

ECO-STARII[™] 75B - 200B

60 Hz Aggregate Drying Ratings

		Natural Gas		
Burner Model	Maximum Capacity (MM Btu/hr)	Main Air Flow (scfh)	Natural Gas Flow (scfh)	Capacity w/FGR (MM Btu/hr)
ESII 75B	78	1,050,000	82,900	62
ESII 100B	103	1,270,000	100,000	82
ESII 125B	129	1,720,000	136,000	103
ESII 150B	155	1,960,000	155,000	124
ESII 175B	181	2,330,000	184,000	144
ESII 200B	207	2,540,000	201,000	165

	No. 2 Fuel Oil (Low Pressure Atomization)												
_	urner lodel	Maximum Capacity (MM Btu/hr)	Primary Air Flow at 36 osig (scfh)	Main Air Flow (scfh)	No. 2 Fuel Oil Flow (gph)								
ESII	75B	77	46,500	1,030,000	545								
ESII	100B	102	46,500	1,270,000	720								
ESII	125B	128	46,500	1,720,000	905								
ESII	150B	153	46,500	1,960,000	1,080								
ESII	175B	179	66,000	2,350,000	1,270								
ESII	200B	205	66,000	2,540,000	1,450								

	No. 2 Fuel Oil (Compressed Air Atomization)												
	urner //odel	Maximum Capacity (MM Btu/hr)	Compressed Air Flow at 60 psig (scfh)	Main Air Flow (scfh)	No. 2 Fuel Oil Flow (gph)								
ESII	75B	77	3,600	1,030,000	545								
ESII	100B	102	3,600	1,310,000	722								
ESII	125B	128	5,400	1,700,000	905								
ESII	150B	153	5,400	1,960,000	1,080								
ESII	175B	179	6,900	2,350,000	1,270								
ESII	200B	205	7,100	2,540,000	1,450								

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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	Liquid Propane													
Burner Model	Maximum Capacity (MM Btu/hr)	Primary Air Flow at 36 osig (scfh)	Main Air Flow (scfh))	LP Flow (gph)	Capacity w/FGR (MM Btu/hr)									
ESII 75B	75	46,500	980,000	820	60									
ESII 100B	95	46,500	1,200,000	1,045	76									
ESII 125B	120	46,500	1,590,000	1,320	96									
ESII 150B	141	46,500	1,810,000	1,550	113									
ESII 175B	165	66,000	2,090,000	1,810	132									
ESII 200B	180	66,000	2,290,000	1,980	144									

Asphalt Application Notes:

- 1. Burner capacity is based on 60Hz power and scfh (standard cubic feet per hour) 60°F 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, 2-4 psig manifold pressure, 30% excess air, and stoichiometric ratio of 9.74 cubic feet air/cubic foot of natural gas.
- 3. No. 2 fuel oil capacities based on higher heating value of 141,146 Btu per gallon, 35% excess air, and stoichiometric ratio of 1371.1 cubic feet air/gallon of No. 2 oil.
- 4. Liquid propane capacities based on higher heating value of 90,912 Btu per gallon, 30% excess air, and stoichiometric ratio of 864 cubic feet air/gallon of liquid propane.
- 5. The exhaust fan must be able to provide a slight negative pressure (suction in the range of 0.25 to 1" wc) at the burner breech plate to exhaust the products of combustion.
- 6. Eco-StarII[™] Burner airflow can be accurately monitored using the body pressure tap on either side of the burner air plenum downstream of the outlet damper. An accurate device capable of reading up to 30" wc 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.
- 8. Low pressure atomizing air, used for firing low pressure fuel oil or LP, is provided by a 36 osi 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 to the burner nozzle for optimum fuel oil atomization.



ECO-STARII[™] 75B - 200B

60 Hz Aggregate Drying Ratings

		Natural Gas		
Burner Model	Maximum Capacity (MW)	Main Air Flow (nm³/hr)	Natural Gas Flow (nm³/hr)	Capacity w/FGR (MW)
ESII 75B	20.6	28,100	2,000	16.5
ESII 100B	27.2	34,000	2,660	21.8
ESII 125B	34.1	46,100	3,360	27.3
ESII 150B	41	52,500	4,020	32.8
ESII 175B	47.8	62,400	4,690	38.2
ESII 200B	54.7	68,000	5,360	43.8

