

## GAS SERIES

The GAS series of burners cover a firing range from 130 to 1050 kW.

Operation is "one stage"; the combustion head, that can be set on the basis of required output, allows optimal performance ensuring good combustion and reducing fuel consumption.

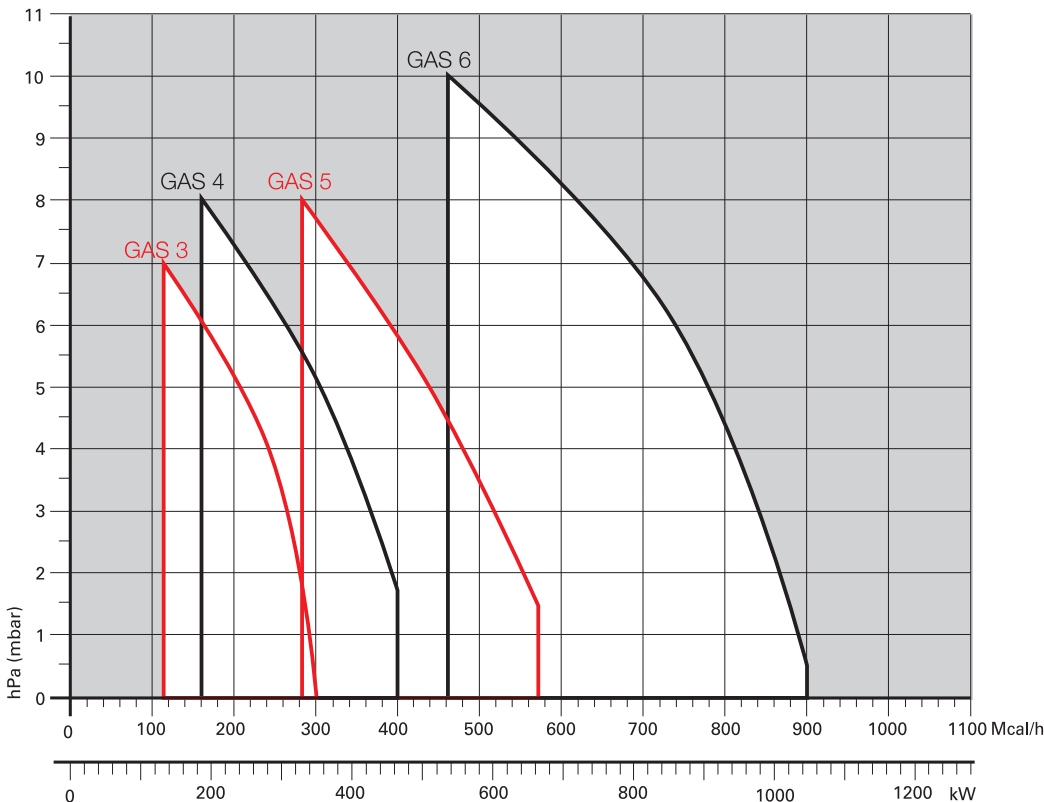
The GAS series are extremely reliable burners, featured by a simple use and an operation without particular maintenance intervention.

Simplified maintenance is achieved by the slide bar system, which allows easy access to all of the essential components of the combustion head. All electrical components are easily accessible only by dismounting a protection panel, thus guaranteeing a quick and simple intervention on components.



<b>GAS 3</b>	130 ÷ 350 kW
<b>GAS 4</b>	185 ÷ 465 kW
<b>GAS 5</b>	325 ÷ 660 kW
<b>GAS 6</b>	525 ÷ 1050 kW

