MASTRO® Service

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CE SVGW DVGW

INSTALLATIONS, OPERATION AND MAINTENANCE INSTRUCTION

Gas-Wok China Ranges

Types:

AHA0005
AHA0007
AHA0008
AHA0006
AHA0010

} **Wall- and free standing ranges**

Gas Rechaud

Types:

AHA0009

} **Table ranges**

1. INSTALLATION

Before installation and operation of the appliance, the following must be observed.

For EU und CH (Switzerland) applies:
The applience must be connected and operated according to national regulations. This applies for installation, air circulation of the room and exhaustion of combustion products.

For DE (Germany) applies:
The applience must be connected according existing installation regulations. It may only be operated in a room with sufficient air circulation to avoid formation of unhealthy combustion products.

The following regulations, technical rules and regulations are compulsory for installation and operation of the appliance:

- Building regulations of the countries
- Fire regulations of the countries
- Regulations working premises
- Building regulations fire technical requirements and air circulation
- DVGW - Instruction G 600 (TRGI), „Technical rules for gas installations“
- TRF „Technical rules liquid gas“
- DVGW – Instruction G 634 „Installation commercial kitchens, gas operating installations“
- Accident regulations VBG 21
- Accident regulations VBG 77
- Security rules kitchens ZH 1/37
- Directions „Air technical installation kitchens“ VDI 2052
- Regulations energy supply installations (GVU)

1.1 Directions

For the installation and adjustment of the appliances as well as for the changes of the gas types, an authorized technician must be called. Sealed parts by the producer or authorized agent may not be touched by the technician.

1.2 Place of Installation / Setting Appliance

The appliance must be placed on a stable solid platform. The platformmust be flat and horizontal. When placed on a table, this must be of non-combustable material.
If the appliance on the wallside is connected with flexible tubes, then the appliance must be screwed to the platform.
This fixation is a must for the Table Models.
If the appliance is placed near temperature sensitive parts (f.i. furniture, electric cables in the wall) there has to be a distance of 100 mm to the rear wall and 200 mm to the side walls.

1.3 Gas connection

Before connecting the appliance, control if the gas type corresponds to the gas type od the place of installation.
If this is not the case an adjustmanet must be made before starting up the appliance.
If flexible tubes are used, these tubes must be in DIN 3384. (Depending of the countries, those which are allowed)
In the gas inlet there must be a gas stop cock, fixed in a suitable position.
Depending on national requirements, a thermo stop cock must be installed before the appliance.
After connection, all gas pipes must be checked with foam or leck sprays under pressure for indentifying gas leaks.

2. Technical Data (valid only for DE / CH / AT)

The appliance is suitable for operation of earth- or liquid gas / Construction A1

Category II 2 ELL 3 B/P

	call pressure	allowed connection pressure Ranges
Earthgas	20,0 mbar	18,0 - 25,0 mbar
Liquid gas	50,0 mbar	42,5 - 57,5 mbar

Outside this range the appliance may not be operated.

2.1 Technical Data (valid for EU)

The appliance is suitable for operation of earth- or liquid gas / Construction A1

Category II 2 ELL 3 B/P

Countries	Category	connection pressure (mbar) 2. family Earthgas	3. family Liquid gas
AT	II2H3B/P	20	50
BE	II2E+3+	20/25	28-30/37
CH	II2H3B/P	20	50
DE	II2ELL3B/P	20	50
DK	II2H3B/P	20	28-30
ES	II2H3+	20	28-30/37
FI	II2H3B/P	20	28-30
FR	II2E+3+	20/25	28-30/37
GB	II2H3+	20	28-30/37
GR	II2H3+	20	28-30/37
IE	II2H3+	20	28-30/37
IT	II2H3+	20	28-30/37
LU	I2E	20	
NL	II2L3B/P	25	28-30
NO	I3B/P		28-30
PT	II2H3+	20	28-30/37
SE	II2H3B/P	28-30	

Type	Heat load	Gas connection values Full fire			Combustion requirements	Exhaust quantity
		Earthgas E Earthgas H (G 20) HuB 0,42 m^3/h	**Earthgas L Earthgas LL** **(G 25)** HuB 0,49 m^3/h	**Liquid gas** (G 30) HuB 0,31 kg/h		
AHA00005	28 kW	2,96 m^3/h	3,45 m^3/h	2,21 kg/h	28,5 m^3/h	32,0 m^3/h
AHA00007	56 kW	5,92 m^3/h	6,90 m /h	4,42 kg/h	57,0 m^3/h	64,0 m^3/h
AHA00008	66 kW	6,98 m^3/h	8,13 m^3/h	5,20 kg/h	66,7 m^3/h	73,4 m^3/h
AHA00006	84 kW	8,88 m^3/h	10,35 m^3/h	6,63 kg/h	85,5 m^3/h	96,0 m^3/h
AHA00010	104 kW	10,99 m^3/h	12,81 m^3/h	8,21 kg/h	105,8 m^3/h	118,9 m^3/h
AHA00009	28 kW	2,96 m^3/h	3,45 m^3/h	2,21 kg/h	28,5 m^3/h	32,0 m^3/h

The small combustion load of the Combi Wok burner is 4 kW.

