CE

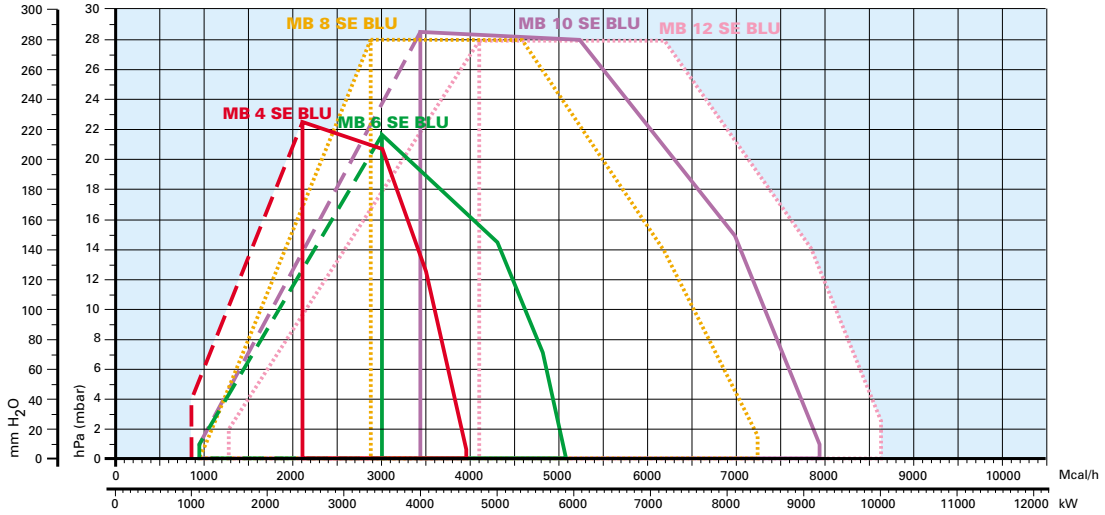
LOW NOx MODULATING GAS BURNERS

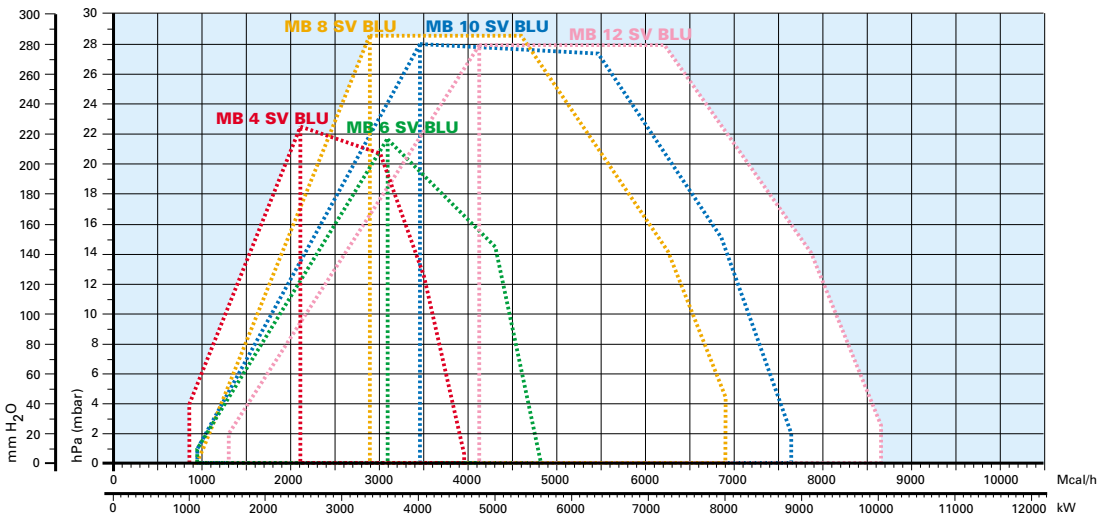
▸ MODUBLOC MB SE-SV BLU SERIES

▸ MB 4 SE BLU	1000/2471	÷	4600 kW
▸ MB 6 SE BLU	1100/3600	÷	5900 kW
▸ MB 8 SE BLU	900/3330	÷	8400 kW
▸ MB 10 SE BLU	1100/4000	÷	9200 kW
▸ MB 12 SE BLU	1505/4800	÷	10050 kW
▸ MB 4 SV BLU	1000/2471	÷	4300 kW
▸ MB 6 SV BLU	1100/3600	÷	5600 kW
▸ MB 8 SV BLU	1300/3380	÷	8000 kW
▸ MB 10 SV BLU	1100/4000	÷	8860 kW
▸ MB 12 SV BLU	1505/4800	÷	10050 kW

The MODUBLOC MB SE BLU and MB SV BLU 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 900 to 9200 kW, and they have been designed for use in hot water boilers or industrial steam generators. Adjustment 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.
The combustion head, studied with advances simulation devices, guarantees reduced polluting emissions. 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





Useful working field for choosing the burner

Modulation range

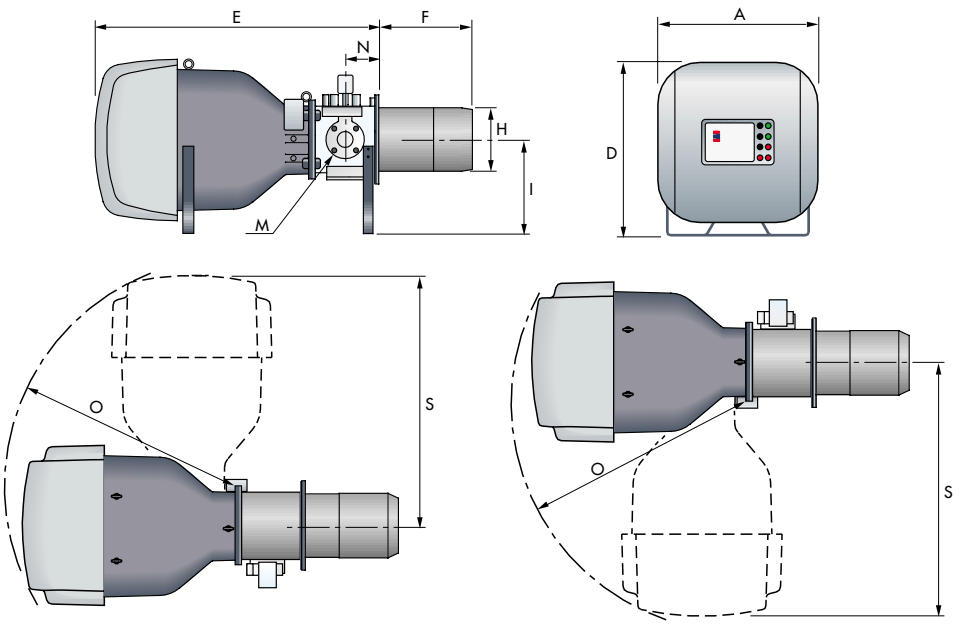
Firing rates in progress

Test conditions conforming to EN 676:
Temperature: 20°C
Pressure: 1000 mbar
Altitude: 100 m a.s.l.

