

mill

Series:
Gentle Air oil
filled radiator



Assembly and instruction manual

This product is only suitable for well insulated spaces or occasional use.

**Please read the instructions carefully before use.
Take good care of this manual for later use.**





Scandinavian home comfort

Mill is a Norwegian brand that develops heating and indoor air quality products tailored for your modern home. Inspired by Scandinavian nature, our products are designed to sustain the toughest of climates to ensure safe, efficient and comfortable temperatures, as well as good air quality.

Mill products are praised for their minimalistic and elegant features as they blend in naturally with any modern interior. Our advanced and user-friendly technology will support a relaxing and healthy home space with reliable temperatures and air quality. Mill's vision is to develop products that create an enjoyable and harmonic household atmosphere, enhancing both comfort and style; the ultimate Scandinavian home comfort.

We hope you enjoy your Mill product.

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Please read the instructions carefully before use. Take good care of this manual for later use.



STORE THIS INSTRUCTION MANUAL FOR FUTURE USE!

NEVER TOUCH YOUR HEATER OR ITS CASING WITH WET HANDS!



IN ORDER TO AVOID OVERHEATING, DO NOT COVER THE HEATER.



Important safety information

You must obey common safety guidelines when using electrical products, especially in the presence of children.



WARNING! To avoid electric shock or damage due to the heat, always make sure the plug is pulled out before the heater is moved or cleaned.

READ THE INSTRUCTIONS CAREFULLY

- The product is intended for home use only.
- Make sure the heater is connected to the house's regular mains as indicated on the heater.
- New heaters will produce a specific odor when used the first time. This will stop after a short time and is completely harmless.
- Check for any pieces of packing foam or cardboard that may have fallen into the heating elements of the heater. These pieces must be removed to avoid unpleasant odors.
- Prevent the heater from overheating — **do not cover.**
- Always turn off the heater and unplug it when not used for a long period of time.
- Pay special attention if the heater is used in rooms where children, the handicapped or elderly reside.
- The heater should not be set up directly beneath an electrical socket outlet.
- The cord must not be laid under any kind of carpet. Make sure the cord is laid in such a way that nobody can trip on it.
- The heater must not be used if either the cord or plug is damaged. The heater must not be used if it has been



dropped on the floor or is damaged in any other way causing it to malfunction.

- The cord must be repaired by the manufacturer or by an expert if it has been damaged, to avoid dangerous situations.
- Avoid using extension cords, which may overheat and could possibly start a fire.
- Never cover the air vents on the heater. Avoid potential fire hazards by making sure the air intakes are not blocked or covered. The heater should be used in rooms with normal flat floors.
- The heater should not be installed in close proximity to flammable materials of any kind because there can always be a risk of fire.
- The heater must never be used in rooms where gasoline, paint or other flammable liquids are stored, such as in a garage.
- Never touch an electric heater with wet hands. The heater should be installed so a person showering or taking a bath cannot come into direct contact with it.
- Some parts of this product can become very hot and cause burns. Particular attention has to be given where children and vulnerable people are present.
- The heater must be switched off, the plug removed and the heater must cool down before it is moved.
- Avoid overloading the mains (the circuit) where the heater is connected. The heater may overload the electrical circuit if other electrical devices are plugged into the same socket outlet.
- Do not use this heater in small rooms when they are occupied by persons not capable of leaving the room on their own, unless constant supervision is provided.
- The product cannot be used by children under 8 years of



age and persons with reduced physical or mental abilities or lack of experience and knowledge unless they have been given supervision or instruction in the safe use of the product and understand the hazards involved.

- Children should not play with the product. Cleaning and maintenance should not be done by unsupervised children.
- Children under the age of 3 should be kept away from the product, unless they are under constant supervision.
- Children aged 3 to 8 years are only permitted to turn the product ON/OFF, assuming the heater is mounted according to the assembly instructions and the children have received.
- Do not use this heater in the immediate surroundings of a bath, a shower or a swimming pool.

WARNING! The heater must not be used if the glass panels are damaged (applies to AB-H1000DN GLASS only).

