



SCAN



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02/99

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

## INSTRUCTIONS FOR INSTALLATION

Congratulations on your new wood burning stove. We are confident that you will enjoy your new stove, especially if you follow the instructions and advice given below.

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

In the SCAN/DSA-stove you will find the following:

- 1 oven mitten
- 1 handle to operate the shaking grate
- Fitting for the flue collar
- 1 set of screws and hexagon spanners
- Fire lighters for the first lighting
- Plastic coverings for the transport holes in the wood compartment

### Before the Stove is Connected to the Chimney:

Contact your local authorities to obtain the existing fire- and building regulations regarding the installation of wood burning stoves, or ask your local experts in that field, e.g., the chimney sweep, to install your stove. All SCAN and DSA wood burning stoves are closed fire places. We recommend that you do not remove the plastic bag until the installation has been completed.

### Installation Clearances:

All SCAN and DSA stoves (except SCAN 4) are double-skinned convection stoves with an insulation 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.

### Security Distances:

The SCAN- and DSA-stoves are double-skinned convection stoves which means that the temperature at the rear of the stove is reduced. This makes it possible to place your stove next to non-combustible materials without any distance needed. However, we recommend that you leave enough space in order to facilitate the cleaning at the rear of the stove.

If the stove is to be placed at a wall of combustible material, we recommend a min. security distance of 20 cm. However, you should always consult your local rules.

### Fresh Air Duct:

Most of the SCAN stoves are prepared for fresh air duct. The cover plate at the rear of the stove may be removed and replaced by the connection branch with damper (spec. accessories) which is mounted by means of the three delivered self-tapping screws.

### Requirements of Flooring:

The stove is to be placed on a noncombustible surface, e.g., an original SCAN/DSA 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 cleaning and maintenance of the stove.

### Transport Safety/SCAN 29:

Do not forget to remove the transport safety screw on the rear of the stove before mounting the stove.

### SCAN 29 and 30:

Please note that SCAN 29 and 30 must stand 100% vertically because of the counterweights.

## CONNECTION TO THE 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 flue pipes must be at least 2 mm thick and we recommend the use of a damper.

From the factory the stove is prepared for top-mounting of the smoke collar, but all SCAN/DSA stoves (except SCAN 27) have an optional smoke outlet, wherefore the smoke collar can be fitted either on the top or at the rear as required.

### Top Discharge:

1. Turn the flue collar around and fix the brackets under the top plate (see sketch I on the last page of the manual).
2. Tighten the two screws with the delivered hexagon spanner (tighten well).

SCAN 27 is prepared for top flue outlet from the factory.

### ARTIST with Top Discharge:

1. Remove the steel top plate.
2. Place the plate on a stable surface, the top pointing upwards.
3. Knock the stamped steel plate (Ø 180 mm) out with a hammer.

### Rear Discharge (except SCAN 27):

1. Remove the cover plate on the rear of the stove.
2. The inner cover plate is removed by means of the hexagon spanner.
3. The flue collar 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 (see sketch I on the last page of the manual).
4. Place the cooking ring in the hole of the top plate.
5. For stoves with curved top plate, place the curved plate (accessory) on the stove.

## MOUNTING POSSIBILITIES

### Top Discharge with Elbow Pipe and Wall Sleeve:

The elbow pipe is to be fitted on to the stove's collar, and the clean out 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 (but not into the chimney).

### 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 a connection piece/adaptor fitting into the inside of the stove's smoke collar to lead condensate and rain into the stove, instead of on the top plate.

### Rear Discharge with Straight Smoke Pipe and Wall Sleeve:

The straight smoke pipe is to be mounted on the outside of the stove's smoke collar and fit completely into the wall sleeve (but not into the chimney).

## MOUNTING OF THE CERAMIC SMOKE DEFLECTOR

A ceramic smoke deflector is delivered with all SCAN and DSA-stoves. Place the smoke deflector plate according to sketch I/3 on the last page of the manual; make sure that it is placed symmetrically in the stove, i.e., with even amounts of free airspace on each side.

## MOUNTING OF TILES

We refer to the instructions delivered together with the tiles.

## TYPE AND AMOUNT OF FUEL

With closed doors					
Stove model SCAN	Beech wood with max. 20% humidity		Lignite briquettes		Chimney draught Pa 1)
	Nominal out put kW	Amount of fuel kg/h	Nominal out put kW	Amount of fuel kg/h	
3/3 K	9	3,2	9	2,2	15
4	7	2,6	6	2,2	13
5/5 K	7	2,3	7	1,8	15
11	7	2,4	7,5	1,9	14
12	7	2,4	7,5	1,9	14
20	6	2,4	-	-	14
22	6	2,2	7	1,8	12
24/24 K	6	1,8	6	1,5	11
26/26 K	9	3,1	-	-	14
27	8	2,4	8	2	12
28/28 K	7	2,4	-	-	16
29/29 K	7	2,4	-	-	14
30	7	2,1	7	2,1	15
31/31 K	7	2,1	7	2,3	13
32/32 K	8	2,4	-	-	15
34/34 K	8	2,4	-	-	13

With closed doors						
Stove model DSA	Type	Beech wood with max. 20% humidity		Lignite briquettes		Chimney draught Pa 1)
		Nominal out put kW	Amount of fuel kg/h	Nominal out put kW	Amount of fuel kg/h	
Maestro	D	10	3,2	11	3,2	10
Brandenburg 3	G	8	2,6	8	2	15
La Luna	F	8	2,4	-	-	12
Artist	H	11	3,2	-	-	10

1) Minimal chimney draught by nominal out put in Pa.

