THERMOBILE
UK LIMITED

All the heat you need!

Model: SB80 & SB110

Model: SB40 & SB60

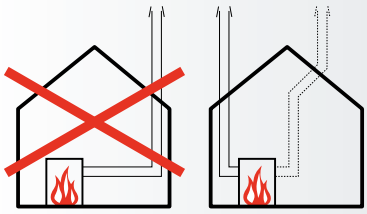
SB Range Universal Oil Heaters with Automatic Ignition

Four models available: SB40, SB60, SB80 & SB110
with heat capacities from 153,000 Btu/hr. to 436,000 Btu/hr.

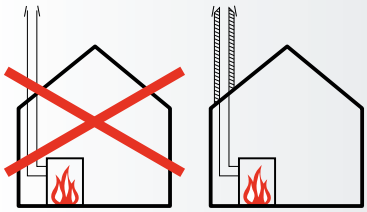
- Multi fuel capability
- Automatic burner with fuel pre-heating
- Room thermostat for economical operation
- Fast and simple installation
- Minimum service and maintenance
- Clean, soot free combustion
- High efficiency
- Heater includes 'day' tank, pump and controls

Flue Stack Installation

Errors to be avoided when installing the flue stack.

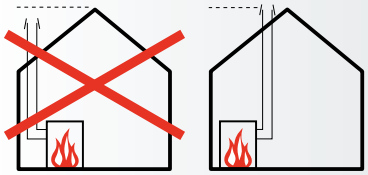


Flue gases can not rise in a horizontal stack and bends also restrict their movement. If flue bends are used then we recommend 45° bends instead of 90° and a gradual sloping stack.



Flue gases must not cool down inside the flue because:-
(a) they should rise to create draught; and
(b) condensation has to be avoided.

It is important that as much of the flue as possible (two thirds minimum) is installed within the building. If this is not possible, then twin wall (insulated) flue may be necessary.



The flue must reach above the apex of the roof otherwise the prevailing winds will affect the flue draft.

Universal Oil Fired Heaters

- 35 second Heating Oil/Diesel
- Processed Fuel Oil (PFO)
- Rapeseed Oil
- Linseed Oil
- Certain Vegetable Oils
- Used Oil (subject to licensing control)
- Bio Diesel

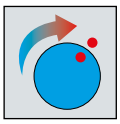
EASY INSTALLATION

The positioning of the heater in the workshop must take into account the following factors:

a) Power supply 220/240 volt (SB40/60)
400 V+N (SB80/110)
b) Flue pipe installation
c) Air supply to main ventilator
d) Connection to a compressed air supply.
e) Access to "Day" fuel tank

MULTI FUEL CAPABILITY

- 35 second Heating Oil/Diesel
- Processed Fuel Oil (PFO)
- Rapeseed Oil
- Linseed Oil
- Certain Vegetable Oils
- Used Oil (subject to licensing control)
- Bio Diesel



BUILT IN ROOM THERMOSTAT

This thermostat enables automatic operation of the heater in order to obtain the desired room temperature and on a low position is extremely useful for overnight frost protection.

The heaters are supplied with a basic room thermostat. An optional digital thermostat/timer control is available at an additional cost.

SERVICE AND MAINTENANCE

The design of these heaters ensures a minimum of necessary service and the service functions can be undertaken by the owner without special tools. The complete burner unit can be removed for any maintenance and service.

VENTILATION ONLY

In summertime the heater can be used for ventilation only.

Ventilation air flow rates:
SB40 – 3200m³/hr (1882cfm)
SB60 – 4100m³/hr (2412cfm)
SB80 – 6200m³/hr (3647cfm)
SB110 – 8100m³/hr (4765cfm)

NON RETURN VALVE

The non return valve in the fuel intake ensures that the burner cannot drain when it is not in operation.

HEATER CONTROL THERMOSTAT

This multifunctional thermostat ensures that the main fan only starts after the combustion chamber has been sufficiently heated. Therefore, there is no cold air blown before heater operation.

COMBUSTION CONTROL

The burner is equipped with a photocell that continuously monitors the flame.

