SENKO

For a perfect warm home!

INSTRUCTION MANUAL - **HANDLING**

CENTRAL HEATING COOKERS

- **C-20**
- **C-25**
- **C-30**
- **C-35**
- **C-20 PREMIUM**
- **C-25 PREMIUM**
- **C-35 PREMIUM**

SN-EN-4/23

Dear client, thank you for choosing a SENKO cooker!

This product was designed and manufactured to its minutest details in order to fulfill your every need for functionality and safety

With the help of *Instruction manual - INSTALLATION* you will learn to correctly install the product, and using the *Instruction manual - HANDLING* you will learn to use the product

Both manuals can be found at http://en.senko.hr/, or you can request them at info@senko.hr.

Senko managment

CONTENTS

1. GENERAL

Solid fuel central heating cookers:

- **C-25 PREMIUM L/D**
- **C-35 PREMIUM L/D**
- **C-20 PREMIUM L/D** w/o oven
- **C-20 L/D** w/o oven
- **C-30 L/D** w/o oven
- **C-25 L/D**
- **C-35 L/D**

L = left cooker: chimney connection is on the left side if cooker is viewed from the front

D = right cooker: chimney connection is on the right side if cooker is viewed from the front

are models from the SENKO cookers palette which can accommodate your needs in the best possible way. Therefore, we ask you to CAREFULLY READ THESE INSTRUCTIONS, which will help you to achieve the best possible results already during the initial use.

The manufacturer is not responsible for any consequences (people or animal injuries or property damages) **resulting from failure to comply with this *Manual*.** The cooker is hot during operation and **the use of protective heat insulated gloves is compulsory during handling**. Children and infirm Individuals are not allowed to handle the cooker.

The external appearance of the cooker is shown on the first page of this Manual. Cooker principal parts are made of stainless steel boiler plates and castings of quality grey cast. The cookers are produced with flue gas connection point on the left or the right side. **When ordering the cooker or the spare parts, it is necessary to state its full designation**, for example: cooker E 2920 D C-20; which means that the flue gas connection is on the right side, if the cooker is observed frontally.

The cookers are manufactured and certified in accordance with the EN 16510-1:2018 parts 2-3 standard and comply with all the requirements set by this standard.

These SENKO cookers are intended **for cooking, space heating and central heating**!

The cooker is packaged in a EURO pallet. During transport, the cooker must be properly fastened in order to prevent tumbling or damages. The standard delivered cooker set consists from:

- cooker,
- instruction manual,
- chimney terminal extension (**23**),
- firing regime adjustment – grate lifting spanner (**24**)
- cooker cleaning tool (**25**).

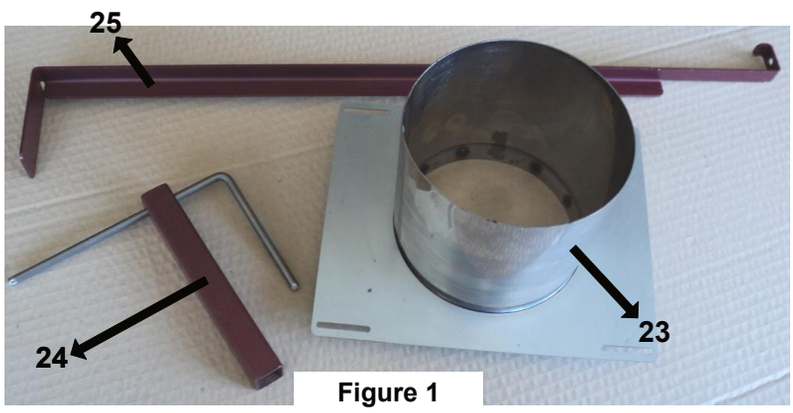


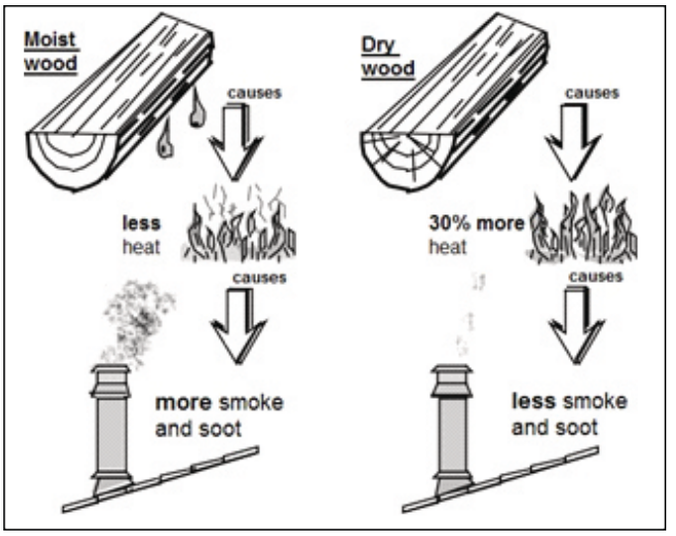
Figure 1

CAUTION! The cooker weighs between 130 and 300 kg. Extra caution is necessary when unloading, transferring, moving and installing the cooker in order to avoid physical injury.

IMPORTANT! Before you start using your cooker, it is OBLIGATORY to insert the automatic regulator probe into the corresponding connector - see figures *12a i b* !

1.1. FUEL

The use of moist and low-calorie wood is not recommended. The **wood moisture must be lesser than 17%.** The energy content of moist wood is low, at approx. 2,3 kWh/kg and it greatly pollutes the door glass, as well as the chimney and the cooker.



Use only recommended fuel:

- **wood**: common beech, common hornbeam, oak, black locust
  ⇒ air dried for a minimum of 2 years
  ⇒ relative humidity 15-17%, energy content at approx. 4,2 kWh/kg
- **wood briquettes**: energy content at approx. 4,4 kWh/kg

1.2. FEEDING

- manually when necessary
- we recommend the **logs** to be of 50 x 50 mm **vertical cut**, up to 2/3 of the firebox length
- use smaller logs for a more intensive fire, and more massive logs to maintain fire
- **the minimum distance between the logs** must be 1 cm, the same distanceof 1 cm applies for the briquettes
- to maintain constant oven temperature, add smaller quantities of fuel occasionally ⇒ approx. 0,5 kg
- it is **necessary to use protective heat insulated gloves** when adding fuel to the firebox
- protective heat insulated gloves must also be used when opening and closing the oven and firebox door and removing the tray from the oven and ash box.

1.3. CHIMNEY

The cooker is connected to the chimney via **130 mm diameter (cookers C-20 and C-25) and 150 mm (cooker C-35 and C-35)**. It is necessary to execute the connection of the rosette and the chimney tightly and impermeably. **If the cooker is separated from the chimney opening** (not recommended) the connection is made via **standard 130 mm (cookers C-20 and C-25) or 150 mm (cooker C-30 and C-35) diameter smoke venting pipe** – see *chapter 1.3. in Instruction manual - INSTALLATION*.

We also advise **to equip the chimney with solid material and possible condensation products collection chamber** and to install the chamber in question beneath the smoke channel inlet, in a manner which allows easy access and inspection via impermeable door.

IMPORTANT

- **BEFORE connecting to the chimney it is necessary always to make a calculation (according to EN 13384 and all other standards for the chimney dimensioning)!**
- **The chimney has a very important function of the smoke exhaust at solid fuel heating devices and therefore MUST BE well and properly dimensioned!**

1.3.1. CHIMNEY CAP

Chimney cap must fulfill the following prerequisites:

- **identical internal diameter** to that of the chimney,
- operational **exit cross-section no less than the double inner diameter of the chimney** – see **B ≥ 2×A** in the Figure 2a,
- constructed **to prevent rain, snow, leaves and other foreign bodies from entering** the chimney,
- constructed **to enable expulsion of combustion products in case of wind** from any direction and incline,
- installed **to enable proper dispersion and dilution of combustion products outside the reflux zone** (backflow) because the counter pressure occurs here. Therefore, it is necessary to adhere to limitations listed in *Figure 2*,
- **mechanical appliances for flue gases suction are not allowed**.

