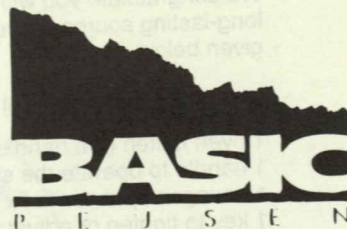


SCAN DSA



**Instructions
for Installation
and use
SCAN, DSA and
BASIC
Woodburning stove**

JULY 1991

GB

KROG IVERSEN & CO. A/S - DK- 5492 VISSENBJERG

Instructions for Installation and Use

We congratulate you with your new woodburning stove. Your new stove will be a long-lasting source of great pleasure to you, if you follow the instructions and advice given below.

In a SCAN stove you will find a service packet containing the following items:

- 1 oven mitten (the handles get hot at max. output of 8-11 kW)
- 1 handle to operate the shaking grate (ash grate)
- 1 hexagon spanner to fix the stove's flue collar
- 1 key to tighten or adjust the handles
- 1 spray lacquer
- 1 flue collar
- 2 hangers for accessories (only SCAN 12, 13, 15, 22 and 23)

Instructions for installation incl. certificate of guarantee (please fill it in and return it to Krog Iversen & Co A/S).

In a DSA or BASIC stove the service packet will contain the following items:

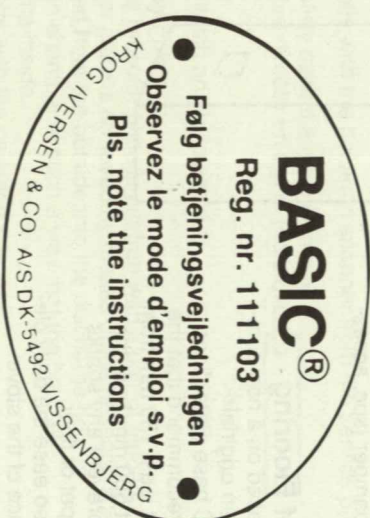
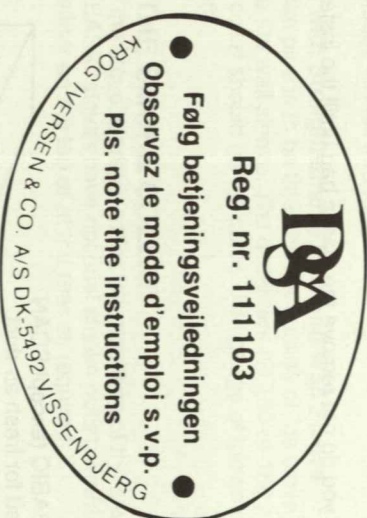
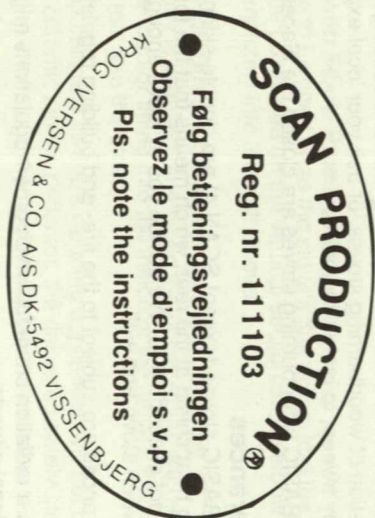
- 1 oven mitten (the handles get hot at max. output of 8-11 kW)
- 3 hexagon spanners (3, 4 and 6 mm)
- 1 spray lacquer
- 1 safety fitting

Instructions for installation incl. certificate of guarantee (please fill it in and return it to Krog Iversen & Co. A/S).

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An original SCAN/DSA or BASIC stove possesses a number plate with registration number. In case of complaints we have to be informed of the registration number.



INSTALLATION

Before the Stove is Connected to the Chimney

Contact your local authorities to obtain the existing fire- and building regulations regarding the installation of woodburning stoves, or ask your local experts in that field, e.g. the chimney sweep, to install your stove.