## FIRING RATES



Useful working field for choosing the burner

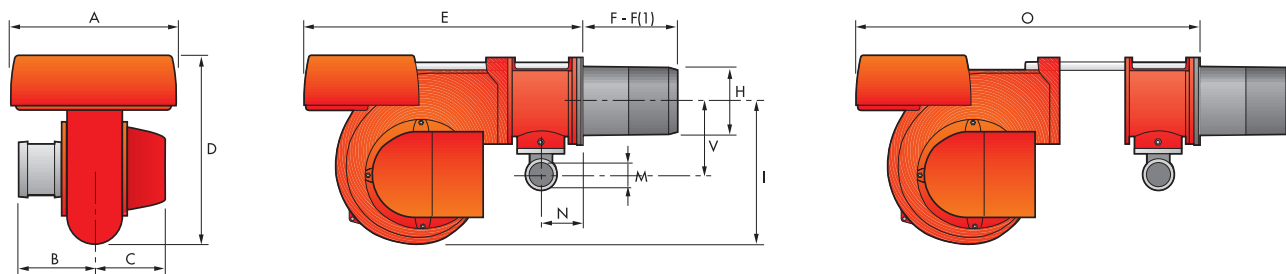
Test conditions conforming to EN676  
 Temperature: 20°C  
 Pressure: 1013,5 mbar  
 Altitude: 0 m a.s.l.

# One Stage Gas Burners

## GAS SERIES

### Overall dimensions (mm)

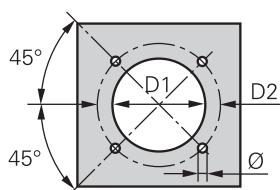
#### BURNER



MODEL	A	B	C	D	E	F - F (1)	H	I	M	N	O	V
▶ GAS 3	410	205	205	397	610	185 - 320	140	292	1"1/2	97	775	165
▶ GAS 4	410	205	205	397	610	187 - 320	150	292	1"1/2	97	775	165
▶ GAS 5	431	226	205	437	645	207 - 365	155	332	1"1/2	97	810	165
▶ GAS 6	463	258	205	485	770	227 - 360	175	370	2"	131	966	195

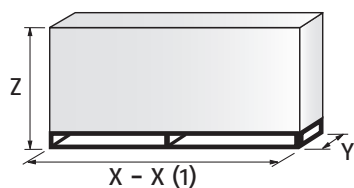
(1) Length with extended combustion head

