CE

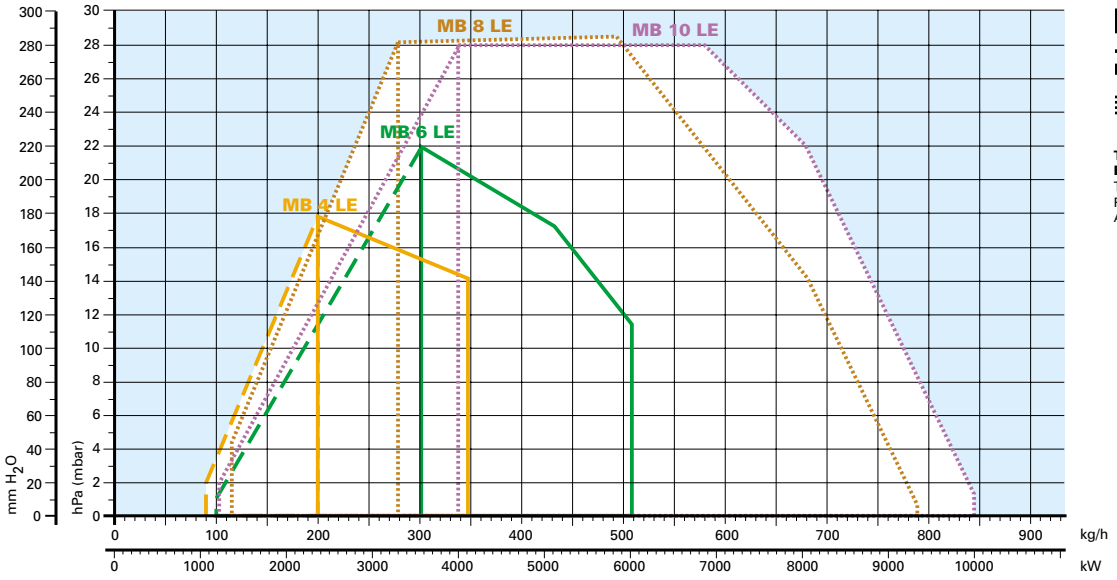
MODULATING LIGHT OIL BURNERS

▸ MODUBLOC MB LE SERIES

▸ **MB 4 LE**	1070/2380 ÷ 4109 kW
▸ **MB 6 LE**	1191/3574 ÷ 6028 kW
▸ **MB 8 LE**	1370/3300 ÷ 9346 kW
▸ **MB 10 LE**	1200/4000 ÷ 10000 kW

The MODUBLOC MB LE series of burners are characterised by a monoblock structure that means all necessary components can be combined in a single unit, making installation easier and faster. The series covers a firing range from 1070 to 10000 kW, and they have been designed for use in hot water boilers or industrial steam generators. Operation is modulating, through an innovative electronic module, which gives control of the air/fuel ratio and PID control of the generator temperature or pressure.
The mechanisms of regulation allow to catch up a high modulation ratio on all firing rates range.
The burner can, therefore, supply with precision the demanded power, guaranteeing a high efficiency system level and the stability setting, obtaining fuel consumption and operating costs reduction.
An exclusive design, with fan unit fitted on line with the combustion head, guarantees low sound emissions, reduced dimensions, easy use and maintenance.

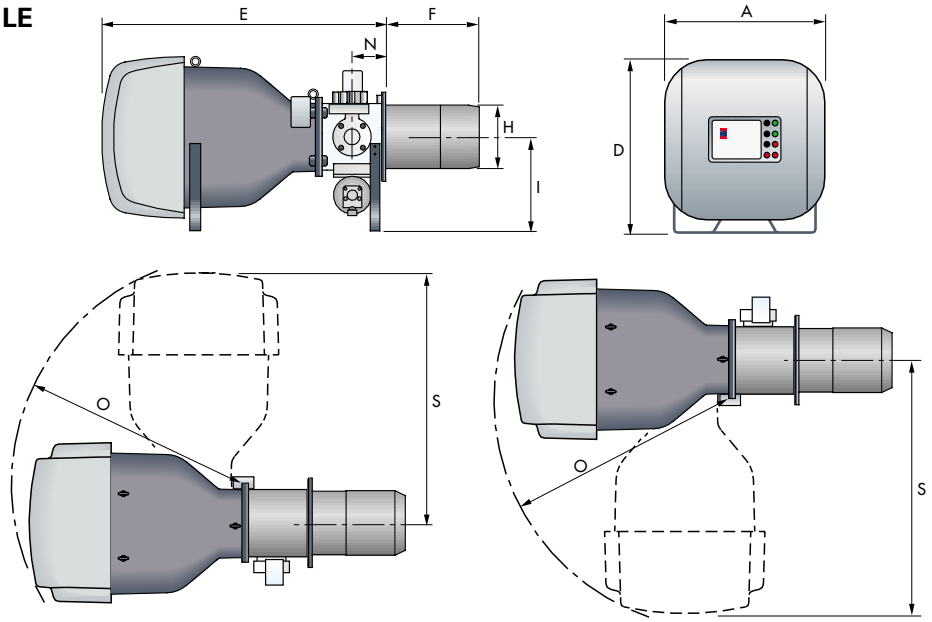
FIRING RATES



MODUBLOC MB LE series - OVERALL DIMENSIONS (mm)

