

MCL

solid fuel boiler



MCL is the industrial series of solid fuel boiler, offering a wide power range (139-1.162 kW). It is designed for function on any type of solid fuel: wood, agricultural residues, carbon, briquettes, with a minimum diameter of 30mm.

The boiler is equipped with three doors: upper door for cleaning of the heat exchanger, middle door for fuel loading and lower door for ash removal.

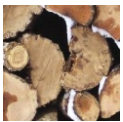
The wood grate is consisted of water cooled tubes for maximum efficiency.

On the middle door an inspection flange is positioned, which can also be used for mounting a typical oil or gas burner as an alternative or emergency solution.

The combustion is performed with a fan mounted on the back side of the boiler, and distributed evenly through an air distributor.

The boiler is equipped with advanced digital controller with fan modulation and many automatization functions for the boiler and heating installation.

Fuels



wood



briquettes



carbon



Full fan modulation



Fumes sensor modulation
Flame detection



Advanced digital control



3 years product warranty



Safety devices and alarm signals

Main features

- Oval-shaped fire chamber for high volume under small dimensions;
- Robust construction;
- High efficiency;
- Tubed heat exchanger;
- Water-cooled wood grate for increased efficiency;
- Digital controller with advanced control of the boiler and the heating installation;
- Full fan modulation with exhaust gas temperature sensor;
- Automatic fuel lack recognition;
- Control of four pumps, hot water boiler, buffer tank, mixing valve control;
- Weather sensitive control with external temperature sensor;
- Control of an auxiliary boiler.

ADVANCED DIGITAL INTERFACE

















The boiler is equipped with an advanced digital controller for extended control of the boiler and installation. The controller offers three different algorithms of fan modulation.

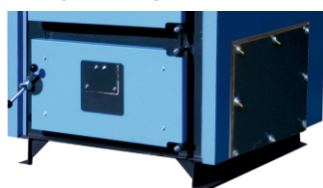
The design of the controller is modular, which enables BUS extension for control of further devices.

The controller automatically recognizes the lack of fuel and passes to standby mode, controls the heating pump, hot water pump and recirculation pump. It can control the hot water boiler, buffer tank, one zone mixing valve and can give command to an auxiliary boiler. A room thermostat can be also connected to the controller.

The controller is standard equipped with weather sensitive control, by means of an external temperature sensor.

	Fan modulation		Weather control		Exhaust temperature regulation
	Heating pump		Buffer control		Room thermostat
	Hot water pump		Boiler switch		Alarm signals
	Mixing valve pump		Mixing valve		Overheating protection
	Recirculation pump		Summer/Winter mode		

OPTIONALS



MCL-F Version: is a variation of the MCL boiler, with a flange for BIOFIRE furnace mounting. The flange can be positioned on the right or left side of the boiler. The boiler will be used as classic wood boiler and when the furnace will be mounted, it adds the possibility of function with pellet and biomass.



Safety heat exchanger: All models can be equipped with a safety heat exchanger for additional protection against overheating. The exchanger is made of copper pipe and is incorporated in the boiler body, surrounding the upper part of the fire chamber.



Controller extension MODULE-B: is an extension module of the basic controller which enables the control of two additional mixing zones.



Lambda module ECOLAMBDA: for maximum efficiency of the combustion, the MCL boiler can be equipped with a lambda module. The sensor is installed at the chimney of the boiler and regulates automatically the oxygen supply in order to achieve perfect combustion parameters.