All SCAN, DSA and BASIC woodburning stoves are closed fire places.

Installation Clearances

All SCAN, DSA and BASIC stoves (except SCAN 4) are double-skinned convection stoves with insulating heat shield at the rear, which means that the temperature at the rear of the stove will not exceed 70° C. We advise you to leave enough room to enable cleaning between stove and wall.

The installation clearances are subject to the fire- and building regulations which must be observed.

The SCAN 4 stove is a radiation stove for which other regulations might apply. Please consult your local experts.

Safety cap

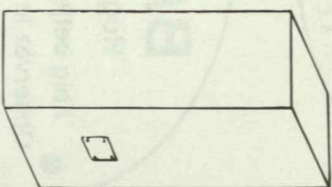
We recommend that you do not remove the plastic bag until the installation has been completed.

Fresh Air Duct

All SCAN/DSA and BASIC (except SCAN 4) stoves are prepared for fresh air duct. The cover plate at the rear of the stove may be removed and replaced by the con- nection branch with damper (spc. acces- sories).

Requirements of Flooring

The stove is to be placed on a non-com- bustible surface, i.e. an original SCAN/DSA or BASIC base plate, floor tiles, or the like. We recommend that the base plate extends at least 150 mm from the sides and at least 500 mm from the front of the stove to prevent any sparks from ruining your carpet or floor. The floor plate will also ease the daily cle- aning and maintenance of the stove.



Demount cover plate.



Mount fresh air duct.

Connection to Chimney

Sometimes it might be necessary to obtain permission to connect your stove to the chimney if other stoves are already connected. The stove should not be connected to a chimney of which the inside diameter is smaller than that of the flue collar. The sto- ve can be connected in the following ways:

Top Discharge with Elbow Pipe and Wall Sleeve

The elbow pipe is to be fitted on to the stove's flue collar, and the cleanout door of the elbow pipe is to be positioned on the vertical section of the elbow pipe. The elbow pipe has to fit completely into the wall sleeve.

Top Discharge with Direct Connection to Steel Chimney

If the steel chimney is installed directly on top of the stove, we recommend the use of connecting piece/adaptor fitting into the inside of the stove's smoke collar to lead condensate and rain into the stove.

Ensure that the chimney sweep's cleaning appliances will not get into the stove and damage the ceramic smoke deflector, the delivered safety steel brace should be attached across the inside of the smoke collar when mounting same.

After the chimney has been swept, the ceramic smoke deflector should be tipped so that any soot residues will fall into the stove.

Rear Discharge with Straight smoke Pipe and Wall Sleeve

The straight smoke pipe is to be fitted on the outside of the stove's smoke collar and fit completely into the wall sleeve. The diameters (\varnothing 150 or 180 mm) of the smoke pipe and smoke collar should be the same. The gauge of the smoke pipe should not be less than 2 mm.

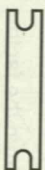
FITTING OF THE SMOKE COLLAR

From the factory the stove is prepared for top-mounting of the smoke collar, but all SCAN/DSA and BASIC stoves have optional smoke outlet, wherefore the smoke col- lar can be fitted either on the top or at the rear as required.

Top Discharge

1. The flue collar is fitted into the hole of the top plate in such a way that the bracket is located under the top plate of the stove.
2. Tighten the bolts with the hexagon spanner from the service packet.

Remember safety plate if a steel chimney is to be mounted directly on top of the stove.

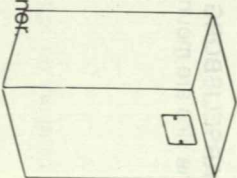


Safety plate

Rear Discharge

Please refer to sketch and below text.

1. Remove the rear plate.
2. The hole in the reflector plate is cut free with a pair of nippers.
3. The inner cover plate is removed by means of the hexagon spanner.
4. The flue is fitted from the outside into the discharge hole of the combustion chamber in such a way that the bracket is located on the inside.



5. Cooking rings can be placed in the hole in the top plate (extra accessory).
6. By SCAN 11, 12, and 13, the rear plate must implicitly be placed in the opening on the top of the stove and the special cover plate for SCAN 12 and 13 is then placed.