This results in the following **flow values**:

Earthgas H, E (G20)	0,42 m^3/h
Earthgas L, LL (G25)	0,49 m^3/h
Liquid gas (G30)	0,31 kg/h

The appliance is operated in full combustion with fixed nozzles without adjustment.
The Wok burner has no small combustion adjustment.
It operates gradual from off (out) to in (in).

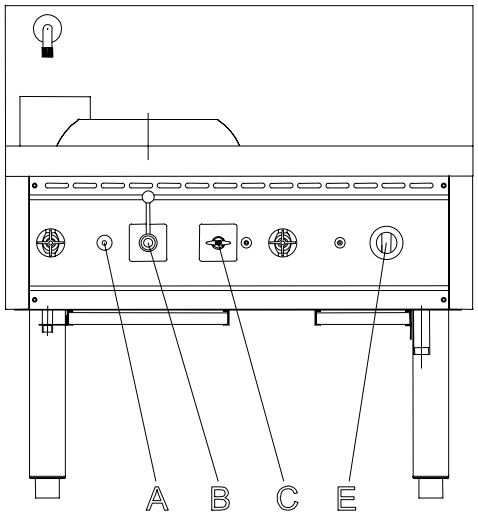
For the Combi Wok burner and the pilot flame the small combustion quantity is regulated for liquid gas with ficed nozzles. For earhgas the nozzles are adjusted.

3. Instruction of Users

The user must be instructed how to operate the appliance. The instruction for use must be kept to the user. The user must be told that after construction changes in the room, which affects the combustion supply, the operation control must be carried out.

4. Operation

4.1 Operation elements



A= Safety tap button for wok burner:
to operate safety system

B= Wok burner gas valve handle:
to open and close the main burner gas supply

C= Pilot gas valve switch:
to open and close the pilot burner gas supply toward wok range.

E= Security control knob:
to open and close the gas supply toward burner soup and to arrange the flame (enlarge and down)

4.2 Start up Wok burner

- Before operation the main gas cock on the appliance must be opened.
- Then press the knob of the safety tap “A“ in and keep the knob pressed in.
- With ignition pistol start up pilot flame. After pilot flame burns knob “A“ to remain pressed in for 15 - 20 seconds. If after releasing knob “A“ the pilot flame goes out, you have to repeat the ignition process.
- Now turn gas valve handle “B“ anti clockwise to position “ON“, the Wok burner will ignite.

Attention! Do not lean over main burner during ignition process.
The high flame could lead to burns.

4.3 Closing of Wok burner

If the Wok burner is to be cut off temporary, the gas valve handle “B“ is to be turned clockwise to position OFF. The burner remains operable.
For longer periods of closing and in the evening, the gas valve handle “B“ has to be placed clockwise to position OFF and the pilot gas valve switch “C“ closed.

4.4 Operation Combi Wok burner (Soup burner)

Press security control knob “E“ and place anti clockwise in ignition position *****.
Leave knob pressed in and ignite with ignition pistol the pilot flame. After the pilot flame burns, the knob must remain pressed in for 15-20 seconds. If after releasing knob the pilot flame continues burning, the appliance is operable. If the pilot flame goes out, you have to repeat the ignition process.
Turn the knob anti clockwise to the desired position between full combustion and small combustion.

4.5 Cut off Combi Wok burner (Soup burner)

If the Combi Wok burner should be cut off temporary, place security control knob clockwise to ignition position *, the burner remains operative.

For longer periods of cut off and in the evening, place knob to position “O“.

5. Important Notice

The appliance is for commercial use and should be operated by qualified staff.
During operation the appliance must be attended.

It is necessary to have the appliance checked at regular intervals.
The time of checking depends on the use.

The checking must take place at least once a year.

On the Wok burner it is not alllowed to use pots with flat bottoms.

During full combustion without Wok pots on it, the flame extends over the Wok ring. During full combustion with Wok pots on it, the flame extends to the side. In both cases burns to the staff are possible when careless.

In case of problems, the appliance must be cut off. The main gas cock must be closed and the service engineer is to be called.

An eventual change of the gas type may only be carried out by the producer or ist service agent.

5.1 ATTENTION – EXPLOSION RISK !!!!

It is strictly **forbitten** to cover the burners or drawers below or the air holes on the side walls, with Alu or silver foil or similar materials.

