



GB

Installation and Operating Instructions

Gas Range

Model	Type No.
with 2 Burners	2063401-05
with 4 Burners	2063402-05
with 6 Burners	2063405-05

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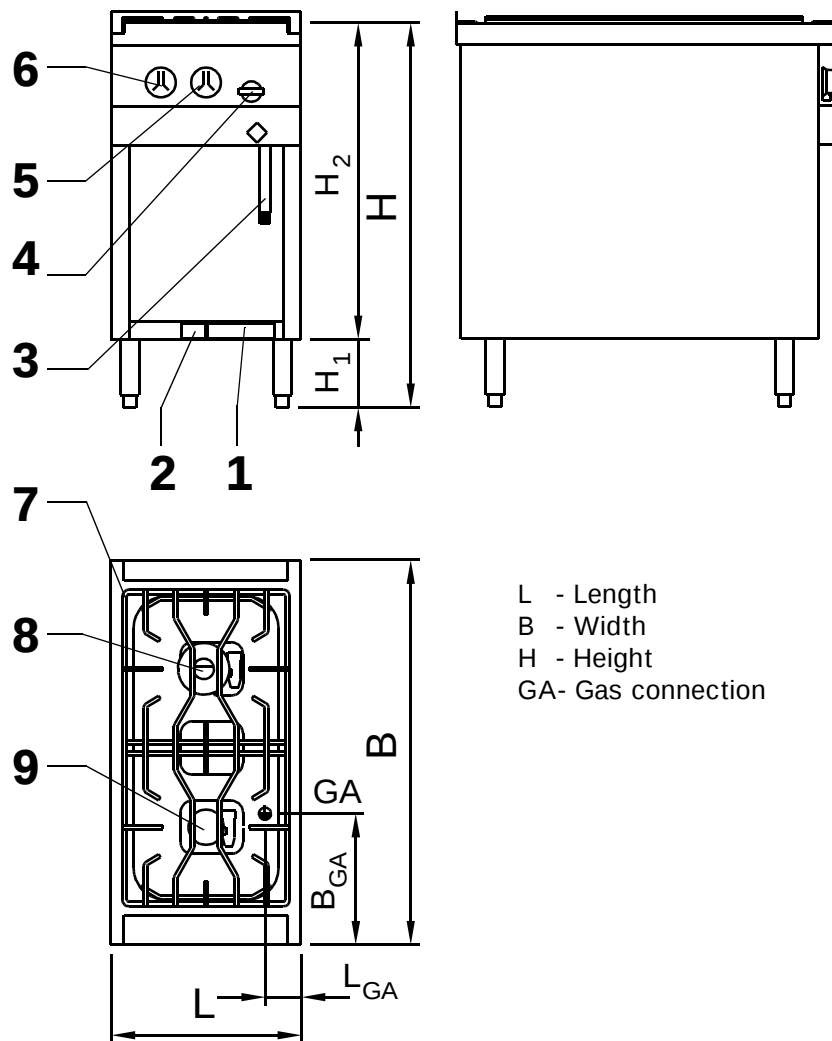
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Appliance description

Appliance construction

Gas-Range with 2 Burners

Type No.: 2063401-05



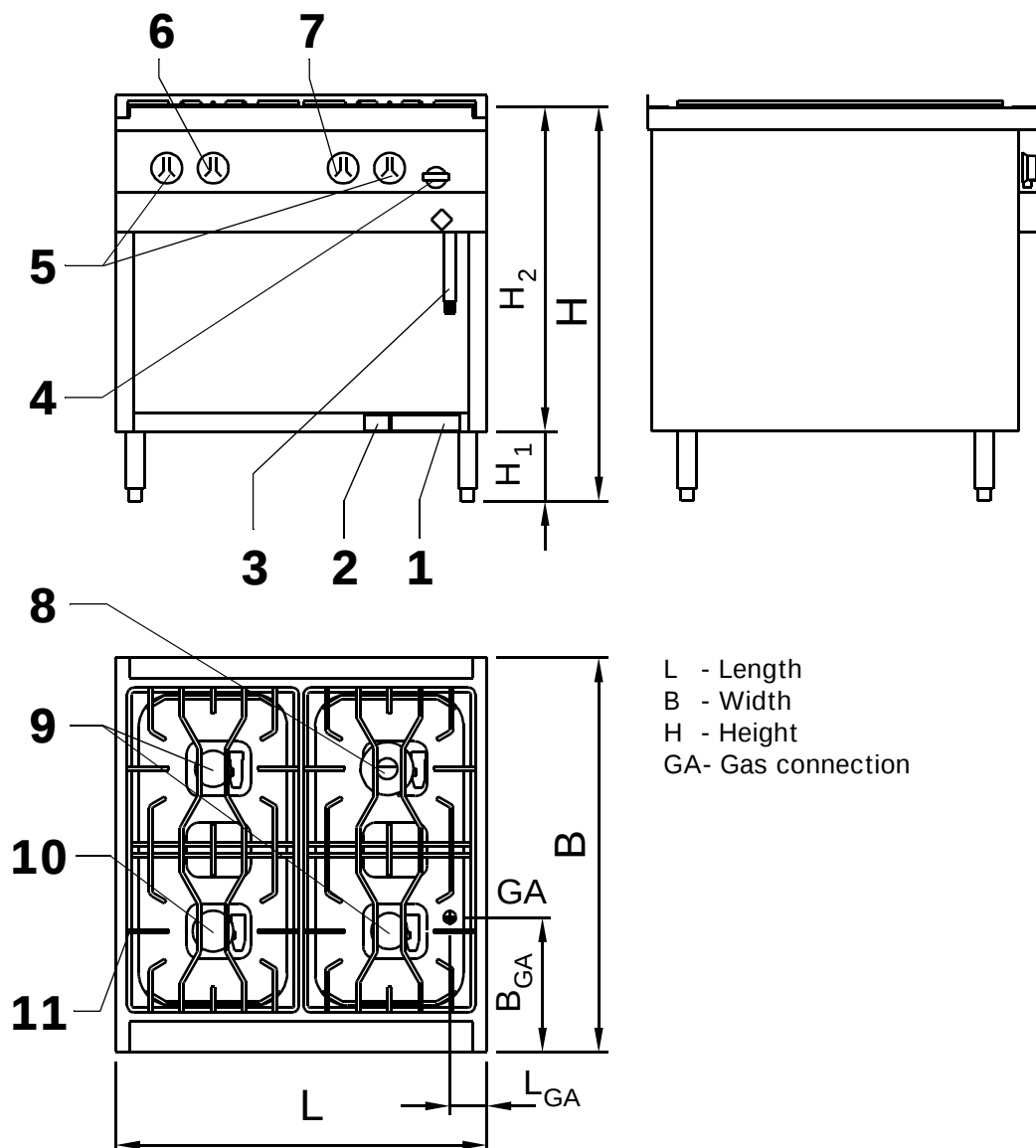
L - Length
B - Width
H - Height
GA- Gas connection

