



## CAPACITIES

### MEGASTAR™ BURNER NATURAL GAS & LIGHT OIL MS-50 – MS-150

MEGASTAR		BURNER MODEL				
GAS SPECIFICATIONS		50	75	100	125	150
Capacity	(MMBTU/hr)	54	89	108	146	166
	(MW)	14.7	24.2	29.3	39.6	45.2
Main Air Flow	(scfh)	636,600	1,050,000	1,270,000	1,720,000	1,960,000
	(nm <sup>3</sup> /hr)	17,100	28,100	34,000	46,100	52,500
Main Air Pressure	(in.w.c.)	14.3	12.6	15.3	13.8	14.5
	(mbar)	35.6	31.3	38.1	34.3	36.1
Gas Flow Rate	(scfh)	52,300	86,200	104,300	141,300	161,000
	(nm <sup>3</sup> /hr)	1,400	2,300	2,800	3,800	4,300
Capacity with Flue Gas Recirc	(MMBTU/hr)	40.5	62	82	103	124
	(MW)	11.0	16.8	22.2	27.9	33.6
Flame Length @ 30° Spin	(ft)	12	14	9	11	15
	(m)	3.7	4.1	2.7	3.4	4.6
Flame Diameter @ 30° Spin	(ft)	4	7	5	8	7
	(m)	1.2	2.0	1.5	2.4	2.1

MEGASTAR		BURNER MODEL				
LIGHT OIL SPECIFICATIONS		50	75	100	125	150
Capacity	(MMBTU/hr)	53	82	100	135	153
	(MW)	14.3	22.3	27.2	36.5	41.5
Main Air Flow	(scfh)	643,300	1,030,000	1,270,000	1,720,000	1,960,000
	(nm <sup>3</sup> /hr)	17,200	27,600	34,000	46,100	52,500
Main Air Pressure	(in.w.c.)	14.3	12.0	16.2	13.7	144.0
	(mbar)	35.6	29.9	40.3	34.1	358.3
Primary Air Flow	(scfh)	46,500	46,500	46,500	46,500	46,500
	(nm <sup>3</sup> /hr)	1,200	1,200	1,200	1,200	1,200
Primary Air Pressure	(in.w.c.)	62	62	62	62	62
	(mbar)	154	154	154	154	154
Oil Flow Rate	(gal)	370	580	710	950	1,080
	(lph)	1,400	2,200	2,690	3,600	4,090
Flame Length @ 30° Spin	(ft)	10	12	12	10	12
	(m)	3.1	3.7	3.7	3.1	3.7
Flame Diameter @ 30° Spin	(ft)	4	5	5	4	5
	(m)	1.2	1.5	1.5	1.2	1.5

(Application Notes on Reverse Side)

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**HAUCK MANUFACTURING CO.,** 100 North Harris Street Cleona, PA 17042 717-272-3051

9/14

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**MS-2**

### Asphalt Application Notes:

1. Burner capacity is based on 60Hz power and scfh ( $\text{nm}^3/\text{hr}$ ) 60°F (0°C) air at sea level. Correction factors must be applied for variations in altitude, temperature, or frequency; consult Hauck. An altitude correction table is available in Hauck Application Sheet GJ75.
2. Natural gas capacities based on higher heating value of 1,034 Btu per cubic foot (lower heating value of 36.74 MJ/ $\text{nm}^3$ ), 2-4 psig (138 – 276 mbar) manifold pressure, 25% excess air, and stoichiometric ratio of 9.74:1.
3. No. 2 fuel oil capacities based on higher heating value of 141,146 Btu per gallon (lower heating value of 36.99 MJ/liter), 35% excess air, and stoichiometric ratio of 1371.1 cubic feet air/gallon of No. 2 oil (9.7  $\text{nm}^3$  air/liter).
4. Liquid propane capacities based on higher heating value of 90,912 Btu per gallon (lower heating value of 23.83 MJ/liter), 35% excess air, and stoichiometric ratio of 864 cubic feet air/gallon of liquid propane (6.1  $\text{nm}^3$  air/liter).
5. The exhaust fan must be able to provide a slight negative pressure, suction in the range of 0.25 to 1" wc (.6 to 2.5 mbar), at the burner breech plate to exhaust the products of combustion.
6. MegaStar™ Burner airflow can be accurately monitored using the body pressure tap on either side of the burner air plenum. An accurate device capable of reading up to 15" wc (75 mbar) will be required for this measurement.
7. All burner fuel manifolds are supplied with fuel flow measuring devices. Liquid fuel manifolds are equipped with an inline flow meter. Gaseous fuel manifolds are equipped with a gas orifice meter that can be accurately checked for gas flow by measuring the differential pressure across the orifice meter with a U-tube device (manometer) capable of reading in the range of 0 to 20"wc (0 to 50 mbar).
8. Low pressure atomizing air, used for firing low pressure fuel oil or LP, is provided by a 36 osi (155 mbar) Hauck high efficiency Turbo Blower. The low pressure air is used to not only atomize liquid fuels, but also improve mixing speed in the combustion zone.
9. High pressure compressed air, used for firing heavy oils or any fuel oil at high elevations, must be supplied by the customer at a nominal 60 psig (4140 mbar) to the burner nozzle for optimum fuel oil atomization.



