

				Oil T	emper	ature F	Rise (°I	F)			
Model	KW	40	50	60	70	80	90	100	110	120	130
Number	Rating				Oil Ca	pacity	(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:

- 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.
- 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)

METRIC CAPACITIES

LHE OIL LINE HEATER ELECTRIC TYPE

				Oil Te	mpera	ature F	Rise (°C	C)			
Model	KW	22.2	27.8	33.3	38.9	44.5	50.0	55.6	61.1	66.7	72.2
Number	Rating				Oil Ca	pacity	(lph)				
LHE 10C	10	659	526	439	379	329	291	265	238	220	204
LHE 15C	15	992	791	659	564	496	439	397	360	329	303
LHE 20C	20	1321	1056	878	753	659	587	526	481	439	405
LHE 25C	25	1650	1321	1101	942	825	734	659	598	549	507
LHE 30C	30	1980	1582	1321	1132	992	878	791	719	659	609
LHE 40C	40	2638	2112	1760	1506	1321	1173	1056	961	878	814
LHE 50C	50	3301	2638	2199	1885	1650	1465	1321	1120	1101	1014
LHE 60C	60	3959	3206	2638	2263	1980	1760	1582	1438	1321	1219
LHE 70C	70	4618	3694	3081	2638	2309	2051	1847	1681	1540	1419
LHE 75C	75	4951	3959	3301	2827	2475	2199	1980	1798	1650	1522
LHE 80C	80	5280	4224	3520	3017	2638	2347	2112	1919	1760	1624
LHE 90C	90	5939	4750	3959	3395	2971	2638	2377	2161	1980	1828
LHE 100C	100	6597	5280	4398	3770	3301	2933	2638	2400	2199	2029
LHE 110C	110	7260	5806	4837	4148	3630	3225	2903	2638	2419	2233
LHE 125C	125	8248	6597	5500	4712	4126	3668	3301	2998	2748	2540
LHE 150C	150	9898	7918	6597	5655	4951	4398	3959	3600	3301	3047
LHE 175C	175	11550	9239	7699	6597	5772	5132	4618	4198	3849	3554
LHE 200C	200	13200	10560	8800	7540	6597	5867	5280	4799	4398	4061
LHE 225C	225	14850	11880	9898	8482	7422	6597	5939	5397	4951	4569
LHE 250C	250	16500	13200	11000	9428	8248	7332	6597	5999	5500	5076

NOTES:

- 1. Oil Capacities based on No. 6 fuel oil exiting the oil line heater at a viscosity of 1.8x10⁻⁵m²/sec and includes a 20% safety factor.
- 2. Maximum inlet pressure is 690 kPa.
- 3. Minimum oil flow rate to actuate flow switch for LHE 10-25 is adjustable from 11 to 170 lph; for LHE 30 is 340 lph; for LHE 40-50 is 454 lph; LHE 60-125 is 681 lph; for LHE 150-250 is 1362 lph.
- 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 71°C and 121°C, respectively. For ease in integrating Hauck oil line heater equipment, all Hauck literature assumes an atomizing viscosity of 1.8x10⁻⁵m²/sec. 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.

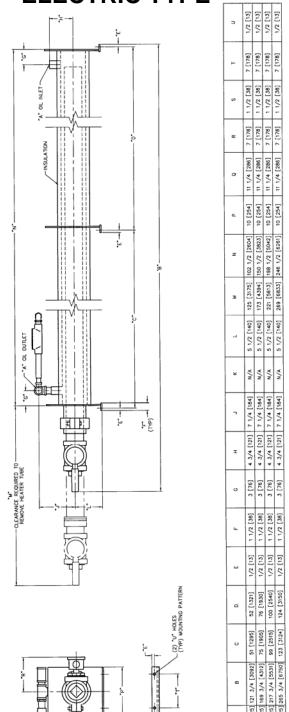
TO SELECT AN OIL LINE HEATER:

- 1. Read horizontally across the top of the table, locate the column representing the required oil temperature rise.
- 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.