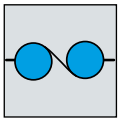
In case of ignition failure or poor combustion, lack of a flame or partly blocked nozzle, the photocell stops the burner.

INDICATOR LIGHTS

The heater has the following lights to show you:-

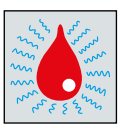
1. When there is power to the heater
2. When the main fan is in operation
3. When there is a burner failure

1 and 2 are positioned on the front panel of the heater. 3 is positioned on the burner control box on top of the burner.



OVERLOAD PROTECTION

- Electrical overload is protected by a trip system for both the main fan and the burner
- Heating overload is protected by a limit thermostat built into the heater control thermostat. This has an automatic reset.
- Any obstruction of the main fan or its air stream is secured by a manually reset overload protection



AUTOMATIC FUEL PRE-HEATING (on used oil)

This system is activated when the heater is operated on used oil.

The pre-heater is then maintained at 70°C to 85°C controlled by a thermostat.

BURNER

The complete burner is fully automatic ensuring correct ignition and atomisation. At required points, condensate drain valves are built into the system.

FLUE PIPE

The standard flue kit consists of:-

1 x T Piece complete with Draught Stabiliser
5 x 1m lengths of Flue Piping
1 x Rain cap

These items ensure the minimum height for efficient operation, i.e. 6m above ground level and 1m above the roof apex.

Supports

Wall bands are available to suit the Flues and for wall fixed installation should be located at 3m centres.

A Guy Wire fixing bracket is available to provide extra lateral support where the flue extends more than 1.5m above the last wall band, or for inter-connection with the roof flashing.

Roof Penetrations

Flat and angled flashings of sheet aluminium are available to provide suitable weather cover where the flue penetrates a roof. Silicone rubber flexible flashings are also available and highly recommended.

Storm collars of aluminium are also available and should be fitted to the pipe immediately above the flashings.

Terminations

To prevent leakage of rainwater into the pipe at joints which may be exposed above roof level, a change-over section is supplied in the flue kit. This section of pipe is provided with a male crimped coupling at each end and is designed for use where the flue passes through the roof: one end should be installed inside the building and one outside. Any subsequent components are installed inverted, i.e. with the male coupling upwards and fitted and secured in the normal way.

NB. All lengths and fittings are fabricated from 0.55mm Type 430 Stainless Steel.

A detailed instruction and service manual is supplied with every Thermobile heater.

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USED OIL

INDUSTRIAL EMISSIONS DIRECTIVE

If the heaters are operated on Used Oil they then fall under Chapter 1V of the Industrial Emissions Directive (IED) .

Heaters operating on Used Oil require a relevant permit under Schedule 13A of the Environmental Permitting Guidance (EPR).

There will also be requirements placed on emissions monitoring and operational control procedures.

INDIVIDUAL FLUE COMPONENTS

Lengths

Straight Lengths – Fixed straight lengths are available in two sizes:- 500mm, 1000mm and Adjustable.


500mm Length


1000mm Length

Fixings


Guy Wire Bracket


Wall Band

Change-Over Lengths (installed through roof)