MOUNTING OF TILES

SCAN 9, 9H, 14, 14H and 19 - DSA - Kronborg

1. Adjust the springs in vertical position.
2. Fit the tile into the upper frame.
3. Push the tile against the spring (the tile should not touch the frame before the right position has been obtained).
4. Fit the tile into the lower frame.
5. Fit the next tiles close to the first.

The tiles are pushed outwards and fixed by means of the spring which can be bent in order to increase or reduce the spring pressure.

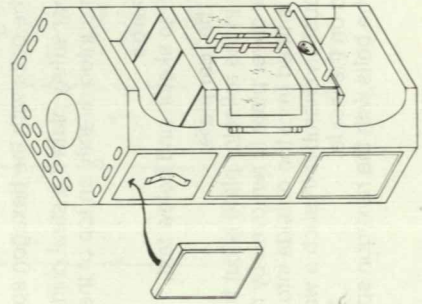
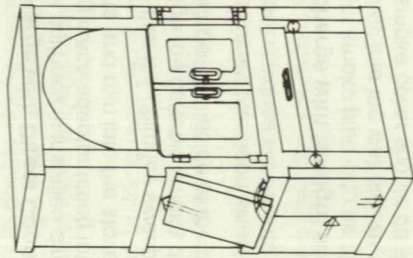
SCAN 1-7

Before the tiles are mounted, the two cover plates at the rear of the stove should be removed. The tiles are fitted according to the above instructions. The cover plates are mounted.

Please note that the top, middle and bottom tiles have different dimensions.

MARSELISBORG 1

The tiles are mounted from the factory.



SCAN 11 AND 13 K

SCAN 11/13K are delivered with two metal nets, which are placed loosely on the top of the stove. The two nets are different whether the stove is to be mounted with top or rear discharge. Sketch (3) shows net used with rear discharge and sketch 4 shows net used with top discharge.

MOUNTING OF SCAN 11 AND 13K TILES

1. Push the tile under the front edge of the stove.
2. Push the tile against the spring and under the rear edge; without the tile touching the stove.
3. Let go carefully of the tile. The spring will push the tile into the right position.

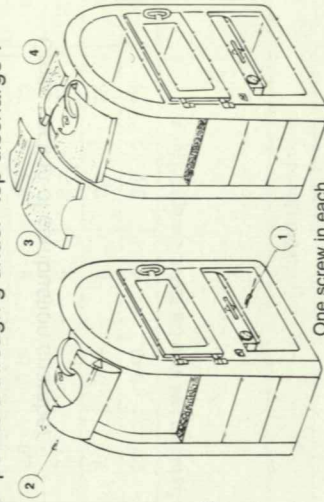
MOUNTING SUCCESSION

Top discharge

- a. Smoke collar and smoke pipe is mounted according to instructions.
- b. The metal net is placed (4).
- c. The two top tiles (2) are mounted.
- d. The other two, semi-circular, tiles are mounted next to the first two tiles.
- e. The bottom springs are placed in horizontal position.
- f. The balance of the tiles are mounted.
- g. Tighten the tiles by means of the screws (1) in the wood compartment and enclosed keys. The tiles must stay movable!

Rear discharge

- a. The rear cover plate is fastened at the top of the stove.
- b. The metal net is placed (3).
- c. Follow hereafter points d through g under "top discharge".



The four curved tiles are all alike with rear discharge.

One screw in each side of the stove for fastening of the tiles.

Demounting/mounting of frame for SCAN 20 side glass:

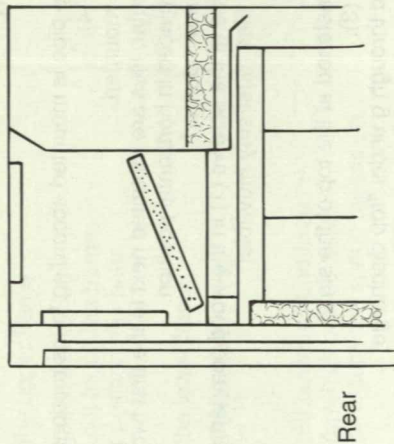
- Demounting:**
- Push the frame up vertically. The two lower fittings, on the inside of the frame, are hereby disengaged.
 - Pull the lower part of the frame slightly.
 - Remove the frame.