MODUBLOC MB SE - SV BLU series - OVERALL DIMENSIONS (mm)

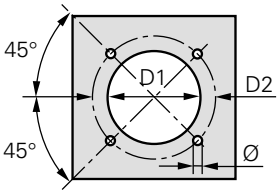
BURNER

MB 4-6-8-10 SE - SV BLU



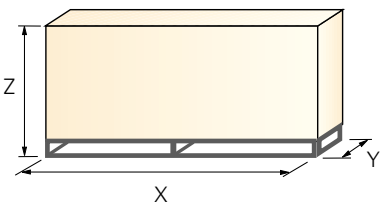
Model	A	D	E	F	H	I	M	N	O	S
MB 4 SE-SV BLU	840	910	1470	521	336	490	DN80	183	1205	1330
MB 6 SE-SV BLU	840	910	1470	521	336	490	DN80	183	1205	1330
MB 8 SE-SV BLU	1007	1079	1900	660	413	575	DN80	208	1570	1740
MB 10 SE-SV BLU	1007	1079	1900	660	413	575	DN80	208	1570	1740
MB 12 SE-SV BLU	1007	1079	1900	668	456	575	DN80	208	1570	1740

BURNER - BOILER MOUNTING FLANGE



Model	D1	D2	Ø
MB 4 SE-SV BLU	350	496	M20
MB 6 SE-SV BLU	350	496	M20
MB 8 SE-SV BLU	418	608	M20
MB 10 SE-SV BLU	418	608	M20
MB 12 SE-SV BLU	470	608	M20

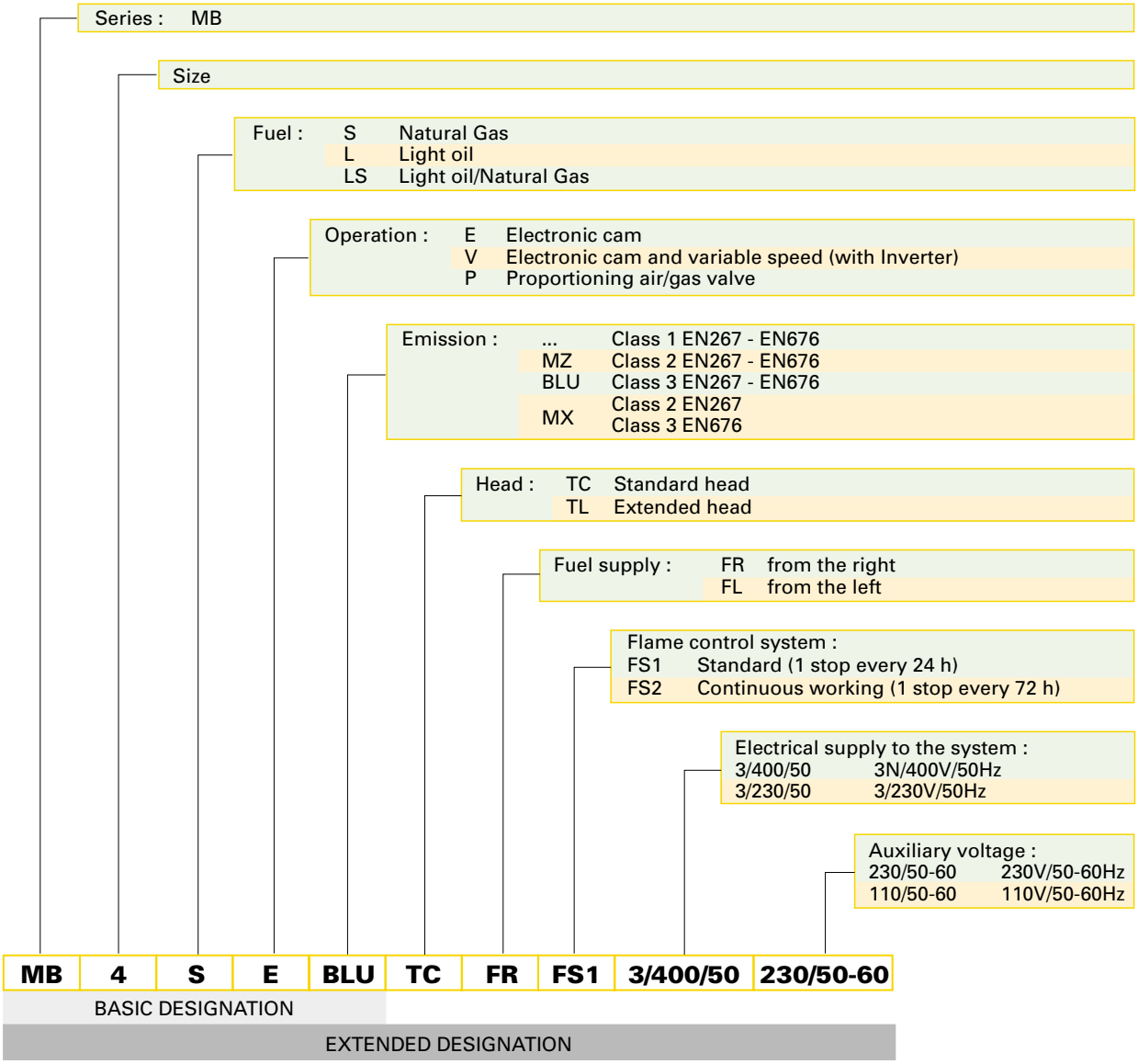
PACKAGING



Model	X	Y	Z	kg
MB 4 SE-SV BLU	2120	1005	1175	300
MB 6 SE-SV BLU	2120	1005	1175	300
MB 8 SE-SV BLU	2690	1170	1350	450
MB 10 SE-SV BLU	2690	1170	1350	450
MB 12 SE-SV BLU	2690	1170	1390	450

MODUBLOC MB SE - SV BLU series - SPECIFICATION

DESIGNATION OF SERIES



MODUBLOC MB SE BLU series - STATE OF SUPPLY

Monoblock forced draught gas burner with modulating operation, fully automatic, made up of:
- Fan with reverse curve blades high performance with low sound emissions
- 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 at 2900 rpm, three-phase 230/400 - 400/690 V with neutral, 50Hz
- Low emission mobile combustion head, that can be set on the basis of required output, fitted with:
    - stainless steel end cone, resistant to corrosion and high temperatures
    - ignition electrodes
    - flame stability disk
- Automatic regulator for gas delivery, controlled by a high precision servomotor
- Maximum gas pressure switch, with pressure test point, for halting the burner in the case of over pressure on the fuel supply line
- Module for air/fuel setting and output modulation with incorporated PID control of temperature or pressure of the heat generator
- Flame control panel for controlling the system safety
- Photocell for flame detection
- Star/triangle starter for the fan motor
- Main electrical supply terminal board
- 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
- Motor internal thermal protection
- Motor failure led signal
- Burner failure led signal and lighted release button
- Led signal for correct rotation direction of fan motor
- Emergency button
- Coded connection plugs-sockets
- Burner opening hinge
- Lifting rings
- IP 40 protection level.

Standard equipment:
- 1 flange gasket
- 8 screws for fixing the flange
- 1 thermal screen
- 4 screws for fixing the burner flange to the boiler
- Instruction handbook for installation, use and maintenance
- Spare parts catalogue.

MODUBLOC MB SV BLU series - STATE OF SUPPLY

Monoblock forced draught gas burner with modulating operation, fully automatic, made up of:
- Fan with reverse curve blades high performance with low sound emissions
- Air suction circuit lined with sound-proofing material
- Air damper for air setting at the minimal modulation controlled by a high precision servomotor
- Air pressure switch
- Fan starting motor at 2900 rpm, three-phase 230/400 - 400/690 V with neutral, 50Hz
- Low emission mobile combustion head, that can be set on the basis of required output, controlled by a high precision dedicated servomotor, fitted with:
    - stainless steel end cone, resistant to corrosion and high temperatures
    - ignition electrodes
    - flame stability disk
- Automatic regulator for gas delivery, controlled by a high precision servomotor
- Maximum gas pressure switch, with pressure test point, for halting the burner in the case of over pressure on the fuel supply line
- Module for air/fuel setting and output modulation with incorporated PID control of temperature or pressure of the heat generator
- Flame control panel for controlling the system safety built-in to the air-fuel ratio controller
- Photocell for flame detection
- Terminal board for main supply and inverter connections
- 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
- Motor failure led signal
- Burner failure led signal and lighted release button
- Led signal for correct rotation direction of fan motor
- Safety feed back signal fan speed motor
- Emergency button
- Coded connection plugs-sockets
- Burner opening hinge
- Lifting rings
- IP 40 electric protection level.

