Weishaupt gas burners G1 to G7
Version LN (Low NO_x)

1/2003 GB

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Description

The Weishaupt G1 to G7 version LN gas burners fulfil the requirements for operational safety, simple installation and reliability. They are energy efficient and environmentally friendly. The burners conform to EN 676 and are EC type tested. Furthermore they conform to the following EC directives:

- Gas Appliance Directive 90/396/EEC
- Machinery Directive 98/37/EC
- Pressure Vessel Directive 97/23/EC
- Electromagnetic Compatibility Directive 89/336/EEC
- Low Voltage Directive 73/23/EEC
- Boiler Efficiency Directive 92/42/EEC

Theses burners have numerous noteworthy details:

- These burners comply with the most stringent directives and NO_x emission limits both here and abroad.
- Large operating range; suitable for many applications
- Automatic sequence of operations
- Combustion chamber prepurge
- Safe flame monitoring
- Stable fan reference line - good combustion behaviour
- Quiet operation
- Burner housing can be hinged open
- As with the standard burners - easy to install, set and service thanks to easily accessible components
- Automatic air shut off on burner shut down

Construction
All the components are brought together in a single unit. The burner motor's axis is at right angles to the direction of the air flow and drives the fan wheel's axle. All the fuel and air regulating components are clearly arranged and easily accessible. The burners can be hinged open to the left or right which facilitates work on the combustion head, diffuser and ignition electrodes.

Fuels
The gas burners have been tested for the following gases in accordance with EN 437 / DVGW Worksheet G 260/I: Natural Gas E (formerly designated Natural Gas H) and LL (formerly designated Natural Gas L).

Application
The burners can be used with heat exchangers such as hot water boilers, steam boilers and air heaters, and for certain process applications. As the burners are capable of overcoming high combustion chamber resistances, they are used primarily on high rated boilers.

Regulation
Dependent on fuel, burner size and requirements, the regulation of air and fuel is by:

- Sliding two stage Z
- Sliding two stage ZM
- Modulation (by including an appropriate controller, the sliding two stage ZM burner can modulate with a servomotor runtime of 42 s).

Sliding two stage Z burners operate with a faster capacity regulation. They are equipped with a servomotor with a runtime of 8 s. The air damper and the gas butterfly valve are operated in compound by means of a regulating cam. The equal flow of gas and air prevents start-up or change-over impact in the combustion chamber or gas main.

Sliding two stage ZM and modulating burners operate with a slower capacity regulation. The air damper and the gas butterfly valve are operated in compound by means of a regulating cam. The runtime for a change in load lasts a maximum of 20 or 42 s.

For sliding two stage control, partial and full load are set positions within the regulation range. The burner's firing rate slides between the two load points, depending on the heat demand. Thus there are no sudden large increases or decreases in the amount of fuel used.

Modulating burners operate at any point within the regulation range, depending on the heat demand.

Reduced capacity at start-up with gas operation
The burners start at ignition load. In this way only a small amount of gas flows into the combustion chamber. After a short delay the gas for the main flame is released.

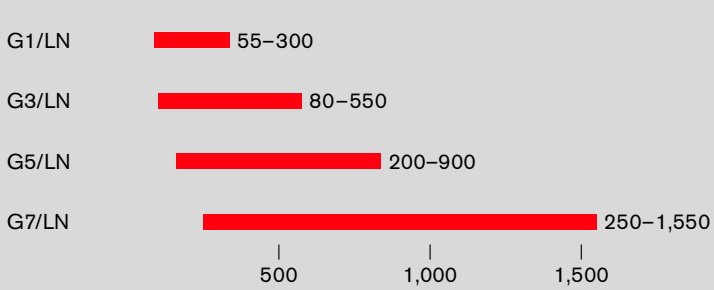
Controlled shut downs from partial load.
The control unit used and the setting of the required values for the second stage or for modulating regulation, means that the controlled shut down of the burner always takes place from the partial load position, thus preventing impact on the gas main.

Flame monitoring
The burner controller, which is either built into the control panel or onto the burner, takes care of the automatic sequence of operations. With its flame sensor it monitors the flame by means of the ionisation principle.

Valve trains
To comply with EN 676 burners must be equipped with two solenoid valves. Weishaupt gas and dual fuel burners are equipped with two Class A solenoid valves (DMV) as standard. Furthermore, Weishaupt recommends the use of valve proving. The use of valve proving is compulsory for ratings above 1200 kW. This, as well as other gas side accessories such as gas filters and gas pressure regulators, can be found in the List of Accessories.

Installation sites
In standard execution (materials, construction, protection), the burners are suitable for use indoors at temperatures between -10°C and +40°C.

Burner overview – rating in kW



Exemplary emission figures with G1 to G7 LowNO_x version gas burners

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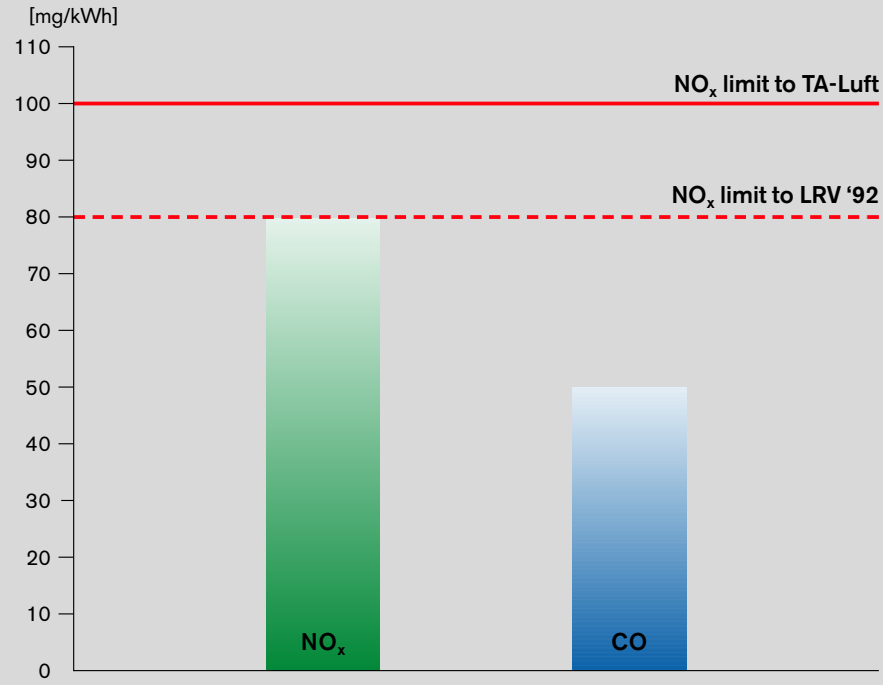
Emission figures with LN (LowNO_x) burners

