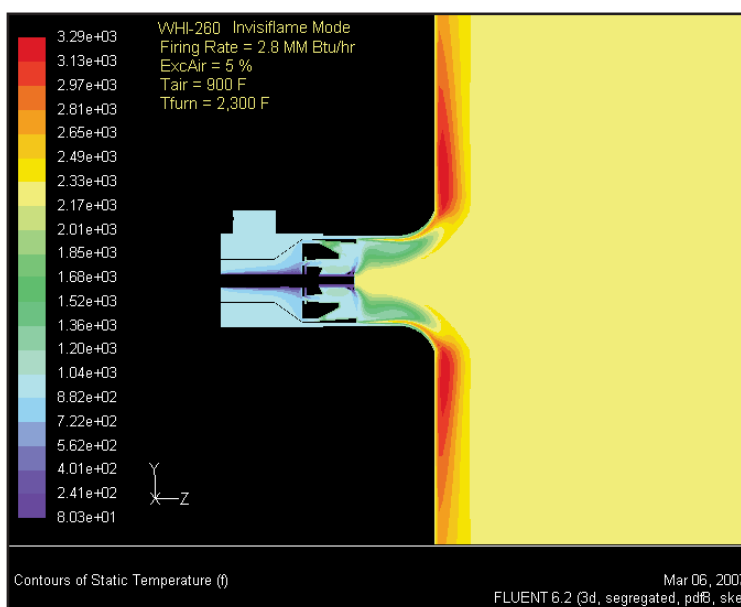
The burner's three-staged air injection design maximizes production efficiency while minimizing NO_x and CO emissions. Low excess air operation (5%) results in outstanding fuel efficiency. The WHI fires any clean industrial fuel gas with a higher heating value of 500 Btu/ft³ (19.7 MJ/nm³) or greater with ambient or preheated combustion air.

Similar to Hauck's WHG burner, the WHI's flat flame pattern promotes even heating by radiation from the furnace walls and roof.

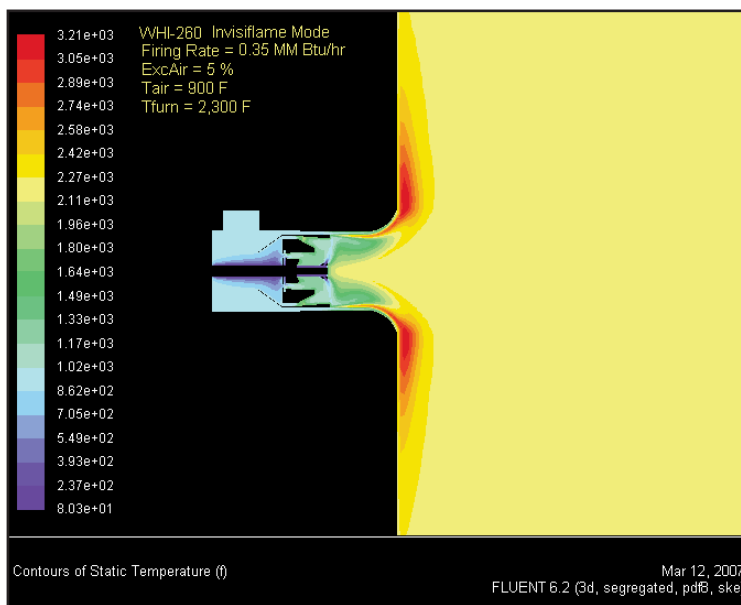
The WHI can be ignited and brought to high fire with low excess air, thus reducing furnace heat-up time resulting in low CO emissions.

The burner design and performance characteristics were optimized using FLUENT® computational fluid dynamics (CFD) software.

The standard burner capacity ranges from 2 to 6 million Btu/hr (580 to 1,760 kW) depending on air preheat. For other capacities, consult Hauck.