- | | |
|---------------------------------------|------------------------------|
| 1 - Identification plate | 6 - Gas tap for E-Burners |
| 2 - Gas sticker | 7 - CNS-Grid (for 2 Burners) |
| 3 - Gas connection; R $\frac{3}{4}$ " | 8 - E-Burner |
| 4 - Gas shut-off tap | 9 - C-Burner |
| 5 - Gas tap for C-Burners | |

All Dimensions [mm]							
L	B	H	H ₁	H ₂	L _{GA}	B _{GA}	H _{GA}
400	850	850	150	700	80	290	-

Gas-Range with 4 Burners

Type No.: 2063402-05



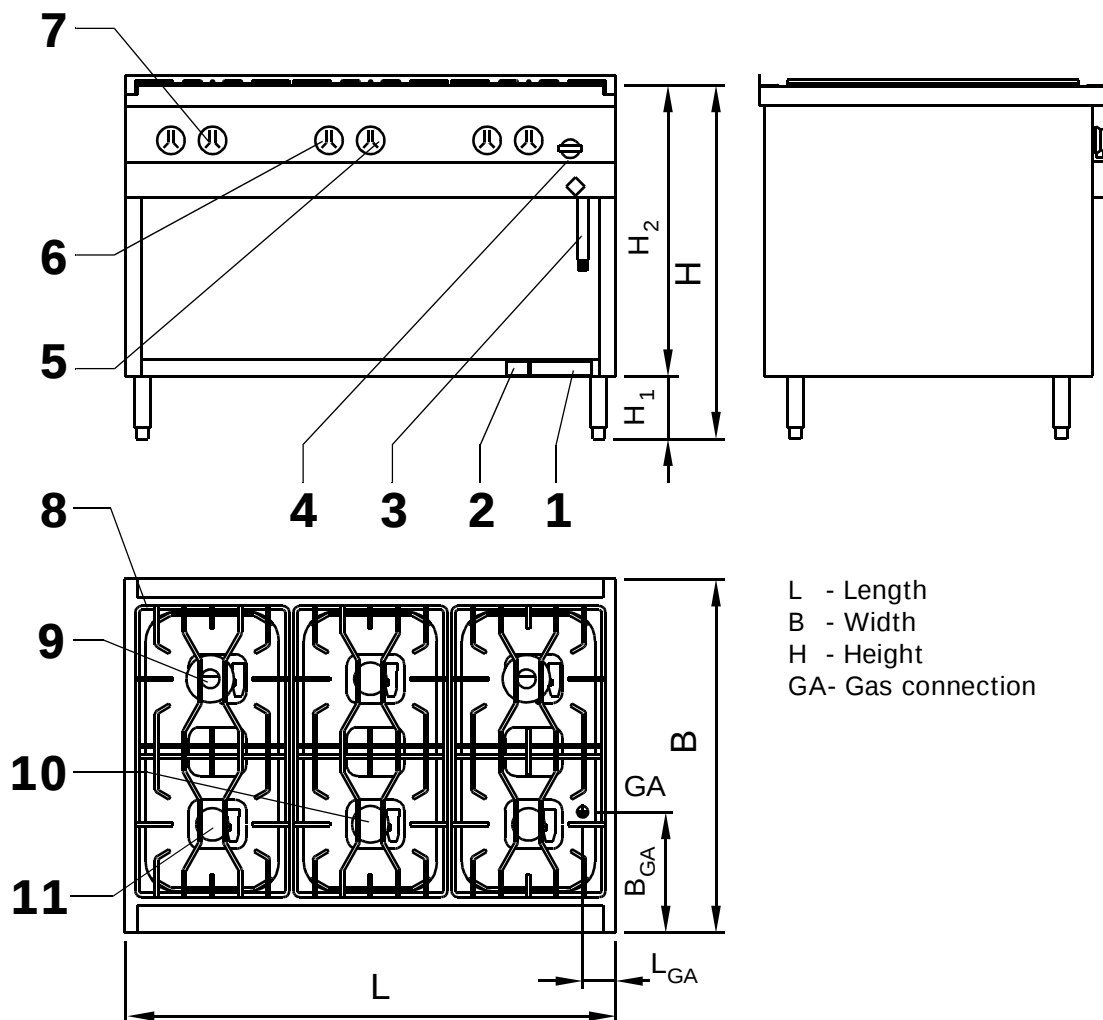
- 1 - Identification plate
- 2 - Gas sticker
- 3 - Gas connection; R $\frac{3}{4}$ "
- 4 - Gas shut-off tap
- 5 - Gas tap for C-Burners
- 6 - Gas tap for D-Burners

