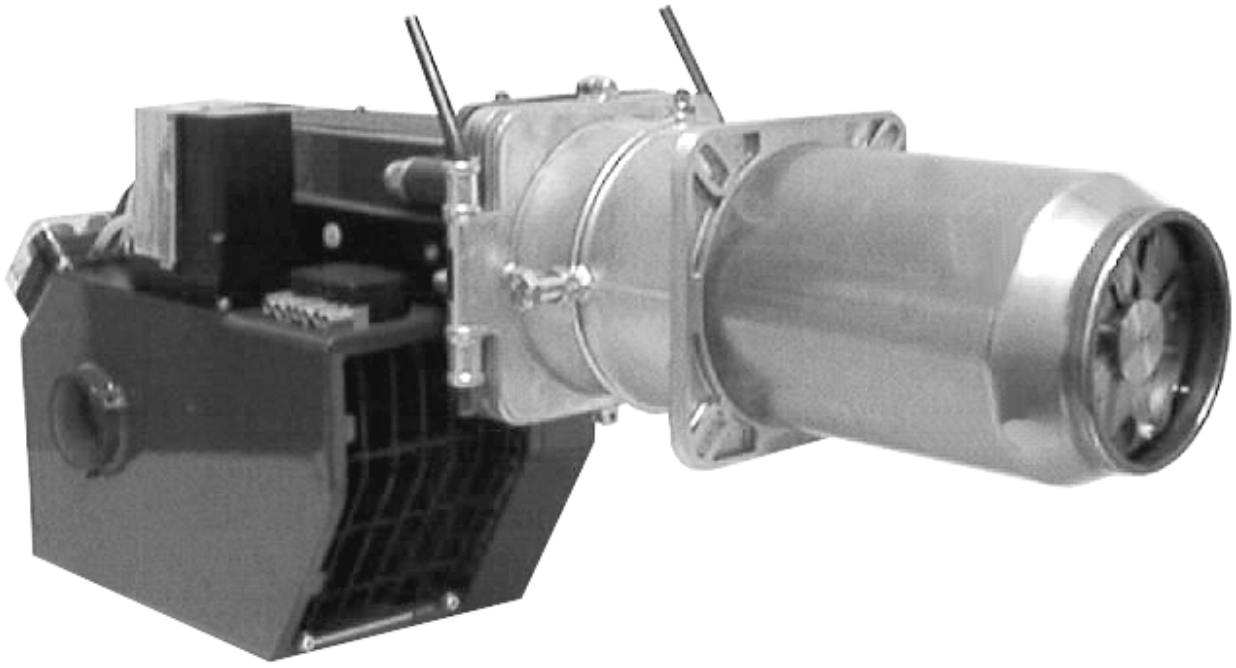
GIERSCH

Technical Information • Installation Instructions

MG10-LN

Gas

Issued in April 2025
Subject to tech. modifications
to improve the product!



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Contents

1 General information

Installation of a gas-fired heating system must be performed in accordance with the applicable regulations and guidelines. It is therefore the duty of the installer to be fully familiar with all regulations. Installation, start-up and maintenance must be performed with utmost care.

The burner must not be operated in rooms with high levels of air humidity (laundry rooms), dust or corrosive vapours. The boiler room must be ventilated accordingly with ventilation air.

Giersch MG Series gas burners are suitable for combustion of natural gas in accordance with DIN EN 437 and are in compliance with the DIN EN 676 European standard.

2 Checking scope of supply and electrical ratings

Before installing the gas burner, please check the scope of delivery.

Scope of delivery:
burner housing, gas jacket with burner pipe, mounting kit, documentation and gas train.

Gas installation and commissioning are subject to the applicable national regulations, e.g. in Germany the Technical Regulations of the DVGW (DVGW-TRGI).

The following must be observed for Switzerland: SVGW Gas Provisions G1, G3: Gas installation EKAS Form.
1942: Liquefied gas regulation, Part 2 Regulations of cantonal authorities (e. g. fire department regulations).

The gas pipe must be designed to conform to the flow rate and the available gas flow pressure and routed with the lowest pressure loss over the shortest distance to the burner.

The loss of gas pressure via the gas train and the burner as well as the resistance on the fuel gas side of the heat generator must be less than the connection flow pressure.

Caution
Observe sequence and through-flow direction of valves and fittings.

3 Maintenance and customer service

The complete system should be checked once a year for proper functioning and leak tightness by an authorised representative of the manufacturer or by another expert.

Only qualified personnel may open only for maintenance, not during on-going operation. Prior to opening/ swinging out, de-energise the burner and let it cool down. After completion of work, close the burner again.

Wear protective clothing|/hearing protection when working in the boiler house

We accept no liability for consequential damage in cases of incorrect installation or repair, the fitting of non-genuine parts or where the equipment has been used for purposes for which it was not intended.

4 Operating instructions

The operating instructions together with this technical information leaflet must be displayed in a clearly visible position in the boiler room. The address of the nearest customer service centre must be displayed on the back of the operating instructions.

5 Instruction of operating personnel

Failures are often caused by operator error. The operating personnel must be properly instructed in how the burner works. In the event of recurring faults, Customer Service should be notified.

6 Key for code designation

MG10/1-Z(M)-L-N-LN

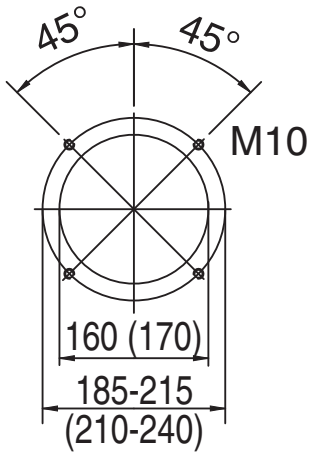
- LN — LowNox
- N — Natural gas LL + E = "N", Liquid gas 3B/P = “F“
- L — Air pressure switch
- Z(M) — Two-stage / modulating
- 10 — Size
- MG1 — Series

7 Technical specifications

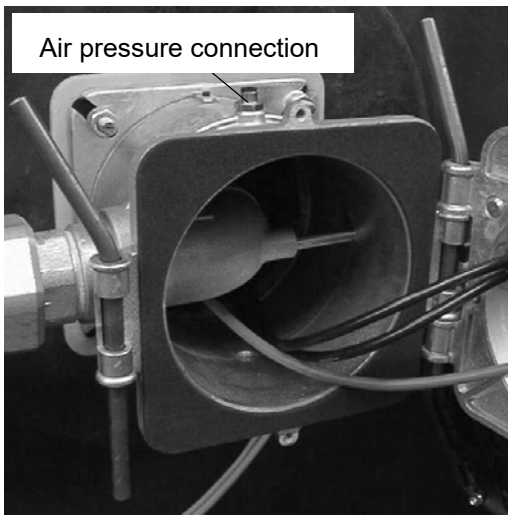
	MG10/1-LN	MG10/2-LN
Burner output	95 - 420 kW	125 - 530 kW
recommended boiler power (η = 92%)	88 - 385 kW	23 - 56,12 kW
Gas type	natural gas LL + E = „-N“/ LPG 3B/P = “-F”	
consumption L-Gas H-Gas LPG	10,5 - 46,6 m^3/h 9,5 - 41,6 m^3/h 3,8 - 16,7 m^3/h	13,9 - 58,8 m^3/h 12,4 - 52,5 m^3/h 5,0 - 21,1 m^3/h
max. Gas pressure	20 - 300 mbar	
Mode of operation	2-stage sliding, modulating	
Voltage	1 / N / PE ~ 50 Hz / 230 V	
EI_{min} / EI_{max}	2,6 A / 4 A	3,5 A / 6,5 A
Max. power consumption at start /during operation	900 / 600 W	1500 / 800 W
Electric motor power	370 W	750 W
Noise emission	≤ 78 dB (A)	
Emission class	5	3
NO_x Limit calue	≤ 56 mg/kWh	≤ 80 mg/kWh
Weigth	45 kg	46 kg

