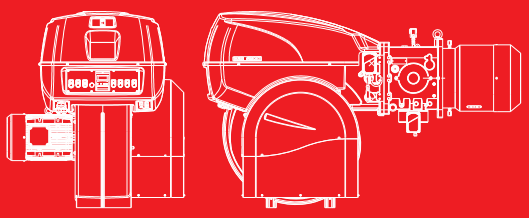
TECHNICAL DATA LEAFLET

LOW NOx GAS

RS 300÷1200/M BLU Series

Low NOx Modulating Gas Burners

RS 300/M BLU	500/1350	÷	3800	kW
RS 400/M BLU	950/1830	÷	4590	kW
RS 500/M BLU	1000/2500	÷	5170	kW
RS 650/M BLU	1410/3020	÷	6500	kW
RS 800/M BLU	1200/3500	÷	8100	kW
RS 1000/M BLU	1100/4000	÷	10100	kW
RS 1200/M BLU	1500/5500	÷	11100	kW



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The RS 300-400-500-650-800-1000-1200/M BLU burners are characterised by a monoblock structure which means that all necessary components are combined in a single unit, making installation easier and faster.
The burners cover a firing range from 1350 to 11100 kW, and they have been designed for use in hot water boilers or industrial steam generators.
0peration can be "two stage progressive" or alternatively "modulating" with the installation of a PID logic regulator or by external 4-20 mA/0-10 V signal.
The mechanical cam device of regulation allows to catch up a high modulation ratio on all firing rates range. The burners 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, engineered with advanced simulation devices, guarantees reduced polluting emissions (N0x < 80 mg/kWh).
FS1 and FS2 versions are available for intermittent and continuous operation applications.
An exclusive design, guarantees low sound emissions, low electrical consumption, easy use and maintenance.

Technical Data

MODEL		RS 300/M BLU	RS 400/M BLU	RS 500/M BLU
Burner operation mode		Progressive two-stage or modulating		
Modulation ratio at max. output		5 ÷ 1		
Servomotor	type	LKS 310 (FS1 version) - SQM 10 (FS2 version)		
	run time s	--		
Heat output	kW	500/1350÷3800	950/1830÷4590	1000/2500÷5170
	Mcal/h	430/1161÷3268	688/1548÷3870	860/2150÷4446
Working temperature	°C min./max.	0/50		
FUEL/AIR DATA				
Net calorific value G20 gas	kWh/Nm³	10		
G20 gas density	kg/Nm³	0.71		
G20 gas delivery	Nm³/h	50/135÷380	80/180÷450	100/250÷520
Net calorific value G25 gas	kWh/Nm³	8.6		
G25 gas density	kg/Nm³	0.78		
G25 gas delivery	Nm³/h	58/156÷442	93/209÷523	116/290÷605
Net calorific value LPG gas	kWh/Nm³	25.8		
LPG gas density	kg/Nm³	2.02		
LPG gas delivery	Nm³/h	--	--	--
Fan	type	Reverse curve blades		
Air temperature	max °C	60		
ELECTRICAL DATA				
Electrical supply	Ph/Hz/V	3N ~ 50 / 230-400V (±10%)		
Auxiliary electrical supply	Ph/Hz/V	1/50/230 ~ (±10%)		
Control box	type	(01)		
Total electrical power	kW	6	9	11
Auxiliary electrical power	kW	--		
Protection level	IP	54		
Motor electrical power	kW	4.5	7.5	9.2
Rated motor current	A	15.8 - 8.7	13.8 - 8	16.9 - 9.7
Motor start up current	A	7 x In		8.1 x Nom
Motor protection level	IP	54		55
Ignition transformer	type	--		
	V1 - V2	230V - 1 X 8 kV		
	I1 - I2	1 A - 20 mA		
Operation		FS1 - Intermittent (at least one stop every 24 h) FS2 Continuous (at least one stop every 72 h)		
EMISSIONS				
Sound pressure	dB(A)	82	85	88
Sound power	dB(A)	93	96	99
CO emission	mg/kWh	< 10		
NOx emission	mg/kWh	< 80		
APPROVAL				
Directive		2006/42/EC - 2009/142/EC - 2014/30/UE - 2014/35/UE		
Conforming to		EN 676		
Certification		CE 0085BR0480	CE 0085BR0481	CE 0085BO0341

(01) RMG/M (for intermittent operation) - LGK16 (for continuous operation)
(02) LFL1... (for intermittent operation) - LGK16 (for continuous operation)

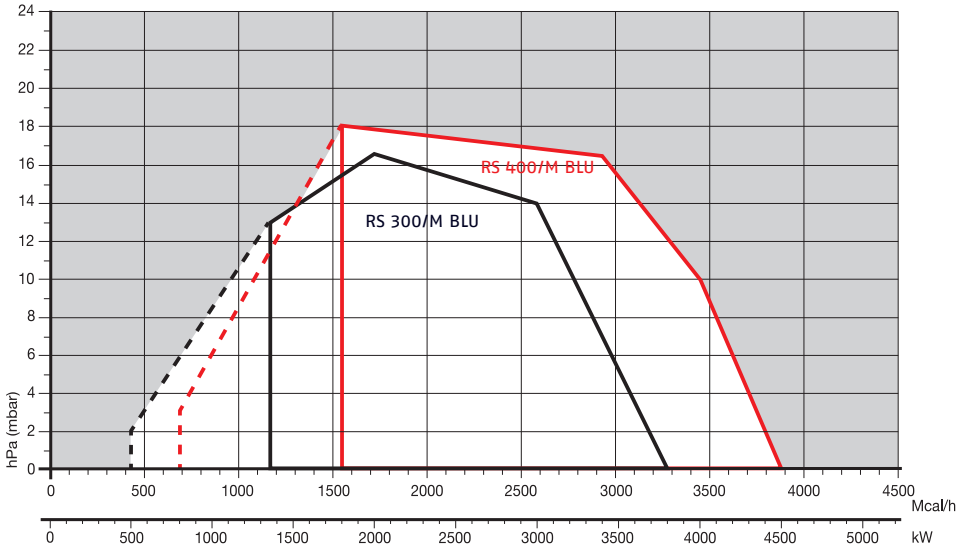
Reference conditions:
Temperature: 20°C - Pressure: 1013,5 mbar - Altitude: 0 m a.s.l. - Noise measured at a distance of 1 meter. Sound pressure measured in manufacturer's combustion laboratory, with burner operating on test boiler and at maximum rated output. The sound power is measured with the "Free Field" method, as per EN 15036, and according to an "Accuracy: Category 3" measuring accuracy, as set out in EN ISO 3746.

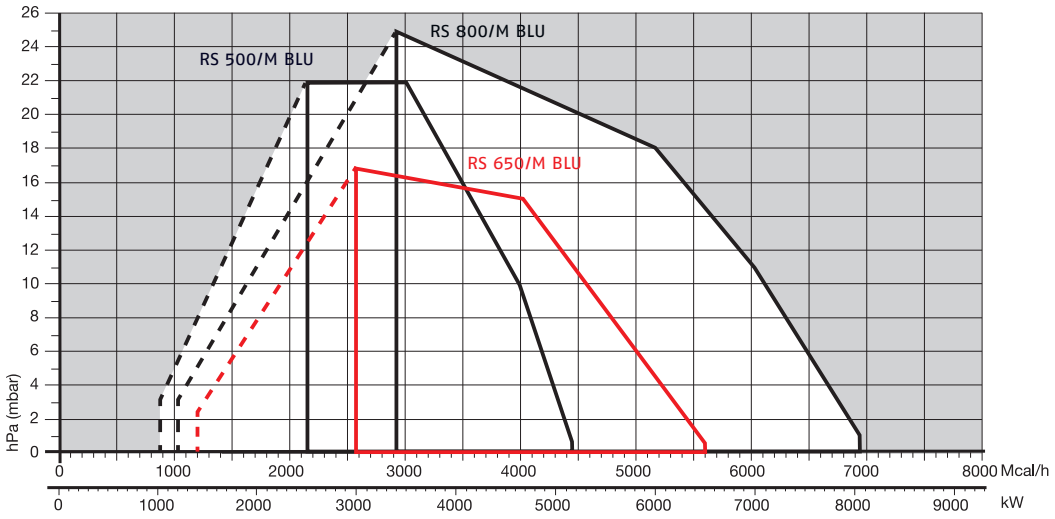
MODEL		RS 650/M BLU	RS 800/M BLU	RS 1000/M BLU	RS 1200/M BLU
Burner operation mode		Progressive two-stage or modulating			
Modulation ratio at max. output		5 ÷ 1		7 ÷ 1	
Servomotor	type	LKS 310 (FS1 version) - SQM10.16 (FS2 version)			
	run time s	--			
Heat output	kW	1410/3020÷6500	1200/3500÷8100	1100/4000÷10100	1500/5500÷11100
	Mcal/h	1230/2580÷5633	1032/3010÷6966	946/3440÷8686	1290/4730÷9546
Working temperature	°C min./max.	0/50			
FUEL/AIR DATA					
Net calorific value G20 gas	kWh/Nm³	10			
G20 gas density	kg/Nm³	0.71			
G20 gas delivery	Nm³/h	143/300÷655	120/350÷80	50/135÷380	80/180÷450
Net calorific value G25 gas	kWh/Nm³	8.6			
G25 gas density	kg/Nm³	0.78			
G25 gas delivery	Nm³/h	166/349÷762	139/407÷942	58/156÷442	93/209÷523
Net calorific value LPG gas	kWh/Nm³	25.8			
LPG gas density	kg/Nm³	2.02			
LPG gas delivery	Nm³/h	55.4/116.3÷253.9	--	--	
Fan	type	Forward curve blades		Reverse curve blades	
Air temperature	max °C	60			
ELECTRICAL DATA					
Electrical supply	Ph/Hz/V	3N/50/230-400 (±10%)			
Auxiliary electrical supply	Ph/Hz/V	1/50/230 ~ (±10%)			
Control box	type	(01)		(02)	
Total electrical power	kW	21.4	24	24	27
Auxiliary electrical power	kW	--			
Protection level	IP	54			
Motor electrical power	kW	18.5	22	22	25
Rated motor current	A	33.3 - 19.2	38.6 - 22.3	39 - 24	44.1 - 25.5
Motor start up current	A	--	6 x Nom	7 x In	
Motor protection level	IP	54			
Ignition transformer	type			--	
	V1 - V2	230V - 1 x 8 kV		230V - 2x5 kV	
	I1 - I2	1A - 20mA		1.9A - 35mA	
Operation		Intermittent (at least one stop every 24 h) or Progressive two-stage or modulating by kit			
EMISSIONS					
Sound pressure	dB(A)	90,1	88,1	85	89,3
Sound power	dB(A)	104,3	102,5	99	99,7
CO emission	mg/kWh	< 10			
NOx emission	mg/kWh	< 80			
APPROVAL					
Directive		2006/42/EC - 2009/142/EC - 2014/30/UE - 2014/35/UE			
Conforming to		EN 676			
Certification		CE-0085BT0337		CE-0085CN0120	

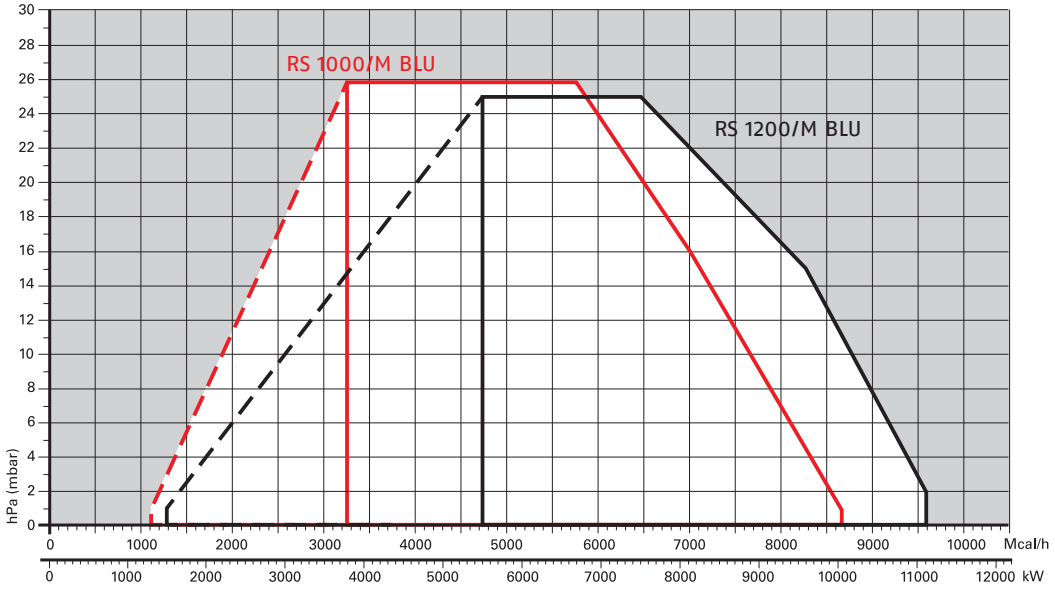
(01) RMG/M (for intermittent operation) - LGK16 (for continuous operation)
(02) LFL1... (for intermittent operation) - LGK16 (for continuous operation)

Reference conditions:
Temperature: 20°C - Pressure: 1013,5 mbar - Altitude: 0 m a.s.l. - Noise measured at a distance of 1 meter. Sound pressure measured in manufacturer's combustion laboratory, with burner operating on test boiler and at maximum rated output. The sound power is measured with the "Free Field" method, as per EN 15036, and according to an "Accuracy: Category 3" measuring accuracy, as set out in EN ISO 3746.

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.

GAS TRAIN DESIGNATION

Series:	MB
	MBC
	DMV
	DMV12
	VGD
	CB
	CBH
	MV
	CG

Size:	405	407	410	412	415	420						
		65	120	300	700	1200	–	1900	3100	5000		
	505	507	510	512	–	520	525	5065	5080	50100	50125	50150
10	15	20	32	40	–	50	–	65	80	100	125	150
		120	220									

Operation:	/S	only ON-OFF function
	/1	stage mode opening
	/2	2nd stage mode opening
	/P	1st stage mode opening with air/gas proportional regulator

Leak detection control:	–	0
	CT	leak detection control device installed on the gas train
	CQ	equipped with pressure switch for leak detection control

Joint type:	R	threaded joint
	F	standard flange ISO
	F1	square flange BS1
	F2	square flange BS2
	F3	square flange BS3 – BS4

Electrical connection:	T	Terminals – Terminal strip
	SD	Domestic plug
	SM	Medium voltage plug

Standard output pressure range:	–	without pressure governor
	0	with governor and air/gas proportional pressure
	2	with governor and output pressure up to 20 mbar
	3	with governor and output pressure up to 30 mbar
	4	with governor and output pressure up to 40 mbar
	5	with governor and output pressure up to 50 mbar
	6	with governor and output pressure up to 60 mbar
	8	with governor and output pressure up to 80 mbar
	15	with governor and output pressure up to 150 mbar

Valve control:	0	shared
	2	separate

CB	5065	/1	CT	F	SM	3	0

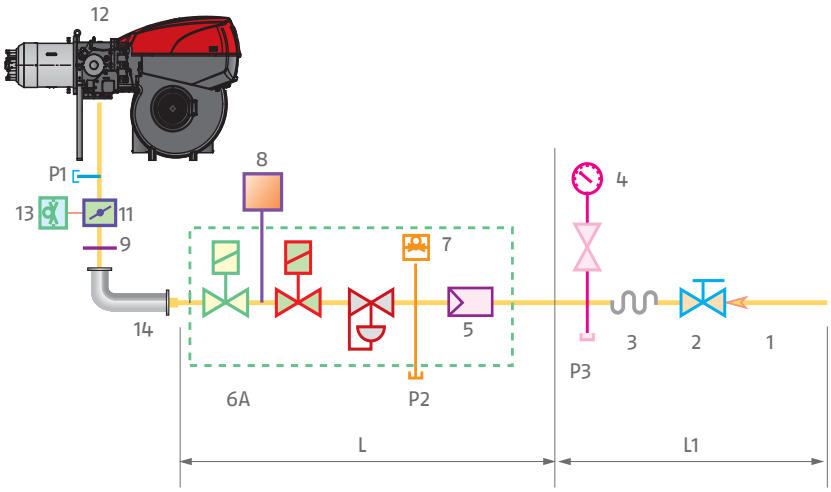
BASIC DESIGNATION

EXTENDED DESIGNATION

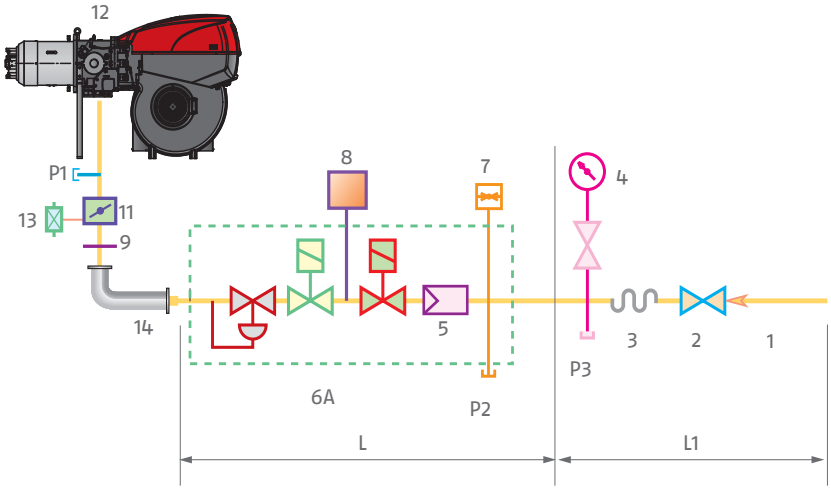
GAS TRAINS

The burners are fitted with a butterfly valve to regulate the fuel, controlled by the main management module of burner through a high precision servomotor.
Fuel can be supplied either from the right or left sides, on the basis of the application requirements.
A maximum gas pressure switch stops the burner in case of excess pressure in the fuel line.
The gas train can be selected to best fit system requirements depending on the fuel output and pressure in the supply line.
The gas trains are with or without seal control.

