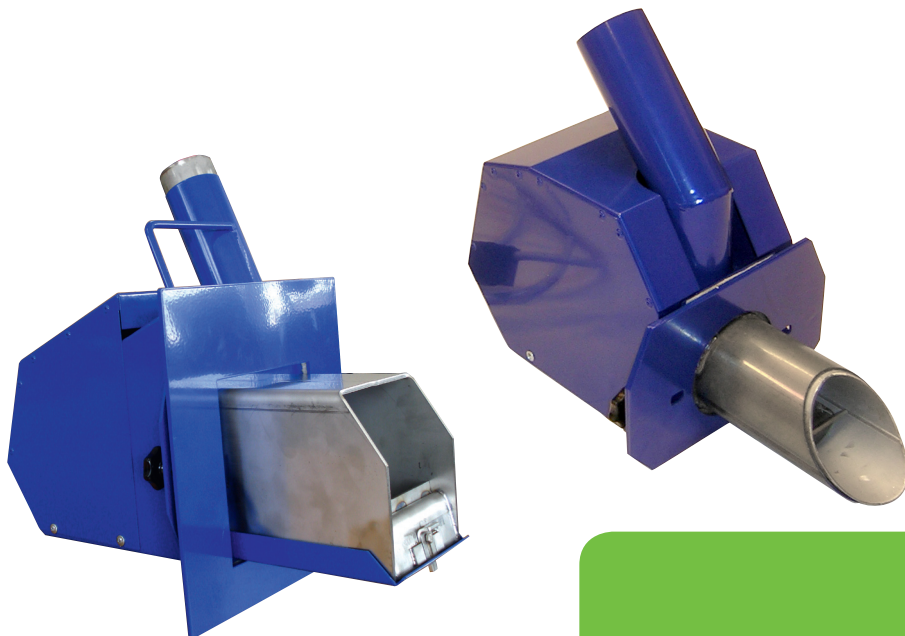




User Manual for NyMo 200 & 150 Pellets Burners



NyMo

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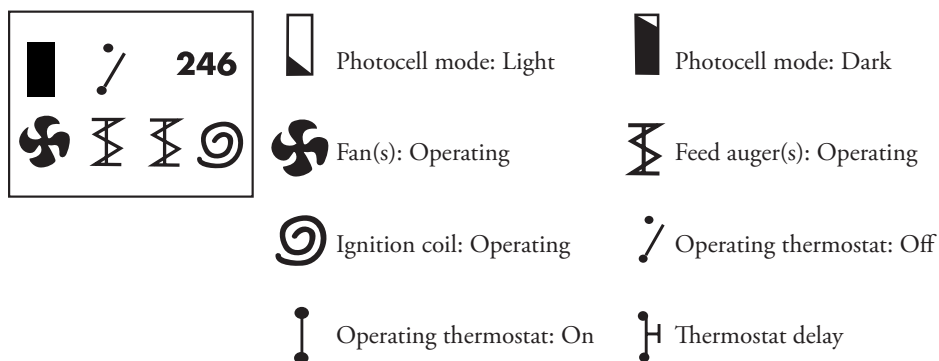
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Control of burner functions

The control circuit board includes a display and three programming keys: “Enter“, “Plus“ (+) and “Minus“ (-).

The following symbols can be displayed:



The control system is pre-set for the type of burner delivered.

For changing a function, press ENTER, and the value last entered will be displayed.

Example:

The text „RUNTIME 8 SEC“ is being displayed: This means that the feed auger is set to run 8 seconds at a time. If you want to change this value, press ENTER once again, so that an asterisk (*) appears behind the figure 8. Now press the plus (+) or minus (-) key, until you obtain the feed time you wish, and confirm the new value by pressing ENTER (now the asterisk disappears). After some 5 seconds, the burner status with all its symbols will be displayed again.

If you want to change a different function, press the plus (+) or minus (-) key until the function you want to change is displayed, and then change the function as described above.



The LED on the circuit board is flashing when the plant is operating and the electronics are working as intended. If the LED stops flashing and shows a steady light, the burner has stopped due to some fault, and one of the following texts is displayed:

PC SHORT

(photocell short-circuited)

= Photocell broken, must be replaced.

IGN.FAIL

(Ignition failed)

= Burner has made repeated ignition attempts without the photocell detecting any flame; the feed auger can have tripped, or the ignition coil might be broken. For more on these and other causes, please see chapter “Trouble-shooting”.