Mounting:

- Place the frame with the guiding plate for the glass downwards.
- Push the top of the frame inwards and engage the top fittings.
- The entire frame is pushed in and guided to the right position.

Mounting of the ceramic smoke deflector:

A ceramic smoke deflector is enclosed with all SCAN, DSA and BASIC stoves. The smoke deflector should be placed symmetrically in the stove, i.e. with even amounts of free air/space on each side.



Cross section of combustion chamber

INSTRUCTIONS FOR USE

Type and amount of fuel

SCAN	With closed doors						Lignite briquettes		
	Flue Ø mm	Amount of fuel kg	Chimney draught min. mbar	Nominal out-put kW	Fuel consump- tion kg/h	Effici- ency ≥ i %	Max. out-put kW	Fuel consump- tion kg/h	Average effici- ency ≥ i %
1	180	3,2	0,15	10	3,7	70	10	2,5	72
2	180	3,2	0,15	10	3,7	70	10	2,5	72
4	150	2,3	0,15	7	2,8	74	7	1,8	74
7	150	2,1	0,14	8	2,8	72	7	2,3	71
8	150	3,2	0,14	8	2,8	72	7	2,3	71
9	150	2,6	0,14	9	3,1	73	9	2,2	75
9/H	150	2,4	0,15	9	2,8	71	9	2,2	75
11	150	2,8	0,14	8	2,4	77	9	2,4	77
12	150	2,8	0,14	8	2,4	77	9	2,4	77
13	180	2,8	0,14	8	2,4	77	9	2,4	77
14	150	2,6	0,14	8	2,8	77	9	2,4	77
14/H	150	2,4	0,15	9	2,8	71	9	2,4	77
15	150	2,8	0,14	8	2,4	77	9	2,4	77
19	180	2,6	0,14	9	3,1	73	9	2,3	75
20	150	2,6	0,14	9	3,1	73	9	2,3	75
22	150	2,1	0,13	6	2,0	75	6	1,8	75
23	150	2,1	0,13	6	2,0	75	6	1,8	75

Instruction for wood is based on test from DS 887-1. Except SCAN 4.

Basic	With closed doors						Lignite briquettes		
	Flue Ø mm	Amount of fuel kg	Chimney draught min. mbar	Nominal out-put kW	Fuel consump- tion kg/h	Effici- ency ≥ i %	Max. out-put kW	Fuel consump- tion kg/h	Average effici- ency ≥ i %
1	150	2,2	0,13	7	2,2	78	7	1,8	74
2	150	2,2	0,13	7	2,2	78	7	1,8	74

Instruction for wood is based on tests from DS 887-1.

DSA	With closed doors					Lignite briquettes			
	Flue Ø mm	Amount of fuel kg	Chimney draught min. mbar	Nominal out-put kW	Fuel consump- tion kg/h	Effici- ency ≥ 1 %	Max. out-put kW	Fuel consump- tion kg/h	Average effici- ency ≥ 1 %
Marselsb. 2	150	2,7	0,18	8	2,7	76	9	2,2	75
Marselsb. 1	180	2,7	0,18	8	2,7	76	9	2,2	75
Kronborg	180	3,2	0,17	10	3,2	77	11	3,2	76
Maestro	180	3,2	0,17	10	3,2	77	11	3,2	76
Brandenb. 1-2	180	3,2	0,17	11	3,2	77	12	3,2	76
La Luna 1-2	150	2,8	0,16	9	2,8	77	16	2,8	76
Rosenborg	150	2,8	0,16	8	2,8	78	9	2,8	77
Amalienborg	180	3,2	0,17	11	3,2	76	12	3,2	75

Instruction for wood is based from DS 887-1. Except SCAN 4.