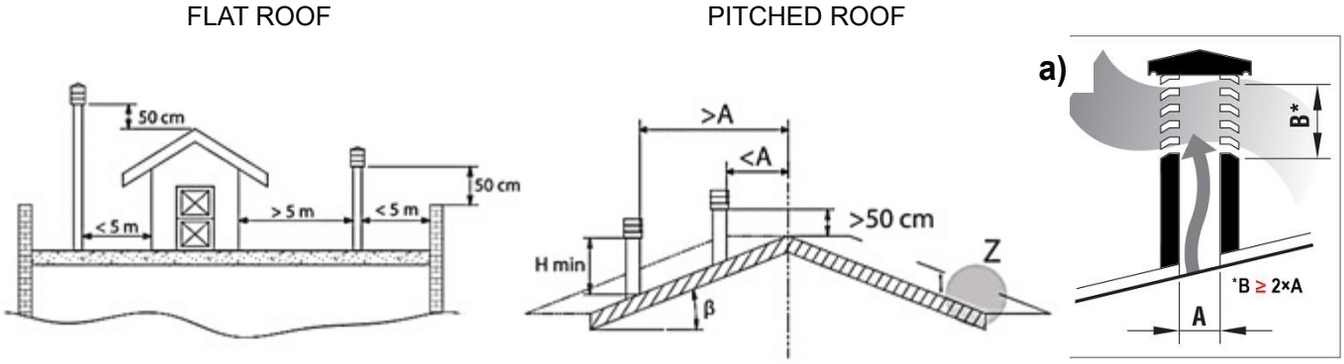


Figure 2

Roof slope	Distance between the roof ridge and the chimney	Minimum chimney height (measuredfrom the roof surface)
β	*A*, m	H_{min}, m
15°	< 1,85	0,5 m above the roof ridge
	> 1,85	1 m from the roof
30°	< 1,5	0,5 m above the roof ridge
	> 1,5	1,3 m from the roof
45°	< 1,3	0,5 m above the roof ridge
	> 1,3	2 m from the roof
60°	< 1,2	0,5 m above the roof ridge
	> 1,2	2,6 m from the roof

1.3.2. CHIMNEY FUNCTION

Among all the meteorological and geographical factors that influence the chimney function (rain, fog, snow, insolation period, etc.) **the wind is most certainly the crucial one**. Apart from the pressure caused by the temperature difference between the flue gases and the outer chimney air, there is another type of pressure – **wind dynamic pressure.**

Ascending wind ALWAYS has the **effect of increasing the pressure**, i.e., **underpressure (flue draught)**, provided the chimney is properly installed. **Descending wind** ALWAYS has the **effect of decreasing the draught** ⇒ overpressure occurs. Apart from wind direction and velocity, chimney position in relation to the house roof and surrounding area is also important (*Figure 3*).

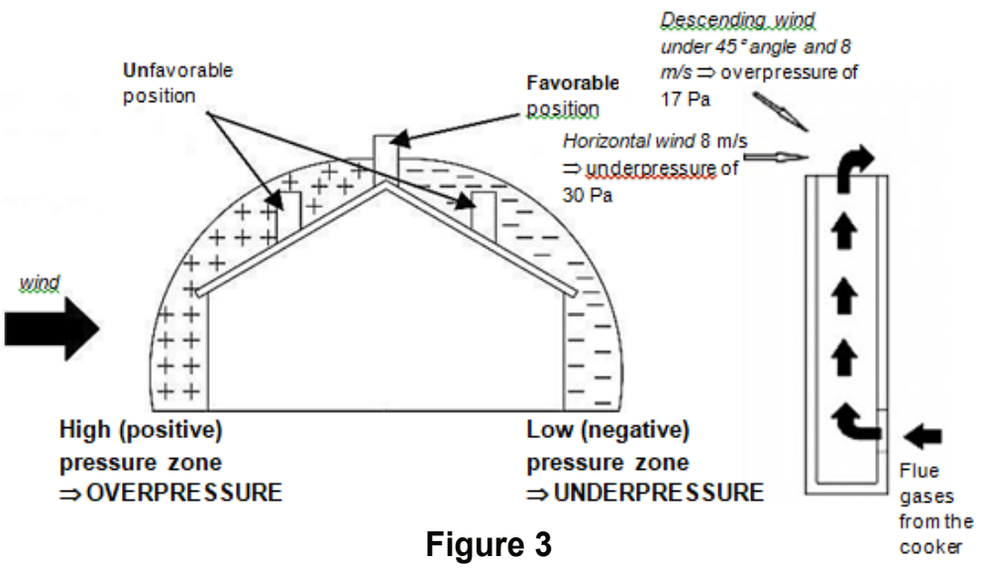


Figure 3

The wind also influences the chimney function indirectly by creating areas of high (overpressure) and low (underpressure) pressure, both inside and outside the residential area (*Figure 4*).

Pressure that facilitates chimney function can occur in rooms directly exposed to the wind (B), but it can also adversely affect the chimney through external pressureif the chimney is situated on the side exposed to wind (A). Contrary to that, underpressure can occur in lee rooms (C), adversely affecting functions of the chimney situated on the opposite side (D) from the wind direction.

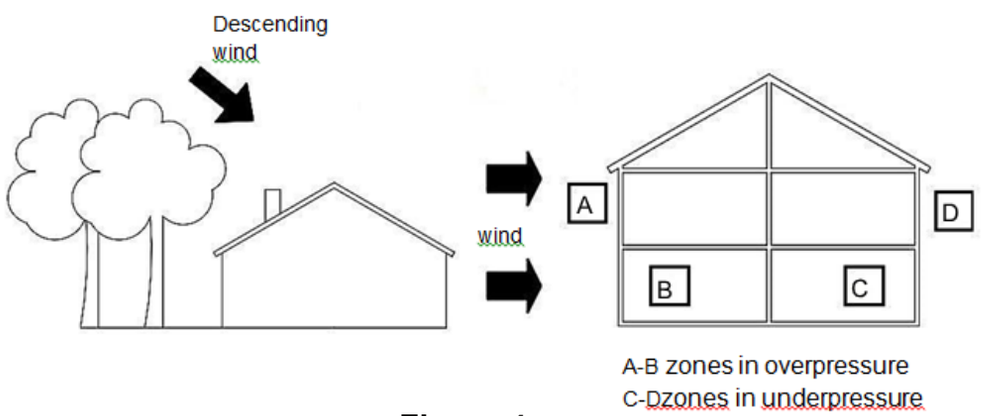


Figure 4

1.4. INSULATION

Cooker is to the outer surfaces isolated with chamotte plates 40 mm thick. The sides are chamber derived and cooled with the natural air circulation. The depth of the chamber is 25 mm.

2. WARNINGS AND SAFETY

When connecting the cooker to the chimney, **adhere to national and European norms and local regulations.**

PROCEDURE IN CASE OF CHIMNEY FIRE

*In case of chimney fire, close the openings for the air inlet and **DON'T open** **the firebox door**. Extinguish the fire using appropriate fire extinguishers.*

***NEVER EXTINGUISHA FIRE WITH WATER!** In case of fire also call the local fire department. Comply with local regulations for fire protection!*

Prior to use, verify with the local authorized chimney-sweeper whether **the cooker is properly connected to the chimney** (the chimney-sweeper must complete the installation report at the end of *Instruction Manual - INSTALLATION*). Prior to commencing the firing procedure, the cooker MUST **be connected to waterworks and central heating installation**. The procedure may only be executed by **an authorized expert** who completes the installation report at the end of *Instruction Manual - INSTALLATION*.

Special attention must be paid that there is enough air for combustion being supplied to the room cooker is installed in.

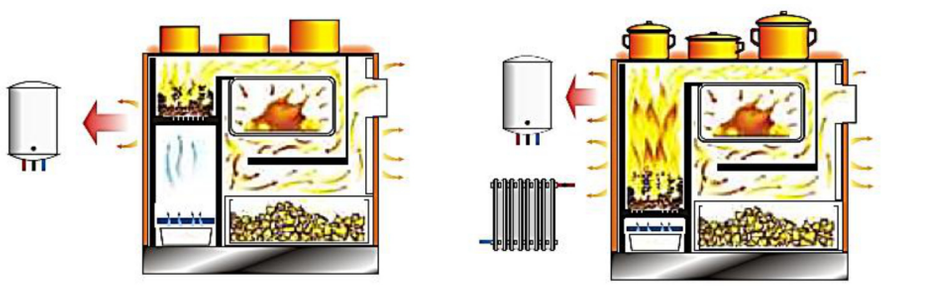
3. TECHNICAL FEATURES

SENKO cookers are very suitable for installing in small rooms or small objects, holiday housesand all other rooms where there's no need for baking yet there should be a cooking possibility.

The cookers are made of **stainless and steel plates and castings of quality grey casts**. The boiler ismade of highly resistant quality boiler sheet according to EN12815. The cooking plate (1) is made of 8 mm thick steel plate OR 6 mm glass ceramic cooking plate CERAN® (only on certain cooker models). Cookerinterior is lined with chamotte.

The primary air regulator (14) is on the front side, with secondary air regulator (11) and boiler thermometer (6) which controls the boiler water temperature. Connections for the central heating system are on the rear side of the cooker.

Cooker **firebox** (8) can function as both **summer and winter** firebox, depending on the position of the firebox low



SUMMER FIREBOX
⇒ cooking and sanitary water heating

WINTER FIREBOX
⇒ cooking, sanitary water heating and radiators heating

Figure 5

The following figures display the schematics of the cookers and their accompanying parts.