MB "THREADED"

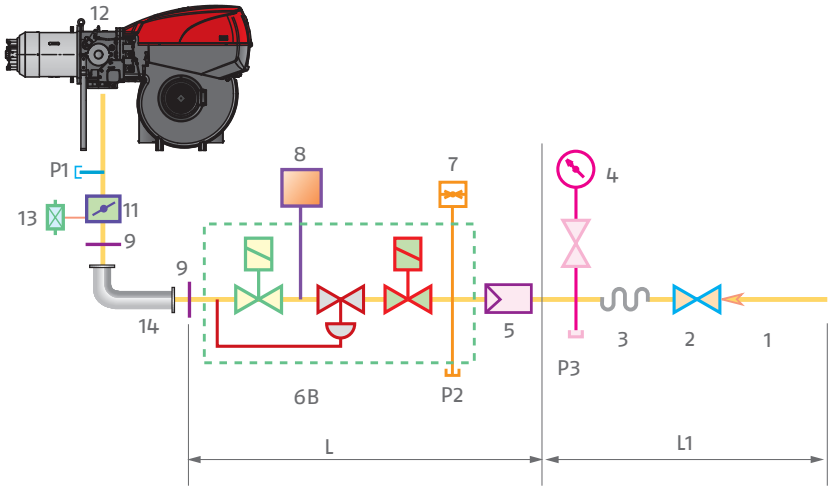


MBC "THREADED"

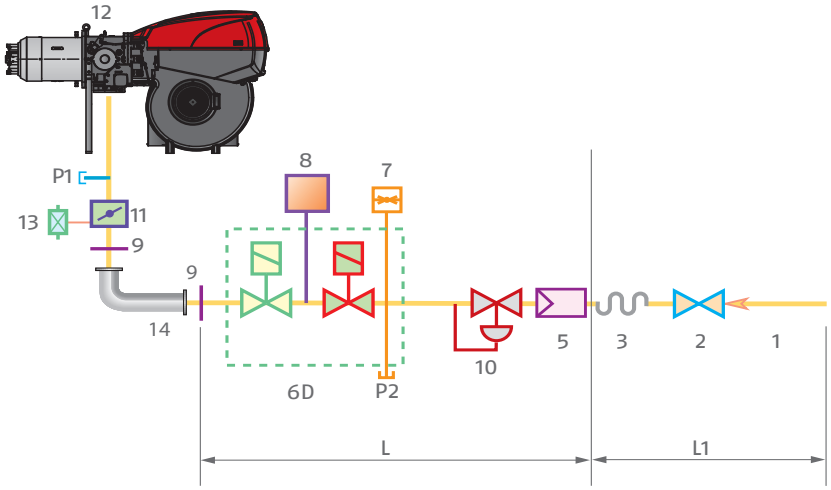


1	Gas input pipework
2	Manual valve
3	Anti-vibration joint
4	Pressure gauge with pushbutton cock
5	Filter
6A	Includes:
	- filter
	- operation valve
	- safety valve
	- pressure adjuster
7	Minimum gas pressure switch
8	Leak detection device, supplied as an accessory or incorporated, based on the gas train code.
9	Gasket, for "flanged" versions only
10	Pressure adjuster
11	Gas adjuster butterfly valve
12	Burner
13	Maximum gas pressure switch
14	Gas train-burner adaptor, supplied separately
P1	Combustion head pressure
P2	Upstream pressure of valves
P3	Upstream pressure of the filter
L	Gas train supplied separately, with the code given in the table.
L1	Installer's responsibility

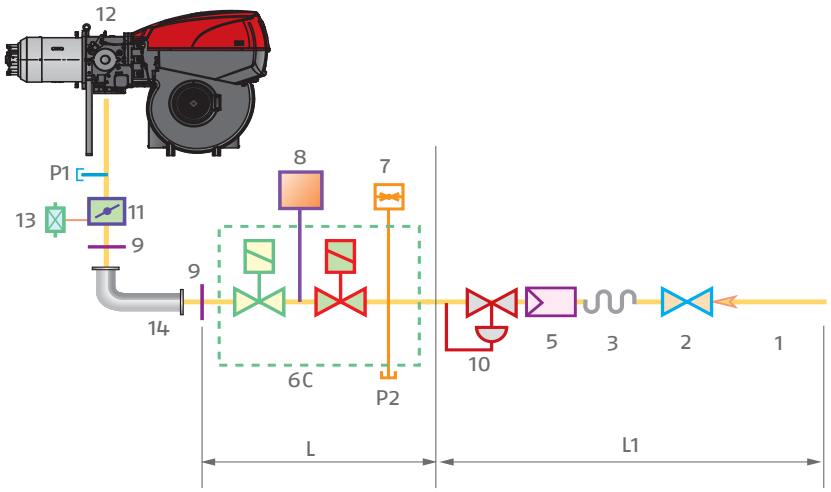
MBC "FLANGED"



CB "FLANGED OR THREADED"

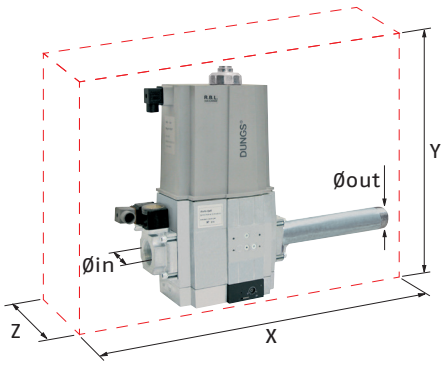


DMV "FLANGED OR THREADED"

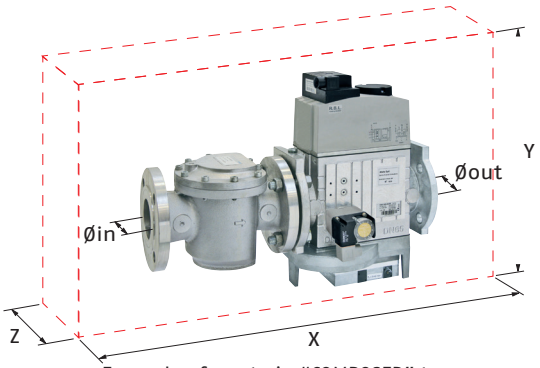


1	Gas input pipework
2	Manual valve
3	Anti-vibration joint
4	Pressure gauge with pushbutton cock
5	Filter
6B	Includes:
	- operation valve
	- safety valve
	- pressure adjuster
6C	Includes:
	- operation valve
	- safety valve
6D	Includes:
	- operation valve
	- safety valve
7	Minimum gas pressure switch
8	Leak detection device, supplied as an accessory or incorporated, based on the gas train code.
9	Gasket, for "flanged" versions only
10	Pressure adjuster
11	Gas adjuster butterfly valve
12	Burner
13	Maximum gas pressure switch
14	Gas train-burner adaptor, supplied separately
P1	Combustion head pressure
P2	Upstream pressure of valves
P3	Upstream pressure of the filter
L	Gas train supplied separately, with the code given in the table
L1	Installer's responsibility

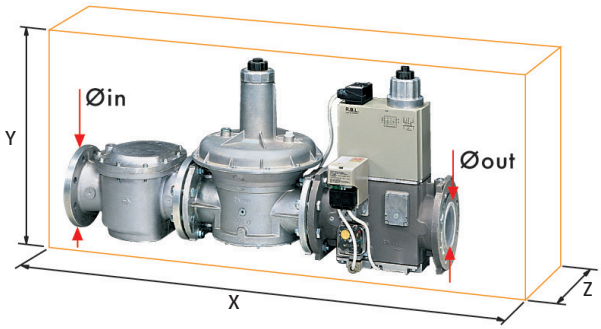
Gas trains are approved by standard EN 676 together with the burner.
The overall dimensions of the gas train depends on how they are constructed. The following table shows the maximum dimensions of the gas trains that can be fitted to RS 650-800-1000-1200/M BLU burners, intake and outlet diameters and seal control if fitted.
The maximum gas pressure of gas train "MULTIBLOC" type is 360 mbar, and that one of gas train "COMPOSED" type is 500 mbar.
"MULTIBLOC" guarantees a range of pressure towards the burner from 4 to 60 mbar. For version DN 65 and DN 80 is from 20 to 40 mbar. For version DN 100 is from 40 to 80 mbar. The range of pressure in the "MULTIBLOC" with flange can be modified choosing the stabiliser spring (see gas train accessory).
The maximum gas pressure of gas train "CB" series is 500 mbar. "CB" gas train guarantees a range of pressure towards the burner from 10 to 30 mbar. The range of pressure can be modified choosing the stabilizer spring (see accessories).
The maximum gas pressure of gas train "DMV" series is 500 mbar. "DMV" gas train is supplied without pressure governor.



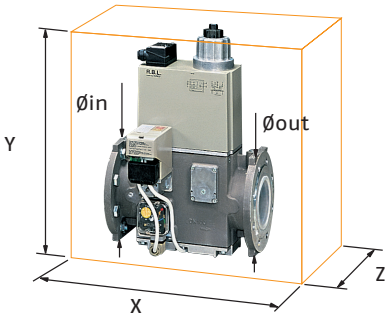
Example of gas train "MULTIBLOC" type without seal control (i.e. MBC 1200)



Example of gas train "COMPOSED" type without seal control (i.e. MBC 1900-3100-5000)



Example of gas train "CB" series with seal control



Example of gas train "DMV" series with seal control

GAS TRAIN						
MODEL	CODE	Ø in	Ø out	X mm	Y mm	Z mm
MB 415/1 - RT 30	3970180	Rp 1-1/2"	Rp 1-1/2"	523	250	100
MB 415/1 CT RT 30	3970198	Rp 1-1/2"	Rp 1-1/2"	523	250	229
MB 415/1 - RT 52	3970250	Rp 1-1/2"	Rp 1-1/2"	523	250	100
MB 415/1 CT RT 52	3970253	Rp 1-1/2"	Rp 1-1/2"	523	250	229
MB 415/1 RSM 30	3970232	Rp 1-1/2"	Rp 1-1/2"	523	250	100
MB 420/1 RT 30	3970181	Rp 2"	Rp 2"	523	289	100
MB 420/1 CT RT 30	3970182	Rp 2"	Rp 2"	523	289	229
MB 420/1 RT 52	3970257	Rp 2"	Rp 2"	523	289	100
MB 420/1 CT RT 52	3970252	Rp 2"	Rp 2"	523	289	229
MB 420/1 RSM 30	3970233	Rp 2"	Rp 2"	523	289	100
MB 420/1 CT RSM 30	3970234	Rp 2"	Rp 2"	523	289	229

GAS TRAIN						
MODEL	CODE	Ø in	Ø out	X mm	Y mm	Z mm
MBC 1200/1 – RSM 60	3970221	Rp 2"	Rp 2"	528	424	161
MBC 1200/1 CT RSM 60	3970225	Rp 2"	Rp 2"	528	424	290
MBC 1900/1 – FSM 40	3970222	DN 65	DN 65	613	430	237
MBC 1900/1 CT FSM 40	3970226	DN 65	DN 65	613	430	298
MBC 3100/1 – FSM 40	3970223	DN 80	DN 80	633	500	240
MBC 3100/1 CT FSM 40	3970227	DN 80	DN 80	633	500	319
MBC 5000/1 – FSM 80	3970224	DN 100	DN 100	733	576	280
MBC 5000/1 CT FSM 80	3970228	DN 100	DN 100	733	576	348

GAS TRAIN						
MODEL	CODE	Ø in	Ø out	X mm	Y mm	Z mm
CB 512/1 – RSM 30	3970145	Rp 1-1/2"	Rp 1-1/2"	891	261	245
CB 512/1 – CT RSM 30	20045589	Rp 1-1/2"	Rp 1-1/2"	891	261	245
CB 520/1 – RSM 30	3970146	Rp 2"	Rp 2"	986	328	255
CB 520/1 – CT RSM 30	3970160	Rp 2"	Rp 2"	986	328	255
CB 525/1 – RSM 30	20044659	Rp 2"	Rp 2"	1025	356	285
CB 525/1 – CT RSM 30	20044660	Rp 2"	Rp 2"	1025	356	285
CB 5065/1 – FSM 30	3970147	DN 65	DN 65	906	356	285
CB 5065/1 CT FSM 30	3970161	DN 65	DN 65	906	356	285
CB 5080/1 – FSM 30	3970148	DN 80	DN 80	934	416	285
CB 5080/1 CT FSM 30	3970162	DN 80	DN 80	934	416	285
CB 50100/1 – FSM 30	3970149	DN 100	DN 100	1054	501	350
CB 50100/1 CT FSM 30	3970163	DN 100	DN 100	1054	501	350
CB 50125/1 – FSM 30	20015871	DN 125	DN 125	1164	780	400
CB 50125/1 CT FSM 30	3970196	DN 125	DN 125	1164	780	400

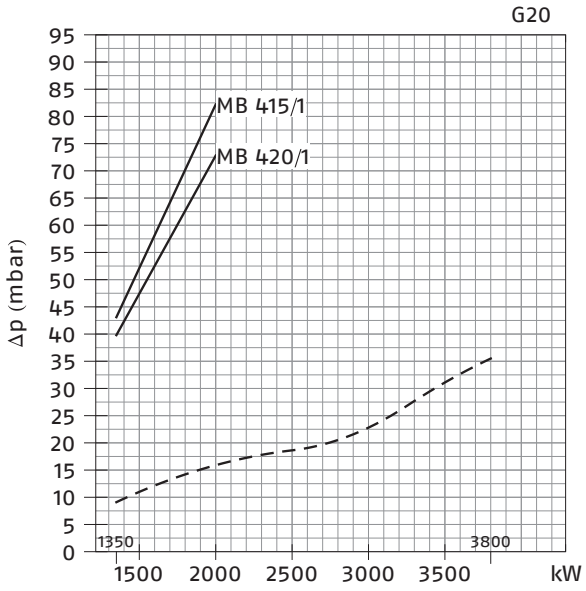
GAS TRAIN						
MODEL	CODE	Ø in	Ø out	X mm	Y mm	Z mm
DMV 512/1 – RSM – 0	20043035	Rp 1-1/2"	Rp 1-1/2"	490	292	245
DMV 512/1 –CT RSM – 0	20043036	Rp 1-1/2"	Rp 1-1/2"	490	292	245
DMV 512/1 – CQ RSM – 2	20043037	Rp 1-1/2"	Rp 1-1/2"	490	292	245
DMV 520/1 – RSM – 0	20043038	Rp 2"	Rp 2"	490	292	255
DMV 520/1 CT RSM – 0	20043039	Rp 2"	Rp 2"	490	292	255
DMV 520/1 CQ RSM – 2	20043040	Rp 2"	Rp 2"	490	292	255
DMV 525/1 – RSM – 0	20043053	Rp 2"	Rp 2"	530	338	270
DMV 525/1 CT RSM – 0	20043054	Rp 2"	Rp 2"	530	338	270
DMV 525/1 CQ RSM – 2	20043055	Rp 2"	Rp 2"	530	338	270
DMV 5065/1 – FSM – 0	20043041	DN 65	DN 65	290	338	270
DMV 5065/1 CT FSM – 0	20043042	DN 65	DN 65	290	338	270
DMV 5065/1 CQ FSM – 2	20043043	DN 65	DN 65	290	338	270
DMV 5080/1 – FSM – 0	20043044	DN 80	DN 80	310	397	290
DMV 5080/1 CT FSM – 0	20043045	DN 80	DN 80	310	397	290
DMV 5080/1 CQ FSM – 2	20043046	DN 80	DN 80	310	397	290
DMV 50100/1 – FSM – 0	20043047	DN 100	DN 100	350	449	307
DMV 50100/1 CT FSM – 0	20043048	DN 100	DN 100	350	449	307
DMV 50100/1 CQ FSM – 2	20043049	DN 100	DN 100	350	449	307
DMV 50125/1 – FSM – 0	20043050	DN 125	DN 125	400	554	333
DMV 50125/1 CT FSM – 0	20043051	DN 125	DN 125	400	554	333
DMV 50125/1 CQ FSM – 2	20043052	DN 125	DN 125	400	554	333

