

THE WOODS IN WINTER Copyright Harworth Heating Ltd 2007

FOR YOUR SOUL, SPIRIT AND PLANET.

As the mid winter equinox rapidly approaches the woodlands can be a magical place. Each in their own way, the trees close down, to withstand the frost and snow, it is within this wonderful setting that we will be demonstrating how wood fired appliances can provide a carbon neutral form of warmth, comfort and a means of cooking during the coming winter season.

Harworth Heating will be showing two quite different stoves and a wood-burning cooker. Along with this you will see how the expert woodman can teach us so much about wood when it is required to be used as a fuel for cooking or heating.

The star of the Harworth show is the new **Morso 6100** series stove, a superb combination of form and function and part of a totally new generation of wood burning stoves recently introduced by Morso.

The elegant Scandinavian design has clean lines and is simple to operate; underlying this simplicity is some serious technology.

For anyone interested in wood burning stoves, there is so much to say, its difficult to know where to start, once you have your head around the how and why, the pleasure it can bring is self evident.



HOW DOES IT DIFFER FROM OTHER STOVES

1. Take an average combustion chamber and rotate it through 90 degrees and place in front of it a large panoramic curved glass panel.

If you walk into a dark room at night with a wood stove burning, what do you look at? Yes, the flames from the fire, not the appliance or fire surround, just the flames.

Open fires provide a totally uninterrupted view of the flames and this is one of the design targets that modern stove designers seek to emulate.

Many stoves have a glass panel, which is generally wider than tall, and this restricts what can be seen, the Morso engineers have turned this around and made the door glass taller but the hearth smaller, as the flame develops to its full potential, it can be seen to its uppermost extremities.

As in art there seems to be a golden rule affecting the proportions of shape and by either intelligent planning or a spark of good luck Morso engineers seem to have achieved it.

2. Take an average combustion chamber and fully insulate it with reeded, high performance insulation panels.

Looking in through the picture window and see the high quality, fully moulded insulating panels on the rear and sides of the combustion chamber, above the top of the chamber are two

more insulating panels all designed to allow the combustion chamber to achieve and maintain its operating temperature as quickly as possible.

3. Take the incoming air and divert it through cast iron ducts into a plenum chamber where it can be heated to temperatures above 400 Deg C and diverted in critical, accurate and measured proportions into different parts of the combustion chamber.

4. Simple single lever combustion air control.

5. Beautiful airtight cast iron door with panoramic glass panel simple and effective door fastening.

6. Clean and easy.

Some stoves are messy and not easy to use, with doors that are difficult to open and close, in some cases ash traps on the inner door castings and comes spilling from the appliance every time the door is opened, these are practical and day-to-day problems, which can become a nuisance when using a wood stove.

Not so with the Morso !

What advantages do these features offer?

All the elements described above combine to give the user a level of performance not seen before in a wood-burning stove.

This is how it works:-

LIGHTING STAGE

The fire is ignited in the usual way and maximum air is admitted via the single and simple air control slide.

As the flames grow and exit the stove, en route, they pass over the cast iron plenum or pre heating chamber and rapidly heat up the fresh incoming air for combustion.

Whilst this is occurring the high performance insulating panels rapidly brings the combustion chamber up to its working temperature.

VAPOURISING STAGE

When the combustion chamber is up to working temperature the magic kicks in, the wood oil starts to vaporise from the wood, and rises into the top of the combustion chamber.

Across the top rear of the combustion chamber is an injector bar which is drilled with a series of small holes, superheated air is drawn through these holes and allowed to mix with the vaporised wood oils and hey presto you have a wonderful gas fire, dancing effortlessly across the top of the panoramic picture window, what a delight to behold.

To ensure that the picture glass window stays clean a proportion of the superheated air is diverted down over the door glass and the rest is diverted into the top of the stove via the horizontal air swirl device.

LONG BURN STAGE

This is when the long burn kicks in because now the stove is up to temperature and it can be turned down by simply reducing the incoming air with just one control lever.

As the stove is slowed down the stove then eaks out every last dredge of wood oil until the wood is left in its final burn phase charcoal.

FINAL BURN STAGE

As the stove approaches this stage the wood is now burning as charcoal, the charcoal slowly decomposes as very light grey coloured ash.

By delicate adjustment of the air control this decomposition can be made to last for a considerable period of time and because the incoming air is pre heated, the charcoal suffers no chilling effects from cold incoming air thus keeping the burn in a state of almost suspended animation, it's amazing.

Because of the superheated incoming air, a fresh charge of fuel can be made to toast away in the base of the stove just giving off its volatiles as opposed to bursting into flames and

burning at a faster burn rate that the user might require.

There are hundreds of stoves to choose from but this stove just stands out from the crowd, for connoisseurs of wood burning this is it!