1000mm Length

Flashings & Terminations


Dektite Flexible Roof Flashing

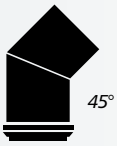

Angled Roof Flashing


Flat Flashing

Storm Collar

Fittings

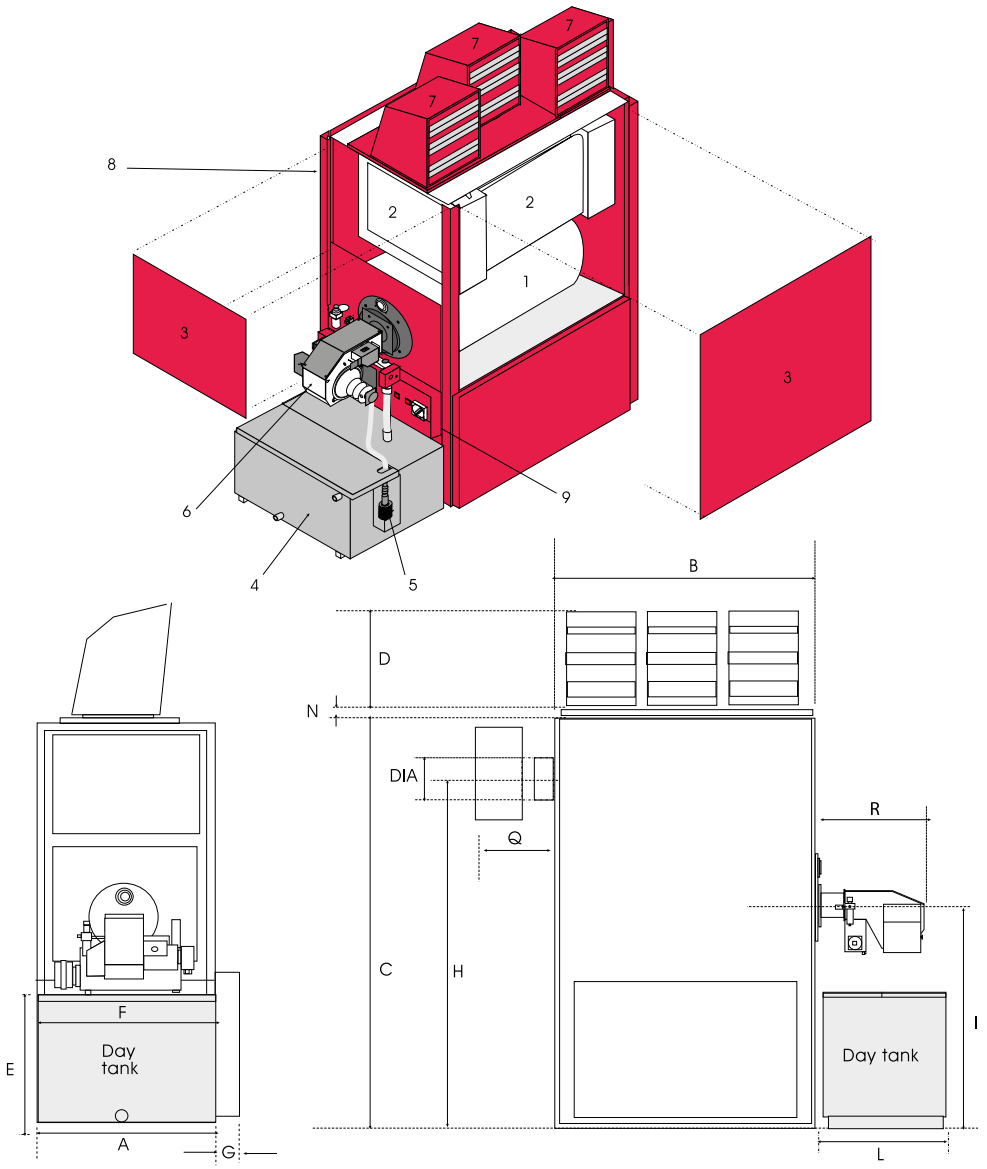

90° Tee Piece complete with draught stabiliser & condensation trap


45° Bend

Part No.	Description
Individual Flue Components for model SB40	
41.900.821	Flue Pipe, 1m x 150mm
41.900.822	Flue Pipe, 1/2m x 150mm
41.900.818	Flue Pipe Adjustable (540mm to 900mm x 150mm)
41.900.830	Rain Cap
41.900.820	Changeover Pipe, 1m x 150mm
98.085.738	T-Piece & Draught Stabiliser & Condensation Trap & Adaptor
41.900.825	Flue Bend, 45° x 150mm
41.900.834	Wall Band for 150mm Flue Stack (locate at 3m centres)
41.900.857	Guy Wire bracket 150mm
41.900.865	Angled Roof Flashing 150mm - Sheet Aluminium
41.900.866	Flat Roof Flashing 150mm - Sheet Aluminium
41.900.860	Storm Collar 150mm
Individual Flue Components for models SB60, 80 and 110	
41.910.212	Flue Pipe, 1m x 200mm
41.910.215	Flue Pipe, 1/2m x 200mm
41.910.230	Flue Pipe Adjustable (540mm to 900mm x 200mm)
41.910.220	Rain Cap
41.910.214	Changeover Pipe, 1m x 200mm
41.910.229	Flue Bend, 45° x 200mm
41.910.204	T-Piece & Draught Stabiliser & Condensation Trap (except SB60)
98.085.104	T-Piece & Draught Stabiliser & Condensation Trap (SB60)
41.910.221	Wall Band for 200mm Flue Stack (locate at 3m centres)
41.910.206	Guy Wire bracket 200mm
41.910.207	Angled Roof Flashing 200mm - Sheet Aluminium
41.910.208	Flat Roof Flashing 200mm - Sheet Aluminium
41.910.209	Storm Collar 200mm
Extras	
40.000.238	Draught Stabiliser (supplied with T-Piece assembly)
41.900.868	Silicone Rubber Flexible Roof Flashing 150mm
98.085.497	Silicone Rubber Flexible Roof Flashing 200mm
41.900.869	Silicone Rubber Fixing Kit for Flashing