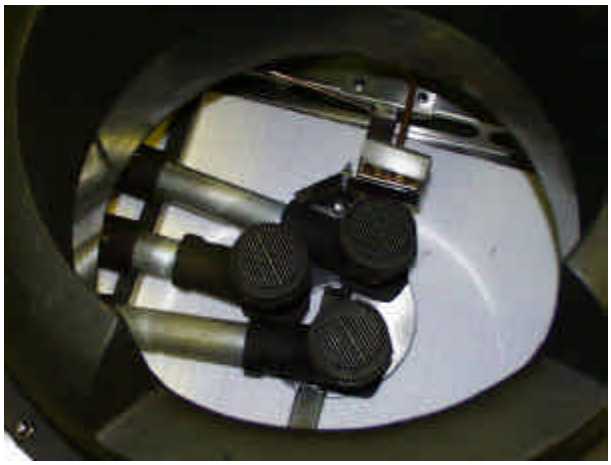
This causes a wrong air circulation and gas combustion and **overheats** extremly the entire appliance and the function of the burners.

6. Cleaning (see Photo below)

Bevor cleaning all armatures must be placed in position -O-. The main gas cock is to be closed. The cleaning should be carried out after each use of the appliance. Food and Fat rests are to be removed.
Clean with warm water, if required some detergent, non agressive cleaner.
For cleaning do not use steel wool or scraper, since corrosion could occur also on stainless steel.
Pay attention that main burner and pilot flame are not dirty. If required burner must be cleaned with non agressive detergents. The appliance may only be operated again when fully dry.
If the appliance is not used for longer periods, all steel parts should be treated with an oil drenched cloth, leaving a protective film against corrosion.

➪ **Attention! Don't clean the range with high pressure water.**

The range will be have **more long use life** and smooth work, if you have **regular clean** every day.



7. Service

The appliance requires a regular service. We recommend a service contract.
Service and repairs may only be carried out by the producer or service agent with qualified staff.

For Service and repairs **only original parts** should be used.

During Service, security arrangements of the appliance, function of burners and operation of burning operation is to be checked. It is to control that no lift off or back stroke of the burners in hot condition occurs. All gas pipes and parts must be controlled for closeness. Slits of the burners and nozzles in the primary air segment must be free of foreign debris.
The gas armatures must be checked for easy of operation. In case of heavy movements, requires the exchange of these parts. Application of grease, in exceptional cases may only be done by the service engineer. Sealed parts of the producer may not be touched by the service engineer. If apart from the listed works other reparis should be required, same should be done.
Only proper handling of the appliance, regular service by service technicians, guarantees problemfree function of the appliance with operation security.
This is also in view of legal regulations for technical equipment as well as accident regulations.

8. Behavior in disturbances

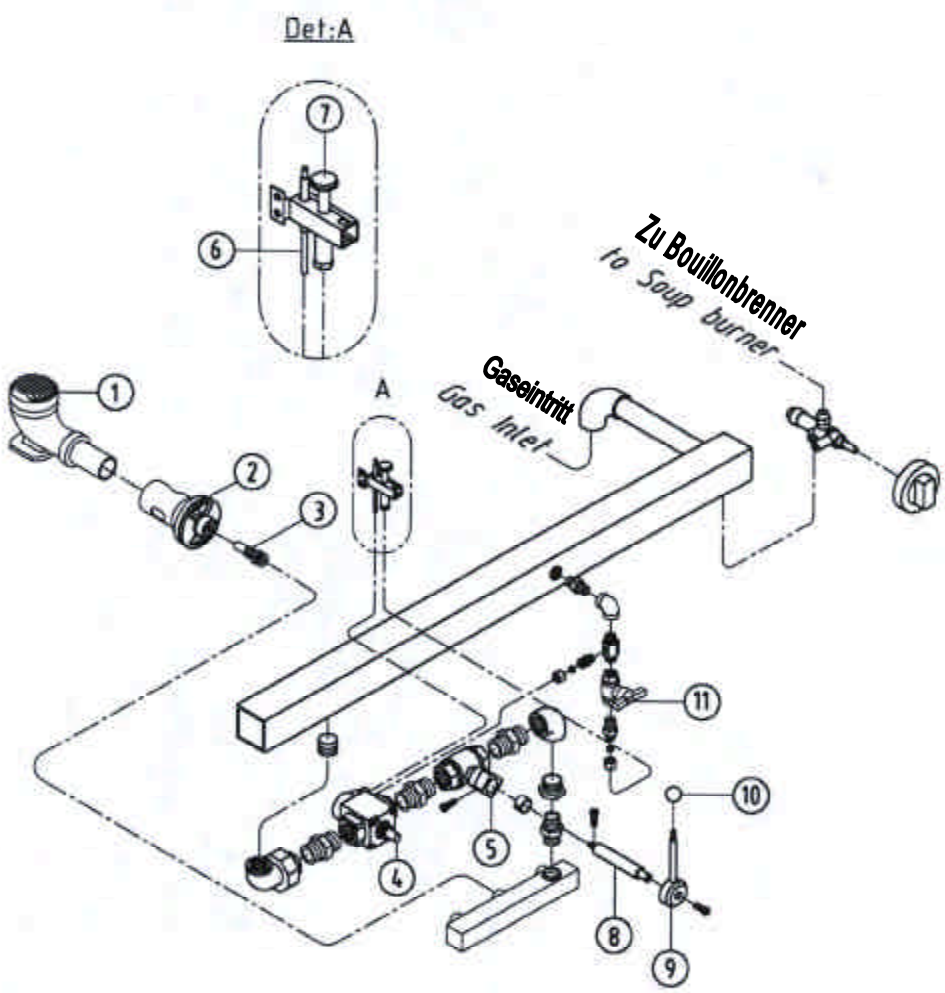
Disturbances can occur due to mistakes in the gas supply, dirtiness of functioning parts, wrong handling or failing ignition, regulators, function of control parts.