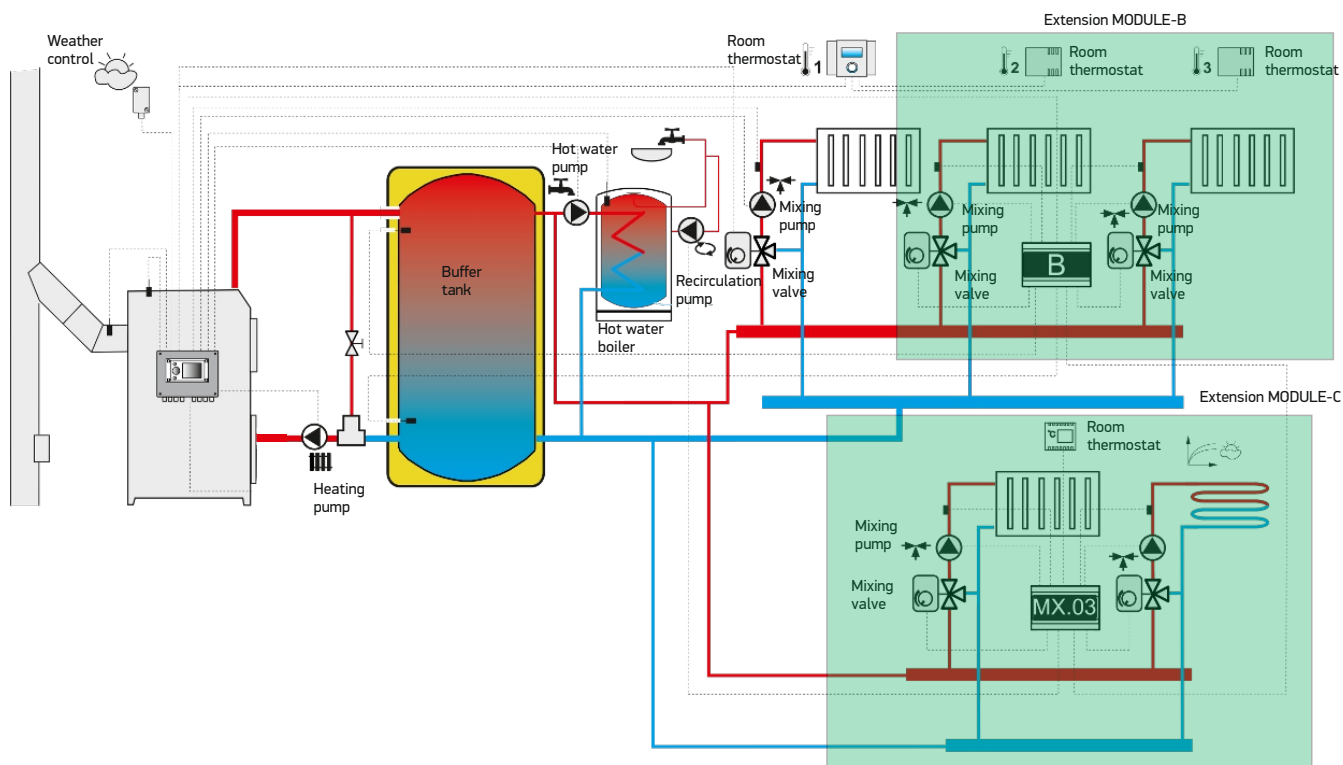


ECONET: is an advanced communication module which facilitates remote control of operation of the boiler via PC computer with Internet access. User is given possibility to control all the parameters: temperature adjustments, pumps and mixers operation and monitoring of current regulator operation states. Clear visualization of the boiler operation history, presented in a form of charts is another crucial benefit for a user.



Safety kit: is intended for mounting on the safety connection of the boiler. It includes safety valve(s) (according to boiler capacity), one air-relief valve and one thermomanometer.