8 Boiler connection dimensions

Dimensions in mm (Dimensions in brackets MG10/2-LN)



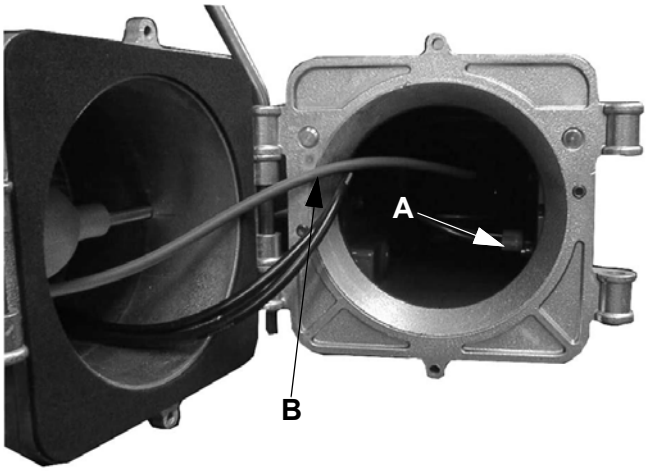
9 Mounting the gas jacket on the boiler



Use adhesive to affix the gasket to the gas jacket.

The boiler connection plate must be prepared in accordance with the dimensions specified in "8 Boiler connection dimensions“.
You can use the gas-jacket gasket as a scribing template.
Using an 8 mm socket-head wrench, secure the gas jacket to the boiler with the 4 M 10 securing screws and washers.
Screw the air pressure connection into the top of compact unit.

10 Mounting the burner housing on the gas jacket (service position)



Position the burner housing in the gas-jacket hinge and secure it with a rod. The burner is now in the service position.

Connect ignition cable "A" to the ignition transformer.
Connect the plug for ionisation "B"

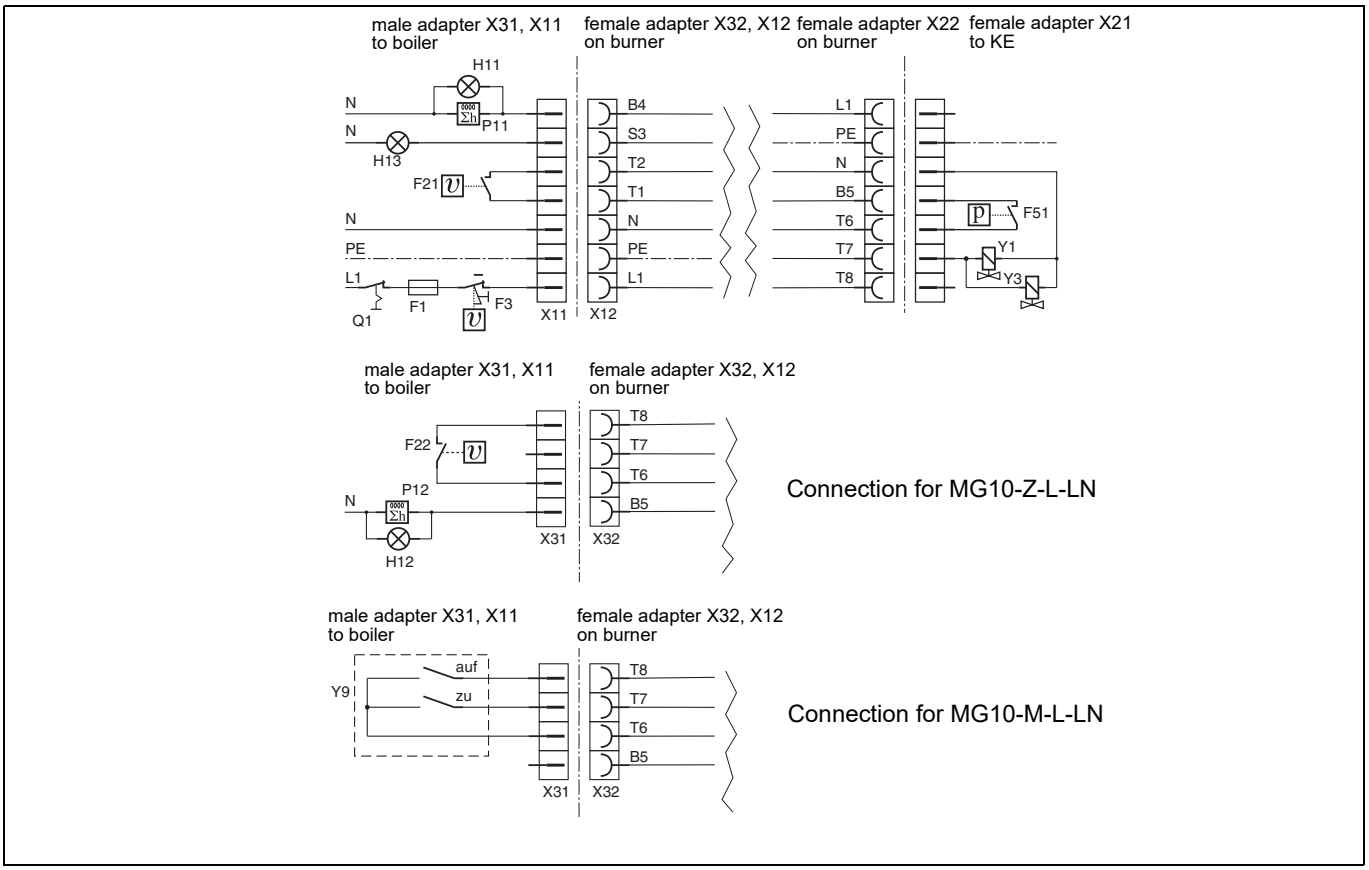
Make sure that the gasket is correctly seated between gas jacket and burner housing.

Swing the burner closed and insert the second securing rod into the hinge. Tighten the screw at the top to secure the burner in position.

