

# USER'S MANUAL

## FJORDA



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The operating instructions reflect the current technical specifications at the time of the print.

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## **Warnings!!!**

**STAFF AND SERVICE PERSONNEL HAVE TO READ THIS MANUAL BEFORE USING THE CABINET.**

**All dangerous parts are located outside the service area. Access to this area is only allowed for staff and qualified engineers.**

### **Warning Labels:**

It is not allowed to remove any labels attached to the cabinet for instruction or safety.

The following labels are used:



follow  
instructions



attention  
danger



moving parts  
danger



hot surface  
danger



shock  
hazard

**Moving parts:** Fan assemblies below bottom shelves. Risk of injuries in case of contact. Hair and clothes might be caught by the fan.

**Burning risk:** Electrical Defrost Element, located below bottom shelves. Temperature of the element during the defrost cycle can increase to a high degree. Risk of burning in case of direct contact.

**Shock hazard:** Electrical parts are located below the bottom shelves. Fan motors, defrost element, solenoid and control valves. Shelf lighting or fan plate assemblies may cause shocks when working in the interior of the cabinet.

**Always switch off the electric power when work is carried out at the interior.**

**The switchbox is located behind the kick plate.**

**It is not allowed to open the switchbox. This may only be done by qualified engineers.**

## Cleaning:

Before you start to clean the cabinet make sure that the power supply is switched off.

Based on the product order specification a service switch is located behind the kick plate/front panel of each cabinet section. If there is no service switch, switch off the electrical current by using the switch located in the central fuse box in the shop.

For cleaning instructions see chapter [3 Cleaning and maintenance](#).



spray water  
prohibited

### In all events:

- Do not spray water in the interior of the cabinet.
- Do not spray water at the fan assembly and the switchbox/control panel

### Field connections:

All connections on the cabinet, such as electricity, drainage and coolant pipes, must be carried out by qualified engineers. Commissioning should also be done by qualified engineers.

NB. In conformance with the European PED guidelines, the built-in evaporators are compressed and tested with nitrogen and supplied with a slight of overpressure.

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# 1 Introduction.

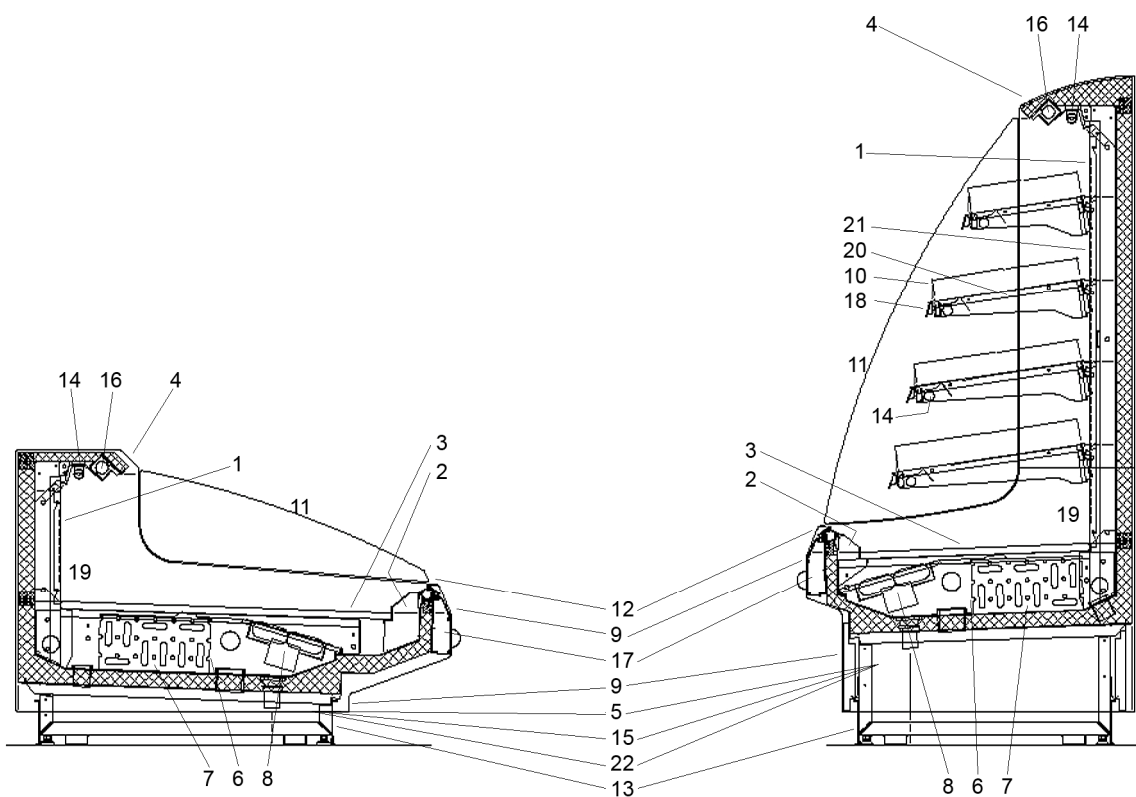
Congratulations on your decision to purchase the Fjorda self-service cabinet from Smeva. The name Smeva is your guarantee of quality and reliability.