- 7 - Gas tap for E-Burners
- 8 - E-Burner
- 9 - C-Burner
- 10 - D-Burner
- 11 - CNS-Grid (for 2 Burners)

All Dimensions [mm]							
L	B	H	H ₁	H ₂	L _{GA}	B _{GA}	H _{GA}
800	850	850	150	700	80	290	-

Gas-Range with 6 Burners

Type No.: 2063405-05



- | | |
|---------------------------------------|------------------------------|
| 1 - Identification plate | 7 - Gas tap for E-Burners |
| 2 - Gas sticker | 8 - CNS-Grid (for 2 Burners) |
| 3 - Gas connection; R $\frac{3}{4}$ " | 9 - E-Burner |
| 4 - Gas shut-off tap | 10 - D-Burner |
| 5 - Gas tap for D-Burners | 11 - C-Burner |
| 6 - Gas tap for C-Burners | |

Alle Maße [mm]							
L	B	H	H ₁	H ₂	L _{GA}	B _{GA}	H _{GA}
1200	850	850	150	700	80	290	-

Main components

Heavy duty catering kitchen housing made out of chrome-nickel steel, material no. 1.4301, hobs in superstructure with deep burner troughs.
The burner troughs are totally sealed off from the substructure and have large easy to clean radii.
Substructure with rigid base plate and height adjustable feet-removable for plinth installation.

Gas fittings

- Atmospheric burners
- Thermoelectrically protected pilot light
- Gas tap for manual ignition and control
- Shut-off tap

Optional accessories

- CNS reduction ring
- Simmering hot plate 1 burner position

Technical Data

Gas-Range 2-, 4- and 6- Burners				
Type No		2063401-05	2063402-05	2063405-05
Hob nominal rated load [kW]		1x3.5 + 1x7.0	2x3.5 + 1x5.6 + 1x7.0	3x3.5 + 1x5.6 + 2x7.0
Max. heat load [kW]		10.5	19.6	30.1
Gas connection values	Natural gas LL (H _{ub})	1.252 m ³ /h	2.337 m ³ /h	3.588 m ³ /h
	Natural gas E (H _{ub})	1.112 m ³ /h	2.074 m ³ /h	3.184 m ³ /h
	Propan	0.860 kg/h	1.606 kg/h	2.465 kg/h
	Butan	0.871 kg/h	1.627 kg/h	2.499 kg/h
Connection pressure	Natural gas	20.0 mbar		
	Liquefied gas	50.0 mbar		

Installation

General instructions

Observe the following regulations when installing the appliance:

- Technical regulations for gas installations (TRDI, DVGW specification G600)
- Technical regulations for liquefied gas (TRF)
- DVGW specifications G 628, G634 and G670
- Local and building regulations
- General regulations of the gas utility

Any installation, modification, or maintenance work on gas appliances in buildings and on properties may only be carried out by the gas utility or gas fitting contractors qualified and registered with the gas utility (DVGW - TRGI 1986).

Any service work on gas appliances may only be carried out by the gas utility, registered gas fitting contractors or by service firms which comply with the regulations in DVGW specification G 676 (DVGW - TRGI 1986).

This appliance requires maintenance of the burner safety and control equipment and must be attended at all times when in operation.



The heat load of the appliance must be checked and/or adjusted during commissioning or after conversion to a different type of gas!

To ensure that this appliance is in full working order, installation, operation, and servicing of the appliance must be in accordance with these operating instructions and be subject to full and regular qualified servicing.

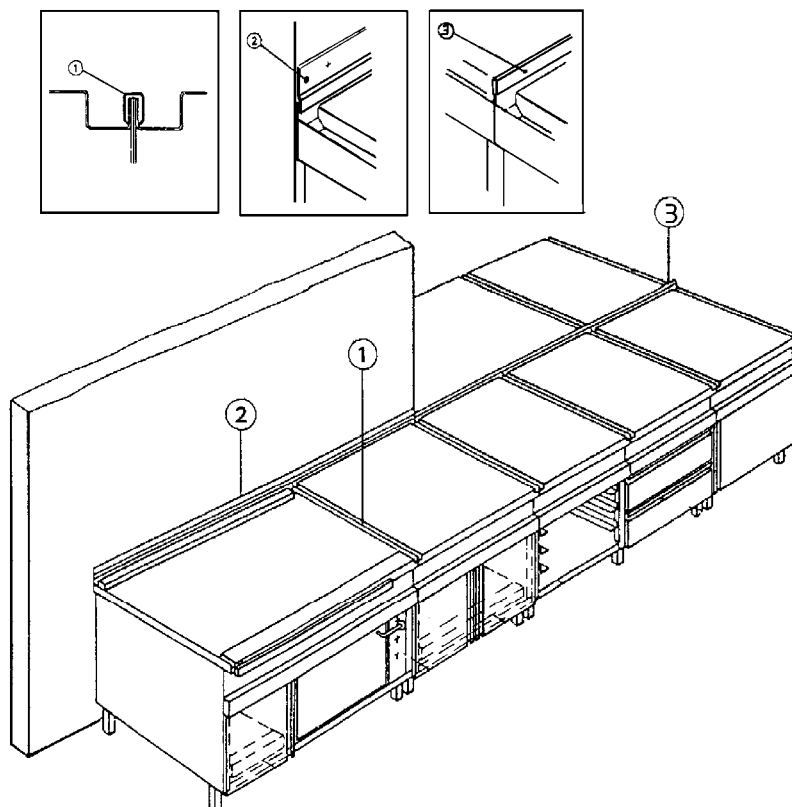
Only then do the guarantees expressed in our terms and conditions of sale and delivery apply.

