



## TWO STAGE DUAL FUEL BURNERS

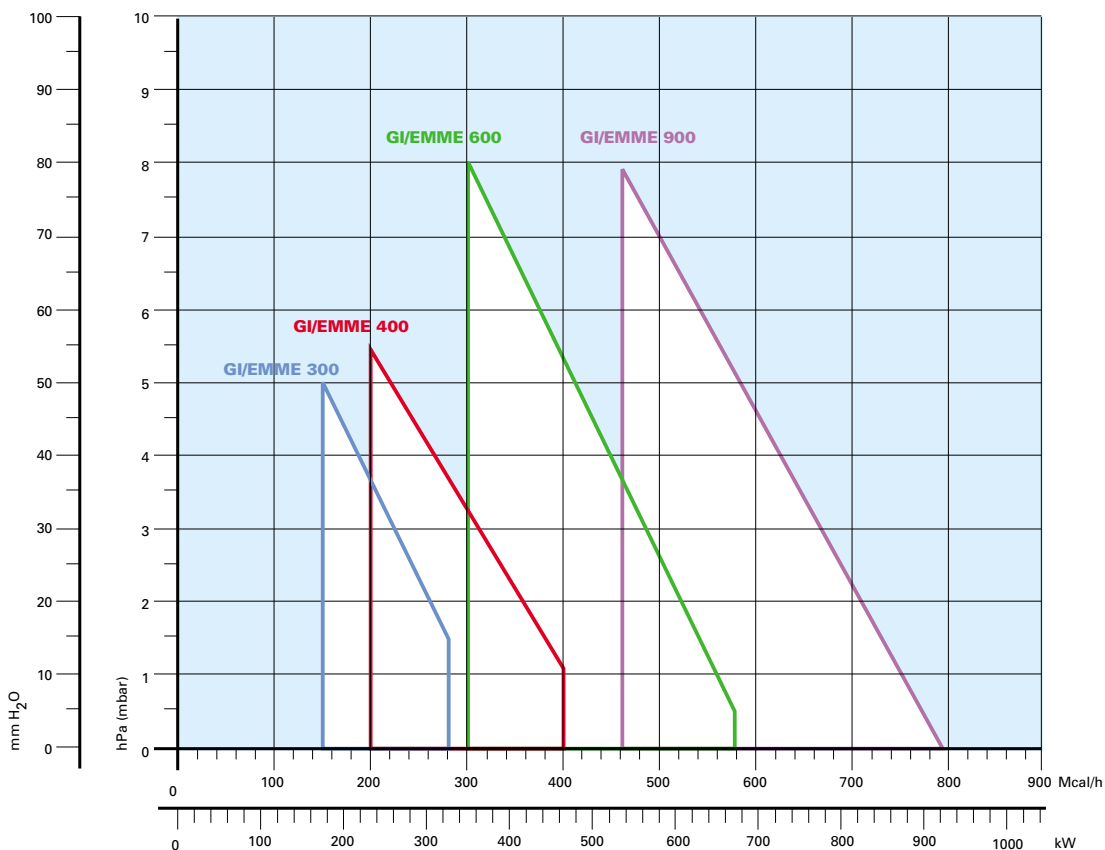
### ► GI/EMME SERIES

► GI/EMME 300	107/175 ÷ 332 kW
► GI/EMME 400	116/232 ÷ 465 kW
► GI/EMME 600	174/348 ÷ 665 kW
► GI/EMME 900	250/525 ÷ 922 kW



The GI/EMME 300-900 series of burners covers a firing range from 107 to 922 kW. They have been designed for middle and high output users and they are in particular suitable for matching with pressurized boilers. Their use allow to have a high safety in operation, guaranteed from the double fuel supply. Two options of operation are available: only gas and only light oil, thus settable by a selector and a terminal board. Light oil circuit is fitted with his own electric motor: this permits pump stop during gas operation preventing danger of pumping seizure. A wide range of accessories and gas trains suitable to the burners guarantee an elevated working flexibility.