The nominal out put can differ from language to language depending on different test standards in the individual countries.

## COMBUSTION CHARACTERISTICS OF DIFFERENT WOOD TYPES:

Type of Tree	Combustion value per m <sup>3</sup> (in kWh)	Combustion value per kg (in kWh)	Notes
Beech	2.100	4.0	long, continuous fire
Oak	2.100	4.2	long, continuous fire
Birch	1.900	4.3	nice flame image
Pine and Douglas Larch	1.700	4.4	fast, crackling heat
Spruce	1.500	4.5	fast, crackling heat

## Storage of the Wood:

The correct storage of the wood is one of the main conditions of an environment-conscious combustion. Only hereby are you guaranteed optimal combustion values, and that the nature is not unnecessarily polluted.

- \* The wood should be stored in an airy, sunny, and dry place (ideal: South side)
- \* There should be about a hand's breadth distance between each layer
- \* Poplar and spruce should be stored at least one year before being used as fuel
- \* Lime, alder, and birch should be stored at least one and a half year before being used as fuel
- \* Beech, ash, and fruit tree should be stored at least two years before being used as fuel

## INSTRUCTIONS FOR USE

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 stored for one to two years before use (see also above). 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 also increases 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 20% 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 about 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.

## Hardening of the Stove Paint:

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

## Lighting and Stoking:

For lighting use pieces of crumbled paper (newspaper) and/or fire lighters, which are placed on the grate in the bottom of the combustion chamber. Then place about two kgs 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. For stoves without ash pan, the door should remain slightly open. Paper and/or fire lighters 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.

**Air Valve Position:**

(see sketch II on the last page of the manual)

SCAN model	3/3K 5/5K	4	11/ 12	20	22	24/ 24K	26/ 26K	27	28/ 28K	29/ 29K	30	31/ 31K	32/ 32K	34/ 34K
1) Combust. air %	100	75	75	50	50	75	100	100	75	75	100	100	50	25
2) Primary air %	0	0	0	20	0	20	0	0	0	0	50	0	10	10

DSA model	Maestro	Brandenburg 3	La Luna 1 + 2	Artist
1) Combust. air %	75	75	50	75
2) Primary air %	0	0	25	50

**Stoking:**

Use the amount of fuel previously specified and ensure that the wood has the prescribed size. Do not pack the wood too closely - this is important in order to obtain an optimal airflow the combustion material. Close the door after approx. 2 min.

**Attention!**

Please note that during the first lighting the doors must be kept open (2 cm) for at least two hours so that the ceramic joints do not stick to the oven paint.

**Soot Free Glasses:**

The stove is constructed to keep the glasses clean when the combustion air intake is fully opened. The more you close the combustion air, the greater is 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. Max. humidity 20%.

**Cleaning:**

Be careful when you empty the stove for ashes. 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.

**Room Ventilation:**

During the combustion, oxygen taken from the room air is used. In order to get sufficient air for the combustion, leave the windows half open in well insulated rooms or have a fresh-air intake installed.

**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). If the chimney draught is strong, the combustion air supply must be reduced additionally.

**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.

**Stoking During Spring Time and Autumn:**

At outdoor temperatures of more than 15°C, the stove may be under fired, and a so-called "cold" combustion will take place. The result will be a 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 that you 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.

**Baking Compartment Tiles:**

Never place pastry or the like directly on the baking compartment tiles. These are too hot, and the liquid/fat will be absorbed by the tiles and thus causing nasty marks.

**Log Guard:**

The log guard must not be removed from the stove during the firing! It protects the glass.

**Open Fire Place:**

If the stove is used as an open fire place with open doors, you must use a spark guard of wire mesh or glass. If you leave the room in which the stove is installed, remember to close the doors of the stove.

Burning with open doors reduces the efficiency.

**MAINTENANCE INSTRUCTIONS**

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 grey is caused by over-firing, i.e. you have used more wood than recommended.

**Glazed Tiles:**

We recommend that you always use a dry cloth when cleaning the tiles as moistness worsens the existence of cracks.

**Soap Stone:**

The soap stones are cleaned with fine sandpaper or a dry sponge.

**Gold- or Chromium Doors:**

Always use a dry cloth to clean your gold- or chromium door (or glass cleaner). Please note that you must NEVER use metal cleaner.

**Cleaning of Glass:**

By burning wet wood or lighting with closed dampers, the doors may become sooty. The glasses are however easily cleaned by use of a special cleaning fluid which is available at your dealer.

Or as follows: Dip a moist cloth or old newspaper in the ashes and use this to clean the glass.