Installation

The appliance must be installed in a stable and level position.

The appliance must only be installed against non-flammable walls and surfaces.

Use the proper connection profiles (optional accessories) when installing the appliance in a line with other MKN appliances (see sketch below).



Depending upon the materials forming the floor and walls, suitable preventive measures may be necessary to exclude the risk of fire.

For example, insulation or maintaining a minimum separation of 50 mm (see also specifications in TRGI Section 5.1.3.3).

All fire protection regulations must be precisely complied with.

The appliance requires an adequate supply of air to ensure proper combustion.

The ventilation system of the installation room must allow proper and safe functioning of the appliance.

The appliance has an adequate supply of air the ventilation system complies with VDI guideline DIN 2052.

If this appliance is installed together with electrical appliances, a properly functioning voltage compensating cable must be fitted in accordance with VDE 0 100 T540.

Connection

Gas connection

Before connecting, ensure that the gas type stipulated on the identification plate, or on the additional plate, complies with the gas supply.

If not, the appliance must be converted accordingly.

This appliance is designed for connection to a fixed gas supply.

The appliance gas connection is located either on the back panel or inside and is fitted with an R³/₄" threaded connector, to DIN 2999 specifications.

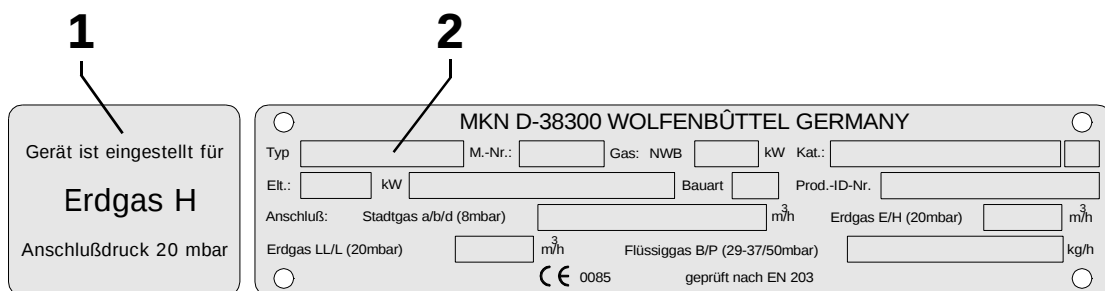


Figure: Identification plate (2) and Gas sticker (1)

Exhaust gas extraction

The appliance is a type A appliance (according to DVGW specification G634) and has an open combustion chamber relative to the installation room.

This appliance is not designed for connection to an exhaust extraction system.

Commissioning for Burners

Preparing

Tightness inspection

The gas connection and all gas lines must be checked for tightness in accordance with the TRGI guidelines.

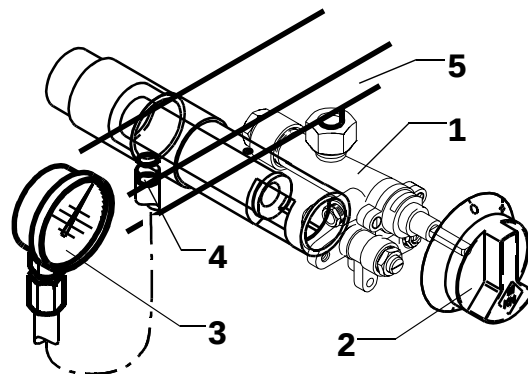


Caution!

Only DVGW approved testing (foaming) agents may be used !

Checking the connection pressure

To check the connection pressure of the gas supply, close the mains gas shut-off tap, remove the control knobs by pulling to the front, and remove the screws from the control panel.



1-Tap cock
2-Control knobs
3-Manometer

4-Pressure measuring spigot
5-Distribution pipe

- Undo the sealing screw from the pressure measuring spiggot (4), and connect up the manometer (3).
- Re-open the gas tap.
- Replace the control knobs (2) and turn on all burners in the maximum setting (see operating instructions).
- Measure the connection pressure.

After measurement, close the gas connection tap (1) then the pressure measuring spiggot (4) and check for tightness.

Procedure if the connection pressure deviates from the norm

Gas type (connection pressure)	Measured pressure (range)	Procedure
Natural gas E, LL (20 mbar)	18.5 - 25.0 mbar	none, no restrictions
	15.0 - 18.5 mbar	Operation permissible but call gas utility
Liquefied gas B, P (50 mbar)	42.5 - 57.5 mbar	none, no restrictions



If the connection pressure is outside of the ranges specified for the gas, DO NOT OPERATE the appliance-call the gas utility!

Checking the nominal heat load

The heat load of the appliance can be determined using the jet pressure method described in section Adjustment, or using the volumetric method as follows.

