

# Midland Combustion Limited

LEADERS IN EXCELLENCE THROUGH HEATING, PUMPING AND PROCESS SYSTEMS



## Fuel Supply Solutions



**Midland Combustion Limited**

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## The Complete Design and Supply Solution to Fuel Oil Handling

### Midland Combustion Offer:-

- Simplex Pumping Units
- Duplex Pumping Units
- Oil Filtering
- Fully Packaged Units
- Automatic Self Clean Filters
- Oil Heating
  - Steam
  - Hot Water
  - Thermal Oil
  - Electric
- Line Heaters/Outflow Heaters
- Close Oil Temperature Regulation
- Oil Pressure Control
- Fire Valves

**Midland Combustion** pay particular attention to quality and pride themselves in the build quality of all products.

When our customers purchase Fully Packaged Units they have security knowing that they are fully tested for performance before they leave the factory.

**Midland Combustion** equipment is supplied for single or multi boiler installations.

The margins put on design cater for correct ring main pressures and efficient combustion by raising the oil temperature to ensure the correct viscosities are supplied at burner tip.

We are pleased to supply packaged or loose items for installation by others.

The test of reliability and performance is in the fact that **Midland Combustion** have been designing and manufacturing Heaters, Pumping Units and Fully Packaged Systems for over fifty years.

During that time many types of fluids have been handled. Not only conventional fuels but heavy oils with viscosities as high as 2500 cSt and Bitumen where the minimum storage temperature is 150°C.

Products are available for handling Tallow, Animal Fats, Molasses and new products such as Bio-Fuels.

Due to the nature of the more aggressive of mediums such as Animal Fats and Bio-Fuels the heating systems are manufactured from Stainless Steel for a longer service life.

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## Technical Information for the Design of Fuel oil Ring Main Systems

### Minimum Storage Temperatures

● HFO	(class G):	40°C
● MFO	(class F):	25°C
● LFO	(class E):	10°C
● Diesel Oil	(class D):	-5°C

### Minimum Temperatures for Transfer

● HFO	(class G):	50°C
● MFO	(class F):	30°C
● LFO	(class E):	10°C
● Diesel Oil		-5°C

### Minimum Temperatures for Combustion for Rotary Cup burners

● HFO	(class G):	89°C
● MFO	(class F):	68°C
● LFO	(class E):	40°C
● Diesel Oil		-5°C

### Minimum Temperatures for Combustion for Pressure Jet burners

● HFO	(class G):	140°C
● MFO	(class F):	125°C
● LFO	(class E):	88°C
● Diesel Oil		-5°C