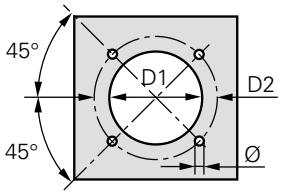
BURNER

MB 4-6-8-10 LE



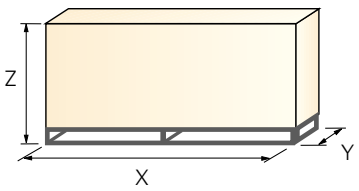
Model	A	D	E	F	H	I	N	O	S
MB 4 LE	840	910	1470	511	336	490	183	1205	1330
MB 6 LE	840	910	1470	511	336	490	183	1205	1330
MB 8 LE	1007	1079	1900	530	413	575	208	1570	1740
MB 10 LE	1007	1079	1900	530	413	575	208	1570	1740

BURNER - BOILER MOUNTING FLANGE



Model	D1	D2	Ø
MB 4 LE	350	496	M20
MB 6 LE	350	496	M20
MB 8 LE	418	608	M20
MB 10 LE	418	608	M20

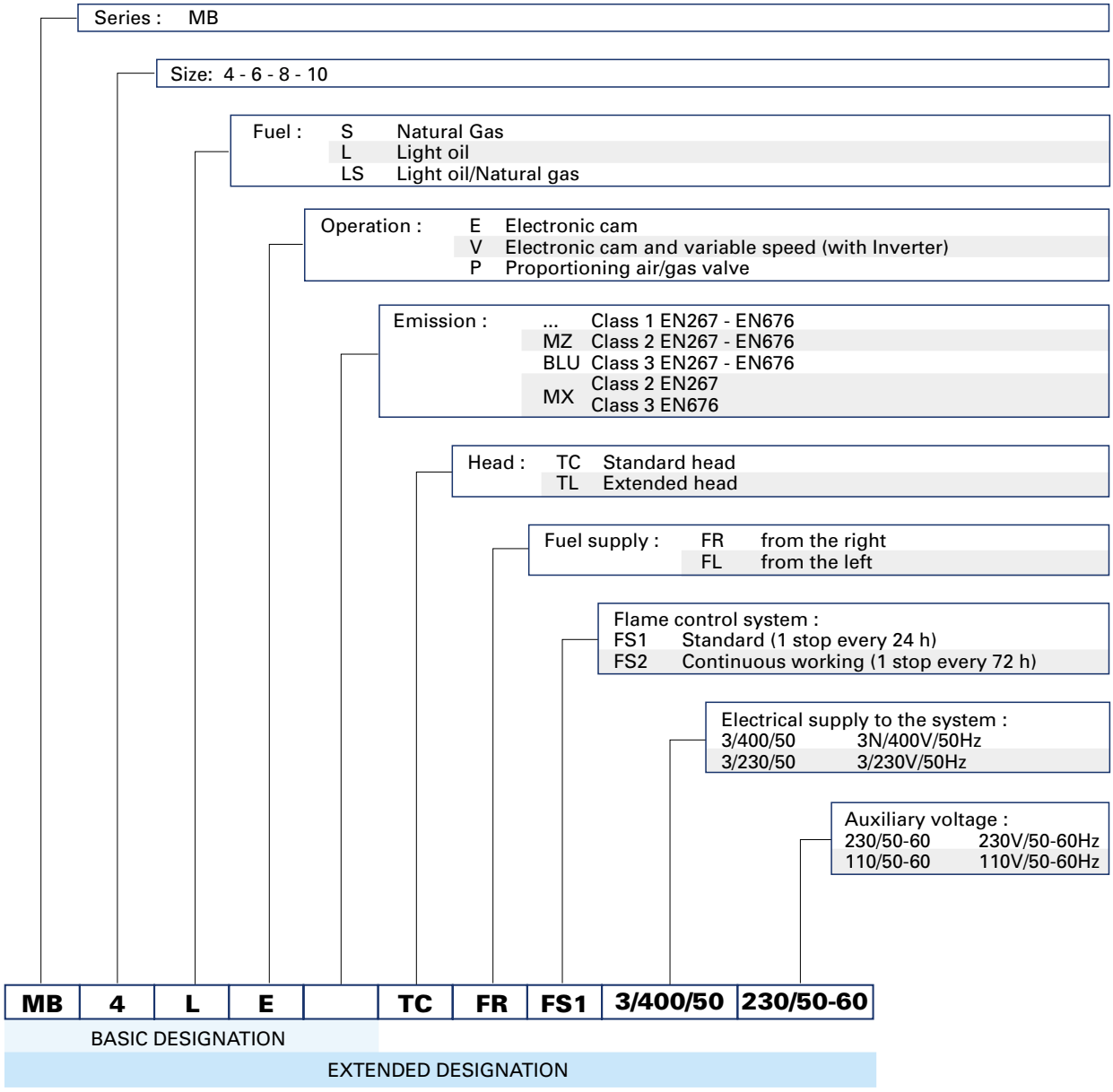
PACKAGING



Model	X	Y	Z	kg
MB 4 LE	2120	1005	1175	300
MB 6 LE	2120	1005	1175	300
MB 8 LE	2690	1170	1350	450
MB 10 LE	2690	1170	1350	450

MODUBLOC MB LE series - SPECIFICATION

DESIGNATION OF SERIES



MODUBLOC MB LE series - STATE OF SUPPLY

Monoblock forced draught oil burners modulanting operation, made up of:
- Fan with reverse curve blades
- Air suction circuit lined with sound-proofing material
- Air damper for air setting controlled by a high precision servomotor
- Air pressure switch
- Fan starting motor
- Pump starting motor
- Mobile combustion head, that can be set on the basis of required output
- Gears pump for high pressure fuel supply
- Valve unit
- Automatic setting for light oil delivery, controlled by a high precision servomotor
- Safety oil pressure switch
- Pressure gauge for delivery pressure
- Pressure gauge for return pressure
- Minimum oil pressure switch
- Module for air/fuel setting and output modulation
- Flame control panel
- Photocell for flame detection
- Star/triangle starter for the fan motor
- Main electrical supply terminal board
- Pump motor starter
- Burner on/off switch
- Auxiliary voltage led signal
- Manual or automatic output increase/decrease switch
- Burner working led signal
- Contacts motor and thermal relay with release button
- Thermal protector PTO for the fan motor
- Motor failure led signal
- Burner failure led signal and lighted release button
- Led signal for correct rotation direction of fan and pump motor
- Emergency button
- Coded connection plugs-sockets