General function displays:

FEEDTIME

= Feed auger operating time necessary to provide the required ignition fuel. Normal operating time is 45–90 sec.

PAUSTIME

= Pausing time for the auger when running at intervals. For running continuously, this time must be set to 0.

RUNTIME

= Running time for the auger when running at intervals. For running continuously, this time must be set to 0.

IGN.TIME

= Max. time for ignition coil; should be set to max. 8 minutes.

AFT.BLOW

(Fan after-blowing)

= Fan shut-down delay after the thermostat cutting out. Normal after-blowing time is about 200 sec.

FAN DEL.

(Fan delay)

= Set to 0: Fan starts when the thermostat cuts in (preventionation); set to 1: Fan starts after ignition fuel feed time is up; set to 2: Fan starts when the photocell detects light (burner ignites using natural draught); set to 3: Fan start can be delayed by a time after the end of ignition fuel feeding (suitable for moist or coarse fuel).



FEEDDEL. (Fuel feeding delay)	= After ignition, the feed auger start can be delayed to allow proper fuel kindling and burning out (suitable for hard fuel like pellets).
RE-INGN. (No. of re-ignition attempts)	= Should normally be set to 1.
AFT.FEED (After-feeding by auger)	= After the thermostat has cut out and fan after-blowing time is up, you can let the feed auger run a little longer (normally about 10 sec.). This is allowed only if the burner feeding auger comes directly from the main fuel storage. If not, this value must be 0.
ADD.AUG. (Additional auger)	Applies to chip burners only, not to pellets burners! = Function for two or more feed augers. In this case the auger right by the burner is connected to its own terminals. When the thermostat cuts out, the auger continues running, emptying itself. Mode 0 is not used; mode 1 = Normal operation; mode 2 = Additional auger runs during the ignition process; mode 3 = Additional auger follows the main auger when feeding at intervals.
AUG.AFT. (After-feeding by add. auger)	Applies to chip burners only, not to pellets burners! = Desired after-feeding by the additional auger after the thermostat has cut out (normally about 90 sec.).
DARK	= Photocell sensitivity, factory-adjusted to 120.
LIGHT	= Photocell sensitivity, factory-adjusted to 80.
S. START (Soft start)	= For pellets burners this should be set to 1.
THM.DEL. (Thermostat delay)	= To be used for hot-water tanks. Here you can prolong the burner's idle time by 15–360 minutes.
IDLETIME	= Should always be set to 30 sec.

PLEASE NOTE: This control program is part of a patented burner, whose software is included in the patent. Copying without our permission will be subject to legal action.

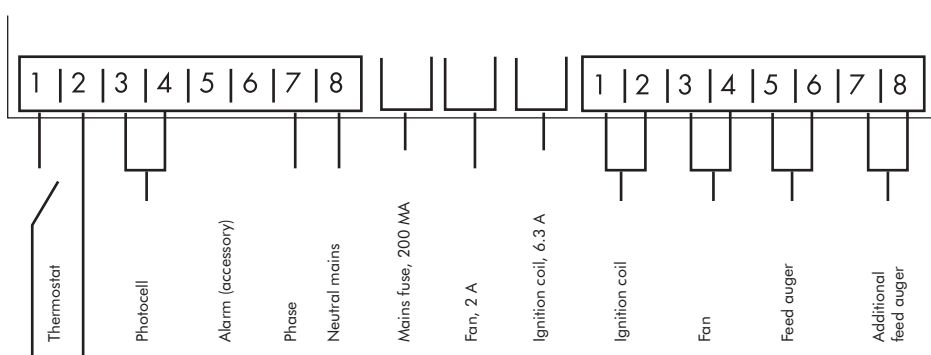


Connection of functions on the control unit

	Terminals to the left
Thermostat	Terminals 1 + 2
Photocell	Terminals 3 + 4
Alarm (accessory)	Terminals 5 + 6
Phase	Terminal 7
Neutral mains	Terminal 8

	Fuses
Mains fuse, 200 MA	Left-hand fuse (next to terminal 8)
Fan, 2 A	Middle fuse
Ignition coil, 6.3 A	Right-hand fuse

	Terminals to the right
Ignition coil	Terminals 1 + 2
Fan	Terminals 3 + 4
Feed auger	Terminals 5 + 6
Additional feed auger	Terminals 7 + 8





Installation of burner

Mount the burner's mounting plate into one of the boiler hatches, or dismount the hatch, where the burner is supposed to be installed, together with the hatch frame. Now drill holes into the burner's mounting plate, which must correspond to the mounting holes in the hatch frame. Then bolt the mounting plate to the boiler and make sure the installation is completely air-tight.