First lighting

The paint will harden the first time the stove is used. This will result in a burned smell, which, however, disappears again when the room is thoroughly aired. It is recommended to open doors and windows to ensure a good draught.

Handling of wood

To avoid environmental problems and to secure the best economy it is recommended to cut the wood in the lengths given by the factory. Wood with a diameter greater than six cm should be chopped. The wood should, after chopping, be stowed for one to two years before use - a dry place with a good draught is the best. If the wood is humid a large part of the heat is used to evaporate the water - and the heat disappears through the chimney. It is not only uneconomical to use humid wood, it does also increase the risk for smoke, tarry soot and pollution.

The stove is tested for burning of wood and lignite briquettes. One should only use wood with a humidity of less than 21% and with a size that fits the individual combustion chamber, i.e. the wood should have a length that is 60 mm less than the cross section measurement of the combustion chamber and with a circumference of 20-30 cm. The weight should be abt. 700 g.

If another kind of fuel is used, e.g. coal, coke, etc. you will have to use a cast iron grate (special accessory) in your stove. Otherwise the guarantee will no longer be valid.

Amounts of fuel exceeding the specifications in the table will make the stove give off more heat than it is constructed for, thus increasing the chimney temperature and reducing the efficiency. This may damage the stove and the chimney.

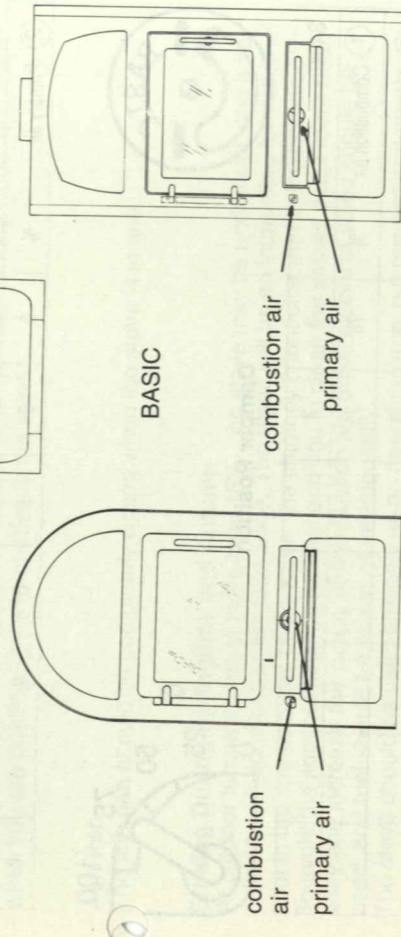
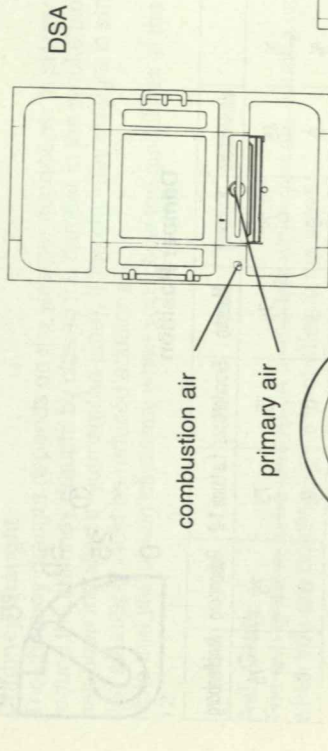
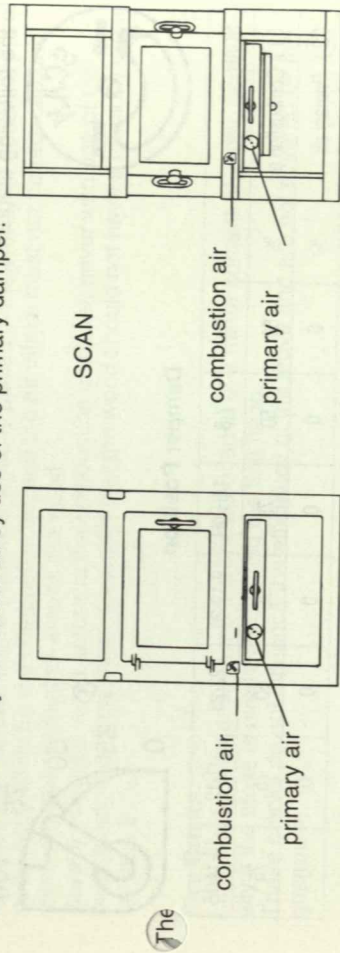
Correct use of wood