Standard equipment:
- 1 flange gasket
- 8 screws for fixing the flange
- 1 thermal screen
- 4 screws for fixing the burner flange to the boiler
- Instruction handbook for installation, use and maintenance
- Spare parts catalogue.

MODUBLOC MB SE - SV BLU series - AVAILABLE BURNER MODELS

Code	Model	Heat output		Total electrical power (kW)	Certification	Note	Price
		(kW)	Natural Gas (Nm^3/h)				
3896400	MB4SE BLU TC FR FS1 3/400/50 230/50-60	1000/2471-4600	100/247-460	14	CE 0085 AU2367		
3896401	MB4SE BLU TC FR FS1 3/230/50 230/50-60	1000/2471-4600	100/247-460	14	CE 0085 AU2367		
3896405	MB4SE BLU TC FL FS1 3/400/50 230/50-60	1000/2471-4600	100/247-460	14	CE 0085 AU2367		
3896406	MB4SE BLU TC FL FS1 3/230/50 230/50-60	1000/2471-4600	100/247-460	14	CE 0085 AU2367		
3896415	MB4SE BLU TC FL FS2 3/400/50 230/50-60	1000/2471-4600	100/247-460	14	CE 0085 AU2367		
3896500	MB6SE BLU TC FR FS1 3/400/50 230/50-60	1100/3600-5900	110/360-590	16	CE 0085 AU2367		
3896501	MB6SE BLU TC FR FS1 3/230/50 230/50-60	1100/3600-5900	110/360-590	16	CE 0085 AU2367		
3896505	MB6SE BLU TC FL FS1 3/400/50 230/50-60	1100/3600-5900	110/360-590	16	CE 0085 AU2367		
3896506	MB6SE BLU TC FL FS1 3/230/50 230/50-60	1100/3600-5900	110/360-590	16	CE 0085 AU2367		
3896515	MB6SE BLU TC FL FS2 3/400/50 230/50-60	1100/3600-5900	110/360-590	16	CE 0085 AU2367		
3897900	MB8SE BLU TC FR FS1 3/400/50 230/50-60	900/3330-8400	90/330-840	18	in progress (CE ...)		
3897910	MB8SE BLU TC FR FS2 3/400/50 230/50-60	900/3330-8400	90/330-840	18	in progress (CE ...)		
3897905	MB8SE BLU TC FL FS1 3/400/50 230/50-60	900/3330-8400	90/330-840	18	in progress (CE ...)		
3897915	MB8SE BLU TC FL FS2 3/400/50 230/50-60	900/3330-8400	90/330-840	18	in progress (CE ...)		
3896600	MB10SE BLU TC FR FS1 3/400/50 230/50-60	1100/4000-9200	110/400-920	22	CE 0085 BM0347		
3896610	MB10SE BLU TC FR FS2 3/400/50 230/50-60	1100/4000-9200	110/400-920	22	CE 0085 BM0347		
3896605	MB10SE BLU TC FL FS1 3/400/50 230/50-60	1100/4000-9200	110/400-920	22	CE 0085 BM0347		
3896615	MB10SE BLU TC FL FS2 3/400/50 230/50-60	1100/4000-9200	110/400-920	22	CE 0085 BM0347		
3896700	MB12SE BLU TC FR FS1 3/400/50 230/50-60	1500/4800-10050	150/480-1000	27	in progress (CE ...)		
3896705	MB12SE BLU TC FL FS1 3/400/50 230/50-60	1500/4800-10050	150/480-1000	27	in progress (CE ...)		
3896710	MB12SE BLU TC FR FS2 3/400/50 230/50-60	1500/4800-10050	150/480-1000	27	in progress (CE ...)		
3896715	MB12SE BLU TC FL FS2 3/400/50 230/50-60	1500/4800-10050	150/480-1000	27	in progress (CE ...)		
3897920	MB8SV BLU TC FR FS1 3/400/50 230/50-60	1300/3380-8000	99/338-800	18	in progress (CE ...)		
3897925	MB8SV BLU TC FL FS1 3/400/50 230/50-60	1300/3380-8000	99/338-800	18	in progress (CE ...)		
3897930	MB8SV BLU TC FR FS2 3/400/50 230/50-60	1300/3380-8000	99/338-800	18	in progress (CE ...)		
3897935	MB8SV BLU TC FL FS2 3/400/50 230/50-60	1300/3380-8000	99/338-800	18	in progress (CE ...)		
3896620	MB10SV BLU TC FR FS1 3/400/50 230/50-60	1100/4000-8860	110/400-886	22	in progress (CE ...)		
3896630	MB10SV BLU TC FR FS2 3/400/50 230/50-60	1100/4000-8860	110/400-886	22	in progress (CE ...)		
3896625	MB10SV BLU TC FL FS1 3/400/50 230/50-60	1100/4000-8860	110/400-886	22	in progress (CE ...)		
3896635	MB10SV BLU TC FL FS2 3/400/50 230/50-60	1100/4000-8860	110/400-886	22	in progress (CE ...)		
3896720	MB12SV BLU TC FR FS1 3/400/50 230/50-60	1505/4800-10050	150/480-1000	27	in progress (CE ...)		
3896725	MB12SV BLU TC FL FS1 3/400/50 230/50-60	1505/4800-10050	150/480-1000	27	in progress (CE ...)		
3896730	MB12SV BLU TC FR FS2 3/400/50 230/50-60	1505/4800-10050	150/480-1000	27	in progress (CE ...)		
3896735	MB12SV BLU TC FL FS2 3/400/50 230/50-60	1505/4800-10050	150/480-1000	27	in progress (CE ...)		

G20 net calorific value: 10 kWh/Nm^3 - Density: 0,71 kg/Nm^3
The burners of MB SE - SV BLU series are in according to 90/396 - 89/336 - 73/23 EEC Directive and EN 676 Norm.

MODUBLOC MB SE - SV BLU series - AVAILABLE GAS TRAIN MODELS

	Gas train code*	Gas train model	Natural gas		LPG		Note	Gas train price
			Burner (type)	Adapter** (code)	Burner (type)	Adapter** (code)		
COMPOSED GAS TRAIN	3970161	CBF 65/1 CT	MB 4 SE-SV BLU MB 6 SE-SV BLU MB 8 SE-SV BLU MB 10 SE-SV BLU MB 12 SE-SV BLU	3010221 ("I" type) 3010225 ("Z" type)			(1)	
	3970162	CBF 80/1 CT	MB 4 SE-SV BLU MB 6 SE-SV BLU MB 8 SE-SV BLU MB 10 SE-SV BLU MB 12 SE-SV BLU	3010222 ("I" type) 3010226 ("Z" type)			(1)	
	3970163	CBF 100/1 CT	MB 4 SE-SV BLU MB 6 SE-SV BLU MB 8 SE-SV BLU MB 10 SE-SV BLU MB 12 SE-SV BLU	3010223 ("I" type) 3010227 ("Z" type)			(1)	
	3970196	CBF 125/1 CT	MB 4 SE-SV BLU MB 6 SE-SV BLU MB 8 SE-SV BLU MB 10 SE-SV BLU MB 12 SE-SV BLU	3010224 ("I" type) 3010228 ("Z" type)			(1)	

*** gas train are 230V/50Hz - 220V/60Hz electrical supply**
**** the adapter price is available in the "Gas train accessories" section**
(1) Seal control incorporated

The following table shows the frequently matching between MB SE - SV BLU burners and the gas train, referred to different inlet gas pressure.