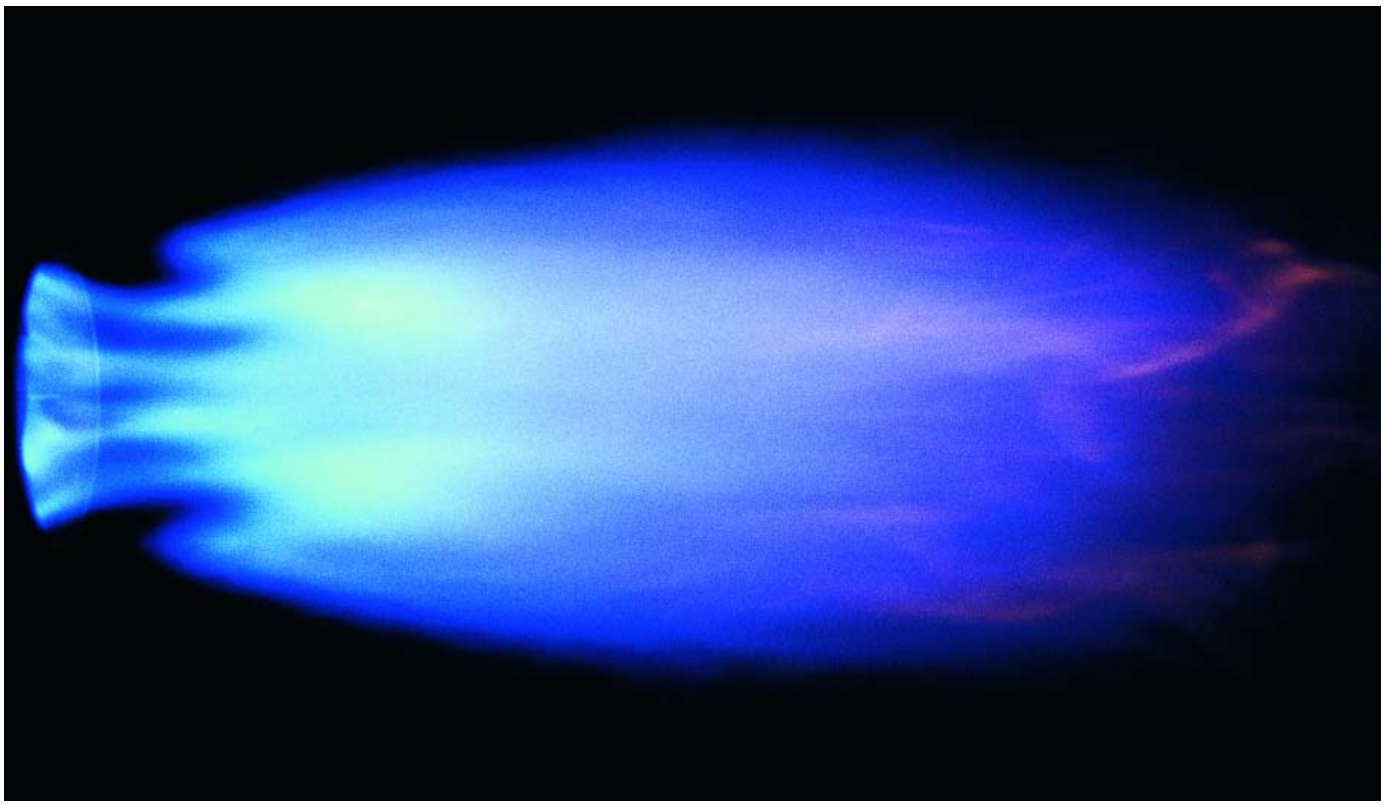


Notes and remarks
The emission figures were achieved with CE tested LN gas burners which complied with EN 676.

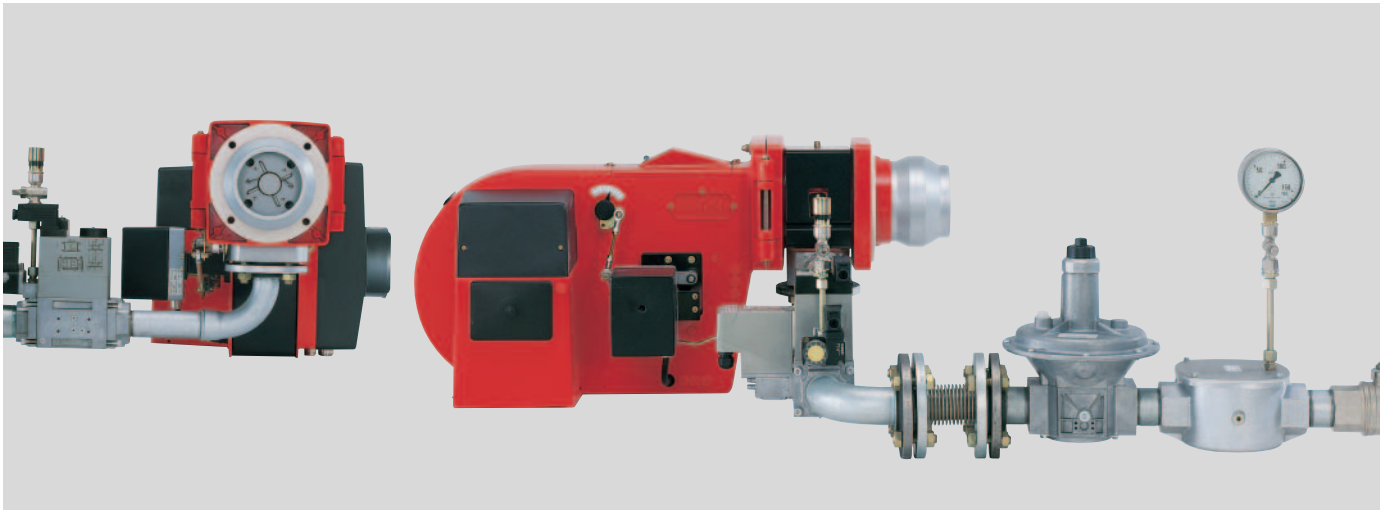
Differing good figures are produced depending on the geometry of the combustion chamber, volume load and firing system (3 pass or reverse flame).