The above temperatures give an approximately viscosity of 62 cSt

The above temperatures give an approximately viscosity of 10 to 15 cSt

### Maximum Flow Rates in Suction Piping (1m/s)

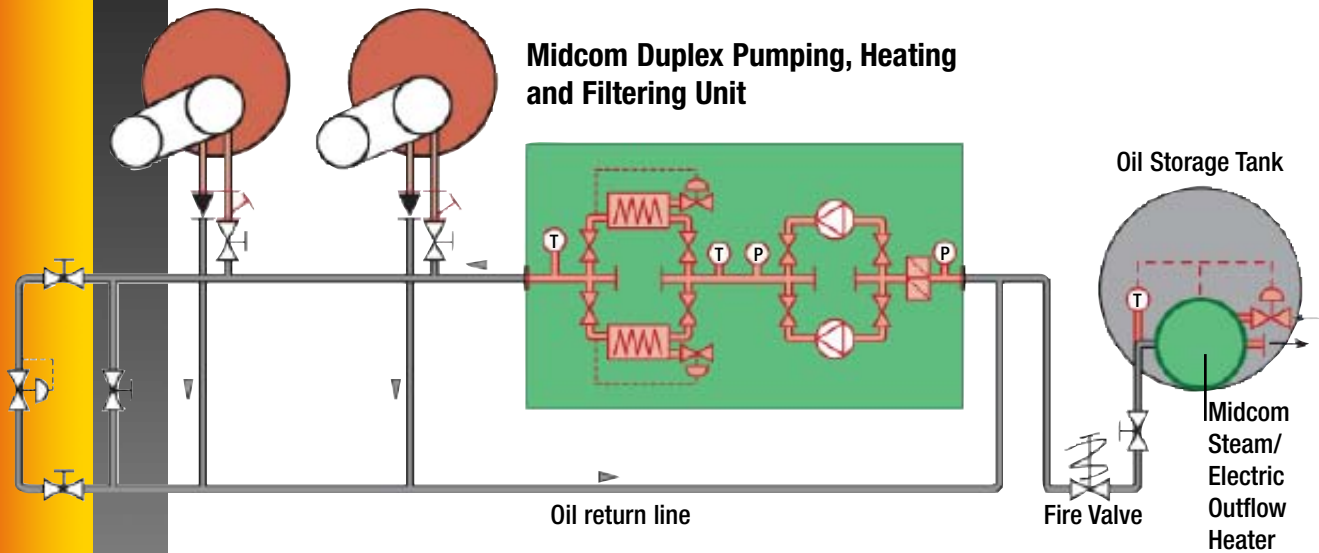
● 3/4" NB	< 1,272 litres/hour
● 1"	< 2,268 litres/hour
● 1 1/2" NB	< 3,540 litres/hour
● 2" NB	< 9,060 litres/hour
● 3" NB	<14,220 litres/hour

### Maximum Flow Rates in Discharge Piping

	Fuel Oil (2m/s)	Diesel (3m/s)
● 1/2" NB	<1,272 litres/hour	< 2,118 litres/hour
● 3/4"	<2,268 litres/hour	< 3,716 litres/hour
● 1" NB	<3,540 litres/hour	< 5,500 litres/hour
● 1 1/2" NB	<9,060 litres/hour	<12,300 litres/hour
● 2" NB	<14,220 litres/hour	<21,900 litres/hour

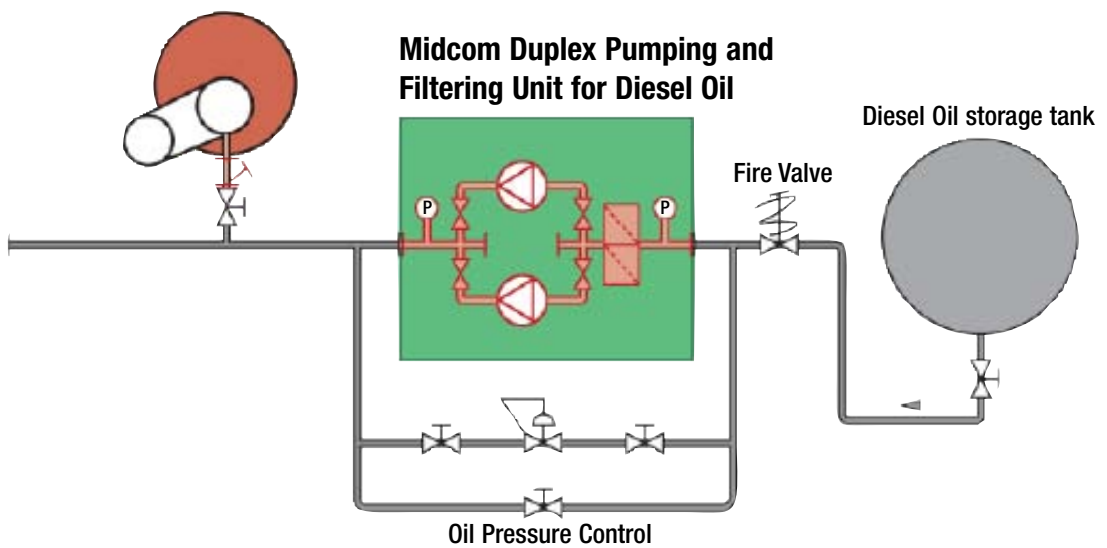
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## Midland Combustion Conventional Oil Supply Solutions



### Midcom Duplex Pumping & Heating Unit for Rotary Cup Ring Main

Lagging and trace heating on heated pipework and packaged units are excluded.