11 Terminal diagram - connector pin assignments

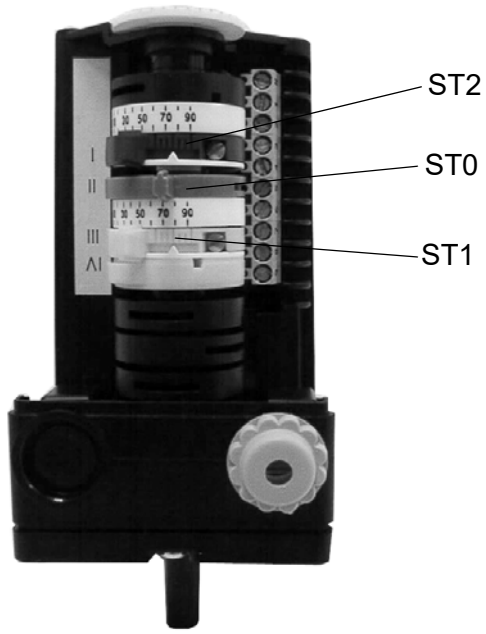
If the plug is already wired:
Check the connections according to the diagram!

The electrical connection of the burner is to be made in the attached plug part according to the circuit diagram, taking into account the local regulations.
The supply line must be secured with max. 10 A (recommended) and must be laid with flexible cable.



Explanation of the switch symbols see separate circuit diagram.

12 Air flap positioning motor



Ausführung -Z-L, -M-L
The air valve positioning motor is for the purpose of adjusting the air flaps only with an oil-burner solenoid valve circuit on two-level burners with an air cutoff. Adjustment is via limit switch cams on the positioning drive roller.

The cam positions for adjusting the burner to the required boiler output are given on the Adjustment Table.

To do so:
Remove cover from air valve positioning motor. Change the cam positions on the levers and do so with a standard screwdriver (cam retainer precision adjustment).
If necessary, switching cams can be adjusted when setting the burner.

Higher setting = More air, pressure increases
Lower setting = Less air, pressure decreases

Colour-coding of switch cams:

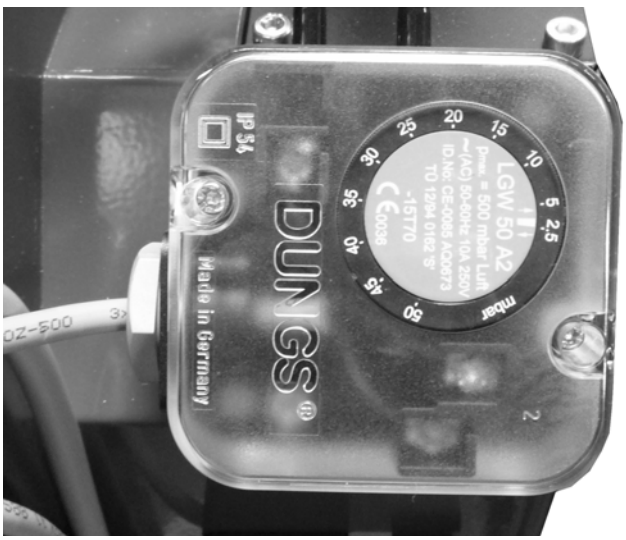
blue (II) = ST0 (closed position)
yellow (III/IV) = ST1 (level 1 position)
red (I) = ST2 (level 2 position)

Please note the following when adjusting the switch cams:

– Do not set cam position for ST1 higher than ST2.
– After adjusting ST1 and ST2 it is necessary to switch over to the next level and then switch back again for the adjustment to become effective.
– When adjustment of the burner is complete, refit positioning motor cover and set level selector switch to position for Level 2.

Important
Do not set cam position ST2 over the marking 88

13 Air pressure switch



The air pressure switch is a differential pressure switch and monitors the air pressure at the forced-air burner.

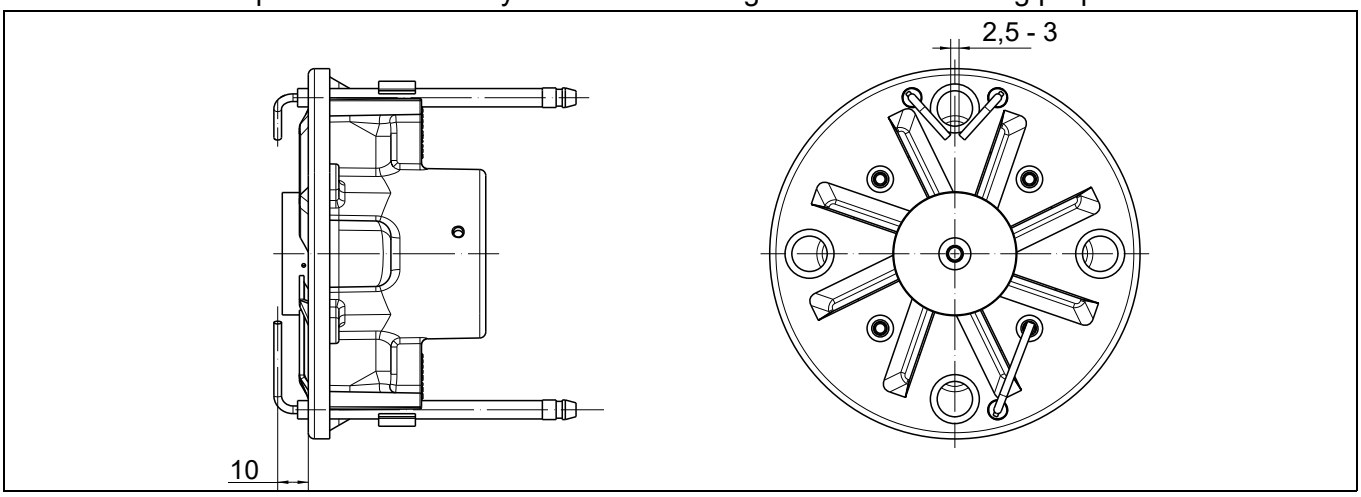
The air pressure switch is pre-set at the factory.

14 Gas pressure monitor

The gas pressure monitor is used to monitor the gas inlet pressure. If the minimum gas inlet pressure falls below the set minimum (factory preset to 12 mbar), the burner is switched off. The burner automatically starts up again when the minimum pressure is exceeded.

15 Set the electrodes

The electrodes are preset at the factory. The dimensions given are for checking purposes.



16 Flame control with ionisation monitor

In the presence of an alternating-current voltage between burner and ionisation rod, the rectifying effect of the flame causes a direct current to flow. This ionisation current is the flame signal and is amplified before being output to the control box. A flame cannot be simulated, because the rectifying effect collapses if there is a short-circuit between sensor electrode and burner.

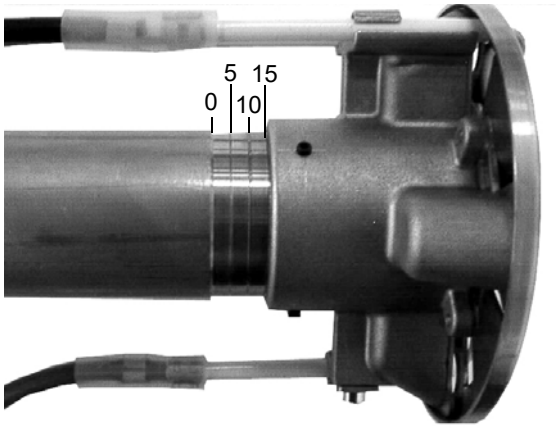
Measuring ionisation current

The ionisation current must be measured during burner start-up and maintenance or after a fault indication in the control box. Disconnect the plug of the ionisation cable and connect the ionisation measuring cable.