- Burner opening hinge
- Lifting rings
- IP 40 protection level.

Standard equipment:
- 2 flexible pipes
- 2 gaskets for the flexible pipes
- 2 nipples for connection to the pump
- 4 screws for fixing the burner flange to the boiler
- 1 thermal screen
- Instruction handbook for installation, use and maintenance
- Spare parts catalogue.

MB LE series - AVAILABLE BURNER MODELS

Code	Model	Heat output		Total electrical power	Certification	Note	Price
		(kW)	(kg/h)	(kW)			
3478000	MB4LE TC FR FS1 3/400/50 230/50-60	1070/2380÷4109	90/201÷346	16	DIN 5G 932/99 M		
3478001	MB4LE TC FR FS1 3/230/50 230/50-60	1070/2380÷4109	90/201÷346	16	DIN 5G 932/99 M		
3478005	MB4LE TC FL FS1 3/400/50 230/50-60	1070/2380÷4109	90/201÷346	16	DIN 5G 932/99 M		
3478006	MB4LE TC FL FS1 3/230/50 230/50-60	1070/2380÷4109	90/201÷346	16	DIN 5G 932/99 M		
3478100	MB6LE TC FR FS1 3/400/50 230/50-60	1191/3574÷6028	100/301÷508	18	DIN 5G 932/99 M		
3478101	MB6LE TC FR FS1 3/230/50 230/50-60	1191/3574÷6028	100/301÷508	18	DIN 5G 932/99 M		
3478105	MB6LE TC FL FS1 3/400/50 230/50-60	1191/3574÷6028	100/301÷508	18	DIN 5G 932/99 M		
3478106	MB6LE TC FL FS1 3/230/50 230/50-60	1191/3574÷6028	100/301÷508	18	DIN 5G 932/99 M		
3478200	MB8LE TC FR FS1 3/400/50 230/50-60	1370/3300÷9346	116/278÷788	21,5	In progress (CE + DIN)		
3478210	MB8LE TC FR FS2 3/400/50 230/50-60	1370/3300÷9346	116/278÷788	21,5	In progress (CE + DIN)		
3478205	MB8LE TC FL FS1 3/400/50 230/50-60	1370/3300÷9346	116/278÷788	21,5	In progress (CE + DIN)		
3478215	MB8LE TC FL FS2 3/400/50 230/50-60	1370/3300÷9346	116/278÷788	21,5	In progress (CE + DIN)		
3478300	MB10LE TC FR FS1 3/400/50 230/50-60	1200/4000÷10000	101/337÷843	25,5	In progress (CE + DIN)		
3478310	MB10LE TC FR FS2 3/400/50 230/50-60	1200/4000÷10000	101/337÷843	25,5	In progress (CE + DIN)		
3478305	MB10LE TC FL FS1 3/400/50 230/50-60	1200/4000÷10000	101/337÷843	25,5	In progress (CE + DIN)		
3478315	MB10LE TC FL FS2 3/400/50 230/50-60	1200/4000÷10000	101/337÷843	25,5	In progress (CE + DIN)		