	No. 2 Fuel Oil (Low Pressure Atomization)												
_	urner lodel	Maximum Capacity (MW)	Primary Air Flow at 15.5 kPa (nm³/hr)	Main Air Flow (nm³/hr)	No. 2 Fuel Oil Flow (lph)								
ESII	75B	21.2	1,250	27,600	2,055								
ESII	100B	28.1	1,250	34,000	2,725								
ESII	125B	35.3	1,250	46,100	3,420								
ESII	150B	42.2	1,250	52,500	4,090								
ESII	175B	49.4	1,770	63,000	4,790								
ESII	200B	56.5	1,770	68,000	5,480								

	No. 2 Fuel Oil (Compressed Air Atomization)												
	urner //odel	Maximum Capacity (MW)	Compressed Air Flow at 414 kPa (nm³/hr)	Main Air Flow (nm³/hr)	No. 2 Fuel Oil Flow (lph)								
ESII	75B	21.2	96	27,600	2,055								
ESII	100B	28.1	96	35,100	2,725								
ESII	125B	35.3	145	45,500	3,420								
ESII	150B	42.2	145	52,500	4,090								
ESII	175B	49.4	185	63,000	4,790								
ESII	200B	56.5	190	68,000	5,480								

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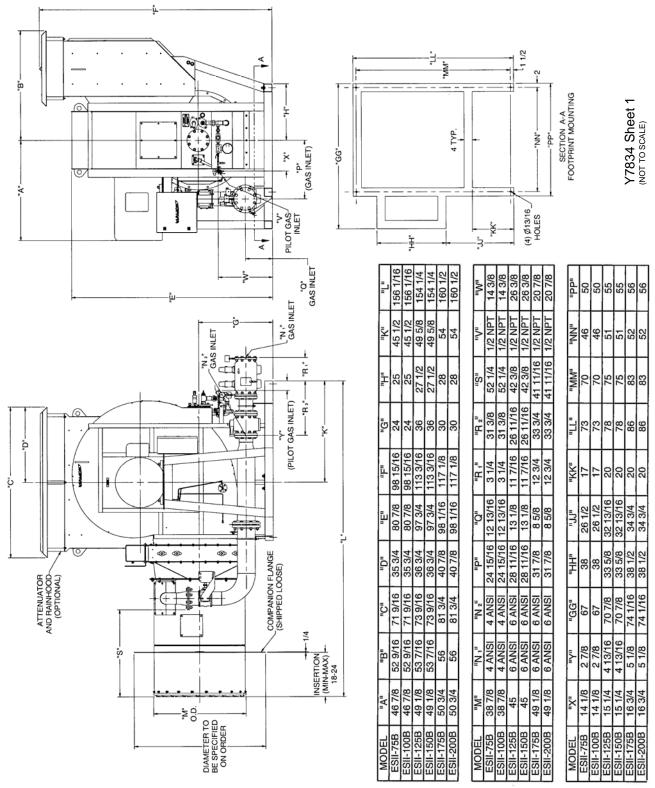
	Liquid Propane													
Burner Model	Maximum Capacity (MW)	Primary Air Flow at 15.5 kPa (nm³/hr)	Main Air Flow (nm³/hr)	LP Flow (lph)	Capacity w/FGR (MW)									
ESII 75B	19.8	1,250	26,300	3,010	15.9									
ESII 100B	25.1	1,250	32,100	3,810	20.1									
ESII 125B	33.0	1,250	42,600	5,010	26.4									
ESII 150B	37.2	1,250	48,500	5,650	29.8									
ESII 175B	43.6	1,770	56,000	6,620	34.9									
ESII 200B	47.5	1,770	61,300	7,210	38.0									

Asphalt Application Notes:

- 1. Burner capacity is based on 60Hz power and nm³/hr (normal cubic meters per hour) 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 lower heating value of 36.74 MJ/nm³, 13.8 27.6 kPa manifold pressure, 30% excess air, and stoichiometric air:gas ratio of 9.74:1.
- 3. No. 2 fuel oil capacities based on lower heating value of 36.99 MJ/liter, 35% excess air, and stoichiometric ratio of 9.70 nm³ air/liter of No. 2 oil.
- 4. Liquid propane capacities based on lower heating value of 23.83 MJ/liter, 30% excess air, and stoichiometric ratio of 6.12 nm³ air/liter of liquid propane.
- 5. The exhaust fan must be able to provide a slight negative pressure (suction in the range of 60 to 250 Pa) at the burner breech plate to exhaust the products of combustion.
- 6. Eco-StarII[™] Burner airflow can be accurately monitored using the body pressure tap on either side of the burner air plenum downstream of the outlet damper. An accurate device capable of reading up to 7,500 Pa 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 5000 Pa.
- 8. Low pressure atomizing air, used for firing low pressure fuel oil or LP, is provided by a 15.5 kPa 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 414 kPa to the burner nozzle for optimum fuel oil atomization.