SCHEMATIC DISPLAY FOR C-20 COOKER

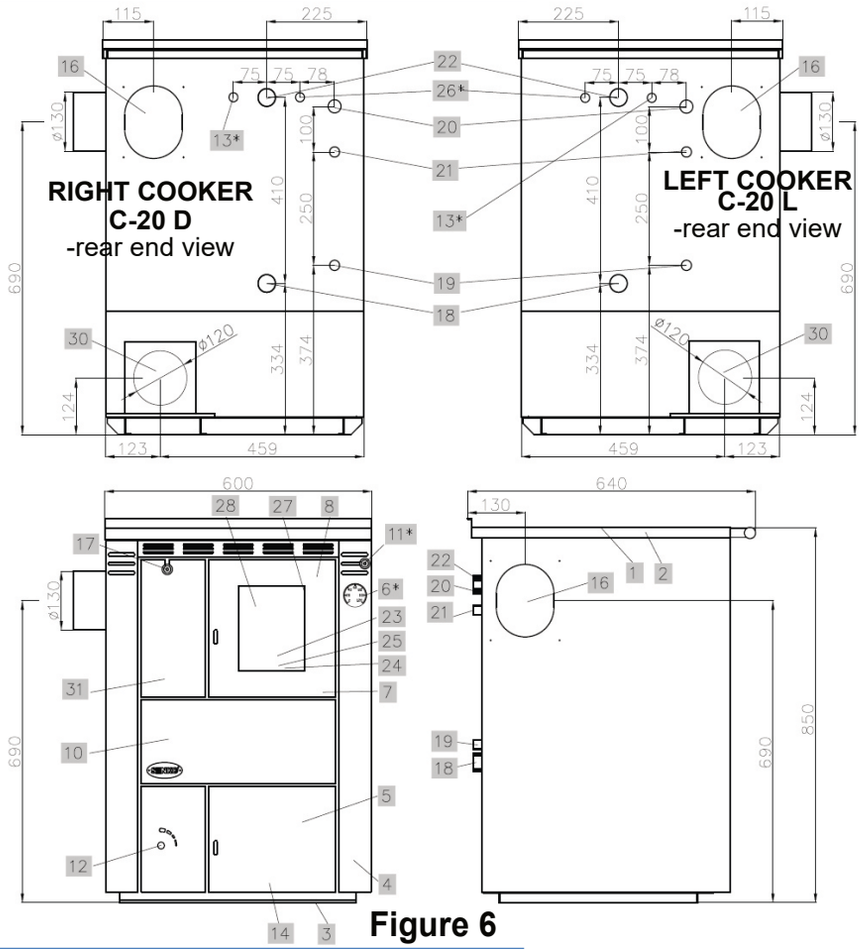


Figure 6

SCHEMATIC DISPLAY FOR C-30 COOKER

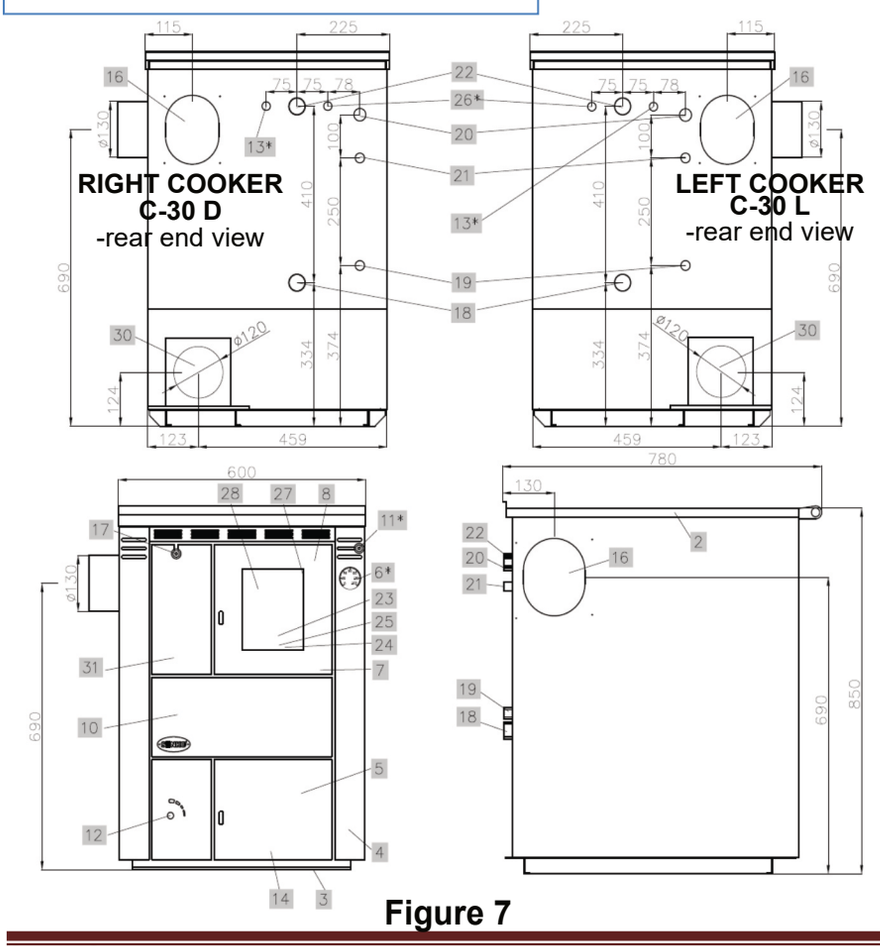


Figure 7

THE KEY :

** only for certain models*

1. Cookingplate
2. Frame
3. Cooker base
4. Cooker housing
5. Lower door
6. *Boiler thermometer
7. Boiler with base
8. Firebox door
10. Cleaninghatch lid
11. *Secondaryair regulator
12. Primary air automatic
13. *Boiler thermometer probe connection point
14. Ashbox
16. Chimneyconnection point
17. Flue gasdeflector
18. R1" cold water connection poin
19. R1/2" inlet water connection point of the boiler thermal protection
20. R3/4" two-way safety valve connectionpoint of the boiler thermal protection (*see Instruction Manual - INSTALLATION*), i.e.boiler thermal protection safety valve probe (*see Instruction Manual - INSTALLATION*)
21. R1/2" outlet water connection point of the boiler thermal protection
22. R1" warm water connection point
23. Chimneyconnection point extension
24. Firing regime adjustment spanner
25. Cooker cleaning tool
26. *Automatic regulator probe connection point
27. Door hinge bolt
28. Firebox door glass
30. Primaryair inlet hatch
31. Decorative plate