## CAPACITIES

# MEGASTAR™ BURNER LIQUID PROPANE & COMPRESSED AIR MS-50 – MS-150

MEGASTAR		BURNER MODEL				
LIQUID PROPANE SPECIFICATIONS		50	75	100	125	150
Capacity	(MMBTU/hr)	P e n d i n g	80	97	128	145
	(MW)		21.7	26.4	34.6	39.3
Main Air Flow	(scfh)		980,000	1,200,000	1,590,000	1,810,000
	(nm <sup>3</sup> /hr)		26,300	32,100	42,600	48,500
Main Air Pressure	(in.w.c.)		12.8	18.5	15.0	18.3
	(mbar)		31.8	46.0	37.3	45.5
Primary Air Flow	(scfh)		46,500	46,500	46,500	46,500
	(nm <sup>3</sup> /hr)		1,200	1,200	1,200	1,200
Primary Air Pressure	(in.w.c.)		62	62	62	62
	(mbar)		154	154	154	154
Propane Flow Rate	(gal)		880	1,070	1,400	1,590
	(lph)		3,330	4,050	5,300	6,020
Flame Length @ 30° Spin	(ft)		14	15	13	15
	(m)		4.3	4.6	4.0	4.6
Flame Diameter @ 30° Spin	(ft)		5	5	6	6
	(m)		1.5	1.5	1.8	1.8

MEGASTAR		BURNER MODEL				
COMPRESSED AIR SPECIFICATIONS		50	75	100	125	150
Capacity	(MMBTU/hr)	N o t  A v a i l a b l e	79	100	130	150
	(MW)		21.4	27.2	35.3	40.7
Main Air Flow	(scfh)		1,030,000	1,310,000	1,700,000	1,960,000
	(nm <sup>3</sup> /hr)		27,600	35,100	45,500	52,500
Main Air Pressure	(in.w.c.)		12.0	16.2	13.2	14.4
	(mbar)		29.9	40.3	32.8	35.8
Compressed Air Flow	(scfh)		3,600	3,600	5,400	5,400
	(nm <sup>3</sup> /hr)		100	100	100	100
Compressed Air Pressure	(psig)		60	60	60	60
	(bar)		4	4	4	4
Oil Flow Rate	(gal)		560	710	920	1,060
	(lph)		2,120	2,690	3,480	4,010
Flame Length @ 30° Spin	(ft)		9	9	10	10
	(m)		2.7	2.7	3.1	3.1
Flame Diameter @ 30° Spin	(ft)		5	5	5	5
	(m)		1.5	1.5	1.5	1.5

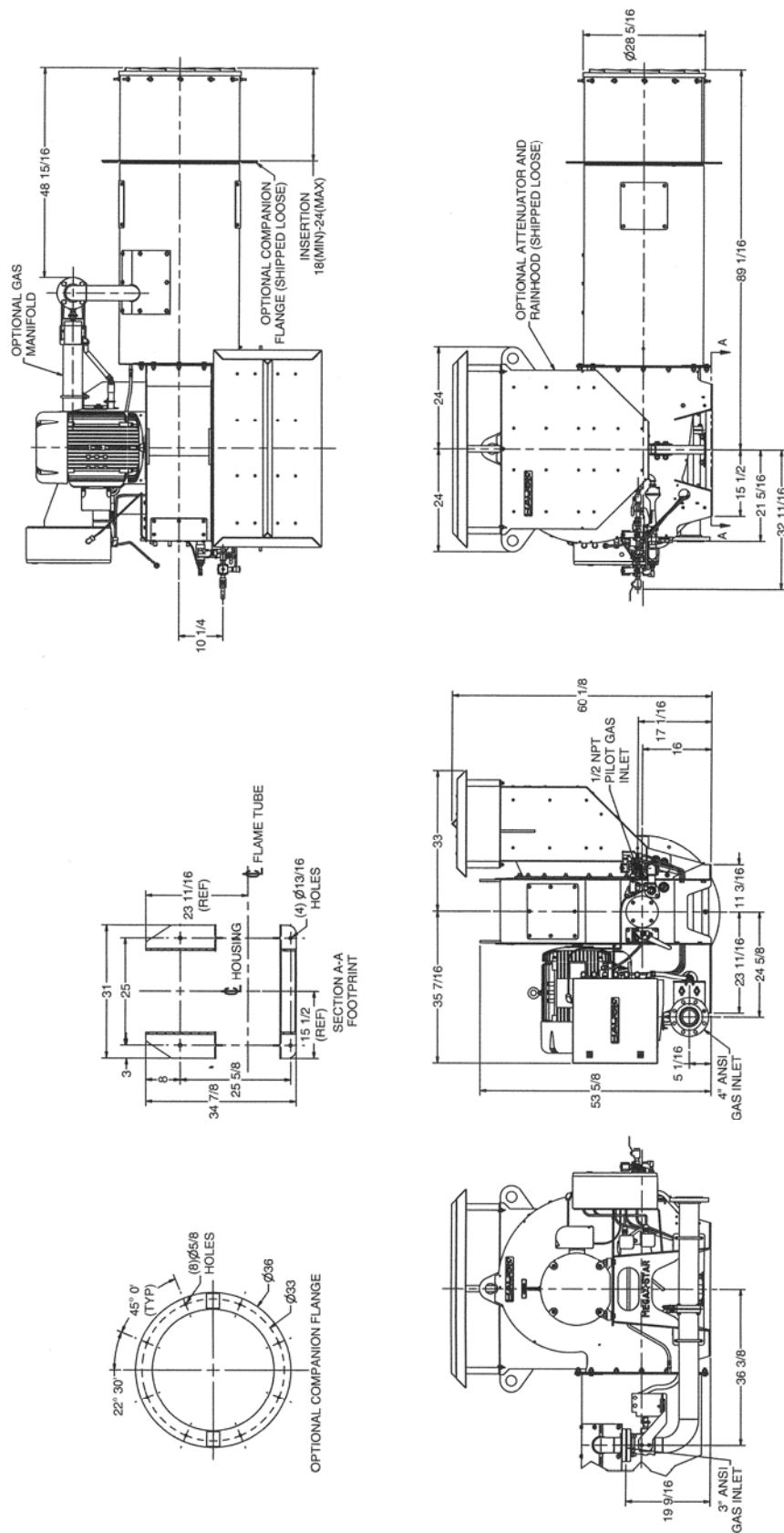
(Application Notes on Reverse Side)