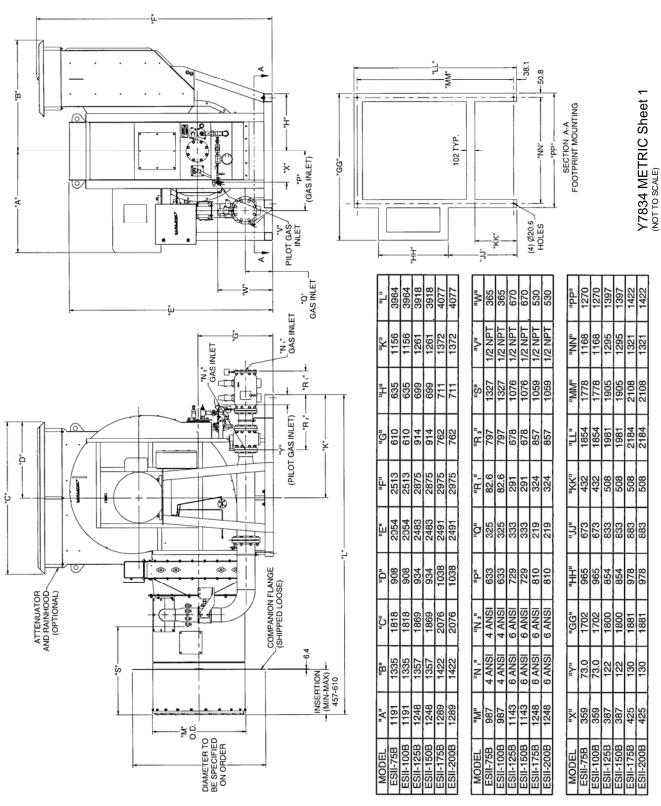


ECO-STARII[™] / GAS MANIFOLD ESII-75B – ESII-200B

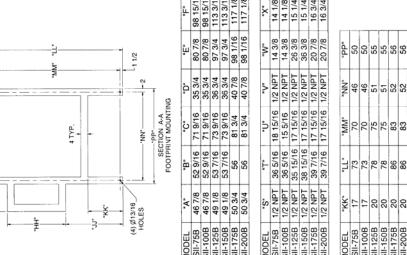


METRIC DIMENSIONS

ECO-STARII[™] / GAS MANIFOLD ESII-75B – ESII-200B



NOTE: 1. DIMENSIONS ARE IN MM.