Specification

Model	Thermostat	Color	Amperage	Power (W)	Mill Heat Boost
AB-H1000MEC	Mechanical	White	220-240V~, 50-60Hz	1000	Yes
AB-H1000DN	Day/night	White	220-240V~, 50-60Hz	1000	Yes
AB-H1500DN	Day/night	White	220-240V~, 50-60Hz	1500	Yes
AB-H2000DN	Day/night	White	220-240V~, 50-60Hz	2000	Yes
AB-H1000DN GLASS	Day/night	Glass	220-240V~, 50-60Hz	1000	Yes
AB-H1000DN BLACK	Day/night	Black	220-240V~, 50-60Hz	1000	Yes

Before first use

After unpacking the heater, check to make sure the product was not damaged during transport. Contact the retailer or importer if you discover any visible damages to the product.

Keep the outer packaging to transport the heater in the future. If you want to dispose the packaging, make sure it is done properly. Keep plastic bags away from children.

First use

After turning on the heater for the first time or after an extended period without use, the heater can produce a burnt odor for a short time. This is normal.

Please read all the instructions carefully before use. Save the instruction manual for future use.



Description of heater

Please see table above for which models that have mechanical/day- and night thermostats.

See figure 1 on separate illustration sheet

A and B Day/night thermostat

1. Heat emission
2. LED display
3. Control panel
4. Output selector and thermostat
5. ON/OFF
6. Legs (aluminium)

C Mechanical Thermostat

1. Heat emission
2. Indicator light
3. Thermostat
4. Output selector
5. Legs (aluminium)

Parts

See figure 2 on separate illustration sheet

1. 2 rails for the feet
2. 2 foot brackets
3. 8 screws (pre-mounted)

Assembly

See figure 3 on separate illustration sheet

1. Remove the pre-mounted screws on both legs before you insert them into the brackets, so that you get a stable foot.
2. Attach the legs to the brackets by tightening 2 screws into each bracket.
3. Remove the pre-mounted screws from the bottom of the heater and place the heater gently on its head to mount the feet.
4. Two screws must be fastened on each foot bracket.
5. **NEVER USE THE HEATER BEFORE THE LEGS HAVE BEEN TIGHTLY SCREWED.**

Instructions mechanical thermostat

Please see table on page 4 for which models that have mechanical thermostats

Control Panel

See figure 4 on separate illustration sheet

1. Indicator light
2. Thermostat: Adjust the desired heat setting
3. Output selector:
 0. OFF
 - I. Low
 - II. Medium
 - III. High

WARNING: BE SURE THE FOOT IS FITTED CORRECTLY AND ACCORDING TO THE INSTRUCTIONS BEFORE USING THE HEATER!

Usage mechanical thermostat

1. Set the output selector to the OFF position (O) and the thermostat to minimum Plug the heater into a grounded outlet.
2. Set the output selector to position I, II or III. Turn the thermostat up to the maximum position. When the desired room temperature has been reached, turn the thermostat slowly down until you hear a click. The thermostat can now remain in this position until a different room temperature is desired. As soon as the room temperature falls below this level, the heater will automatically switch on again. When the room has again reached the desired temperature, the heater will switch off again.
3. If you wish to change the room temperature, repeat the instructions in step 2.
4. The heater has an overheat protection that turns the device off if any parts become extremely hot.
5. To switch the heater off, turn the output selector to the O position. If the heater will be left unused for a longer period of time, pull out the plug.

Instructions day/night thermostat

Please see table on page 4 for which models that have day- and night thermostats.

Control panel

See figure 5 on separate illustration sheet

1. Standby
2. Daytime setback
3. Nighttime setback
4. Power indicator - Shows whether the heater is using power or not
5. Desired room temperature
- 6,7,8 Indicates the output level
9. Timer function
10. Daytime setback activation button
11. Nighttime setback activation button
12. Function button
13. Timer activation button
14. Thermostat and output selector:
 - i. Turn the selector to the left to decrease the temperature, and turn the selector to the right to increase the temperature.
 - ii. Push the button to change the desired power level. 3 power levels

WARNING: BE SURE THE FOOT IS FITTED CORRECTLY AND ACCORDING TO THE INSTRUCTIONS BEFORE USING THE HEATER!




If the temperature sensor is not functioning properly, you will see this symbol on the display. Please contact the dealer or importer.