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### Asphalt Application Notes:

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## MEGASTAR™/ GAS MANIFOLD MS-50



Y8947 Sht. 1  
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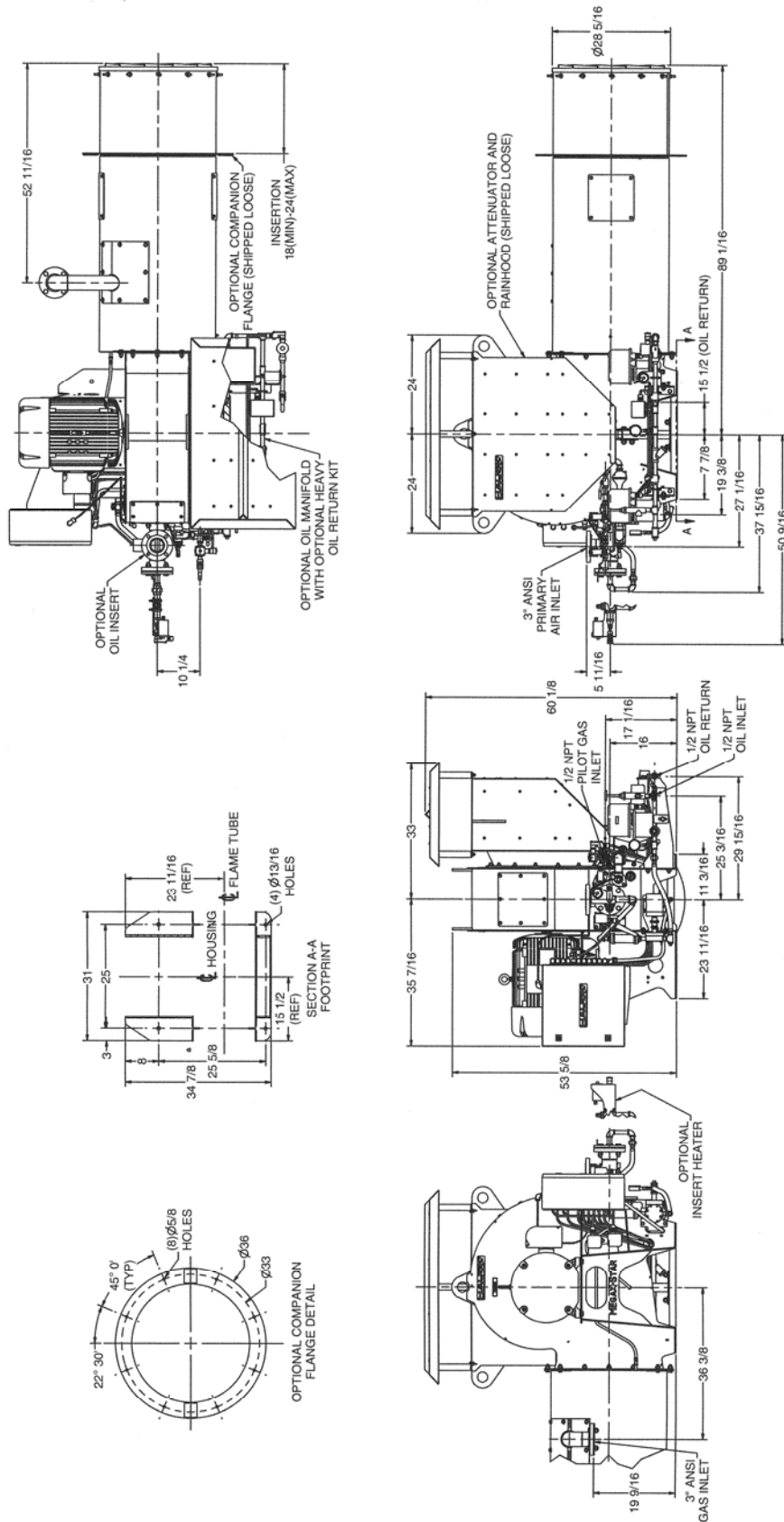
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**MS-3**

