



LHE

Oil Line Heater - Electric Type

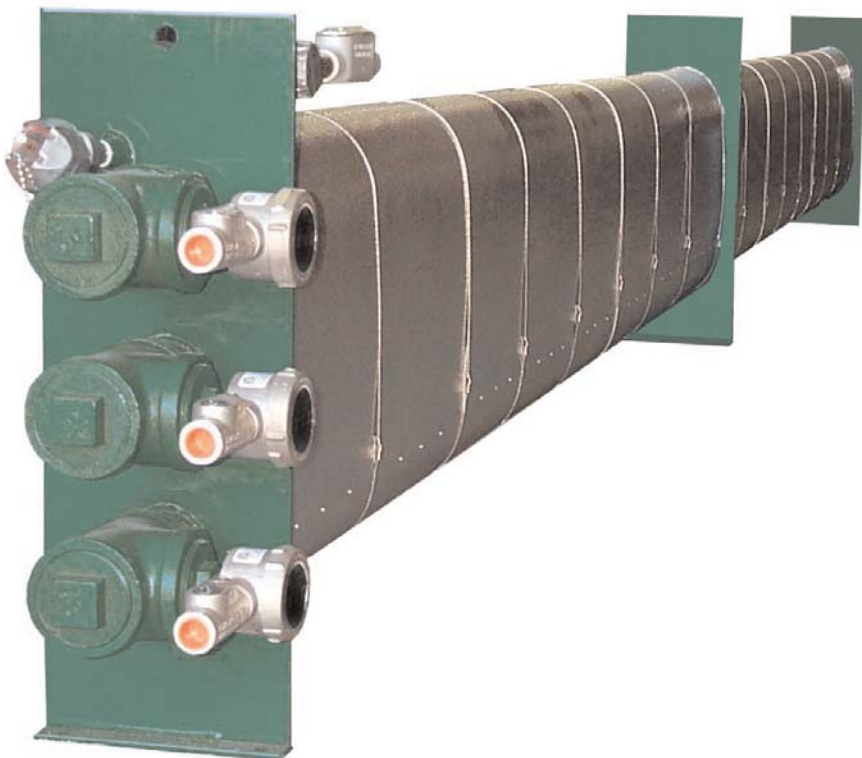


Features

- Precise digital temperature control
- Low watt density design
- Rugged construction
- Removable heat exchanger tubes for ease of cleaning
- Removable heating elements
- Oil flow switch
- UL listed control panel
- Minimal field wiring

Benefits

- Five year heating element warranty
- Uniform heat transfer
- Reduced coking and maintenance downtime
- Long service life
- Safe operation with control panel and oil flow switch



The Hauck LHE Electric Oil Line Heater is designed to supply the heat necessary to lower fuel oil viscosity to that required at the burner for proper atomization. This usually involves a change from a nominal pumping viscosity of 2000 SSU ($4.3 \times 10^{-4} \text{ m}^2/\text{sec}$) to the atomizing viscosity of 90 SSU ($1.8 \times 10^{-5} \text{ m}^2/\text{sec}$). The heater's unique design allows for heat exchanger tubes to be easily removed to facilitate cleaning of any coking buildup. Hauck's LHEs are available in a wide range of heating inputs from 10 to 250 kW to meet specific application requirements.

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COMPANY**

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www.hauckburner.com

Combustion Excellence Since 1888

LHE-1



Hauck Manufacturing Company

LHE

OIL LINE HEATER - ELECTRIC TYPE



ADVANTAGES OF THE LHE

Uniform Heat Transfer

Removable Heat Exchanger Tubes and Heating Elements

Reduced Coking

Rugged Construction for Long Service Life

To avoid heat loss from oil in transit to the burners and for quicker burner light off, an oil line heater should be located as close as possible to the burners. In some instances, oil supply and burners are not centrally located, making the maintenance of constant oil temperatures a problem. Through the use of Hauck LHE line heaters, the travel distance of the heated oil can be reduced to eliminate undesirable oil temperature variations caused by heat loss and oil flow rate variations in long oil lines.

Uniform Heat Transfer

The LHE's heating elements provide uniform heat transfer and come with a five year warranty. These elements are ETL listed and utilize a low watt density design for longer service life and less coking. Hauck heaters are designed to provide a heat input of approximately 9 W/in² (1.4 W/cm²) of heating surface.

Automatic Temperature Control

Each line heater unit is equipped with a digital electronic temperature controller. After the controller is set at the desired temperature, the line heater automatically controls the temperature of the oil, thus eliminating overheating or underheating. The oil temperature is measured by a thermocouple located inside the discharge end of the heater.



LHE UL Listed Control Panel

Removable Heat Exchanger Tubes and Heating Elements

The LHE's low watt density heat input permits the heating surface to operate at lower temperatures and thereby reduces coking and the frequency of cleaning and servicing. The heat exchanger tubes can be easily removed via the grooved coupling for cleaning of any coking buildup. If required, the heating elements can also be easily removed and replaced.



Grooved Couplings for Easy Removal
and Cleaning of Heat Exchanger Tubes

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LHE OIL LINE HEATER ELECTRIC TYPE

Model Number	KW Rating	Oil Temperature Rise (°F)									
		40	50	60	70	80	90	100	110	120	130
		Oil Capacity (gph)									
LHE 10C	10	174	139	116	100	87	77	70	63	58	54
LHE 15C	15	262	209	174	149	131	116	105	95	87	80
LHE 20C	20	349	279	232	199	174	155	139	127	116	107
LHE 25C	25	436	349	291	249	218	194	174	158	145	134
LHE 30C	30	523	418	349	299	262	232	209	190	174	161
LHE 40C	40	697	558	465	398	349	310	279	254	232	215
LHE 50C	50	872	697	581	498	436	387	349	317	291	268
LHE 60C	60	1046	837	697	598	523	465	418	380	349	322
LHE 70C	70	1220	976	814	697	610	542	488	444	407	375
LHE 75C	75	1308	1046	872	747	654	581	523	475	436	402
LHE 80C	80	1395	1116	930	797	697	620	558	507	465	429
LHE 90C	90	1569	1255	1046	897	785	697	628	571	523	483
LHE 100C	100	1743	1395	1162	996	872	775	697	634	581	536
LHE 110C	110	1918	1534	1278	1096	959	852	767	697	639	590
LHE 125C	125	2179	1743	1453	1245	1090	969	872	792	726	671
LHE 150C	150	2615	2092	1743	1494	1308	1162	1046	951	872	805
LHE 175C	175	3051	2441	2034	1743	1525	1356	1220	1109	1017	939
LHE 200C	200	3487	2789	2325	1992	1743	1550	1395	1268	1162	1073
LHE 225C	225	3923	3138	2615	2241	1961	1743	1569	1426	1308	1207
LHE 250C	250	4358	3487	2906	2491	2179	1937	1743	1585	1453	1341

NOTES:

1. Oil Capacities based on No. 6 fuel oil exiting the oil line heater at a viscosity of 90 SSU and includes a 20% safety factor.
2. Maximum inlet pressure is **100 psig**.
3. Minimum oil flow rate to actuate flow switch for LHE 10-25 is adjustable from 3 to 45 gph; for LHE 30 is 90 gph; for LHE 40-50 is 120 gph; LHE 60-125 is 180 gph; for LHE 150-250 is 360 gph.
4. Standard supply voltage is 480V/3Ph/60Hz unless otherwise specified on order.

SELECTION

When choosing the proper oil line heater for a particular application, two basic criteria must be used; the required rise in oil temperature and the maximum oil capacity. The required rise in oil temperature is the difference between the temperature of the oil at the heater inlet and temperature to which the oil must be heated to achieve the viscosity for proper atomization. Typical atomizing temperature for No. 4 and No. 6 fuel oil are 160°F and 250°F, respectively. For ease in integrating Hauck oil line heater equipment, all Hauck literature assumes an atomizing viscosity of 90 SSU. Since the temperature rise can vary even between oil shipments of the same grade, Hauck recommends the use of a Hauck Viscometer to determine the exact required temperature rise for the oil to be burned.

TO SELECT AN OIL LINE HEATER:

1. Read horizontally across the top of the table, locate the column representing the required oil temperature rise.
2. Read vertically down this column until you reach a capacity which equals or just exceeds your computed maximum capacity.
3. Read horizontally to the left to determine the model number of the oil line heater which meets your requirements.
4. Ensure that the oil supply system is adequately sized to satisfy the minimum oil flow rate requirement to actuate the flow switch at low fire; if inadequate, consult Hauck for alternate flow switch recommendation.

