

MODUBLOC MB SE SERIES

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 3300 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.

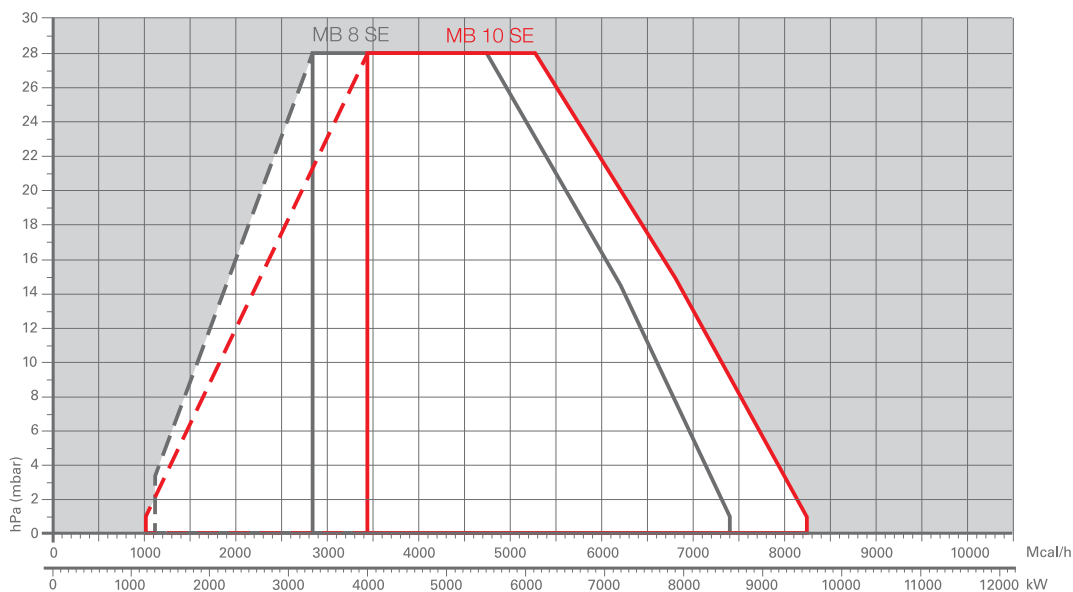
The burner can, therefore, supply with precision the demanded power, guaranteeing a high efficiency system level and the stability setting, obtaining fuel consumption and operating costs reduction.


An exclusive design, with fan unit fitted on line with the combustion head, guarantees low sound emissions, reduced dimensions, easy use and maintenance.



MB 8 SE	1300/3300 ÷ 8600 kW
MB 10 SE	1185/4000 ÷ 9580 kW

FIRING RATES



 Useful working field for choosing the burner

 Modulation range

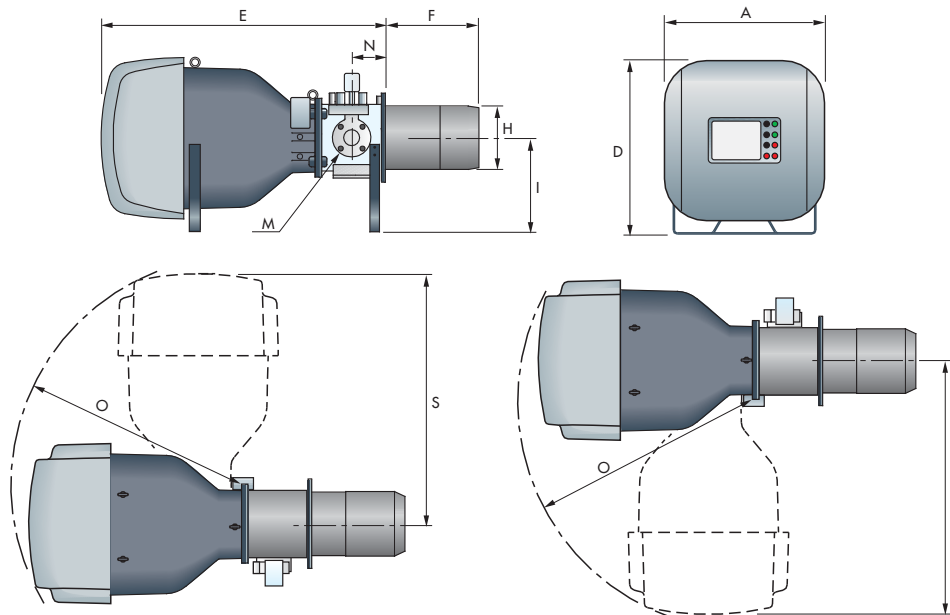
Test conditions conforming to EN676
 Temperature: 20°C
 Pressure: 1013,5 mbar
 Altitude: 0 m a.s.l.