When stating information relating to guaranteed values, certain conditions for measurement and evaluation must be taken into account, such as, amongst others, combustion chamber loading, test tolerances, temperature, pressure, humidity.

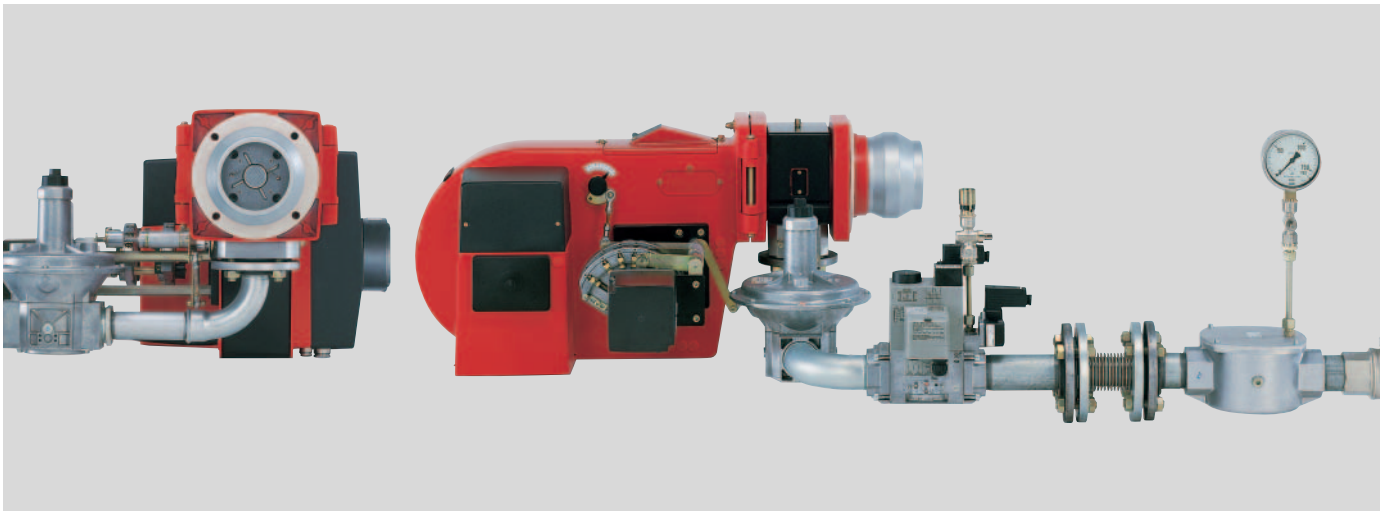
The designation "LN" is used for one of the new Weishaupt LowNO_x burner series



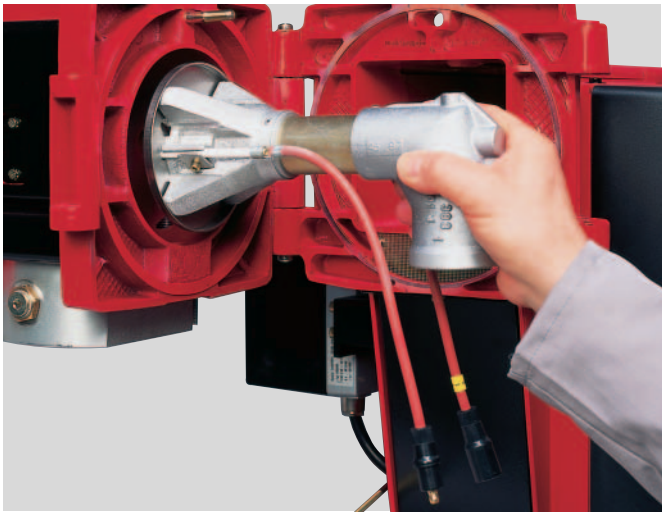
Typical flame formation for LN (LowNO_x) version gas burners



G3/1-E gas burner, version Z-LN



G3/1-E gas burner, version ZMA-LN



LN version gas burner: the mixing assembly is very accessible.

Burner rating dependent on combustion chamber resistance

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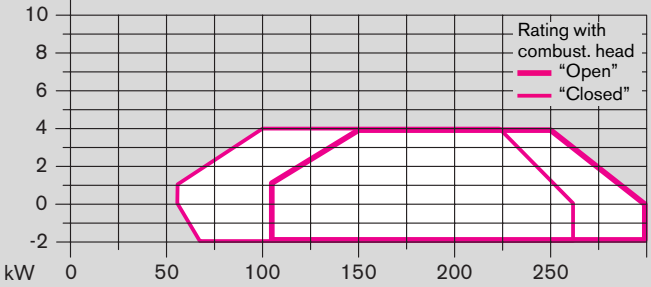
The ratings depending on pressure in the combustion chamber are limit values, which have been measured on idealised test flame tubes according to EN676.

All ratings given are based on an air temperature of 20°C and an installation altitude of 500 m

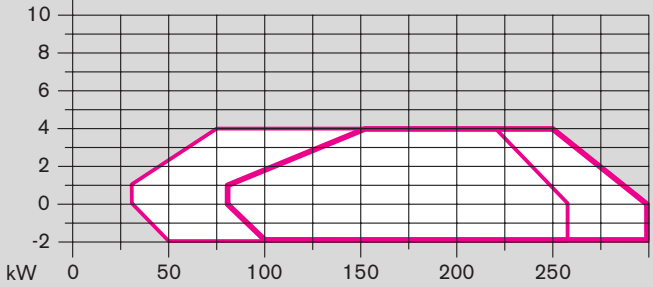
mbar

Burner type **G1/1-E, version LN**
Combustion head type G1/3a-105 x 36
Rating kW 55 – 300



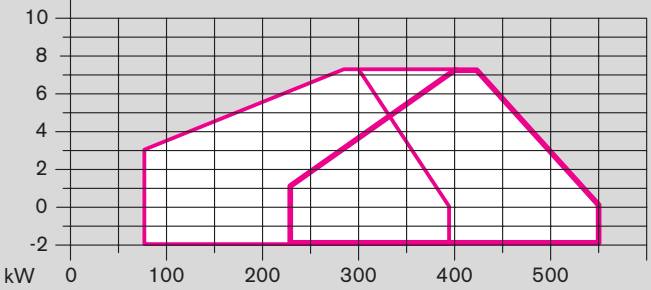
mbar

Burner type **G1/1-E, version ZMA-LN**
Combustion head type G1/3a-105 x 36
Rating kW 30 – 300



mbar

Burner type **G3/1-E, version LN**
Combustion head type G3/3a-120 x 41
Rating kW 80 – 550