SCHEMATIC DISPLAY FOR C-25 COOKER

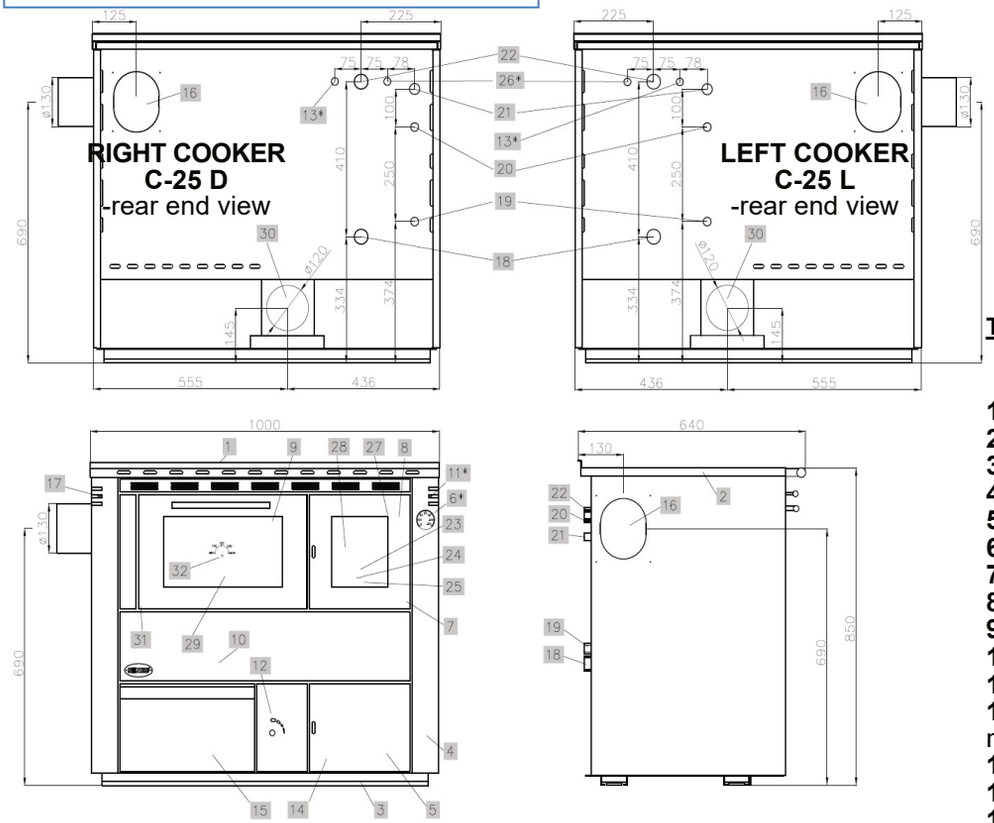


Figure 8

SCHEMATIC DISPLAY FOR C-35 COOKER

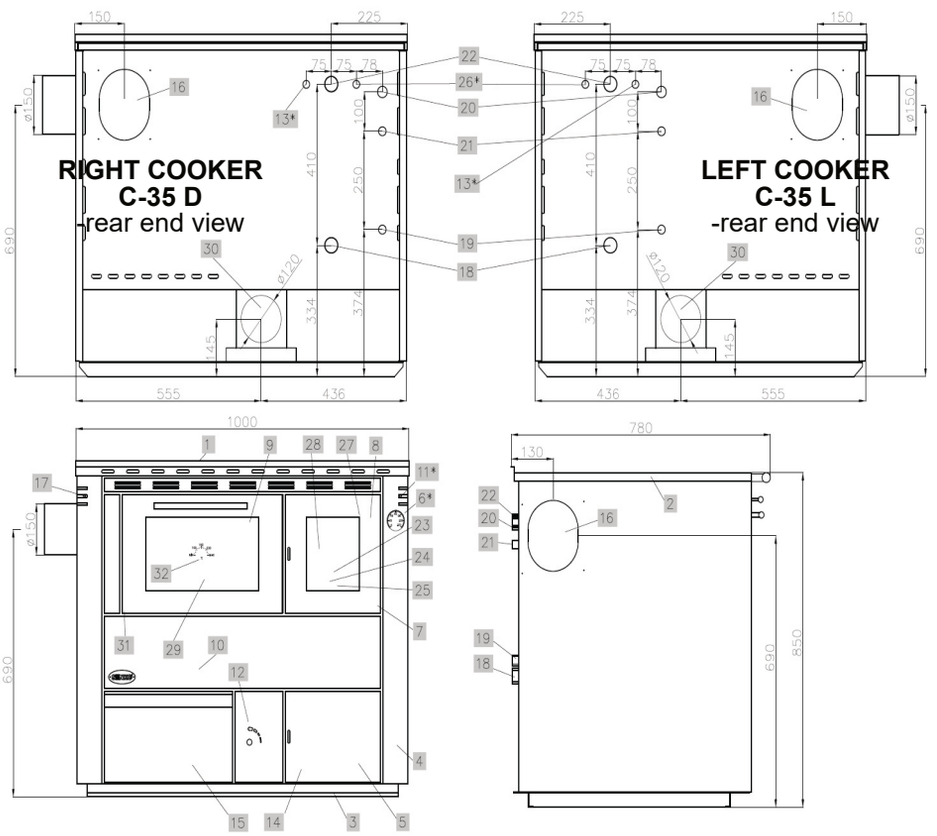


Figure 9

THE KEY :

1.Cooking plate
2.Frame
3.Cooker base
4.Cooker housing
5.Lower door
6.Boiler thermometer
7.Boiler with base
8.Firebox door
9.Oven with door
10. Cleaning hatch lid
11. Secondary air regulator
12. Primary air automatic regulator
14. Ash box
15. Fuel box
16. Chimney connection point
17. Flue gas deflector
18. R1'' cold water connection point
19. R1/2'' inlet water connection point of the boiler thermal protection
20. R3/4'' two-way safety valve connection point of the boiler thermal protection(see *Instruction Manual - INSTALLATION*), i.e.boiler thermal protection safety valve probe (see *Instruction Manual - INSTALLATION*)
21. R1/2'' outlet water connection point of the boiler thermal protection
22. R1'' warm water connection point
23. Chimney connection point extension
24. Firing regime adjustment spanner
25. Cooker cleaning tool
27. Door hinge bolt
28. Firebox door glass
29. Oven door glass
30. Primary air inlet hatch
31. Oven door hinge
32. Oven thermometer

SCHEMATIC DISPLAY FOR E 2580 C-25 PREMIUM COOKER

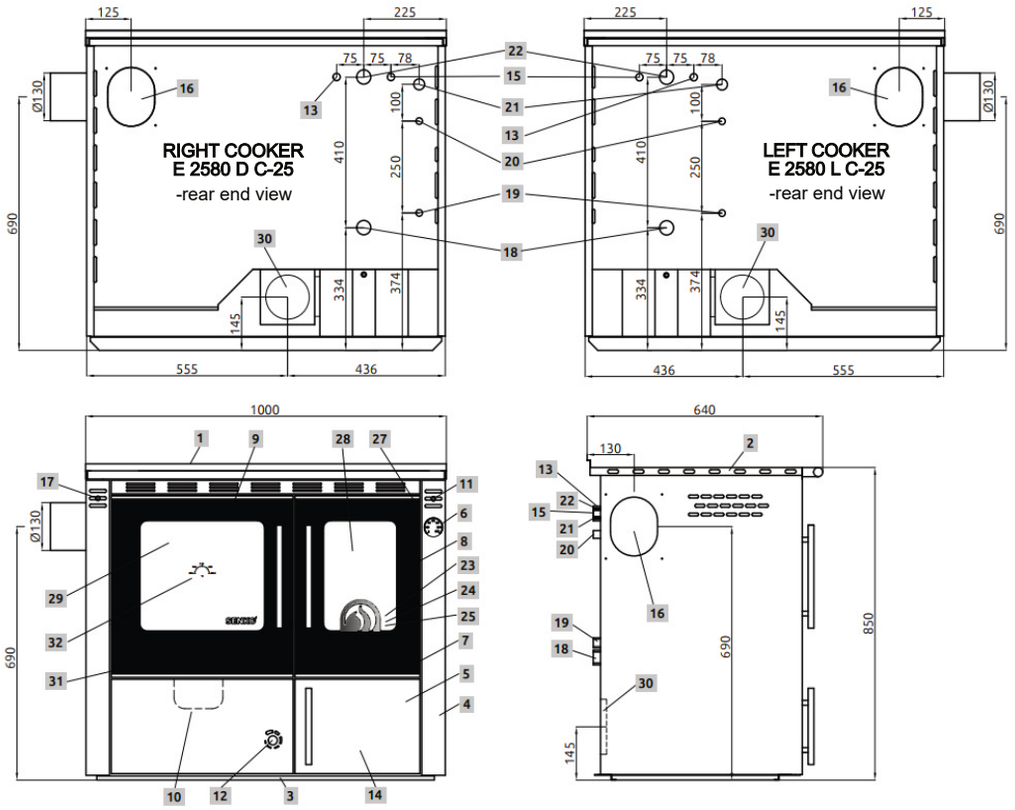


Figure 10

SCHEMATIC DISPLAY FOR E 2535 C-35 PREMIUM COOKER

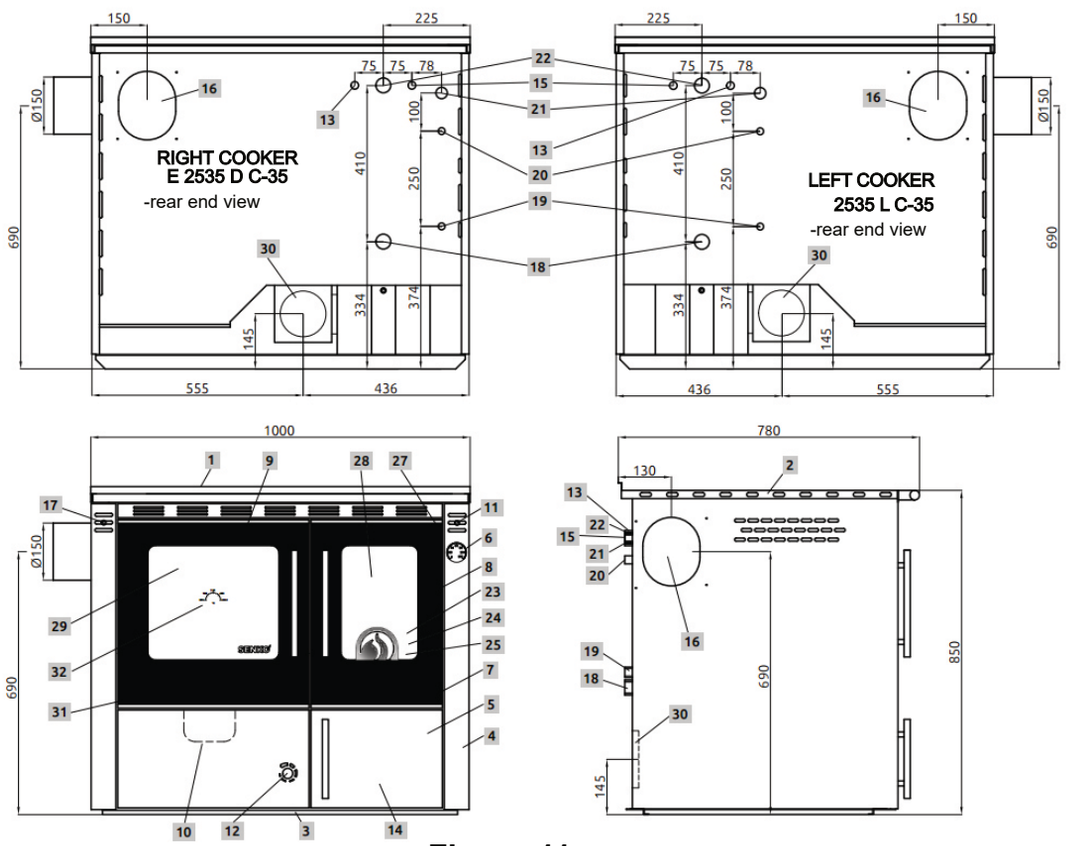


Figure 11

THE KEY :