Correct stoking results in invisible smoke, optimal heating and lower risk for a chimney fire.

Incorrect stoking results in visible smoke which may cause discomfort to eyes and respiratory passages.

Lignite briquettes

The combustion may be controlled by use of the primary damper.



BASIC 1

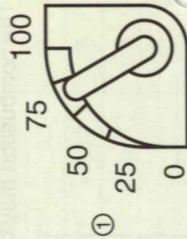
BASIC 2

LIGHTING AND STOKING

For lighting use pieces of crumpled paper (newsprint) and/or other firelighters, which are placed on the grate in the bottom of the combustion chamber. Then place about two kg wood (small pieces) on top of the paper.

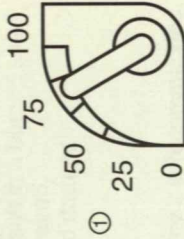
The combustion air should be fully opened and the ash pan should be opened 1-2 cm.

Paper and/or firelighters are lighted and the doors are almost completely closed. When the fire has caught on well, after about 10-15 minutes, the stove is ready for the first portion of wood, and the combustion air and primary air are adjusted according to the following diagrams.



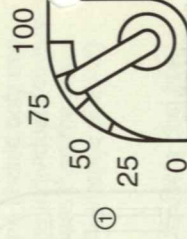
Damper Position

SCAN	1-2	7-8	14H-9H	9-19-20	22-23	11-12	13-14-15
① Combustion air %	50	50	75	75	50	75	75
② Primary air %	0	0	0	0	0	0	0



Damper Position

DSA	Marselisborg	Kronborg	Maestro	Brandenburg	La Luna 1-2	Rosenborg	Amalienborg
① Combustion air %	45	75	75	75	75	75	75
② Primary air %	0	0	0	0	0	0	0



Damper Position

BASIC	1	2
① Combustion air %	75	75
② Primary air %	0	0

Room ventilation:

During the combustion, oxygen taken from the room air is used. To get sufficient air for the combustion, leave the windows half open in well insulated rooms or have a fresh-air intake installed in the outer wall that might be connected to the fresh-air duct of the stove.

Soot free glasses:

The stove is constructed to keep the glasses clean when the combustion air intake is fully opened. The more one closes for the combustion air the greater the risk for sooty glasses. Whenever a new portion of wood is placed in the stove it is necessary to open completely for the combustion air, and the air intake must not be reduced until there are clear flames all around the wood.

Always place the wood across in the combustion chamber, never with one of the ends facing the glass. Also remember that the wood should not have a humidity greater than 21%.

Fire Bricks

Little cracks may arise in the fire bricks because of a minor content of water, especially if the stove is overheated during the first firing.

These cracks do not influence the efficiency of the stove and are not covered by the guarantee.

Chimney Draught

The chimney draught depends on the weather conditions. In stormy weather you may reduce the chimney draught by closing the damper in the smoke pipe (if a damper has been installed in your smoke pipe). If the chimney draught is strong, the combustion air supply must be reduced additionally.

Note that you obtain efficiency when you follow the guidelines in the diagram on page 12.

Ash Grate

The ash grate is to be closed on all models when you are burning wood, and open when you are burning lignite briquettes in the stove.

Ash Pan

The ash pan should be completely closed when the stove is in use.

Stoking During Springtime and Autumn

At outdoor temperatures of more than 15°C, the stove may be underfired, and a so-called "cold" combustion will take place. The result will be an increasing formation of soot in the smoke ducts of the stove, the chimney connector, and in the chimney.