The following data are required for the volumetric method:

NHL	Nominal heat load in kW (see identification plate)
H _{uB}	Operating heat value of mains gas in kW/m ³ (ask the gas utility)
V _{measured}	Gas consumption measured after time in l or dm ³
t _{measured}	Time of gas consumption measurement in minutes

Volumetric method

To measure the gas consumption and the time, the burner must be operated in the maximum setting according to the operating instructions.

The measurement can take place after approx. 15 minutes of operating to allow the appliance to warm up. Gas consumption can be measured for a set time from a gas meter.

These values can be used to calculate the adjustment values E_{set} and E_{measured} (Adjustment value E in l/min).

$$E_{\text{set}} = \frac{\text{NHL} \times 1000 [\text{dm}^3]}{H_{\text{uB}} \times 60 [\text{min}]} \quad E_{\text{measured}} = \frac{V_{\text{measured}} [\text{dm}^3]}{t_{\text{measured}} [\text{min}]}$$

Check the jets if the measured adjustment values do not match the set values.

Close the gas shut-off valve of the gas supply before carrying out any work to replace jets or the adjustment work that may be necessary.

Recommission the appliance once the work has been carried out and determine the new adjustment values.

If necessary involves, repeat the procedure.

Adjusting nominal heat load

The appliance operates with fixed jets and a pre-adjustment screw.

The appliance panel must be removed before adjusting the nominal heat load.

When adjusting, check that the gas type available and the measured connection pressure match the details on the appliance identification plate and that the jets for the burner and ignition burner fitted in the appliance match the details.

Jet table

Gas Range with C-Burner, Nominal heat load 3.5 kW, minimum adjusted heat load 0.7 kW					
Gas family (connection pressure)	Outer jet D code no.	Inner jet B code no.	Fine flow jet C code no.	Pilot jet E code no.	Primary air inlet gap in the mixing pipe [mm]
Natural gas E, H (20 mbar)	155 ¹⁾	135	037	035	5 - 15
Natural gas LL, L (20 mbar)	155	135 ¹⁾	037	035	5 - 15
Natural gas L (25 mbar)	155 ¹⁾	150	037	035	5 - 15
Liquefied gas B, P (50 mbar)	155 ¹⁾	080	037	020	20 - 25
Liquefied gas B, P (30 mbar)	155 ¹⁾	090	037	020	20 - 25
¹⁾ jets not used					

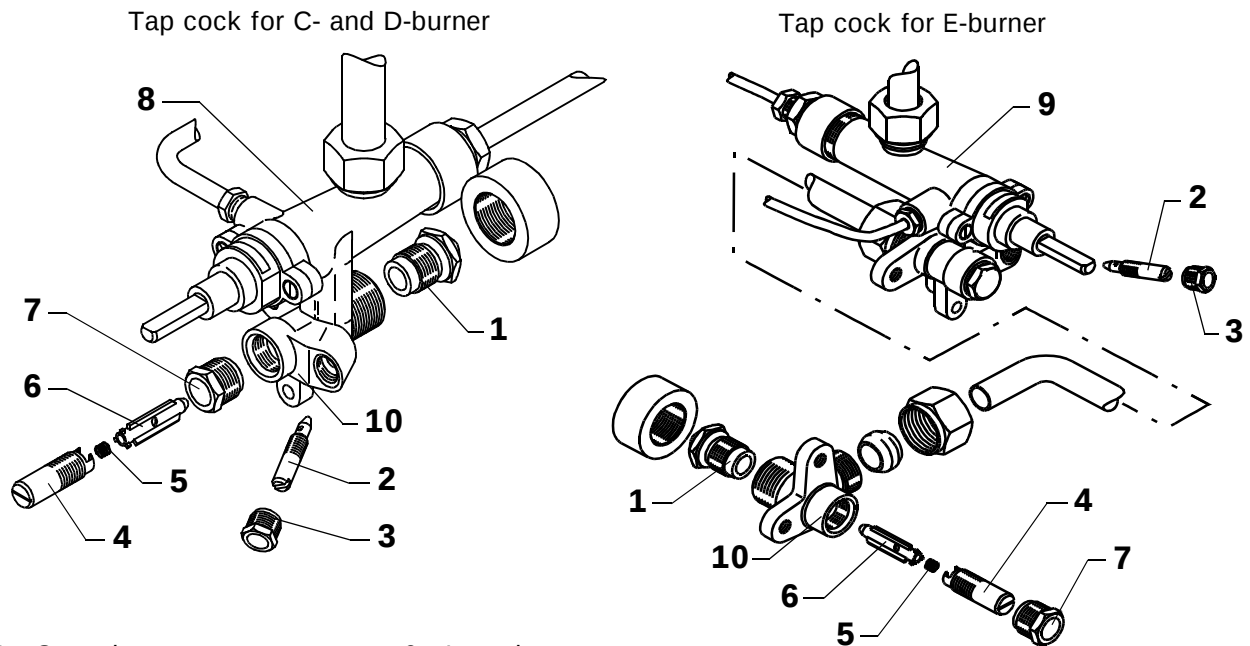
Gas Range with D-Burner, Nominal heat load 5.6 kW, minimum adjusted heat load 1.4 kW					
Gas family (connection pressure)	Outer jet D code no.	Inner jet B code no.	Fine flow jet C code no.	Pilot jet E code no.	Primary air inlet gap in the mixing pipe [mm]
Natural gas E, H (20 mbar)	205 ¹⁾	185	050	035	5 - 15
Natural gas LL, L (20 mbar)	205	185 ¹⁾	050	035	5 - 15
Natural gas L (25 mbar)	205 ¹⁾	200	050	035	5 - 15
Liquefied gas B, P (50 mbar)	205 ¹⁾	105	050	020	20 - 25
Liquefied gas B, P (30 mbar)	205 ¹⁾	115	050	020	20 - 25
¹⁾ jets not used					