(See Reverse Side For Metric Capacities)

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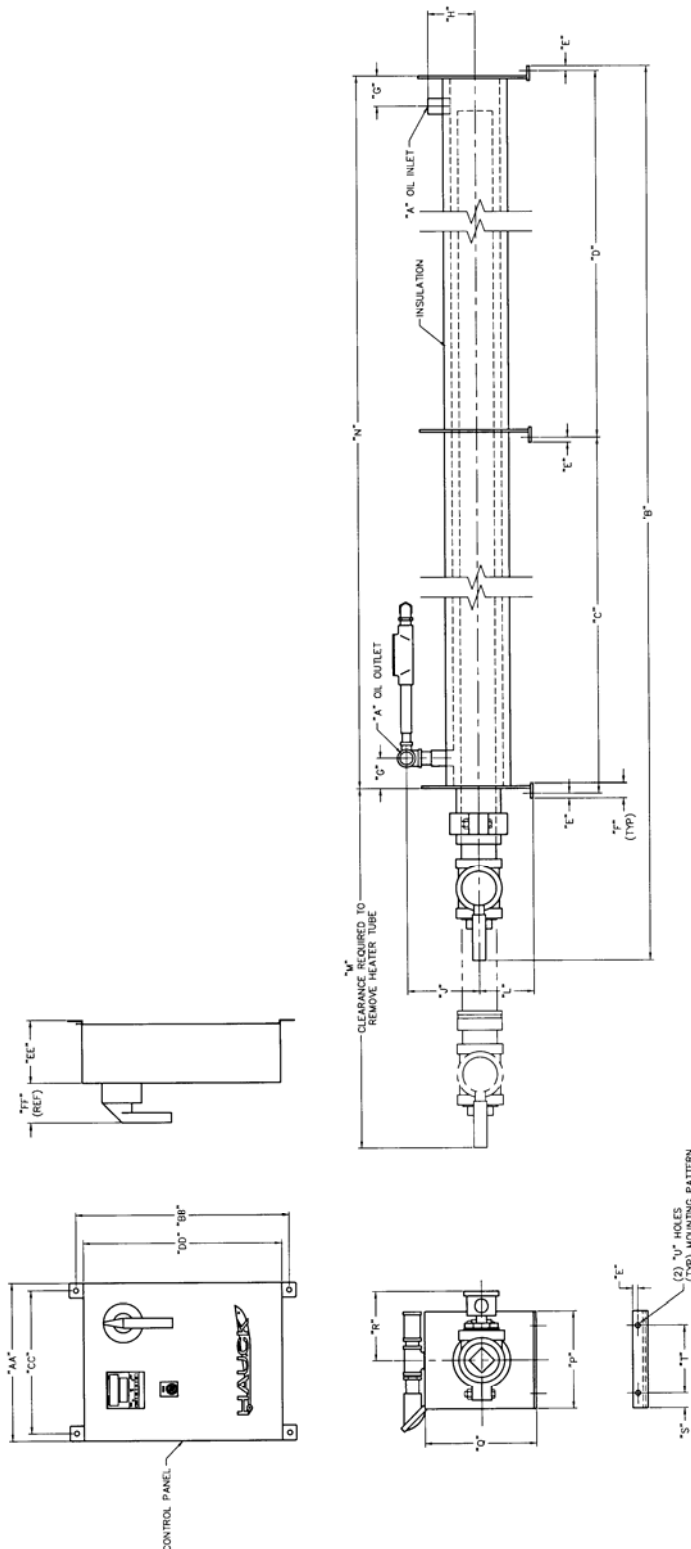
LHE-2

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ventas@morterahauck.com

LHE OIL LINE HEATER ELECTRIC TYPE

LHE 10C THROUGH LHE 25C



MODEL NUMBER	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U
LHE 10C	1 NPT [DN 25]	121 3/4 [3092]	51 [1295]	52 [1321]	1/2 [13]	1 1/2 [38]	3 [76]	4 3/4 [121]	7 1/4 [184]	N/A	5 1/2 [140]	125 [3175]	102 1/2 [2604]	10 [254]	11 1/4 [286]	7 [178]	1 1/2 [38]	7 [178]	1/2 [13]
LHE 15C	1 NPT [DN 25]	169 3/4 [4302]	75 [1905]	76 [1930]	1/2 [13]	1 1/2 [38]	3 [76]	4 3/4 [121]	7 1/4 [184]	N/A	5 1/2 [140]	173 [4394]	150 1/2 [3823]	10 [254]	11 1/4 [286]	7 [178]	1 1/2 [38]	7 [178]	1/2 [13]
LHE 20C	1 NPT [DN 25]	217 3/4 [5531]	99 [2515]	100 [2540]	1/2 [13]	1 1/2 [38]	3 [76]	4 3/4 [121]	7 1/4 [184]	N/A	5 1/2 [140]	221 [5633]	198 1/2 [5042]	10 [254]	11 1/4 [286]	7 [178]	1 1/2 [38]	7 [178]	1/2 [13]
LHE 25C	1 NPT [DN 25]	265 3/4 [6750]	122 [3124]	124 [3150]	1/2 [13]	1 1/2 [38]	3 [76]	4 3/4 [121]	7 1/4 [184]	N/A	5 1/2 [140]	269 [6833]	246 1/2 [6261]	10 [254]	11 1/4 [286]	7 [178]	1 1/2 [38]	7 [178]	1/2 [13]

MODEL NUMBER	AA	BB	CC	DD	EE	FF
LHE 10C	16 [406]	21 1/2 [546]	14 1/2 [368]	20 [508]	7 1/4 [184]	2 [51]
LHE 15C	16 [406]	21 1/2 [546]	14 1/2 [368]	20 [508]	7 1/4 [184]	2 [51]
LHE 20C	16 [406]	21 1/2 [546]	14 1/2 [368]	20 [508]	7 1/4 [184]	2 [51]
LHE 25C	16 [406]	21 1/2 [546]	14 1/2 [368]	20 [508]	7 1/4 [184]	2 [51]

NOTE:
1. DIMENSIONS ARE IN INCHES [MM]. PIPE CONNECTIONS ARE IN NPT [DN].
2. CONTROL PANEL IS SHIPPED LOOSE.

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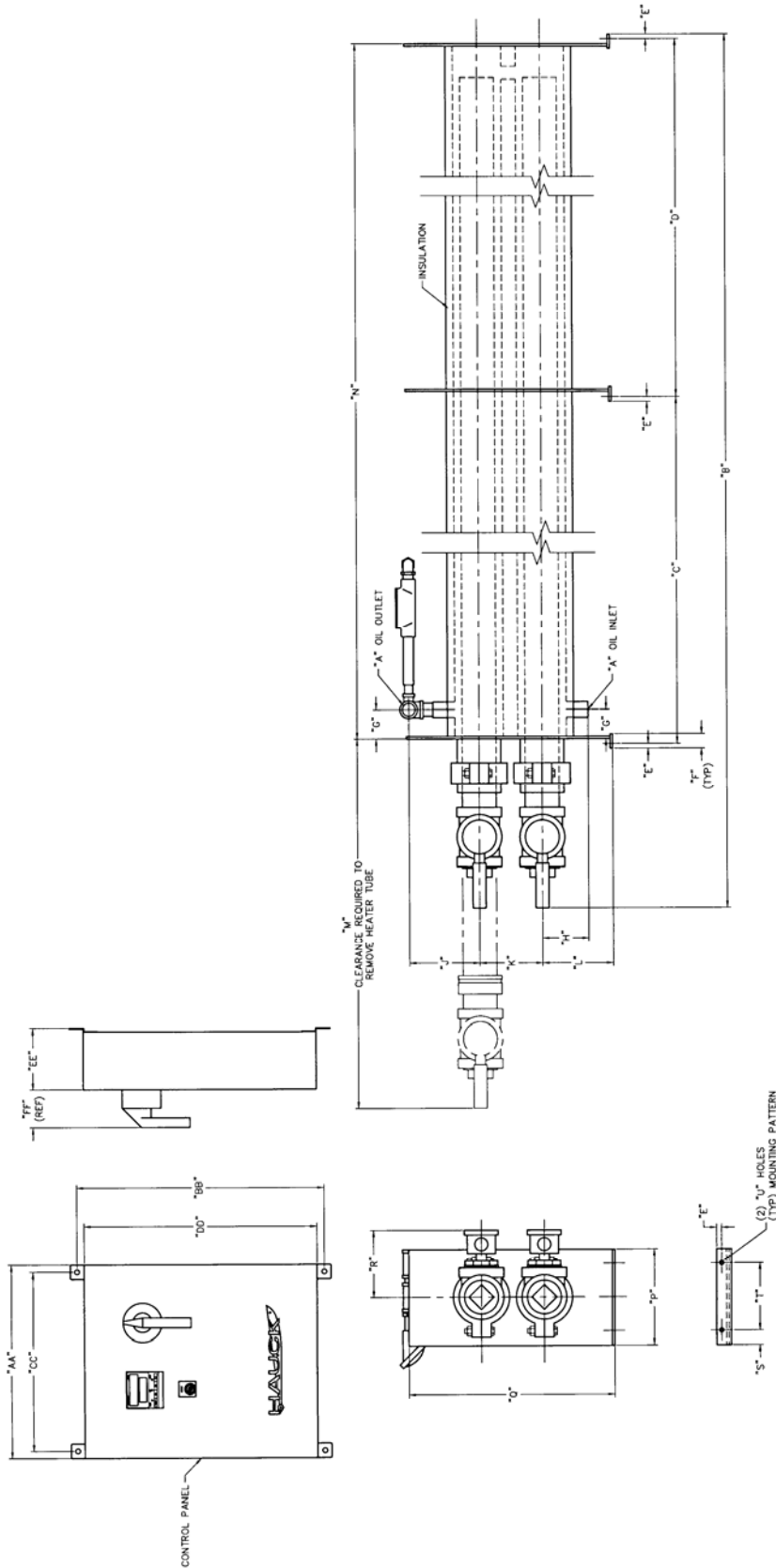
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MORTERA Y COMPAÑÍA, S. A DE C. V.