## MEGASTAR™ / OIL MANIFOLD MS-50



Y8947 Sht. 2  
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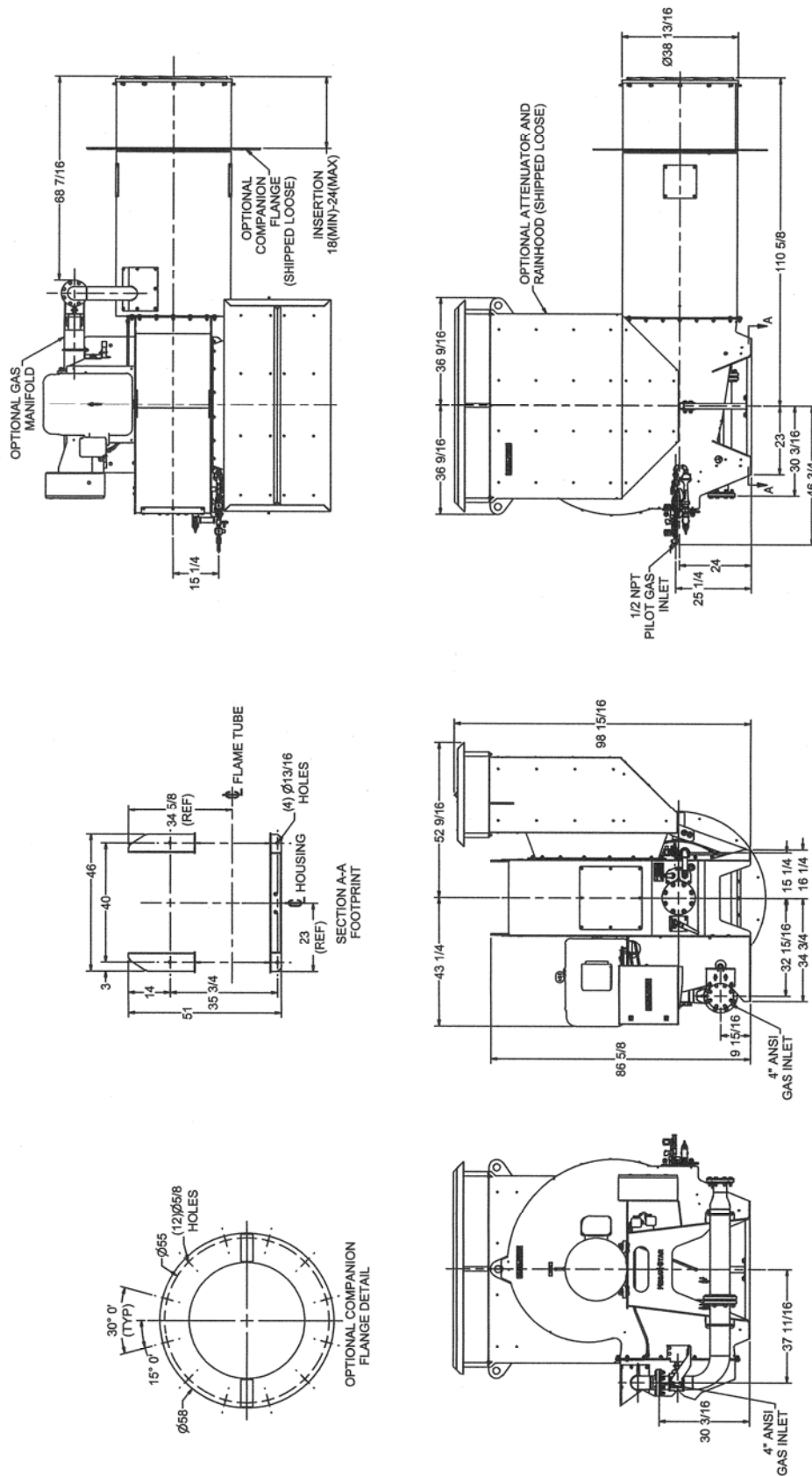
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## DIMENSIONS