Perform measurement straight after the post-ignition time during the safety time period !

The ionisation current must be at least 1.5 µA. Currents lower than 1.5 µA cause unstable operation or shut-down. If the current is too low clean the ionisation rod and the inside of the burner tube. It may be necessary to correct the shape of the ionisation rod. If the ionisation rod is defective, replace the electrode. Reverse the polarity of the ignition transformer, if necessary. Check the cables for moisture formation and dry if necessary.

17 Adjustment of the burner head



DSet the position of the burner head according to burner output in accordance with the table on page 16ff.

18 Control box LME 22

Testing the control unit for proper functioning

Danger of fatal injury from electric shocks!

Disconnect electrical cable from power supply before carrying out any work on live parts! Troubleshooting may only be carried out by authorised and trained personnel! Unlocking may only be carried out by an authorised specialist.

After startup and after maintenance of the burner, the following controls to perform.

Burner startup with broken lines to the flame detector:

- Disconnect the cable to the flame monitor and restart the burner.
  At the end of the safety time the controller makes a lockout
- Reestablish the connection.

Burner operation with simulated loss of flame:

- Pull the compact unit the square plug from the gas pressure switch and jumper the contacts in the connector.
- Start the burner.
- Connect operation are the ball valve.
  After loss of flame, the controller makes a lockout.
- Remove the jumper in the connector and insert it back to the gas pressure switch of the compact unit.

Burner operation with simulated air pressure loss:

- Pull are the operation from the air hose to the "+" input of the air pressure switch.
  The controller makes a lockout.
- Insert the air hose back onto the air pressure switch

Operation indicator:

During commissioning, the display appears in accordance with the following table:

Color code table of the multicolored signal light (LED)		
Status	**Colore code**	**Colore**
Waiting time (tw), other waiting states	○.....	OUT
Ignition phase, ignition activated	●○●○●○●○●○●	Flashing yellow
Operation, flame OK	□.....	green
Operation, flame bad	□○□○□○□○□○	Flashing green
Extraneous light when the burner starts	□▲□▲□▲□▲□▲	green-red
undervoltage	●▲●▲●▲●▲●▲	green-red
Fault, alarm	▲.....	red
Error code output, see «Error code table»	▲○▲○▲○▲○	Flashing red
Interface diagnosis	▲▲▲▲▲▲▲▲	Red flickering light

Legend:

..... Permanent ▲ red □ green
○ Out ● yellow

Safety and switching functions

In the event of a flame failure during operation, the fuel supply is immediately switched off and the control box goes into fault mode. A restart takes place in all cases following a mains power failure. A fault is triggered immediately if there is flame detection during pre-ventilation. The position of the air pressure monitor is continuously checked. There can be no start-up if it is not in its neutral position. A fault is triggered if the working contact fails to close during pre-ventilation, or reopens. In the event of a lack of air during operation, the air pressure monitor contact opens and the valves close immediately. The device goes into fault mode.

Diagnostics of the cause of fault

After lockout, the red signal lamp will remain steady on. In that condition, visual diagnostics of the cause of fault according to the error code table can be activated by pressing the lockout reset button for more than 3 seconds. Pressing the lockout reset button again for at least 3 seconds, interface diagnostics will be activated. Interface diagnostics works only if the lockout reset button extension AGK20… is not fitted. If, by accident, interface diagnostics has been activated, in which case the slightly red light of the signal lamp flickers, it can be deactivated by pressing again the lockout reset button for at least 3 seconds. The instant of switching over is indicated by a yellow light pulse.

Error code table

Red blink code of signal lamp (LED)	Alarm at term. 10	Possible cause
2 x blinks	ON	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
3 x blinks	ON	Air pressure switch faulty - Loss of air pressure signal after specified time - Air pressure switch welded in normal position
4 x blinks	ON	Extraneous light when burner is started up
5 x blinks	ON	Air pressure switch time supervision - Air pressure switch welded in working position - Error with valve proving (only in conjunction with LDU11...)
6 x blinks	ON	Free
7 x blinks	ON	Too many losses of flame during operation (limitation of repetitions) - Faulty or soiled fuel valves - Faulty or soiled flame detector - Poor adjustment of burner
8 x blinks	ON	Free
9 x blinks	ON	Free
10 x blinks	OFF	Wiring error or internal error, output contacts, other faults
14 x blinks	ON	CPI contact not closed

During the time the cause of fault is diagnosed, the control outputs are deactivated

- Burner remains shut down
- External fault indication remains deactivated
- Fault status signal (alarm) at terminal 10, according to the error code table

The diagnostics of the cause of fault is quit and the burner switched on again by resetting the burner control. Press the lockout reset button for about 1 second (<3 seconds).

19 Calculation principles for gas burner adjustment

The values given in the tables are setting values for start-up.
The necessary system adjustment must be newly determined in each case.

General:
The calorific value ($H_{i,n}$) of fuel gasses is usually given for normal atmospheric conditions (0°C, 1013 mbar).

Natural gas type E	$H_{i,n}$ = 10.4 kWh/m^3
Natural gas type LL	$H_{i,n}$ = 9.3 kWh/m^3
LPG gas (propane)	$H_{i,n}$ = 25.9 kWh/m^3

Gas counters measure the volume of gas in the operational state.

Specifying throughput:
To allow correct setting of the heat generator load, the gas throughput must be determined in advance.

Example:

Height above sea level	230 m
Atmospheric pressure B (according to table)	989 mbar
Gas pressure p_G at counter	20 mbar
Gas temperature ϑ_G	16°C
Boiler rating Q_n	220 kW
Efficiency η_K (assumed)	92%
Calorific value $H_{i,n}$	10.4 kWh/m^3

Gas flow in standard state (V_n)

$$V_n = \frac{Q_n}{\eta_k \times H_{i,n}} = \frac{220kW}{0,92 \times 10,4 \frac{kWh}{m^3}} = 23\frac{m^3}{h}$$

Gas flow in operating state (V_B)

$$V_B = \frac{V_n}{f} = \frac{23\frac{m^3}{h}}{0,94} = 24\frac{m^3}{h}$$

Conversion factor (f)

$$f = \frac{B + P_G}{1013} \times \frac{273}{273 + \vartheta_G}$$

Annual average air pressure

Mean geodesic height of supplied region ASL [m]	from		1	51	101	151	201	251	301	351	401	451	501	551	601	651	701
	to	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
Annual average of air pressure	(mbar)	1016	1013	1007	1001	995	989	983	977	971	965	959	953	947	942	936	930

Key:

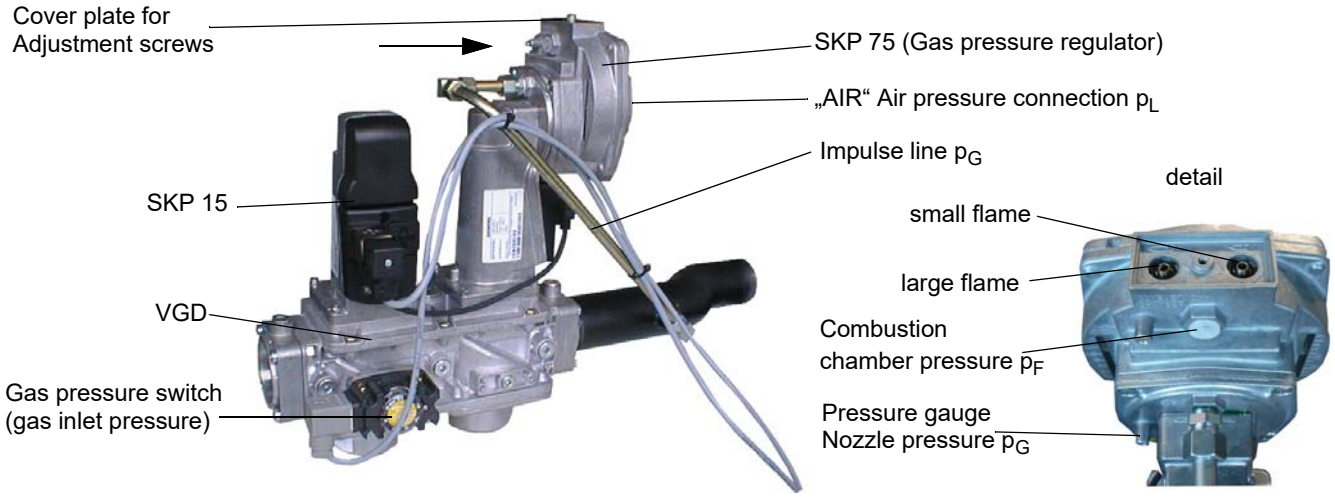
Q_n =	boiler rating [kW]
η_K =	efficiency [%]
$H_{i,n}$ =	lower standard calorific value [kWh/m^3]
f =	conversion factor
B =	barometric pressure [mbar]
p_G =	gas pressure at gas counter [mbar]
ϑ_G =	gas temperature at gas counter [°C]

20 Gasburner with KEV 407 ¾", KEV 300 1", KEV 412 1 ½", KEV 1 ½"

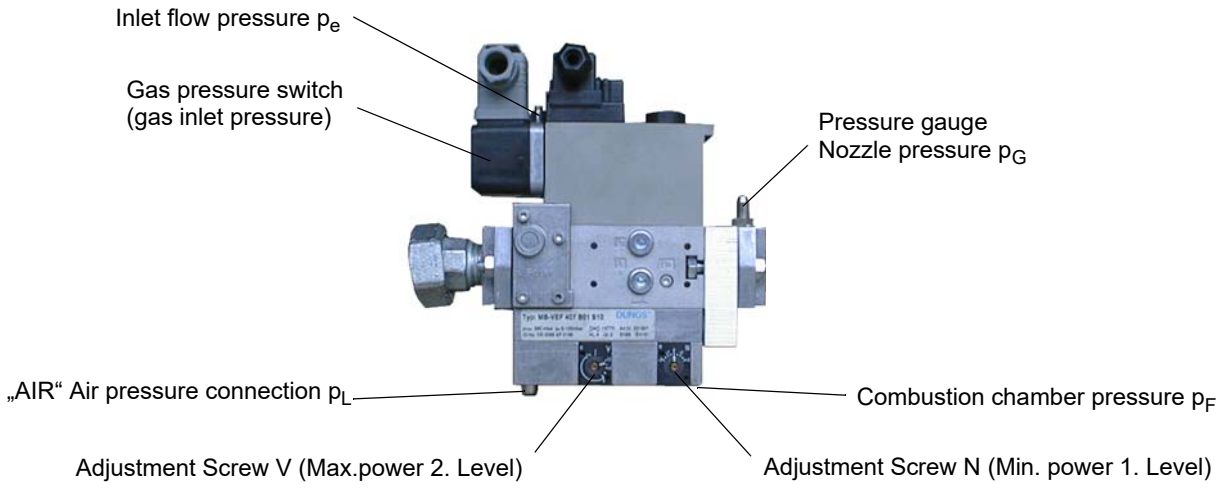
Installation of compact unit	
Installation position	only in horizontal line, not tilted
Minimum distance to walling:	20 mm
Screw each air pressure measuring nipple into the top of the gas jacket (see "9 Installing gas jacket on boiler“). Route the connecting hose between the measuring nipple for air pressure and the compact unit in a loose loop.	

The nipple for the air pressure connection must be screwed to the top of the gas jacket (see 9. Installing gas jacket to the boiler).

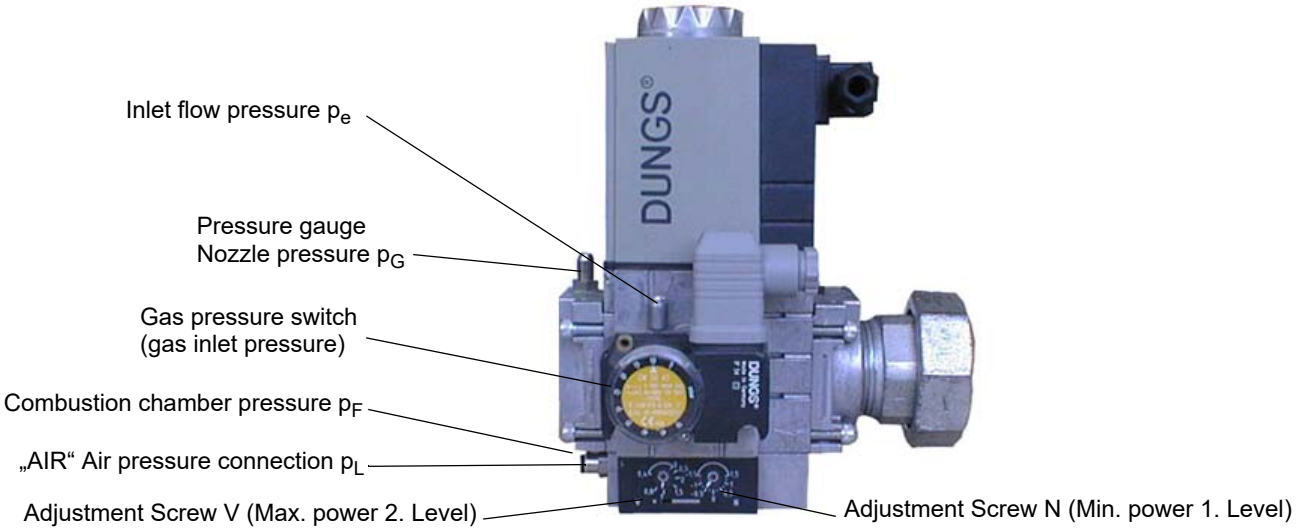
KEV 1 ½" .