#### BURNER - BOILER MOUNTING FLANGE



MODEL	D1	D2	Ø
▶ GAS 3	155	226	M10
▶ GAS 4	165	226	M10
▶ GAS 5	165	226	M10
▶ GAS 6	185	276	M12

#### PACKAGING

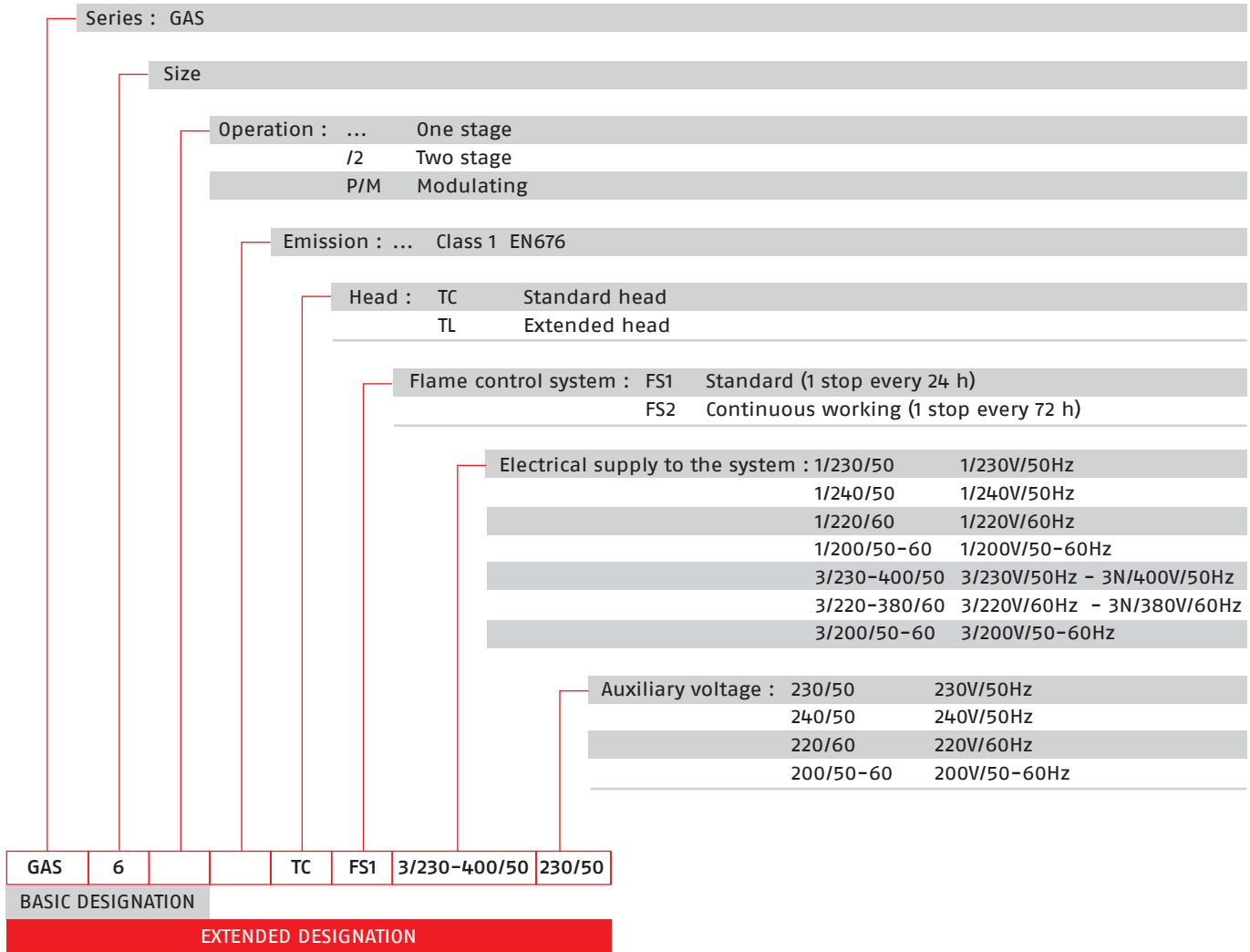


MODEL	X - X (1)	Y	Z	kg
▶ GAS 3	850	545	473	32
▶ GAS 4	850	545	473	38
▶ GAS 5	895	543	520	41
▶ GAS 6	1045	543	555	58

(1) Length with extended combustion head

## Specification

### DESIGNATION OF SERIES



# One Stage Gas Burners

## GAS SERIES

### Specification

#### STATE OF SUPPLY

Monoblock forced draught gas burner, one stage operation, made up of:

- Air suction circuit
- Fan with forward curved blades
- Air damper for air setting
- 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
- Minimum air pressure switch
- Single phase or three phases electrical motor
- Microprocessor-based burner safety control box, with diagnostic function
- Flame inspection window
- Slide bars for easier installation and maintenance
- Protection filter against radio interference
- IP X0D (IP 40) protection level.

Standard equipment:

- 1 gas train flange
- 1 flange gasket
- 1 insulating screen
- 8 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 <sup>3</sup> /h)			
3751987	GAS 3	TC	FS1	1/200/50-60	200/50-60	130-350	13-35	0,48-0,6	-		
3751982	GAS 3	TC	FS1	1/220/60	220/60	130-350	13-34	0,4	-		
3751918	GAS 3	TC	FS1	1/230/50	230/50	130-350	13-35	0,4	CE 0085AQ0707		
3751960	GAS 3	TC	FS1	1/240/50	240/50	130-350	13-35	0,4	-		
3751961	GAS 3	TL	FS1	1/240/50	240/50	130-350	13-36	0,4	-		
3751617	GAS 4	TC	FS1	1/230/50	230/50	185-465	18,5-46,5	0,54	-		
3751687	GAS 4	TC	FS1	3/200/50-60	200/50-60	180-470	18-47	0,6	-		
3751682	GAS 4	TC	FS1	3/220-380/60	220/60	180-470	18-47	0,6	-		
3751787	GAS 5	TC	FS1	3/200/50-60	200/50-60	320-660	32-66	0,85	-		
3751782	GAS 5	TC	FS1	3/220-380/60	220/60	320-660	32-66	1,1	-		
3751717	GAS 5	TC	FS1	3/230-400/50	230/50	325-660	32,5-66	0,85	-		
3751887	GAS 6	TC	FS1	3/200/50-60	200/50-60	525-1050	52-105	1,7	-		
3751882	GAS 6	TC	FS1	3/220-380/60	220/60	525-1050	52-105	1,7	-		
3751817	GAS 6	TC	FS1	3/230-400/50	230/50	525-1050	52,5-105	1,7	-		

Natural gas G20 net calorific value: 10 kWh/Nm<sup>3</sup> - Density gas G20: 0,71 kg/Nm<sup>3</sup>

The burners of GAS series are in according to 2009/142 - 2004/108 - 2006/95 - 2006/42 EC Directive and EN 676 Norm.