1. Cooking plate
2. Frame
3. Cooker base
4. Cooker housing
5. Lower door
6. Boiler thermometer
7. Boiler with base
8. Firebox door
9. Oven with door
10. Cleaning hatch lid
11. Secondary air regulator
12. Primary air automatic regulator
13. Automatic regulator probe connection point
14. Ash box
15. Boiler thermometer probe connection point
16. Chimney connection point
17. Flue gas deflector
18. R1'' cold water connection point
19. R1/2'' inlet water connection point of the boiler thermal protection
20. R1/2'' outlet water connection point of the boiler thermal protection
21. R3/4'' two-way safety valve connection point (see *Instruction Manual - INSTALLATION*), i.e. safety valve probe connection point of the boiler thermal protection (see *Instruction Manual - INSTALLATION*)
22. R1'' warm water connection point
23. Chimney connection point extension
24. Firing regime adjustment spanner
25. Cooker cleaning tool
26. Cooking-baking / heating regime regulator
27. Door hinge bolt
28. Firebox door glass
29. Oven door glass
30. Primary air inlet hatch
31. Oven door hinge
32. Oven thermometer

4. HANDLING THE PRODUCT

⇒ holding the cooker frame is not allowed while handling the appliance!

⇒ **please follow the instructions shown on figure *12.***

4.1. DIRECTING THE FLUE GAS

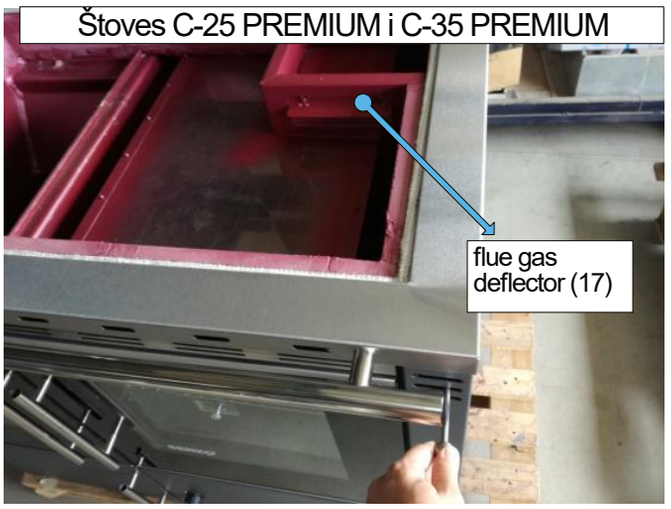
Flue gas deflector (17) accelerates the expulsion of flue gas from the cooker when this is necessary. It is primarily **used during initial stages of firing or when larger quantities of fuel are added** into the firebox.

Closed flue gas deflector (17)

Open flue gas deflector (17)

⇒ **Boiler efficiency significantly reduced!**

Figure 12



Closed flue gas deflector (17)

Open flue gas deflector (17)

⇒ **Boiler efficiency significantly reduced!**

Figure 13

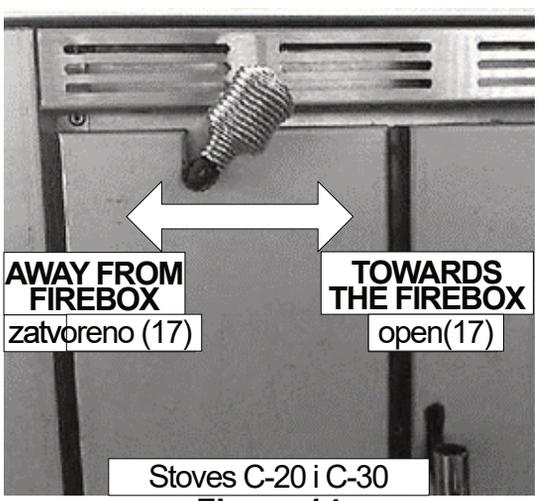
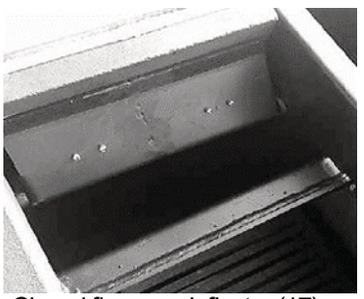


Figure 14



Closed flue gas deflector (17)

Open flue gas deflector (17)

⇒ **Boiler efficiency significantly reduced!**

Figure 15

Operating the flue gas deflector (17) regulates also the temperature (9) ⇒ **if it is open, the stove cools itself!**

4.2. AIR ADJUSTMENT AND REGULATION

CHIMNEY

If the chimney is equipped with a vent damper, it must be adjusted to keep the **chimney flue draught within the limitations**:

- for C-20 ► 13 ± 2 Pa,
- for C-30 ► 15 ± 2 Pa,
- for C-25 ► 13 ± 2 Pa,
- for C-35 ► 15 ± 2 Pa.

PRIMARY AIR

Primary air is the air that flows directly through the firebox grate. There is an **automatic primary air regulator** (12) bellow the cleaning hatch lid (10), or near the ash box (14). Its probe, which measures the temperature of the water in the boiler, is placed on the boiler frontal side under the lid which is housing the boiler thermometer. See **figures *6-11*.**

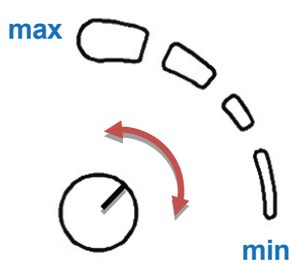


Figure 16

Turning the PVC wheel of the automatic regulator **regulates primary air flow**. Regulator is set in accordance with the desired boiler water temperature. The division ranges **from min** (minimum slit) **to max** (maximum slit):

- **min ⇒ automatic regulator is closed and there is no primary air flow,**
- **max ⇒ primary air opening is completely open and the flow is at its maximum.**

There is a round **Ø120mm connection point for the intake of external primary air** on the cooker rear side, onto which a pipe can be connected – see *chapter 1.4. Instruction Manual - INSTALLATION.*

The connecting pipe or the reduction must be made out of non- flammable material (in accordance with DIN 4102-B1).

SECONDARY AIR

Secondary air is the air that flows into the firebox to facilitate maximum combustion, reducing harmful substances to ashes and discharging flue gas with low capacity for pollution into the chimney.


Figure 17

Regulator handle (11) is placed on the cooker front side beneath the boiler thermometer.

Air flow is regulated by pulling the handle as needed. When the handle is pulled out, the regulator is open, otherwise is closed.

The regulator must be closed when initiating firing. The regulator is to be open to the maximum 15 minutes upon commencement of firing.

4.3. FIREBOX GRATE

Cooker firing regimes differ during summer and winter (**winter and summer regime)** – *Figure 5*. The regimes are determined by the position of the lower firebox grate.

The grate is positioned via special mechanism:

- **summer regime – the grate is elevated as necessary,**
- **winter regime – the grate is lowered.**

Grate adjusting mechanism is placed in the lower door opening (5). **Firing regime adjustment spanner** (24) is used to elevate the grate.

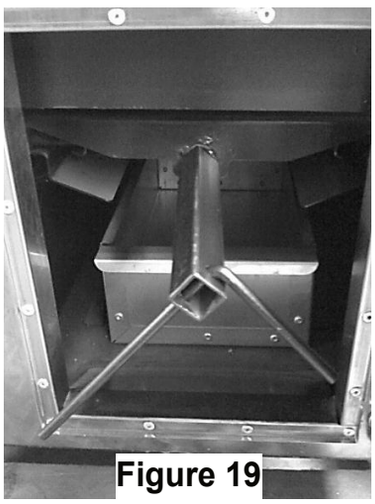


Figure 19

firing regime adjusting mechanism with regime adjustment spanner (24)

Once the grate has been placed in the desired position, the spanner must be removed from the mechanism; otherwise the lower door (5) cannot be closed.