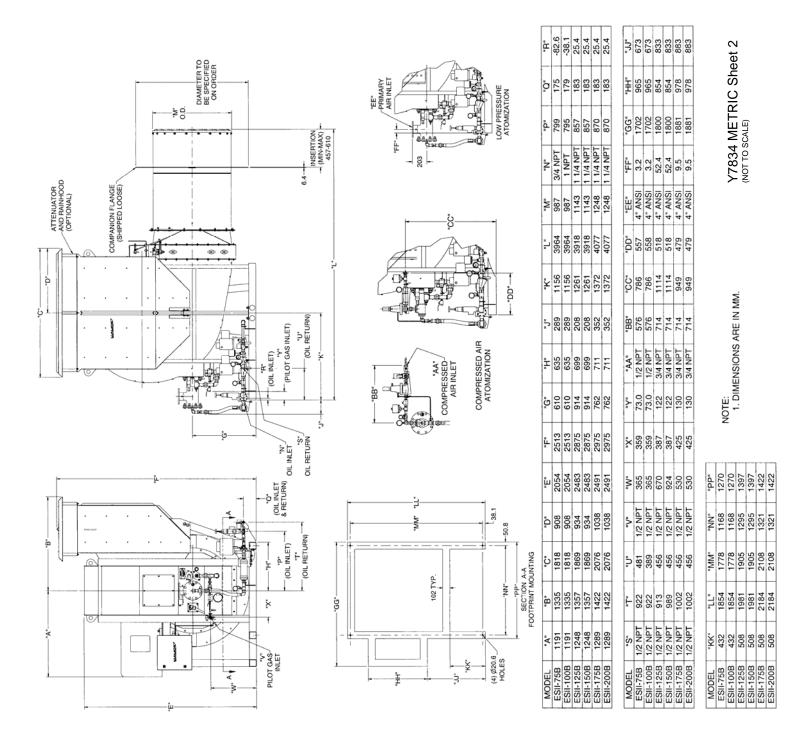


ECO-STARII™ / OIL MANIFOLD **ESII-75B - ESII-200B**

1/4	PRIMARY AIR INLET AIR INLET COMPRESSIRE ATOMIZATION	31 7/16 6 7/8 31 5/16 6 7/8 31 5/16 7 1/16 1 33 3/4 7 3/16 1 34 1/4 7 3/16 1 34 1/4 7 3/16	"GG" "HH" 67 38 67 38 70 7/8 33 5/8 70 7/8 33 5/8 74 1/16 38 1/2 74 1/16 38 1/2	Y7834 Sheel (NOT TO SCALE)
ATTENUATOR AND FAMINHOOD (OPTIONAL) (OPTIONA	Non No.	11 3/8 45 1/2 156 1/16 38 7/8 3/4 NPT 11 3/8 45 1/2 156 1/16 38 7/8 1 NPT 2 83/16 49 5/8 154 1/4 45 11/4 NPT 2 8 3/16 49 5/8 160 1/2 49 1/8 11/4 NPT 13 7/8 54 160 1/2 49 1/8 11/4 NPT 13 7/8 54 160 1/2 49 1/8 11/4 NPT 13 7/8 54 160 1/2 49 1/8 11/4 NPT 13 7/8 54 160 1/2 49 1/8 11/4 NPT	T 22 11/16 30 15/16 21 15/16 4* ANSI 1/8 T 22 11/16 30 15/16 21 15/16 4* ANSI 1/8 T 28 11/8 43 7/8 20 3/8 4* ANSI 2 11/6 T 28 1/8 43 7/8 20 3/8 4* ANSI 2 11/6 T 28 1/8 37 3/8 18 7/8 4* ANSI 2 11/6 T 28 1/8 37 3/8 18 7/8 4* ANSI 3/8 T 28 1/8 37 3/8 18 7/8 4* ANSI 3/8	(Metric Dimensions on Reverse Side)
OIL INETURN J.	SOMPRESSED AIR ATOMIZATION	98 15/16 24 25 98 15/16 24 25 11133/16 36 27 1/2 117 1/8 30 28 117 1/8 30 28	"X" "Y" "AA" 14 1/8 2 7/8 1/2 NPT 14 1/8 2 7/8 1/2 NPT 15 1/4 4 13/16 3/4 NPT 16 3/4 5 1/8 3/4 NPT 16 3/4 5 1/8 3/4 NPT	(Metric Dime
(OIL INLET	- 11.17 MMr.	"E" 80 7/8 80 7/8 97 3/4 97 3/4 98 1/16 98 1/16	PT 14 3/8 PT 14 3/8 PT 26 3/8 PT 26 3/8 PT 20 7/8 PT 20 7/8	55 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
BB (OIL RETURN)	4 TYP. 1 NN' SECTION AA FOOTPHINT MOUNTING	*C*	18 15/16 1/2 NPT 15 5/16 1/2 NPT 17 15/16 NPT 17 15/1	70 46 70 46 75 51 51 83 52 83 52
× ×	SEC SEC FOOTPRIL	*B* 52 9/16 52 9/16 53 7/16 53 7/16 56 56 56	T. 365/16 T. 365/16 T. 3515/16 T. 397/16 T. 397/16	"LL" 73 78 86 86 86 86
A. PILOT GRAPH	(5) \$7.37.6 (6) \$7.37.6 (7) \$7.37.6	MODEL *A* ESII-758 46 7/8 ESII-1008 46 7/8 ESII-1508 49 1/8 ESII-758 50 3/4 ESII-2008 50 3/4	MODEL 'S' ESII-75B 1/2 NPT ESII-100B 1/2 NPT ESII-125B 1/2 NPT ESII-175B 1/2 NPT ESII-75B 1/2 NPT ESII-200B 1/2 NPT	MODEL KK* ESII-758 17 ESII-1008 17 ESII-1268 20 ESII-1768 20 ESII-1768 20 ESII-7768 20

