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## Midland Combustion Steam/Electric Outflow Heaters

**Midcom** Combined Steam/Electric Outflow Heaters (S/EOF) are multi loop design incorporating electric elements where the primary heating system is not available for start up conditions. The electric facility provides a flow of oil for the start up operation. Once running the primary heating source can take over the heating operations. They have been proven in service for the last 50 years.

High viscosity crude oils as well as coal tar, bitumen, mineral oils, BIO fuels, water and a host of process fluids can be heated to specific temperatures and controlled precisely either by the more common direct acting temperature control or the more accurate systems of electronic or pneumatic controllers.

The electric start up facility is provided with adjustable temperature control thermostat and over temperature – cut out – thermostat fitted into pockets and located within a weather tight enclosure.

The Electric side is fitted with long life low watts density removable ceramic core elements are designed for optimum trouble free service and ease of maintenance Steam to the internal coils should be limited to 7 barg as recommended by BS799.

They are extensively used in large and small heating applications such as diesel oil systems where there is a need to prevent waxing at low temperatures, combustion systems, furnace applications and all styles of fuel handling arrangements.

One advantage of the **Midcom** Combined Steam/Electric Outflow Heater is that a failed electric element can be replace without the need to isolate and drain the storage tank.

All heaters in the **Midcom** range have been supplied for **Marine** applications requiring rigorous inspections from the likes of Lloyds Register of Shipping, Zurich, ABS etc.

Products are hydraulic and electrical tested before they leave the factory.

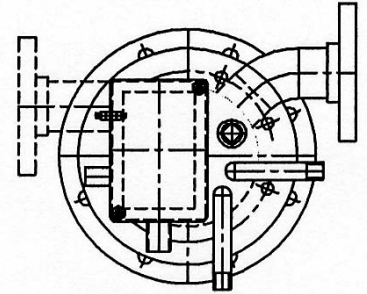
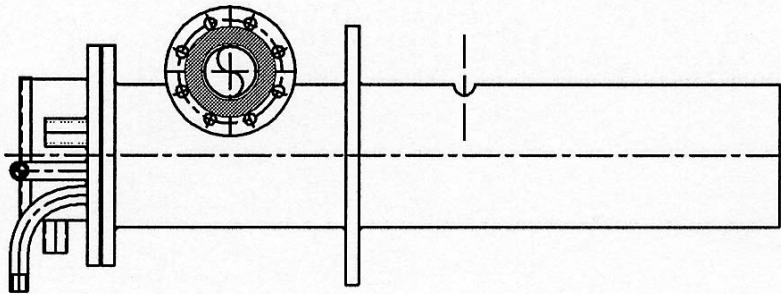
By installing a **Midcom** Outflow Heater the tank contents can be stored at a lower temperature thus saving energy. The outflow heater will therefore only heat the required oil needed for process.

<b>Fuel Oils</b>	<b>Viscosity @ 50°C (cSt)</b>	<b>Minimum Storage Temperature</b>	<b>Minimum Pumping Temperature @ Outflow Heater Outlet</b>
Class F	110	25°C	30°C
Class G	380	40°C	50°C
Class H	600	45°C	55°C



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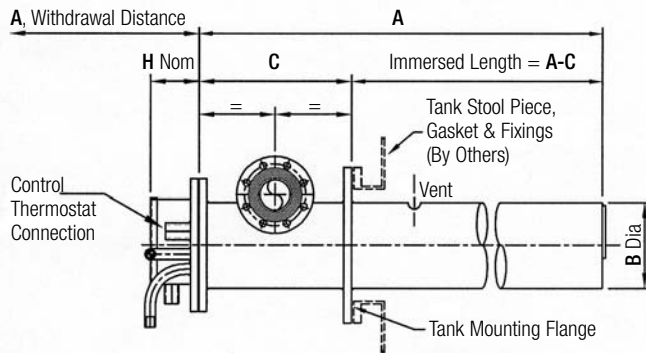
Midcom Code	Standard kW Load	Basing on 7 barg Steam. Maximum Heating Throughput Raising Heavy Fuel Oil through 10°C (kg/hr)
SEOF 6 - 24	3.6	2044
SEOF 6 - 30	4.5	2555
SEOF 6 - 36	5.4	3066
SEOF 6 - 48	7.2	3994
SEOF 6 - 60	9.8	5109
SEOF 6 - 72	10.8	6131
SEOF 6 - 84	12.6	7153
SEOF 6 - 96	14.4	8175
SEOF 8 - 72	10.8	9860
SEOF 8 - 84	12.6	11653
SEOF 8 - 96	14.4	13625
SEOF 10 - 60	9.0	8067
SEOF 10 - 72	10.8	9860
SEOF 10 - 84	12.6	11653
SEOF 10 - 96	14.4	13625

Midcom Code	Standard kW Load	Basing on 7 barg Steam. Maximum Heating Throughput Raising Heavy Fuel Oil through 10°C (kg/hr)
SEOF 12 - 60	27.0	8067
SEOF 12 - 72	32.4	9860
SEOF 12 - 84	37.8	11653
SEOF 12 - 96	43.2	13625
SEOF 16 - 84	37.8	35497
SEOF 16 - 96	43.2	41233
SEOF 18 - 84	37.8	47329
SEOF 18 - 96	43.2	54141

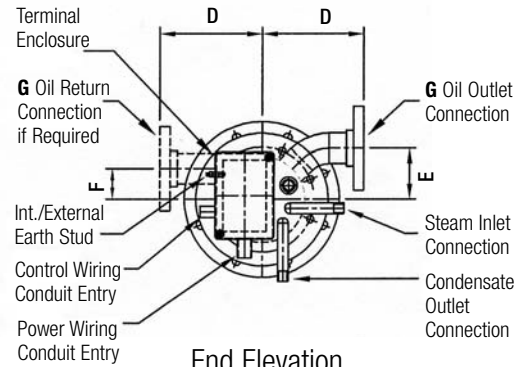


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# Midland Combustion Steam/ Electric Outflow Heater Dimensions



Elevation



End Elevation

Midcom Type	mm B	mm C	mm D	mm E	mm F	NB G	mm H	Tank Mounting Flange (PN10 BS EN 1092)
SEOF 6 -	168.3	300	200	100	55	50	151	<b>200NB-</b> 340 O/D x 20mm Thick C/W 8 off 22ø Holes on 295 Pcd off Ctr's
SEOF 8 -	219.1	300	230	130	75	50	151	<b>250NB-</b> 395 O/D x 20mm Thick C/W 12 off 22ø Holes on 350 Pcd off Ctr's
SEOF 10 -	273	300	260	140	105	50	156	<b>300NB-</b> 445 O/D x 25mm Thick C/W 12 off 22ø Holes on 400 Pcd off Ctr's
SEOF 12 -	323.8	380	350	210	115	80	156	<b>350NB-</b> 505 O/D x 25mm Thick C/W 16 off 22ø Holes on 460 Pcd off Ctr's
SEOF 16 -	406.4	380	400	275	155	80	163	<b>450NB-</b> 615 O/D x 32mm Thick C/W 20 off 26ø Holes on 565 Pcd off Ctr's
SEOF 18 -	457	460	450	300	170	100	171	<b>500NB-</b> 670 O/D x 40mm Thick C/W 20 off 26ø Holes on 620 Pcd off Ctr's
<b>Length</b>	24 ins	30 ins	36 ins	48 ins	60 ins	72 ins	84 ins	96 ins
<b>A</b>	610	765	915	1220	1525	1830	2135	2440