## FIRING RATES

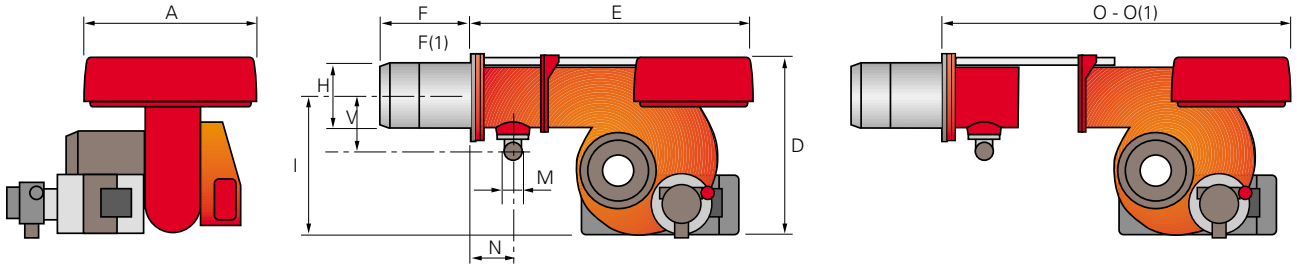


□ Useful working field for choosing the burner

Test conditions conforming to EN 267 - 676:  
 Temperature: 20°C  
 Pressure: 1000 mbar  
 Altitude: 100 m a.s.l.

## GI/EMME series - OVERALL DIMENSIONS (mm)

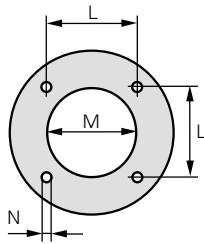
### BURNER



Model	A	D	E	F - F(1)	H	I	M	N	O - O(1)	V
▶ GI/EMME 300	410	397	610	185 - 320	140	292	1"1/2	97	978 - 978	165
▶ GI/EMME 400	410	397	610	187 - 320	150	292	1"1/2	97	1018 - 1018	165
▶ GI/EMME 600	410	437	645	187 - 320	155	332	1"1/2	97	1063 - 1063	165
▶ GI/EMME 900	410	485	770	227 - 360	175	370	2"	131	1260 - 1260	195

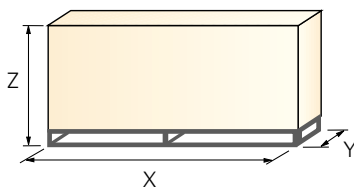
(1) Length with extended combustion head