Usage day/night thermostat

See figure 6 on separate illustration sheet

1. Plug the heater into a grounded outlet.
2. Press the ON/OFF button.
3. Choose the desired power I, II or III, by pressing the output selector. Turn the thermostat to the desired temperature while looking at the display. As soon as the room temperature drops below this level, the heater will automatically start again. When the room has reached the desired temperature again, the heater will turn itself off.
4. The thermostat goes from 5 to 35°C.
5. If you want to change the temperature in the room, repeat step 3.
6. The heater has an overheat protection that turns the device off if any parts become extremely hot.
7. If the temperature sensor is not functioning as it should,  will be shown on the display. In such instances, the heater will switch itself off. Please contact your distributor or importer.
8. To turn off the heater, press the ON/OFF button. Should the heater be left unused for a longer period of time, pull out the plug.

Timer function

See figure 7 on separate illustration sheet

The timer function will turn off the heater after a desired number of hours have passed.

Day- and nighttime setback

When programming the heater for either day- or nighttime setback, the setback period will be active from the time you register the program. Which means; if you want to start your daytime setback at 7.30 am, you need to register the program at 7.30 am.

You only need to program the heater 1 time for daytime setback and 1 time for nighttime setback. If you have programmed the heater, the setback programs will be active on the following days:

Daytime setback: Monday-Friday (day 1-5)

Nighttime setback: All nights.



EXAMPLE:



Let us say you want to program the heater for both daytime- and nighttime setback (normally the heater is set to 23 degrees). You want the heater to do the following:


1. Daytime setback activated from 7.30 am to 2.30 pm. Desired temperature: 17 degrees
2. Nighttime setback activated from 10.00 pm to 6.00 am. Desired temperature: 18 degrees

How to activate daytime setback

See figure 8 on separate illustration sheet




1. Tuesday 7.30 am you go to the heater and press  on the heater's control panel.
2. "d" will be visible in the display. Use the wheel to set what day it is today when you are programming the heater (1 = Monday, 2 = Tuesday etc.) You are not programming the heater for the various days. This is simply to tell the heater what day it is when you are programming the heater, since the daytime setback is active only Monday-Friday. Select 2 for Tuesday. Confirm by pressing .


3. "C" will flash in the display. Use the wheel to set 17 as the desired temperature for daytime setback. Confirm by pressing .
4. "H" will flash in the display. Use the wheel to set 7 hours as desired setback period (meaning it will be active from 7.30 am to 2.30 pm). Confirm by pressing .
5. The daytime setback will now be active from 7.30 am to 2.30 pm Monday-Friday. Setback temperature is 17 degrees.

* Control light  is green when the heater is in an active setback period. The control light is red when the setback period is inactive but programmed.

How to activate nighttime setback

See figure 9 on separate illustration sheet

1. At 10.00 pm you go to the heater and press  on the heater's control panel.
2. "C" will flash in the display. Use the wheel to set 18 as the desired temperature for nighttime setback. Confirm by pressing .
3. "H" will flash in the display. Use the wheel to set 8 hours as desired setback period (meaning it will be active from 22.00 pm to 6.00 am). Confirm by pressing .
4. The nighttime setback will now be active from 10.00 pm to 6.00 am every day. The setback temperature is 18 degrees.

*Control light  is green when the heater is in an active setback period. The control light is red when the setback period is inactive but programmed.

N.B. If a power cut occurs/you turn off the heater, the programming will be lost and you will have to do this over again.

ATTENTION! 2012 models (series nr. HL12) have a different set up where you are not asked to register number of hours and temperature while programming. The standards are as follows:

Daytime setback: 5 hours and 17 degrees


Nighttime setback: 7 hours and 17 degrees

Besides this they follow the same set up.

Change setback temperature – daytime



See figure 10 on separate illustration sheet


Press and hold  and press  3 times.

Enter the desired temperature for daytime setback. Save by pressing  or wait for 15 seconds for automatic confirmation.

Change setback temperature – nighttime

See figure 11 on separate illustration sheet



Press and hold  and press  3 times.


Enter the desired temperature for daytime setback. Save by pressing  or wait for 15 seconds for automatic confirmation.



Change number of hours – daytime

See figure 12 on separate illustration sheet


Press and hold  and press  2 times.

Enter the desired number of hours for daytime setback. Save by pressing  or wait for 15 seconds for automatic confirmation.

Change number of hours – nighttime




See figure 13 on separate illustration sheet

Press and hold  and press  2 times.

Enter the desired number of hours for nighttime setback. Save by pressing  or wait for 15 seconds for automatic confirmation.