LHE OIL LINE HEATER ELECTRIC TYPE

LHE 30C THROUGH LHE 50C



MODEL NUMBER	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U
LHE 30C	1 NPT [DN 25]	169 3/4 [4312]	75 [1905]	76 [1930]	1/2 [13]	1 1/2 [38]	3 [76]	4 3/4 [121]	7 1/4 [184]	6 1/2 [165]	7 1/4 [184]	173 [4394]	150 1/2 [3823]	10 [254]	22 1/4 [565]	7 [178]	1 1/2 [38]	7 [178]	1/2 [13]
LHE 40C	1 NPT [DN 25]	217 3/4 [5531]	99 [2515]	100 [2540]	1/2 [13]	1 1/2 [38]	3 [76]	4 3/4 [121]	7 1/4 [184]	6 1/2 [165]	7 1/4 [184]	221 [5613]	198 1/2 [5042]	10 [254]	22 1/4 [565]	7 [178]	1 1/2 [38]	7 [178]	1/2 [13]
LHE 50C	1 NPT [DN 25]	265 3/4 [6750]	123 [3124]	124 [3150]	1/2 [13]	1 1/2 [38]	3 [76]	4 3/4 [121]	7 1/4 [184]	6 1/2 [165]	7 1/4 [184]	269 [6833]	246 1/2 [6261]	10 [254]	22 1/4 [565]	7 [178]	1 1/2 [38]	7 [178]	1/2 [13]

MODEL NUMBER	AA	BB	CC	DD	EE	FF
LHE 30C	20 [508]	25 1/2 [678]	18 1/2 [470]	24 [610]	7 1/4 [184]	2 [51]
LHE 40C	20 [508]	25 1/2 [678]	18 1/2 [470]	24 [610]	7 1/4 [184]	2 [51]
LHE 50C	20 [508]	25 1/2 [678]	18 1/2 [470]	24 [610]	7 1/4 [184]	2 [51]

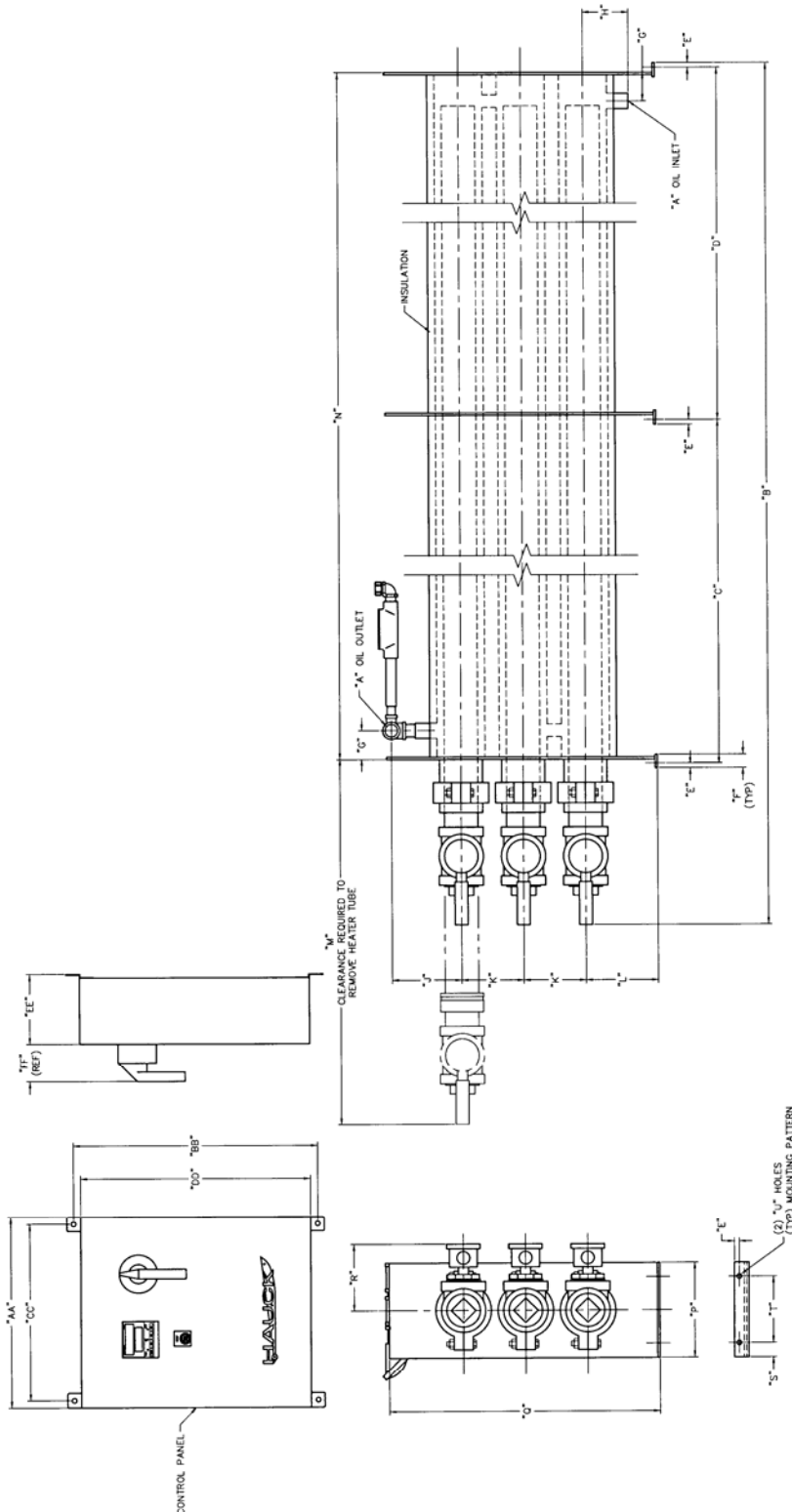
NOTE:
1. DIMENSIONS ARE IN INCHES [MM]. PIPE CONNECTIONS ARE IN NPT [DN].
2. CONTROL PANEL IS SHIPPED LOOSE.

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LHE OIL LINE HEATER ELECTRIC TYPE

LHE 60C THROUGH LHE 75C



MODEL NUMBER	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U
LHE 60C	1 NPT [DN 25]	217 3/4 [5531]	99 [2515]	100 [2540]	1/2 [13]	1 1/2 [38]	3 [76]	4 3/4 [121]	7 1/4 [184]	6 1/2 [165]	7 1/2 [191]	221 [5613]	198 1/2 [5042]	10 [254]	28 1/4 [718]	7 [178]	1 1/2 [38]	7 [178]	1/2 [13]
LHE 70C	1 NPT [DN 25]	253 3/4 [6445]	117 [2972]	118 [2997]	1/2 [13]	1 1/2 [38]	3 [76]	4 3/4 [121]	7 1/4 [184]	6 1/2 [165]	7 1/2 [191]	257 [6528]	234 1/2 [5956]	10 [254]	28 1/4 [718]	7 [178]	1 1/2 [38]	7 [178]	1/2 [13]
LHE 75C	1 NPT [DN 25]	265 3/4 [6750]	123 [3124]	124 [3150]	1/2 [13]	1 1/2 [38]	3 [76]	4 3/4 [121]	7 1/4 [184]	6 1/2 [165]	7 1/2 [191]	269 [6833]	246 1/2 [6261]	10 [254]	28 1/4 [718]	7 [178]	1 1/2 [38]	7 [178]	1/2 [13]

MODEL NUMBER	AA	BB	CC	DD	EE	FF
LHE 60C	20 [508]	25 1/2 [678]	13 1/2 [470]	24 [610]	7 1/4 [184]	2 [51]
LHE 70C	20 [508]	25 1/2 [678]	13 1/2 [470]	24 [610]	7 1/4 [184]	2 [51]
LHE 75C	20 [508]	25 1/2 [678]	13 1/2 [470]	24 [610]	7 1/4 [184]	2 [51]