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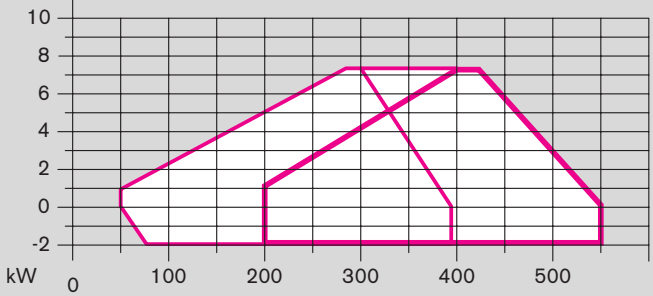
Burner type **G3/1-E, version ZMA-LN**
Combustion head type G3/3a-120 x 41
Rating kW 50 – 550



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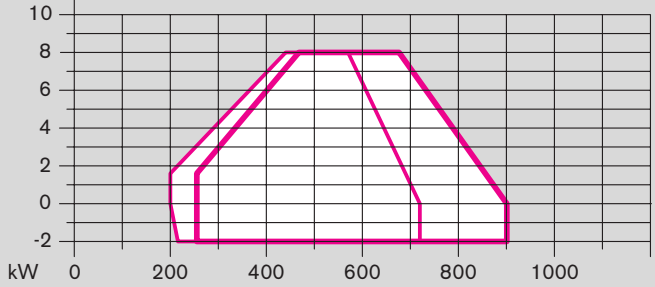
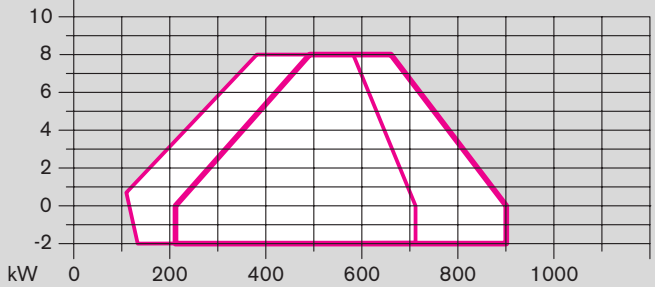
Burner type **G5/1-D, version ZM-LN**
Combustion head type G5/3a-162 x 50
Rating kW 200 – 930



mbar

Burner type **G5/1-D, version ZMA-LN**
Combustion head type G5/3a-162 x 50
Rating kW 130 – 900



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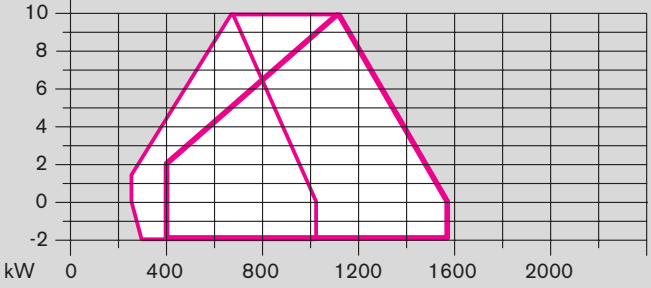
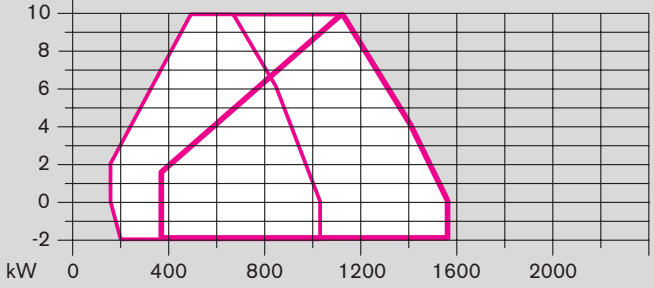
Burner type **G7/1-D, version LN**
Combustion head type G7/3a-190 x 60
Rating kW 250 – 1550



mbar

Burner type **G7/1-D, version ZMA-LN**
Combustion head type G7/3a-190 x 60
Rating kW 150 – 1550



Burner selection

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Valve train R DN	**Version with DMV valves** Order No.

Size 1

Type G1/1-E, version ZE-LN

3/4”	251 103 01
1”	251 113 01
1 1/2”	251 113 02
2”	251 113 03
40	251 123 01
50	251 133 01
65	251 143 01
80	251 153 01

Type G1/1-E, version ZD-LN

3/4”	251 104 01
1”	251 114 01
1 1/2”	251 114 02
2”	251 114 03
40	251 124 01
50	251 134 01
65	251 144 01
80	251 154 01

Type G1/1-E, version ZME-LN

3/4”	251 106 01
1”	251 116 01
1 1/2”	251 116 04
2”	251 116 05
40	251 126 01
50	251 136 01
65	251 146 01
80	251 156 01

Type G1/1-E, version ZMD-LN

3/4”	251 107 01
1”	251 117 01
1 1/2”	251 117 04
2”	251 117 05
40	251 127 01
50	251 137 01
65	251 147 01
80	251 157 01

Type G1/1-E, version ZMAE-LN

1”	251 116 03
1 1/2”	251 116 06
2”	251 116 07
40	251 126 03
50	251 136 03

Type G1/1-E, version ZMAD-LN

1”	251 117 03
1 1/2”	251 117 06
2”	251 117 07
40	251 127 03
50	251 137 03

Size 3

Type G3/1-E, version ZE-LN

3/4”	251 303 01
1”	251 313 01
1 1/2”	251 313 02
2”	251 313 03
40	251 323 01
50	251 333 01
65	251 343 01
80	251 353 01

Valve train R DN	**Version with DMV valves** Order No.