RHA Allied Industry Member
OFTEC Member
GEA GARAGE EQUIPMENT ASSOCIATION

SB RANGE HEATER DIMENSIONS



1. Combustion Chamber
2. Heat Exchanger
3. Access Panel
4. Day Tank
5. Fuel Filter
6. Automatic Oil Burner
7. Swivel Exit Heads, 2 or 3, depending on model
8. Main Ventilator Fan Limit Control
9. Electric Main Isolator Switch

OVERALL DIMENSIONS (mm)				TECHNICAL INFORMATION						
Model	Width	Length	Height	Model	Heat Capacity (Btu/hr)	Heated Air Flow (M^3/hr)	Electric Supply (Volts)	Power Consumption (Kw)	Day Tank Capacity (Litres)	Approx Fuel Consumption (Litres/Hr)
SB40	690	1860	1850	SB40	153,000	3200	230	1,1	80	4.5
SB60	690	1860	1850	SB60	204,000	4100	230	1,4	80	6.0
SB80	900	2060	2175	SB80	306,000	6200	400 + 0	1,8	130	9.0
SB110	900	2060	2175	SB110	436,000	8100	400 + 0	2,2	130	12.8

All dimensions include day tank, burner and flue tee piece (B+Q=L)

MODEL	A	B	C	D	E	F	G	H	I	L	N	Q	R	DIA	WEIGHT KG
SB40/60	570	910	1425	400	270	560	120	1255	805	550	25	400	405	160	180
SB80/110	760	1110	1750	400	320	760	140	1525	945	550	25	400	405	180	290

ACCESSORIES

Flowmatic:

An automatic motor and pump system to keep the 'day oil tank' supplied from a bottom outlet, gravity fed, bulk storage tank (pipework and electric cable not included). Maximum distance of 15m.

A pneumatic pump system is available for bulk storage tanks with top outlets and/or for distances above 15m.

Thermostat/Timer ECO.X TFP2

An energy management computer specifically designed for total space heating control.

Features of the ECO.X TFP2

- Quartz accuracy
- 7 day temperature control with each day having independent settings
- Two timed periods available for each day
- Two line LCD giving clear indication of time, settings, temperature etc.

Filter Kits

Air inlet filters are available for the main ventilator fan.

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Dealer

12th April 2016

INFORMATION REGARDING SMALL WASTE OIL BURNERS (SWOBS)

On the 18th July 2011 Thermobile UK Ltd were made aware that The Department for Environment Food and Rural Affairs (Defra) were conducting a review of guidance on the implementation of the European Union Waste Incineration Directive (WID), now the Industrial Emissions Directive (IED), and it's application to small waste oil burners (SWOBS) in England and Wales.

Thermobile attended meetings at Defra on 10th August 2011 and 4th November 2011 together with representatives of the Garage Equipment Association (GEA), the Retail Motor Industry Federation (RMI) and the Oil Firing Technical Association (OFTEC).

SWOBS were exempt from WID since it's inception in 2000 as the UK produced guidance which took the view that small waste oil burners lacked the technical specification to amount to "incineration plant" for the purposes of the Directive.

Manufacturers of SWOBS, the GEA, RMI, OFTEC and other trade organisations fought the case for current and potential operators of SWOBS as to the benefits of burning waste oil on site at the point of it's arising as against that of being transported, recycled and sold back to the end user at great profit to the oil recycling companies.