Gas Range with E-Burner, Nominal heat load 7.0 kW, minimum adjusted heat load 2.1 kW					
Gas family (connection pressure)	Outer jet D code no.	Inner jet B code no.	Fine flow jet C code no.	Pilot jet E code no.	Primary air inlet gap in the mixing pipe [mm]
Natural gas E, H (20 mbar)	230 ¹⁾	200	060	035	5 - 15
Natural gas LL, L (20 mbar)	230	200 ¹⁾	060	035	5 - 15
Natural gas L (25 mbar)	230 ¹⁾	220	060	035	5 - 15
Liquefied gases B, P (50 mbar)	230 ¹⁾	120	060	020	20 - 25
Liquefied gases B, P (30 mbar)	230 ¹⁾	130	060	020	20 - 25
¹⁾ jets not used					

Adjustment jet table

Adjustment table for Gas Range with C-, D- and E-Burner					
Gas family (connection pressure)	Outer jet D	Inner jet B	Fine flow jet C	Pilot jet E	Primary air inlet gap in the mixing pipe [mm]
Natural gas E, H (20 mbar)	screw in tightly	screw in tightly	adjust fine flow adjuster	if neces- sary adjust primary air inlet (ca. 50%)	adjust 5 - 15 screw
Natural gas LL, L (20 mbar)		turn to the stop, then turn back approx 3 turns			
Natural gas L (25 mbar)			screw in tightly		
Liquefied gases B, P (50 mbar)		adjust 20 - 25 screw			
Liquefied gases B, P (30 mbar)			screw in tightly		adjust fine flow adjuster

Changing the jets



- | | |
|--------------------------------|-------------------------------|
| 1 - Outer jet | 6 - Inner jet |
| 2 - Fine flow adjustment jet | 7 - Counter nut |
| 3 - Counter nut | • for jet holder |
| • for fine flow adjustment jet | 8 - Tap cock, C- and D-burner |
| 4 - Jet holder | 9 - Tap cock, E-burner |
| 5 - Spring | 10 - Jet holder |

Outer jet

The jet (1) must be screwed out and replaced with a new one. It must be screwed back in tightly.

Inner jet

Screw out the jet holder (4) after loosening the counter nut (7). The jets (6) is located in the jet holder and held firmly in place with a spring. Take care not to lose the spring (5) when exchanging the jet.

After replacing the jet in the jet holder (4), screw the jet holder back in.

Adjust according to gas type, **see Adjusting nominal heat load**. Re-tighten the counter nut to form a tight seal and fix the jet in place firmly.

Fine flow jet

After loosening the counter nut (3), screw out the fine flow (2) adjustment and replace a new one.

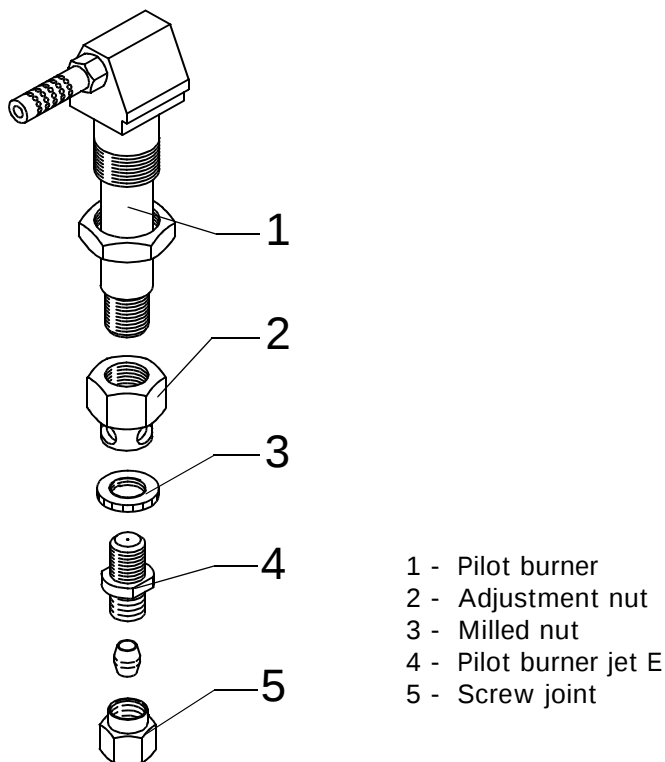
Adjust according to gas type, **see Adjusting nominal heat load**.

- Screwing in fine flow adjustment jet, flame gets smaller
- Screwing out fine flow adjustment jet, flame gets bigger

When setting the fine flow adjustment make sure that the flame can be ignited.

Re-tighten the counter nut effect a tight seal and firmly hold the jet in place.

Exchanging and adjusting the pilot light jet



Undo the screw fitting at the base of the pilot burner.

Hold the adjustment nut in place above the jet and screw out the jet.

Remove the milled nut and screw onto the new jet until the stop (Attention! left-hand thread!).

Then screw the jet with the milled nut into the adjustment nut until the stop.

Screw the screw fitting into the jet.

Turn the adjustment nut approx. 4 turns in a counter-clockwise direction.