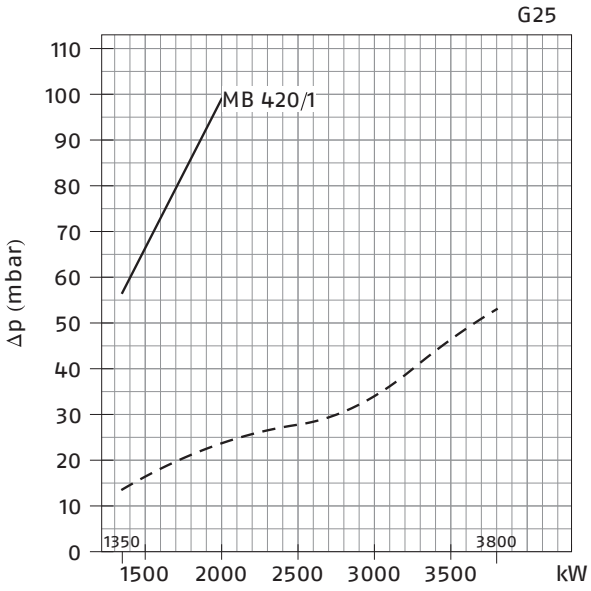
Pressure Drop Diagram

The diagrams indicate the minimum pressure drop of the burners with the various gas trains that can be matched with them; at the value of these pressure drop add the combustion chamber pressure.
The value thus calculated represents the minimum required input pressure to the gas train.

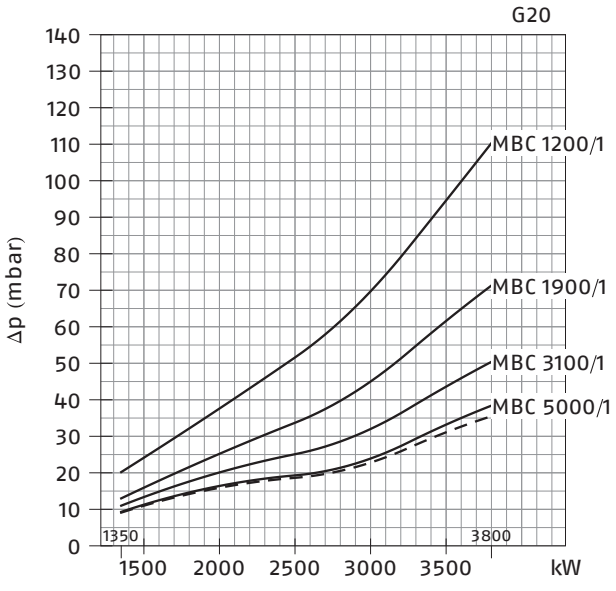
The minimum input gas pressure required is 15 mbar while burner operating.
In particular, the pressure difference between gas train upstream and downstream has to remain always over pressure drop values indicated below.

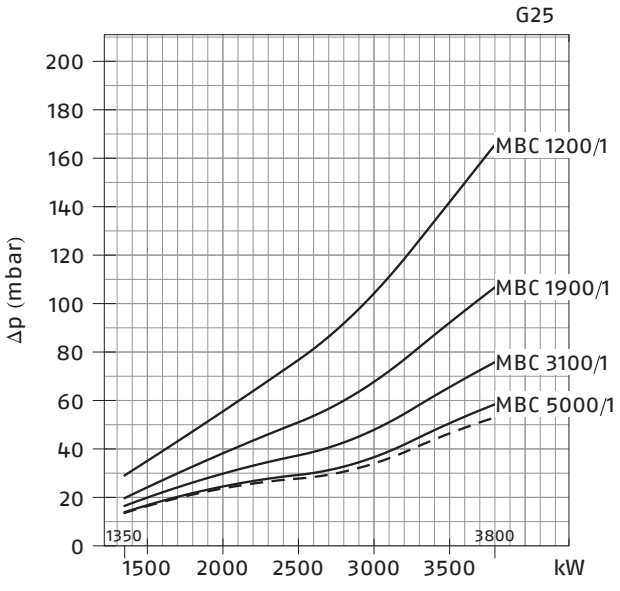
RS 300/M BLU (NATURAL GAS)





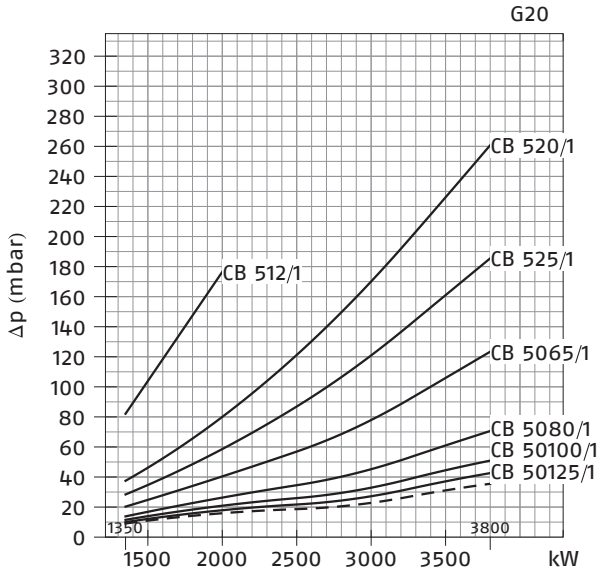
RS 300/M BLU (NATURAL GAS)

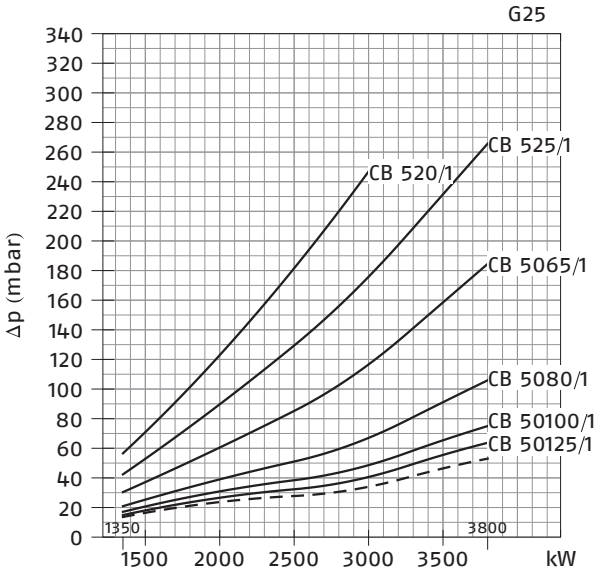




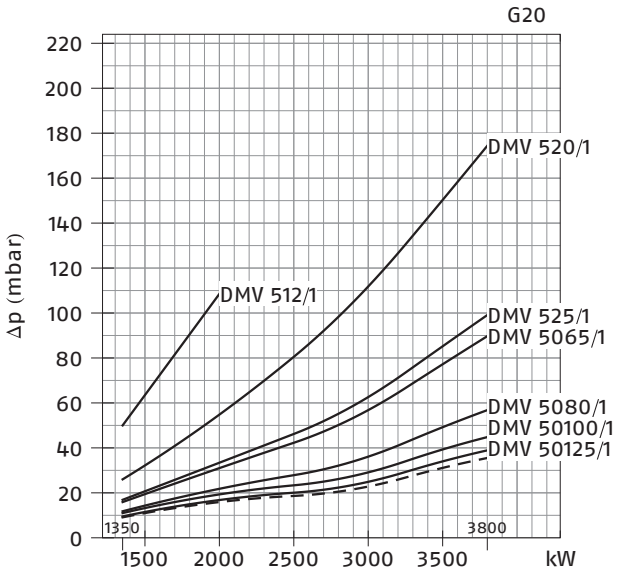
——— Combustion head + gas butterfly valve + gas train
– – – Combustion head + gas butterfly valve

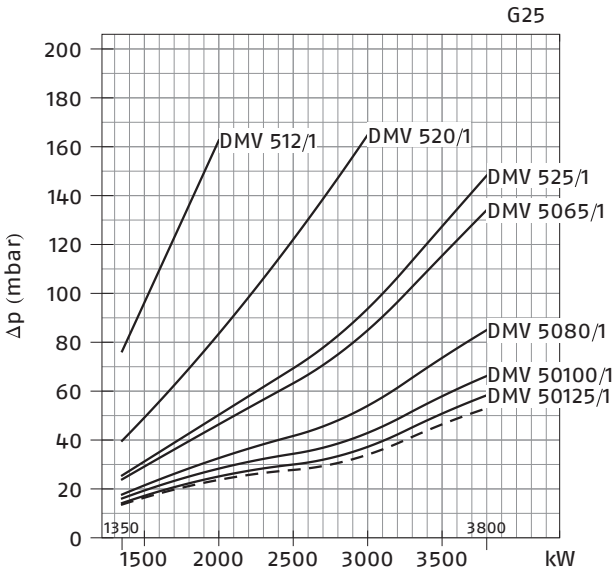
RS 300/M BLU (NATURAL GAS)





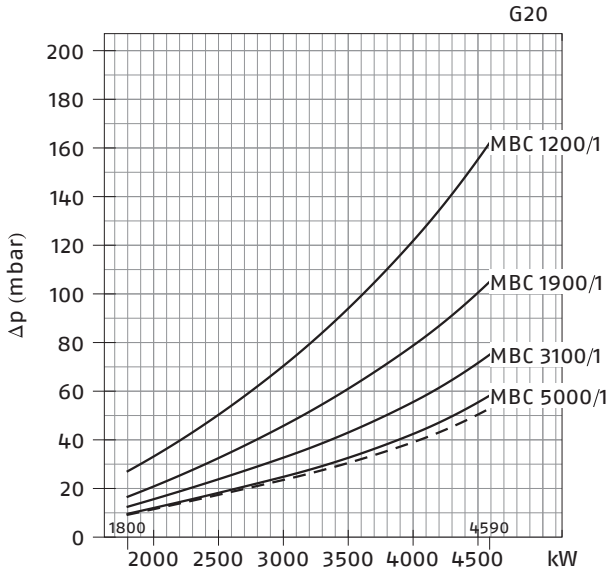
RS 300/M BLU (NATURAL GAS)

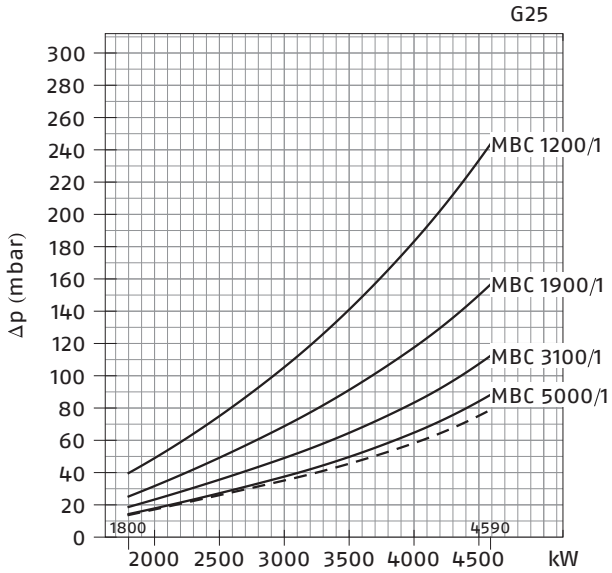




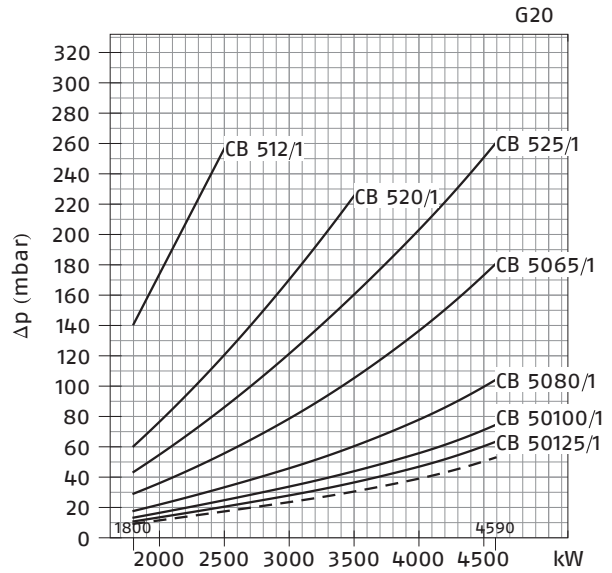
——— Combustion head + gas butterfly valve + gas train
– – – Combustion head + gas butterfly valve

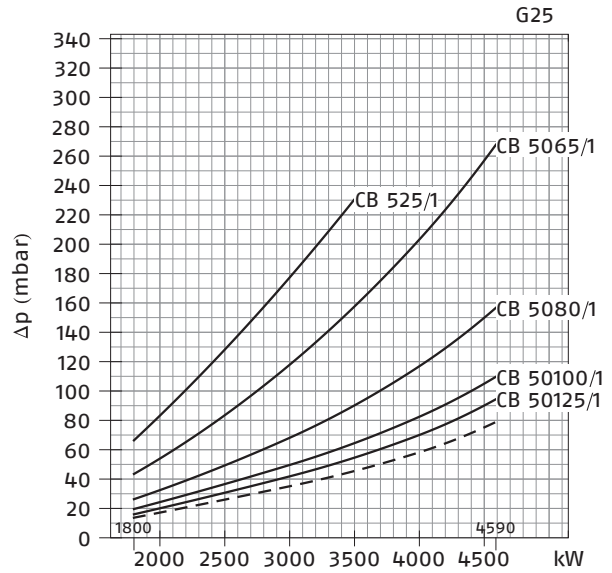
RS 400/M BLU (NATURAL GAS)





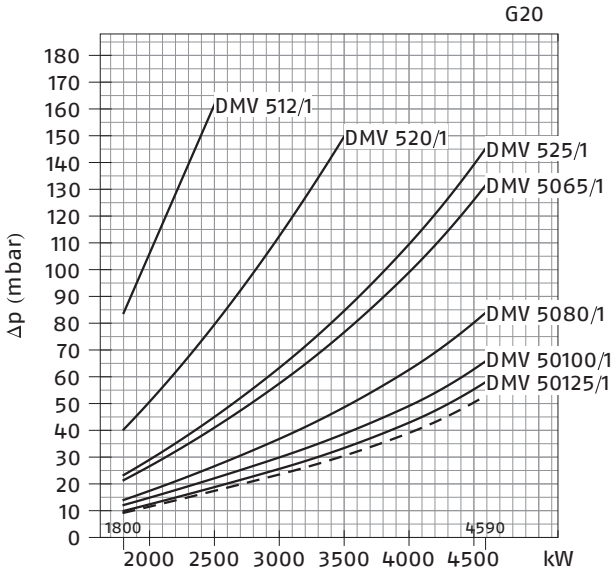
RS 400/M BLU (NATURAL GAS)