Modulating Gas Burners

MODUBLOC MB SE SERIES

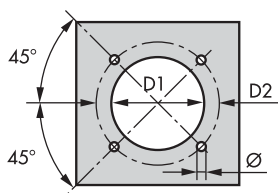
Overall dimensions (mm)

BURNER



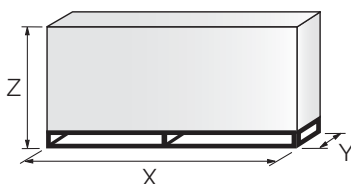
MODEL	A	D	E	F	H	I	M	N	O	S
▶ MB 8 SE	1007	1079	1900	530	413	575	DN80	208	1570	1740
▶ MB 10 SE	1007	1079	1900	530	413	575	DN80	208	1570	1740

BURNER - BOILER MOUNTING FLANGE



MODEL	D1	D2	Ø
▶ MB 8 SE	418	608	M20
▶ MB 10 SE	418	608	M20

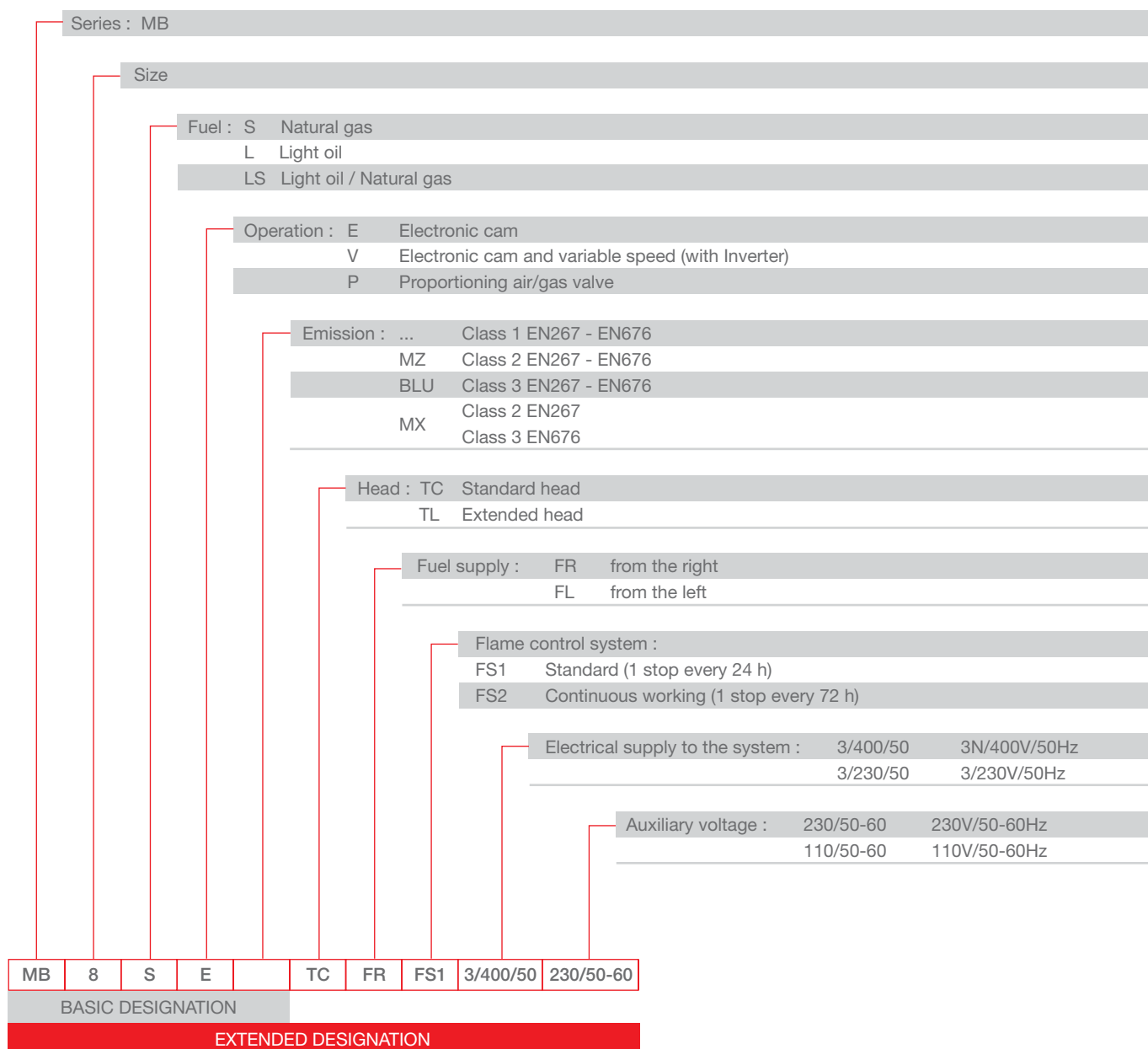
PACKAGING



MODEL	X	Y	Z	kg
▶ MB 8 SE	2700	1170	1350	450
▶ MB 10 SE	2700	1170	1350	450

Specification

DESIGNATION OF SERIES



Modulating Gas Burners

MODUBLOC MB SE SERIES

Specification

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
- Burner safety control box 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 X0D (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.

Available models

Burners

CODE	MODEL						HEAT OUTPUT		TOTAL ELECTRICAL POWER (kW)	CERTIFICATION	NOTE
							(kW)	NATURAL GAS (Nm ³ /h)			
3786200	MB8SE	TC	FR	FS1	3/400/50	230/50-60	1300/3300-8600	130/330-860	18	CE 0085BO0169	
3786210	MB8SE	TC	FR	FS2	3/400/50	230/50-60	1300/3300-8600	130/330-860	18	CE 0085BO0169	
3786205	MB8SE	TC	FL	FS1	3/400/50	230/50-60	1300/3300-8600	130/330-860	18	CE 0085BO0169	
3786215	MB8SE	TC	FL	FS2	3/400/50	230/50-60	1300/3300-8600	130/330-860	18	CE 0085BO0169	
3786300	MB10SE	TC	FR	FS1	3/400/50	230/50-60	1185/4000-9580	119/400-958	22	CE 0085BO0162	
3786310	MB10SE	TC	FR	FS2	3/400/50	230/50-60	1185/4000-9580	119/400-958	22	CE 0085BO0162	
3786305	MB10SE	TC	FL	FS1	3/400/50	230/50-60	1185/4000-9580	119/400-958	22	CE 0085BO0162	