### BURNER - BOILER MOUNTING FLANGE



Model	L	M	N
▶ GI/EMME 300	160	155	M 10
▶ GI/EMME 400	160	165	M 10
▶ GI/EMME 600	160	165	M 10
▶ GI/EMME 900	195	185	M 12

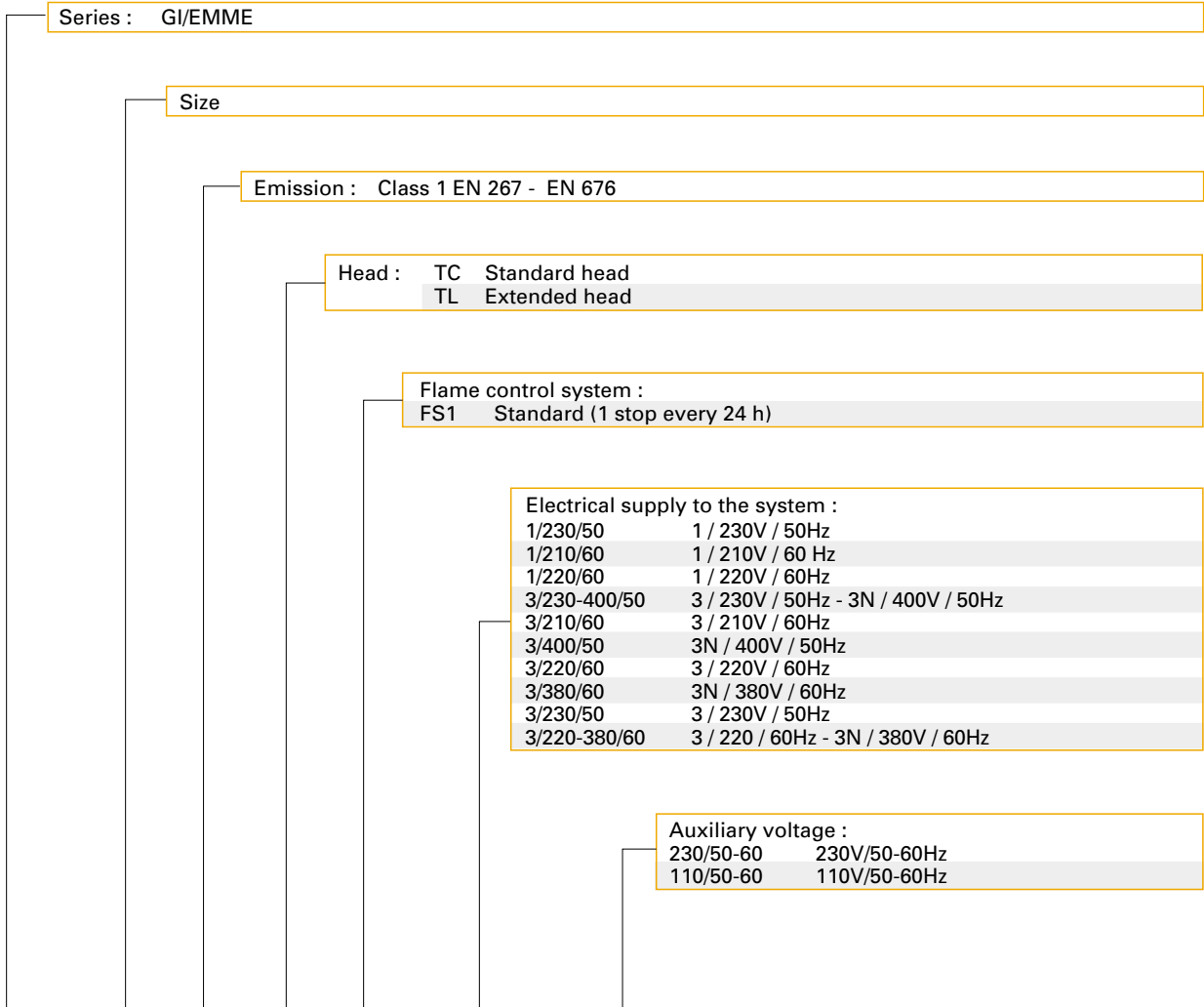
### PACKAGING



Model	X	Y	Z	kg
▶ GI/EMME 300	835	530	453	42
▶ GI/EMME 400	835	530	453	49
▶ GI/EMME 600	880	530	500	64
▶ GI/EMME 900	103	530	435	88

# GI/EMME series - SPECIFICATION

## DESIGNATION OF SERIES



<b>GI/EMME</b>	<b>900</b>		<b>TC</b>	<b>FS1</b>	<b>3/230-400/50</b>	<b>230/50</b>
BASIC DESIGNATION			EXTENDED DESIGNATION			

## GI/EMME series - STATE OF SUPPLY

Monoblock forced draught dual fuel burner, two stage operation, made up of:

- Air suction circuit
- Fan with forward curved blades
- Air damper for setting controlled by a servomotor
- Combustion head, that can be set on the basis of required output
- Minimum air pressure switch
- Fan electrical motor
- Pump electrical motor
- Gears pump for high pressure fuel supply, fitted with:
  - filter
  - pressure regulator
  - connections for installing a pressure gauge and a a vacuumeter
  - internal by-pass for single pipe installation
- Valve unit with a double oil safety valve on the output circuit
- UV photocell for flame detection
- Flame inspection window
- Slide bars for easier installation and maintenance
- Protection filter against radio interference
- IP 40 protection level.

### Standard equipment:

- 1 gas train gasket
- 1 flange gasket
- 1 insulating screen
- 2 flexible hoses for connection to the oil supply circuit
- 2 nipples for connection to the pump
- 3 wiring looms fittings for electrical connections
- 8 screws for fixing the burner flange to the boiler
- 1 LPG kit
- 2 nozzles for light oil
- Instruction handbook for installation, use and maintenance
- Spare parts catalogue.

## GI/EMME series - AVAILABLE BURNER MODELS

Code	Model		Heat output			Total electrical power (kW)	Certification	Note	Price
			(kW)	Light oil (kg/h)	Natural Gas (Nm <sup>3</sup> /h)				
3483681	GI/EMME 300 TC FS1	1/220/60 220/60	107/175-340	9/15-29	11/17,5-34	0,5	-		
3483621	GI/EMME 300 TC FS1	1/230/50 230/50	107/175-332	9/15-28	11/17,5-33	0,5	-		
3484271	GI/EMME 400 TC FS1	1/210/60 120/60	116/232-465	10/20-39	12/23-46,5	0,62	-		
3484221	GI/EMME 400 TC FS1	1/230/50 230/50	116/232-465	10/20-39	12/23-46,5	0,62	-		
3484281	GI/EMME 400 TC FS1	3/220-380/60 220/60	116/232-465	10/20-39	12/23-46,5	0,62	-		
3484871	GI/EMME 600 TC FS1	3/210/60 120/60	174/348-697	15/30-60	17/35-70	1,1	-		
3484881	GI/EMME 600 TC FS1	3/220-380/60 220/60	174/348-697	15/30-60	17/35-70	1,1	-		
3484821	GI/EMME 600 TC FS1	3/230-400/50 230/50	174/348-665	15/30-56	17/35-66,5	1,1	-		
3485971	GI/EMME 900 TC FS1	3/210/60 120/60	262/523-1045	22/44-88	26/52-105	2	-		
3485981	GI/EMME 900 TC FS1	3/220-380/60 220/60	262/523-1045	22/44-88	26/52-105	2	-		
3485921	GI/EMME 900 TC FS1	3/230-400/50 230/50	250/525-922	21/44-78	25/52,5-92	2	-		