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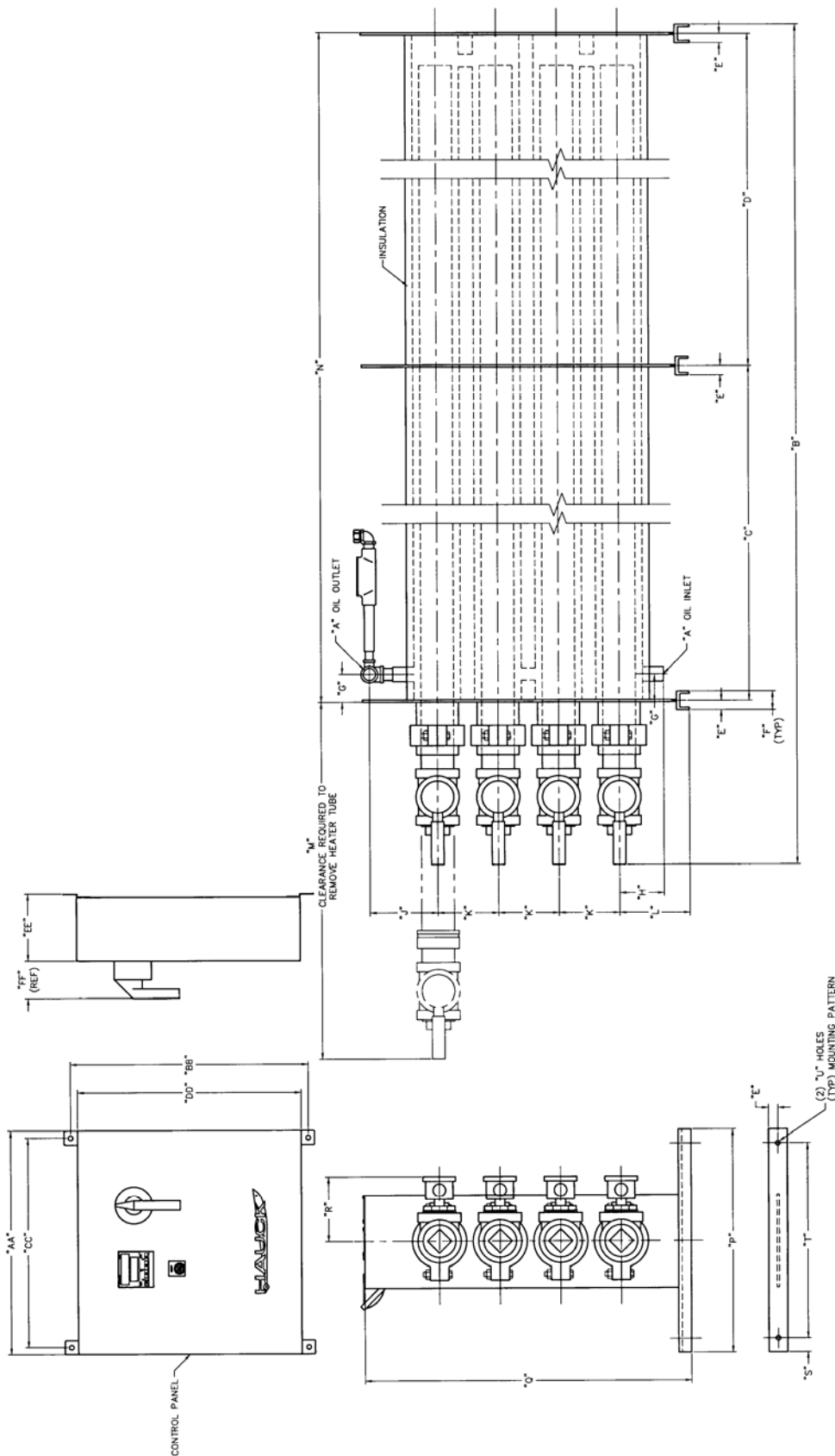
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MORTERA Y COMPAÑÍA, S. A. DE C. V.

LHE OIL LINE HEATER ELECTRIC TYPE

LHE 80C THROUGH LHE 100C



MODEL NUMBER	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U
LHE 80C	1 NPT [DN 25]	217 3/4 [5531]	99 [2515]	99 [2515]	1 [25]	2 [51]	3 [76]	4 3/4 [121]	8 [203]	6 1/2 [165]	7 1/2 [191]	221 [5613]	198 1/2 [5042]	24 [610]	35 [889]	7 [178]	1 1/2 [38]	21 [533]	1/2 [13]
LHE 90C	1 NPT [DN 25]	241 3/4 [6140]	111 [2819]	111 [2819]	1 [25]	2 [51]	3 [76]	4 3/4 [121]	8 [203]	6 1/2 [165]	7 1/2 [191]	245 [6223]	222 1/2 [5652]	24 [610]	35 [889]	7 [178]	1 1/2 [38]	21 [533]	1/2 [13]
LHE 100C	1 NPT [DN 25]	265 3/4 [6750]	123 [3124]	123 [3124]	1 [25]	2 [51]	3 [76]	4 3/4 [121]	8 [203]	6 1/2 [165]	7 1/2 [191]	269 [6833]	246 1/2 [6261]	24 [610]	35 [889]	7 [178]	1 1/2 [38]	21 [533]	1/2 [13]

NOTE:

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2. CONTROL PANEL IS SHIPPED LOOSE.

MODEL NUMBER	AA	BB	CC	DD	EE	FF
LHE 80C	24 [610]	25 1/2 [678]	22 1/2 [572]	24 [610]	7 1/4 [184]	2 [51]
LHE 90C	24 [610]	25 1/2 [678]	22 1/2 [572]	24 [610]	7 1/4 [184]	2 [51]
LHE 100C	24 [610]	25 1/2 [678]	22 1/2 [572]	24 [610]	7 1/4 [184]	2 [51]

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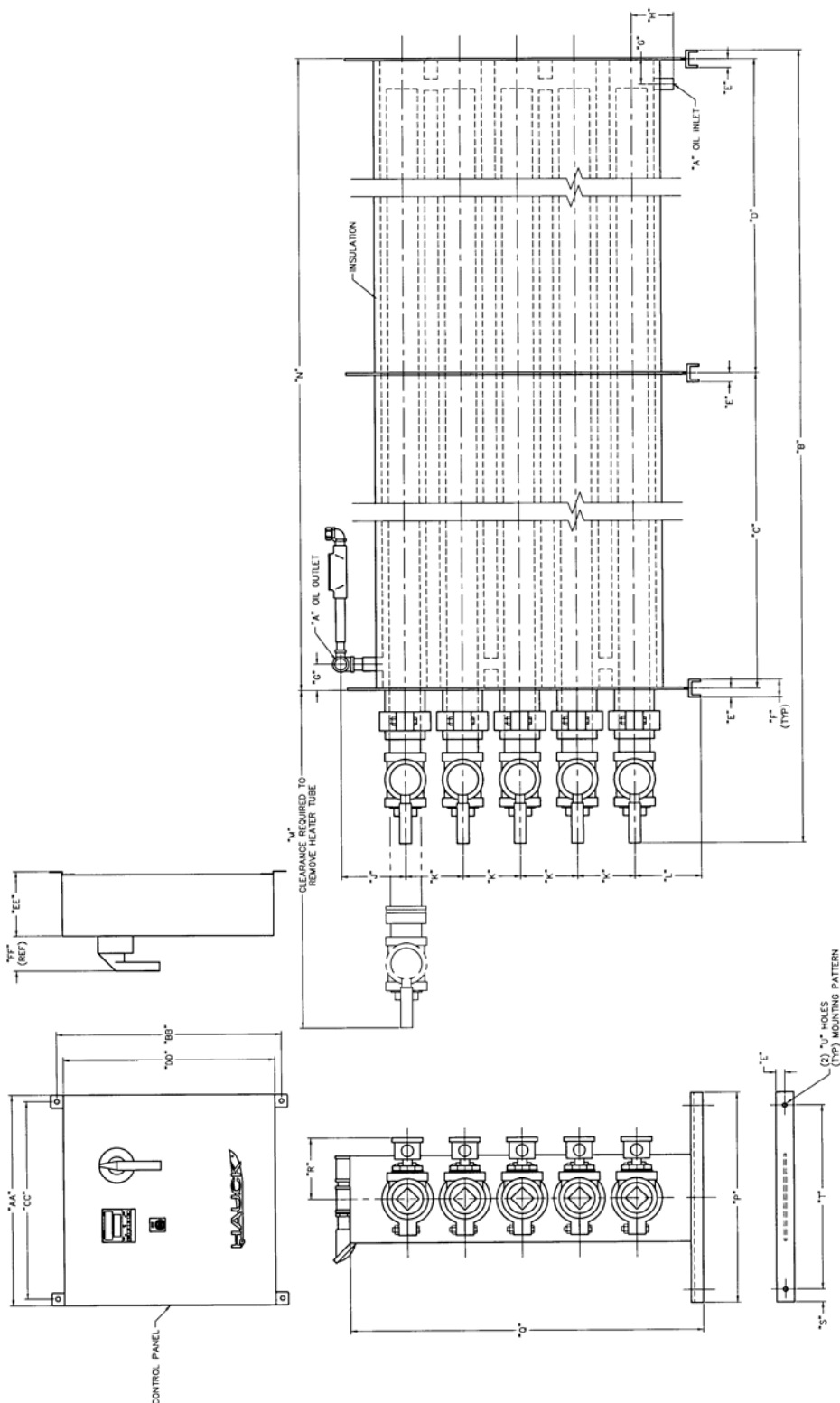


MORTERA Y COMPAÑIA, S. A DE C. V.