Burner	Reference combustion chamber pressure (mbar)	Natural gas G20 (20 mbar)		Natural gas G20 (300 mbar)		LPG (35 mbar)		LPG (150 mbar)	
		Gas train	Reference output (kW)	Gas train	Reference output (kW)	Gas train	Reference output (kW)	Gas train	Reference output (kW)
MB 4 SE-SV BLU	15		3900	CBF 65/1 CT	3900				
MB 6 SE-SV BLU	15		5100	CBF 65/1 CT	5100				
MB 8 SE-SV BLU	12		6500	CBF 100/1 CT	6500				
MB 10 SE-SV BLU	15		7700	CBF 100/1 CT	7700				

MODUBLOC MB SE - SV BLU 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 - 12 SE - SV BLU	3010234	

I/O digital module

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

Burner	Module code	Price
MB 4 - 6 - 8 - 10 - 12 SE - SV BLU	3010233	

I/O analogic module

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

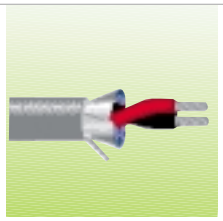
Burner	Module code	Price
MB 4 - 6 - 8 - 10 - 12 SE - SV BLU	3010232	

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 -12 SE - SV BLU	CO, CO_2, O_2	3010235	
MB 4 - 6 - 8 - 10 -12 SE - SV BLU	CO, CO_2, O_2, NO	3010236	
MB 4 - 6 - 8 - 10 -12 SE - SV BLU	CO, CO_2, O_2, SO_2	3010237	
MB 4 - 6 - 8 - 10 -12 SE - SV BLU	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 - 12 SE - SV BLU	3010239	

Accessories for modulating operation

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

PROBE				
Burner	**Type**	**Range (°C) (bar)**	**Code**	**Price**
MB 4 - 6 - 8 - 10 - 12 SE - SV BLU	Temperature	0 ÷ 400°C	3010187	
MB 4 - 6 - 8 - 10 - 12 SE - SV BLU	Pressure	0 ÷ 3 bar	3010246	
MB 4 - 6 - 8 - 10 - 12 SE - SV BLU	Pressure	0 ÷ 18 bar	3010186	
MB 4 - 6 - 8 - 10 - 12 SE - SV BLU	Pressure	0 ÷ 30 bar	3010188	

Burner support

For easier maintenance, a mobile burner support has been designed.

Burner	Support code	Price
MB 4 - 6 - 8 - 10 - 12 SE - SV BLU	in progress	

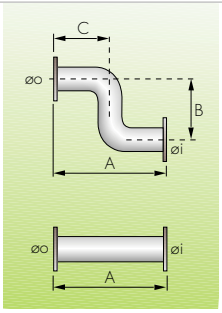
Inverter module

The inverter allows the variation of the amount of combustion air through a variable speed action of the fan motor.

Burner	Code	Price
MB 4 - 6 SV BLU	3090960	
MB 8 SV BLU	3091174	
MB 10 SV BLU	3090913	
MB 12 SV BLU	3090926	

MODUBLOC MB SE - SV BLU series - GAS TRAIN ACCESSORIES

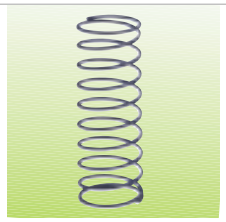
Adapters



When the diameter of the gas train is different from the set diameter of the burners, an adapter must be fitted between the gas train and the burner.

Burner	Gas train	Adapter type	Dimensions Øi DN	Øo DN	A mm	B mm	C mm	Adapter code	Price
All models	CBF 65/1 CT	I	65	80	320	–	–	3010221	
	CBF 80/1 CT	I	80	80	320	–	–	3010222	
	CBF 100/1 CT	I	100	80	320	–	–	3010223	
	CBF 125/1 CT	I	125	80	320	–	–	3010224	
	CBF 65/1 CT	Z	65	80	400	480	225	3010225	
	CBF 80/1 CT	Z	80	80	400	480	225	3010226	
	CBF 100/1 CT	Z	100	80	400	480	225	3010227	
	CBF 125/1 CT	Z	125	80	500	480	300	3010228	

Stabiliser spring



Accessory springs are available to vary the pressure range of the gas train stabilisers.

Gas train	Spring	Code	Price
CBF 65/1 CT - 80/1 CT	Red from 25 to 55 mbar	3010133	
CBF 100/1 CT	Red from 25 to 55 mbar	3010134	
CBF 125/1 CT	Red from 25 to 55 mbar	3010315	
CBF 125/1 CT	Yellow from 30 to 70 mbar	3010316	
CBF 65/1 CT - 80/1 CT	Black from 60 to 110 mbar	3010135	
CBF 100/1 CT	Black from 60 to 110 mbar	3010136	
CBF 125/1 CT	Black from 60 to 110 mbar	3010317	
CBF 65/1 CT - 80/1 CT	Pink from 100 to 150 mbar	3090456	
CBF 100/1 CT	Pink from 100 to 150 mbar	3090489	
CBF 125/1 CT	Pink from 100 to 150 mbar	3010318	

CE

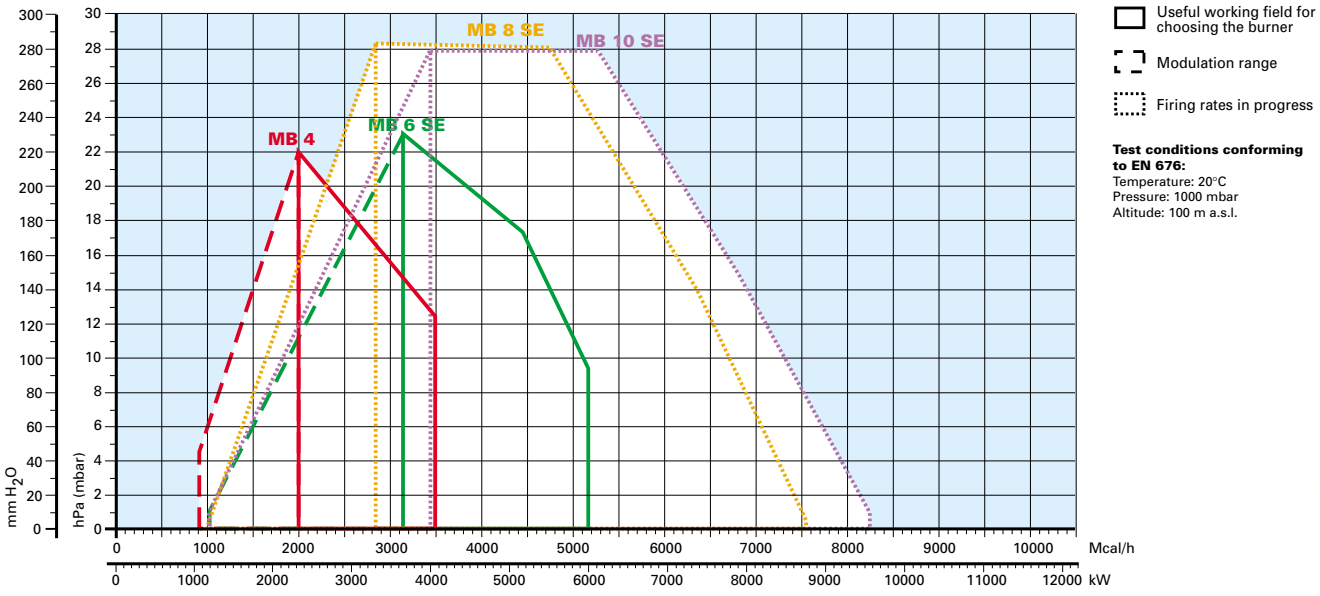
MODULATING GAS BURNERS

MODUBLOC MB SE SERIES

MB 4 SE	1070/2325 ÷ 4070 kW
MB 6 SE	1185/3630 ÷ 6000 kW
MB 8 SE	1175/3300 ÷ 8755 kW
MB 10 SE	1185/4000 ÷ 9580 kW

The MODUBLOC MB SE 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 9580 kW, and they have been designed for use in hot water boilers or industrial steam generators. Adjustment 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.