Net calorific value light oil: 11,8 kWh/kg; 10.200 kcal/kg - Viscosity at 20°C: 4-6 mm<sup>2</sup>/s (cSt).

Net calorific value G20 gas: 10 kWh/Nm<sup>3</sup>; 8.600 kcal/Nm<sup>3</sup> - Density: 0,71 kg/Nm<sup>3</sup>.

The burners of GI/EMME series are in according to 89/336, 73/23 Directive and EN 267, EN 676 Norm.

## GI/EMME 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)				
MULTIBLOC	3970156	MBD 407	GI/EMME 300	3000824	GI/EMME 300	3000824	(1)		
	3970157	MBD 410	GI/EMME 300	3000824	GI/EMME 300	3000824	(1)		
			GI/EMME 400	3000824		GI/EMME 400			3000824
	3970152	MBD 412	GI/EMME 300	3010124	GI/EMME 300	3000824	(1)		
			GI/EMME 400	3010124		GI/EMME 400			3000824
			GI/EMME 600	3010124		GI/EMME 600			3000824
			GI/EMME 900	3010126		GI/EMME 600			3000824
3970183	MBD 415	GI/EMME 300	-	GI/EMME 300	-	(1)			
		GI/EMME 400	-	GI/EMME 400	-				
		GI/EMME 600	-	GI/EMME 600	-				
		GI/EMME 900	3000843	GI/EMME 900	3000843				
3970184	MBD 420	GI/EMME 400	3000822	GI/EMME 400	3000822	(1)			
		GI/EMME 600	3000822	GI/EMME 600	3000822				
		GI/EMME 900	-	GI/EMME 900	-				
3970185	MBD 420 CT	GI/EMME 400	3000822	GI/EMME 400	3000822	(2)			
		GI/EMME 600	3000822	GI/EMME 600	3000822				
		GI/EMME 900	-	GI/EMME 900	-				
COMPOSED	3970153	CB 40/2	GI/EMME 300	-	GI/EMME 300	-	(1)		
			GI/EMME 400	-	GI/EMME 400	-			
			GI/EMME 600	-	GI/EMME 600	-			
			GI/EMME 900	3000843	GI/EMME 900	3000843			
	3970154	CB 50/2	GI/EMME 400	-	GI/EMME 400	-	(1)		
			GI/EMME 600	-	GI/EMME 600	-			
			GI/EMME 900	-	GI/EMME 900	-			
3970166	CB 50/2 CT	GI/EMME 400	-	GI/EMME 400	-	(2)			
		GI/EMME 600	-	GI/EMME 600	-				
		GI/EMME 900	-	GI/EMME 900	-				
3970155	CB 65/2	GI/EMME 900	3000825	GI/EMME 900	3000825	(1)			
3970167	CB 65/2 CT	GI/EMME 900	3000825	GI/EMME 900	3000825	(2)			

\* Gas train are 230V/50Hz - 220V/60Hz electrical supply.

\*\* The adapter price is available in the "Gas train accessories" section.

(1) Seal control accessory.

(2) Seal control incorporated.

The following table shows the frequently matching between GI/EMME 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)
GI/EMME 300	2,7	MBD 412	280	MBD 407	280	MBD 407	280	MBD 407	280
GI/EMME 400	2,8	MBD 415 CB 40/2	380	MBD 410	380	MBD 410	380	MBD410	380
GI/EMME 600	3	MBD 420 CB 50/2	560	MBD 410	560	MBD 412	560	MBD 410	560
GI/EMME 900	3,2	CB 65/2	770	MBD 412	770	MBD 415 CB 40/2	770	MBD 412	770

## GI/EMME series - BURNER ACCESSORIES

### Nozzles type 60° B

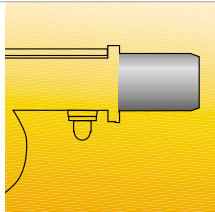


The nozzles must be ordered separately. The following table shows the features and codes on the basis of the maximum required fuel output.