Type G3/1-E, version ZD-LN

3/4”	251 304 01
1”	251 314 01
1 1/2”	251 314 02
2”	251 314 03
40	251 324 01
50	251 334 01
65	251 344 01
80	251 354 01

Type G3/1-E, version ZME-LN

3/4”	251 306 01
1”	251 316 01
1 1/2”	251 316 04
2”	251 316 05
40	251 326 01
50	251 336 01
65	251 346 01
80	251 356 01

Type G3/1-E, version ZMD-LN

3/4”	251 307 01
1”	251 317 01
1 1/2”	251 317 04
2”	251 317 05
40	251 327 01
50	251 337 01
65	251 347 01
80	251 357 01

Typr G3/1-E, version ZMAE-LN

1”	251 316 03
1 1/2”	251 316 06
2”	251 316 07
40	251 326 03
50	251 336 03

Type G3/1-E, version ZMAD-LN

1”	251 317 03
1 1/2”	251 317 06
2”	251 317 07
40	251 327 03
50	251 337 03

Size 5

Type G5/1-D, version ZD-LN

3/4”	151 504 01
1”	151 514 01
1 1/2”	151 514 02
2”	151 514 03
40	151 524 01
50	151 534 01
65	151 544 01
80	151 554 01
100	151 564 01

Type G5/1-D, version ZMD-LN

3/4”	151 507 01
1”	151 517 01
1 1/2”	151 517 04
2”	151 517 05
40	151 527 01
50	151 537 01
65	151 547 01
80	151 557 01
100	151 567 01

Armaturen R DN	**Version with DMV valves** Order No.

Type G5/1-D, version ZMAD-LN

1”	151 517 03
1 1/2”	151 517 06
2”	151 517 07
40	151 527 03
50	151 537 03
65	151 547 03
80	151 557 03

Size 7

Type G7/1-D, version ZD-LN

1”	151 714 01
1 1/2”	151 714 02
2”	151 714 03
40	151 724 01
50	151 734 01
65	151 744 01
80	151 754 01
100	151 764 01

Type G7/1-D, version ZMD-LN

3/4”	151 707 01
1”	151 717 01
1 1/2”	151 717 02
2”	151 717 03
40	151 727 01
50	151 737 01
65	151 747 01
80	151 757 01
100	151 767 01

Type G7/1-D, version ZMAD-LN

1”	151 717 04
1 1/2”	151 717 05
2”	151 717 06
40	151 727 03
50	151 737 03
65	151 747 03
80	151 757 03
100	151 767 03

Note
If sliding two stage (ZM) burners are to be used as modulating burners, this must be advised when ordering. The two versions have differing servomotor runtimes for the compound regulation.

Valve train sizing with DMV valves

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Type G1/1-E, version LN

Burner rating [kW]	Low pressure supply (flow pressure in mbar before shut off valve p_e max = 300 mbar) Nominal diameter of valve trains						High pressure supply (flow pressure in mbar before solenoid valve) Nominal diameter of valve trains			
	3/4"	1"	40*	50*	65	80	3/4"	1"	40*	50*
	Nominal diameter of gas butterfly valve						Nom. diameter of gas butterfly valve			
	25	25	25	25	25	25	25	25	25	25
Natural gas E, Hi = 37.26 MJ/mn³ (10.35 kWh/mn³), d = 0.606, WI = 47.84 kWh/mn³										
150	16	10	9	8	–	–	10	6	6	5
200	26	14	12	11	11	10	16	9	8	8
220	30	16	13	12	11	11	18	10	9	9
250	36	19	14	13	13	12	22	12	10	10
280	44	22	16	15	14	14	26	13	12	12
300	49	24	17	16	15	14	30	14	13	12
Natural gas LL, Hi = 31.79 MJ/mn³ (8.83 kWh/mn³), d = 0.641, WI = 39.67 kWh/mn³										
150	21	12	9	9	9	8	12	7	6	6
200	33	17	13	12	11	11	20	10	9	9
220	39	20	14	13	13	12	24	12	10	10
250	48	23	17	15	14	14	29	14	12	12
280	59	27	19	17	16	15	35	16	14	13
300	66	30	20	18	17	16	39	17	15	15

Type G3/1-E, version LN

Burner rating [kW]	Low pressure supply (flow pressure in mbar before shut off valve p_e max = 300 mbar) Nominal diameter of valve trains						High pressure supply (flow pressure in mbar before solenoid valve) Nominal diameter of valve trains			
	3/4"	1"	40*	50*	65	80	3/4"	1"	40*	50*
	Nominal diameter of gas butterfly valve						Nom. diameter of gas butterfly valve			
	25	25	40	40	40	40	25	25	40	40
Natural gas E, Hi = 37.26 MJ/mn³ (10.35 kWh/mn³), d = 0.606, WI = 47.84 kWh/mn³										
300	45	20	13	11	10	10	26	10	8	8
350	60	26	16	14	13	12	34	14	11	11
400	76	31	18	16	14	14	43	16	12	12
450	93	36	20	17	15	14	52	18	13	13
500	112	42	23	18	16	15	63	21	14	14
550	133	48	25	20	17	16	74	23	16	15
Natural gas LL, Hi = 31.79 MJ/mn³ (8.83 kWh/mn³), d = 0.641, WI = 39.67 kWh/mn³										
300	62	26	16	13	12	12	35	13	10	10
350	83	33	19	16	14	14	47	17	13	12
400	105	41	22	18	16	15	60	20	15	14
450	130	48	25	20	17	16	73	24	16	16
500	158	57	28	22	19	17	88	27	18	17
550	188	66	31	24	20	18	104	30	19	18

Type G5/1-D, version LN

Burner rating [kW]	Low pressure supply (flow pressure in mbar before shut off valve p_e max = 300 mbar) Nominal diameter of valve trains							High pressure supply (flow pressure in mbar before solenoid valve) Nominal diameter of valve trains					
	3/4"	1"	40*	50*	65	80	100	3/4"	1"	40*	50*	65	80
	Nominal diameter of gas butterfly valve							Nom. diameter of gas butterfly valve					
	25	25	40	50	50	50	50	25	25	40	50	50	50
Natural gas E, Hi = 37.26 MJ/mn³ (10.35 kWh/mn³), d = 0.606, WI = 47.84 kWh/mn³													
450	89	32	16	13	11	10	10	48	14	9	9	8	7
500	109	39	19	15	12	11	11	60	17	11	10	9	9
550	131	46	22	17	14	13	12	72	21	13	12	11	10
600	154	54	26	19	15	14	14	85	24	15	14	12	11
700	207	70	32	23	18	16	15	113	30	18	17	14	13
800	267	88	39	27	20	18	17	–	38	22	20	16	15
900	–	109	46	31	23	20	19	–	45	25	23	18	16
Natural gas LL, Hi = 31.79 MJ/mn³ (8.83 kWh/mn³), d = 0.641, WI = 39.67 kWh/mn³													
450	125	43	20	15	12	11	10	68	19	11	10	9	8
500	154	52	24	17	14	12	12	84	22	13	12	10	9
550	185	62	28	20	16	14	13	101	27	16	14	12	11
600	219	73	32	23	17	16	15	119	31	18	16	14	12
700	295	96	41	27	20	18	17	–	40	22	20	16	14
800	–	123	50	33	24	20	19	–	50	27	24	19	17
900	–	152	61	39	27	23	21	–	61	32	28	21	19