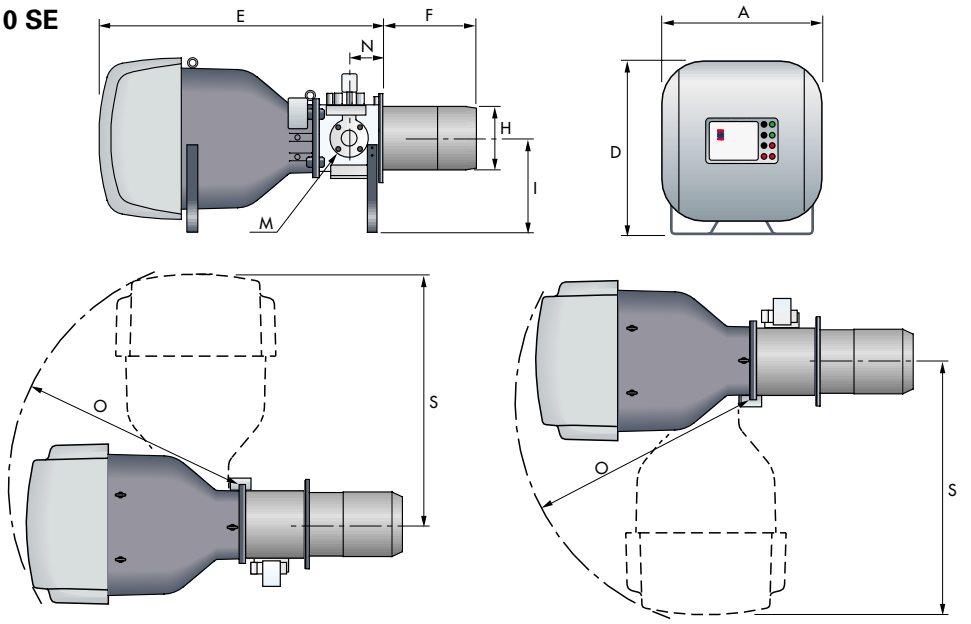
FIRING RATES



MODUBLOC MB SE series - OVERALL DIMENSIONS (mm)

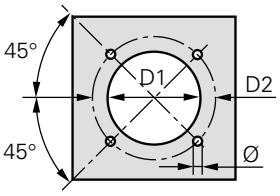
BURNER

MB 4-6-8-10 SE



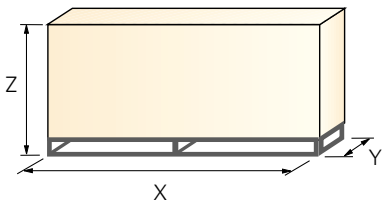
Model	A	D	E	F	H	I	M	N	O	S
MB 4 SE	840	910	1470	511	336	490	DN80	183	1205	1330
MB 6 SE	840	910	1470	511	336	490	DN80	183	1205	1330
MB 8 SE	1007	1079	1900	530	413	575	DN80	208	1570	1740
MB 10 SE	1007	1079	1900	530	413	575	DN80	208	1570	1740

BURNER - BOILER MOUNTING FLANGE



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

PACKAGING



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

MODUBLOC MB SE series - SPECIFICATION

DESIGNATION OF SERIES

Series : MB

Size

Fuel :
- S Natural Gas
- L Light oil
- LS Light oil/Natural Gas

Operation :
- E Electronic cam
- V Electronic cam and variable speed (with Inverter)
- P Proportioning air/gas valve

Emission :
- ... Class 1 EN267 - EN676
- MZ Class 2 EN267 - EN676
- BLU Class 3 EN267 - EN676
- MX Class 2 EN267 Class 3 EN676

Head :
- TC Standard head
- TL Extended head

Fuel supply :
- FR from the right
- FL from the left

Flame control system :
- FS1 Standard (1 stop every 24 h)
- FS2 Continuous working (1 stop every 72 h)

Electrical supply to the system :
- 3/400/50 3N/400V/50Hz
- 3/230/50 3/230V/50Hz

Auxiliary voltage :
- 230/50-60 230V/50-60Hz
- 110/50-60 110V/50-60Hz

MB	4	S	E		TC	FR	FS1	3/400/50	230/50-60

BASIC DESIGNATION

EXTENDED DESIGNATION

MODUBLOC MB SE series - STATE OF SUPPLY

Monoblock forced draught gas burner with modulating operation, fully automatic, made up of:
- Fan with reverse curve blades high performance with low sound emissions
- 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 at 2900 rpm, three-phase 230/400 - 400/690 V with neutral, 50Hz
- Mobile combustion head, that can be set on the basis of required output, fitted with:
    - stainless steel end cone, resistant to corrosion and high temperatures
    - ignition electrodes
    - flame stability disk
- Automatic regulator for gas delivery, controlled by a high precision servomotor
- Maximum gas pressure switch, with pressure test point, for halting the burner in the case of over pressure on the fuel supply line
- Module for air/fuel setting and output modulation with incorporated PID control of temperature or pressure of the heat generator
- Flame control panel for controlling the system safety
- Photocell for flame detection
- Star/triangle starter for the fan motor
- Main electrical supply terminal board
- 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
- Motor internal thermal protection
- Motor failure led signal
- Burner failure led signal and lighted release button
- Led signal for correct rotation direction of fan motor
- Emergency button
- Coded connection plugs-sockets
- Burner opening hinge
- Lifting rings
- IP 40 protection level.

Standard equipment:
- 1 flange gasket
- 8 screws for fixing the flange
- 1 thermal screen
- 4 screws for fixing the burner flange to the boiler
- Instruction handbook for installation, use and maintenance
- Spare parts catalogue.

MODUBLOC MB SE series - AVAILABLE BURNER MODELS

Code	Model	Heat output		Total electrical power (kW)	Certification	Note	Price
		(kW)	Natural Gas (Nm^3/h)				
3786000	MB4SE TC FR FS1 3/400/50 230/50-60	1070/2325-4070	107/233-407	14	CE 0085AU2367		
3786001	MB4SE TC FR FS1 3/230/50 230/50-60	1070/2325-4070	107/233-407	14	CE 0085AU2367		
3786005	MB4SE TC FL FS1 3/400/50 230/50-60	1070/2325-4070	107/233-407	14	CE 0085AU2367		
3786006	MB4SE TC FL FS1 3/230/50 230/50-60	1070/2325-4070	107/233-407	14	CE 0085AU2367		
3786100	MB6SE TC FR FS1 3/400/50 230/50-60	1185/3630-6000	119/363-600	16	CE 0085AU2367		
3786101	MB6SE TC FR FS1 3/230/50 230/50-60	1185/3630-6000	119/363-600	16	CE 0085AU2367		
3786105	MB6SE TC FL FS1 3/400/50 230/50-60	1185/3630-6000	119/363-600	16	CE 0085AU2367		
3786106	MB6SE TC FL FS1 3/230/50 230/50-60	1185/3630-6000	119/363-600	16	CE 0085AU2367		
3786200	MB8SE TC FR FS1 3/400/50 230/50-60	1175/3300-8755	118/330-876	18	in progress (CE ...)		
3786210	MB8SE TC FR FS2 3/400/50 230/50-60	1175/3300-8755	118/330-876	18	in progress (CE ...)		
3786205	MB8SE TC FL FS1 3/400/50 230/50-60	1175/3300-8755	118/330-876	18	in progress (CE ...)		
3786215	MB8SE TC FL FS2 3/400/50 230/50-60	1175/3300-8755	118/330-876	18	in progress (CE ...)		
3786300	MB10SE TC FR FS1 3/400/50 230/50-60	1185/4000-9580	119/400-958	22	in progress (CE ...)		
3786310	MB10SE TC FR FS2 3/400/50 230/50-60	1185/4000-9580	119/400-958	22	in progress (CE ...)		
3786305	MB10SE TC FL FS1 3/400/50 230/50-60	1185/4000-9580	119/400-958	22	in progress (CE ...)		
3786315	MB10SE TC FL FS2 3/400/50 230/50-60	1185/4000-9580	119/400-958	22	in progress (CE ...)		