If the gas supply is ok., all funtioning parts clean, wrong handling excluded, you have to call a service engineer.

In case of disturbances the gas armature (main gas cock) must be closed.

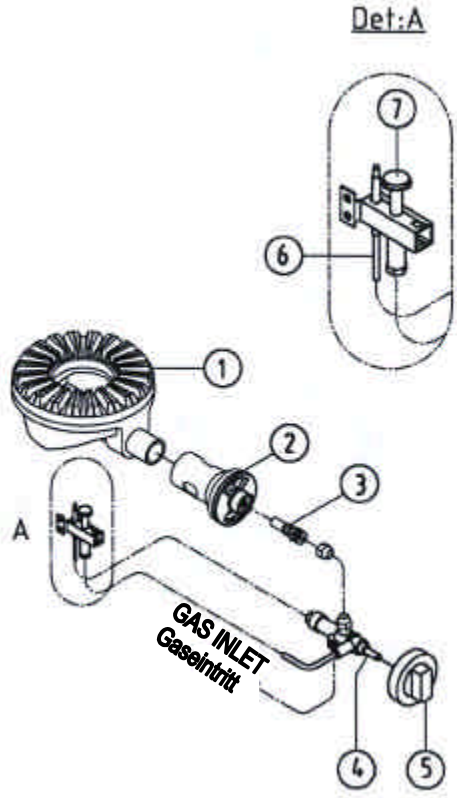
Repairs may only be carried out by qualified service engineers under consideration of ruling regulations for operation and installation.

List of Wok burner components



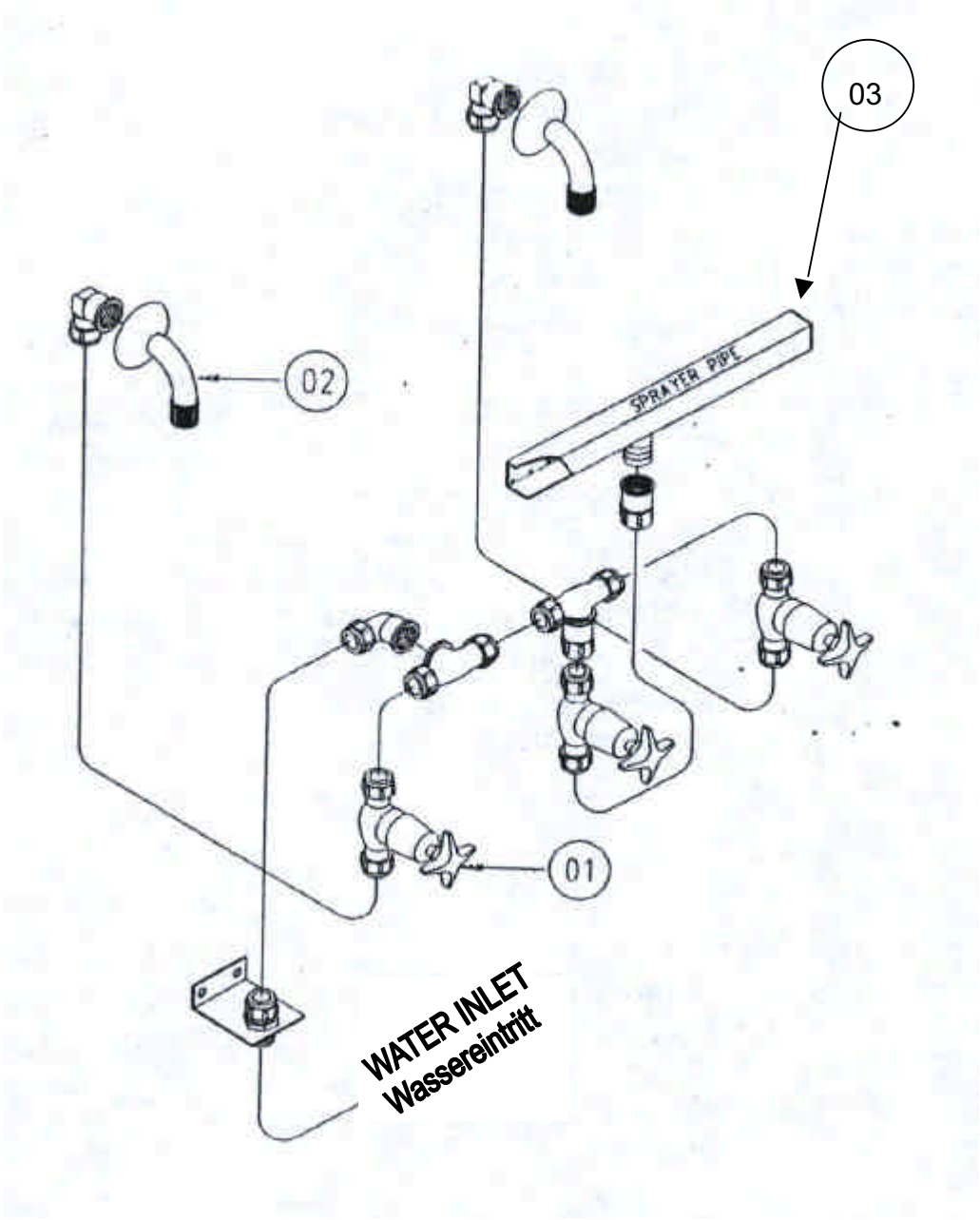
Del. N°	Description	Parts N°	Quantity
1	Burner Assy	CH 8014 S	3
2	Primary air control assy	CH 8000 S	3
3	Injector for burner	CH 2830	3
4	Safety device	CH 3713	1
5	Burner valve	CH 2006	1
6	Thermocouple	WT 3890	1
7	Pilot burner DBL	WT 3851	1
8	Handle shaft	CH 4226	1
9	Handle valve assy	CH 8006 S	1
10	Ball knob	CH 2014	1
11	Pilot valve	CH 2004	1