Y7372 (NOT TO SCALE)



LHE OIL LINE HEATER **ELECTRIC TYPE**



MODEL NUMBER	¥	88	8	0	3	H
UHE 100	16 [406]	21 1/2 [546]	21 1/2 [546] 14 1/2 [368]	20 [508]	7 1/4 [184]	2 [51]
UHE 15C	16 [406]	21 1/2 [546]	21 1/2 [546] 14 1/2 [368]	20 [508]	7 1/4 [184]	2 [51]
LHE 20C	16 [406]	21 1/2 [546]	21 1/2 [546] 14 1/2 [368]	20 [508]	7 1/4 [184]	2 [51]
LHE 25C	16 [406]	21 1/2 [546]	21 1/2 [546] 14 1/2 [368]	20 [508]	7 1/4 [184]	2 [51]

t	2 [51]	2 [51]	2 [51]	2 [51]	
3	7 1/4 [184]	7 1/4 [184]	7 1/4 [184]	7 1/4 [184]	
00	20 [508]	20 [508]	20 [508]		
8	14 1/2 [368]	14 1/2 [368]	14 1/2 [368]	14 1/2 [368]	
88	21 1/2 [546] 14 1/2 [368]	21 1/2 [546] 14 1/2 [368]	21 1/2 [546] 14 1/2 [368]	21 1/2 [546] 14 1/2 [368]	
¥	16 [406]	16 [406]		16 [406]	
MODEL NUMBER	LHE 100	UHE 150	LHE 20C	LHE 25C	

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

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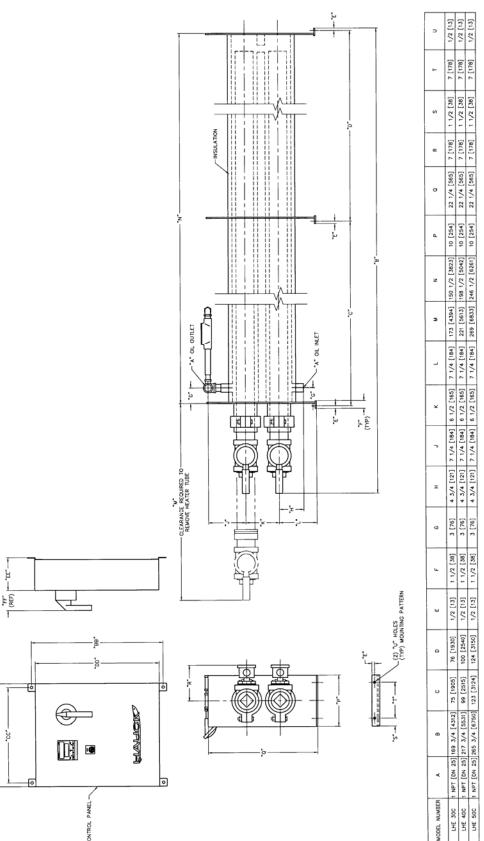
In accordance with Hauck's commitment to Total Quality Improvement, Hauck reserves the right to change the specifications of products without prior notice.

JODEL NUMBER

LHE 10C LHE 15C LHE 20C LHE 25C

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Y7373 (NOT TO SCALE)



LHE 30C THROUGH LHE 50C

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MODEL NUMBER	٧	88	8	8	出	Ł
LHE 30C	20 [508]	25 1/2 [678] 18 1/2 [470]	18 1/2 [470]	24 [610]	7 1/4 [184]	2 [51]
LHE 40C	20 [508]	25 1/2 [678]	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]	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.

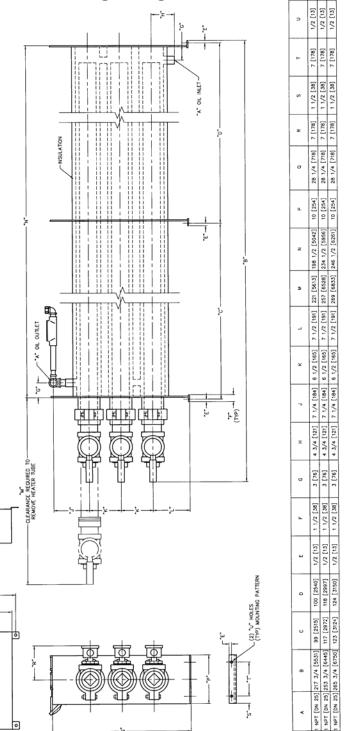


LHE 60C THROUGH LHE 75C

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LHE OIL LINE HEATER ELECTRIC TYPE



MODEL NUMBER	¥	68	8	QQ	EE	Ħ
UHE 60C	20 [508]	25 1/2 [678]	25 1/2 [678] 13 1/2 [470]	24 [610]	7 1/4 [184]	2 [51]
LHE 70C	20 [508]	25 1/2 [678]	25 1/2 [678] 18 1/2 [470]	24 [610]	7 1/4 [184]	2 [51]
LHE 75C	20 [508]	25 1/2 [678]	25 1/2 [678] 18 1/2 [470] 24 [610]	24 [610]	7 1/4 [184]	2 [51]

Y7374 (NOT TO SCALE)

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

MODEL NUMBER LHE 60C LHE 70C LHE 75C

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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LHE 80C THROUGH LHE 100C

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



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MODEL NUMBER LHE 110C

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

(OVER)