KEV 407 ¾", KEV 412 1 ½"



KEV 300 1"



Connect the blue hose to the "AIR" port of the KEV and the air pressure port to the gas jacket. The blue hose serves as a control line for the KEV and must be laid in a free arc without kinks.

Remove cover plate for adjusting screws on gas pressure regulator.

Start the burner.

1. Adjustment of the excess air in Max. Power - and Min. Power

- Set the air flap positions ST2 for the max. output and ST1 for the min. output according to the setting tables (see page 17 ff).
- In Max. Output, set the excess air with the ‘large flame’ / ‘V’ adjustment screw on the gas pressure regulator. The CO2 value in the flue gas should be 9 - 10% for natural gas and 11 - 12% for liquid gas.
- Set the excess air in min. output with the ‘small flame’ / ‘N’ adjustment screw on the gas pressure regulator. The CO2 value in the flue gas should be 9 - 10% for natural gas and 11 - 12% for liquid gas. for liquid gas. The min. output setting influences the max. output setting.
- In Max. Power, check the excess air and correct if necessary with the ‘large flame’ / ‘V’ adjustment screw on the gas pressure regulator.

2. Power setting in Max. Power - and Min power

- Max. Check max. output by checking the gas quantity on the gas meter or comparing the nozzle pressure with the values in the setting tables. The output can be increased by opening the air flap (increasing ST2) and decreased by closing the air flap (decreasing ST2). The excess air does not change with this setting.
- Check the minimum output by checking the gas quantity on the gas meter or comparing the nozzle pressure with the values in the setting tables. The output can be increased by opening the air flap (increasing ST1) and decreased by closing the air flap (decreasing ST1). The excess air does not change with this setting.

Burner start:

- Start gas burner at min. power - if the burner does not go into operation, set screw N. Turn something in the direction of “+“ and repeat start.

Large flame / „V“ setting	Exhaust gas analysis	
Change in „+“ direction if:	CO_2 too small	O_2 too high
Change in „-“ direction if:	CO_2 too high	O_2 too small

Adapt nozzle pressure Max. Power	Max.output
ST2/Max. output increase if:	Output/ nozzle pressure too small
ST2/Max. output reduct if:	Output / nozzle pressure too high

Adapt nozzle pressure Min.. Power	Min. output
ST1/Max. output increase if:	Output / nozzle pressure too small
ST1/Min. output reduct if:	Output / nozzle pressure too high

Small flame / „N“ setting	Exhaust gas analysis	
Change in „+“ direction if:	CO_2 too small	O_2 too high
Change in „-“ direction if:	CO_2 too high	O_2 too small

Attention!
Differential exchange disc pressure p_L - combustion chamber pressure p_F must be at least 0.3 mbar.

21 Leak check device (accessory)

The leak check device is an automatic valve monitor. Both the gas solenoid valves in the gas line are checked for leaks. Following a controlled shutdown of the burner and before restart of the purging time, the gas pressure in the test section between the two gas solenoid valves is increased. The contacts for the control box are enabled if the test time expires and the test section is leaktight. The leak check device is checked for leaks before each start.

If there is a leak (pressure in the test section drops), the leak check device goes into fault mode and blocks the signal enabling the contacts for the control box.

22 Start-up

The burner can be put into operation once the gas and electrical installation and assembly work has been completed.

- Prepare the flue-gas analyser.
- Adjust the air valve positioning motor as described in point 12.
- Prepare the gas train as described in Section 20.
- Switch on the burner.
- After the burner is started, the switch is switched to 2. Stage (high load).
- Adjust the air flap to the desired power range (cf. Adjustment table).
- The gas pressure is to be adjusted by adjusting p_{G2} (V) according to the required maximum burner power.
- Check exhaust gas levels (CO_2, CO, O_2). The CO_2 content in the exhaust gas should be 9-10% for natural gas, 11-12% for liquefied gas. (p. 20).
- After correct setting in the 2. Stage (High Load) the switch is switched to the 1. Step (Low Load) Adjust gas pressure by adjusting p_G1 (N) according to the table. Monitor and, if necessary, re-regulate emissions (see No. 20).
- Once set, switch to 2. Switch to high load and check exhaust levels again.
- After completion of adjustment, check the setting data.
- Check the gas pressure monitor after start-up.
  To do so, close ball valve slowly; burner must shut down but not go into fault mode.
- Recheck the values at low load and full load and correct the settings.
- If the inlet pressures are higher than 20 mbar, set the gas pressure monitor to approx. 70-80% of the inlet pressure.

23 Adjustment tables

The values shown in the tables are only start-up settings. They take into account typical fire chamber resistances in practice. The required plant setting must be re-determined in case of deviating data such as boiler power, heating value and altitude.

In any case, post-regulation is necessary due to the plant.

The maximum output of the burner can only be achieved in the mixing head position 0. The variable mixing head position can optimise the operating behaviour of the burner at different heat generators..

MG10/1-LN Burner output		Boiler output at η = 92%	Position air flap		Burner head position	**Natural gas LL: $H_{i,n}$ = 9,3 [kWh/m³]**			
						Gas nozzle pressure		Gas throughput	
Stage 2	Stage 1	Stage 2	ST2	ST1		Stage 2	Stage 1	Stage 2	Stage 1
[kW]	[kW]	[kW]	[°]	[°]	[mm]	[mbar]	[mbar]	[m³/h]	[m³/h]
180	95	166	15	6	**15**	3,8	1,2	20,0	10,5
240	120	221	23	7	**15**	7,2	2,0	26,6	13,3
280	150	258	36	9	**15**	10,0	2,7	31,0	16,6
330	170	304	90	12	**15**	13,0	3,2	36,6	18,8
280	140	256	27	10	**0**	8,6	1,7	31,0	15,7
360	180	331	40	15	**0**	12,0	2,8	39,9	20,0
380	200	350	50	17	**0**	13,8	3,8	42,1	22,2
420	220	386	90	18	**0**	16,7	4,6	46,6	24,4

MG10/1-LN Burner output		Boiler output at η = 92%	Position air flap		Burner head position	**Natural gas E: $H_{i,n}$ = 10,4 [kWh/m³]**			
						Gas nozzle pressure		Gas throughput	
Stage 2	Stage 1	Stage 2	ST2	ST1		Stage 2	Stage 1	Stage 2	Stage 1
[kW]	[kW]	[kW]	[°]	[°]	[mm]	[mbar]	[mbar]	[m³/h]	[m³/h]
180	95	166	15	6	**15**	3,0	0,9	17,8	9,4
240	120	221	23	7	**15**	5,6	1,6	23,8	11,9
280	150	258	36	9	**15**	7,8	2,1	27,8	14,9
330	170	304	90	12	**15**	10,2	2,5	32,7	16,9
280	140	256	27	10	**0**	6,7	1,3	27,8	13,9
360	180	331	40	15	**0**	9,4	2,2	35,7	17,8
380	200	350	50	17	**0**	10,6	3,0	37,7	19,8
420	220	386	90	18	**0**	13,1	3,6	41,6	21,8