## Available models

### Gas Trains

CODE	GAS TRAIN			VPS CODE	ADAPTER CODE						
	MODEL	Ø	C.T.		GAS 3	GAS 4	GAS 5	GAS 6			
3970500*	MB 405/1 - RT 20	Rp 3/4"	-	3010123	3000824		●	●			
3970084*	MB 405/2 - RSD 20	Rp 1/2"	-	3010123	20044756		●	●			
3970553*	MB 407/1 - RT 20	Rp 3/4"	-	3010123	3000824						
3970599*	MB 407/1 - RT 52	Rp 3/4"	-	3010123							
3970229*	MB 407/1 - RSM 20	Rp 3/4"	-	3010123							
3970537*	MB 407/2 - RSD 20	Rp 3/4"	-	3010123							
3970556*	MB 407/2 - RT 20	Rp 3/4"	-	3010123							
3970258*	MB 410/1 - RT 52	Rp 1" 1/2	-	3010123					-	-	-
3970554*	MB 410/1 - RT 20	Rp 3/4"	-	3010123	3000824						
3970600*	MB 410/1 - RT 52	Rp 3/4"	-	3010123							
3970230*	MB 410/1 - RSM 20	Rp 3/4"	-	3010123							
3970534*	MB 410/2 - RSD 20	Rp 3/4"	-	3010123							
3970557*	MB 410/2 - RT 20	Rp 3/4"	-	3010123	3000843						
3970256*	MB 412/1 - RT 52	Rp 1" 1/2	-	3010123					-	-	-
3970144*	MB 412/1 - RT 20	Rp 1" 1/2	-	3010123					-	-	-
3970197**	MB 412/1 CT RT 20	Rp 1" 1/2	◆	-					-	-	-
3970231*	MB 412/1 - RSM 20	Rp 1" 1/2	-	3010123					-	-	-
3970152*	MB 412/2 - RT 20	Rp 1" 1/2	-	3010123					-	-	-
3970180*	MB 415/1 - RT 30	Rp 1" 1/2	-	3010123					-	-	-
3970198**	MB 415/1 CT RT 30	Rp 1" 1/2	◆	-					-	-	-
3970250*	MB 415/1 - RT 52	Rp 1" 1/2	-	3010123					-	-	-
3970253**	MB 415/1 CT RT 52	Rp 1" 1/2	◆	-					-	-	-
3970232*	MB 415/1 - RSM 30	Rp 1" 1/2	-	3010123	-	-	-				
3970183*	MB 415/2 - RT 20	Rp 1" 1/2	-	3010123	-	-	-				
3970181*	MB 420/1 - RT 30	Rp 2"	-	3010123	3000822						
3970182**	MB 420/1 CT RT 30	Rp 2"	◆	-							
3970257*	MB 420/1 - RT 52	Rp 2"	-	3010123							
3970252**	MB 420/1 CT RT 52	Rp 2"	◆	-							
3970233*	MB 420/1 - RSM 30	Rp 2"	-	3010123							
3970234**	MB 420/1 CT RSM 30	Rp 2"	◆	-							
3970184*	MB 420/2 - RT 20	Rp 2"	-	3010123							
3970185**	MB 420/2 CT RT 20	Rp 2"	◆	-							
3970221*	MBC 1200/1 - RSM 60	Rp 2"	-	3010367							
3970225**	MBC 1200/1 CT RSM 60	Rp 2"	◆	-							
3970222*	MBC 1900/1 - FSM 40	DN 65	-	3010367	●	●	3000825				
3970226**	MBC 1900/1 CT FSM 40	DN 65	◆	-	●	●					
3970223*	MBC 3100/1 - FSM 40	DN 80	-	3010367	●	●	●	3000826			
3970227**	MBC 3100/1 CT FSM 40	DN 80	◆	-	●	●	●				
3970224*	MBC 5000/1 - FSM 80	DN 100	-	3010367	●	●	●	●			
3970228**	MBC 5000/1 CT FSM 80	DN 100	◆	-	●	●	●	●			

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

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

\*\* 230V/50Hz electrical supply.