WHI 260 - High Fire Flat Flame



WHI 260 - 8:1 Turndown Flat Flame

For additional information on this product, visit our website at:

www.hauckburner.com

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of the Elster Group



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WHI WALL HUGGER INVISIFLAME® GAS BURNER

	BURNER MODEL			
	140		240	
BURNER SPECIFICATIONS – HIGH FIRE	BURNER STATIC INLET AIR PRESSURE OF 20.9"WC			
Combustion Air Temp. (°F)	60		900	
Operating Mode	Firing	Invisi-Flame	Firing	Invisi-Flame
Max. Input @ 5% Excess Air (MMBtu/hr)	2.4	2.0	1.5	1.2
Max. Air Flow @ 20.9"wc (scfh)	24,000	19,500	14,840	11,760
Min. Input @ Max. Air Flow (Btu/hr)	191,000	N/A		
Max. Excess Air (%)	1,230	N/A		
Air Press. @ Burner Inlet ("wc)	22.5	22.5	22.5	22.5
Burner Gas Inlet Press. ("wc)	7.9	7.0	4.2	2.5
Flame Length @ Max. Input (ft)	0.75	N/A	.5	N/A
Flame Dia. @ Max. Input (ft)	3.5	N/A	2.75	N/A
Stage 1 & 2 Air Static Press. ("wc)	1.7	0.2	1.7	0.2
Stage 3 Air Static Press. ("wc)	7.6	7.7	7.6	7.7
BURNER SPECIFICATIONS – LOW FIRE				
Input @ 5% Excess Air (Btu/hr)	151,600	151,600	151,600	151,600
Air Flow – Low Fire (scfh)	1,500	1,500	1,500	1,500
Min. Input @ Low Fire Air Flow (Btu/hr)	80,000	N/A		
Max. Excess Air (%)	100	N/A		
Min. Gas for Ignition (scfh)	80	80	80	80
Min. Gas for UV Signal (scfh)	80	N/A	80	N/A

Notes:

1. "Firing" Operating Mode is required for furnace temperatures below 1600°F; Invisiflame® operating mode is suitable for furnace temperatures above 1600°F.
2. Capacities based on natural gas with HHV of 1034 Btu/ft³, 0.59 S.G., and stoichiometric air:gas ratio of 9.74:1 with burner firing into chamber under no pressure @ 5% excess air.
3. Air and gas flows based on 60°F @ sea level.
4. Static air pressure measured at designated locations.
5. Flame lengths measured from the end of the burner tile.
6. Flame length and diameter is not applicable in Invisiflame® operating mode.
7. All data based on industry standard air and gas piping practices.
8. Flame detection via UV scanner in Firing Mode only.
9. Burners can be operated up to a static inlet air pressure of 16 osig; 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.

HAUCK MANUFACTURING CO., P.O. Box 90 Lebanon, PA 17042-0090 717-272-3051



WHI WALL HUGGER INVISIFLAME® GAS BURNER

	BURNER MODEL			
	160		260	
BURNER SPECIFICATIONS – HIGH FIRE	BURNER STATIC INLET AIR PRESSURE OF 20.9"WC			
Combustion Air Temp. (°F)	60		900	
Operating Mode	Firing	Invisi-Flame	Firing	Invisi-Flame
Max. Input @ 5% Excess Air (MMBtu/hr)	4.9	4.5	3.0	2.8
Max. Air Flow @ 20.9"wc (scfh)	48,430	44,590	29,950	27,570
Min. Input @ Max. Air Flow (Btu/hr)	300,000	N/A		
Max. Excess Air (%)	1,600	N/A		
Air Press. @ Burner Inlet ("wc)	22.5	22.5	22.5	22.5
Burner Gas Inlet Press. ("wc)	28.6	23.3	13.6	10
Flame Length @ Max. Input (ft)	1	N/A	0.75	N/A
Flame Dia. @ Max. Input (ft)	6	N/A	4.75	N/A
Stage 1 & 2 Air Static Press. ("wc)	2.0	0.1	2.0	0.1
Stage 3 Air Static Press. ("wc)	20.9	20.9	20.9	20.9
BURNER SPECIFICATIONS – LOW FIRE				
Input @ 5% Excess Air (Btu/hr)	300,000	300,000	300,000	300,000
Air Flow – Low Fire (scfh)	3,100	3,100	3,100	3,100
Min. Input @ Low Fire Air Flow (Btu/hr)	150,000	N/A		
Max. Excess Air (%)	120	N/A		
Min. Gas for Ignition (scfh)	145	145	145	145
Min. Gas for UV Signal (scfh)	145	N/A	145	N/A

Notes:

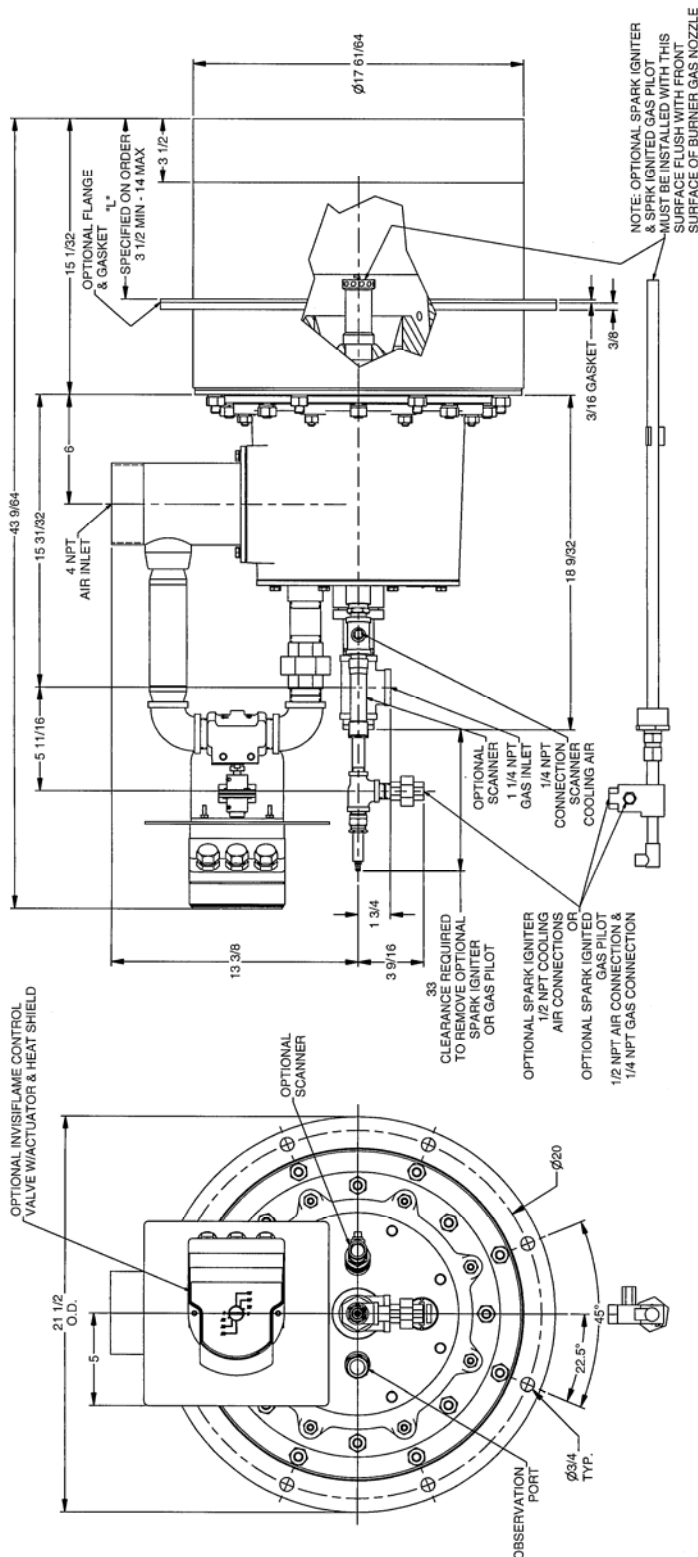
1. "Firing" Operating Mode is required for furnace temperatures below 1600°F; Invisiflame® operating mode is suitable for furnace temperatures above 1600°F.
2. Capacities based on natural gas with HHV of 1034 Btu/ft³, 0.59 S.G., and stoichiometric air:gas ratio of 9.74:1 with burner firing into chamber under no pressure @ 5% excess air.
3. Air and gas flows based on 60°F @ sea level.
4. Static air pressure measured at designated locations.
5. Flame lengths measured from the end of the burner tile.
6. Flame length and diameter is not applicable in Invisiflame® operating mode.
7. All data based on industry standard air and gas piping practices.
8. Flame detection via UV scanner in Firing Mode only.
9. Burners can be operated up to a static inlet air pressure of 16 osig; 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.



DIMENSIONS

WHI
WHI WALL HUGGER INVISIFLAME® GAS BURNER



Y8322
(NOT TO SCALE)

- NOTES:
1. AIR INLET CAN BE LOCATED IN ANY POSITION.
 2. PILOT COOLING AIR & GAS INLET CAN BE LOCATED IN ANY POSITION THAT DOES NOT INTERFERE WITH OPTIONAL INVISIFAME CONTROL LOOP.