DIMENSIONS

LHE OIL LINE HEATER ELECTRIC TYPE

LHE 110C THROUGH LHE 125C



MODEL NUMBER	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U
LHC 100C	1 NPT (ON 25)	241 3/4 (8140)	111 (2819)	111 (2819)	1 (25)	2 (51)	3 (76)	4 3/4 (121)	7 1/4 (184)	6 1/2 (165)	7 1/2 (191)	245 (6232)	222 1/2 (5652)	24 (610)	40 (1016)	7 (178)	1 1/2 (38)	21 (533)	1/2 (13)
100C 100C	1 NPT (ON 25)	241 3/4 (8140)	111 (2819)	111 (2819)	1 (25)	2 (51)	3 (76)	4 3/4 (121)	7 1/4 (184)	6 1/2 (165)	7 1/2 (191)	269 (6833)	246 1/2 (6261)	24 (610)	40 (1016)	7 (178)	1 1/2 (38)	21 (533)	1/2 (13)

MODEL NUMBER	AA	BB	CC	DD	EE	FF
LHE 110C	24 [610]	25 1/2 [678]	22 1/2 [572]	24 [610]	7 1/4 [184]	2 [51]
LHE 198C	34 [850]	36 1/2 [928]	23 1/2 [572]	24 [610]	7 1/4 [184]	2 [51]

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NOTE:
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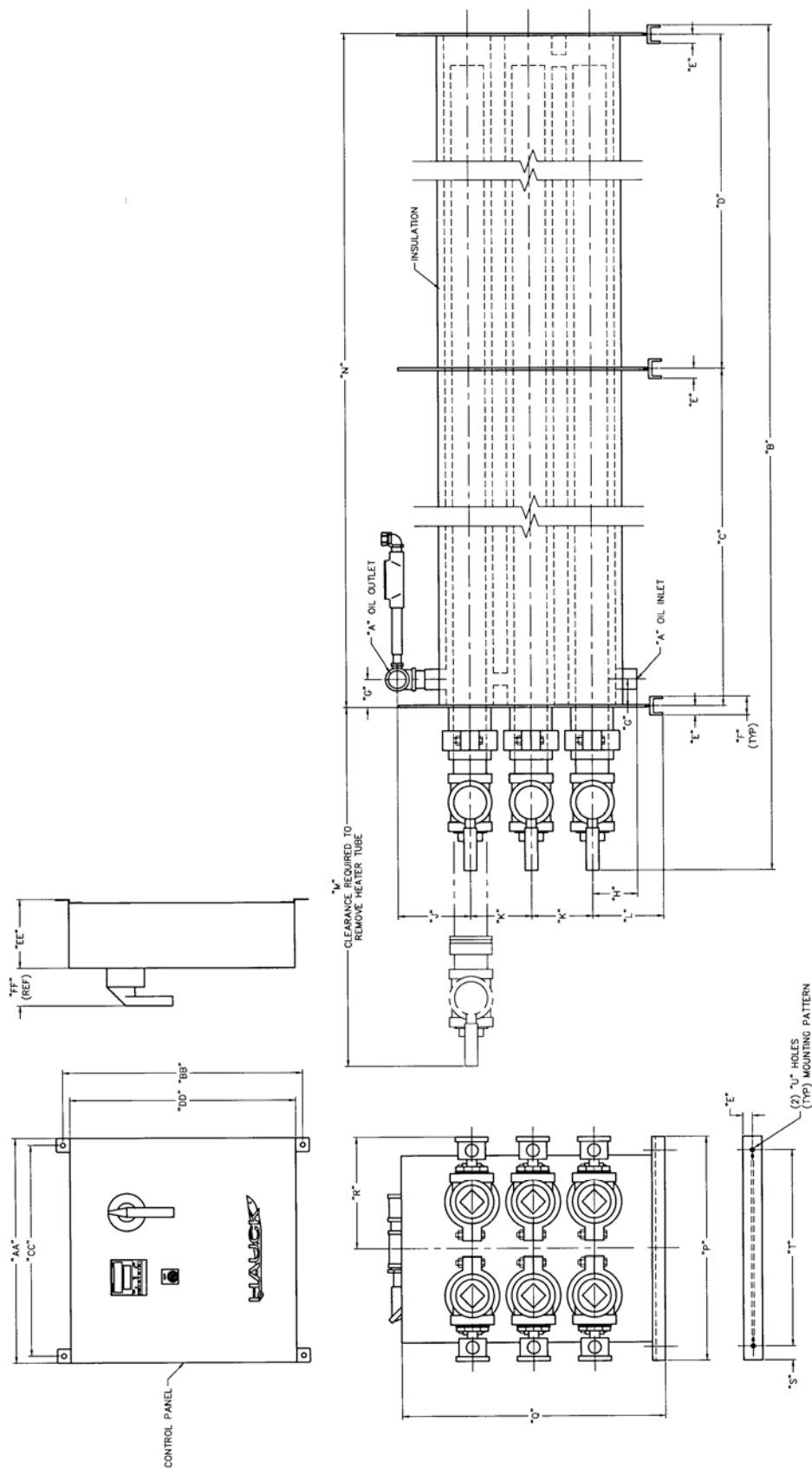
LHE-3.2



MORTERA Y COMPAÑÍA, S. A. DE C. V.

LHE OIL LINE HEATER ELECTRIC TYPE

LHE 150C



MODEL NUMBER	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U
LHE 150C	1 1/2 NPT [DN 40]	265 3/4 [6750]	123 [3124]	123 [3124]	1 [25]	2 [51]	3 [76]	4 3/4 [121]	7 3/4 [197]	6 1/2 [165]	7 1/2 [191]	269 [6833]	246 1/2 [6261]	24 [610]	28 1/2 [711]	12 [306]	1 1/2 [38]	21 [533]	1/2 [13]

MODEL NUMBER	AA	BB	CC	DD	EE	FF
LHE 150C	30 [762]	37 1/2 [943]	28 1/2 [724]	36 [914]	9 1/4 [235]	2 [51]

- NOTE:
1. DIMENSIONS ARE IN INCHES [MM]. PIPE CONNECTIONS ARE IN NPT [DN].
 2. CONTROL PANEL IS SHIPPED LOOSE.

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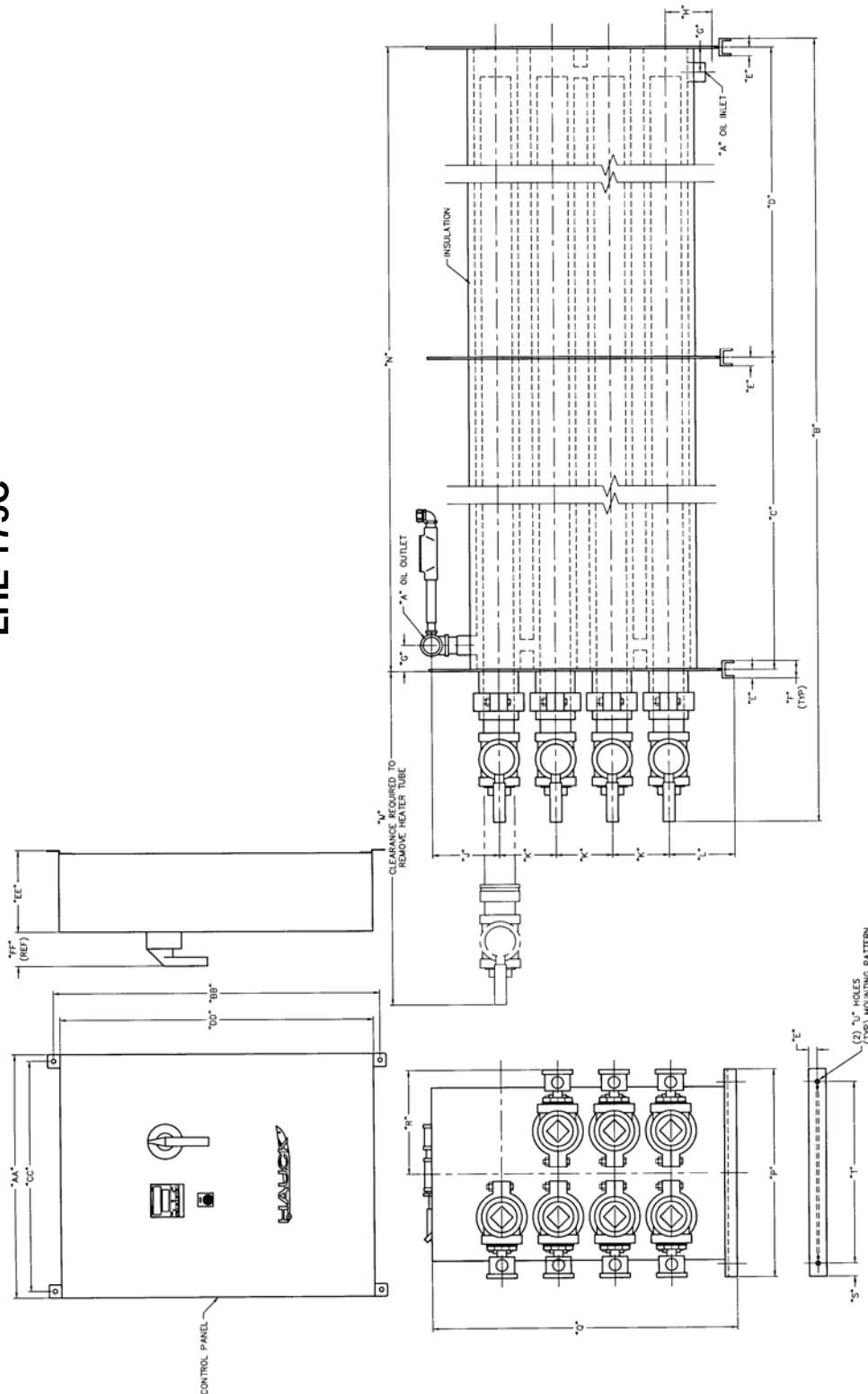


MORTERA Y COMPAÑÍA, S. A. DE C. V.