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).

● Not available.

# One Stage Gas Burners

## GAS SERIES

### Available models

#### Gas Trains

CODE	GAS TRAIN			VPS CODE	ADAPTER CODE					
	MODEL	Ø	C.T.		GAS 3	GAS 4	GAS 5	GAS 6		
3970145*	CB 512/1 - RSM 30	Rp 1" 1/2	-	3010367	-	-	-	3000843		
20045589**	CB 512/1 CT RSM 30	Rp 1" 1/2	◆	-	-	-	-			
3970153*	CB 512/2 - RT 32	Rp 1" 1/2	-	3010367	-	-	-			
20045590**	CB 512/2 CT RT 32	Rp 1" 1/2	◆	-	-	-	-			
3970146*	CB 520/1 - RSM 30	Rp 2"	-	3010367	3000822			-		
3970160**	CB 520/1 CT RSM 30	Rp 2"	◆	-				-		
3970154*	CB 520/2 - RT 32	Rp 2"	-	3010367				-		
20045591**	CB 520/2 CT RT 32	Rp 2"	◆	-				-		
20044659*	CB 525/1 - RSM 30	Rp 2"	-	3010367				-		
20044660**	CB 525/1 CT RSM 30	Rp 2"	◆	-				-		
3970147*	CB 5065/1 - FSM 30	DN 65	-	3010367				●	3000825	
3970161**	CB 5065/1 CT FSM 30	DN 65	◆	-				●		
3970155*	CB 5065/2 - FT 32	DN 65	-	3010367	●					
3970167**	CB 5065/2 CT FT 32	DN 65	◆	-	●					
3970148*	CB 5080/1 - FSM 30	DN 80	-	3010367	●	●	3000826+ 3000822	3000826		
3970162**	CB 5080/1 CT FSM 30	DN 80	◆	-	●	●				
3970156*	CB 5080/2 - FT 32	DN 80	-	3010367	●	●				
3970168*	CB 5080/2 CT FT 32	DN 80	◆	-	●	●				
3970149*	CB 50100/1 - FSM 30	DN 100	-	3010367	●	●	●	3010370+		
3970163**	CB 50100/1 CT FSM 30	DN 100	◆	-	●	●	●	3000826		
20015871*	CB 50125/1 - FSM 30	DN 125	-	3010367	●	●	●	●		
3970196**	CB 50125/1 CT FSM 30	DN 125	◆	-	●	●	●	●		

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

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

\*\* 230V/50Hz electrical supply.

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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.

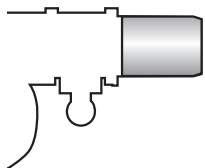
◆ gas train equipped with leak detection control device.

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).

● Not available.

## Burner accessories

### Extended head kit



"Standard head" burners can be transformed into "extended head" versions, by using the special kit.

BURNER	STANDARD HEAD LENGTH (mm)	EXTENDED HEAD LENGTH (mm)	KIT CODE
▶ GAS 3	185	320	3000605
▶ GAS 4	187	320	3000606
▶ GAS 5	207	365	3000607
▶ GAS 6	227	360	3000608

### Spacer kit



If burner head penetration into the combustion chamber needs reducing, varying thickness spacers are available, as given in the following list.

BURNER	SPACER THICKNESS S (mm)	KIT CODE
▶ GAS 3 - 4 - 5 - 6	142	3000755

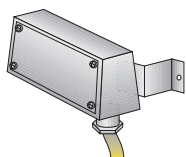
### Continuous ventilation kit



If the burner requires continuous ventilation in the stages without flame, a special kit is available as given in the following table.