Type G1/1-E, version ZMA-LN

Burner rating [kW]	Low pressure supply (flow pressure in mbar before shut off valve p_e max = 300 mbar) Nominal diameter of valve trains					High pressure supply (flow pressure in mbar before solenoid valve) Nominal diameter of valve trains			
	1"	40*	50*	65	80	1"	40*	50*	
	Nominal diameter of gas butterfly valve					Nom. diameter of gas butterfly valve			
	25	25	25	25	25	25	25	25	
Natural gas E, Hi = 37.26 MJ/mn³ (10.35 kWh/mn³), d = 0.606, WI = 47.84 kWh/mn³									
150	10	9	8	–	–	9	8	8	
200	14	12	11	11	10	13	11	11	
220	16	13	12	11	11	15	12	12	
250	19	14	13	13	12	17	14	13	
280	22	16	15	14	14	19	16	15	
300	24	17	16	15	14	21	17	15	
Natural gas LL, Hi = 31.79 MJ/mn³ (8.83 kWh/mn³), d = 0.641, WI = 39.67 kWh/mn³									
150	12	9	9	9	8	11	9	9	
200	17	13	12	11	11	15	13	12	
220	20	14	13	13	12	17	14	13	
250	23	17	15	14	14	20	16	15	
280	27	19	17	16	15	23	18	17	
300	30	20	18	17	16	26	20	18	

Type G3/1-E, version ZMA-LN

Burner rating [kW]	Low pressure supply (flow pressure in mbar before shut off valve p_e max = 300 mbar) Nominal diameter of valve trains					High pressure supply (flow pressure in mbar before solenoid valve) Nominal diameter of valve trains			
	1"	40*	50*	65	80	1"	40*	50*	65
	Nominal diameter of gas butterfly valve					Nom. diameter of gas butterfly valve			
	40	40	40	40	40	40	40	40	40
Natural gas E, Hi = 37.26 MJ/mn³ (10.35 kWh/mn³), d = 0.606, WI = 47.84 kWh/mn³									
300	16	13	11	10	10	14	12	11	10
350	21	16	14	13	12	17	15	14	13
400	25	18	16	14	14	20	18	15	14
450	29	20	17	15	14	22	20	17	15
500	33	23	18	16	15	25	21	18	16
550	37	25	20	17	16	28	24	19	16
Natural gas LL, Hi = 31.79 MJ/mn³ (8.83 kWh/mn³), d = 0.641, WI = 39.67 kWh/mn³									
300	21	16	13	12	12	17	15	13	12
350	26	19	16	14	14	21	18	16	14
400	32	22	18	16	15	25	21	18	16
450	37	25	20	17	16	28	24	20	17
500	43	28	22	19	17	32	27	21	18
550	49	31	24	20	18	36	30	23	19

Type G5/1-D, version ZMA-LN

Burner rating [kW]	Low pressure supply (flow pressure in mbar before shut off valve p_e max = 300 mbar) Nominal diameter of valve trains					High pressure supply (flow pressure in mbar before solenoid valve) Nominal diameter of valve trains				
	1"	40*	50*	65	80	1"	40*	50*	65	80
	Nominal diameter of gas butterfly valve					Nom. diameter of gas butterfly valve				
	50	50	50	50	50	50	50	50	50	50
Natural gas E, Hi = 37.26 MJ/mn³ (10.35 kWh/mn³), d = 0.606, WI = 47.84 kWh/mn³										
450	23	13	13	11	10	17	13	12	10	10
500	27	16	15	12	11	20	15	14	12	11
550	32	18	17	14	13	23	17	16	13	13
600	37	20	19	15	14	26	19	18	15	14
700	47	24	23	18	16	32	22	22	17	16
800	59	29	27	20	18	39	26	25	19	18
900	72	34	31	23	20	47	31	29	22	19
Natural gas LL, Hi = 31.79 MJ/mn³ (8.83 kWh/mn³), d = 0.641, WI = 39.67 kWh/mn³										
450	30	16	15	12	11	21	15	14	12	11
500	39	19	17	14	12	24	17	17	13	12
550	42	22	20	16	14	29	20	19	15	14
600	49	25	23	17	16	33	22	22	17	15
700	63	30	27	20	18	41	27	26	20	17
800	80	36	33	24	20	51	32	31	22	20
900	98	43	39	27	23	62	38	37	26	22

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Type G7/1-D, version LN

Burner rating [kW]	Low pressure supply (flow pressure in mbar before shut off valve p_e max = 300 mbar) Nominal diameter of valve trains						High pressure supply (flow pressure in mbar before solenoid valve) Nominal diameter of valve trains					
	1”	**40***	**50***	**65**	**80**	**100**	**1”**	**40***	**50***	**65**	**80**	**100**
	Nominal diameter of gas butterfly valve						Nominal diameter of gas butterfly valve					
	40	40	50	65	65	65	40	40	50	65	65	65
Natural gas E, Hi = 37.26 MJ/mn³ (10.35 kWh/mn³), d = 0.606, WI = 47.84 kWh/mn³												
700	61	25	16	11	9	9	21	12	10	7	6	6
800	80	34	22	15	13	12	29	17	14	11	9	9
900	102	42	27	19	16	15	38	22	19	14	12	12
1000	125	52	33	23	19	18	47	27	24	18	16	15
1200	179	73	47	32	26	24	67	39	34	25	22	21
1400	236	93	57	37	29	26	86	47	40	29	24	23
1550	285	110	65	40	31	28	101	53	45	31	26	24
Natural gas LL, Hi = 31.79 MJ/mn³ (8.83 kWh/mn³), d = 0.641, WI = 39.67 kWh/mn³												
700	90	38	24	17	14	13	33	19	17	13	11	10
800	116	48	31	21	18	17	43	25	22	16	14	14
900	146	60	38	26	22	20	55	31	27	20	18	17
1000	179	73	46	31	26	23	67	38	33	25	21	20
1200	255	102	63	41	34	30	94	52	45	33	28	27
1400	–	131	77	48	37	33	120	64	55	38	31	29
1550	–	154	89	53	40	35	–	73	62	41	33	31

The combustion chamber pressure in mbar must be added to the minimum gas pressure required.