G20 net calorific value 10 kWh/Nm^3 - Density 0,71 kg/Nm^3
The burners of MB SE series are in according to 90/396 - 89/336 - 73/23 EEC Directive and EN 676 Norm.

MODUBLOC MB SE series - AVAILABLE GAS TRAIN MODELS

	Gas train code*	Gas train model	Natural gas		LPG		Note	Gas train price
			Burner (type)	Adapter** (code)	Burner (type)	Adapter** (code)		
COMPOSED GAS TRAIN	3970161	CBF 65/1 CT	MB 4 SE MB 6 SE MB 8 SE MB 10 SE	3010221 ("I" type) 3010225 ("Z" type)	MB 4 SE MB 6 SE MB 8 SE MB 10 SE	3010221 ("I" type) 3010225 ("Z" type)	(1)	
	3970162	CBF 80/1 CT	MB 4 SE MB 6 SE MB 8 SE MB 10 SE	3010222 ("I" type) 3010226 ("Z" type)	MB 4 SE MB 6 SE MB 8 SE MB 10 SE	3010222 ("I" type) 3010226 ("Z" type)	(1)	
	3970163	CBF 100/1 CT	MB 4 SE MB 6 SE MB 8 SE MB 10 SE	3010223 ("I" type) 3010227 ("Z" type)	MB 4 SE MB 6 SE MB 8 SE MB 10 SE	3010223 ("I" type) 3010227 ("Z" type)	(1)	
	3970196	CBF 125/1 CT	MB 4 SE MB 6 SE MB 8 SE MB 10 SE	3010224 ("I" type) 3010228 ("Z" type)	MB 4 SE MB 6 SE MB 8 SE MB 10 SE	3010224 ("I" type) 3010228 ("Z" type)	(1)	

*** gas train are 230V/50Hz - 220V/60Hz electrical supply**
**** the adapter price is available in the "Gas train accessories" section**
(1) Seal control incorporated

The following table shows the frequently matching between MB SE burners and the gas train, referred to different inlet gas pressure.

Burner	Reference combustion chamber pressure (mbar)	Natural gas G20 (20 mbar)		Natural gas G20 (300 mbar)		LPG (35 mbar)		LPG (150 mbar)	
		Gas train	Reference output (kW)	Gas train	Reference output (kW)	Gas train	Reference output (kW)	Gas train	Reference output (kW)
MB 4 SE	16		3500	CBF 65/1 CT	3500		3500	CBF 65/1	3500
MB 6 SE	17		5200	CBF 65/1 CT	5200		5200	CBF 80/1	5200
MB 8 SE	15		6800	CBF 100/1 CT	6800		6800	CBF 80/1	6800
MB 10 SE	9		8700	CBF 100/1 CT	8700		8700	CBF 100/1	8700

MODUBLOC MB SE 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 SE	3010234	

I/O digital module

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

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

I/O analogic module

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

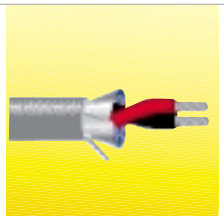
Burner	Module code	Price
MB 4 - 6 - 8 - 10 SE	3010232	

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 SE	CO, CO_2, O_2	3010235	
MB 4 - 6 - 8 - 10 SE	CO, CO_2, O_2, NO	3010236	
MB 4 - 6 - 8 - 10 SE	CO, CO_2, O_2, SO_2	3010237	
MB 4 - 6 - 8 - 10 SE	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 SE	3010239	

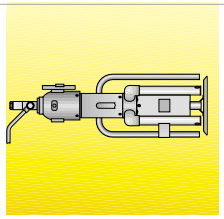
Accessories for modulating operation

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

PROBE

Burner	Type	Range (°C) (bar)	Code	Price
MB 4 - 6 - 8 - 10 SE	Temperature	0 ÷ 400°C	3010187	
MB 4 - 6 - 8 - 10 SE	Pressure	0 ÷ 3 bar	3010246	
MB 4 - 6 - 8 - 10 SE	Pressure	0 ÷ 18 bar	3010186	
MB 4 - 6 - 8 - 10 SE	Pressure	0 ÷ 30 bar	3010188	

LPG kit



For burning LPG gas, a special kit is available.

Burner	Kit code	Price
MB 4 SE	3010189	
MB 6 SE	3010190	
MB 8 SE	in progress	
MB 10 SE	3010296	

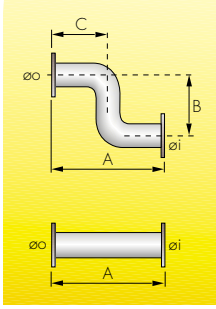
Burner support

For easier maintenance, a mobile burner support has been designed.

Burner	Support code	Price
MB 4 - 6 SE	in progress	
MB 8 - 10 SE	in progress	

MODUBLOC MB SE series - GAS TRAIN ACCESSORIES

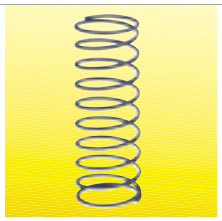
Adapters



When the diameter of the gas train is different from the set diameter of the burners, an adapter must be fitted between the gas train and the burner.

Burner	Gas train	Adapter type	Dimensions Øi DN	Øo DN	A mm	B mm	C mm	Adapter code	Price
MB 4-6-8-10 SE	CBF 65/1 CT	I	65	80	320	--	--	3010221	
MB 4-6-8-10 SE	CBF 80/1 CT	I	80	80	320	--	--	3010222	
MB 4-6-8-10 SE	CBF 100/1 CT	I	100	80	320	--	--	3010223	
MB 4-6-8-10 SE	CBF 125/1 CT	I	125	80	320	--	--	3010224	
MB 4-6-8-10 SE	CBF 65/1 CT	Z	65	80	400	480	225	3010225	
MB 4-6-8-10 SE	CBF 80/1 CT	Z	80	80	400	480	225	3010226	
MB 4-6-8-10 SE	CBF 100/1 CT	Z	100	80	400	480	225	3010227	
MB 4-6-8-10 SE	CBF 125/1 CT	Z	125	80	500	480	300	3010228	

Stabiliser spring



Accessory springs are available to vary the pressure range of the gas train stabilisers.