Net calorific value: 11,8 kWh/kg - 10200 kcal/kg - Viscosity at 20°C: 4÷6 mm²/s (cSt).
The burners of MB LE series are in according to 73/23 - 89/336 - 98/37 EEC Directive and EN 267 Norm.

MODUBLOC MB LE series - BURNER ACCESSORIES

DTI module (Data Transfer Interface)

This electronic module can transfer multiple signals from different local modules to a BMS supervisor software system (Building Management System).

Burner	Module code	Price
MB 4 - 6 - 8 - 10 LE	3010234	

I/O digital module

Digital modules I/O transfer in-coming and out-going information from the system in general to a remote supervisor system.

Burner	Module code	Price
MB 4 - 6 - 8 - 10 LE	3010233	

I/O analogic module

I/O Analog modules transfer in-coming and out-going information to a remote supervisor system.

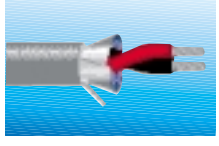
Burner	Module code	Price
MB 4 - 6 - 8 - 10 LE	3010232	

EGA module (Exhaust Gas Analyser)

Four different EGA modules are available to measure some of the exhaust gas substances and their temperature.

Burner	Analysed gas	Module code	Price
MB 4 - 6 - 8 - 10 LE	CO, CO_2, O_2	3010235	
MB 4 - 6 - 8 - 10 LE	CO, CO_2, O_2, NO	3010236	
MB 4 - 6 - 8 - 10 LE	CO, CO_2, O_2, SO_2	3010237	
MB 4 - 6 - 8 - 10 LE	CO, CO_2, O_2, NO, SO_2	3010238	

Belden 9501 type leads



All the connections for the above modules must be done using a BELDEN 9501 type lead (available in coils of 50 m).

Burner	Lead code	Price
MB 4 - 6 - 8 - 10 LE	3010239	

Accessories for modulating operation

Main management module allows a modulating operation with use of probes chosen on the basis of the application.

Burner	Probe type	Range (°C) (bar)	Probe code	Price
MB 4 - 6 - 8 - 10 LE	Temperature	0 ÷ 400°C	3010187	
MB 4 - 6 - 8 - 10 LE	Pressure	0 ÷ 3 bar	3010246	
MB 4 - 6 - 8 - 10 LE	Pressure	0 ÷ 18 bar	3010186	
MB 4 - 6 - 8 - 10 LE	Pressure	0 ÷ 30 bar	3010188	

Return nozzles with needle cut-off type B5 45°

The following list shows the features and codes on the basis of the maximum required fuel output.

NOTE: each burner needs N° 1 nozzle.

Burner	Rated delivery (kg/h)	Nozzle code	Price	Burner	Rated delivery (kg/h)	Nozzle code	Price
MB 4 LE	200	3009800		MB 8 LE	525	3009813	
	225	3009801			550	3009814	
	250	3009802			575	3009815	
	275	3009803			600	3009816	
	300	3009804			650	3009817	
	325	3009805			700	3009818	
MB 6 LE	350	3009806		MB 10 LE	400	3009808	
	375	3009807			425	3009809	
	400	3009808			450	3009810	
	425	3009809			475	3009811	
	450	3009810			500	3009812	
	475	3009811			525	3009813	
	500	3009812			550	3009814	
MB 8 LE	300	3009804			575	3009815	
	325	3009805			600	3009816	
	350	3009806			650	3009817	
	375	3009807			700	3009818	
	400	3009808			750	3009819	
	425	3009809			800	3009820	
	450	3009810			850	3009821	
	475	3009811			900	3009822	
	500	3009812					

Burner support

For easier maintenance, a mobile burner support has been designed, which means the burner can be dismantled without the need for forklift trucks.

Burner	Support code	Price
MB 4 - 6 LE	In progress	
MB 8 - 10 LE	In progress	