Type G7/1-D, version ZMA-LN

Burner rating [kW]	Low pressure supply (flow pressure in mbar before shut off valve p_e max = 300 mbar) Nominal diameter of valve trains						High pressure supply (flow pressure in mbar before solenoid valve) Nominal diameter of valve trains					
	1”	**40***	**50***	**65**	**80**	**100**	**1”**	**40***	**50***	**65**	**80**	**100**
	Nominal diameter of gas butterfly valve						Nominal diameter of gas butterfly valve					
	65	65	65	65	65	65	65	65	65	65	65	65
Natural gas E, Hi = 37.26 MJ/mn³ (10.35 kWh/mn³), d = 0.606, WI = 47.84 kWh/mn³												
700	39	16	14	11	9	9	23	14	13	10	9	8
800	51	21	19	15	13	12	31	18	18	14	12	11
900	64	27	24	19	16	15	39	23	22	18	15	15
1000	79	33	29	23	19	18	48	29	27	22	19	18
1200	113	46	40	32	26	24	68	40	38	30	26	24
1400	147	55	48	37	29	26	86	47	44	34	28	26
1550	175	63	54	40	31	28	101	54	50	37	30	27
Natural gas LL, Hi = 31.79 MJ/mn³ (8.83 kWh/mn³), d = 0.641, WI = 39.67 kWh/mn³												
700	57	24	21	17	14	13	35	21	20	16	14	13
800	74	30	27	21	18	17	45	27	25	20	17	16
900	92	37	33	26	22	20	56	33	31	25	21	20
1000	113	45	39	31	26	23	68	39	37	29	25	23
1200	159	61	53	41	34	30	94	53	50	38	32	30
1400	208	75	64	48	37	33	120	64	59	44	36	32
1550	249	87	73	53	40	35	–	72	67	48	38	34

*** The figures given for size DN40 also apply to 1 1/2” and those for DN50 to 2” valve trains.**

Special equipment

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Sizes 1 to 3

No.	Description		G1-LN Order No.	G3-LN Order No.
1	**Vertically firing burner version**		standard	standard
2	**Air intake flange** for connection of an air duct		210 000 67	210 000 67
3	**Combustion head extension**	by 100 mm	250 002 83	250 002 86
		by 200 mm	250 002 84	250 002 87
		by 300 mm	250 002 85	250 002 88
4	**Integral switchgear**	G, version ZE	250 000 02	250 000 06
		G, version ZD	250 000 04	250 000 08
		G, version ZME	250 001 31	250 001 29
		G, version ZMD	250 001 32	250 001 30
5	**Flame sensor (UV cell)** instead of ionisation electrode		250 002 95	250 002 95
6	**Potentiometer** on servomotor	ZM 220 Ohm	110 002 86	110 002 86
		ZM 1000 Ohm	110 003 03	110 003 03
7	**Burner controller**	LGK 16... in lieu of LFL	250 000 81	250 000 81
8	**Solenoid valve for air pressure switch test** for continuous run fan or post purge		250 000 54	250 000 54

Sizes 5 to 7

No.	Description		G5-LN Order No.	G7-LN Order No.
1	**Downward firing burner version**		standard	standard
2	**Air intake flange** for connection of an air duct		110 001 05	110 001 06
3	**Combustion head extension**	by 100 mm	150 012 53	150 012 78
		by 200 mm	150 012 54	150 012 79
		by 300 mm	150 012 55	150 012 80
4	**Integral switchgear**	G, version ZE	–	–
		G, version ZD	150 006 54	150 006 56
		G, version ZME	–	–
		G, version ZMD	150 010 22	150 010 93
5	**Flame sensor (UV cell)** instead of ionisation electrode		150 012 63	150 012 63
6	**Potentiometer** on servomotor	ZM 220 Ohm	110 002 86	110 002 86
		ZM 1000 Ohm	110 003 03	110 003 03
7	**Burner controller**	LGK 16... in lieu of LFL	250 000 81	250 000 81
8	**Solenoid valve for air pressure switch test** for continuous run fan or post purge		150 010 07	150 010 07

Special frequencies and voltages available on request at no extra cost.

Additional price for Isolation Class F motors available on request

Technical data
Product Ident. Nos.

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Description			for burner G1 . . LN	G3 . . LN	G5 . . LN	G7 . . LN
Burner motor 1 ~ 230V, 50 Hz		Type	ECK07-2	ECK08/90-2	–	–
Nominal capacity		kW	0.25	0.76	–	–
Nominal load at 230V		A	2.3	6	–	–
Motor prefuse		A	10	16	–	–
Speed		1/min	2850	2850	–	–
Capacitor		µF	16	25	–	–
Burner motor 3 ~ 230/400V		Type	DK07-2	DK07/2	DK08/90-2	D112/110-2/1
Nominal capacity		kW	0.76	0.76	1.4	3.0
Nominal load at 230/400V		A	3.6/2.1	3.6/2.1	6.3/3.5	6.0
Motor prefuse		A	16	16	16	16
Speed		1/min	2820	2820	2820	2900
Fan wheel			galvanised	galvanised	galvanised	galvanised
Ignition unit		Type	W-ZG 02/1	W-ZG 02/1	W-ZG 02/1	W-ZG 02/1
Burner controller for – single and sliding two stage Z, sliding two stage ZM and modulating burners G and GL		Type	LFL 1.322	LFL 1.322	LFL 1.322	LFL 1.322
Servomotor						
– single and sliding two stage Z	(run time 8 s)	Type	-w- 1055/80	-w- 1055/80	-w- 1055/80	-w- 1055/80
– sliding two stage ZM	(run time 20 s)	Type	SQM 10.15562	SQM 10.15562	SQM 10.15562	SQM 10.15562
– modulating burners	(run time 42 s)	Type	SQM 10.16562	SQM 10.16562	SQM 10.16562	SQM 10.16562
Weight						
Gas burner (without valve train)		kg (approx.)	39	43	55	76

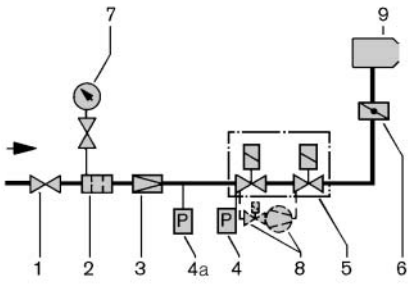
Standard burner motor version: Isolation Class Btrop., type of protection IP44

Burner type	Product Ident. No.
Gas burner G, Version LN (LowNO$_x$)	
G1/1-E	CE-0085AP 0519
G3/1-E	CE-0085AP 0522
G5/1-D	CE-0085AP 0525
G7/1-D	CE-0085AP 0387

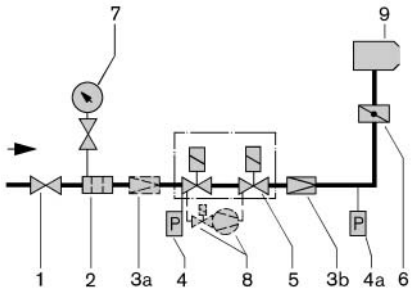
The burner types shown are approved for use with Natural Gas E (formerly Natural Gas H) and Natural Gas LL (formerly Natural Gas L).