Cancel (skip) setback period



See figure 14 on separate illustration sheet

Press and hold  and press  or  once (depending on which setback period you want to cancel).

- * **The heater will skip an active setback period or the next setback period.**
- * **During the next setback period, the heater will automatically resume the programmed temperature reduction.**

Delete a setback program



See figure 15 on separate illustration sheet

Press and hold  or  (depending on which setback period you want to cancel) for 3 seconds.

Temperature calibration


See figure 16 on separate illustration sheet

It may occur deviation between the temperature registered by the heater and the actual temperature in the room. This can be caused by several reasons, however, the most common is that the heater is placed in a fair distance from where you usually reside. When you set the temperature to for example 22 degrees, it is only natural that you expect the same temperature where your sofa is placed for instance. However, the temperature sensor is placed on the product itself, and therefore a deviation in temperature may occur. To adjust this, all Mill heaters are equipped with a calibration function, which enables you to adjust the temperature registered by the heater. N.B! The room must have achieved a stable temperature before any calibration.

Press  2 times and use + or – to set the actual temperature observed in the room. Confirm with  or wait for 15 seconds for automatic confirmation.

Resetting the heater

See figure 17 on separate illustration sheet

Turn off the heater's main switch. Press and hold  while you turn on the heater's main switch.



Memory function

See figure 17 on separate illustration sheet

The heater remembers all the temperature settings and will automatically return to the desired temperature after a power cut. Your day- and nighttime setbacks will however be deleted after a power cut, and you will need to register the programs again.


Maintenance

1. For cleaning, always unplug the heater and leave it to cool.
2. Wipe the heater regularly with a damp cloth and dry the surface before turning on the heater again.
3. The heater must be cleaned at least once a month during the heating season.
CAUTION! The heater should never be immersed in water.
Avoid using detergents to clean the heater.
Never let any water get inside the heater; this can be hazardous.
4. Dust etc. should be removed with a soft cloth.
5. The heater can be stored in a dry and clean place.
6. If the heater stops working, do not attempt to repair it yourself because it can cause a fire hazard and/or electric shock.

Warranty

The warranty is valid for 2 years. The heater will be repaired or replaced during this time should any malfunction occur. The warranty applies if the heater is used according to these instructions and the customer can present a purchase receipt. If the heater malfunctions in any way, please contact the store where it was purchased or the importer.

Waste disposal

The symbol  indicates that this product is not to be disposed of together with household waste. This product must be delivered to a recycling service or container for electrical appliances and electronic equipment. This is done to avoid health risks and prevent harm to the environment. Local businesses (or the environmental station in your neighborhood) are required by law to accept and recycle such products, as a means of environmentally sound disposal.

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Seasonal energy efficiency

Information requirement for the electric local space heaters

Model identifier(s): AB-H1000MEC

Item	Symbol	Value	Unit	Item	Unit
Head Output				Type of heat input, for electric storage local space heaters only (select one)	
Nominal heat output	P _{nom}	1,00	kW	manual heat charge control, with integrated thermostat	No
Minimum heat output (indicative)	P _{min}	0,4	kW	manual heat charge control with room and/or outdoor temperature feedback	No
Maximum continuous heat output	P _{max,c}	1,00	kW	electronic heat charge control with room and/or outdoor temperature feedback	No
Auxiliary electricity consumption				fan assisted heat output	No
At nominal heat output	e _{lmax}	N/A	kW	Type of heat output/room temperature control (select one)	
At minimum heat output	e _{lmin}	N/A	kW	single stage heat output and no room temperature control	No
In standby mode	e _{lSB}	0,0	kW	two or more manual stages, no room temperature control	No
				with mechanic thermostat room temperature control	Yes
Seasonal space heating energy efficiency	η _s	36 %		with electronic room temperature control	No
				electronic room temperature control plus day timer	No
				electronic room temperature control plus week timer	No
				Other control options (multiple selections possible)	
				room temperature control, with presence detection	No
				room temperature control, with open window detection	No
				with distance control option	No
				with adaptive start control	No
				with working time limitation	No
				with black bulb sensor	No
Contact details	Mill International AS Grini Næringspark 10, 1361 Østerås, Norway				