Adjust according to gas type, **see *Adjusting nominal heat load***

- Turning adjustment nut to the left reduces air inflow
- Turning adjustment nut to the right increases air inflow

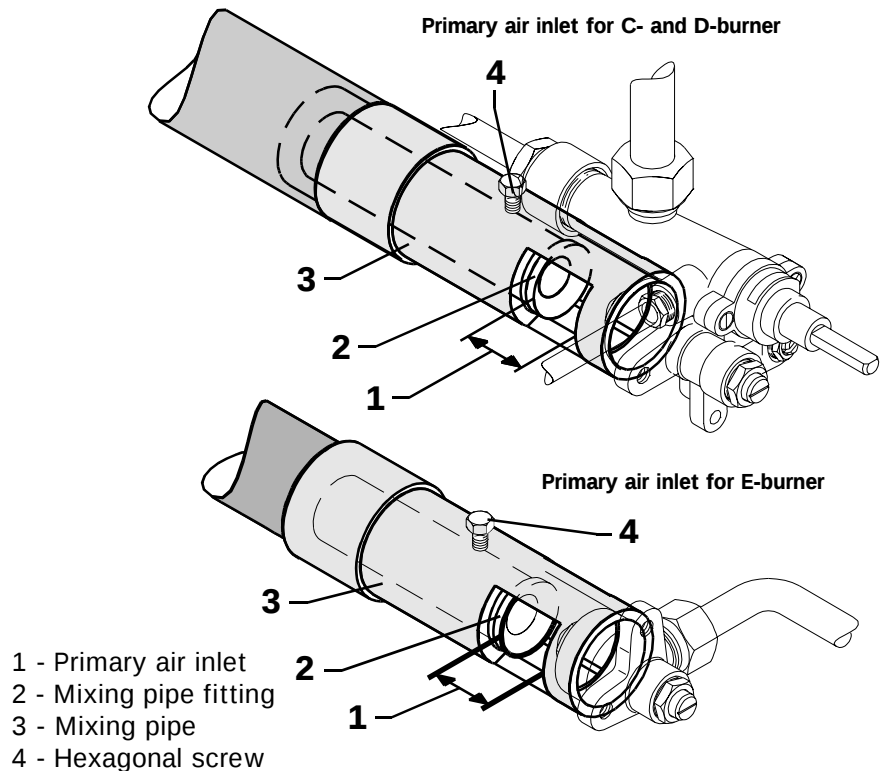
The center of the flame should be pointed.

Securely screw the fitting in place again with the milled nut.

Adjusting the primary air inlet at the mixing pipe

Adjust the mixing pipe fitting after loosening the hexagonal screw on the mixing pipe.

Adjust according to gas type, **see *Adjusting nominal heat load***



- Pushing the mixing pipe fitting to the rear increases air inflow
 - Pushing the mixing pipe fitting to the front reduces air inflow
- The center of the flame should be pointed. After adjustment, retighten the hexagonal screw.

Checking that the appliance is functioning properly

Check that the appliance is in proper working order after adjustment or maintenance work has been carried out. This mainly involves the following:

- Checking the exhaust gas extractor in the installation room
- Checking gas tightness
- Checking fresh air supply to the burners (primary air inlet)
- Checking burner safety and combustion quality
- Checking the ignition, safety and control equipment

When testing gas tightness, check in particular that the sealing plugs on the jet holders are still tightly seated after warming-up-if necessary, retighten. The room where the appliance is installed must also be assessed in accordance with pertinent current regulations.

Operator training

The operator must be properly trained in the use of the appliance. The installation and operating instructions supplied with the appliance must be given to the operator. The operator must be informed that any changes to the building which might affect the supply of fresh air require an inspection to ensure proper ventilation.

Operating instructions for Burners

Commissioning

The initial commissioning must only be carried out by a qualified gas fitter.

Operation

Open the appliance shut-off tap by pressing in and turning the knob to the left until the stop.

Turn the control knob of the selected burner to the left to the "✧"-symbol and press the knob in.

With the other hand, ignite the pilot light with a conventional igniter.

After approx. 10 seconds, release the knob and turn to left left to create the size of flame required.

maximum setting - large flame symbol 

minimum setting - small flame symbol 

The burners of each hot plate must be monitored during operation.

Operating pauses

Turn the knob of the burner in question to the right to the "✧"-symbol and the burner will shut off-except for the pilot light.

To switch off, press in the control knob in the "✧"-symbol position and turn further to the right until the "●"-symbol is at the top.

Release the knob.

Turn off the appliance shut-off tap if the whole appliance is not going to be used for some time.

Malfunction procedure

General

Problems can arise due to gas supply failure, incorrect operation, dirty components or defective ignition, control and monitoring components.

All problems not caused by dirt must be diagnosed and repaired by a qualified gas fitter (➞ **General instructions**).

The appliance must be switched off and the gas supply shut-off tap must be set to the off position until the appliance has been properly repaired.

Cleaning and maintenance

General

It is recommended that the proper working order of the appliance is regularly checked by a qualified person, and that any defects are rectified immediately.

Particular attention must be paid to the gas tightness of all gas lines leading to the appliance (➞ Section ***Checking that the appliance is functioning properly***).

The servicing of gas equipment requires that the following are diligently checked:

- Condition and tightness of the burner and that pilot burner (gas nozzles must be clean and unimpeded)
- Tightness and functioning of the thermo-unit (cut-off time: max. 60 seconds, opening time: max. 15 seconds)
- Airflow and exhaust extraction (in particular the primary air inlet)
- Heat load
- Combustion behaviour (flames must not lift-off, fall back, be yellow or sooty).

All gas servicing work must be carried out by qualified personnel; ➞ Section ***General instruction***.

Hobs

Remove any boiled-over food or liquid from the burner cap or burner head immediately.