Gas train	Spring	Code	Price
CBF 65/1 CT - 80/1 CT	Red from 25 to 55 mbar	3010133	
CBF 100/1 CT	Red from 25 to 55 mbar	3010134	
CBF 125/1 CT	Red from 25 to 55 mbar	3010315	
CBF 125/1 CT	Yellow from 30 to 70 mbar	3010316	
CBF 65/1 CT - 80/1 CT	Black from 60 to 110 mbar	3010135	
CBF 100/1 CT	Black from 60 to 110 mbar	3010136	
CBF 125/1 CT	Black from 60 to 110 mbar	3010317	
CBF 65/1 CT - 80/1 CT	Pink from 100 to 150 mbar	3090456	
CBF 100/1 CT	Pink from 100 to 150 mbar	3090489	
CBF 125/1 CT	Pink from 100 to 150 mbar	3010318	

CE

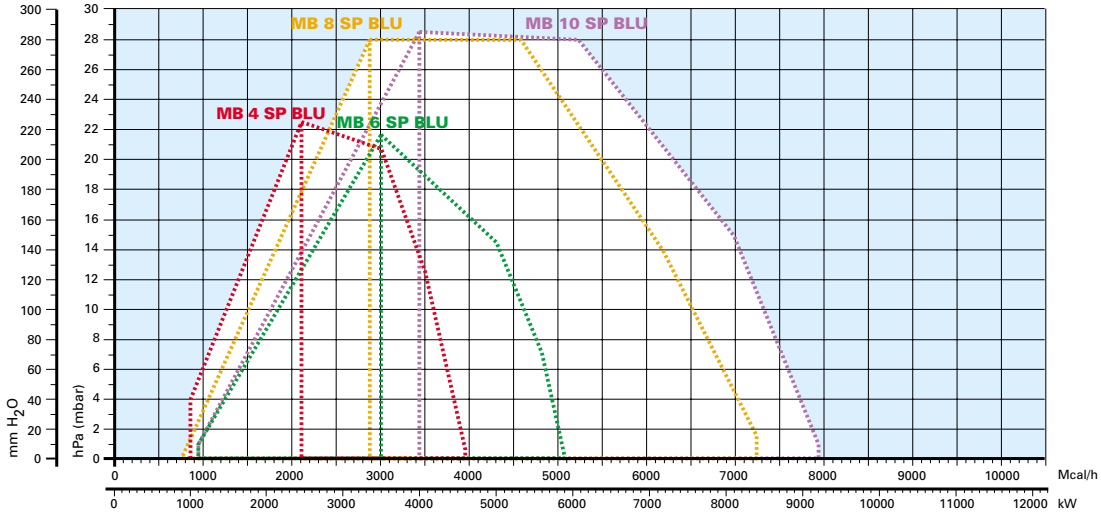
LOW NOx MODULATING GAS BURNERS

MODUBLOC MB SP BLU SERIES

MB 4 SP BLU	1000/2450 ÷ 4600 kW
MB 6 SP BLU	1100/3600 ÷ 5900 kW
MB 8 SP BLU	900/3330 ÷ 8400 kW
MB 10 SP BLU	1100/4000 ÷ 9200 kW

The MODUBLOC MB SP BLU 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 900 to 9200 kW, and they have been designed for use in hot water boilers or industrial steam generators. Using a particular proportioning valve the burner keeps the desired air to gas ratio in every working condition.
The burner can also supply with precision the demanded power, guaranteeing a high efficiency system level and the stability setting, obtaining fuel consumption and operating costs reduction.
The combustion head, studied with advances simulation devices, guarantees reduced polluting emissions. An exclusive design, with fan unit fitted on line with the combustion head, guarantees low sound emissions, reduced dimensions, easy use and maintenance.

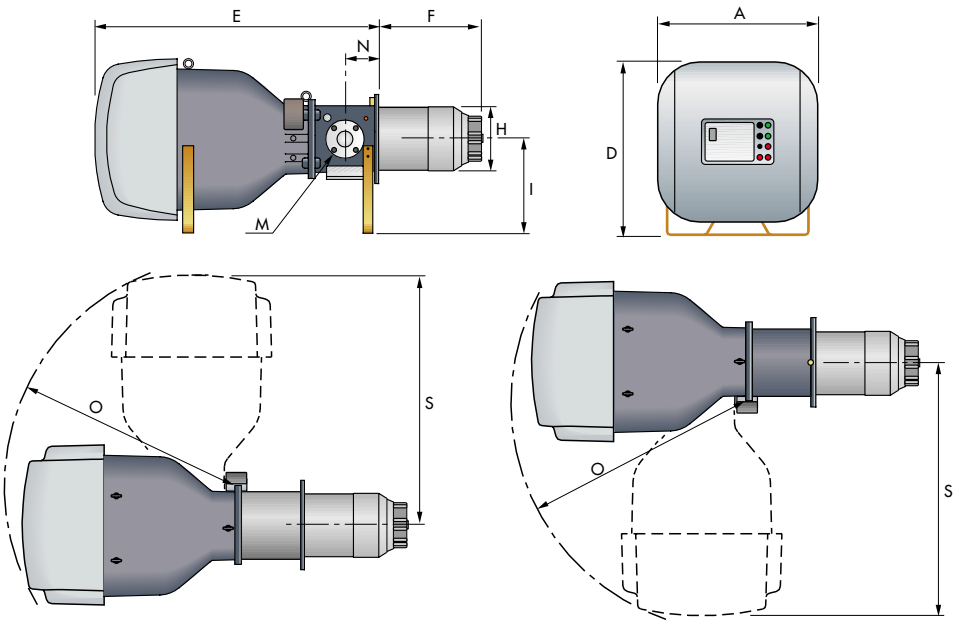
FIRING RATES



MODUBLOC MB SP BLU series - OVERALL DIMENSIONS (mm)

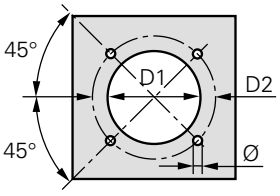
BURNER

MB 4-6-8-10 SP BLU



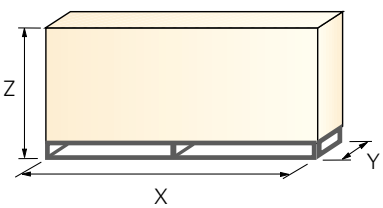
Model	A	D	E	F	H	I	M	N	O	S
MB 4 SP BLU	840	910	1470	521	336	490	DN80	183	1205	1330
MB 6 SP BLU	840	910	1470	521	336	490	DN80	183	1205	1330
MB 8 SP BLU	1007	1079	1900	530	413	575	DN80	208	1570	1740
MB 10 SP BLU	1007	1079	1900	530	413	575	DN80	208	1570	1740