### MEGASTAR™/ GAS MANIFOLD MS-75



Y8998 Sht. 1  
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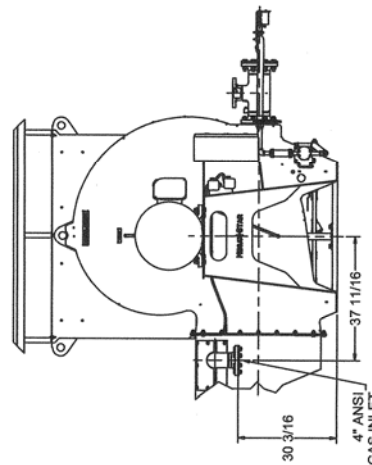
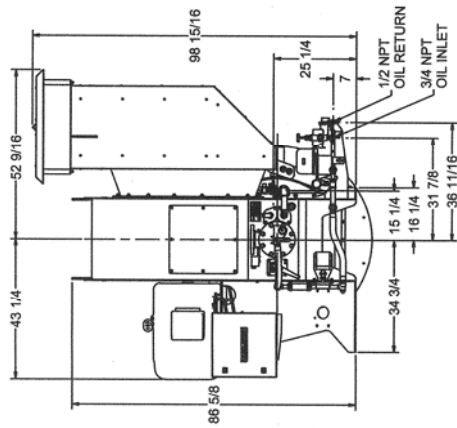
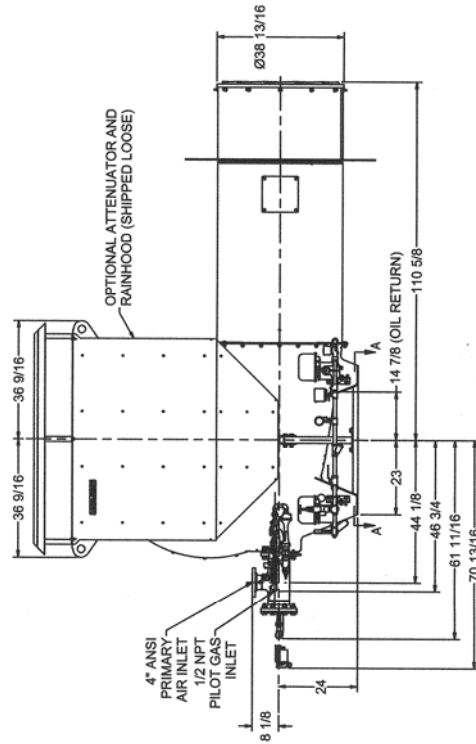
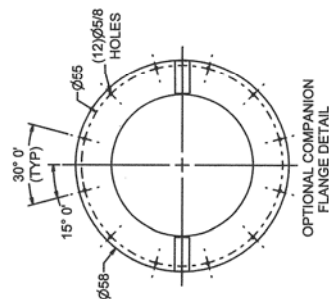
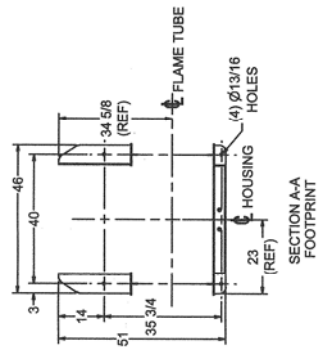
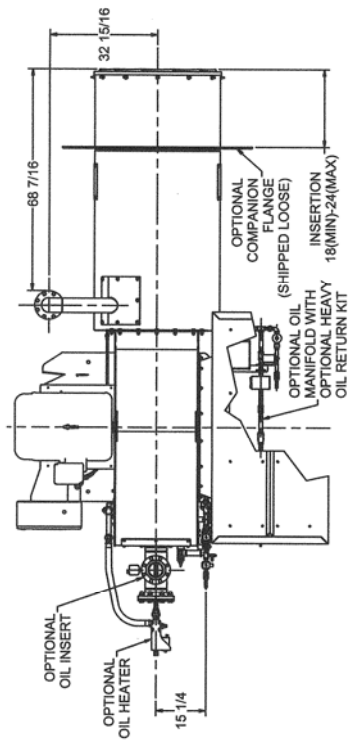
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MS-3.2