Remove any loose grates from the boiler. Some boilers also have flue gas "brakes" (for oil heating) that must be removed.

NOTE: Regardless of the type of burner, the distance between the front edge of the burner grate section and the rear wall of the boiler's combustion chamber must be at least 200-250 mm. If this is not the case, a 70mm spacer frame can be installed, to be ordered from us.

The burner is primarily intended for installation in the opening where the oil burner has been sitting. On certain boilers, the burner can also be mounted into the hatch, if the hatch's hinge and lock are sufficiently strong to be able to carry the burner; furthermore, the hatch must be secured with a switch (limit switch type). You can also make a new hatch with an opening for the burner, as well as an adapter plate if you want to now and then heat with different fuels.

Place the feed auger into the pellets storage bin and then fill the bin with pellets (not the other way around, as you won't be able to get the auger down into a filled bin). If need be, make a hole into the bin wall to obtain proper auger inclination. The auger must not be inclined more than 45°, otherwise pellets feeding might become uneven, leading to disturbances. After its installation, plug the feed auger into a wall socket. Now the auger is filling up with pellets, which will take some 20 minutes. When the pellets start dropping into the burner hose, stop the feed auger and plug it into the burner.

The electrical connection of the burner must follow the enclosed wiring diagram and be carried out by a certified electrician. The electrical power must be wired through a double thermostat on the boiler. If there is a hot-water tank, it might be possible to attach an operating thermostat on top of the tank, or else a contact thermostat, to achieve the best results.

NOTE: The degrees shown on the thermostat can deviate somewhat from the actual water temperature in the tank.

Prior to starting the burner, dismount the burner hose, light a match and hold it over the burner's fuel pipe. Now the flame should be sucked down into the burner opening, indicating that there is negative pressure in the boiler. If this is not the case, check if secondary air valves or hatches are leaking air. This test must be repeated after the burner has been operating for 15-30 minutes. Continue testing now and then; if you detect counter-pressure from the boiler,



the latter must be checked out or swept. Overpressure in the boiler can also be created if the burner has too high a feed rate or is getting too much combustion air. To try this out, you can lower the fuel feed and air supply values. The burner is designed for max. 20 kW and can be damaged (for example, by overheating) when getting too much fuel.

The draught in the boiler is crucial for your heating. If the burner is installed on a typical oil burner, flue gas “brakes” and the like must be removed from inside the boiler so as to avoid poor draught conditions likely to make the burner overheat and cause deflagrations when being started up. This problem can arise in summertime. The draught must be 1-1.5 vp, measured between boiler and chimney. The flue gas ducts in the boiler must be cleaned on a regular basis. This is more important than the removal of ash. Also the burner’s grate and gas neck must be cleaned as needed, which is dependent on pellets quality: The higher the proportion of fines in the pellets, the more frequently the burner must be cleaned.

Also the pellets storage bin must be cleared from fines. When the bin is emptied out to the point where you can see the feed auger, check and make sure there are not too many fines in the auger infeed. Too many fines obstruct feeding and can make the burner stop.

The burner is preset to about 15 kW. If you want to increase or decrease fuel feeding, proceed as described in the opening chapter. To ensure cost-efficient operation, flue gas temperature must not exceed 275-300 degrees Celsius.

Clean the photocell now and then. Use paper – no chemicals! Soot deposits on the photocell indicate that the draught in the boiler is insufficient or the fuel feed rate too high.

All solid-fuel heating plants need regular maintenance for best results and highest reliability. So please be prepared to follow our instructions.



Trouble-shooting

If the burner has stopped and nothing can be seen on the burner display, check the main fuse and the main power switch.

If you discover no irregularities, switch off the power and remove the burner hood (slightly loosen its four holding screws and lift it off upward and backward). Then switch the power back on and measure the voltage on terminals 7 and 8; it should be 230 V. NOTE: Voltage checks must be carried out by a certified electrician!

If the voltage is correct, check the fuses.

If symbols are displayed: Check whether the thermostat symbol indicates that the thermostat has cut out. Measure the voltage on terminals 1 + 2 on the left of the control circuit board. NOTE: Voltage checks must be carried out by a certified electrician!

If there are no 230 V, the thermostat might not be properly connected, or else it is broken.