To avoid the soot buildup, we recommend you to clean the smoke ducts more frequently and increase the supply of combustion air. Small pieces of wood should be used, and fuel should be added more frequently.

The stove should be used primarily as an open fireplace, but remember a spark guard.

Cleaning:

Be careful when you empty the stove for ash. There may be glows left as long as 24 hours after the stove was last used. We recommend that you use an original ash bin (accessory). The ash may, when it is cold, be placed in a garbage bag.

Open Fireplace:

If the stove is used as an open fireplace with open doors, you must use an (original) spark guard of wiremesh or glass (special accessories).

If you leave the room in which the stove is installed, for a shorter or longer period of time, remember to close the doors of the stove.

Burning with open doors reduces the efficiency.

MAINTENANCE INSTRUCTIONS

Lacquered surface:

The stove is cleaned with a moist cloth. Spray lacquer is available for repair of possible damages/scratches. Your dealer has the right spray in the right colour. As there may be minor colour differences it is recommended to repair larger areas with natural borders.

You will get the best result if the stove is repaired while it is warm (remember a good airing during the repair).

A possible change of colour to gray is caused by over-firing, i.e. you have used more wood than layed down in the diagrams on page 9 and 10.

Cleaning of glass:

By burning wet wood or lighting with closed dampers the doors may become more or less sooty.

The glasses are however easily cleaned by use of a special cleaning fluid which is available at your dealer.

Doors:

All doors are tightened with a special string made from ceramic fibres. These strings may be replaced.

All models with sliding doors are equipped with replaceable steel bands in the sides.

Adjustment of Doors SCAN stoves:

The doors of the models SCAN 4, 11, 12, 13, 14, 14H, 15, and 20 can be adjusted towards the stove if the fixing screw B is loosened by turning it halfway round, and the screw A is tightened with a hexagon spanner. Remember to fasten the screw B again (ref. drawing A on page 15).

Replacement of Square Doors, SCAN Stoves:

The screw A is loosened, and the screw B is unscrewed. The door is pulled off the hinge C, which is to remain on the stove. A complete new door is mounted by repeating the procedure in reverse order (ref. drawing A below).

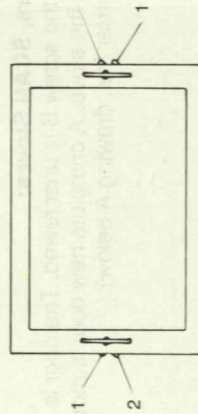
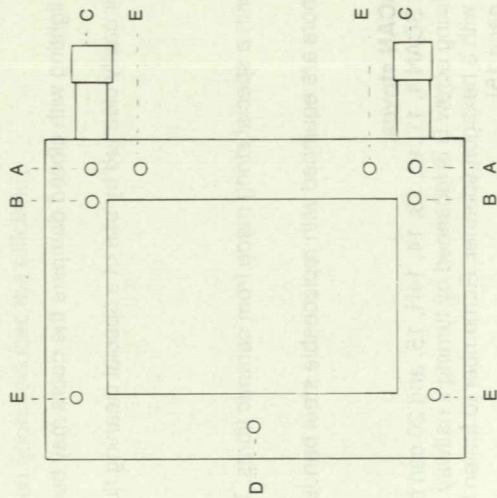
Adjustment of handles, SCAN stoves:

The vertical position of the handles on models 4, 11, 12, 13, 14, 14H, 15, and 20 may be adjusted by loosening screw D and turning the ring underneath. Remember to fasten the screw again.

The handles on models 9, 9H, 19, 22, and 23 may likewise be adjusted by use of a allen key.

Replacement of glass, SCAN stoves:

The outer frame is removed by dismantling the handle and the 4 nuts E.



DISMOUNTING/MOUNTING OF SCAN 1, 2, 7, 8 DOORS

Tools:

- A 2,5 mm hexagon spanner (included in the service packet).