## MEGASTAR™/ OIL MANIFOLD MS-75



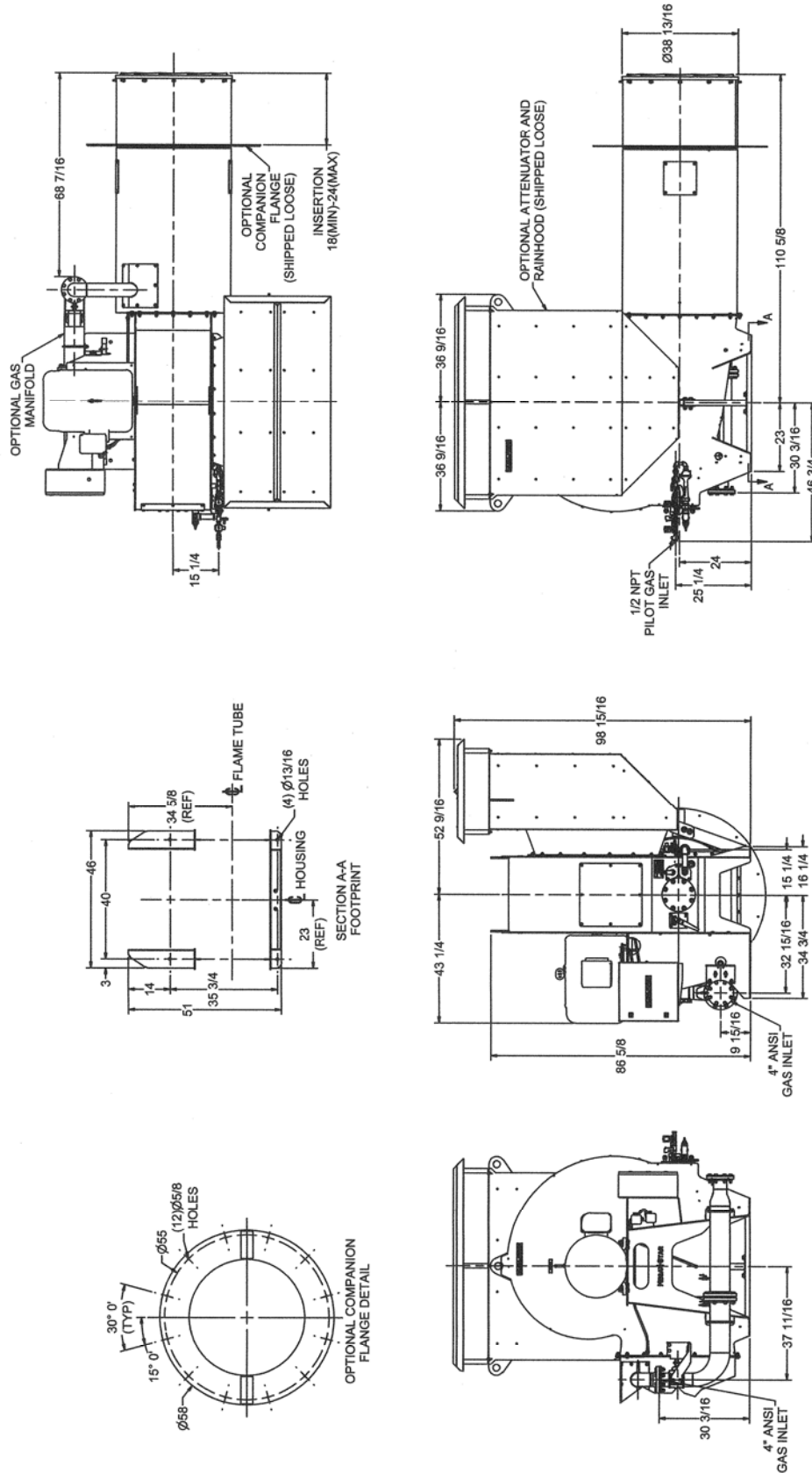
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## DIMENSIONS

### MEGASTAR™/ GAS MANIFOLD MS-100



Y8998 Sht. 1  
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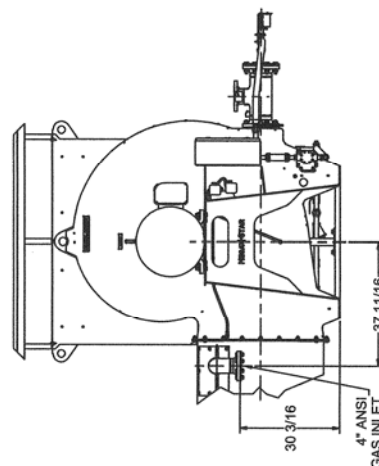
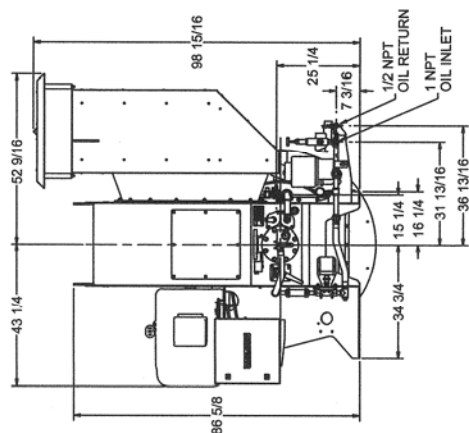
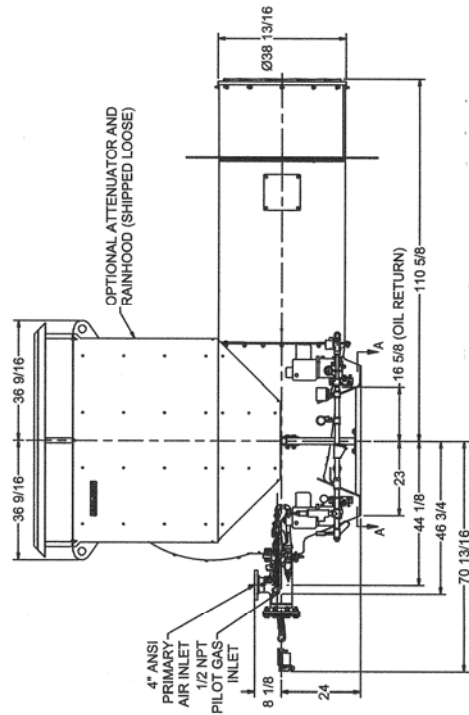
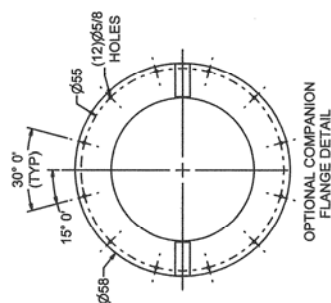
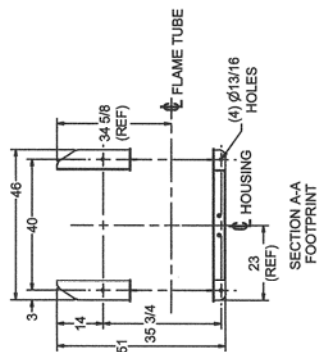
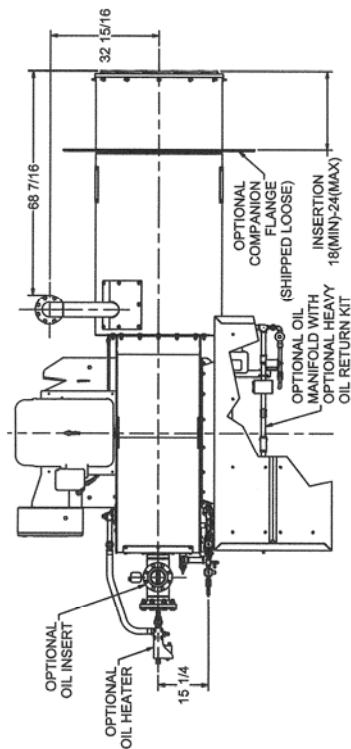
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**MS-3.4**