DIMENSIONS

LHE OIL LINE HEATER ELECTRIC TYPE

LHE 175C



MODEL NUMBER	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U
LHE 175C	1 1/2 NPT [DN 40]	269 3/4 [6750]	123 [3124]	123 [3124]	1 [25]	2 [51]	3 [76]	4 3/4 [121]	7 3/4 [197]	6 1/2 [165]	7 1/2 [197]	269 [6833]	246 1/2 [6261]	24 [610]	35 [889]	12 [305]	1 1/2 [38]	21 [533]	1 1/2 [38]

NOTE:
1. DIMENSIONS ARE IN INCHES [MM]. PIPE CONNECTIONS ARE IN NPT [DN].
2. CONTROL PANEL IS SHIPPED LOOSE.

MODEL NUMBER	AA	BB	CC	DD	EE	FF
LHE 175C	36 [914]	37 1/2 [953]	28 1/2 [724]	36 [914]	9 1/4 [235]	2 [51]

Y7378
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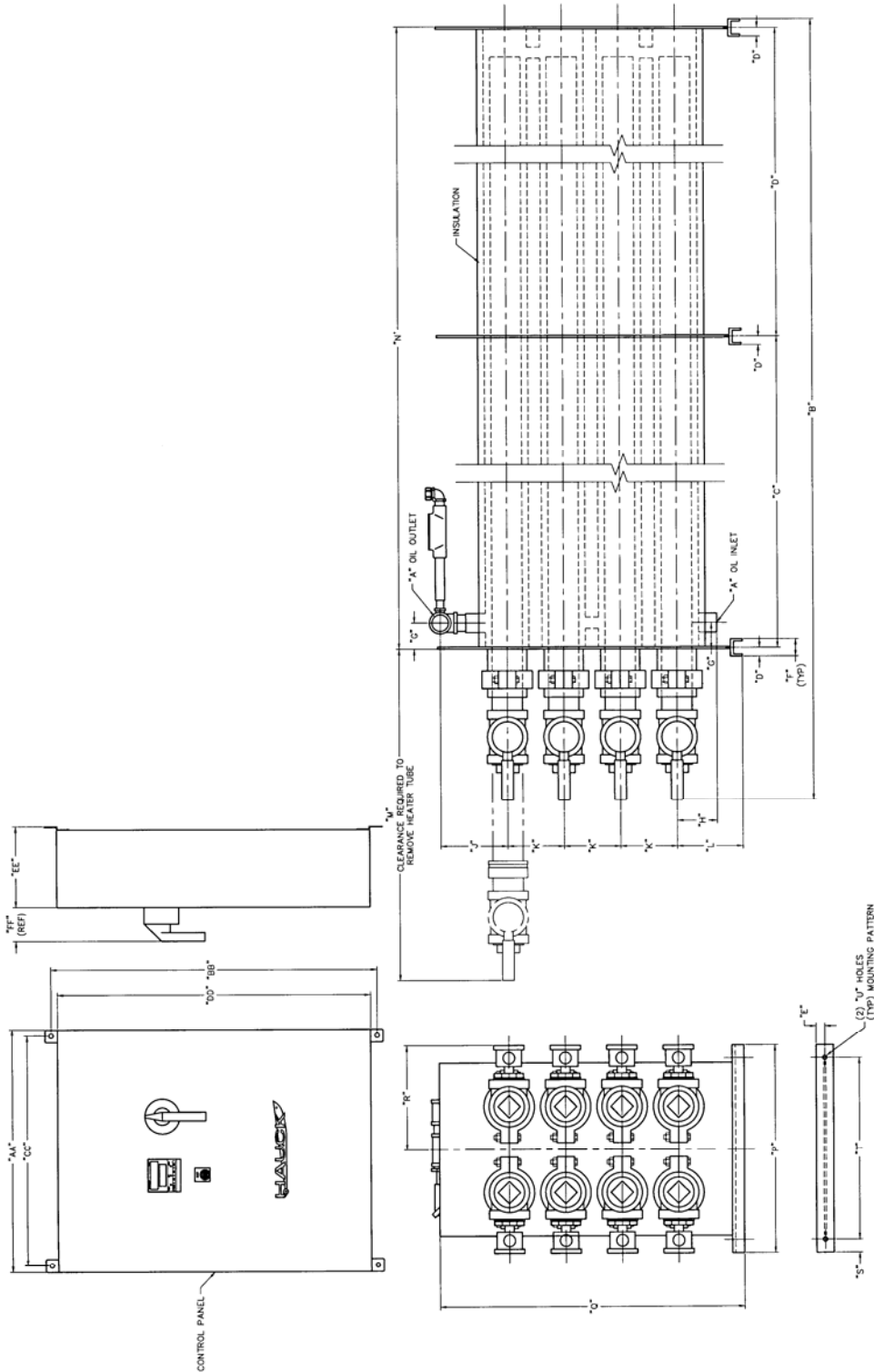
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LHE-3.3

LHE 200C

LHE OIL LINE HEATER ELECTRIC TYPE



MODEL NUMBER	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U
LHE 200C	1 1/2 NPT [DN 40]	265 3/4 [6750]	123 [3124]	123 [3124]	1 [25]	2 [51]	3 [76]	4 3/4 [121]	7 3/4 [197]	6 1/2 [165]	7 1/2 [191]	269 [6833]	246 1/2 [6261]	24 [610]	35 [889]	12 [305]	1 1/2 [38]	21 [533]	1/2 [13]

MODEL NUMBER	AA	BB	CC	DD	EE	FF
LHE 200C	30 [762]	37 1/2 [953]	28 1/2 [724]	36 [914]	9 1/4 [235]	2 [51]

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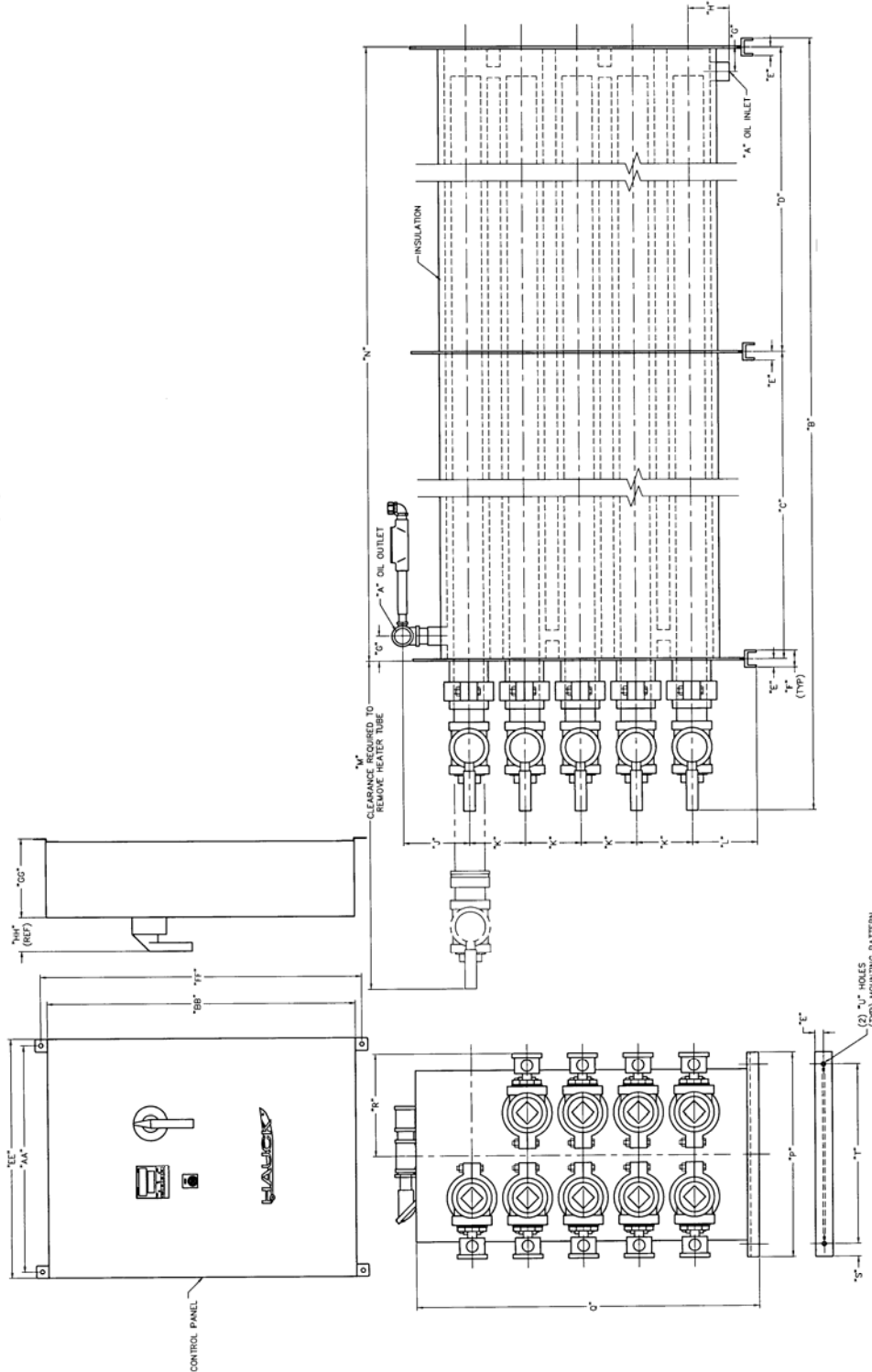


MORTERA Y COMPAÑÍA, S. A. DE C. V.