3786315	MB10SE	TC	FL	FS2	3/400/50	230/50-60	1185/4000-9580	119/400-958	22	CE 0085BO0162	

G20 net calorific value 10 kWh/Nm³ - Density 0,71 kg/Nm³

The burners of MB SE series are in according to 90/396 - 2004/108 - 2006/95 EC Directive and EN 676 Norm.

Gas Trains

CODE	GAS TRAIN			VPS 50 Hz CODE	ADAPTER CODE *** MB 8-10 SE
	MODEL	Ø	C.T.		
3970221 *	MBC 1200/1 - RSM 60	Rp 2"	-	3010367	3000826
3970225 **	MBC 1200/1 CT RSM 60	Rp 2"	◆	-	3000826
3970222 *	MBC 1900/1 - FSM 40	DN 65	-	3010367	3010369
3970226 **	MBC 1900/1 CT FSM 40	DN 65	◆	-	3010369
3970223 *	MBC 3100/1 - FSM 40	DN 80	-	3010367	3010222 (1)
3970227 **	MBC 3100/1 CT FSM 40	DN 80	◆	-	3010222 (1)
3970224 *	MBC 5000/1 - FSM 80	DN 100	-	3010367	3010370
3970228 **	MBC 5000/1 CT FSM 80	DN 100	◆	-	3010370
3970147 *	CB 5065/1 - FSM 30	DN 65	-	3010367	3010221 or 3010369
3970161 **	CB 5065/1 CT FSM 30	DN 65	◆	-	3010221 or 3010369
3970148 *	CB 5080/1 - FSM 30	DN 80	-	3010367	3010222 (1)
3970162 **	CB 5080/1 CT FSM 30	DN 80	◆	-	3010222 (1)
3970149 *	CB 50100/1 - FSM 30	DN 100	-	3010367	3010223 or 3010370
3970163 **	CB 50100/1 CT FSM 30	DN 100	◆	-	3010223 or 3010370
20015871 *	CB 50125/1 - FSM 30	DN 125	-	3010367	3010224
3970196 **	CB 50125/1 CT FSM 30	DN 125	◆	-	3010224

Please see designation of Gas Train Series in the page before the Catalogue index.

* 230V/50Hz - 220V/60Hz electrical supply.

** 230V/50Hz electrical supply.

*** see Adapter models on Gas train accessories paragraph.

The valve seal control device is compulsory (conforming to EN 676) on gas trains to burners with a maximum output over 1200 kW.