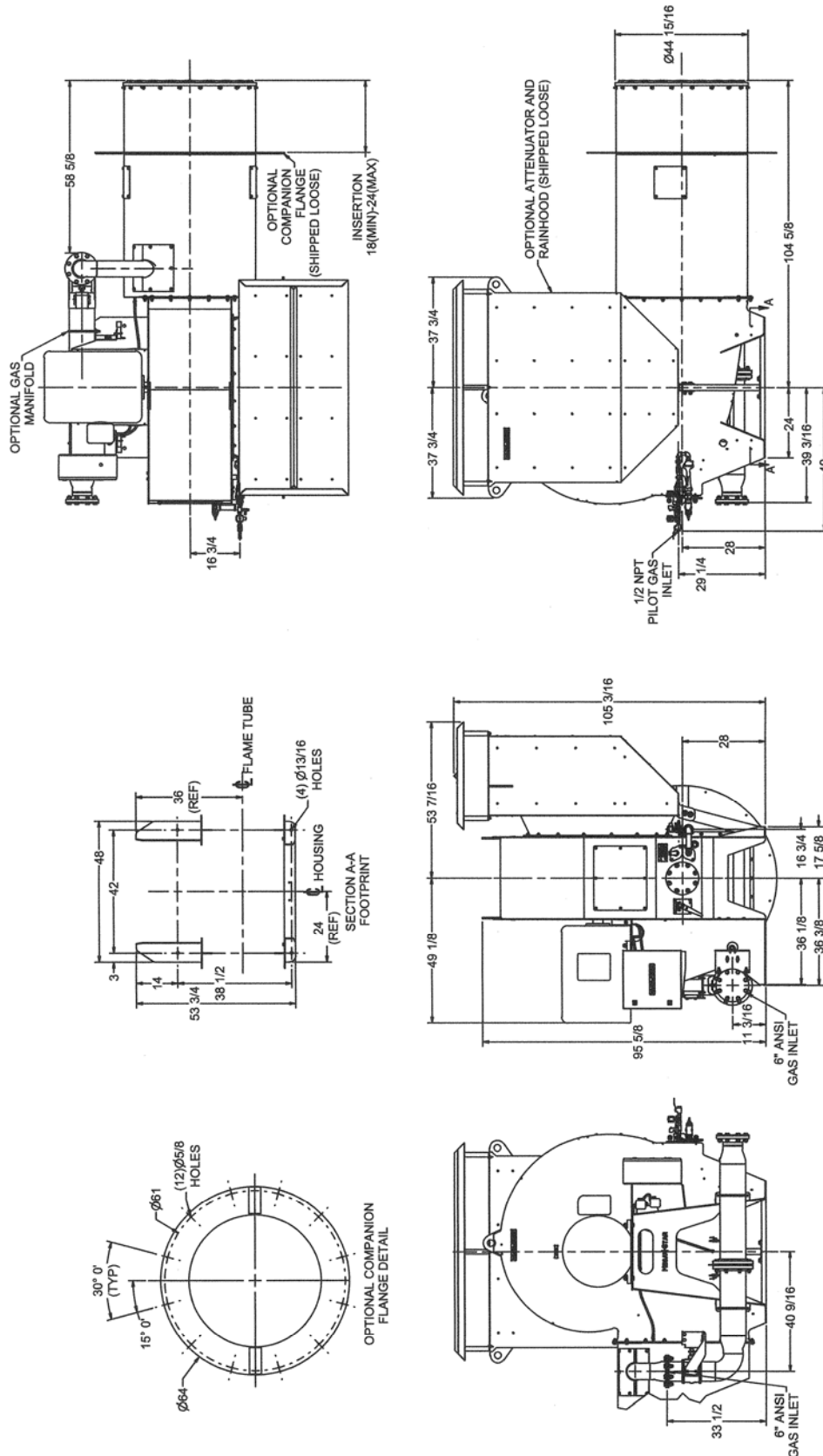
## MEGASTAR™/ OIL MANIFOLD MS-100



Y8998 Sht. 3  
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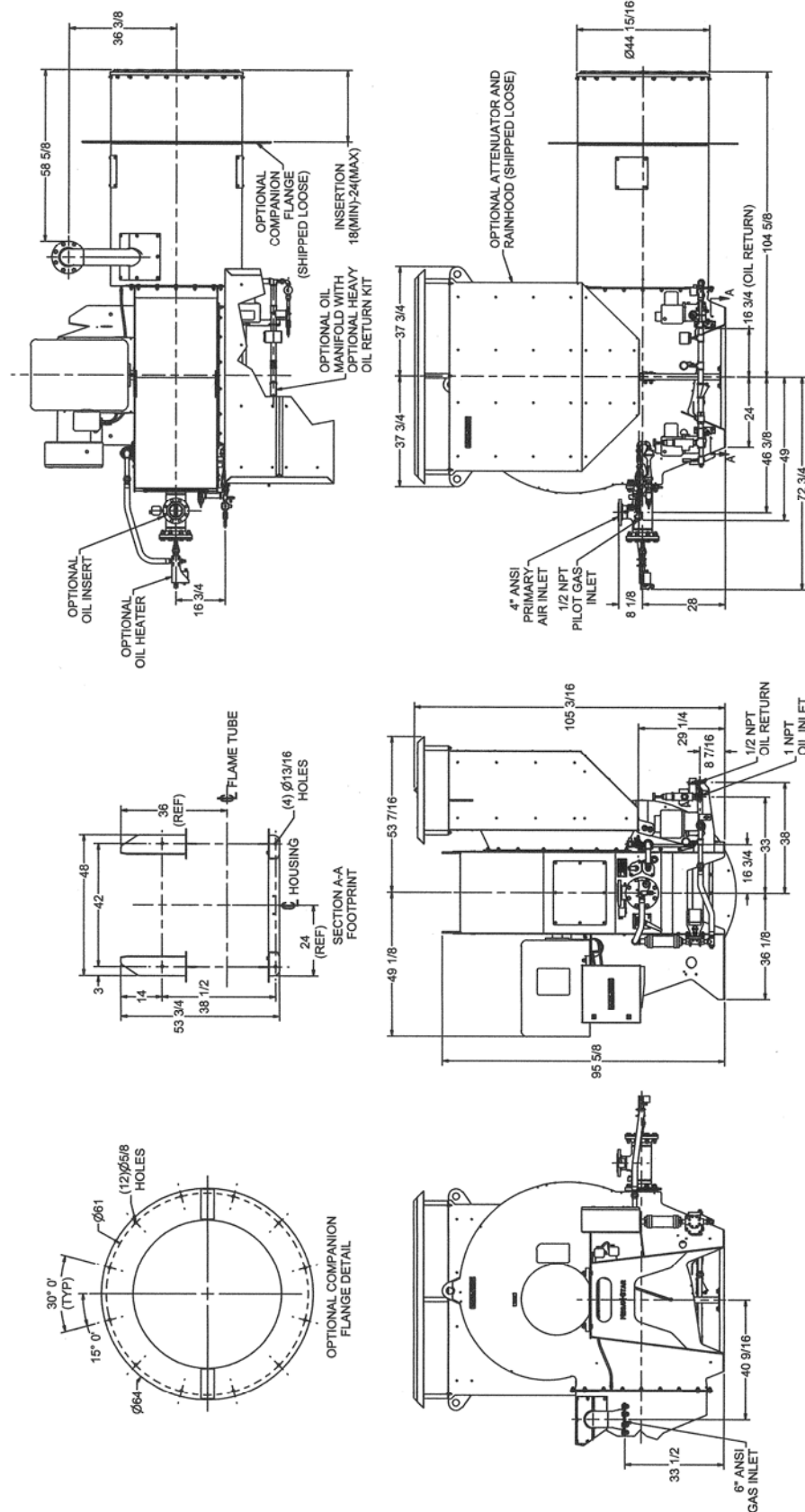
## MEGASTAR™/ GAS MANIFOLD MS-125 & 150



Y9004 Sht. 1  
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## MEGASTAR™/ OIL MANIFOLD MS-125 & MS-150



Y9004 Sht. 2  
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## SUPPLEMENTAL DATA

### MEGASTAR™ BURNER ORDERING INFORMATION

	MS	50-	O-	H-	C-	LO-	R-	H
<b>Burner Type</b> MegaStar								
<b>Size</b> 50 75 100 125 150								
<b>Fan</b> O – ODP T – TEFC								
<b>VFD</b> H – Hauck Supplied X – Not Supplied								
<b>Fuel Manifold</b> G – Gas C – Combination O – Oil/LP Only								
<b>Combination Fuel</b> LO – Low Pressure Oil CA – Compressed Air/Oil LP – Liquid Propane XX – Gas Manifold								
<b>Oil Return Kit</b> R – Oil Return Kit X – Not Supplied								
<b>Insert Heater</b> H – Heater X – Not Supplied								