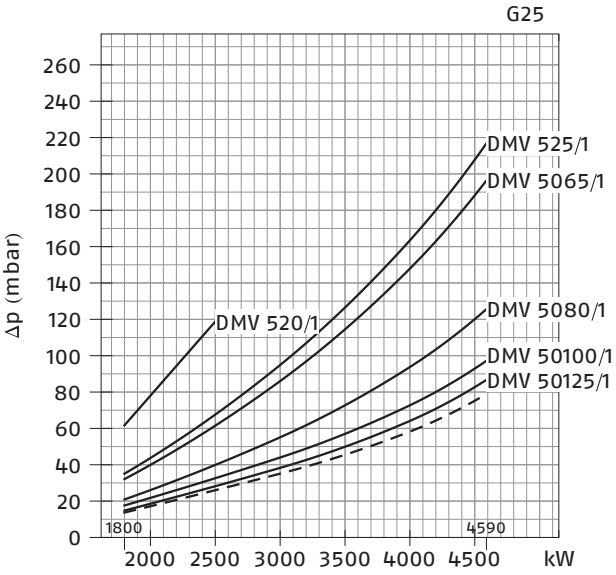




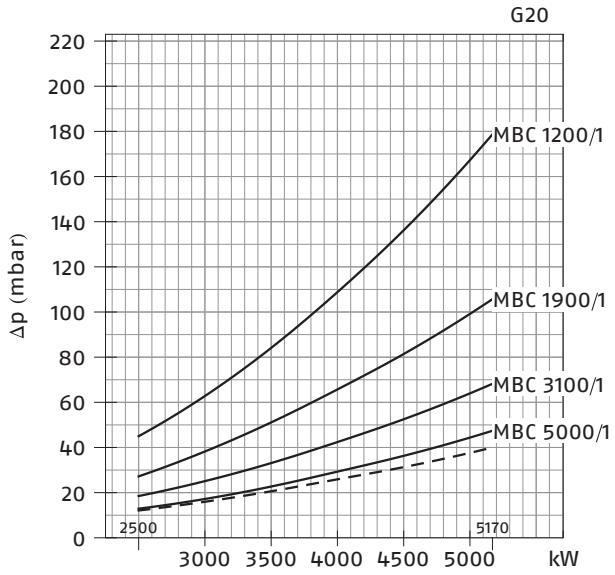
——— Combustion head + gas butterfly valve + gas train
– – – Combustion head + gas butterfly valve

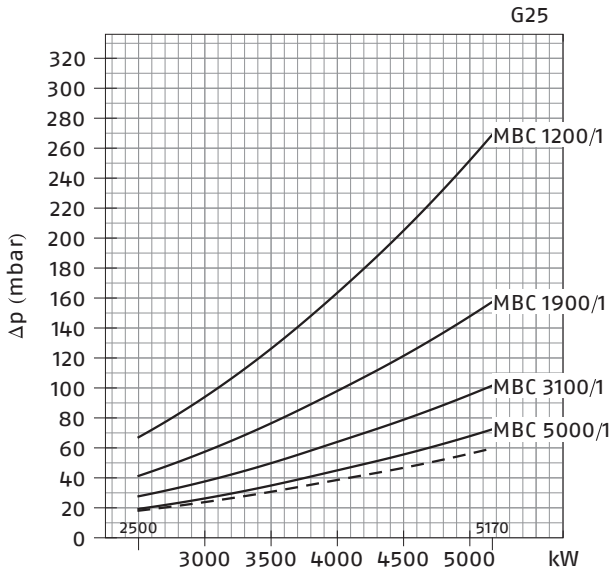
RS 400/M BLU (NATURAL GAS)





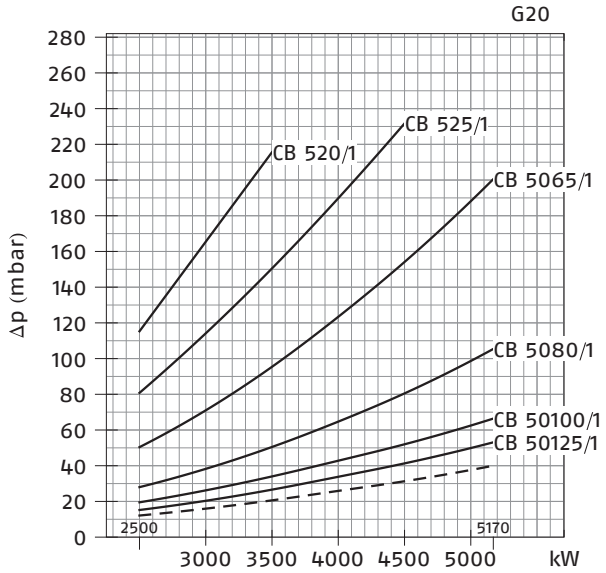
RS 500/M BLU (NATURAL GAS)

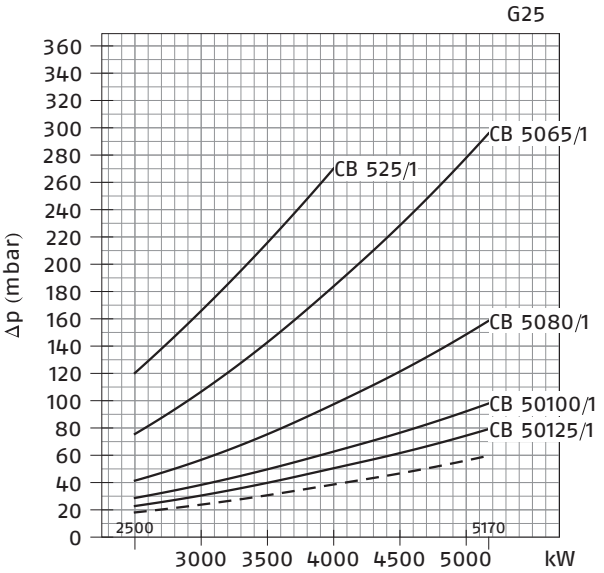




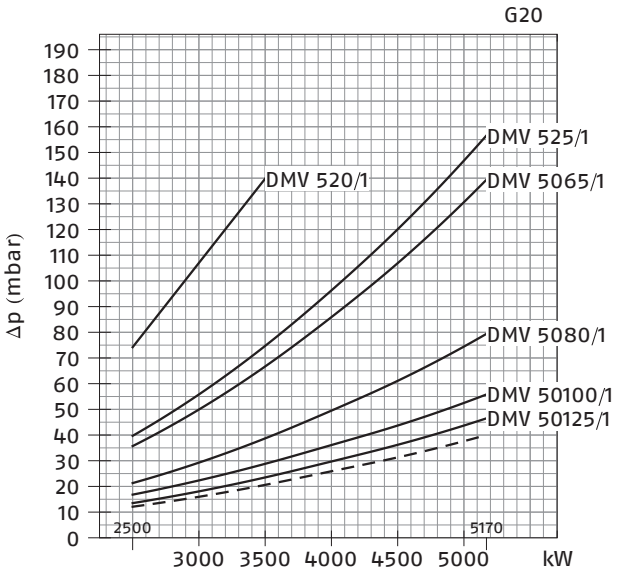
——— Combustion head + gas butterfly valve + gas train
– – – Combustion head + gas butterfly valve

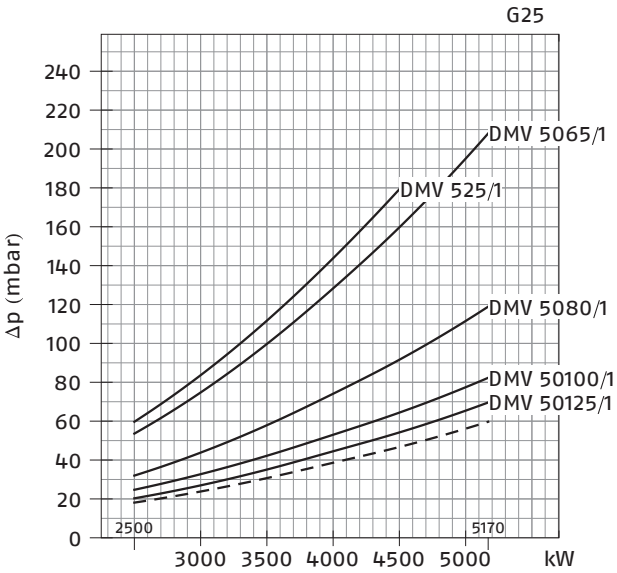
RS 500/M BLU (NATURAL GAS)





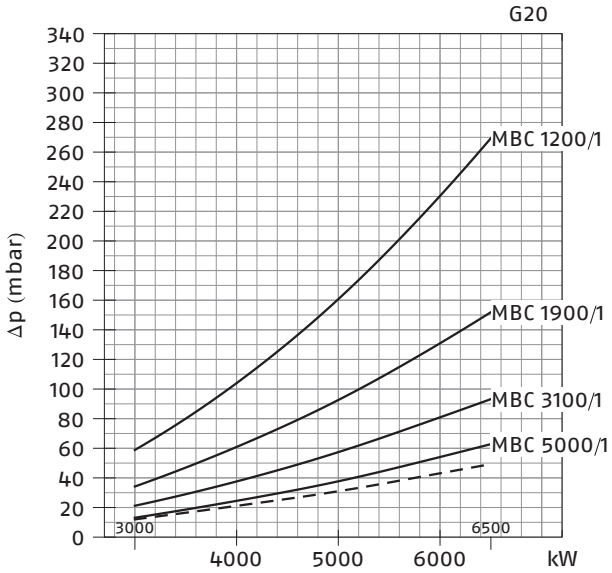
RS 500/M BLU (NATURAL GAS)

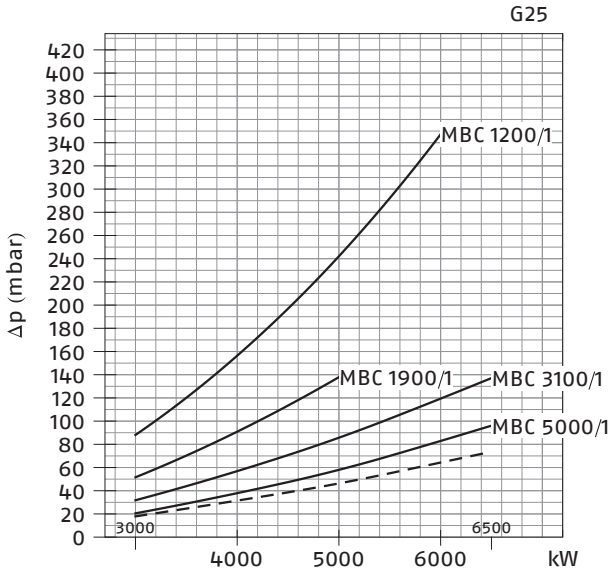




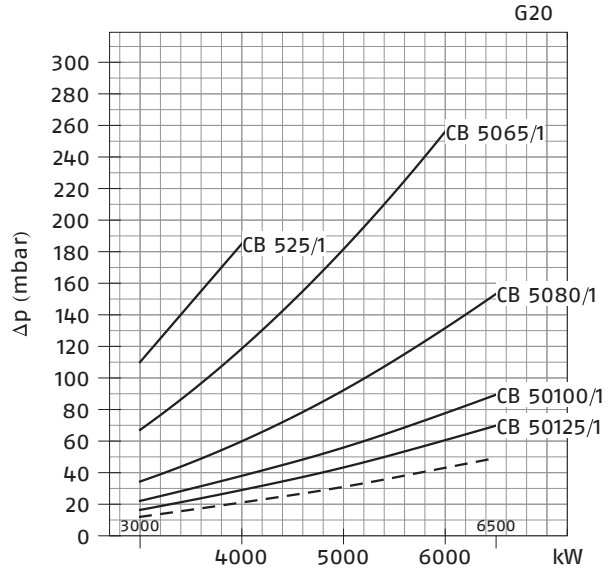
——— Combustion head + gas butterfly valve + gas train
– – – Combustion head + gas butterfly valve

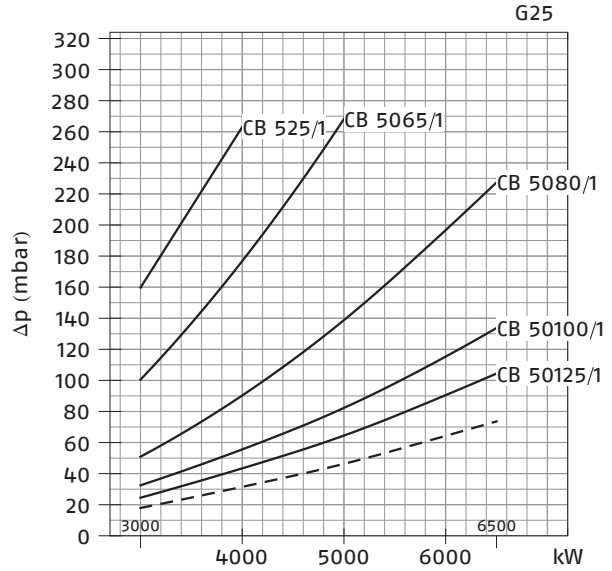
RS 650/M BLU (NATURAL GAS)





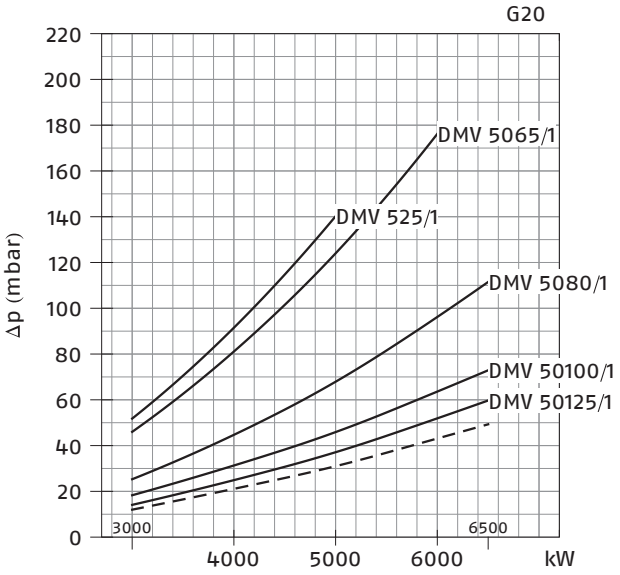
RS 650/M BLU (NATURAL GAS)

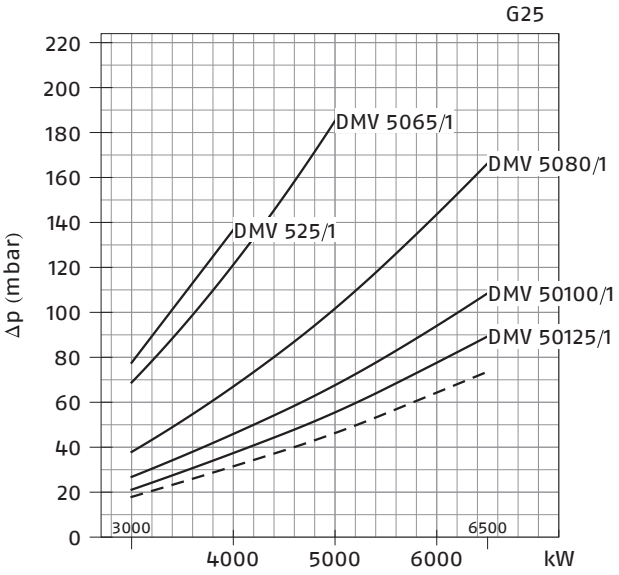




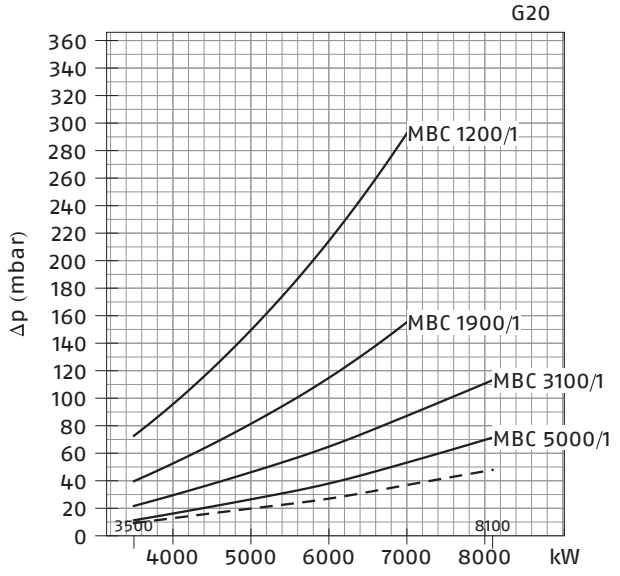
——— Combustion head + gas butterfly valve + gas train
– – – Combustion head + gas butterfly valve