INSTALLATION DIAGRAM

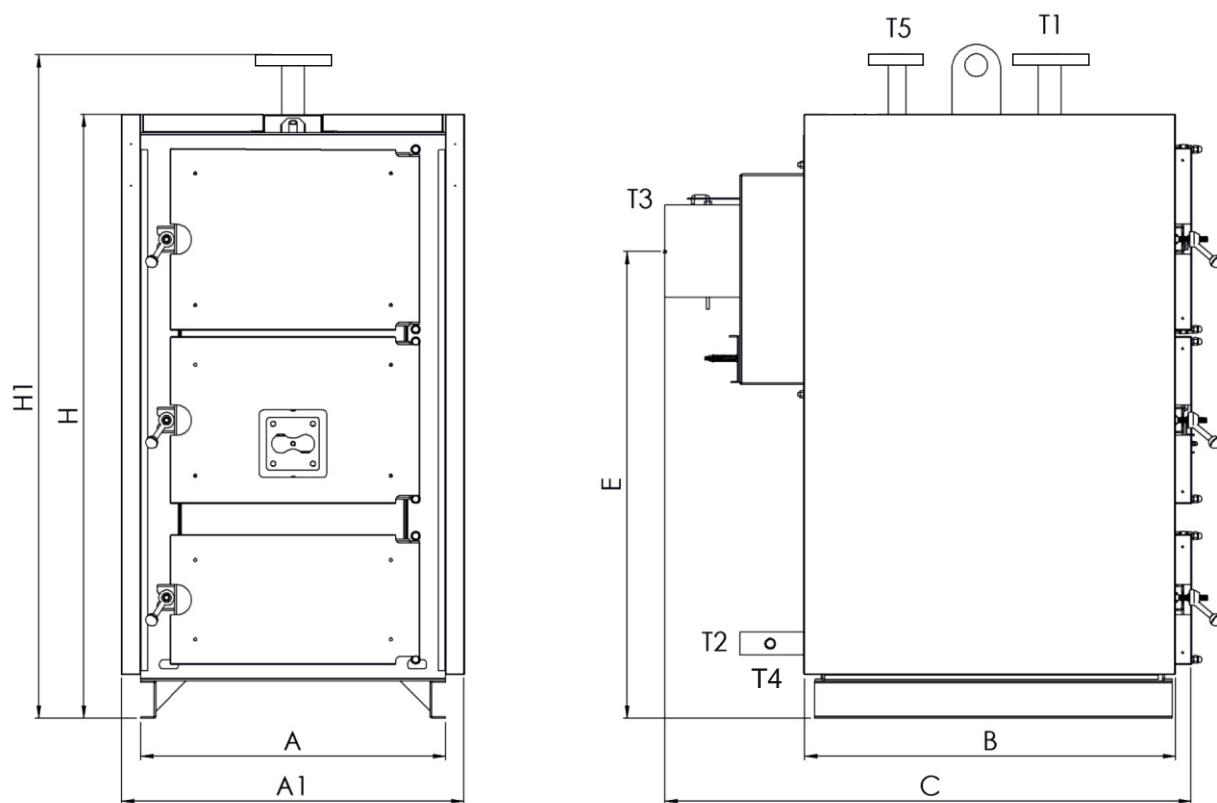


Extension modules MODULE-B and MODULE-C are not standard boiler equipment.

TECHNICAL DATA

Type	Power	Temp. max.	Pressure max.	Feeding door	Wood length	Efficiency	Water contents	Electrical supply	Weight
	kW	°C	bar	mm	mm	%	lit	V/Hz	kg
MCL 120	139	90	3	590x370	1150	80	360	230/50	880
MCL 150	174	90	3	590x370	1400	80	420	230/50	990
MCL 180	208	90	3	590x370	1600	80	550	230/50	1220
MCL 200	232	90	3	825x510	1000	80	620	230/50	1420
MCL 250	291	90	3	825x510	1250	80	720	230/50	1600
MCL 300	349	90	3	825x510	1500	80	820	230/50	2130
MCL 400	465	90	3	825x510	1750	80	920	230/50	2200
MCL 500	581	90	3	1180x665	1250	80	1420	230/50	3000
MCL 600	698	90	3	1180x665	1500	80	1860	230/50	3400
MCL 700	814	90	3	1180x665	1750	80	2440	230/50	4000
MCL 800	930	90	3	1180x665	2000	80	2650	230/50	4800
MCL 900	1046	90	3	1180x665	2250	80	2890	230/50	5500

DIMENSIONS



- T1 - Outlet
- T2 - Inlet
- T3 - Chimney
- T4 - Drainage
- T5 - Safety connection

Type	A1	A	B	H	H1	E	C	T3	T1-T2	T5	T4
	mm								mm		inch
MCL 120	920	810	1320	1585	1740	1245	1765	295	DN 65	DN 50	½"
MCL 150	920	810	1570	1585	1740	1245	2015	295	DN 65	DN 50	½"
MCL 180	920	810	1820	1585	1740	1245	2265	295	DN 65	DN 50	½"
MCL 200	1107	1000	1320	1970	2150	1510	1840	345	DN 80	DN 50	1"
MCL 250	1107	1000	1570	1970	2150	1510	2090	345	DN 80	DN 50	1"
MCL 300	1107	1000	1820	1970	2150	1510	2340	395	DN 100	DN 50	1"
MCL 400	1107	1000	2070	1970	2150	1510	2590	395	DN 100	DN 50	1"
MCL 500	1575	1475	1590	2465	2570	1870	2225	445	DN 100	DN 65	1 ¼"
MCL 600	1575	1475	1840	2465	2570	1870	2475	445	DN 125	DN 65	1 ¼"
MCL 700	1575	1475	2090	2465	2570	1870	2725	495	DN 125	DN 65	1 ¼"
MCL 800	1575	1475	2340	2465	2570	1870	2975	495	DN 150	DN 80	1 ¼"
MCL 900	1575	1475	2590	2465	2570	1870	3225	495	DN 150	DN 80	1 ¼"