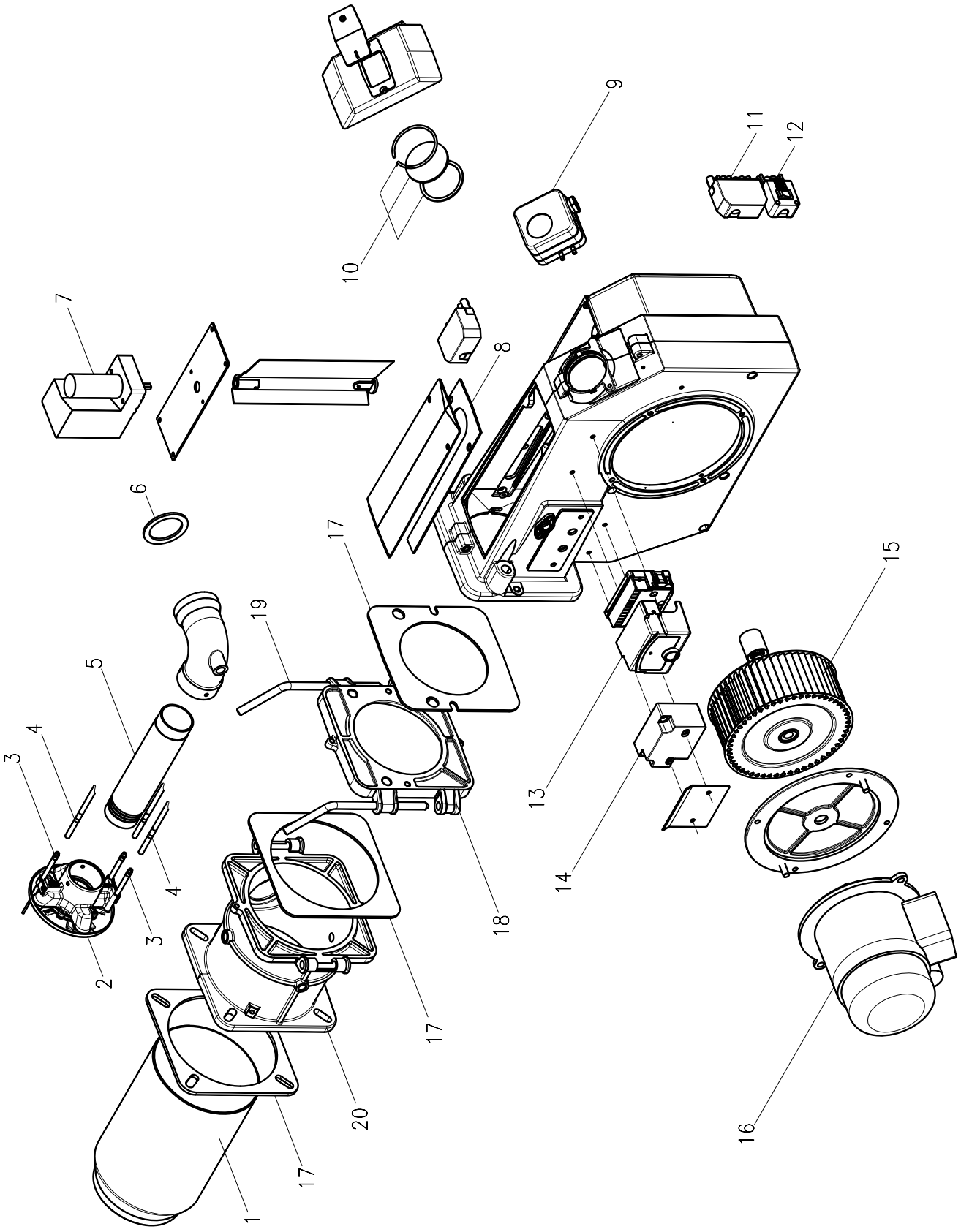
MG10/1-LN Burner output		Boiler output at η = 92%	Position air flap		Burner head position	**Propan: $H_{i,n}$ = 25,89[kWh/m³]**			
						Gas nozzle pressure		Gas throughput	
Stage 2	Stage 1	Stage 2	ST2	ST1		Stage 2	Stage 1	Stage 2	Stage 1
[kW]	[kW]	[kW]	[°]	[°]	[mm]	[mbar]	[mbar]	[m³/h]	[m³/h]
180	95	166	15	6	**15**	4,8	1,0	7,2	3,8
240	120	221	23	7	**15**	7,2	1,6	9,6	4,8
280	150	258	36	9	**15**	9,8	2,8	11,1	6,0
330	170	304	90	12	**15**	13,8	3,6	13,1	6,8
280	140	256	27	10	**0**	8,5	2,0	11,1	5,6
360	180	331	40	15	**0**	13,0	3,8	14,3	7,2
380	200	350	50	17	**0**	15,8	4,2	15,1	8,0
420	220	386	90	18	**0**	18,6	5,0	16,7	8,8

MG10/2-LN Burner output		Boiler output at η = 92%	Position air flap		Burner head position	**Natural gas LL: $H_{i,n}$ = 9,3 [kWh/m^3]**			
Stage 2	Stage 1	Stage 2	ST2	ST1		Gas nozzle pressure Stage 2	Gas nozzle pressure Stage 1	Gas throughput Stage 2	Gas throughput Stage 1
[kW]	[kW]	[kW]	[°]	[°]	[mm]	[mbar]	[mbar]	[m^3/h]	[m^3/h]
250	125	230	19	9	**5**	3,8	1,5	27,7	13,9
300	150	276	26	9	**5**	5,9	2,0	33,3	16,6
400	200	368	53	13	**5**	10,2	2,8	44,3	22,2
440	220	405	90	16	**5**	12,8	3,2	48,2	24,4
360	180	331	33	14	**0**	7,7	3,1	39,9	20,0
440	220	405	52	20	**0**	12,0	4,2	48,8	24,4
500	250	460	70	23	**0**	14,4	5,0	55,4	27,7
530	270	488	90	24	**0**	15,5	5,2	58,8	29,9

MG10/2-LN Burner output		Boiler output at η = 92%	Position air flap		Burner head position	**Natural gas E: $H_{i,n}$ = 10,4[kWh/m^3]**			
Stage 2	Stage 1	Stage 2	ST2	ST1		Gas nozzle pressure Stage 2	Gas nozzle pressure Stage 1	Gas throughput Stage 2	Gas throughput Stage 1
[kW]	[kW]	[kW]	[°]	[°]	[mm]	[mbar]	[mbar]	[m^3/h]	[m^3/h]
250	125	230	19	9	**5**	3,0	1,2	24,8	12,4
300	150	276	26	9	**5**	4,6	1,6	29,7	14,9
400	200	368	53	13	**5**	8,0	2,2	39,7	19,8
440	220	405	90	16	**5**	10,0	2,5	43,6	21,8
360	180	331	33	14	**0**	6,0	2,4	35,7	17,8
440	220	405	52	20	**0**	9,4	3,3	43,6	21,8
500	250	460	70	23	**0**	11,3	3,9	49,6	24,8
530	270	488	90	24	**0**	12,1	4,1	52,5	26,8