Attention! The ashes should not get into contact with your skin! Wipe with a dry cloth. The ceramic door joint must not get wet.

**SCAN 29:**

The stove must be cold.

1. Push the door about ¼ up.
2. Close the door lock at the right (pull the ring forwards).
3. Loosen the two top screws to the left and to the right. Support the door so that it does not fall down.
4. Pivot the door and clean the glass.
5. After cleaning the glass, pivot the door back and fasten the two top screws.
6. Open the door lock. Close the door.

**SCAN 30:**

The stove must be cold.

1. Open the door completely.
2. Loosen the two bottom screws to the left and to the right.
3. Pivot the door upwards from below while supporting it with your hand - do not let it fall. If necessary, you can block the door with a piece of wood while cleaning it.
4. After cleaning the glass, pivot the door back and mount the two bottom screws.
5. Close the door.

**SCAN 30/Lifting Door:**

The wires and the wheels need to be greased with a special lubricant from time to time in order to ensure an impeccable functioning of the door. The lubricant is available at your dealer's. See sketch IV on the last page of the manual.

**Ceramic Packing Cord:**

All SCAN and DSA stoves are equipped with ceramic packing cord to ensure the tightness of the doors and the glasses. This packing cord is a wearing part and must be changed from time to time. Please consult your authorized dealer in this case.

**Ceramic Smoke Deflector:**

We recommend that you treat the ceramic smoke deflector (Skamol) with caution as it is a delicate material (not included in the guarantee). It is extremely heat-resistant.

**MOUNTING/DISMOUNTING OF DOORS**

In general, we recommend that you leave the dismounting of the door to the authorized dealer.

**SCAN Stoves with External Hinges:**

See sketch III on the last page of the manual. Unscrew the screw on the side of the hinge and lift off the door. Mounting of the door is made in reverse order.

**SCAN 20, 27, 28, 29, 30, 31, 32, and ARTIST:**

We recommend that you leave the dismounting of the door to the authorized dealer.

**DSA Doors (except ARTIST):**

See sketch III on the last page of the manual.

1. Close the door.
2. Loosen the screw (1).
3. Carefully open the door.
4. Remove the middle post (2) from the hinge tube.
5. Remove the door.

Mounting is made in reverse order.

**REPLACEMENT OF GLASS:**

Dismount the door and place it on a plane surface with its back upwards. Remove all the screws of the inner frame. Remove the inner door and replace the glass. Change the ceramic packing cord if necessary. Remount the inner frame and remount the door on the stove.

**ADJUSTMENT OF HANDLES**

See sketch III on the last page of the manual. On the models SCAN 3, 5, 22, 24, 26, and 28 the handles can be adjusted into loose handles by loosening the screw opposite the handle. The vertical position of the handle can be adjusted with the other screw.

The DSA stoves are equipped with one screw only for the adjustment of the vertical position.

**TROUBLE SHOOTING**

- |                                 |  |
|---------------------------------|--|
| Smoke:                          | <ul style="list-style-type: none"> <li>- Insufficient chimney draught!</li> <li>- Check if the chimney has the right dimension.</li> <li>- Check if the smoke pipe or chimney is blocked.</li> <li>- Check if the chimney has the right height compared to the surroundings.</li> <li>- If the above is OK, the chimney draught may be increased by decreasing the smoke deflector plate (max. 2 cm at a time).</li> </ul> |
| The wood burns too fast:        | <ul style="list-style-type: none"> <li>- Are the air valves adjusted correctly according to the instructions?</li> <li>- Is the smoke deflector plate placed correctly?</li> </ul>   |
| Sootend glass:                  | <ul style="list-style-type: none"> <li>- Is the combustion air valve adjusted according to the instructions?</li> <li>- Is the wood dry?</li> </ul>  |
| Sootend chimney:                | <ul style="list-style-type: none"> <li>- Incorrect combustion!</li> <li>- Is the wood dry?</li> </ul>  |
| The shaking grate-is stuck:     | <ul style="list-style-type: none"> <li>- Check if a piece of wood, a pin or the like is stuck.</li> <li>- Is the bar placed/mounted correctly?</li> </ul>  |
| The stove's surface turns grey: | <ul style="list-style-type: none"> <li>- Over heating - please refer to maintenance instructions "Surface of the Stove"</li> </ul>   |
| The stove does not heat:        | <ul style="list-style-type: none"> <li>- Use of moist wood. The energy is used to dry the wood.</li> </ul>   |

**GUARANTEE PROVISIONS**

The SCAN and DSA wood burning stoves are subject to a strict quality control, before they are shipped to the dealer. However, an error may occur, wherefore we back our SCAN and DSA stoves with a 5 years guarantee.

**The Guarantee Does NOT Cover:**

- Wearing parts, fire bricks, smoke deflector, glass, tiles, ceramic packing cord, and shaking grate.
- Damages caused by incorrect installation or use.
- Transport expenses in connection with guarantee repairs.
- Dismounting/mounting in connection with guarantee repairs.

The guarantee is valid only on showing an invoice from an authorized dealer.