Seasonal energy efficiency

Information requirement for the electric local space heaters

Model identifier(s): AB-H1000DN, AB-H1000DN BLACK, AB-H1000DN GLASS

Item	Symbol	Value	Unit	Item	Unit
Head Output				Type of heat input, for electric storage local space heaters only (select one)	
Nominal heat output	P _{nom}	1,00	kW	manual heat charge control, with integrated thermostat	No
Minimum heat output (indicative)	P _{min}	0,40	kW	manual heat charge control with room and/or outdoor temperature feedback	No
Maximum continuous heat output	P _{max,c}	1,00	kW	electronic heat charge control with room and/or outdoor temperature feedback	No
Auxiliary electricity consumption				fan assisted heat output	No
At nominal heat output	el _{max}	N/A	kW	Type of heat output/room temperature control (select one)	
At minimum heat output	el _{min}	N/A	kW	single stage heat output and no room temperature control	No
In standby mode	e _{ISB}	0,00021	kW	two or more manual stages, no room temperature control	No
				with mechanic thermostat room temperature control	No
Seasonal space heating energy efficiency	η _s	39 %		with electronic room temperature control	No
				electronic room temperature control plus day timer	No
				electronic room temperature control plus week timer	Yes
				Other control options (multiple selections possible)	
				room temperature control, with presence detection	No
				room temperature control, with open window detection	No
				with distance control option	No
				with adaptive start control	No
				with working time limitation	No
				with black bulb sensor	No
Contact details	Mill International AS Grini Næringspark 10, 1361 Østerås, Norway				



Seasonal energy efficiency

Information requirement for the electric local space heaters

Model identifier(s): AB-H1500DN

Item	Symbol	Value	Unit	Item	Unit
Head Output				Type of heat input, for electric storage local space heaters only (select one)	
Nominal heat output	P _{nom}	1,50	kW	manual heat charge control, with integrated thermostat	No
Minimum heat output (indicative)	P _{min}	0,60	kW	manual heat charge control with room and/or outdoor temperature feedback	No
Maximum continuous heat output	P _{max,c}	1,50	kW	electronic heat charge control with room and/or outdoor temperature feedback	No
Auxiliary electricity consumption				fan assisted heat output	No
At nominal heat output	el _{max}	N/A	kW	Type of heat output/room temperature control (select one)	
At minimum heat output	el _{min}	N/A	kW	single stage heat output and no room temperature control	No
In standby mode	el _{SB}	0,00021	kW	two or more manual stages, no room temperature control	No
				with mechanic thermostat room temperature control	No
Seasonal space heating energy efficiency	η _s	39 %		with electronic room temperature control	No
				electronic room temperature control plus day timer	No
				electronic room temperature control plus week timer	Yes
				Other control options (multiple selections possible)	
				room temperature control, with presence detection	No
				room temperature control, with open window detection	No
				with distance control option	No
				with adaptive start control	No
				with working time limitation	No
				with black bulb sensor	No
Contact details	Mill International AS Grini Næringspark 10, 1361 Østerås, Norway				



Seasonal energy efficiency

Information requirement for the electric local space heaters

Model identifier(s): AB-H2000DN

Item	Symbol	Value	Unit	Item	Unit
Head Output				Type of heat input, for electric storage local space heaters only (select one)	
Nominal heat output	P _{nom}	2,00	kW	manual heat charge control, with integrated thermostat	No
Minimum heat output (indicative)	P _{min}	0,80	kW	manual heat charge control with room and/or outdoor temperature feedback	No
Maximum continuous heat output	P _{max,c}	2,00	kW	electronic heat charge control with room and/or outdoor temperature feedback	No
Auxiliary electricity consumption				fan assisted heat output	No
At nominal heat output	e _{lmax}	N/A	kW	Type of heat output/room temperature control (select one)	
At minimum heat output	e _{lmin}	N/A	kW	single stage heat output and no room temperature control	No
In standby mode	e _{lSB}	0,00021	kW	two or more manual stages, no room temperature control	No
				with mechanic thermostat room temperature control	No
Seasonal space heating energy efficiency	η _s	39 %		with electronic room temperature control	No
				electronic room temperature control plus day timer	No
				electronic room temperature control plus week timer	Yes
				Other control options (multiple selections possible)	
				room temperature control, with presence detection	No
				room temperature control, with open window detection	No
				with distance control option	No
				with adaptive start control	No
				with working time limitation	No
				with black bulb sensor	No
Contact details	Mill International AS Grini Næringspark 10, 1361 Østerås, Norway				