List of Combi Wok burner components (soup burner)



Del. N°	Description	Parts N°	Quantity
1	Burner assy	CH 8020 S	1
2	Primary air control	CH 8000 S	1
3	Injector for burner	CH 4363	1
4	Security tap	WT 3875	1
5	ABS knob valve	WT 3602	1
6	Thermocouple	WT 3890	1
7	Pilot burner DBL	WT 3851	1

Components water system



Del. N°	Description	Parts N°	Quantity
1	Water cock	GS 2305	2-3
2	Water flow out	GS 3910	1-2
3	Sprayer Pipe		1-2

PROBLEM SOLUTIONS

ATTENTION – DANGER OF EXPLOSIONS !!!!

It is absolutly **prohibited** used alumatic paper or similer to cover the burner, the pilot unit and the side walls over the drawer. **Advice it will be damaged the range!**

The above cause a wrong combustion and bad gasfire, it **over heat extremly** the unit and a bad function of the burners will happened.

N°	PROBLEM	CAUSE	REMEDY
A	**Soup burner**		
1	Pilot flame does not ignite	- Gas pipe pilot flame not closed - Pilot flame clogged - Pilot flame head clogged - Pilot flame nozzle clogged	- Has the main gas pipe any gas? - Dismantle and clean (evt. exchange) - clean with steel brush (evt. dismantle and clean) - Pilot flame nozzle (C) replace
2	Burner flame is yellow	- Air regulation on nut required - Burner is dirty	- Air regulation opening on nut must be mininimum 15 mm - Take out, take apart, clean
3	Burner does not burnt	- Gas cock is damagedt	- control evt. exchange
4	Pilot flame burns, but does not stay	- Thermocouple dirty - Thermocouple does not produce voltage in millivolt - Thermocouple is loose - Thermocouple magnet on gas cock defective	- clean with fine steel brush - take apart and exchange - again screw into position - take apart and exchange
B	**Wok range**		
1	Pilot flame does not ignite	- Gas tube pilot flame is leaking - Gas tube pilotf lame clogged - Pilot flame head is clogged - Pilot flame nozzle is clogged - Security armature defective	- has main gas pipe any gas? - take out and clean (evt. exchange) - clean with fine steel brush (take out and clean) - Pilot flame nozzle (C) exchange - Take out and replace
2	Burner flame is yellow	- Air regulation on nut required - Burner is dirty	- Air regulation opening on nut must be minimum 15 mm - Take out, take apart, clean
3	Burner does not burn	- Gas cock defective	- Control evt. exchange
4	Pilot flame burns, but on releasing securita arm, flame does not stay	- Thermocouple dirty - Thermocouple does not give voltage in millivolt - Thermocouple is loose - Thermocouple magnet on gas cock defective	- clean with fine steel brush - take apart abd exchange - again screw into position - take apart and exchange

CE SVGW DVGW

CONVERSION INSTRUCTION

Gas Wok China Ranges

Types: AHA0005
AHA0007
AHA0008
AHA0006
AHA0010

Wall- and free standing ranges

Gas Rechaud

Types:
AHA0009

Table ranges

9. Gas conversion

The gas conversion may only be carried out by a qualified service engineer authorized by the producer.