MG10/2-LN Burner output		Boiler output at η = 92%	Position air flap		Burner head position	**LPG: $H_{i,n}$ = 25,89 [kWh/m^3]**			
Stage 2	Stage 1	Stage 2	ST2	ST1		Gas nozzle pressure Stage 2	Gas nozzle pressure Stage 1	Gas throughput Stage 2	Gas throughput Stage 1
[kW]	[kW]	[kW]	[°]	[°]	[mm]	[mbar]	[mbar]	[m^3/h]	[m^3/h]
250	125	230	19	9	**5**	6,3	1,5	10,0	5,0
300	150	276	26	9	**5**	9,1	2,2	11,9	6,0
400	200	368	53	13	**5**	16,2	4,0	15,9	8,0
440	220	405	90	16	**5**	19,8	4,9	17,5	8,8
360	180	331	33	14	**0**	11,3	2,8	14,3	7,2
440	220	405	52	20	**0**	16,8	4,2	17,5	8,8
500	250	460	70	23	**0**	22,0	5,5	19,9	10,0
530	270	488	90	24	**0**	24,5	6,3	21,1	10,8

24 Exploded view drawing / spare parts list



ZBZ_2-471

Pos.	Designation	PU	Order no.
1	Burner tube MG10		47-90-22479
1	Burner tubeMG10.2		47-90-24879
1	Burner tube MG10.1, 100 mm extended		47-90-24630
1	Burner tube MG10.2, 100 mm extended		47-90-24908
1	Burner tube MG10.1, 200 mm extended		47-90-24633
1	Burner tube MG10.2, 200 mm extended		47-90-24909
2	Burner head MG10.1 for Natural gas cpl. with electroden		47-90-24457
2	Burener head MG10.2 for Natural gas cpl. with electroden		47-90-24873
2	Burner head MG10 for NLPG cpl. with electroden		47-90-25339
3	Ignition- and Ionisations electrode- set		47-90-27353
4	Ignition and ionization cable for MG10		47-90-27990
4	Ignition and ionization cable for MG10, 100 mm extended		47-90-27991
4	Ignition and ionization cable for MG10, 200 mm extended		47-90-27992
5	Gas nozzle tube for MG10.1		47-90-24263
5	Gas nozzle tube for MG10.2		47-90-24883
5	Gas nozzle tube for MG10.1, 100 mm extended		47-90-24628
5	Gas nozzle tube for MG10.2, 100 mm extended		47-90-24906
5	Gas nozzle tube for MG10.1, 200 mm extended		47-90-24629
5	Gas nozzle tube for MG10.2, 200 mm extended		47-90-24907
6	Gasket for gas nozzle MG10.1	10	37-50-20111
6	Gasket for gas nozzle MG10.2	10	47-50-24882
7	Server motor STA12 B3		47-90-22471
8	Cover with sealing	5	47-50-10668
9	Pressure switch		44-90-20793
10	Sight glass with sealing		36-90-11544
11	Female part 7-pol. kpl., sblack/brown		47-90-11243
12	Female part4-pol. for -M		37-90-20744
12	Female part 4-pol. kpl., green		47-90-11840
13	Control box LME 22.232		47-90-28741
14	Ignition transformer Mod. 26/35 with cable		47-90-24469
15	Fan wheel ∅180 x 75 for MG10.1		46-90-12997
15	Fan wheel ∅180 x 74 for MG10.2		47-90-24190
16	Motor 0,37 kW 230 V / 50 Hz for MG10.1		47-90-12998
16	Motor 0,75 kW 230 V / 50 Hz for MG10.2		47-90-27438
17	Gasket-set for MG10.1		47-90-27539
17	Gasket-set for MG10.2		47-90-27540
18	Gasket jacket part 2 kpl. for MG10.1		47-90-22181
18	Gasket jacket part 2 kpl. for MG10.2		46-90-20209
19	Securing rod MG10.1	2	47-50-22367
19	Securing rod MG10.2	2	46-50-21085
20	Gasket jacket part 1 kpl. for MG10.1		47-90-22182
20	Gasket jacket part 1 kpl. for MG10.2		47-90-24953
-	Inlet nozzle		46-90-13005
-	Protective grid		46-90-13000
-	Combustion chamber pressure measuring tube for KEV (CG and MBC)		47-90-30200

PU = packaging unit 1, 5, 10, 20, 50 pieces

25 Declaration of Conformity

Enertech GmbH, Postfach 3063, 58662 Hemer
0 23 72/965-0 0 23 72/6 1240 info@giersch.de www.giersch.de

Declaration of Conformity for Gas Burners

We, Enertech GmbH, Adjutantenkamp 18 in D-58675 Hemer declare under our responsibility that

gas burner type **MG10/..**

is conform with the regulations of these directives

MD2006/42/EG
EMC2014/30/EU
GAD 2016/426/EU
LVD2014/35/EU
RoHS 2011/65/EU
DIN EN 676

and is marked with:

CE

CE-0085

Hemer, 16.01.2018

ppa. i.V.

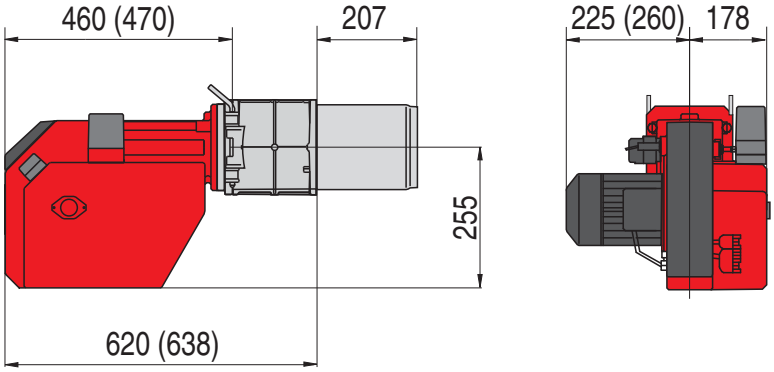
Wendel
Sales director

Rebbe
Technical management

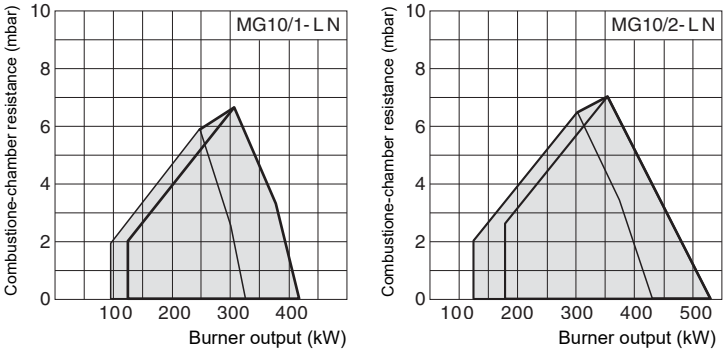
Art.-Nr. 89-10--80875 Druck-Nr. 4/2017

26 Dimensions

Dimensions in mm (Dimensions in brackets MG10/2-LN)



27 Working ranges



Working range acc. to DIN EN 676.

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