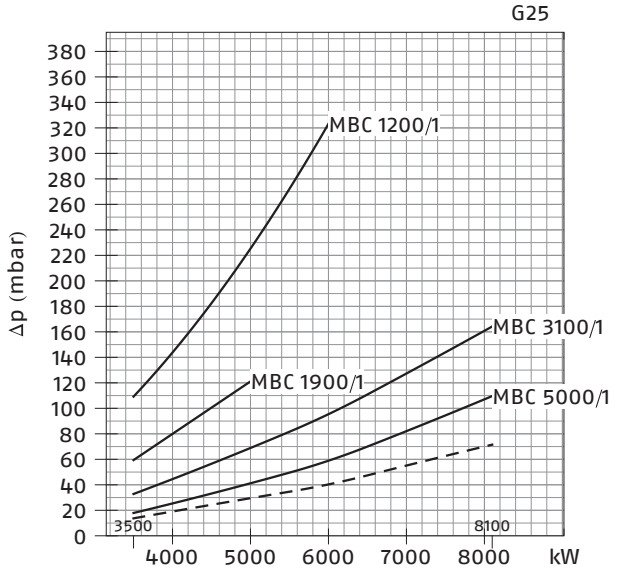
RS 650/M BLU (NATURAL GAS)





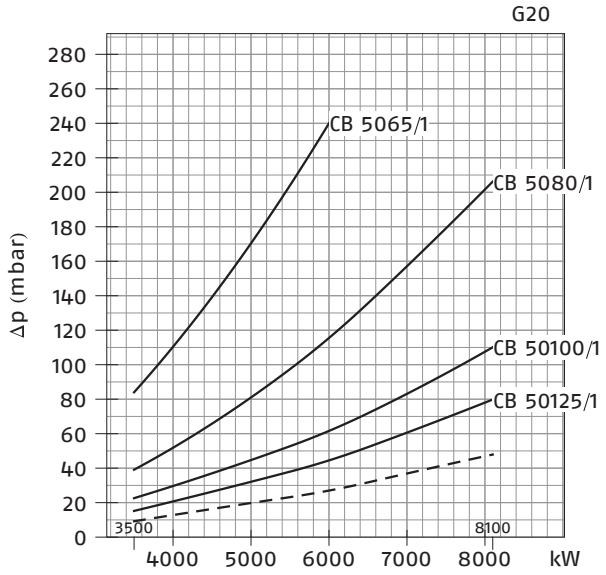
RS 800/M BLU (NATURAL GAS)

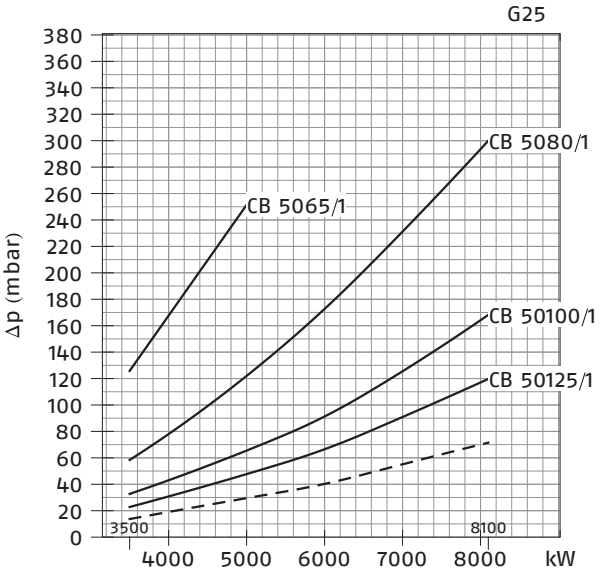




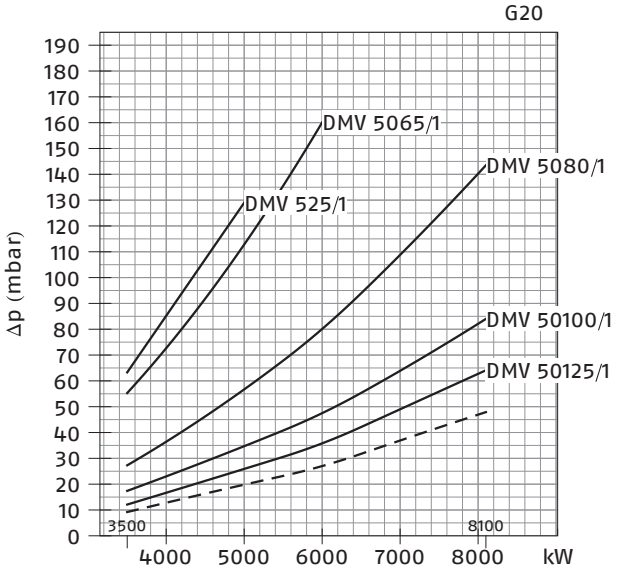
——— Combustion head + gas butterfly valve + gas train
– – – Combustion head + gas butterfly valve

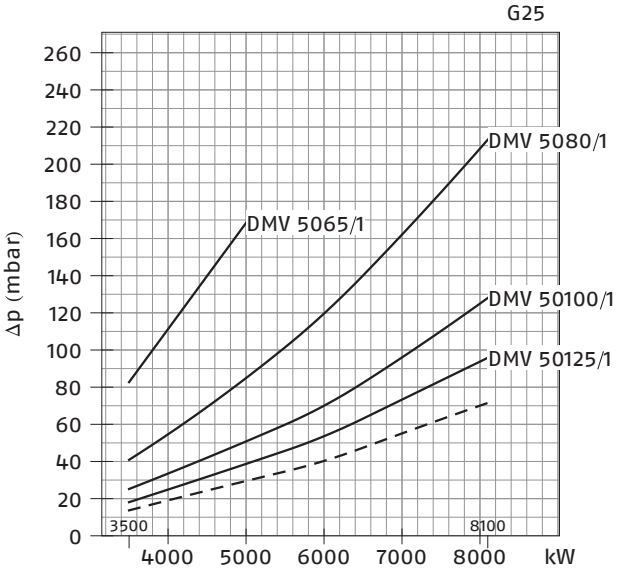
RS 800/M BLU (NATURAL GAS)





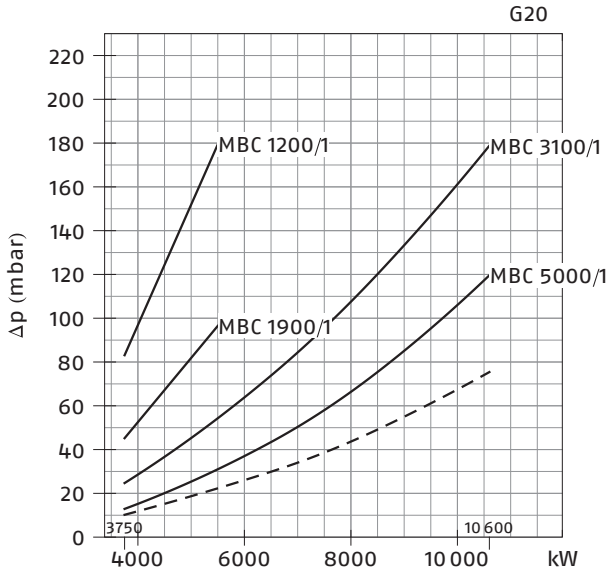
RS 800/M BLU (NATURAL GAS)

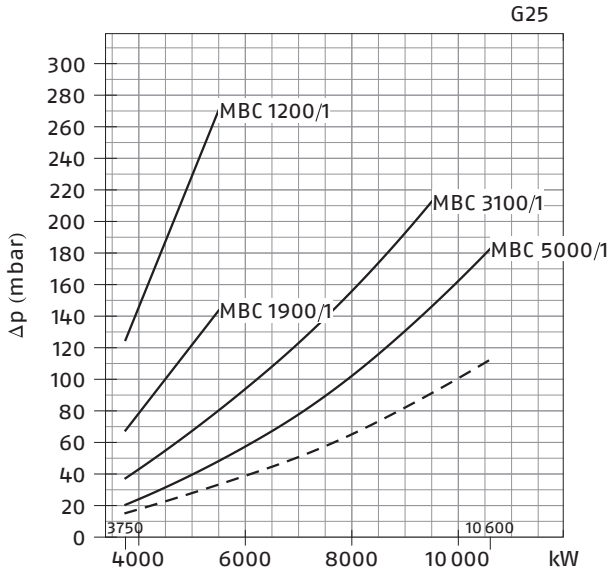




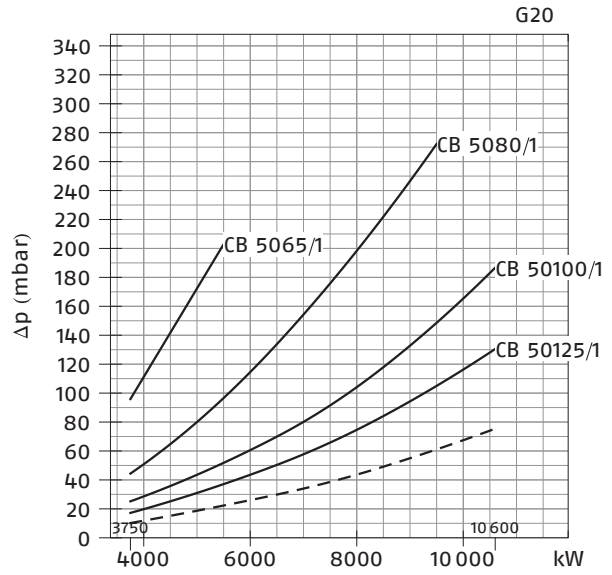
——— Combustion head + gas butterfly valve + gas train
– – – Combustion head + gas butterfly valve

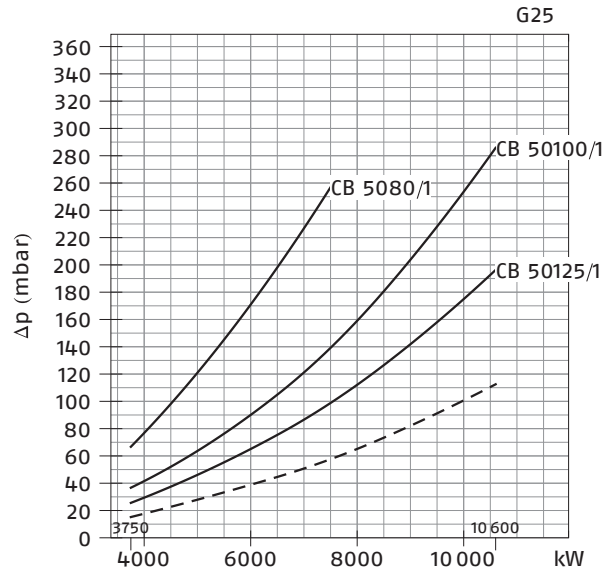
RS 1000/M BLU (NATURAL GAS)





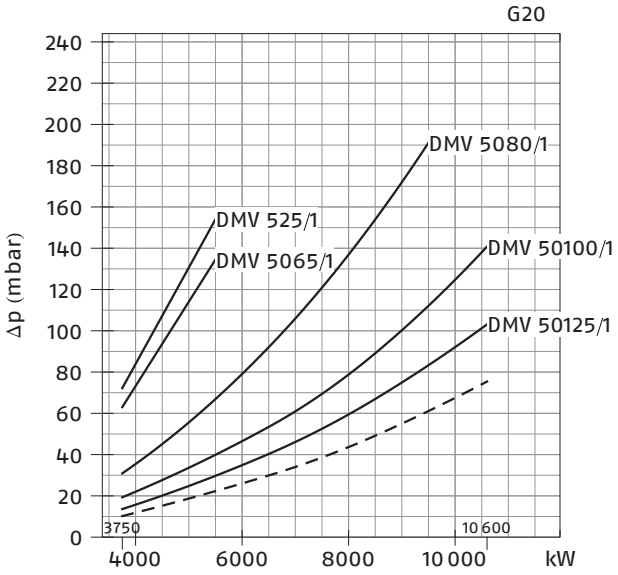
RS 1000/M BLU (NATURAL GAS)

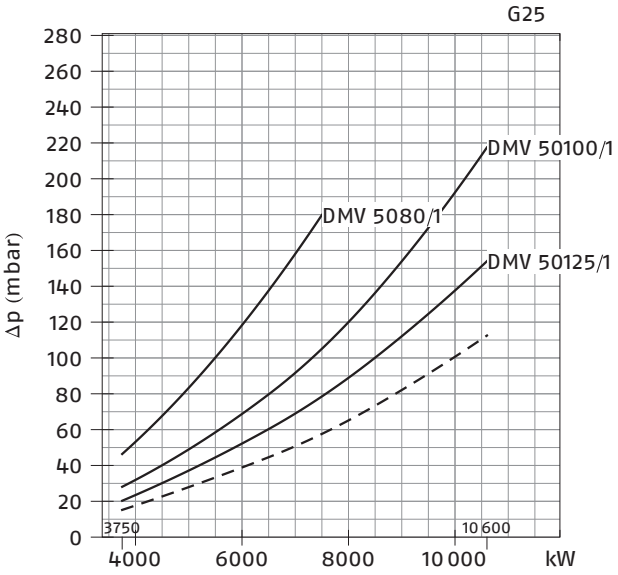




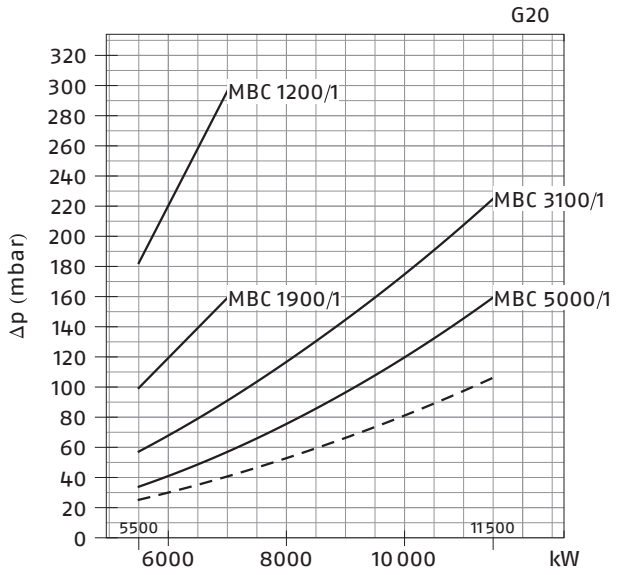
——— Combustion head + gas butterfly valve + gas train
– – – Combustion head + gas butterfly valve

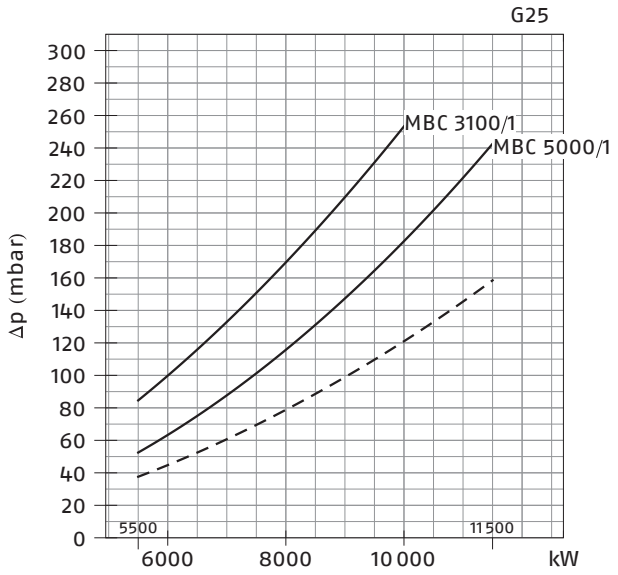
RS 1000/M BLU (NATURAL GAS)