(See Reverse Side for Metric Dimensions)

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ventas@morterahauck.com

WHI-3



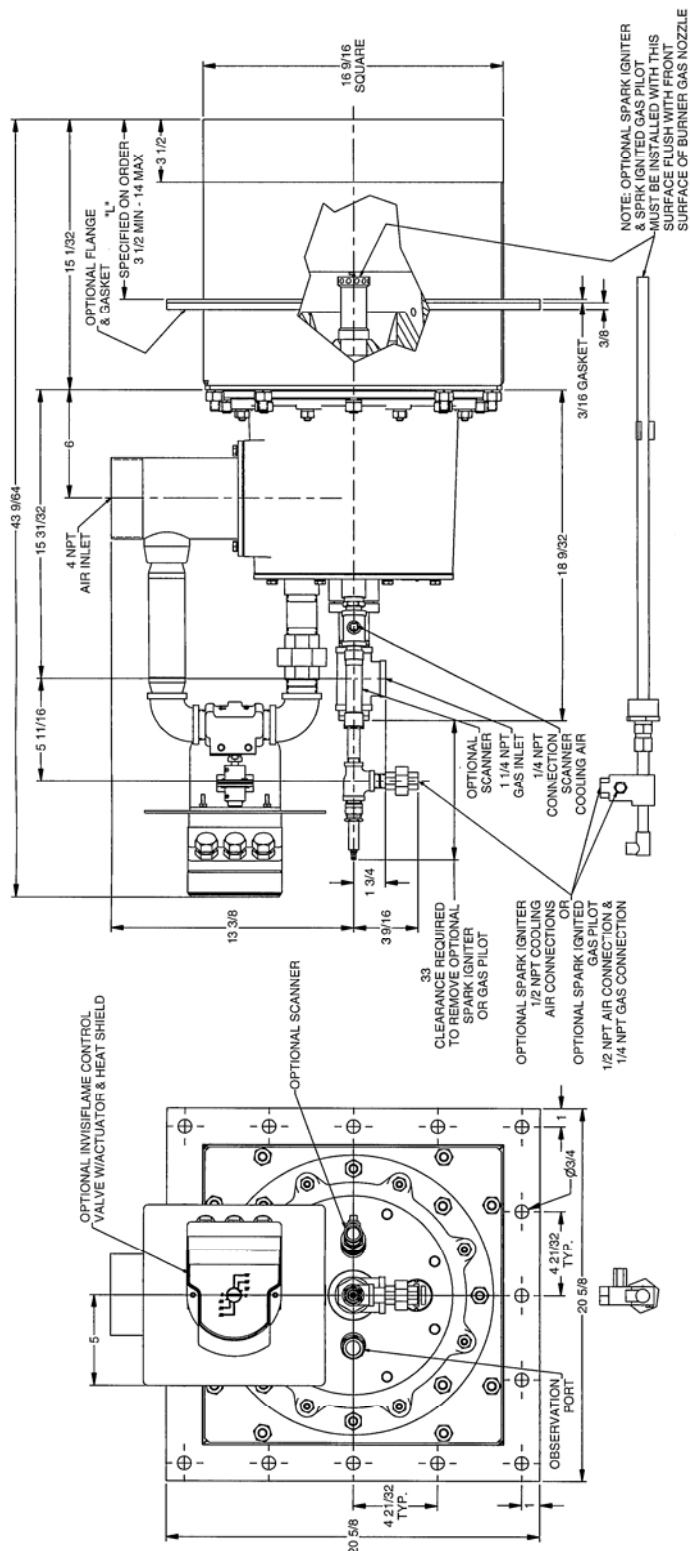
MORTERA Y COMPAÑIA, S. A DE C. V.

DIMENSIONS

WHI

WHI WALL HUGGER INVISIFLAME® GAS BURNER

WHI 140 & 240 WITH SQUARE TILE



Y8321
(NOT TO SCALE)

- NOTES:
1. AIR INLET CAN BE LOCATED IN ANY POSITION.
 2. PILOT COOLING AIR & GAS INLET CAN BE LOCATED IN ANY POSITION THAT DOES NOT INTERFERE WITH OPTIONAL INVISIFAME CONTROL LOOP.