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

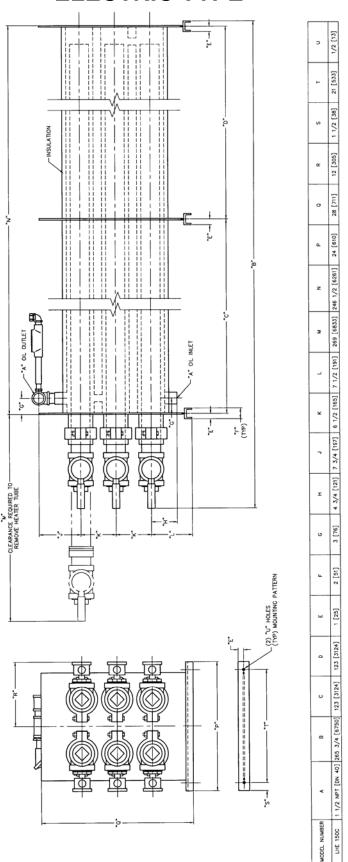
LHE 110C THROUGH LHE 125C

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CONTROL PANEL

LHE OIL LINE HEATER ELECTRIC TYPE



Y7377 (NOT TO SCALE)

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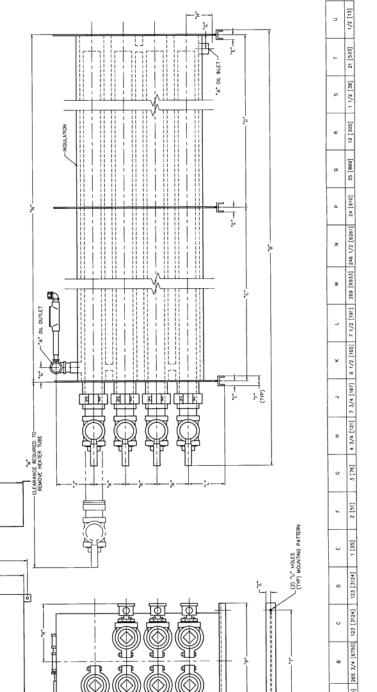
MODEL NUMBER LHE 150C

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







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

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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28 1/2 [724] 8

30 [762]

(OVER)

LHE 175C

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FF (REF.)

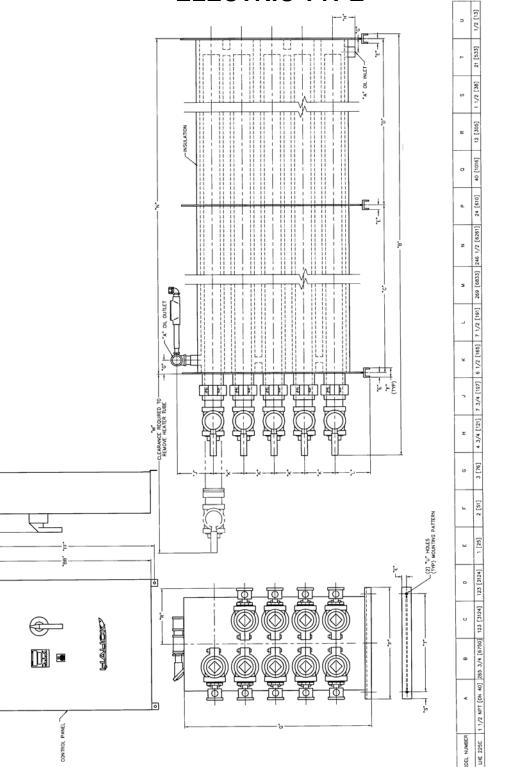
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LHE OIL LINE HEATER ELECTRIC TYPE



Y7380

36 [914] 9 1/4 [235]

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MODEL NUMBER

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

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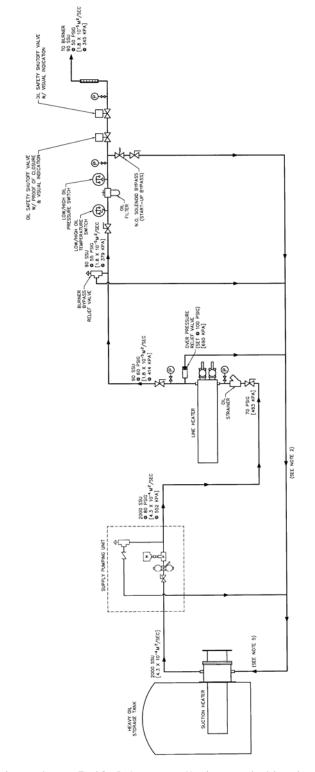
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		265 3/4 [6750
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88	37 1/2 [953]
*	30 [762]
MODEL NUMBER	LHE 250C

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



TYPICAL SINGLE BURNER SYSTEM HEAVY OIL SUPPLY



IF USING NO. 6 FUEL OIL AND THE PIPING BETWEEN THE SUPPLY PUMPING UNIT AND THE HEAVY OIL MANIFOLD IS GREATER THAN 56 FT (15M), AN ADDITIONAL BYPASS RELIEF VALVE MAY BE REQUIRED IN THE SUPPLY PIPING TO ACCOMODATE COLD SYSTEM START UP (CONSULT HAUCK).