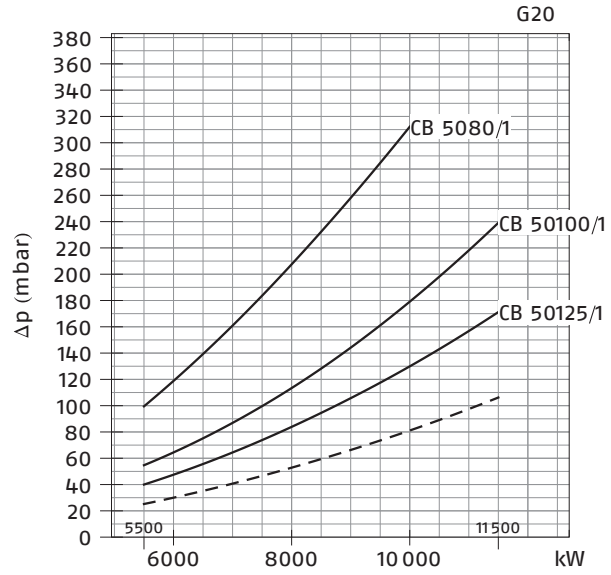
RS 1200/M BLU (NATURAL GAS)

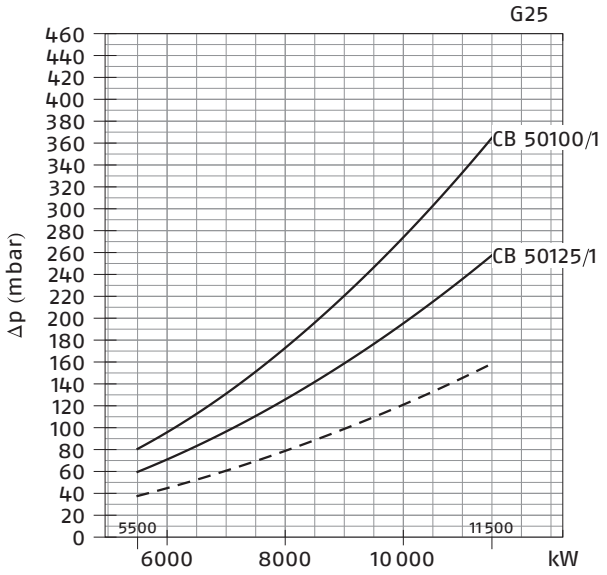




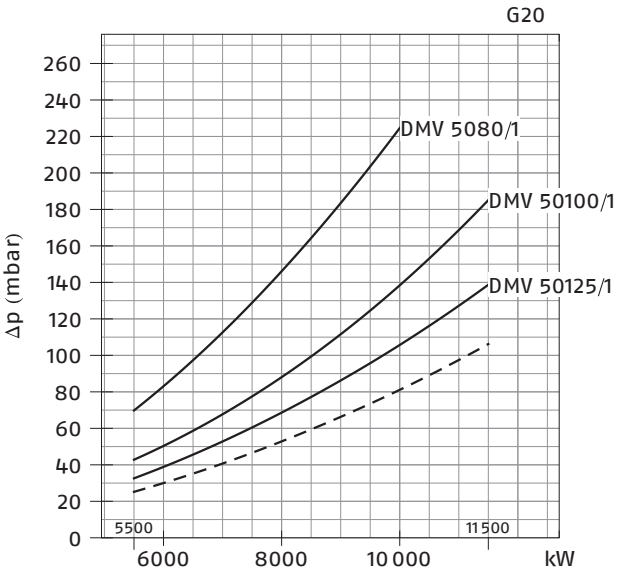
——— Combustion head + gas butterfly valve + gas train
– – – Combustion head + gas butterfly valve

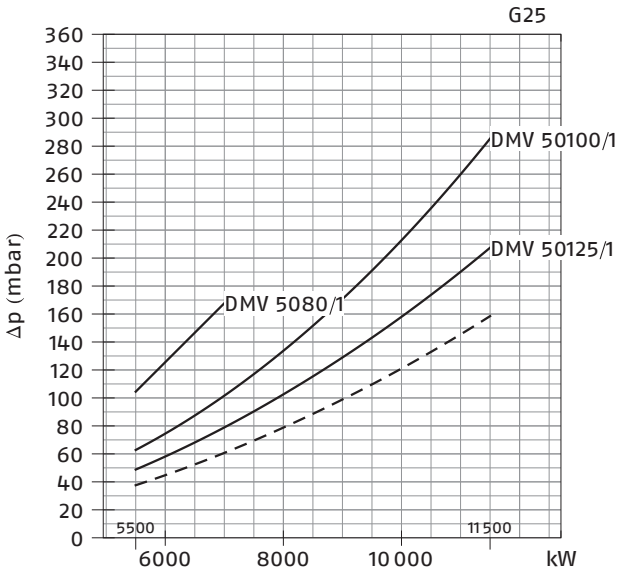
RS 1200/M BLU (NATURAL GAS)





RS 1200/M BLU (NATURAL GAS)





Combustion head + gas butterfly valve + gas train
Combustion head + gas butterfly valve

GAS TRAIN		ADAPTER						
CODE	MODEL	CODE						
		RS 300	RS 400	RS 500	RS 650	RS 800	RS 1000	RS 1200
3970180	MB 415/1 - RT 30	20064220 + 20064169 / (20068062)[1]	●	●	●	●	●	●
3970198	MB 415/1 CT RT 30		●	●	●	●	●	●
3970250	MB 415/1 - RT 52		●	●	●	●	●	●
3970253	MB 415/1 CT RT 52		●	●	●	●	●	●
3970232	MB 415/1 - RSM 30		●	●	●	●	●	●
3970181	MB 420/1 - RT 30	20064169 / (20068062)[1]	●	●	●	●	●	●
3970182	MB 420/1 CT RT 30		●	●	●	●	●	●
3970257	MB 420/1 - RT 52		●	●	●	●	●	●
3970252	MB 420/1 CT RT 52		●	●	●	●	●	●
3970233	MB 420/1 - RSM 30		●	●	●	●	●	●
3970234	MB 420/1 CT RSM 30		●	●	●	●	●	●
3970221	MBC 1200/1 - RSM 60	20064169 / (20068062)[1]					20066253 / (20068058)[1]	
3970225	MBC 1200/1 CT RSM 60							
3970222	MBC 1900/1 - FSM 40	20059330 / (20065924 + 20059330)[1] / (3010221 + 20059331)[2]					20066263 / (20065924 + 20066263)[1]	
3970226	MBC 1900/1 CT FSM 40							
3970223	MBC 3100/1 - FSM 40	20059331 / (20065937 + 20059331)[1] / (3010222 + 20059331)[2]					20066268 / (20065937 + 20066268)[1]	
3970227	MBC 3100/1 CT FSM 40							
3970224	MBC 5000/1 - FSM 80	20059332 / (20065960 + 20059332)[1] / (3010223 + 20059331)[2]					20066278 / (20065960 + 20066278)[1]	
3970228	MBC 5000/1 CT FSM 80							
3970145	CB 512/1 - RSM 30	20064220 + 20064169 /(20068062)[1]		●	●	●	●	●
20045589	CB 512/1 CT RSM 30			●	●	●	●	●
3970146	CB 520/1 - RSM 30	20064169 / (20068062)[1]			●	●	●	●
3970160	CB 520/1 CT RSM 30				●	●	●	●
20044659	CB 525/1 - RSM 30	20064169 / (20068062)[1]				●	●	●
20044660	CB 525/1 CT RSM 30					●	●	●
3970147	CB 5065/1 - FSM 30	20059330 / (20065924 + 20059330)[1] / (3010221 + 20059331)[2]					20066263 / (20065924 + 20066263)[1]	●
3970161	CB 5065/1 CT FSM 30							●
3970148	CB 5080/1 - FSM 30	20059331 / (20065937 + 20059331)[1] / (3010222 + 20059331)[2]					20066268 / (20065937 + 20066268)[1]	
3970162	CB 5080/1 CT FSM 30							
3970149	CB 50100/1 - FSM 30	20059332 / (20065960 + 20059332)[1] / (3010223 + 20059331)[2]					20066278 / (20065960 + 20066278)[1]	
3970163	CB 50100/1 CT FSM 30							
20015871	CB 50125/1 - FSM 30	20059333 / (20065968 + 20059333)[1] / (3010224 + 20059331)[2]					20066284 / (20065968 + 20066284)[1]	
3970196	CB 50125/1 CT FSM 30							

<table>
<tr><th colspan="2">GAS TRAIN</th><th colspan="7">ADAPTER</th></tr>
<tr><th rowspan="2">CODE</th><th rowspan="2">MODEL</th><th colspan="7">CODE</th></tr>
<tr><th>RS 300</th><th>RS 400</th><th>RS 500</th><th>RS 650</th><th>RS 800</th><th>RS 1000</th><th>RS 1200</th></tr>
<tr><td>20043035</td><td>DMV 512/1 - RSM -0</td><td colspan="2" rowspan="3">20064220 + 20064169 / (20068062)[1]</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr>
<tr><td>20043036</td><td>DMV 512/1 CT RSM -0</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr>
<tr><td>20043037</td><td>DMV 512/1 CQ RSM -2</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td></tr>
<tr><td>20043038</td><td>DMV 520/1 - RSM -0</td><td colspan="3" rowspan="3">20064169 / (20068062)[1]</td><td>●</td><td>●</td><td>●</td><td>●</td></tr>
<tr><td>20043039</td><td>DMV 520/1 CT RSM -0</td><td>●</td><td>●</td><td>●</td><td>●</td></tr>
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<tr><td>20043054</td><td>DMV 525/1 CT RSM -0</td><td>●</td></tr>
<tr><td>20043055</td><td>DMV 525/1 CQ RSM -2</td><td>●</td></tr>
<tr><td>20043041</td><td>DMV 5065/1 - FSM -0</td><td colspan="4" rowspan="3">20059330 / (20065924 + 20059330)[1] / (3010221 + 20059331)[2]</td><td colspan="2" rowspan="3">20066263 / (20065924 + 20066263)[1]</td><td>●</td></tr>
<tr><td>20043042</td><td>DMV 5065/1 CT FSM -0</td><td>●</td></tr>
<tr><td>20043043</td><td>DMV 5065/1 CQ FSM -2</td><td>●</td></tr>
<tr><td>20043044</td><td>DMV 5080/1 - FSM -0</td><td colspan="4" rowspan="3">20059331 / (20065937 + 20059331)[1] / (3010222 + 20059331)[2]</td><td colspan="3" rowspan="3">20066268 / (20065937 + 20066268)[1]</td></tr>
<tr><td>20043045</td><td>DMV 5080/1 CT FSM -0</td></tr>
<tr><td>20043046</td><td>DMV 5080/1 CQ FSM -2</td></tr>
<tr><td>20043047</td><td>DMV 50100/1 - FSM -0</td><td colspan="4" rowspan="3">20059332 / (20065960 + 20059332)[1] / (3010223 + 20059331)[2]</td><td colspan="3" rowspan="3">20066278 / (20065960 + 20066278)[1]</td></tr>
<tr><td>20043048</td><td>DMV 50100/1 CT FSM -0</td></tr>
<tr><td>20043049</td><td>DMV 50100/1 CQ FSM -2</td></tr>
<tr><td>20043050</td><td>DMV 50125/1 - FSM -0</td><td colspan="4" rowspan="3">20059333 / (20065968 + 20059333)[1] / (3010224 + 20059331)[2]</td><td colspan="3" rowspan="3">20066284 / (20065968 + 20066284)[1]</td></tr>
<tr><td>20043051</td><td>DMV 50125/1 CT FSM -0</td></tr>
<tr><td>20043052</td><td>DMV 50125/1 CQ FSM -2</td></tr>
</table>

Key to layout
- ● Gas train not available or not suitable for the matching to the burner.

1) To be used with gas train and burner opening on the left (fan motor side).
2) To be used with gas train on the left (fan motor side) and burner opening on the right.

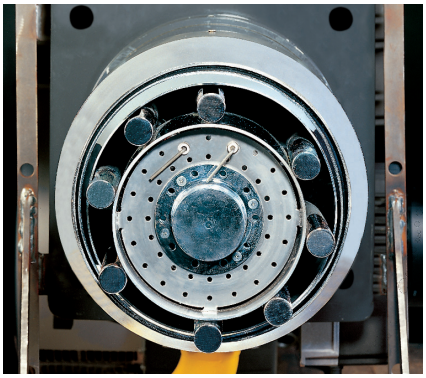
Ventilation

The ventilation unit comes with a sound proofing system.
All the burners in the RS 300-400-500-650-800-1000-1200/M BLU series are fitted with fans, which give excellent performance and are fitted in line with the combustion head. The air flow and sound-deadening materials used in the construction are designed to reduce sound emissions to the minimum and guarantee high levels of performance in terms of output and air pressure.
A high precision servomotor through the main management module installed on each burner of RS 300-400-500-650-800-1000-1200/M BLU series, controls the air dampers position constantly.

Example of the RS 1000-1200/M BLU sound proofing system.

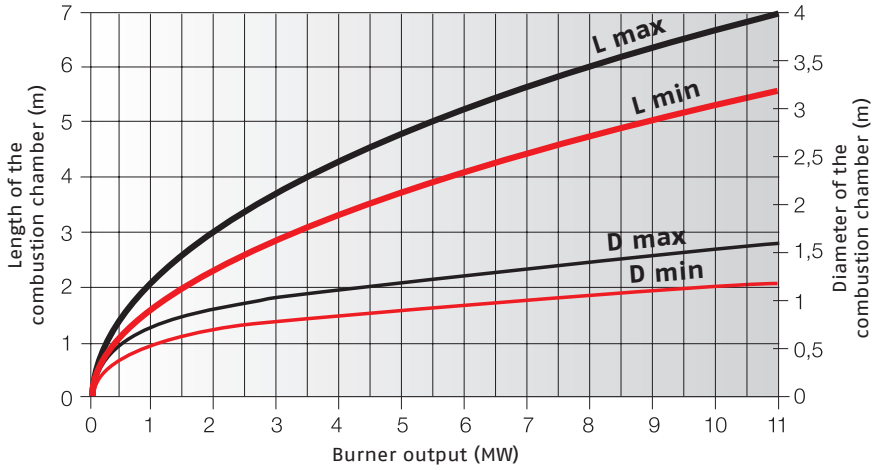
Combustion Head

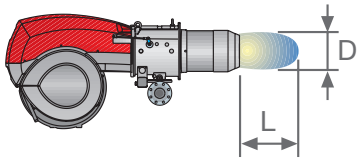
The innovative combustion head adjustment system ensures perfect movement during modulation as well as reducing noise and pollutants.
Simple adjustment of the combustion head allows to adapt internal geometry of the head to the output of the burner.
The same adjustment servomotor for the air damper also varies, depending on the required output, the setting of the combustion head, through a simple lever.
This system guarantees excellent mix on all firing rates range.



Example of RS300-400-500/M BLU burner combustion head.

SUGGESTED COMBUSTION CHAMBER DIMENSIONS

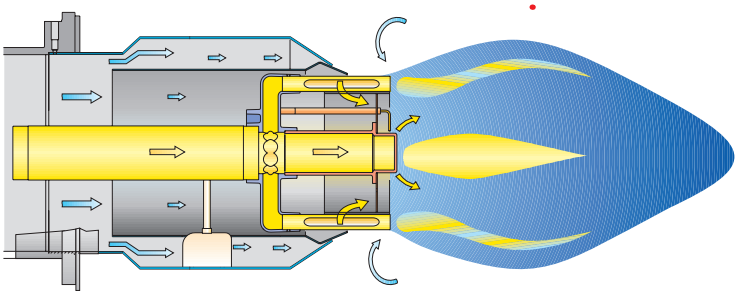




Example:
Burner thermal output = 6000 kW;
L Combustion Chamber (m) = 4,7 m (medium value);
D Combustion Chamber (m) = 1,2 m (medium value)

Safe and Green

The RS/M BLU series reduces polluting emissions with its exclusive design which optimises air/fuel mixture.
The gas in the combustion head is distributed through openings which are perpendicular to the air flow; part of the fuel is injected directly into the centre of the flame.
This results in low flame temperature combustion to prevent the formation of NO. Gradual and progressive combustion throughout the flame prevents areas of high oxidation inside the flame.
Emissions are further reduced by the re-circulation of combustion gases due to the high velocity of air leaving the combustion head.
Pollution levels are below even the most severe standard requirements (NOx <80 mg/kWh).