(See Reverse Side for Metric Dimensions)

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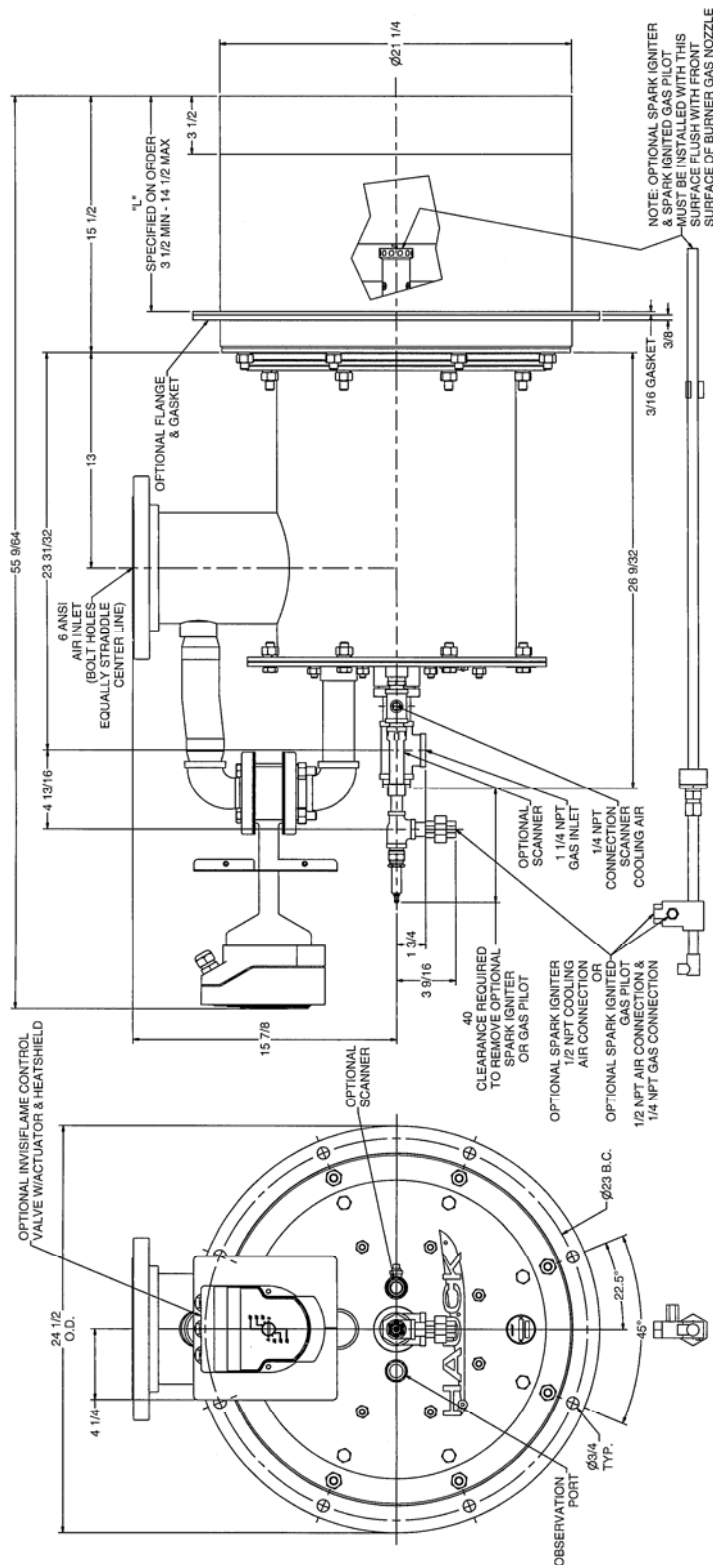
WHI-3.1



DIMENSIONS

WHI
WHI WALL HUGGER INVISIFLAME® GAS BURNER

WHI 160 & 260 WITH ROUND TILE



Y8110
(NOT TO SCALE)

- NOTES:
1. AIR INLET CAN BE LOCATED IN ANY POSITION.
 2. PILOT COOLING AIR & GAS INLET CAN BE LOCATED IN ANY POSITION THAT DOES NOT INTERFERE WITH OPTIONAL INVISIFAME CONTROL LOOP.
 3. AIR INLET FLANGE CONNECTION IS ANSI 125 LB BOLT PATTERN.

(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.