Make no mistake, it certainly can, it can run at an 80% plus efficiency,

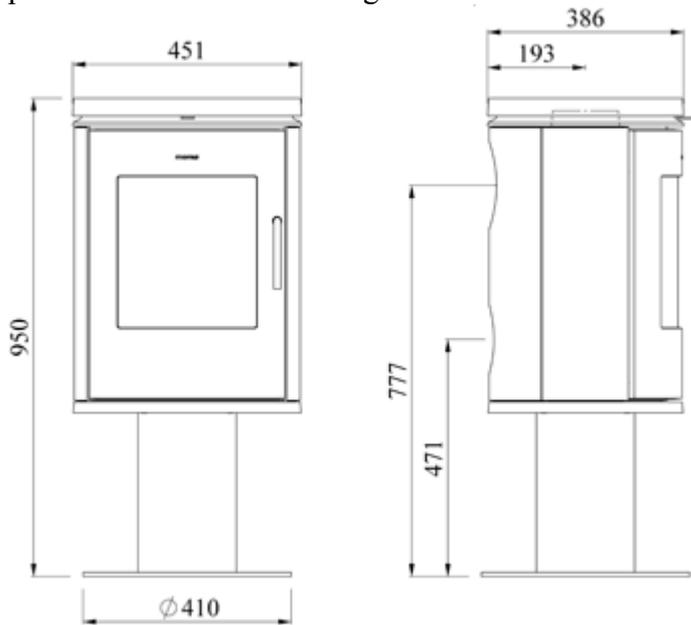
It can stay in for long periods of time

It can significantly reduce your running costs

It can produce the most amazing pyrotechnics, which demonstrate the technology at work.

For enthusiasts of sustainable living, this stove is a masterpiece of modern design and it can have a significant effect on your carbon footprint.

Comments made regarding the Morso 6100 series appliance are based on the considered opinions of Harworth Heating Technical staff and have no connection to Morso Denmark.



Technical details

Heat output (kW)	3-6
Heating capacity (sq. m)	45-90
Height (mm)	950
Width (mm)	451
Depth (mm)	386
Flue outlet top (internal)	Ø 125
Flue outlet rear (internal)	Ø 125
Weight(kg)	110
Max. log length (cm)	30
Min. clearance to combustible material behind the stove (mm)	150
Min. clearance to combustible material, to the side (mm)	400

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Harworth Heating are fully focussed on one activity only and our staff can advise on all aspects of home heating, Wood – Wood Pellet– Solid Fuel – Oil & Gas.

We have OFTEC – CORGI – HETAS qualified staff.

WE ARE MAIN AGENTS FOR MANUFACTURERS LISTED BELOW-:

AGA

RAYBURN

THERMOROSSO / BOSKY

MORSO

JOTUL

WANDERS

ESSE

HUNTER

CHARNWOOD

STOVAX

VILLAGER

ARROW

FONDERIE FRANCO BELGE

DOVRE

TOWN AND COUNTRY HEATING

WE CAN SUPPLY-:

WOOD BURNING APPLIANCES

WOOD STOVES (WITH INTEGRATED CENTRAL HEATING IF REQUIRED)

WOOD FIRED BOILERS

WOOD FIRED COOKERS (WITH INTEGRATED CENTRAL HEATING IF REQUIRED)

WOOD PELLET STOVES

WOOD PELLET BOILERS

MULTIFUEL BURNING APPLIANCES

MULTIFUEL STOVES (with integrated central heating if required)

MULTIFUEL COOKERS (with integrated central heating if required)

MULTIFUEL BOILERS

OIL BURNING APPLIANCES

OIL STOVES (with integrated central heating if required)

OIL COOKERS (with integrated central heating if required)

Oil Boilers

GAS BURNING APPLIANCES

GAS STOVES (decorative wood or coal effect)

GAS COOKERS (with integrated central heating if required)

Gas boilers

ELECTRIC POWERED APPLIANCES

ELECTRIC STOVES (decorative wood or coal effect)

ELECTRIC COOKERS
ELECTRIC BOILERS

HYBRID APPLIANCES

HYBRID COOKERS
Spare parts for most appliances and open fires.
FIRE BARS AND GRATES
ASH PANS
STOVE DOOR GLASSES
STOVE PAINT TO REFRESH YOUR AGEING APPLIANCE
glass fibre ropes foR door seals
water circulating pumps
pipes fittings and valves
thermostatic controls
danfoss motor valves
heat resistant PAINTS, boards, glues and sealants

SPARE PARTS FOR OIL BOILERS

COMPLETE OIL BURNERS BY EOGB AND ECO-FLAM
DANFOSS OIL BURNER nOZZLES
BURNER MOTORS
BURNER PUMPS
PHOTO CELLS
HF UNITS
FANS

SPARE PARTS FOR OIL STOVES

BURNERS
CATALYSERS
DESCALERS
OIL CONTROL VALVES

SPARE PARTS FOR GAS STOVES

THERMOCOUPLES
ARTIFICIAL COALS
SAFETY STATS

FLUE AND CHIMNEY SYTEMS FOR ALL APPLIANCES AND ALL FUELS

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SELKIRK SM SYSTEMS
MARINE CHIMNEY SYSTEMS

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