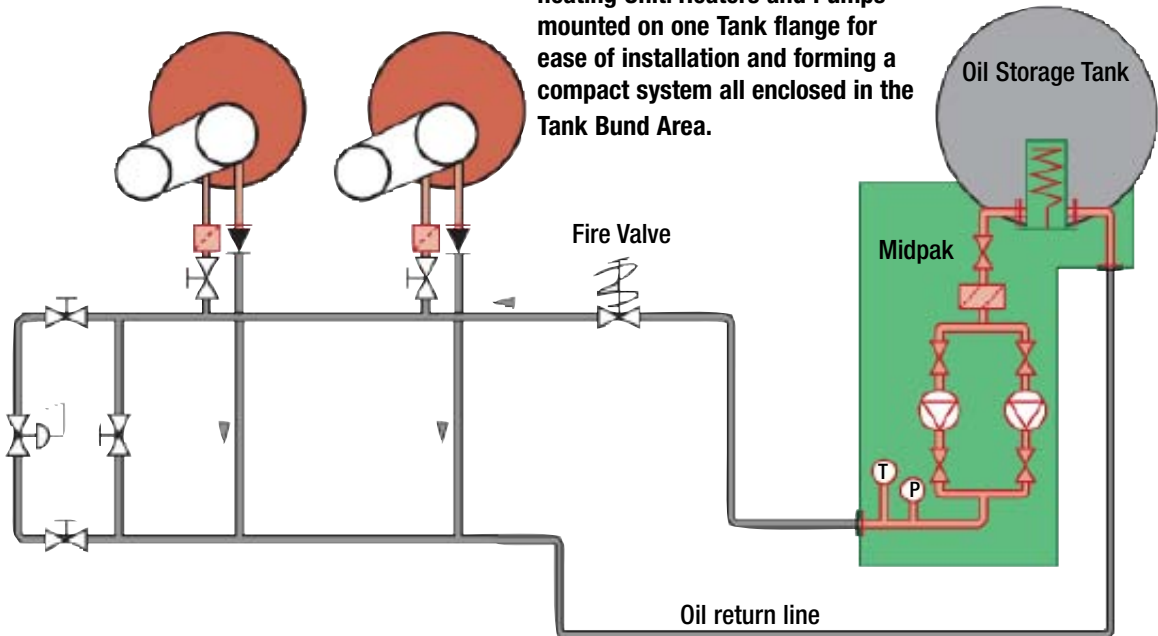


### Midcom Duplex Pumping & Filtering Unit for Diesel Oil Applications

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## Midland Combustion Conventional Oil Supply Solutions

**Midcom 'Midpak' Pumping and heating Unit. Heaters and Pumps mounted on one Tank flange for ease of installation and forming a compact system all enclosed in the Tank Bund Area.**



Lagging and trace heating on pipework and packaged units are excluded.