9.1 Technical data (valid only for DE / CH / AT)

The applience is for operation of earth- or liquid gas / Construction A1

Category II 2 ELL 3 B/P

	Call pressure	Allowed connection pressure ranges
Earthgas	20,0 mbar	18,0 - 25,0 mbar
Liquid gas	50,0 mbar	42,5 - 57,5 mbar

Beyond these pressure ranges the appliance may not be operated!

9.2 Technical data (valid for EU)

The applience is for operation of earth- or liquid gas / Construction A1

Category II 2 ELL 3 B/P

Country of destination	Category	Pressure ranges (mbar) 2. family Earthgas	3. family Liquid gas
AT	II2H3B/P	20	50
BE	II2E+3+	20/25	28-30/37
CH	II2H3B/P	20	50
DE	II2ELL3B/P	20	50
DK	II2H3B/P	20	28-30
ES	II2H3+	20	28-30/37
FI	II2H3B/P	20	28-30
FR	II2E+3+	20/25	28-30/37
GB	II2H3+	20	28-30/37
GR	II2H3+	20	28-30/37
IE	II2H3+	20	28-30/37
IT	II2H3+	20	28-30/37
LU	I2E	20	
NL	II2L3B/P	25	28-30
NO	I3B/P		28-30
PT	II2H3+	20	28-30/37
SE	II2H3B/P	20	28-30

Type	Heat load	Gas connection values Full fire			Combustion requirements	Exhaust quantity
		Earthgas E Earthgas H (G 20) HuB 0,42 m^3/h	**Earthgas L Earthgas LL** **(G 25)** HuB 0,49 m^3/h	**Liquid gas** (G 30) HuB 0,31 kg/h		
AHA00005	28 kW	2,96 m^3/h	3,45 m^3/h	2,21 kg/h	28,5 m^3/h	32,0 m^3/h
AHA00007	56 kW	5,92 m^3/h	6,90 m^3/h	4,42 m^3/h	57,0 m^3/h	64,0 m^3/h
AHA00008	66 kW	6,98 m^3/h	8,13 m^3/h	5,20 kg/h	66,7 m^3/h	73,4 m^3/h
AHA00006	84kW	8,88 m^3/h	10,35 m^3/h	6,63 kg/h	85,5 m^3/h	96,0 m^3/h
AHA00009	28 kW	2,96 m^3/h	3,45 m^3/h	2,21 kg/h	28,5 m^3/h	32,0 m^3/h

The small combustion adjustment for the Combi Wok burner is 4 kW.

This result in the following **flow values**:

Earthgas H, E (G20)	0,42 m^3/h
Earthgas L, LL (G25)	0,49 m^3/h
Liquid gas (G30)	0,31 kg/h

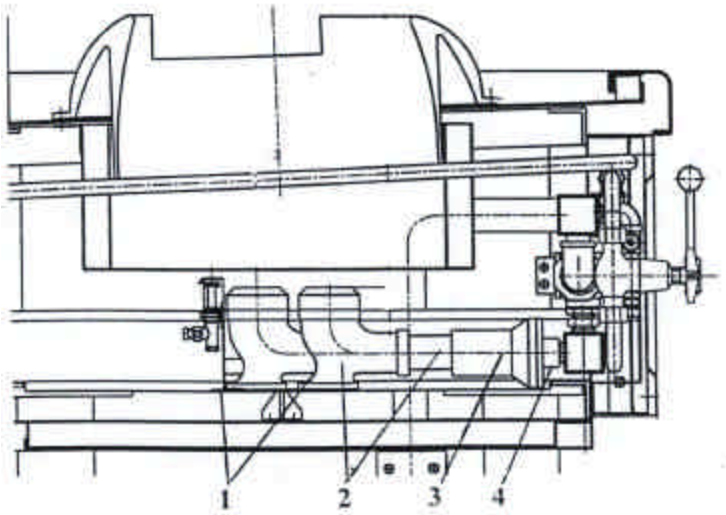
9.3 Nozzle data table

Gas typet		Pressure (mbar)	Wok burner Ø (mm)	Soup burner full comb. Ø (mm)	Soup burner small comb. Ø (mm)	Pilot flame Ø (mm)
Earthgas E	G20	20; 20/25	3 x 2,35	2,35	adjustable	adjustable
Earthgas LL	G25	20	3 x 2,60	2,60	adjustable	adjustable
Earthgas L	G25	25	3 x 2,50	2,50	adjustable	adjustable
Liquid gas B/P	G30	28 - 30	3 x 1,60	1,60	1,00	0,20
Liquid gas B/P	G30	28 - 30/37 50	3 x 1,40	1,40	0,90	0,20

The applience is operated in full combustion with fixed nozzles without prior adjustment.
The Wok burner has no small combustion adjustment. Same is regulated gradual from OFF (out) to ON (in).
The Combi Wok burner and the pilot flame are operated for liquid gas for small combustion with fixed nozzles, for earthgas same has to be regulated.