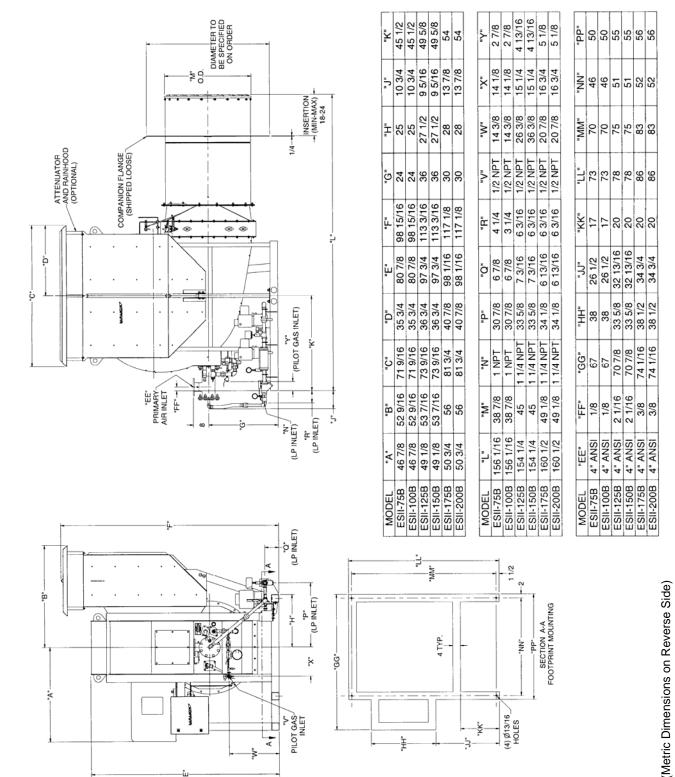
METRIC DIMENSIONS

ECO-STARII[™] / OIL MANIFOLD ESII-75B – ESII-200B



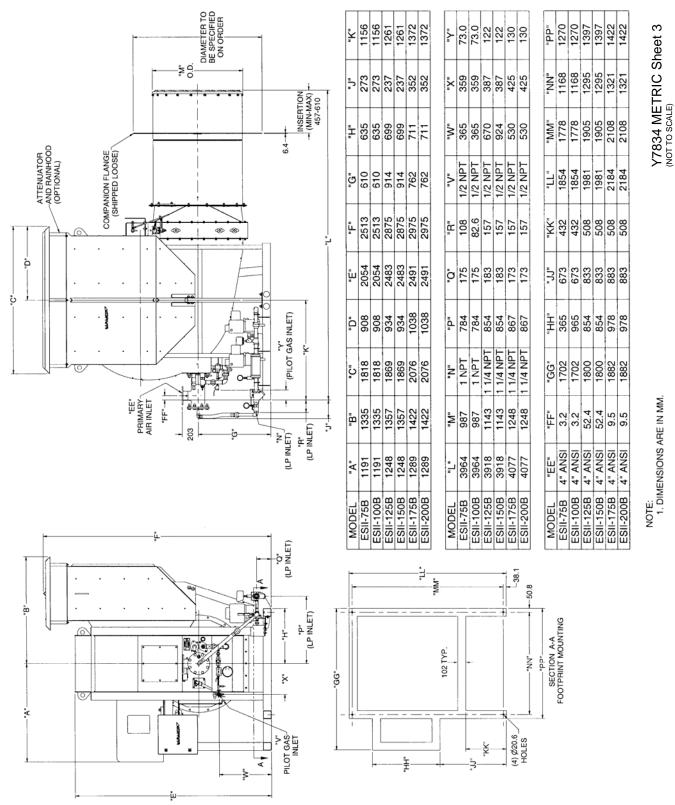


ECO-STARII[™] / LP MANIFOLD ESII-75B – ESII-200B



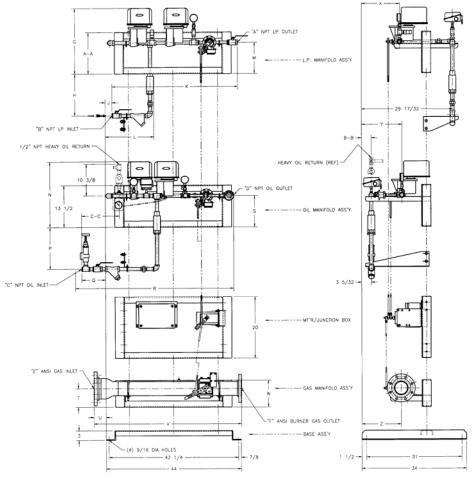
METRIC DIMENSIONS

ECO-STARII[™] / LP MANIFOLD ESII-75B – ESII-200B





ECO-STARII[™] **OPTIONAL RACK MOUNTED FUEL MANIFOLD ESII-75 - ESII-200**



- NAY COMBINATION OF FUEL MODULES CAN BE SUPPLIED W/BASE AND MOTOR/JUNCTION BOX AS SPECIFIED ON ORDER.
 SIII-75 TO ESIII-200 UTILIZE FUEL MANIFOLDS THAT ARE INTEGRAL TO THE BURNER SKID; REMOTE RACK MOUNTED FUEL MANIFOLDS ARE OPTIONAL.