BURNER	KIT CODE
▶ GAS 3 - 4 - 5 - 6	3010030

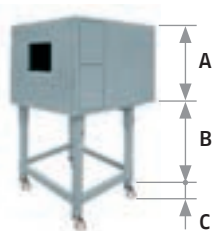
### Post-ventilation kit



To prolong ventilation for approximately 5 seconds after opening of thermostats chain, a special kit is available.

BURNER	KIT CODE
▶ GAS 3 - 4 - 5 - 6	3010004

### Sound proofing box



If noise emission needs reducing even further, sound-proofing boxes are available. In case of generator heights, where a lower dimension "B" is required, ask for the Box Support Kit code 20065135.

BURNER	BOX TYPE	A (mm)	B (mm) min-max	C (mm)	[dB(A)] (*)	BOX CODE
▶ GAS 3 - 4 - 5 - 6	C1/3	650	372 - 980	110	10	3010403

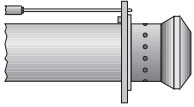
(\*) Average noise reduction according to EN 15036-1 standard

# One Stage Gas Burners

## GAS SERIES

### Burner accessories

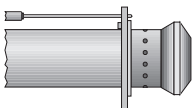
#### LPG kit



For burning LPG gas, a special kit is available.

BURNER	KIT CODE FOR STANDARD HEAD	KIT CODE FOR EXTENDED HEAD
▶ GAS 3	3000657	3000807
▶ GAS 4	3000658	3000808
▶ GAS 5	3000659	3000809
▶ GAS 6	3000753	3000810

#### Town Gas kit



For burning Town Gas, a special kit is available.

BURNER	KIT CODE FOR STANDARD HEAD (*)	KIT CODE FOR EXTENDED HEAD(*)
▶ GAS 3	3000742	-
▶ GAS 4	3000754	-
▶ GAS 5	3000759	-
▶ GAS 6	3000768	-

(\*) Without CE certification

#### PC Interface kit



To connect the control box to a personal computer for the transmission of operation, fault signals and detailed service information, an interface adapter with PC software are available.

BURNER	KIT CODE
▶ GAS 3 - 4 - 5 - 6	3002719

#### Protection kit (electromagnetic interferences)

When the burner is installed in a room particularly subject to electromagnetic interference (signals emitted over 10 V/m) due for example to INVERTER presence or in systems where the lengths of the thermostat connections is over 20 meters, this specific protection kit is available as an interface between the thermostatic controls and the burner.









BURNER	KIT CODE
▶ All models	3010386



## 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	LENGTH mm	ADAPTER CODE
2"  1" 1/2	70	3000822
3/4"  1" 1/2	31	3000824
DN 65  2" 1/2  2"	300	3000825
DN 80  2" 1/2  1" 1/2	300	3000826
1" 1/2  2"	35	3000843
1/2"  1" 1/2	31	20044756

### Seal control kit



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

BURNER	GAS TRAIN	KIT CODE for 50 Hz operation	KIT CODE for 60 Hz operation
▶ GAS 3	MB 407/2 - 410/2 - 412/2 - 415/2	3010123	20050030
	CB 512/2	3010125	20050033
▶ GAS 4	MB 410/2 - 412/2 - 415/2 - 420/2	3010123	20050030
	CB 512/2 - 520/2	3010125	20050033
▶ GAS 5	MB 410/2 - 412/2 - 415/2 - 420/2	3010123	20050030
	CB 512/2 - 520/2	3010125	20050033
▶ GAS 6	MB 410/2 - 412/2 - 415/2 - 420/2	3010123	20050030
	CB 512/2 - 520/2 - 5065/2	3010125	20050033

### Stabiliser spring



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

GAS TRAIN	SPRING COLOUR	SPRING PRESSURE RANGE mbar	SPRING CODE
▶ CB 512/2	Red	25 - 55	3010131
	Black	60 - 110	3010157
	Pink	90 - 150	3090486
▶ CB 520/2	Red	25 - 55	3010132
	Black	60 - 110	3010158
	Pink	90 - 150	3090487
▶ CB 5065/2 - 5080/2	Red	25 - 55	3010133
	Black	60 - 110	3010135
	Pink	100 - 150	3090456
	Grey	140 - 200	3090992