- **wide grate openings must be positioned facing downwards at all times to allow the ashes to fall down!**
- **grate lifting and lowering is executed ONLY when the cooker is cold!**

4.4. FIRING

4.4.1. PROCEDURE

Prior to every firing, follow the following procedure:

- if the chimney is equipped with a vent damper, open it completely,
- open the flue gas deflector (17) and set the automatic primary air regulator (12) to maximum,
- use the regulator (11) to close the secondary air flow,
- open the firebox door (8) (maximum door opening angle is 90°),
- put the kindle wood into the firebox and ignite it,
- close the firebox door (8),
- monitor flame progression through the firebox door,
- once the fire is in full flame, add wooden logs as necessary,
- use the regulator (11) to open the secondary air supply and close the flue gas deflector (17),
- regulate the fire intensity by regulating the volume of primary air via automatic regulator (12),
- **primary air MUST NEVER be supplied in any other manner when the automatic regulator (12) is used!**

WARNING! Never use flammable liquids , such as petrol and similar to ignite the fire and always keep these and similar liquids away from your cooker

4.4.2. OPTIMAL USE VALUES

Primary air volume and chimney flue draught must be adjusted to levels that prevent boiler water temperature from **exceeding 85°C.**

Maximum quantity of fuel that can be accommodated in the firebox:

- **6 kg for C-20 and C-25 cooker,**
- **8 kg for C-30 and C-35 cooker.**

Adding fuel in regular intervals, in quantities of 2 to 4 kg, is recommended.

When using the oven for baking, it is recommended (to maintain constant temperature in the oven) to add 0,5 kg of fuel in regular intervals. It is also recommended to rotate the tray from 180° halfway through the baking process to ensure uniform baking!

Cooker optimum values may be achieved only if the cooker nominal power was chosen in accordance with the rules of profession and object energetic efficiency.

4.4.3. ADDING FUEL

Apart from use of appropriate fuel and satisfactory chimney flue draught, the manner in which the cooker is fueled **also influences the glass cleanness**.

We recommend only **one layer in each fuel refill** and, if possible, the **use of logs of length up to 2/3 of the firebox length**. There should be **a minimum distance of 1-2 cm between the logs.**

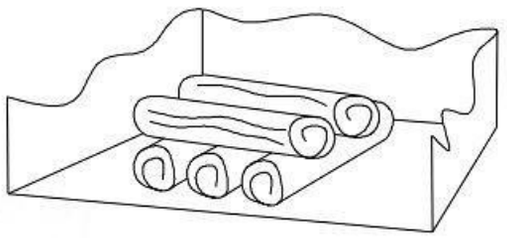


Figure 20

Briquettes should be used in amount that only covers the firebox surface, also with a **minimum distance of 1-2 cm** between them.

WARNING! <u>New fuel quantities</u> should be <u>added</u> only on top of embers, i.e., not on the flames, but only <u>on top of embers (approx. 1 cm thick)</u>.

Primary air automatic regulator (12) must be completely closed at least 1 minute before opening the firebox door (6) to prevent the breach of flue gases into the residential area.

The door must be opened slowly. After adding the fuel, close the door slowly. **Open the primary air automatic regulator (12) to decrease the time of fuel combustion.**

Once the fuel starts burning, adjust the primary air automatic regulator (12) to a desired position ⇒ in accordance with *chapter 4.2.*

Flue gas deflector (17) MUST BE opened <u>before opening the door</u>!

4.4.4. FEEDING IN TRANSITION PERIOD

During the transition period, i.e. **when outdoor temperatures are higher**, sudden increase in outdoor temperature can **cause chimney malfunction** (decreased chimney flue draught) resulting with not all flue gases being expelled into the atmosphere.

It is therefore recommended to **use less fuel and smaller logs** during the transition period in order to achieve a more lively flame, as well as to **adjust the primary air volume** in order to improve the expulsion of flue gases from the chimney.

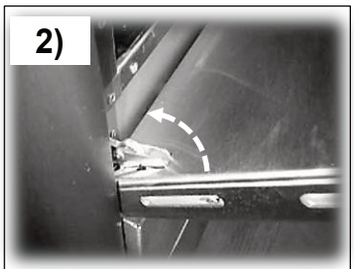
4.5. OVEN DOOR

Oven door are removed as shown in the following figure:

1)

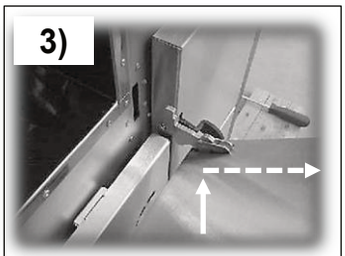
♦ open the oven door all the way
♦ move the safety all the way back on the left and right oven hinges

2)



♦ close the door halfway ensuring that the safeties lean against the door slits

3)



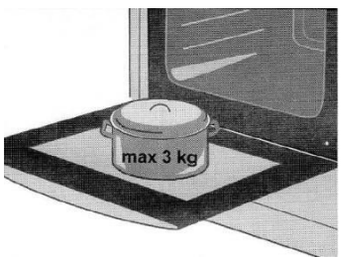
♦ lift the ajar door (for around 15°) upwards for approx. 2 mm and lightly pull them towards yourself, inclining the door toward the cooker simultaneously

♦ pull the door from the cooker hinge bearing

Reverse the procedure to mount the door back!

WARNING! Always make sure that the hinge safeties properly fit in their bearings prior and after the removal of door! Otherwise they might suddenly pop out during door removal or mounting, i.e. the hinge might suddenly close due to strong springs, which might cause injuries!

The oven door hinges must be periodically (at least once a year) lubricated with grease resistant to high temperatures (up to 400°C)!



Oven door hinges can be damaged when overload, so on the open oven door do not stack hard cooking utensils (max 3 kg) and do not lean against the doors while cleaning the inside of the oven!

At the open door may not fit with your foot or sit on them (children)!

4.6. FUELBOX (C-25 and C-35)

Fuel box (15) is mounted on the guide bars. **Maximum bearing capacity of the box is 15 kg.**

The box is removed as follows:

- pull the box towards yourself all the way,
- lift the box upwards for approx. 5 mm and lightly pull towards yourself,
- the box is mounted back by reversing the procedure!

Easily flammable or explosive objects must not be stored in the box!

5. CLEANING

5.1. CLEANING THE COOKER

The cooker and the chimney must be regularly cleaned (at least once a month).

The ash box (14) and the box area must be cleaned on daily basis. Ash disposal is to be executed in environmentally acceptable manner and in accordancewith safety procedures.

The glass (28) on the upper firebox door should be cleaned as necessaryusing the soot and grease cleaning agent.

The oven (9) should be cleaned after every instance of use.

To clean the exterior surface, use a soft cloth with a neutral cleaning fluid. Never use metallic sponges and / or other similar sponge to avoid damaging the surface! PAINTED SURFACES DO NOT CLEAN WITH ABRASIVE CLEANING AGENTS!

While **cleaning the top side of the cooker** (*Figure 20*), it is necessaryto remove the cooking plate (1) and thoroughly cleanthe soot from the boiler, around the oven and flue gas deflector, including the chimney outlet opening.

Cooker cleaning is to be performed only when the cooker is inactive and when it is cold!

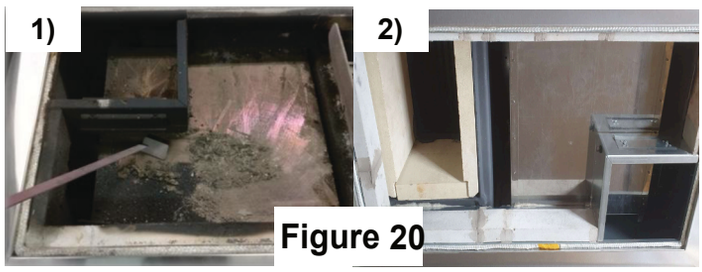


Figure 20

5.2. CLEANING THE FLUE GAS CHANNEL

When cleaning the cooker's flue gas channel it is necessary to remove the **cleaning hatch lid** ⇒ *Figure 21a*. Following that, use the screwdriver to remove the protective lid (*Figure 21b*), clean and remove the soot and ashes from the cooker inside (*Figure 21c*) using a scoop.

After thorough cleaning, mount back the protective lid and cleaning hatch lid back into their positions.