Operation

BURNER OPERATION MODE

The RS 300-400-500-650-800-1000-1200/M series of burners can have "two-stage progressive" or "modulating" operation.

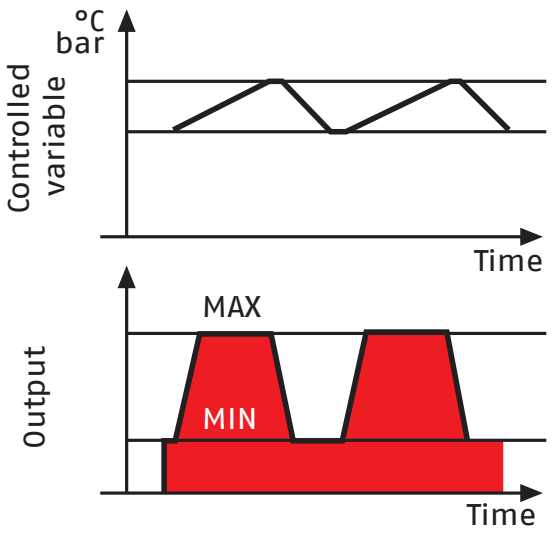
Output regulator

Analog 4-20 mA or 0 - 10V converter for remote modulation

On "two-stage progressive" operation, the burner gradually adapts the output to the requested level, by varying between two pre-set levels (see picture A).

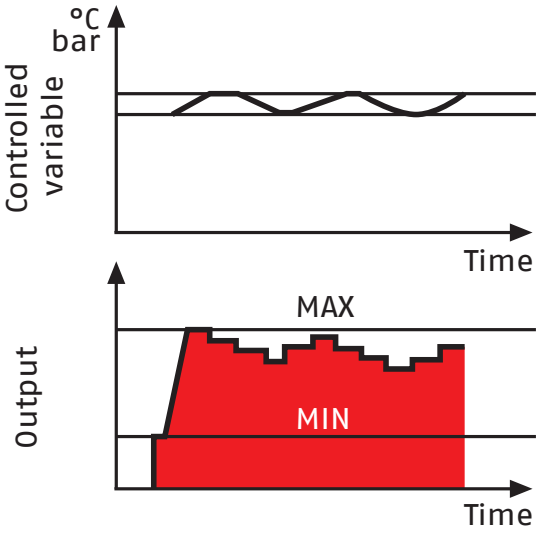
On "modulating" operation, normally required in steam generators, in superheater boilers or diathermic oil burners, a specific regulator and probes are required. These are supplied as accessories that must be ordered separately. The burner can work for long periods at intermediate output levels (see picture B).

"TWO-STAGE PROGRESSIVE" OPERATION



Picture A

"MODULATING" OPERATION



Picture B

The RS 300-400-500-650-800/M BLU series burners are fitted with the RMG/M microprocessor control panel for the supervision during intermittent operation. The RS 1000-1200/M BLU are fitted with the LFL1...control panel. The FS2 burners are fitted with the LGK control panel.

LFL ... CONTROL BOX

LGK ... CONTROL BOX

RMG ... CONTROL BOX

For helping the commissioning and maintenance work, on the RMG/M control box, there are two main elements:

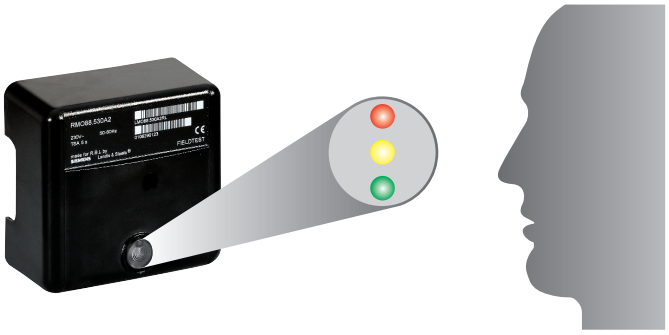
The lock-out reset button is the central operating element for resetting the burner control and for activating / deactivating the diagnostic functions.

The multi-color LED is the central indication element for visual diagnosis and interface diagnosis.

Both elements are located under the transparent cover of lock-out reset button, as shown in the picture above.

There are two diagnostic choices, for indication of operation and diagnosis of fault cause:

VISUAL DIAGNOSIS



INTERFACE DIAGNOSIS

By the interface adapter and a PC with dedicated software or by a predisposed flue gas analyzer (see paragraph accessories).

INDICATION OF OPERATION

In normal operation, the various status are indicated in the form of colour codes according to the table below.
The interface diagnosis (with adapter) can be activated by pressing the lock-out button for > 3 seconds.

COLOR CODE TABLE

Operation status	Color code table
Stand-by	
Pre-purging	
Ignition phase	
Flame OK	
Poor flame	
Undervoltage, built-in fuse	
Fault, alarm	
Flame simulation	

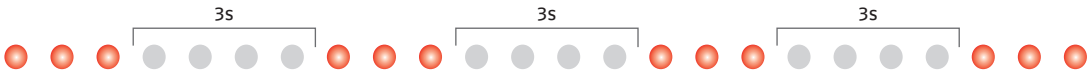
LED off

DIAGNOSIS OF FAULT CAUSES

After lock-out has occurred, the red signal lamp is steady on. In this status, the visual fault diagnosis according to the error code table can be activated by pressing the lock-out reset button for > 3 seconds.
The interface diagnosis (with adapter) can be activated by pressing again the lock-out button for > 3 seconds.

The flashing of red LED are a signal with this sequence:

(e.g. signal with n° 3 flashes – faulty air pressure monitor)

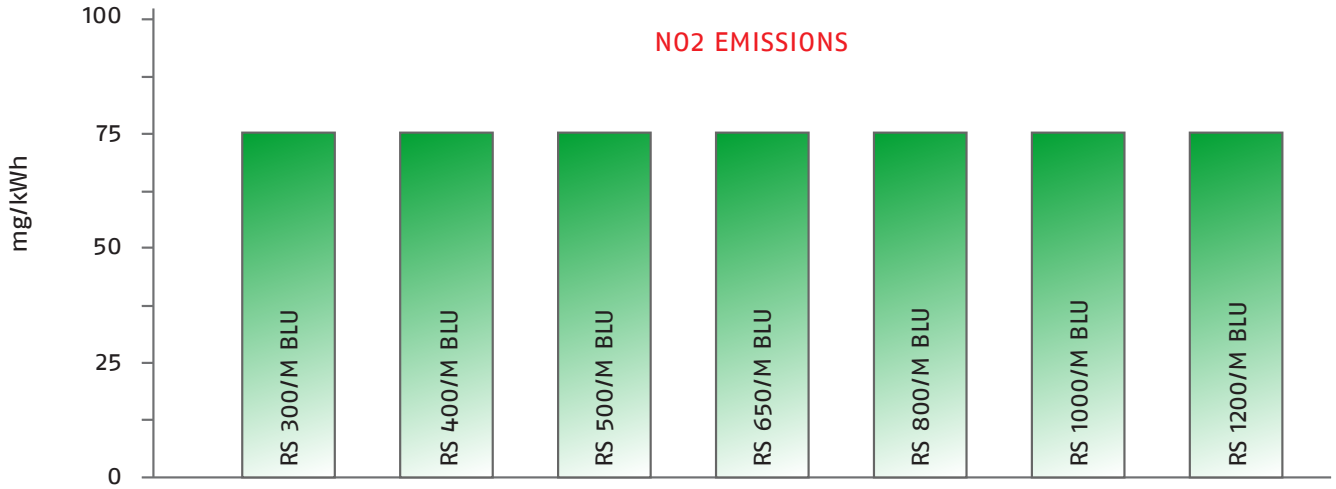


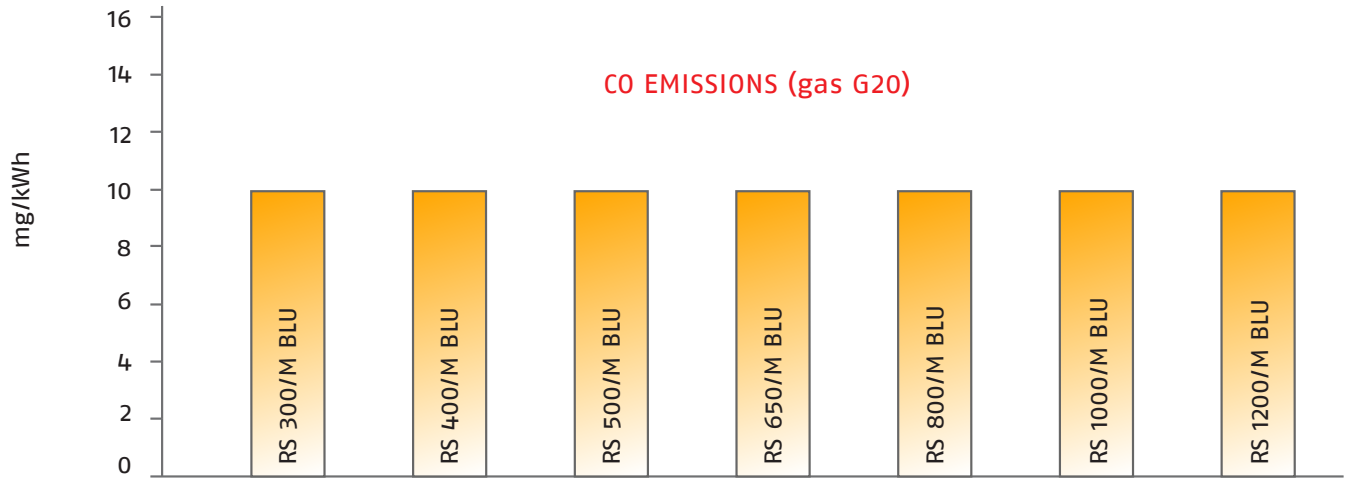
(LED off)

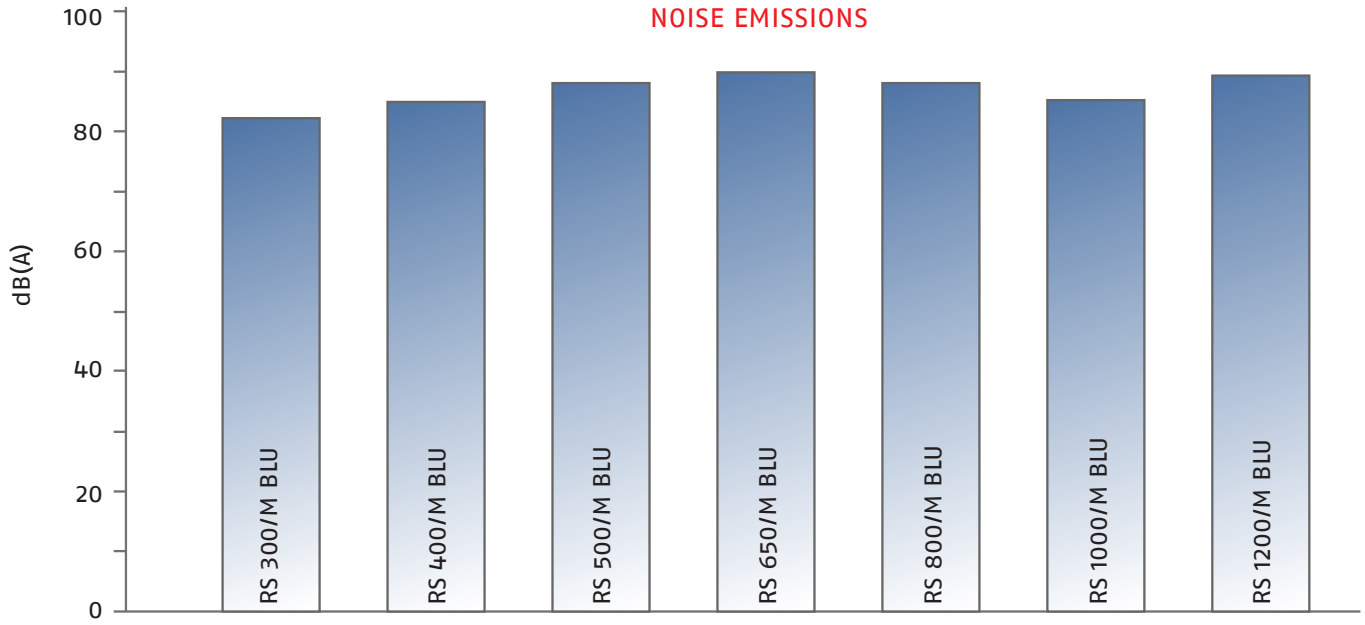
ERROR CODE TABLE

POSSIBLE CAUSE OF FAULT		FLASH CODE
No establishment of flame at the end of safety time:	- faulty or soiled fuel valves - faulty or soiled flame detector - poor adjustment of burner, no fuel - faulty ignition equipment	2x flashes
Faulty air pressure monitor		3x flashes
Extraneous light or simulation of flame on burner start up		4x flashes
Loss of flame during operation:	- faulty or soiled fuel valves - faulty or soiled flame detector - poor adjustment of burner	7x flashes
Wiring error or internal fault		10x flashes

Emissions



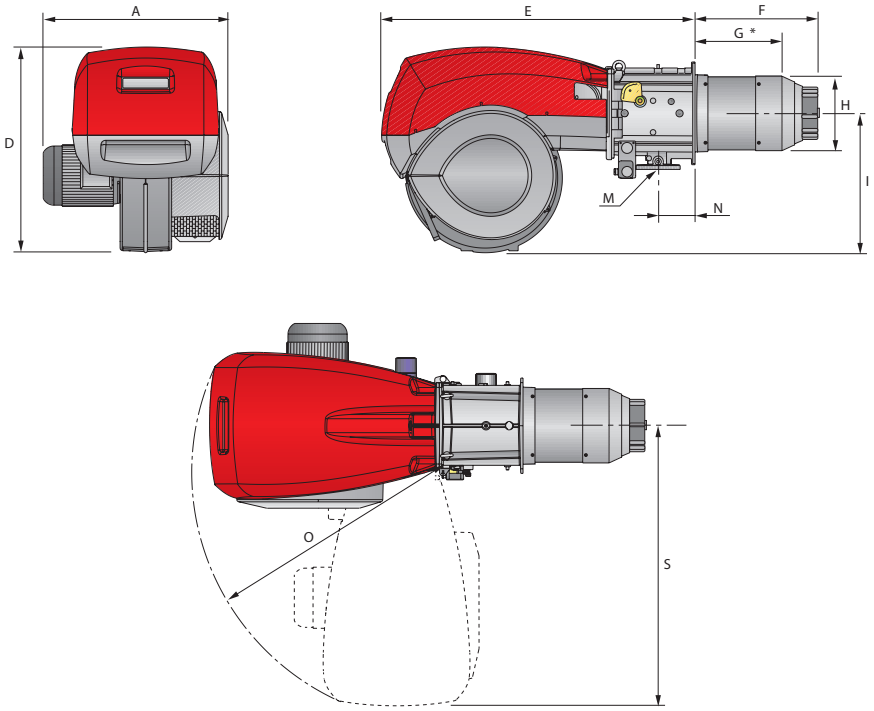




The noise emissions have been measured at the maximum output.