Y6967 (NOT TO SCALE)

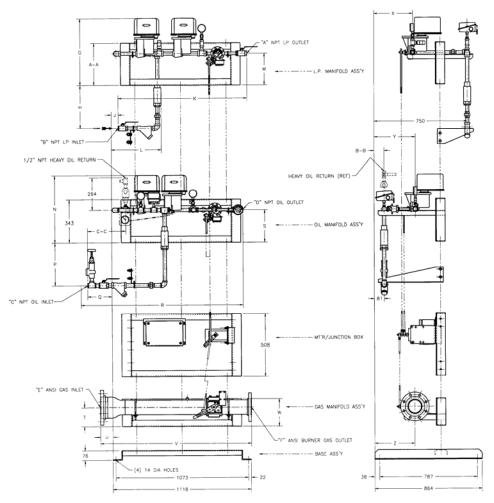
١,	ODEL NO.	Α	В	С	D	E	F	G	Н	J	K	L	М	N	P
Г	ESII-75	7/4	3/4	3/4		-		21 1/4	13 9/16	2 3/16	40 7/8	15 3/4	10 1/8		13 9/16
	ESII-100	3/4	1	1		_ °	-	26 1/4	13 7/16	-4 3/8	47	11	15 1/8		13 7/16
	ESII-125				1										
	ESII-150	1	1 1/4	1 1/4	'	8	6	30 15/16	13 3/16	26 11/16	20 3/16	47 7/16	15 7/16	25 13/16	13 1/4
	ESII-175		, .	, .			_	,	,		,	,			'
L	ESII-200										L		l		

MODEL NO.	Q	R	S	Т	U	٧	W	X	Υ	Z	A-A	В-В	C-C
ESII-75	7 11/16	49 3/4	10 1/4	c	-4	48	8 5/8	12 3/8		12 13/16	13 1/2	13 1/8	12 1/8
ESII-100	-1 1/4	40 7/16			-4	40	0 3/0	12 3/0		12 10/10			7 13/16
ESII-125									13 1/8				
ESII-150	-1	40 11/16	10 5/16	9 7/8	-5/8	44 5/8	9 5/8	13	10 1,0	12 3/4	18 1/2	3 5/32	8 1/16
ESII-175	-1 40 11/16		,-	-, -	,	, .			,				
ESII-200													

(Metric Dimensions on Reverse Side)

METRIC DIMENSIONS

$\textbf{ECO-STARII}^{\text{TM}}$ OPTIONAL RACK MOUNTED FUEL MANIFOLD **ESII-75 - ESII-200**



NOTES:

Y6967 METRIC (NOT TO SCALE)

- 1. DIMENSIONS ARE IN MM.
- AMY COMBINATION OF FUEL MODULES CAN BE SUPPLIED W/BASE AND MOTOR/JUNCTION BOX AS SPECIFIED ON ORDER.
 SSII-75 TO ESII-200 UTILIZE FUEL MANIFOLDS THAT ARE INTEGRAL TO THE BURNER SKID; REMOTE RACK MOUNTED FUEL MANIFOLDS ARE OPTIONAL.

MODEL NO.	Α	В	С	D	E	F	G	Н	J	K	L	М	N	Р
ESII-75		3/4	3/4		_	· .	565	344	56	1038	400	257	540	344
ESII-100	3/4	1	1	i	6	4	667	341	-111	1194	279	384		341
ESII-125	-													
ESII-150	١.	/4	1 1/4	' '		6	786	335	678	513	1205	392	656	337
ESII-175	1 1 1/4 1 1/4 8 6	/00	333	070	313	1203	332		007					
ESII-200	1							1				1		

MODEL NO.	Q	R	S	Т	U	٧	W	Х	Y	Z	A-A	В-В	C-C
ESII-75	195	1264	260	152	-102	1219	219	314	333	325	343	333	308
ESII-100	-32	1027	262								470	80	198
ESII-125	-25	1033		251	-16	1133	244	330		324			205
ESII-150													
ESII-175													
ESII-200													