Dismounting:

- Close the door.
- Set the handles in closed position (vertically).
- Loosen both screws marked 1 (fig. A) by means of the hexagon spanner (approx. 3,5 turns of the screw).
- Set the handles in horizontal position.
- Remove the door.

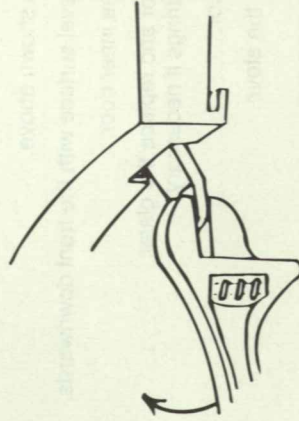
Mounting:

- Replace the door.
- Set the handles in closed position (vertically).
Check that the door has been placed correctly and that the closing pawls at top and bottom of the door are placed in their respective grooves.
- Fasten the screws marked 1 (fig. B).
- Set the handles in open position.
- Check that the door can slide from one side to another.

The screws marked 2 (fig. B) are intended for the adjustment of the vertical position of the handles.

Adjustment of closing pawls on SCAN 1, 2, 7, 8 doors:

Dismount the door and place the handle in closed position. Take a monkey wrench and pull the pawls as shown below. Remount the door. Repeat the procedure if the adjustment is insufficient.



Dismounting/mounting of doors, DSA/BASIC stoves:

1. Close the door.
2. Loosen the allen screw 1.
3. Carefully open the door.
4. The middle post is removed from the hinge tube.
5. Remove the door.

Remounting in the reverse order:

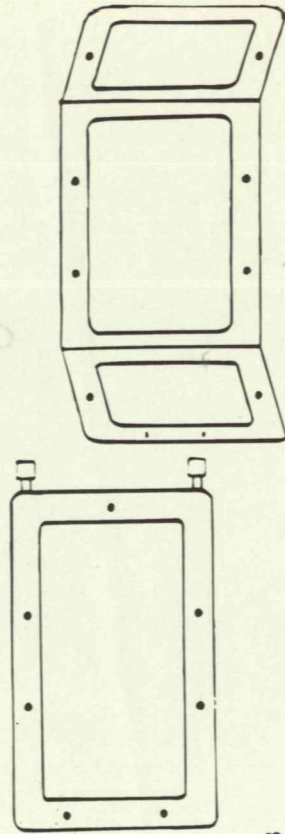
Make sure that the spring is placed correctly in the middle post.

Adjustment of self closing hinges, DSA/BASIC stoves:

1. Close the door.
Loosen the allen screw (1) with the enclosed 3 mm key.
2. Turn the hinge pin (2) anticlockwise with the enclosed 6 mm key
- maximum to full rotations.
3. Fasten the allen screw (1) again.

Replacement of glass, DSA/BASIC stoves:

1. Dismount the door as shown above.
2. Place the door on a level surface with the front downwards.
3. Remove all nuts on the inner door.
4. Remove the inner door and replace the glass.
Change the sealing strings if necessary.
5. Remount the inner door.
6. Remount the door on the stove.



Error possibilities:

Smoke:

- Insufficient chimney draught!
- Check if the chimney has the right dimension.
- Check if the smoke pipe or chimney is blocked.
- Check if the chimney has the right height compared to the surroundings.
- If the above is ok the chimney draught may be increased by decreasing the smoke deflector plate. Maximum 2 cm at a time.

The wood burns too fast:

- Are the air valves adjusted correctly?
- Is the smoke deflector plate correctly placed?

Sootend glass:

- Is the combustion air damper adjusted according to directions?
- Is the wood dry?

Sootend chimney:

- Incorrect combustion!
- Is the wood dry?

The shaking grate is stock:

- Check if a piece of wood, a pin or something similar is stock.
- Is the bar correctly placed/mounted?

The stove's surface turns gray:

- Over heating.
Please refer to maintenance instructions "lacquered surface".

The stove does not heat:
- Use of moist wood.
- The energy is used to dry the wood.