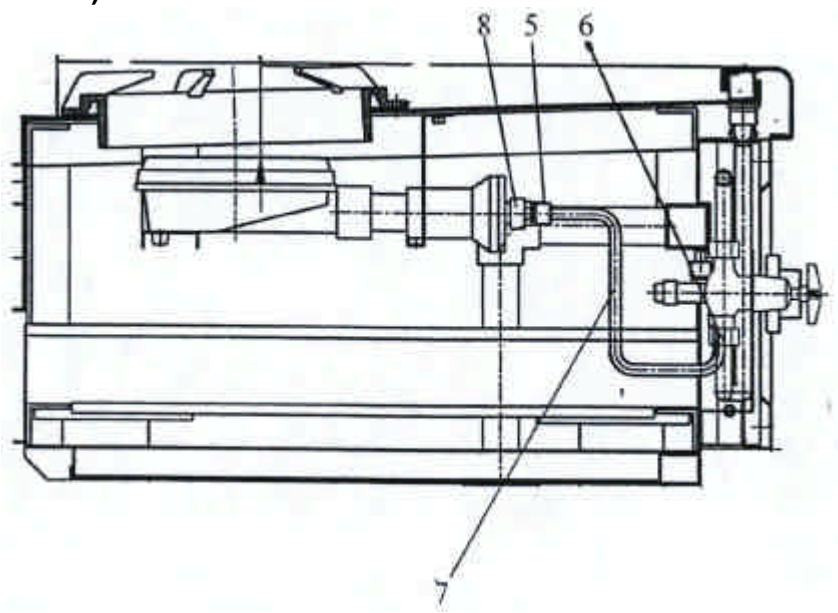
9.4 Nozzle change Wok burner

Remove fixing screw (1). Pull burner with gas pipe out (2). Remove mixing chamber by moving same anti clockwise from the nozzle. Twist pressure ring (4) anti clockwise from the nozzle. Pay attention that the pressure spring is not lost.
Turn now the nozzle from the gas pipe and then replace a nozzle according to the nozzle data table for the required gas type into the unit. The nozzle must be fixed with a non-hardening sealing tape.
Then replace the burner by following instructions in opposite direction. Pay attention also to “primary air adjustment“.



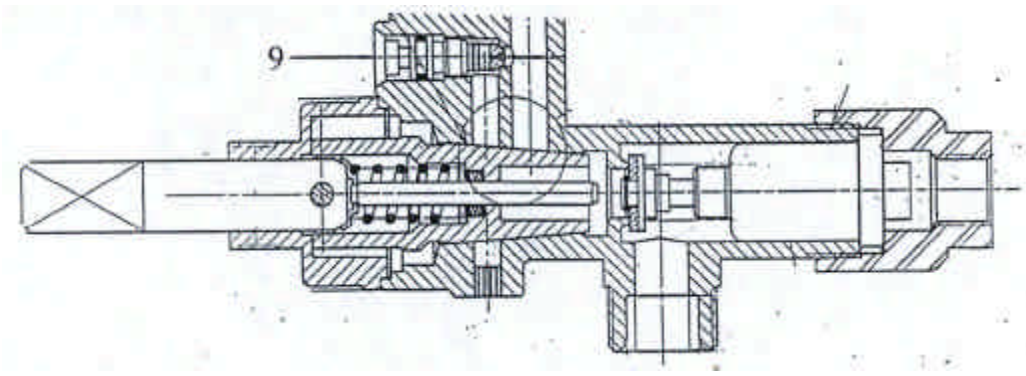
9.5 Nozzle change Combi Wok burner (soup burner) (full combustion nozzle)

Remove screw (5) and (6) take out complete pipe (7).
Turn nozzle (8) with pressure ring and pressure spring from mixing chamber.
Place a nozzle into unit according nozzle data table for the required gas type.
The nozzle must be fixed with a non hardening sealing tape.
Pay attention thet pressure ring and pressure spring are incorporated in proper sequence.
Replace complete pipe gas tight into unit.
Pay attention to “primary air adjustment“ explained under **Point 12.**



10. Small combustion adjustment

For the Combi Wok burner (soup burner) the small combustion adjustment must be regulated to 4 kW for earthgas.
The nozzle bore in the small combustion nozzle is 50 mbar and 30 mbar.
To regulate for earthgas proceed as follows:

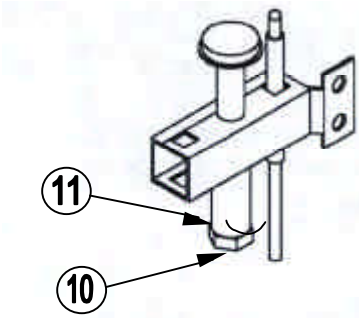


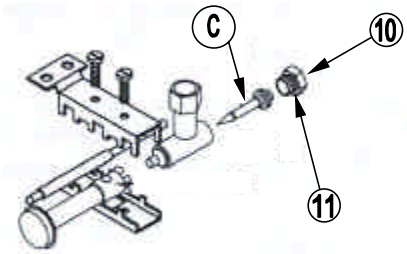
Operate burner in small combustion.
Turn off handle of the security control knob.
With a small screw driver adjust small combustion nozzle (9) that 4 kW are obtained.
(Turn **Clockwise reduces** warmth load, turn **anti clockwiseincreases** warmth load).
The adjustment of the warmth load can be done according volume method, see flow chart.
The adjustment of the warmth load must be such that the burner in hot or cold,
ignites properly.
For changing to liquid gas the small combustion nozzle (9) turn slightly against the stroke.