NOTE: each burner needs N° 2 nozzles.

Burner	Rated delivery (kg/h) at 12 bar	GPH	Nozzle code	Price
GI/EMME 300	6,8	1,75	3042110	
GI/EMME 300	7,8	2,00	3042126	
GI/EMME 300	8,7	2,25	3042127	
GI/EMME 300 - 400	9,7	2,50	3042140	
GI/EMME 300 - 400	11,6	3,00	3042158	
GI/EMME 300 - 400	13,6	3,50	3042162	
GI/EMME 300 - 400 - 600	15,6	4,00	3042172	
GI/EMME 400 - 600	17,5	4,50	3042182	
GI/EMME 400 - 600	19,4	5,00	3042192	
GI/EMME 400 - 600	21,3	5,50	3042202	
GI/EMME 600 - 900	23,3	6,00	3042212	
GI/EMME 600 - 900	27,1	7,00	3042232	
GI/EMME 600 - 900	29,1	7,50	3042242	
GI/EMME 900	33	8,50	3042262	
GI/EMME 900	36,8	9,50	3042282	
GI/EMME 900	38,8	10,00	3042292	
GI/EMME 900	42,3	11,00	3042312	
GI/EMME 900	46,5	12,00	3042322	

### Extended head kit



“Standard head” burners can be transformed into “extended head” versions, by using the special kit. The kits available for the various burners, giving the original and the extended lengths, are listed below.

Burner	Standard head length (mm)	Extended head length (mm)	Kit code	Price
GI/EMME 300	185	320	3000836	
GI/EMME 400	187	320	3010001	
GI/EMME 600	187	320	3010002	
GI/EMME 900	227	360	3010003	

### Sound proofing box

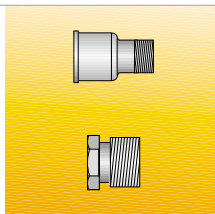


If noise emission needs reducing even further, sound-proofing boxes are available.

Burner	Box type	Average noise reduction [dB(A)]	Box code	Price
GI/EMME 600	C2	11	3000777	
GI/EMME 900	C3	14	3000778	

## GI/EMME 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	Dimensions	Adapter code	Price
GI/EMME 300	MBZRDLE 407-410	3/4"  1" 1/2	3000824	
	MBZRDLE 412	1" 1/4  1" 1/2	3010124	
GI/EMME 400	MBZRDLE 410	3/4"  1" 1/2	3000824	
	MBZRDLE 412	1" 1/4  1" 1/2	3010124	
	MBZRDLE 420 - CB 50/1	2"  1" 1/2	3000822	
GI/EMME 600	MBZRDLE 410	3/4"  1" 1/2	3000824	
	MBZRDLE 412	1" 1/4  1" 1/2	3010124	
	MBZRDLE 420 - CB 50/1	2"  1" 1/2	3000822	
GI/EMME 900	MBZRDLE 412	1" 1/4  2"	3010126	
	MBZRDLE 415 - CB 40/1	1" 1/2  2"	3000843	
	CBF 65	DN 65  2" 1/2  1" 1/2  2"	3000825	

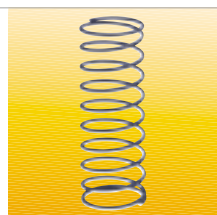
### Seal control kit



To test the valve seals on the gas train, a special "seal control kit" is available.

Burner	Gas train	Kit code	Price
GI/EMME 300	MBZRDLE 407 - MBZRDLE 410 - MBZRDLE 412	3010123	
	MBZRDLE 415 - CB 40/2 - MBZRDLE 410 - MBZRDLE 412	3010125	
GI/EMME 400	MBZRDLE 415 - MBZRDLE 420 CB 40/2 - CB 50/2	3010125	
	MBZRDLE 410 - MBZRDLE 412 MBZRDLE 415 - MBZRDLE 420 CB 40/2 - CB 50/2	3010123	
GI/EMME 600	MBZRDLE 410 - MBZRDLE 412 MBZRDLE 415 - MBZRDLE 420 CB 40/2 - CB 50/2	3010125	
	MBZRDLE 412	3010123	
GI/EMME 900	MBZRDLE 415 - MBZRDLE 420 CB 40/2 - CB 50/2 - CBF 65/2	3010125	

### Stabiliser spring



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

Gas train	Spring	Spring code	Price
CBF 65/2	Red from 25 to 55 mbar	3010133	
CBF 65/2	Black from 60 to 110 mbar	3010135	
CBF 65/2	Pink from 100 to 150 mbar	3090456	