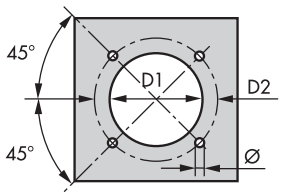
Overall Dimensions (mm)

BURNERS RS 300-400-500-650-800/M BLU



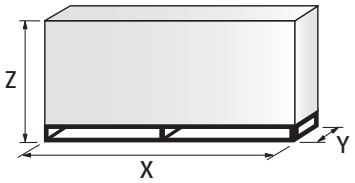
MODEL	A	D	E	F	G*	H	I	M	N	O	S
RS 300/M BLU	720	867	1325	521	373	313	588	DN65	164	1055	1175
RS 400/M BLU	775	867	1325	521	373	313	588	DN65	164	1055	1175
RS 500/M BLU	775	867	1325	521	357	370	588	DN65	164	1055	1175
RS 650/M BLU	800	950	1325	549	397	363	588	DN65/80	175	1055	1175
RS 800/M BLU	940	867	1325	582	418	363	588	DN65/80	164	1055	1175

BURNER - BOILER MOUNTING FLANGE



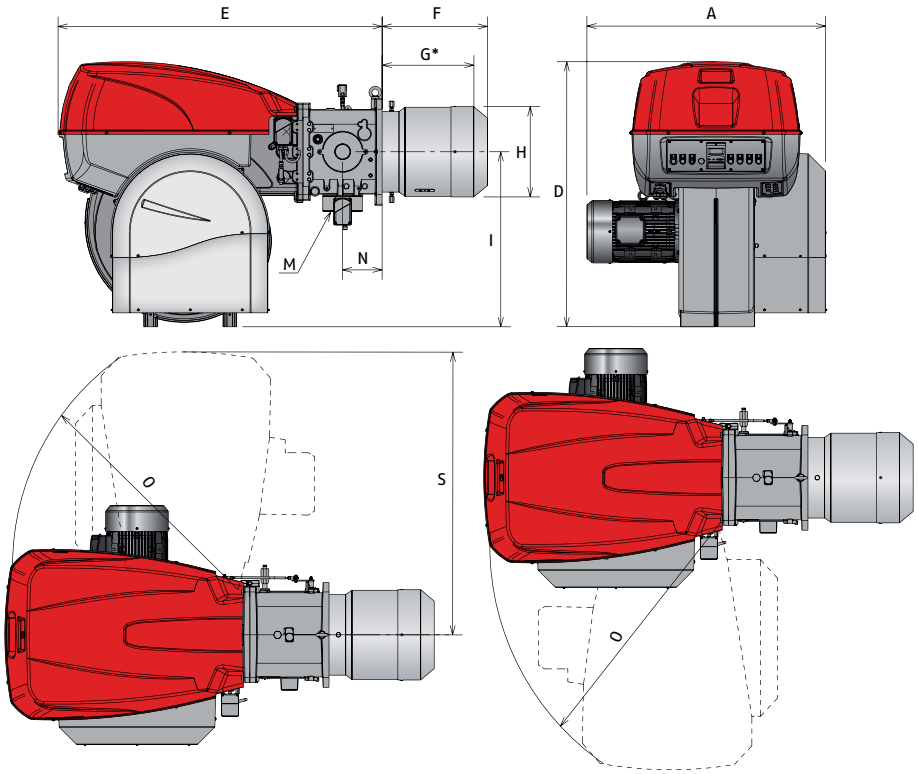
MODEL	D1	D2	Ø
RS 300/M BLU	350	452	M18
RS 400/M BLU	350	452	M18
RS 500/M BLU	390	452	M18
RS 650/M BLU	400	495	M18
RS 800/M BLU	400	495	M18

PACKAGING



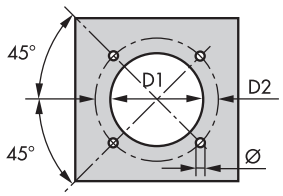
MODEL	X	Y	Z	kg
RS 300/M BLU	1960	945	1100	225
RS 400/M BLU	1960	945	1100	236
RS 500/M BLU	1960	945	1100	250
RS 650/M BLU	2040	1180	1125	300
RS 800/M BLU	2040	1180	1125	300

BURNERS RS 1000-1200/M BLU



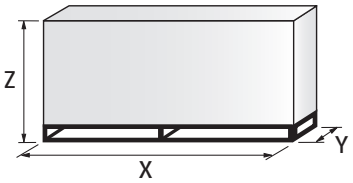
MODEL	A	D	E	F	G*	H	I	M	N	O	S
RS 1000/M BLU	1206	1338	1637	669	485	413	885	DN80	200	1350	1493
RS 1200/M BLU	1250	1338	1637	670	485	456	885	DN80	200	1350	1493

BURNER - BOILER MOUNTING FLANGE



MODEL	D1	D2	Ø
RS 1000/M BLU	460	608	M20
RS 1200/M BLU	500	608	M20

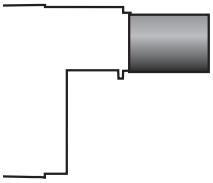
PACKAGING



MODEL	X	Y	Z	kg
RS 1000/M BLU	2400	1400	1595	500
RS 1200/M BLU	2400	1400	1595	550

Burner accessories

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)	CODE
RS 300-400/M BLU	521 (1) - 373 (2)	621 (1) - 473 (2)	3091427
RS 300-400/M BLU	521 (1) - 373 (2)	671 (1) - 523 (2)	3091919
RS 300-400/M BLU	521 (1) - 373 (2)	721 (1) - 573 (2)	20022815
RS 500/M BLU	521 (1) - 357 (2)	671 (1) - 507 (2)	20028449

(1) referred to quote F
(2) referred to quote G

Accessories for modulating operation

POWER CONTROLLER

To obtain modulating operation, the RS/M BLU series of burners requires a regulator with three point outlet controls.
The following table lists the accessories for modulating operation with their application range.

BURNER	TYPE	CODE
All models	RWF 50.2	20101190
	RWF 55.5	20101191

PROBE

The relative temperature or pressure probes fitted to the power controller must be chosen on the basis of the application.

BURNER	TYPE	RANGE (°C) (bar)	CODE
All models	Temperature PT 100	-100 ÷ 500°C	3010110
	Pressure 4 ÷ 20 mA	0 ÷ 2,5 bar	3010213
	Pressure 4 ÷ 20 mA	0 ÷ 16 bar	3010214
	Pressure 4 ÷ 20 mA	0 ÷ 25 bar	3090873

ANALOG CONTROL SIGNAL CONVERTER

BURNER	TYPE (INPUT SIGNAL)	CODE
All models	0/2 - 10 V (impedance 200 KΩ) 0/4 - 20 mA (impedance 250 Ω)	3010390

POTENTIOMETER

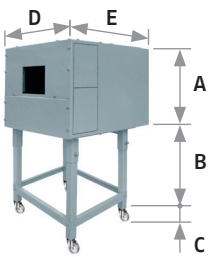
BURNER		CODE
RS 300-400-500/M BLU RS 650-800/M BLU		3010402
RS 1000-1200/M BLU		On demand

PC INTERFACE KIT

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

BURNER		CODE
RS 300-400-500/M BLU RS 800/M BLU		3002719

SOUND PROOFING BOX

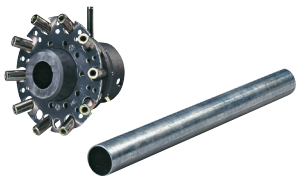


If noise emission needs reducing even further, sound-proofing boxes are available. In case of generator heights, where a lower dimension "B" is required, ask for the Box Support Kit code 20065135.
The useful dimensions are 40 mm less than the total dimensions indicated in the table (A, D, E). Not suitable for outdoor use.

BURNER	BOX TYPE	A (mm)	B (mm) min. - max.	C (mm)	D (mm)	E (mm)	[dB(A)] (*)	CODE
All models	C7	1255	160 - 980	110	1140	1345	10	3010376
	C8	1425	285 - 1000	110	1500	1800	10	3010401

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

LPG KIT

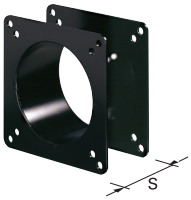


For burning LPG gas, a special kit is available to be fitted to the combustion head of the burner.

BURNER	CODE
RS 300/M BLU	3010445*
RS 400-500/M BLU	20012916*
RS 800/M BLU	20007822*

(*) CE approved

SPACER KIT



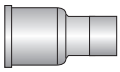
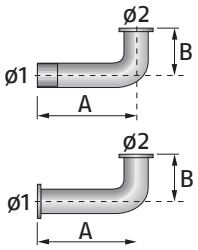
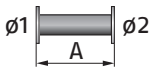
If burner head penetration into the combustion chamber needs reducing, varying thickness spacers are available, as given in the following table:

BURNER	SPACER THICKNESS S (mm)	CODE
RS 300-400-500/M BLU RS 650-800/M BLU	180	20008903

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
	Ø1 DN	Ø2 DN	A mm	B mm	
1" 1/2  2"	-	-	65	-	20064220
2"  2"	-	-	65	-	20042324
DN 80  2" 1/2  2"	-	-	300	-	3000826
	2"	65 / 80	230	230	20064169
	2"	65 / 80	780	230	20068062
	65	65 / 80	230	230	20059330
	80	65 / 80	230	230	20059331
	100	65 / 80	230	230	20059332
	125	65 / 80	245	230	20059333
	2"	65 / 80	230	375	20066253
	2"	65 / 80	780	375	20068058
	65	65 / 80	230	375	20066263
	80	65 / 80	230	375	20066268
	100	65 / 80	230	375	20066278
	125	65 / 80	245	375	20066284
	65	80	400	-	3010221
	80	80	400	-	3010222
	100	80	400	-	3010223
	125	80	320	-	3010224
	65	65	800	-	20065924
	80	80	800	-	20065937
	100	100	800	-	20065960
	125	125	800	-	20065968

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 512/1	Red	25 - 55	3010131
	Black	60 - 110	3010157
	Pink	90 - 150	3090486
CB 520/1 - 525/1	Red	25 - 55	3010132
	Black	60 - 110	3010158
	Pink	90 - 150	3090487
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 for 50 Hz operation	KIT CODE for 60 Hz operation
MB/1 type	3010123	20050030
MCB/1 type	3010367	20029057

Specification

DESIGNATION OF SERIES

A specific index guides your choice of burner from the various models available in the RS/M series. Below is a clear and detailed specification description of the product.

Series:	R			
Fuel:	S	Natural Gas		
	L	Light oil		
	LS	Light oil/Natural Gas		
	N	Heavy oil		
Size:				
Setting:	/1	Single stage	/E	Electronic cam
	/B	Two stage	/P	Proportioning air/gas valve
	/M	Modulating-Mechanical cam	/EV	Electronic cam predisposed for variable speed (with inverter)
Emission:	...	Class 1 EN267 - EN676		
	MZ	Class 2 EN267 - EN676		
	BLU	Class 3 EN267 - EN676		
	MX	Class 2 EN267 Class 3 EN676		
Head length:	TC	standard head		
	TL	extended head		
Flame control system:	FS1	Standard (1 stop every 24 h)		
	FS2	Continuous working (1 stop every 72 h)		
Electrical supply to the system:				
	1/230/50	1/230V/50Hz		
	3/230/50	3/230V/50Hz		
	3/400/50	3N/400V/50Hz		
	3/230-400/50	3/230V/50Hz - 3N/400V/50Hz		
	3/220/60	3/220V/60Hz		
	3/380/60	3N/380V/60Hz		
	3/220-380/60	3/220/60Hz - 3N/380V/60Hz		
Auxiliary voltage:	230/50-60	230V/50-60H		
	110/50-60	110V/50-60Hz		

R	S	500	/M	BLU	TC	FS1	3/230-400/50	230/50-60
BASIC DESIGNATION								
EXTENDED DESIGNATION								

AVAILABLE BURNER MODELS

MODEL				HEAT OUTPUT NATURAL GAS (kW)	HEAT OUTPUT NATURAL GAS (Nm³/h)	TOTAL ELECTRICAL POWER (kW)	CERTIFICATION	NOTE
RS 300/M BLU	TC	FS1 3/230-400/50	230/50-60	500/1350-3800	50/135-380	5	CE 0085BR0480	(1)
RS 300/M BLU	TC	FS1 3/220-380/60	220/50-60	500/1350-3800	50/135-380	5	-	(1)
RS 400/M BLU	TC	FS1 3/400/50	230/50-60	950/1830-4590	95/183-459	8,8	CE 0085BR0481	(1)
RS 400/M BLU	TC	FS1 3/380/60	220/50-60	950/1830-4590	95/183-459	8,8	-	(1)
RS 500/M BLU	TC	FS1 3/400/50	230/50-60	1000/2500-5170	100/250-517	10,6	CE 0085B00341	(1)
RS 500/M BLU	TC	FS2 3/400/50	230/50-60	1000/2500-5170	100/250-517	10,6	CE 0085B00341	(1)
RS 500/M BLU	TC	FS1 3/380/60	220/50-60	1000/2500-5170	100/250-517	10,6	-	(1)
RS 650/M BLU	TC	FS1 3/400/50	230/50-60	1410/3000-6500	143/300-655	20,5	CE 0085BT0337	(1)
RS 800/M BLU	TC	FS1 3/400/50	230/50-60	1200/3500-8100	120/350-810	24	CE 0085BT0337	(1)
RS 800/M BLU	TC	FS2 3/400/50	230/50-60	1200/3500-8100	120/350-810	24	CE 0085BT0337	(1)
RS 800/M BLU	TC	FS1 3/380/60	220/50-60	1200/3500-8100	120/350-810	26	-	(1)
RS 1000/M BLU	TC	FS1 3/400/50	230/50-60	1100/4000-10100	130/380-940	24	CE-0085CN0119	(1) (2)
RS 1000/M BLU	TC	FS1 3/400/50	230/50-60	1100/4000-10100	130/380-940	24	CE-0085CN0119	(1) (3)
RS 1200/M BLU	TC	FS1 3/400/50	230/50-60	1500/5500-11100	150/550-1150	27,2	CE-0085CN0120	(1) (2)
RS 1200/M BLU	TC	FS1 3/400/50	230/50-60	1500/5500-11100	150/550-1150	27,2	CE-0085CN0120	(1) (3)

Natural gas, net calorific value: 10 kWh/Nm³ - Density: 0,71 kg/Nm³
(1) according to 2009/142 EC - 2014/30/UE - 2014/35/UE - 2006/42 EC Directives. 97/23/EC directive (only for RS 650-800/M BLU FS2 model)
(2) UV photocell
(3) ionization probe

SPECIFICATION

STATE OF SUPPLY

Monoblock forced draught gas burner with modulating operation, fully automatic, made up of:
- High performance fan with low sound emissions, reverse curve blades for RS 300-400-500-1000-1200/M BLU, forward curve blades for RS 650-800/M BLU.
- 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, 50 Hz
- 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; ionisation sensor for flame detection
  - 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
- Burner safety control box for controlling the system safety (RMG/M for FS1 intermittent operation - LFL for FS1 intermittent operation for RS 1000-1200 model - LGK16 for FS2 continuous operation)
- Ionisation probe for flame detection an UV flame sensor for 1000-1200 models
- Star/triangle starter for the fan motor (burners with motor electrical power ≥ 7,5 kW)
- 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
- Connection plugs-sockets
- Burner opening hinge
- Lifting rings
- IP 54 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

Gas train
Fuel supply line, in the MULTIBLOC configuration (for a diameter of 1-1/2" and 2") or COMPOSED configuration (from a diameter of DN 65 until a diameter of DN 125), fitted with:
- Filter
- Stabiliser
- Minimum gas pressure switch
- Safety valve
- One stage working valve with ignition gas output regulator.

Conforming to:
- 2014/30/UE directive (electromagnetic compatibility)
- 2014/35/UE directive (low voltage)
- 2009/142/EC directive (gas)
- 2006/42/EC directive (machine)
- 97/23/EC directive (pressure equipment)(only for RS 650-800/M BLU FS2 model)
- EN 676 (gas burners).

Available accessories to be ordered separately:
- Extended head kit
- Power controller
- Probe
- Analog control signal converter
- Potentiometer
- PC interface kit
- Sound proofing box
- LPG kit
- Spacer kit
- Adapters
- Stabiliser spring
- Seal control.

Riello Burners a world of experience in every burner we sell.

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[1]

[2]

[1] BURNERS PRODUCTION PLANT
S. PIETRO, LEGNAGO (VERONA) – ITALIA

[2] HEADQUARTER BURNERS DIVISION
S. PIETRO, LEGNAGO (VERONA) – ITALIA

Across the world, Riello sets the standard in reliable and high efficiency burner technology.
With burner capacity from 5 kW to 48 MW, Riello gas, oil, dual fuel and Low Nox burners deliver unbeatable performance across the full range of residential and commercial heating applications, as well as in industrial processes.
With headquarter in Legnago, Italy, Riello has been manufacturing premium quality burners for over 90 year.
The manufacturing plant is equipped with the most innovative systems of assembling lines and modern manufacturing cells for a quick and flexible response to the market.
Besides, the Riello Combustion Research Centre, located in Angiari, Italy, represents one of the most modern facility in Europe and one of the most advanced in the world for the development of the combustion technology.
Today, the company's presence on worldwide markets is distinguished by a well-constructed and efficient sales network, alongside many important Training Centres located in various countries to meet its customers' needs.
Riello has 13 operational branches abroad (in Europe, America and Asia), with customers in over 60 countries.

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