DIMENSIONS

LHE OIL LINE HEATER ELECTRIC TYPE

LHE 225C



MODEL NUMBER	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U
LHE 225C	1 1/2 NPT [DN 40]	265 3/4 [6750]	123 [3124]	123 [3124]	1 [25]	2 [51]	3 [76]	4 3/4 [121]	7 3/4 [197]	6 1/2 [165]	7 1/2 [191]	269 [6833]	246 1/2 [6261]	24 [610]	40 [1016]	12 [305]	1 1/2 [38]	21 [533]	1 1/2 [38]

NOTE:
1. DIMENSIONS ARE IN INCHES [MM]. PIPE CONNECTIONS ARE IN NPT [DN].
2. CONTROL PANEL IS SHIPPED LOOSE.

MODEL NUMBER	AA	BB	CC	DD	EE	FF
LHE 225C	30 [762]	37 1/2 [953]	28 1/2 [724]	36 [914]	9 1/4 [235]	2 [51]

Y7380
(NOT TO SCALE)

(OVER)

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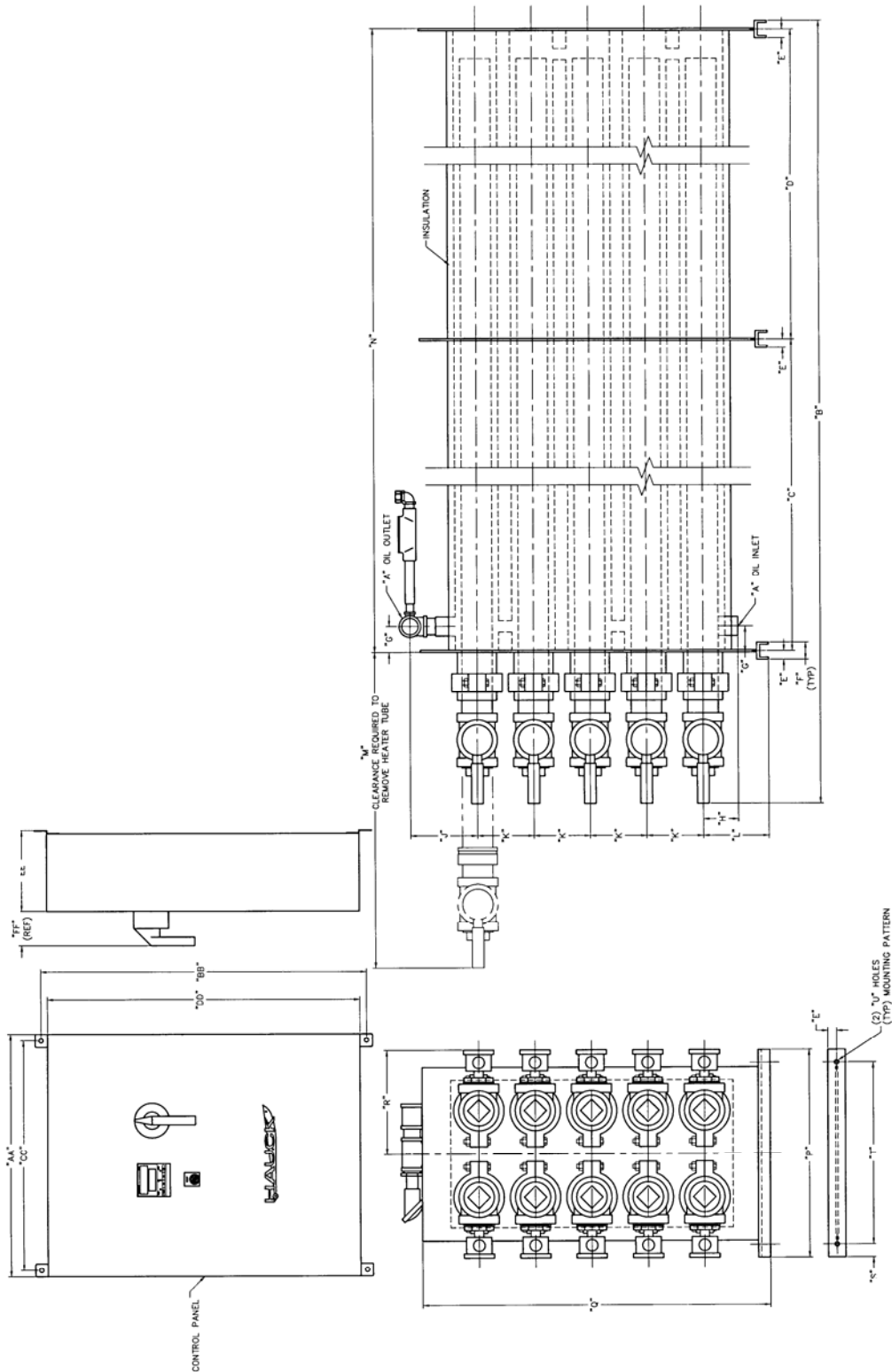
LHE-3.4



MORTERA Y COMPAÑÍA, S. A. DE C. V.

LHE OIL LINE HEATER ELECTRIC TYPE

LHE 250C



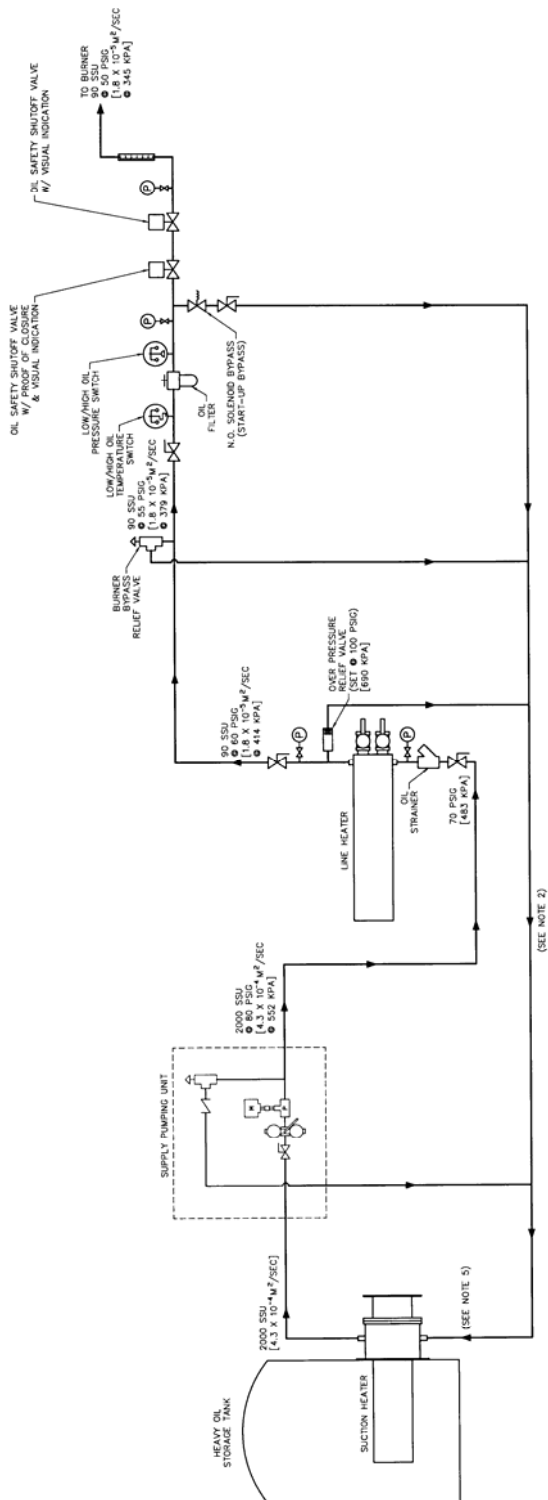
MODEL NUMBER	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U
LHE 250C	1 1/2 NPT [DN 40]	265 3/4 [6750]	123 [3124]	123 [3124]	1 [25]	2 [51]	3 [76]	4 3/4 [121]	7 3/4 [197]	6 1/2 [165]	7 1/2 [191]	269 [6833]	245 1/2 [6266]	24 [610]	40 [1016]	12 [305]	1 1/2 [38]	21 [533]	1 1/2 [13]

NOTE:
1. DIMENSIONS ARE IN INCHES [MM]. PIPE CONNECTIONS ARE IN NPT [DN].
2. CONTROL PANEL IS SHIPPED LOOSE.