BURNER - BOILER MOUNTING FLANGE



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

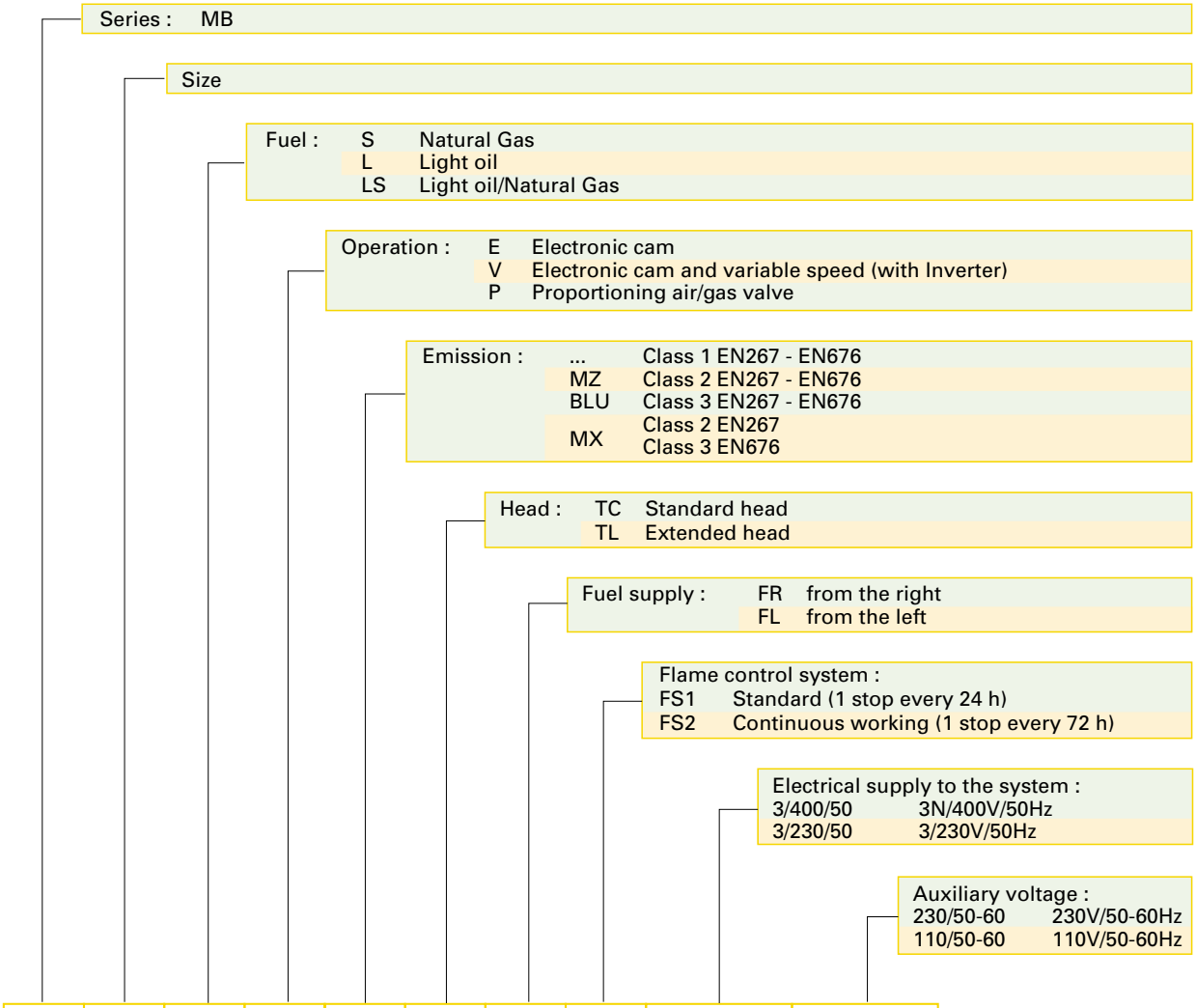
PACKAGING



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

MODUBLOC MB SP BLU series - SPECIFICATION

DESIGNATION OF SERIES



MODUBLOC MB SP BLU series - STATE OF SUPPLY

Monoblock forced draught gas burner with modulating operation, fully automatic, made up of:
- Fan with reverse curve blades high performance with low sound emissions
- 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 at 2900 rpm, three-phase 230/400 - 400/690 V with neutral, 50Hz
- Low emission combustion head, that can be set on the basis of required output, fitted with:
    - stainless steel end cone, resistant to corrosion and high temperatures
    - ignition electrodes
    - flame stability disk
- Maximum gas pressure switch, with pressure test point, for halting the burner in the case of over pressure on the fuel supply line
- Module for air/fuel setting and output modulation with incorporated PID control of temperature or pressure of the heat generator
- Flame control panel for controlling the system safety
- Photocell for flame detection
- Star/triangle starter for the fan motor
- Main electrical supply terminal board
- 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
- Motor internal thermal protection
- Motor failure led signal
- Burner failure led signal and lighted release button
- Led signal for correct rotation direction of fan motor
- Emergency button
- Coded connection plugs-sockets
- Burner opening hinge
- Lifting rings
- IP 40 protection level.

Standard equipment:
- 1 flange gasket
- 8 screws for fixing the flange
- 1 thermal screen
- 4 screws for fixing the burner flange to the boiler
- Instruction handbook for installation, use and maintenance
- Spare parts catalogue.

MODUBLOC MB SP BLU series - AVAILABLE BURNER MODELS

Code	Model	Heat output		Total electrical power (kW)	Certification	Note	Price
		(kW)	Natural Gas (Nm^3/h)				
in progress	MB 4 SP BLU TC FR FS1 3/400/50 230/50-60	1000/2450-4600	100/247-460	14	in progress (CE ...)		
3809083	MB 6 SP BLU TC FR FS1 3/400/50 230/50-60	1100/3600-5900	110/360-590	16	in progress (CE ...)		
in progress	MB 8 SP BLU TC FR FS1 3/400/50 230/50-60	900/3330-8400	90/330-840	18	in progress (CE ...)		
3809090	MB 10 SP BLU TC FR FS1 3/400/50 230/50-60	1100/4000-9200	110/400-920	22	in progress (CE ...)		

G20 net calorific value: 10 kWh/Nm^3 - Density: 0,71 kg/Nm^3
The burners of MB SP BLU series are in according to 90/396 - 89/336 - 73/23 EEC Directive and EN 676 Norm.

MODUBLOC MB SP BLU series - AVAILABLE GAS TRAIN MODELS

	Gas train code*	Gas train model	Natural gas		LPG		Note	Gas train price
			Burner (type)	Adapter** (code)	Burner (type)	Adapter** (code)		
COMPOSED GAS TRAIN	3970312	VGDF 65 CT	MB 4 SP BLU MB 6 SP BLU MB 8 SP BLU MB 10 SP BLU	in progress			(1)	
	3970313	VGDF 80 CT	MB 4 SP BLU MB 6 SP BLU MB 8 SP BLU MB 10 SP BLU	in progress			(1)	
	3970314	VGDF 100 CT	MB 4 SP BLU MB 6 SP BLU MB 8 SP BLU MB 10 SP BLU	in progress			(1)	
	3970196	VGDF 125 CT	MB 4 SP BLU MB 6 SP BLU MB 8 SP BLU MB 10 SP BLU	in progress			(1)	

*** gas train are 230V/50Hz - 220V/60Hz electrical supply**
**** the adapter price is available in the "Gas train accessories" section**
(1) Seal control incorporated

MODUBLOC MB SP BLU series - BURNER ACCESSORIES

Accessories for modulating operation

To obtain modulating operation the MB series requires a regulator.

Burner	Type	Regulator code	Price
MB 4 - 6 - 8 - 10 SP BLU	RWF 40	3001078	

The relative temperature or pressure probe fitted to the regulator must be chosen on the basis of the application.

PROBE

Burner	Type	Range (°C) (bar)	Code	Price
MB 4 - 6 - 8 - 10 SP BLU	Temperature	0 ÷ 500°C	3010110	
MB 4 - 6 - 8 - 10 SP BLU	Pressure	0 ÷ 2,5 bar	3010213	
MB 4 - 6 - 8 - 10 SP BLU	Pressure	0 ÷ 16 bar	3010214	

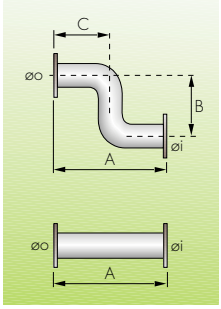
Burner support

For easier maintenance, a mobile burner support has been designed.

Burner	Support code	Price
MB 4 - 6 SP BLU	in progress	
MB 8 - 10 SP BLU	in progress	

MODUBLOC MB SP BLU series - GAS TRAIN ACCESSORIES

Adapters



When the diameter of the gas train is different from the set diameter of the burners, an adapter must be fitted between the gas train and the burner.

Burner	Gas train	Adapter type	Dimensions Øi DN	Øo DN	A mm	B mm	C mm	Adapter code	Price
MB 4-6-8-10 SP BLU	VGDF 65 CT	I	65	80	320	--	--	3010221	
MB 4-6-8-10 SP BLU	VGDF 80 CT	I	80	80	320	--	--	3010222	
MB 4-6-8-10 SP BLU	VGDF 100 CT	I	100	80	320	--	--	3010223	
MB 4-6-8-10 SP BLU	VGDF 125 CT	I	125	80	320	--	--	3010224	
MB 4-6-8-10 SP BLU	VGDF 65 CT	Z	65	80	400	480	225	3010225	
MB 4-6-8-10 SP BLU	VGDF 80 CT	Z	80	80	400	480	225	3010226	
MB 4-6-8-10 SP BLU	VGDF 100 CT	Z	100	80	400	480	225	3010227	
MB 4-6-8-10 SP BLU	VGDF 125 CT	Z	125	80	500	480	300	3010228	