Check the photocell for damage.

If the feed auger does not run: Check the overheating protector sitting on the fuel infeed pipe. If the protector has tripped, certain types can be reset. Otherwise, restart the burner and check whether there is voltage on the terminals for the feed auger. NOTE: Voltage checks must be carried out by a certified electrician!

You can also plug the auger into a wall socket to verify its function.

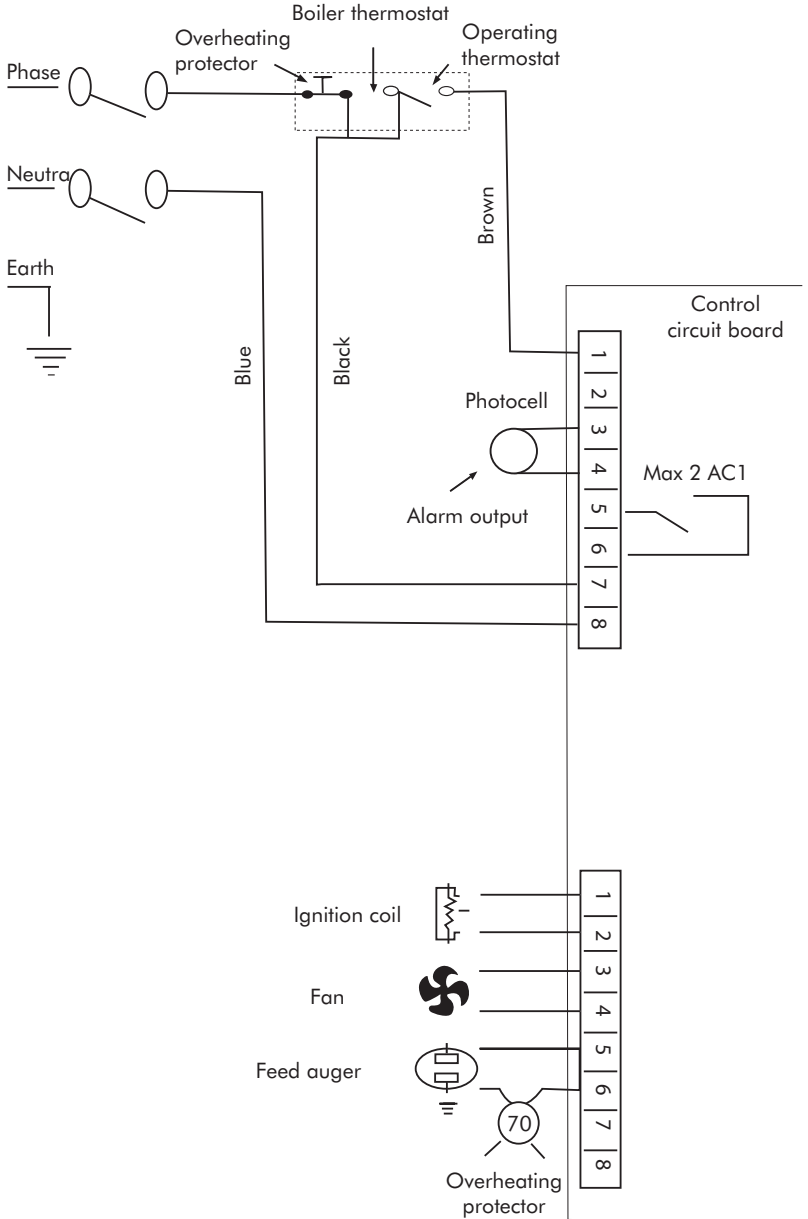
If pellets are filling up the hose completely: Probably the hose is obstructed by long pieces. Switch off the power to clean the burner. Also too much cinders on the grate can be a cause (poor fuel quality or wrong setting). Clean the burner more frequently! After cleaning, switch the power back on.

If the ignition is faulty, check the ignition fuse (see wiring diagram).

If the fan does not work, check its fuse and its connections. Rotate the impeller to check for possible obstructions, and replace the fan if necessary.



Wiring diagram NyMo 200 – 150





Guarantee

This certificate documents our guarantee that is valid for two years from the purchase date. Our guarantee does not cover damage caused by natural disasters, lightning, faulty installation, faulty setting, faulty handling or faulty servicing of your burner. Nor does our guarantee cover other equipment that can affect your burner's operation or material life.

Purchase date: _____

Signatures:

Names printed:



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