MODEL NUMBER	AA	BB	CC	DD	EE	FF
LHE 250C	30 [762]	37 1/2 [953]	28 1/2 [724]	36 [914]	9 1/4 [235]	2 [51]

Y7381
(NOT TO SCALE)

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LHE OIL LINE HEATER
ELECTRIC TYPETYPICAL SINGLE BURNER SYSTEM
HEAVY OIL SUPPLY

NOTES:

1. PIPING SCHEMATIC SHOWS TYPICAL COMPONENTS AND NOMINAL VISCOSITIES AND PRESSURES FOR HEAVY FUEL OIL SUPPLY; ACTUAL REQUIREMENTS ARE DEPENDENT UPON THE SPECIFIC BURNER SYSTEM (CONSULT HAUCK).
2. OIL RETURN LINES TO BE SIZED ACCORDING TO DISTANCE TO PUMP - MINIMUM SIZE EQUAL TO TWO PIPE SIZES LARGER THAN OIL SUPPLY LINE (SEE GL88 FOR MINIMUM LINE SIZES FOR HAUCK SUPPLY PUMPING OIL UNITS).
3. ALL HEAVY FUEL OIL PIPING MUST BE HEAT TRACED (ELECTRIC OR STEAM) AND INSULATED. SELF-REGULATING HEAT TRACING IS RECOMMENDED TO MAINTAIN THE DESIRED TEMPERATURE OF A GIVEN FUEL OIL TO ACHIEVE 90 SSU ($1.8 \times 10^{-3} \text{ m}^2/\text{SEC}$) AT THE BURNER ELECTRICAL HEAT TRACING WITH A NOMINAL RATING OF 12 W/FT (34W/M) COVERED WITH A NOMINAL 2" (50MM) FIBERGLASS TYPE INSULATION IS SUFFICIENT FOR MOST APPLICATIONS.
4. IF USING NO. 6 FUEL OIL AND THE PIPING BETWEEN THE SUPPLY PUMPING UNIT AND THE HEAVY OIL MANIFOLD IS GREATER THAN 50 FT (15M), AN ADDITIONAL BYPASS RELIEF VALVE MAY BE REQUIRED IN THE SUPPLY PIPING TO ACCOMMODATE COLD SYSTEM START UP (CONSULT HAUCK).
5. IF SUCTION HEATER IS NOT UTILIZED, OIL RETURN LINE SHOULD BE PIPED TO THE OIL STORAGE TANK.

Y7514
(NOT TO SCALE)

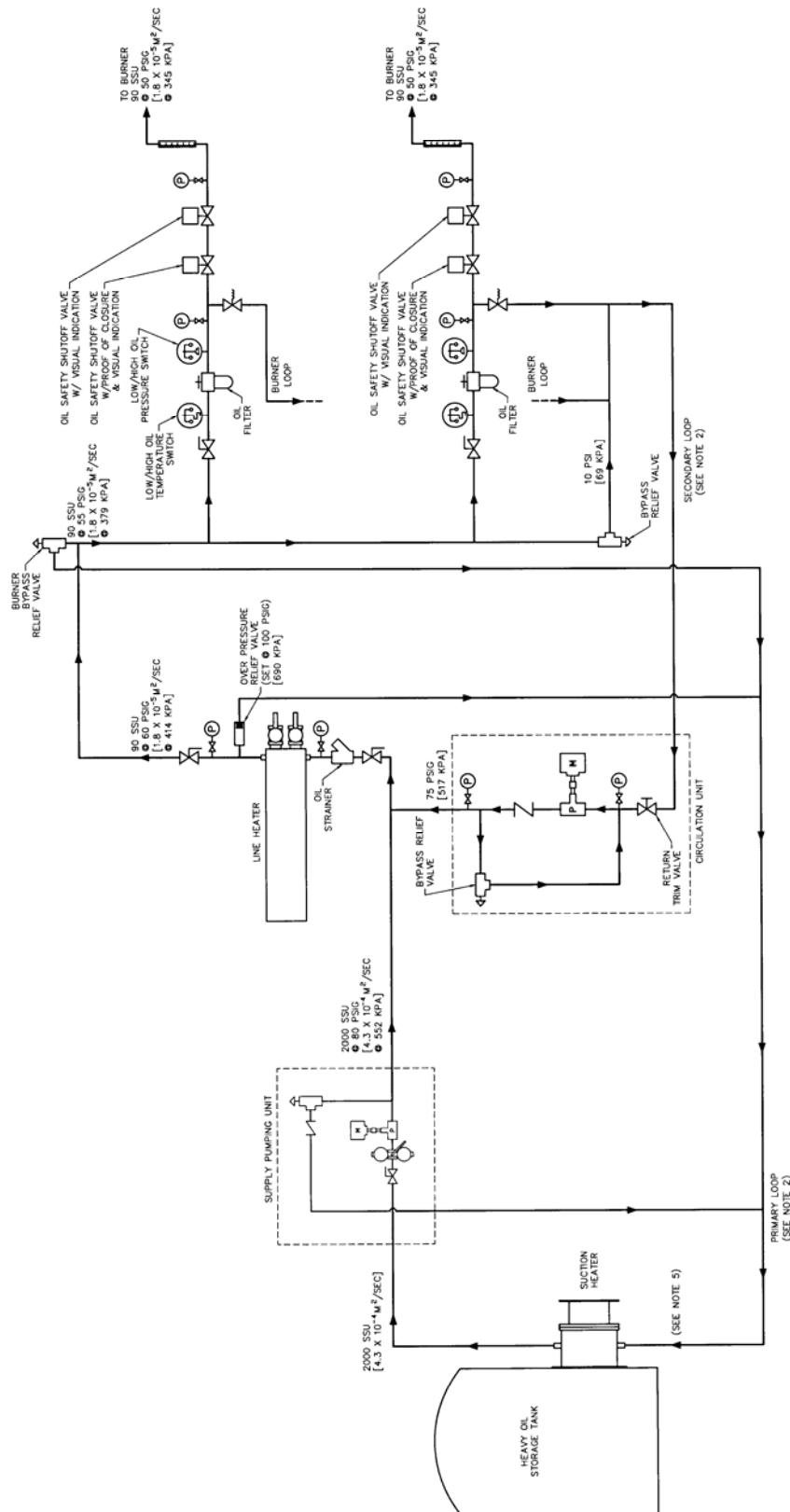
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LHE OIL LINE HEATER ELECTRIC TYPE

TYPICAL MULTIPLE BURNER SYSTEM HEAVY OIL SUPPLY



NOTES:

1. PIPING SCHEMATIC SHOWS TYPICAL COMPONENTS AND NOMINAL VISCOSITIES AND PRESSURES FOR HEAVY FUEL OIL SUPPLY; ACTUAL REQUIREMENTS ARE DEPENDENT UPON THE SPECIFIC BURNER SYSTEM (CONSULT HAUCK).
2. OIL RETURN LINES TO BE SIZED ACCORDING TO DISTANCE TO PUMP – MINIMUM SIZE EQUAL TO TWO PIPE SIZES LARGER THAN OIL SUPPLY LINE (SEE GL88 FOR MINIMUM LINE SIZES FOR HAUCK SUPPLY PUMPING OIL UNITS).
3. FOR ALL HEAVY OIL APPLICATIONS, OIL PIPING MUST BE HEAT TRACED (ELECTRIC OR STEAM) AND INSULATED. SELF-REGULATING HEAT TRACING IS RECOMMENDED TO MAINTAIN THE DESIRED TEMPERATURE OF A GIVEN FUEL OIL TO ACHIEVE 90 SSU ($1.8 \times 10^{-5} \text{ m}^2/\text{sec}$) OR LESS AT THE BURNER. ELECTRICAL HEAT TRACING WITH A NOMINAL RATING OF 12 W/FT (34 W/M) COVERED WITH A NOMINAL 2" (50MM) FIBERGLASS TYPE INSULATION IS SUFFICIENT FOR MOST APPLICATIONS.
4. IF USING NO. 6 FUEL OIL AND THE PIPING BETWEEN THE SUPPLY PUMPING UNIT AND THE HEAVY OIL MANIFOLD IS GREATER THAN 50 FT (15 M), AN ADDITIONAL BYPASS RELIEF VALVE MAY BE REQUIRED IN THE SUPPLY PIPING TO ACCOMMODATE COLD SYSTEM START UP (CONSULT HAUCK).
5. IF SUCTION HEATER IS NOT UTILIZED, OIL RETURN LINE SHOULD BE PIPED TO THE OIL STORAGE TANK.

Y7123
(NOT TO SCALE)