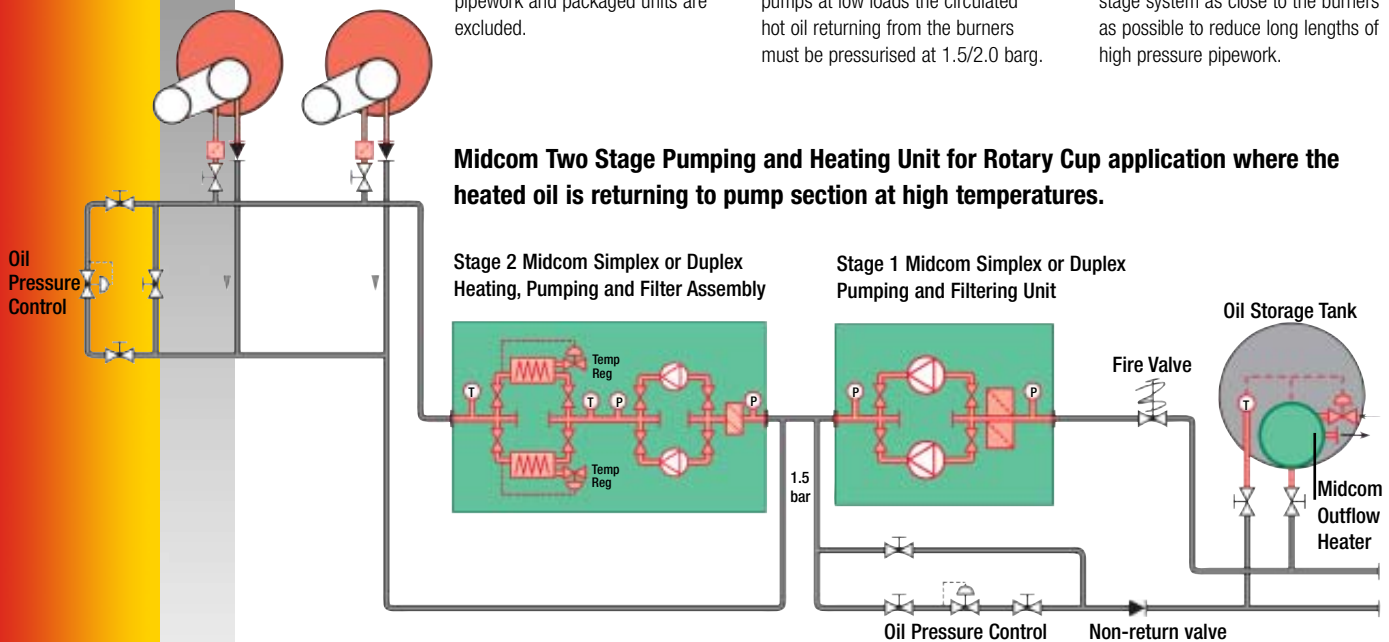
To avoid cavitation of the fuel oil pumps at low loads the circulated hot oil returning from the burners must be pressurised at 1.5/2.0 barg.

It is advisable to place the second stage system as close to the burners as possible to reduce long lengths of high pressure pipework.

**Midcom Two Stage Pumping and Heating Unit for Rotary Cup application where the heated oil is returning to pump section at high temperatures.**

Stage 2 Midcom Simplex or Duplex Heating, Pumping and Filter Assembly

Stage 1 Midcom Simplex or Duplex Pumping and Filtering Unit



# Midland Combustion Limited

## History

**Midland Combustion** was formed in 1960 and today remains a private company. All design and manufacture takes place in Wolverhampton with in house inspections to ensure quality and performance once on site.

## Quality

The company's quality management systems are approved to ISO9001.

## Spares

Spare parts can be provided for all our products with some customers still needing replacement parts for equipment some thirty years old. All we need is a serial number from the equipment and the customer support will offer quotations and assistance to enable the plant to keep running.

## Global

**Midland Combustion** has a market that has no boundaries. The company supplies products to all parts of the Globe and its customers in far away places continue to grow.

## Standards

All European standards are adhered to, particularly PED and CE Marking.

## Environment

We at **Midland Combustion** are conscious of our social responsibilities with regards to helping the environment through our working practices. Our objective is to sustain our environment for our descendants.

## Our Mission

To design, manufacture and deliver a range of Heaters, Pumping systems, Process system solutions that incorporate the highest standards of engineering principles that exceed our customers expectations.

Through continuous innovations to develop a range of products and services that will secure steady growth for the company the prosperity of its employees and the protection of the environment.

To develop a company culture where customer service is the core of its values to strive always to do its very best and to be realistic, truthful, accurate in its dealings with customers and suppliers.