The initiative rails against the logic of the obvious sensible carbon footprint of burning waste oil on site and reducing the operator's heating bills in these difficult economic times.

Further to this statement by Defra, Thermobile commissioned a Carbon Footprint "cradle to grave" report for Waste *Oil* versus Processed Fuel Oil and Virgin Oil which was presented to Defra.

Thermobile is the only manufacturer of Waste Oil Fired Heaters to have been involved in discussions with Defra for the past 25 years concerning the use of waste oil as a means of workshop heating and the ONLY Company to spend a large sum on the Carbon Footprint study.

On the 14th September 2015 Thermobile received notification from Defra that on the 16th July 2015 the Parliamentary Under Secretary of State for Environment and Rural Affairs, Rory Stewart, announced that as part of commitment to cleaner air the Government would amend the current Environmental Permitting Guidance – the "Waste Incineration Directive Guidance", to state clearly that all waste incineration plants and co-incineration plants burning waste oils in England and Wales fall under the scope of Chapter IV the Industrial Emissions Directive (IED). The change effects small basic appliances such as Small Waste Oil Burners (SWOBS). A further Impact Assessment report was received a few days later.

This Guidance will be amended to advise that these units are within scope of Chapter IV of the IED, and therefore their continued use of waste oils as a fuel will require the relevant permit under Schedule 13A of the Environmental Permitting Guidance (EPR). The cost of the application is £3,218 with an annual subsistence fee of £1,384. In addition to the considerable cost, the application process is far more complex and additional requirements will be placed on emissions monitoring and operational control procedures. The change comes after the European Union Commission raised concerns that the low risk status of small waste oil burners in England and Wales was jeopardising local air quality.

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THERMOBILE®

Cont:

The use of SWOBS is already subject to similar severe financial and monitoring restrictions in Scotland , Northern Ireland and all other EU member states the cost of this permit would be prohibitive to end users.

We have never been presented with emission figures from a waste oil heater by Defra and as far as we know the last tests were conducted 35 years ago when the new oil had far greater metallic compounds and other impurities.

In 2011 Thermobile offered to pay for emission tests and were told not to bother by Defra as the main objective of the directive was waste, and not emissions.

The astounding admission by Defra is "There could be some emissions produced when waste oil is processed, however we have no data on this so assume these would be negligible"!!

This Processed Fuel Oil (PFO) is the main alternative fuel suggested by Defra !!!.

Defra published the amended guidance in December 2015 with amendments taking effect from 6th April 2016 which is extremely annoying as the RMI, GEA and ourselves were assured in 2011 that we would be involved in further consultation.

A meeting with Rory Stewart , the Parliamentary Under Secretary of State for Environment and Rural Affairs , took place on the 1st March 2016 attended by Andy Wallis (General Manager Thermobile UK), Stuart James (RMI Independent Garages Director) and Dave Garratt (GEA Chief Executive).
Rory Stewart acknowledged our concerns but explained that his primary concern with SWOBS was their potential impact on public health due to emissions. However he is prepared to look at any evidence that we can show to prove that they have got it wrong.
We pointed out again to Defra that a SWOB burning waste oil is as clean as one burning Processed Fuel Oil (PFO) but this did not carry much weight and it became obvious that Defra did not see any future in burning PFO or waste oil.
Defra commented that we will need to prove that the emissions from a SWOB burning waste oil are no more damaging than a SWOB burning heating oil (diesel).
If we could provide such evidence we would also need to convince them that the quality of the waste oil used was constant, which is obviously impossible.
Thermobile are looking into the cost of the tests involved and will liaise with the RMI and GEA as to the feasibility of such tests.

Waste Oil heaters can still be operated on alternative fuels which do not require a licence from Defra. The units can be operated on 35 sec Heating Oil, Diesel, Processed Fuel Oil (PFO), and Bio Oils Including Linseed, Rapeseed and certain refined Vegetable Oils.
The manual ignition AT Series Do Not Require any adjustment.
The Automatic ignition SB Series require simple adjustments to the compressed air pressure and the temperature setting of the oil pre-heating element