Included in delivery
Valve train layout

Burner type	**G1 to 3 version LN**	**G5 to 7 version LN**
Number of solenoid valves	2	2
Burner housing with integrated sound attenuated air inlet	●	
Burner housing, air control housing		●
Hinged flange, housing with sight glass, Weishaupt burner motor, pressure side air regulation, fan wheel, air pressure switch, servomotor, gas/air compound regulation with regulating cam(s), ignition unit, terminal rails, flange gasket, fixing screws	●	●
Mixing head for NO_x reduction	●	●
Limit switch on hinged flange	●	●
Burner controller with flame sensor (ionisation electrode) loose for fitting into control panel or mounted on burner	●	●
Gas double solenoid valve (DMV), Class A Gas butterfly valve	●	●
Gas pressure switch	●	●
Valve connection piece	●	●



Sliding two stage (Z), sliding two stage (ZM) and modulating burners **with DMV solenoid valves** and VPS valve proving



Sliding two stage (ZM) and modulating burners **with DMV solenoid valves** and VPS valve proving

Legend

1 Isolating cock *
2 Gas filter *
3 Governor (LP) or (HP) *
3a Governor (HP only) *
3b Governor (LP) *
4 Gas pressure switch, min.
4a Gas pressure switch, max. (TRD) *
5 Double solenoid valve
6 Gas butterfly valve
7 Gas pressure gauge and cock *
8 VPS Valve proving *
9 Gas burner

* not included in burner price

Dimensions

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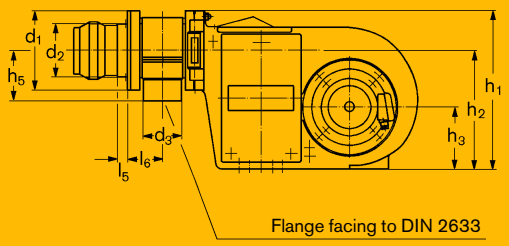
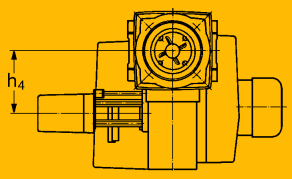
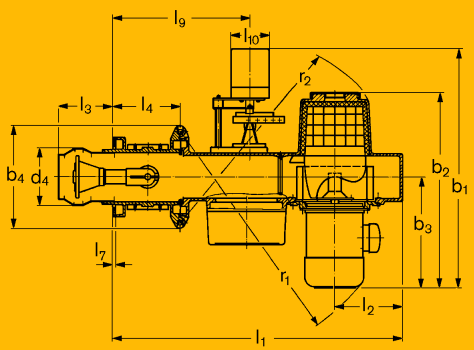
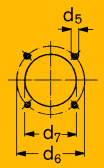
Sizes 1 and 3



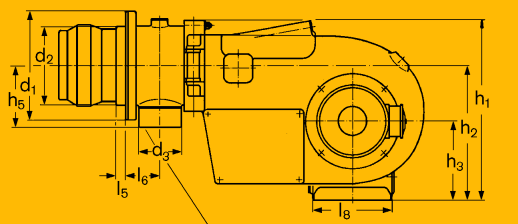


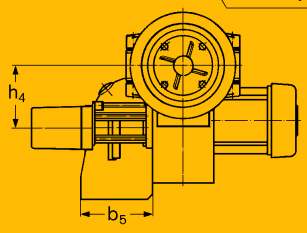


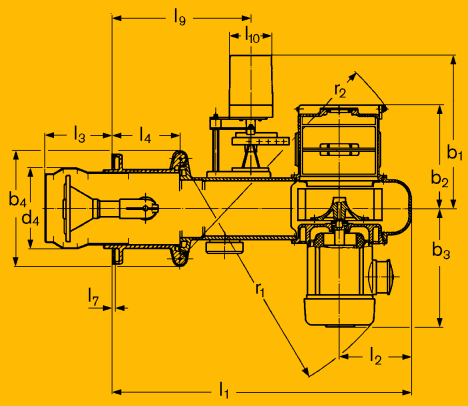
Drilling dimensions of the burner plate



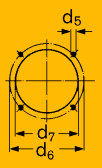
Sizes 5 and 7







Drilling dimensions of the burner plate



Size	Dimensions in mm															
	l_1	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9 ①	l_9 ②	l_{10} ①	l_{10} ②	b_1 ①	b_1 ②	b_2	b_3
1	685	168	144	168	35	88	8	–	312	342	110	120	543	653	501	275
3	805	188	147	188	28	98	8	–	392	382	110	120	570	680	529	295
5	868	200	197	208	42	108	8	238	451	421	110	120	275	390	275	305
7	965	225	277	228	52	118	8	251	514	484	110	120	305	415	326	330

	b_4	b_5	h_1	h_2	h_3	h_4	h_5	d_1	d_2	d_3	d_4	d_5	d_6 ③	d_7	r_1	r_2
1	248	–	388	290	150	175	130	195	129	DN25	127	M8	160-170	135	550	590
3	280	–	430	325	170	175	140	220	154	DN40	160	M10	186	165	650	670
5	312	200	494	373	220	195	162	260	195	DN50	200	M10	235	210	680	725
7	355	229	560	415	245	195	182	330	235	DN65	250	M12	298	270	720	800

① Sliding two stage Z burner
② Sliding two stage ZM burner
③ The dimensions of the burner connection to the boiler have been newly laid down in accordance with DIN 4789. Therefore boilers with a rating of 72 - 150 kW have a fixing plate diameter of 170 mm