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).

PIPING

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RETURN LINES TO BE SIZED ACCORDING TO DISTANCE TO PUMP — IMUM SIZE EQUAL TO TWO PIPE SIZES LARGER THAN OIL SUPPLY LINE E GL88 FOR MINIMUM LINE SIZES FOR HAUCK SUPPLY PUMPING OIL

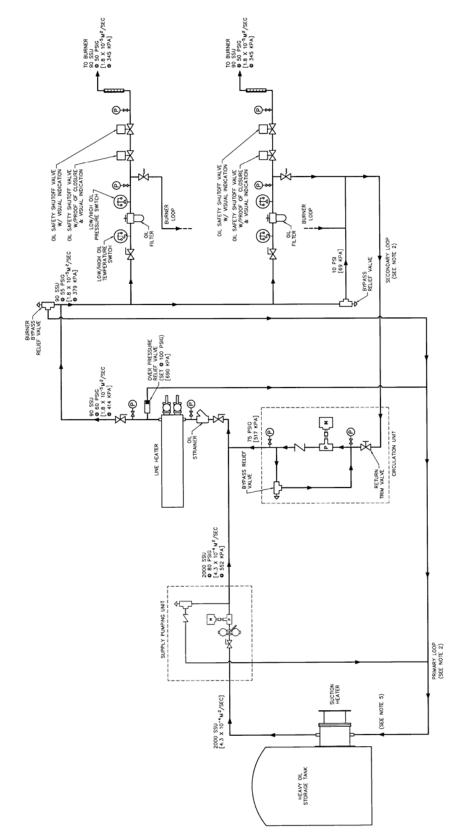
PIPED OIL RETURN LINE SHOULD BE IF SUCTION HEATER IS NOT UTILIZED, TO THE OIL STORAGE TANK.

(NOT TO SCALE)

WITH A NOMINAL RATING OF 12 W/FT (34W/M) COVERED WITH A NOMINAL 2" (50MM) FIBERGLASS TYPE INSULATION IS SUFFICIENT FOR MOST APPLICATIONS.

ALL HEANY FUEL OIL PIPING MUST BE HEAT TRACED (ELECTRIC OR STEAM) AND INSULATED, SELF-REGULATING HEAT TRACING IS RECOMMENDED TO MANITAIN THE DESIRED TEMPERATURE OF A GIVEN FUEL OIL TO ACHIEVE 90 SSU (1.8 x 10⁻⁵ Mz²/SEC) AT THE BURNER ELECTRICAL HEAT TRACING WITH A NOMINAL RATING OF 12 W/FT (34W/M) COVERED WITH A NOMINAL

(OVER)



TYPICAL MULTIPLE BURNER SYSTEM

HEAVY OIL SUPPLY

Y7123 (NOT TO SCALE)

PIPING SCHEMATIC SHOWS TYPICAL COMPONENTS AND NOMINAL VISCOSTITES AND PRESSURES FOR HEAVY FUEL OIL SUPPLY; ACTUAL REQUIREMENTS ARE DEPENDENT UPON THE SPECIFIC BURNER SYSTEM (CONSULT HAUCK).

NOTES:

- 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).
- PRECOMMENDED TO MAINTAIN THE DESIRED TEMPERATURE OF A OWEN FUEL OIL TO ACHIEVE 90 SSU (1.8 x 10⁻³M²/SEC) OR LESS AT THE BURNER. ELECTRICAL HEAT TRACING WITH A NOMINAL RATING OF 12 W/FT (34W/W) COVERED WITH A NOMINAL RATING OF 12 W/FT (34W/W) SUFFICIENT FOR MOST APPLICATIONS. FOR ALL HEAVY OIL APPLICATIONS, OIL PIPING MUST (ELECTRIC OR STEAM) AND INSULATED. SELF-REGULAT RECOMMENDED TO MAINTAIN THE DESIRED TEMPERATU

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 RECURED IN THE SUPPLY PIPING TO ACCOMODATE COLD SYSTEM START UP (CONSULT HAUCK). IF SUCTION HEATER IS NOT UTILIZED, OIL RETURN LINE SHOULD BE PIPED TO THE OIL STORAGE TANK.