11. Pilot flame adjustment

The Pilot flame must be regulated for earthgas. This is done as follows:
Pilot flame ignite covering screw (10) with washer (11). Remove with small screw driver, nozzle (C) adjust that main burner ignites well. Turn **Uclockwise reduce** gas flow, **anti clockwise increases** gas quantity.

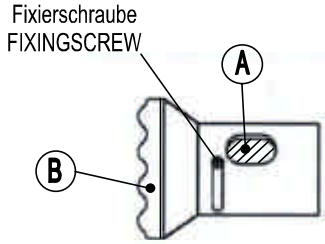
When operated with liquid gas, nozzle (C) turn clockwise towards stroke.
After regulating washer (11) and covering screw (10) fix gas tight.

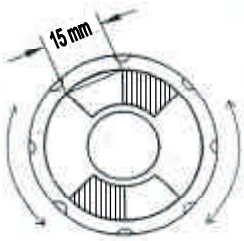




12. Primary air adjustment

The primary air is fixed and sealed by the producer and may not be touched.
The adjustment made by the producer applies to earth- and liquid gas.
The primary air opening in the mixing pipe (A) are always closed.
The primary air opening in the nut (B) on the front side of the burner is adjusted in such a way that there is an opening of 15 mm (see drawing).
In case of a nozzle change (C) pay attention that the diameter is not changed. If necessary a new adjustment must be done. There after nut mother (B) to be sealed with laquer.
If necessary only slight corrections may be done.





13. Tests

After a conversion the following requirements must be fulfilled:

- Nozzle diameter and pressure must be identical to the indication of the producer
- The tightness of all gas pipes and parts must be secure
- Ignition, through ignition, over ignition must be guaranteed for full combustion and small combustion operation
- The flame may not lift off nor beat back to the nozzles
- All burners, ignition and control arrangements must be checked for dirt, secureness and function
- The closing time of the thermo electric ignition control **may not exceed 60 seconds**

14. Sticker

Ater a conversion of a gas type has been carried out a new sticker must be placed on the appliance which shows clearly the new gas type and gas pressure.

PROBLEM SOLUTIONS

ATTENTION – DANGER OF EXPLOSIONS !!!!

It is absolutly **prohibited** used alumatic paper or similer to cover the burner, the pilot unit and the side walls over the drawer. **Advice it will be damaged the range!**

The above cause a wrong combustion and bad gasfire, it **over heat extremly** the unit and a bad function of the burners will happened.

N°	PROBLEM	CAUSE	REMEDY
A	**Soup burner**		
1	Pilot flame does not ignite	- Gas pipe pilot flame not closed - Pilot flame clogged - Pilot flame head clogged - Pilot flame nozzle clogged	- Has the main gas pipe any gas? - Dismantle and clean (evt. exchange) - clean with steel brush (evt. dismantle and clean) - Pilot flame nozzle (C) replace
2	Burner flame is yellow	- Air regulation on nut required - Burner is dirty	- Air regulation opening on nut must be mininimum 15 mm - Take out, take apart, clean
3	Burner does not burnt	- Gas cock is damagedt	- control evt. exchange
4	Pilot flame burns, but does not stay	- Thermocouple dirty - Thermocouple does not produce voltage in millivolt - Thermocouple is loose - Thermocouple magnet on gas cock defective	- clean with fine steel brush - take apart and exchange - again screw into position - take apart and exchange
B	**Wok range**		
1	Pilot flame does not ignite	- Gas tube pilot flame is leaking - Gas tube pilotf lame clogged - Pilot flame head is clogged - Pilot flame nozzle is clogged - Security armature defective	- has main gas pipe any gas? - take out and clean (evt. exchange) - clean with fine steel brush (take out and clean) - Pilot flame nozzle (C) exchange - Take out and replace
2	Burner flame is yellow	- Air regulation on nut required - Burner is dirty	- Air regulation opening on nut must be minimum 15 mm - Take out, take apart, clean
3	Burner does not burn	- Gas cock defective	- Control evt. exchange
4	Pilot flame burns, but on releasing securita arm, flame does not stay	- Thermocouple dirty - Thermocouple does not give voltage in millivolt - Thermocouple is loose - Thermocouple magnet on gas cock defective	- clean with fine steel brush - take apart abd exchange - again screw into position - take apart and exchange