The gas outlets in the burner head as well as the burner cap support on the burner head should be cleaned from time (depending on how dirty they become) with a soft wire brush (spark plug brush) in order to remove residues.

If necessary, boil the burner cap to remove grease and fat. After cleaning, make sure that the burner cap is put back in the correct position.

Chapter

Malfunction procedure

General

Problems can arise due to gas supply failure, incorrect operation, dirty components or defective ignition, control and monitoring components.

All problems not caused by dirt must be diagnosed and repaired by a qualified gas fitter (➡ **General instructions**).

The appliance must be switched off and the gas supply shut-off tap must be set to the off position until the appliance has been properly repaired.

Chapter

Conversion to a different gas type

General

Unless otherwise specified in the order, this appliance is set up for natural gas,

The appliance can be converted to natural or liquefied gas by replacing the jets and adjusting the min. and max. gas flow at the adjustment gland.

All jets for the burners are marked with stamped code numbers according to the jet table.

This appliance leaves the factory fitted with a set of jets for the selected gas type.

Further sets of jets are provided with the appliance for other gas types.

Check the code numbers on the replacement jets during conversion work.

Remove the control panel from the appliance when converting (→ Section **Checking the connection pressure**).

Conversion

Gas conversion requires the following:

- Replace outer jet D
- Replace or adjust inner jet B
- Adjust fine flow adjustment jet C
- Replace or adjust pilot light jet E
- Adjust the primary air inlet on the mixing pipe

The jets, their replacement and their adjustment are described in → Sections **Adjusting nominal heat load** and **Changing the jets**.

After conversion, check the nominal heat load that the burners are functioning properly (→ Sections **Checking the nominal heat load** and **Checking that the appliance is functioning properly**).

Conversion work may only be carried out by the gas utility, or their contracted installation companies, service or conversion firms.

The conversion work must be in accordance with TRGI and the manufacturer's instructions.

Appendix

Standards and documents referred to in the instructions

G 206/I	Gas properties
G 600	Technical regulations for gas installations (DVGW-TRDI 1986)
TRF	Technical regulations for liquefied gas (TRF 1988)
G 628	Methods to adjust gas burning appliances with burners and without fans
G 634	Installation of gas appliances in catering kitchens.
G 670	Controlling domestic gas appliances with extraction systems

Available:
Wirtschafts- und Verlagsgesellschaft
Gas- und Wasser GmbH,
Josef-Wirmer-Straße 1-3

53123 Bonn



EEC(EG)-CERTIFICATE OF CONFORMITY



The
MKN Maschinenfabrik Kurt Neubauer GmbH & Co
Halberstädter Straße, D-38300 Wolfenbüttel

herewith declares, that the product

Device type : Gas Range with 2, 4, 6 Burners „OPTIMA 850“
Device number : 2063401, 2063402, 2063405
Device type : Gas Range with 4, 6 Burners with 2/1 GN Electric Baking Oven „OPTIMA 850“
Device number : 2063403, 2063406
Device type : Gas Range with 4, 6 Burners with 2/1 GN Gas Baking Oven „OPTIMA 850“
Device number : 2063404, 2063407

complies with the fundamental demands set for the alignment of legal requirements of the member states set down in

- EC-Gas Appliance Directive 90/396/EEC dated 29. June 1990, including the modifications (article 10) according to the recommendation 93/68/EEG dated 22. July 1993
- EC-Directive 73/23/EEC dated 19. February 1973 concerning the safety of electric equipment operating within set voltages limits, including the modifications set down in directive 93/68/EEC of 22. July 1993, article 13
- EC-Directive 89/336/EEC, 92/31/EEC and 93/68/EEC, article 5 concerning electromagnetic compatibility.

The product-ID-Number of the type testing certificate by the DVGW is:

CE-0085AQ0284

Basis of Test (type testing gas):		
DIN EN 203-1 (11.1992),	E DIN EN 203-2 (10.1992),	DIN 3363 (07.1979)
Electric Components (if applicable):		
EN 60335-1: 1988,		EN 60335-2-36/A1: 1992
EN 55014: 1993,		EN 55104: 1995

Installation code: A1, countries of destination, appliance categories, supply pressures:

all types:

AT: I12H3B/P; 20mbar, 50mbar

FI: I12H; 20mbar

all types except 2063404, 2063407:

DK, SE: I12H3B/P; 20mbar, 30mbar

FR: I12E+3B/P; 20/25mbar, 50mbar

ES: I12H3P; 20mbar, 50mbar

only 2063404, 2063407:

DE: I13B/P; 50mbar

FR: I13B; 50mbar

NL: I12L3P; 25mbar, 50mbar

BE: I13+; 50/67mbar

PT: I12H3+; 20mbar, 50/67mbar

BE: I12E+; 20/25mbar

ES, IE, GB, PT:

I12H3P; 20mbar, 37mbar

FI: I13B/P; 30mbar

DK, IE: I12H; 20mbar

FR: I13P; 50mbar

SE: I12H; 20mbar

DE: I12ELL3B/P; 20mbar, 50mbar

BE, FR: I13+; 30/37mbar

ES, IE, IT, GB, PT:

I12H3+; 20mbar, 30/37mbar

NL: I12L3B/P; 25mbar, 30mbar

ES: I12H; 20mbar

GB, IT: I12H; 20mbar

Year of CE-designation: 97

This declaration becomes invalid if modifications are carried out without our approval.

Wolfenbüttel,

25.2.2000

Paul Werner Huppert
Managing director

This declaration certifies the unit is in accordance with the guidelines mentioned above, but assure not any kind of features.



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