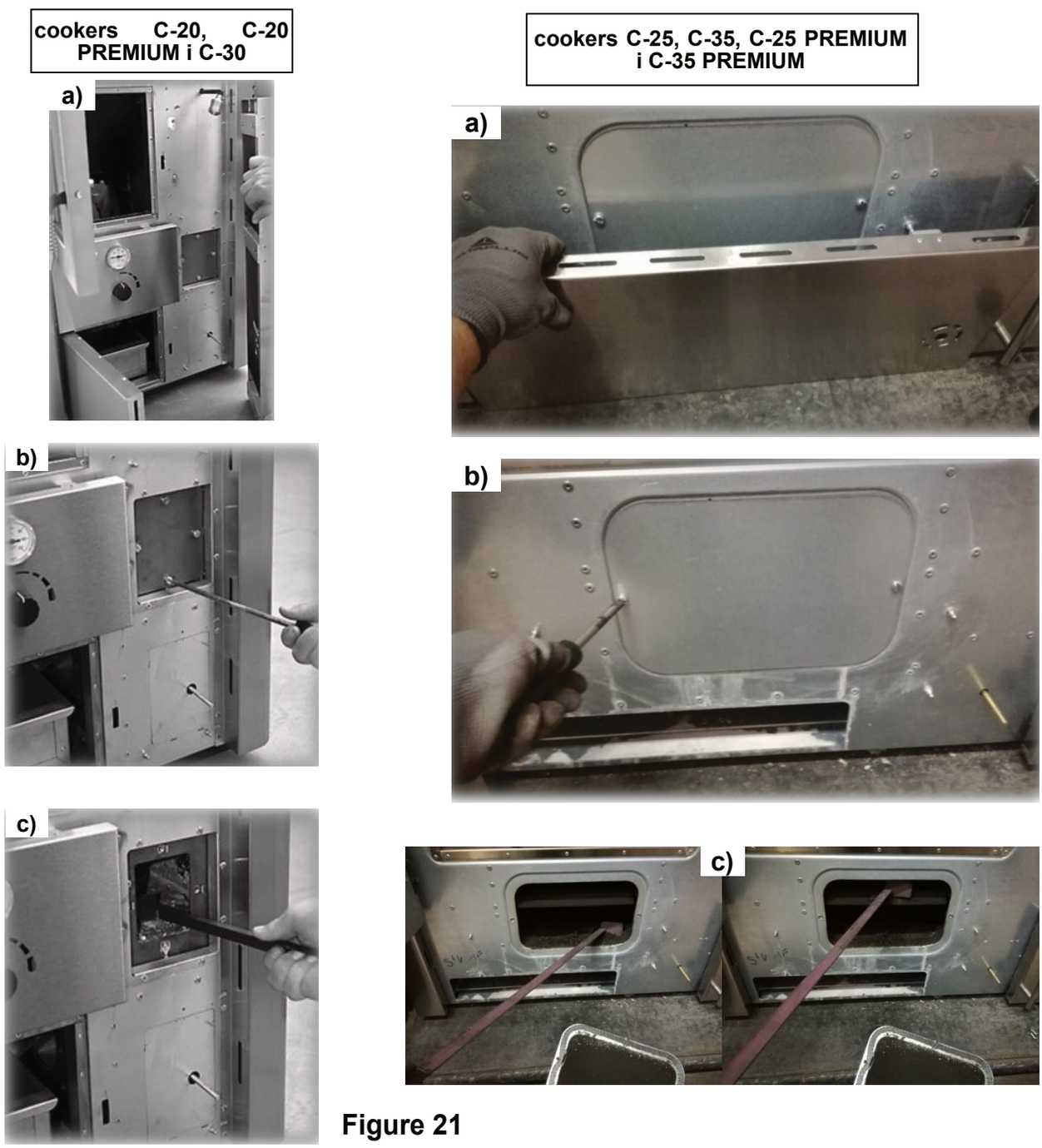
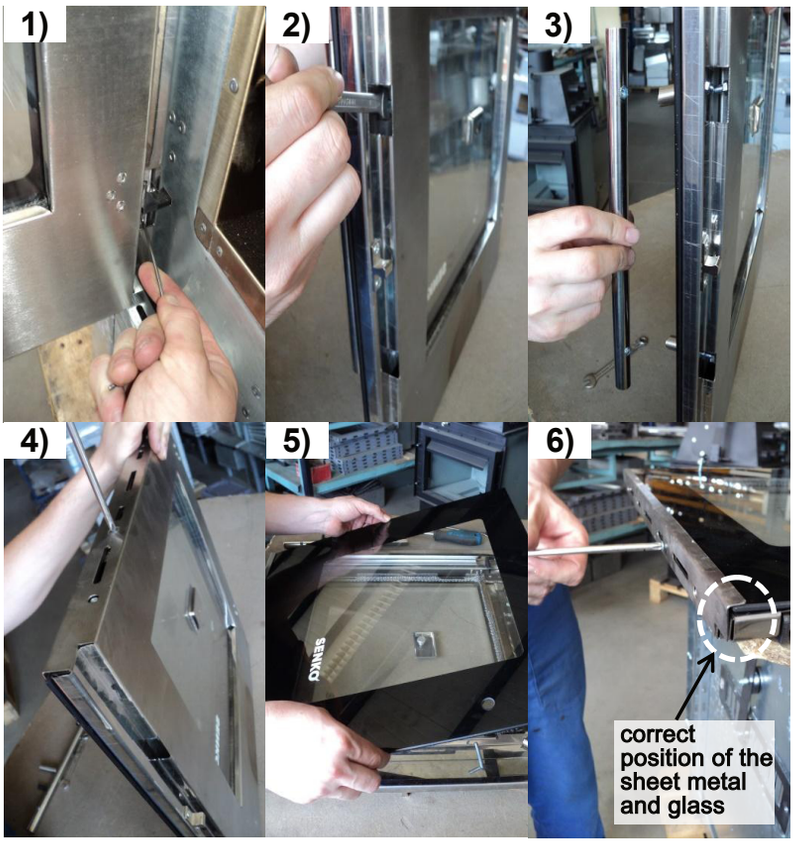


Figure 21

5.3. CLEANING THE DOOR GLASS

Here will be described the procedure for **removing the oven door glass and firebox door glass.**

OVEN DOOR GLASS



1) Open the oven door and take out the safeties on the bottom and upper hinge.

We recommend to first take out the safety on the bottom hinge!

2) Loosen the 2 M5 screws that secure the handle on the door

3) Remove the handle from the door

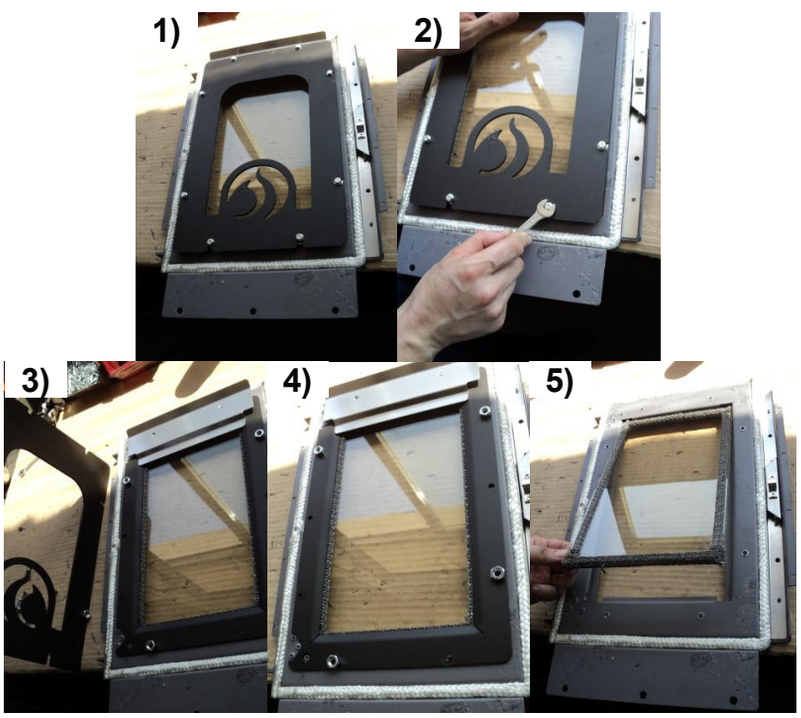
4) Loosen the 2 screws on the top of the door and remove the sheet metal

5) With slow movements carefully remove the glass from the slot

6) When reassembling the sheet on the glass, gently tighten the 2 screws!

If necessary, replace the seals on the glass!

FIREBOX DOOR GLASS



1) It is necessary to remove the internal protective sheet metal (with flame cut) on the door

2) Loosen the 8 pieces of M5 screws that secure the sheet metal on the door

3) Remove the protective sheet metal from the door

4) Remove also the nuts and other sheet metal which secures the glass on the door

5) Remove the glass and clean it with a suitable cleaning agent. Reassemble everything in reverse order.

If necessary, replace the seals on the glass!

6. MAINTENANCE

During the cooker use, the **chamotte insulation** (consumable material) suffers natural damage that must be repaired with chamotte putty. **It is not necessary to remove the chamotte insulation from the cooker**.

During delivery, cooking plate is coated with protective paint. After a few hours of the first firing protective paint on the cooking plate will burn out causing an unpleasant smell. The smell disappears after a few hours of firing. The plate took on a greyish - operating color. This is **normal phenomenon and has no effect on plate lifespan.**

During the non-use of the cooker, it is IMPORTANT that **the cooking plate is smeared with a cloth dipped in edible oil** because due to moisture on the plate it may appear the layer of rust.

Stainless material on the cookers is susceptible to slight colour change due to high temperatures. **Stainless materials are to be maintained exclusively with stainless material maintenance agents in accordance with the manufacturer's instructions**.

Handle securing bolt on firebox door and **firebox door protective sheet** has to be tightened if necessary.

GLASSCERAMIC COOKING PLATE

- ***only at certain cooker models***

Glass ceramic cooking plate by SCHOTT is **extremely temperature resistant** and withstand even abrupt temperature shocks **up to 700°C**. It is insensitive to normal mechanical loads in the kitchen. CERAN® cooking surface is **easy to clean**.