To select the gas train please refer to the technical data leaflet and/or instruction manual.

C.T. Gas valve leak detection control device:

- gas train not equipped with leak detection control device; this device can be ordered separately - see VPS column - and installed later.

◆ gas train equipped with leak detection control device.

VPS Valve leak detection control device. Supplied separately from the gas train (please see Gas train accessories paragraph for both 50 Hz and 60 Hz codes).

(1) To use if it is necessary to space out the gas train from the burner.

Modulating Gas Burners

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
▶ MB 8 - 10 SE	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
▶ MB 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
▶ MB 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
▶ MB 8 - 10 SE	CO, CO ₂ , O ₂	on demand
▶ MB 8 - 10 SE	CO, CO ₂ , O ₂ , NO	20019488
▶ MB 8 - 10 SE	CO, CO ₂ , O ₂ , SO ₂	on demand
▶ MB 8 - 10 SE	CO, CO ₂ , O ₂ , NO, SO ₂	on demand

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
▶ MB 8 - 10 SE	3010239

Burner accessories

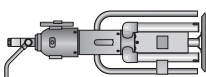
Accessories for modulating operation



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
▶ MB 8 - 10 SE	Temperature	0 ÷ 400°C	3010187
▶ MB 8 - 10 SE	Pressure	0 ÷ 3 bar	3010246
▶ MB 8 - 10 SE	Pressure	0 ÷ 18 bar	3010186
▶ MB 8 - 10 SE	Pressure	0 ÷ 30 bar	3010188

LPG kit



For burning LPG gas, a special kit is available.

BURNER	KIT CODE
▶ MB 8 - 10 SE	3010296

Burner support



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

BURNER	SUPPORT CODE
▶ MB 8 - 10 SE	3010385

Sound proofing box



If noise emission needs reducing even further, sound-proofing boxes are available.

BURNER	AVERAGE NOISE REDUCTION [dB(A)] (*)	BOX CODE
▶ MB 8 - 10 SE	10	3010401

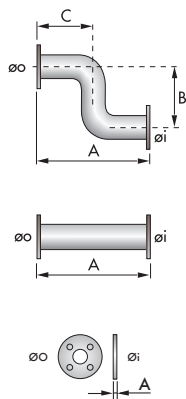
(*) according to EN 15036-1 standard

Modulating Gas Burners

MODUBLOC MB SE SERIES

Gas train accessories

Adapters



In certain cases, an adapter must be fitted between the gas train and the burner, when the diameter of the gas train is different from the set diameter of the burner.
Below are given the available adapters; please see on the Gas Train list the correct adapter codes to select.

ADAPTER	DIMENSIONS					ADAPTER CODE
	Øi DN	ØO DN	A mm	B mm	C mm	
	65	80	400	-	-	3010221
	80	80	400	-	-	3010222
	100	80	400	-	-	3010223
	65	80	400	480	225	3010225
	80	80	400	480	225	3010226
	100	80	400	480	225	3010227
	65	80	10	-	-	3010369
	100	80	50	-	-	3010370
	-	-	300	-	-	3000826

Stabiliser spring



To vary the pressure range of the gas train stabilisers, accessory springs are available. The following table shows these accessories with their application range. Please refer to the technical manual for the correct choice of spring.

GAS TRAIN	SPRING COLOUR	SPRING PRESSURE RANGE mbar	SPRING CODE
▶ MBC 1900/1 - 3100/1 MBC 5000/1	White	4 - 20	3010381
	Red	20 - 40	3010382
	Black	40 - 80	3010383
	Green	80 - 150	3010384
▶ CB 5065/1 - 5080/1	Red	25 - 55	3010133
	Black	60 - 110	3010135
	Pink	100 - 150	3090456
	Grey	140 - 200	3090992
▶ CB 50100/1	Red	25 - 55	3010134
	Black	60 - 110	3010136
	Pink	100 - 150	3090489
	Grey	140 - 200	3092174
▶ CB 50125/1	Red	25 - 55	3010315
	Yellow	30 - 70	3010316
	Black	60 - 110	3010317
	Pink	100 - 150	3010318

Seal control kit



To test the valve seals on the gas train, a special "seal control kit" is available. The valve seal control device is compulsory (EN 676) on gas trains to burners with a maximum output over 1200 kW. The seal control is type VPS 504.

GAS TRAIN	KIT CODE	KIT CODE
	for 50 Hz operation	for 60 Hz operation
▶ MBC/1 type	3010367	20029057
▶ CB/1 type	3010367	20029057