

# B



**43 kW - 350 kW**



**3.050 m<sup>3</sup>/h - 26.500 m<sup>3</sup>/h**



## **BIO MANN**

### **Industrial pellet heater**

**Energy saving from 30% to 50% against other non-ecological combustibles.**

**It does not feed the CO<sub>2</sub> emission on to the ozone layer.**

**Subsidized equipments within the Saving Strategy and Energy Efficiency.**



**MET MANN**



## Industrial pellet heater



The BIOmann heaters are fully autonomous for the heating of non domestic premises. Their special feature is that they use pellets (bio-mass) as combustible. At present, bio-mass is the most economic and ecologic combustible, since energy saving goes from 30-50% with regards to other combustibles.

The start up range is composed of six models of 43, 69, 100, 160, 200 and 350 kW as calorific power with outputs higher than 92%.

The heaters are equipped with 5 basic elements, which are:

### Basic equipment

Industrial heater equipped with a combustion chamber with a tubular exchanger designed to obtain outputs higher than 92%.

The external structure is made of galvanised steel kiln painted with polyester powder paint. The parts exposed to the heat are completely isolated either by means of a Met Matt patented air chamber or by means of highly thick insulating fibres.

On the front part, there is a big access door to the combustion chamber and the heating exchanger to realise the cleaning and inspection tasks.

The ventilation train located at the lower part impels the hot air to the premises to be heated.

### Automatic pellet burner

The automatic pellets burner is responsible to automatically and in a safety way light the pellet automatically supplied by the worm gear.

Main features:

- Heater element that lights the pellet placed at the combustion ashtray.
- Centrifugal fan with a high capacity to impel by developing a horizontal flame as in the traditional burners.
- All the parts exposed to the fire are made of steel to support high temperatures.
- The fluent dynamics of the burner guarantees a homogeneous mixing of combustible/comburent with a high combustion output. Thanks to it, the burner can operate with reduced air excess.
- The power regulation can be all-nothing, double stage or multistage thanks to the programmer that allows choosing the operating type.

### Electrical panel and burner programmer

The electrical panel has been designed to be able to arrange all the equipment functions both the security ones and the operating ones. The main functions are:

- ON-OFF switch
- Safety thermostat with manual assembly.
- Electronic programmer with microprocessor.
- Display to control the operating stages and possible breakdowns.
- Probe to regulate the hot air.
- Control of the temperature of the pellets feeding tube.
- Control of the combustion chamber pressure.
- Exit for the remote indication of the alarms.
- Interface electric connectors panel/burner/heater/net feeding.
- Foreseen for the connection of a timer programmer to start and stop the equipment.
- Safety micro switches to enter to the cleaning door.

### Endless pellets feeding

The feeding mechanism of the pellets has been realised with an endless system whose components are as follows:

- Moto reducer of a high starting power.
- Electric link cable with connector included.
- Endless tube spiral.
- Tube made of carbon steel.
- Flexible tube to link with the burner.

### Pellets container

The pellets container has been designed and made to be fit at the left or right side of the equipment. All the parts have been made of a galvanized steel plate and kiln painted with polyester powder paint. The standard capacity is of 190Kg but it can be connected to a higher capacity silo by means of a pellets vacuum cleaner.



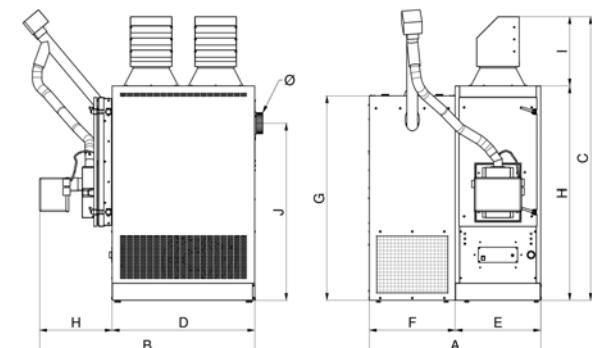
### Pellets automatic burner



### Electrical panel with burner programmer



### Container with pellets feeder



Model	BM-050	BM-070	BM-105	BM-160	BM-200	BM-350
<b>Nominal maximum power</b>	43,0 kW	69,0 kW	100 kW	160 kW	200 kW	350 kW
<b>Real maximum power</b>	39,6 kW	63,5 kW	92 kW	144 kW	184 kW	322 kW
<b>Thermal output</b>	92%	92%	92%	92%	92%	92%
<b>Maximum pellets consumption</b>	8,6 kg/h	13,8 kg/h	20 kg/h	32 kg/h	40 kg/h	70 kg/h
<b>Consumption with environment thermostat</b>	6,0 kg/h	9,6 kg/h	14 kg/h	22 kg/h	28 kg/h	49 kg/h
<b>Capacity pellets tank</b>	190 kg	190 kg	190 kg	190 kg	190 kg	190 kg
<b>Maximum volume to heat (0,04 kW/m³)</b>	1.075 m³	1.725 m³	2.500 m³	4.000 m³	5.000 m³	8.750 m³
<b>Thermal rise</b>	33 °C	34 °C	33 °C	32 °C	36 °C	39 °C
<b>Driven air flow</b>	3.050 m³/h	4.800 m³/h	7.100 m³/h	11.000 m³/h	17.000 m³/h	26.500 m³/h
<b>Driven air available pressure</b>	120 Pa	120 Pa	120 Pa	120 Pa	120 Pa	135 Pa
<b>Sound level (3 meters)</b>	60 dB (A)	64 dB (A)	75 dB (A)	75 dB (A)	75 dB (A)	75 dB (A)
<b>Motor air fan power</b>	0,55 kW	0,74 kW	1,50 kW	2,20 kW	3,00 kW	5,50 kW
<b>Power (heater element/fan burner/motor endless)</b>	530 W	530 W	645 W	800 W	850 W	925 W
<b>Electric voltage</b>	230V/I/50Hz	230V/I/50Hz	400V/III/50Hz	400V/III/50Hz	400V/III/50Hz	400V/III/50Hz

### General dimensions

	A	B	C	D	E	F	G	H	I	J	Ø
<b>BM-050</b>	1153	1301	1806	805	550	603	1430	1320	486	1145	120
<b>BM-070</b>	1204	1510	1981	1000	600	603	1430	1500	486	1239	150
<b>BM-105</b>	1306	1610	2272	1093	700	603	1430	1786	486	1613	150
<b>BM-160</b>	1507	-	2418	1702	904	603	-	1932	486	-	200
<b>BM-200</b>	1640	-	2542	2303	1037	603	-	2124	486	-	200
<b>BM-350</b>	1857	-	2587	2612	1254	603	-	2169	486	-	250



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