- It should be cleaned **only when completely cooled down**, preferably after each use - with kitchen paper towels or a clean cloth
- For regular cleaning **use special glass ceramic cleaning agents** which creates a protective layer on the surface
- For regular cleaning **use special glass ceramic cleaning agents** which creates a protective layer on the surface
- NEVER use abrasive or aggressive cleaning agents such as grill and baking oven sprays, stain and rust remover, sponges with abrasive surface !
- **Before each use, wipe the dust and other particles** from the cooking plate, as such deposits can damage the surface
- Hard and baked stainsmust be removed with a **scraper for glass-ceramic**
- If anything (**sugar or food containing sugar** etc.) has burnt-in on the cooking surface by mistake, this **must be removed immediately (while hot)** to avoid surface damage.
- Changing the color of the plate has no effect on its performance and efficiency!

6.1. OLD COOKER DISPOSAL

Once the cooker is no longer fit for use it must be delivered to an authorized disposal service specialized in recycling this type of waste. **It is forbidden to dispose of the old cookers in the natural environment!**

6.2. SPARE PARTS

Only original spare parts by the manufacturer are to be used. Should non-original spare parts be used or should the repair be executed by an unauthorized individual, the warranty will be void.

6.3. MECHANISM FOR CHANGING THE POSITION OF THE GRATE

Mechanism may become jammed during use due to solid ash debris, metal parts (i.e. nails), feeding with inappropriate fuels, exceeding the cooker nominal power. It is necessary to remove and clean the mechanism in those instances.

It is first necessary to check if only the grate is jammed. Remove the grate from the boiler and test the mechanism. If the mechanism cannot be launched at that point, it is necessary to remove and clean it.

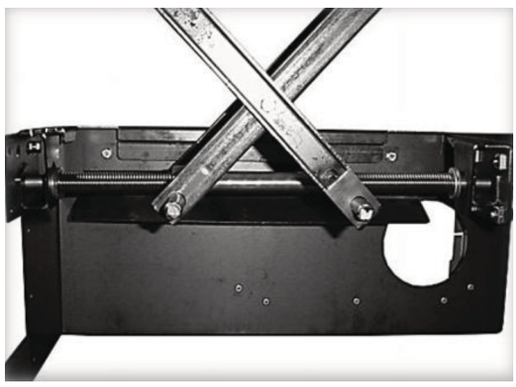


Figure 23

Mechanism is removed by removing the protective sheet above the mechanism first and then by removing the 4 frontal screws, 4 rear-end screws and 2 screws on each, left and right sides, all using an OK10 wrench; and finally, by removing the entire mechanism (*Figure 23*). The mechanism is cleaned from impurities and reassembledby reversing the procedure.

7. MALFUNCTIONS / CAUSES/ SOLUTIONS

PROBLEM	POSSIBLE CAUSE	SOLUTIONS
Smoke coming out of the cooker	♦ cooker filled with soot ♦ chimney filled with soo ♦ fuel too moist ♦ low caloriefuel	⇨ clean the cooker as described in *chapter 5.1.* ⇨ clean the chimney as described in *chapter 5.2.*
	♦ levels of fresh air in the room too low ♦ return water temperature too low ♦ firebox temperature too low ♦ chimney lower than 4.5 m ♦ chimney diameter smaller than the one prescribed	⇨ use fuel as described in *chapter 1.1. Instruction manual - INSTALLATION* ⇨ study *chapter 4.4.* ⇨ set the thermostat to activate the pump at temperatures over 55°C ⇨ increase the firebox temperature by increasing fuel quantity ⇨ adjust the chimney in accordance with *chapters 1.2.* and *1.3. Instruction manual - INSTALLATION*
Insufficient flue draught in the chimney; black smoke expelled from the chimney	♦ chimney filled with soot ♦ cooker filled with soot ♦ chimney partially clogged or filled with soot	⇨ clean the chimney ⇨ clean the cooker ⇨ unclog and clean the chimney
	♦ fuel not sufficiently dry ♦ firebox cast grate turned in the wrong direction ♦ upper or lower door opened ♦ inadequate flue draught ♦ faulty regulation	⇨ use fuel in accordance with *chapter 1.1.* ⇨ set the grate in accordance with *chapter 4.3.* ⇨ close the door ⇨ adjust the flue draught in accordance with *chapter 1.2. Instruction manual - INSTALLATION* ⇨ adjust the primary and secondary air
Cooking temperature too high	♦ excessive chimney flue draught ♦ inadequate fuel ♦ flue gas deflector closed grate too high during summer period	⇨ reduce the chimney flue draught in accordance with *chapter 1.2. Instruction manual - INSTALLATION* ⇨ usefuel as described in *chapter 1.1.* ⇨ open the flue gas deflector ⇨ lower the grate

There is noise from the boiler	♦ insufficient water level in the central heating system ♦ insufficient water pressure in the central heating system ♦ improper central heating installation ♦ during the summer period, the boiler is not connected to the water heating boiler ♦ the cooker is not placed in a horizontal position with the use of spirit level ♦ excessive velocity of water flow in the system ♦ air in the system	⇨ refill the central heating system with the necessary amount of water to achieve 2 bar pressure ⇨ increase water pressure to 2 bar ⇨ execute the central heating installation in accordance with professional standards and DIN 4751 norm - part 1 for open systems ,i.e. 4751 – part 2 for closed systems ⇨ connect the boiler to water heater ⇨ mount the cooker as described in *chapter 1.1. Instruction manual - INSTALLATION* ⇨ reduce the water circulation velocity by adjusting the number of pump rotations ⇨ properly and thoroughly vent the system
Firebox door glass is black and/or the firebox is smoky (black soot)	♦ insufficient flue draught (less than 10Pa) ♦ faulty regulation ♦ too much fuel in the firebox ♦ fuel too moist ♦ inadequate fuel ♦ excessive firebox temperature	⇨ check the connection of the cooker with the chimney and the chimney ⇨ study *chapters 1.2.* and *1.3. Instruction manual - INSTALLATION* ⇨ study *chapter 4.2.* ⇨ reduce the fuel quantity ⇨ use fuel with less than 17% of relative moisture ⇨ use fuel as described in *chapter 1.1.* ⇨ reduce the fuel quantity and primary air volume and adjust chimney flue draught
Water leaking from the boiler (boiler condensation)	♦ excessive water flow ♦ fuel too moist ♦ boiler damaged ♦ insufficient fuel quantity ♦ insufficient primary air volume	⇨ reduce the water flow ⇨ use fuel as described in *chapter 1.1.* ⇨ call an authorized maintenance technician ⇨ add more fuel to the firebox ⇨ increase primary air volume in accordance with *chapter 4.2.*, check the functionality of the primary air automatic regulator
Cooking temperature too low	♦ insufficient or excessive chimney flue draught ♦ excessive primary air volume ♦ inadequate fuel ♦ too much fuel – combustion difficult ♦ flue gas deflector opened ♦ grate too low during summer period	⇨ adjust the chimney flue draught in accordance with *chapter 1.2. Instruction manual - INSTALLATION* ⇨ reduce primary air volume ⇨ use fuel as described in *chapter 1.1.* ⇨ add less fuel to the firebox ⇨ close the flue gas deflector ⇨ set the grate height as desired
Raising or lowering the grate somewhat difficult	♦ non-combustible material debris between the grate and the boiler (nails and similar) ♦ malformed boiler	⇨ thoroughly clean the non-combustible material debris ⇨ call an authorized maintenance technician
Outlet boiler water does not reach the required temperature	♦ central heating system improperly dimensioned ♦ insufficient fuel quantity ♦ central heating system thermometer does not display the temperature properly	⇨ dimension the central heating system according to professional standards and DIN 4751 norm – part 1 for open systems, i.e. DIN 4751 – part 2 for closed systems ⇨ adjust the water flow in accordance with the boiler thermal possibilities ⇨ add more fuel to the firebox in accordance with *chapter 4.4.2.* ⇨ install functional and approved

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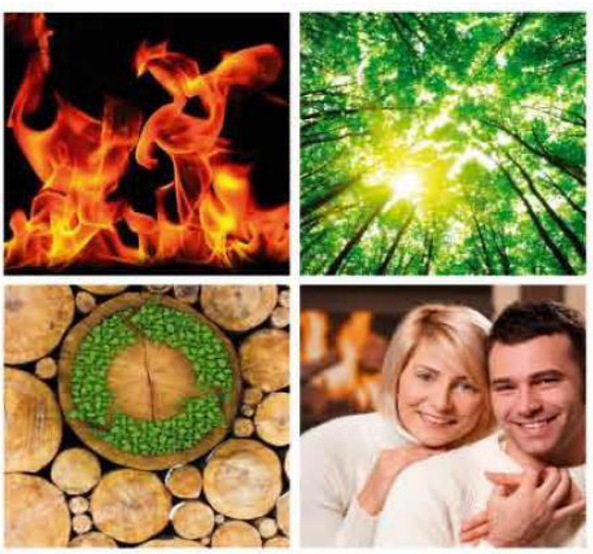

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