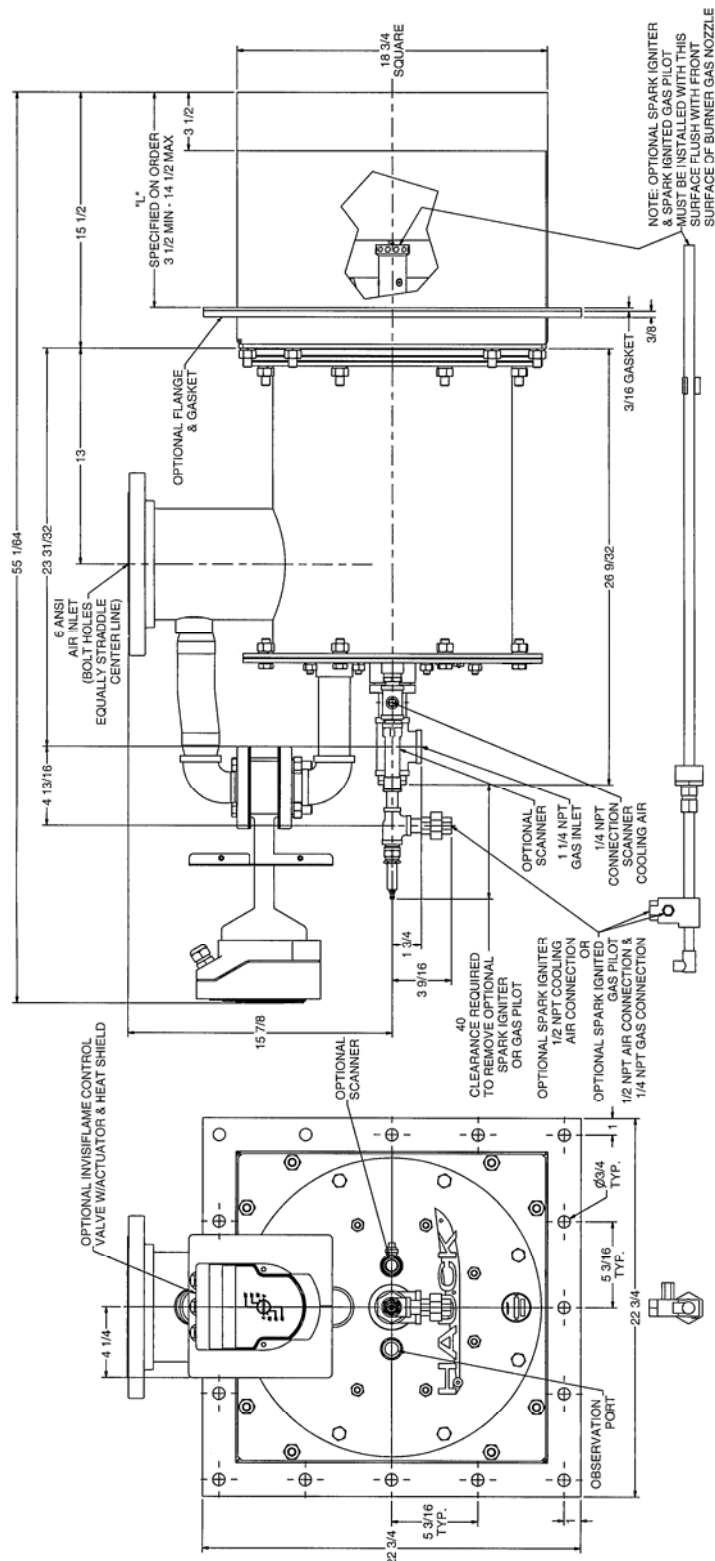


MORTERA Y COMPAÑIA, S. A DE C. V.

DIMENSIONS

WHI
WHI WALL HUGGER INVISIFLAME® GAS BURNER

WHI 160 & 260 WITH SQUARE TILE



Y8063
(NOT TO SCALE)

- NOTES:
1. AIR INLET CAN BE LOCATED IN ANY POSITION.
 2. PILOT COOLING AIR & GAS INLET CAN BE LOCATED IN ANY POSITION THAT DOES NOT INTERFERE WITH OPTIONAL INVISIFAME CONTROL LOOP.
 3. AIR INLET FLANGE CONNECTION IS ANSI 125 LB BOLT PATTERN.

(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.

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WHI-3.3