The Fjorda is a vertical refrigerated display cabinet, characterises by a wide variety of versions. The cabinet is designed to display cold prepacked goods. And is not designed to cool down goods.

This cabinet meets the highest requirements. This does not mean that the cabinet does not has to be treated and maintained properly. This manual can help you do this.

A troubleshooting list for minor malfunctions that are easily rectified is also included. See chapter 6 Minor Malfunction List.

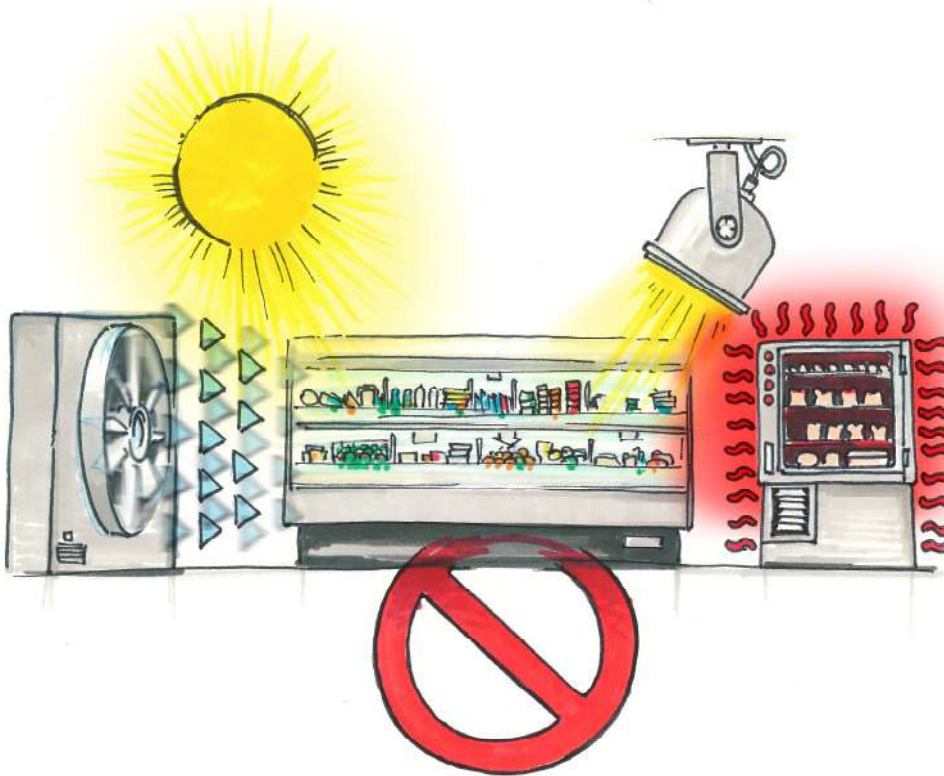
For more serious faults and/or defects in the cabinet contact your Smeva dealer.



- |                              |                                     |
|------------------------------|-------------------------------------|
| 1 air discharge plate        | 12 nose                             |
| 2 air return                 | 13 kickplate                        |
| 3 bottom shelf               | 14 lighting                         |
| 4 canopy                     | 15 lightswitch                      |
| 5 controlpanel/thermostat    | 16 nightblind                       |
| 6 electrical defrost element | 17 noseprofile                      |
| 7 evaporator coil            | 18 price marking rail/ticket holder |
| 8 fan assembly               | 19 product identification label     |
| 9 front panel                | 20 shelf                            |
| 10 front riser               | 21 shelfrail                        |
| 11 glass panel               | 22 switchbox                        |

## **2 Putting the Cabinet into Service.**

For correct operation of the cabinet, the following instructions should be followed.



### **2.1 External Influences.**

#### **- Avoid placing the cabinet in direct sunlight.**

Thermal radiation can raise the product temperature to an unacceptable level even when the air temperature display in the cabinet shows the required value.

#### **- Keep the lighting intensity in the store as low as possible.**

By this we mean the extra lighting that may shine on the display area from outside the cabinet. No spotlights should therefore be directed at the display area. Moreover, light is one of the main causes of discoloration of fresh meat and other products.

#### **- Avoid placing heat-emitting equipment in the immediate vicinity of the cabinet.**

Discuss this with your installers!

Heat sources include radiators, heaters, ovens, heat-emitting machinery, spotlights, air curtains at entrances.

#### **- Avoid air-disturbing factors, such as air-conditioning units, inlet grilles and fans that will affect the operation of the cabinet.**

Draughts can cause excessive temperature raises.

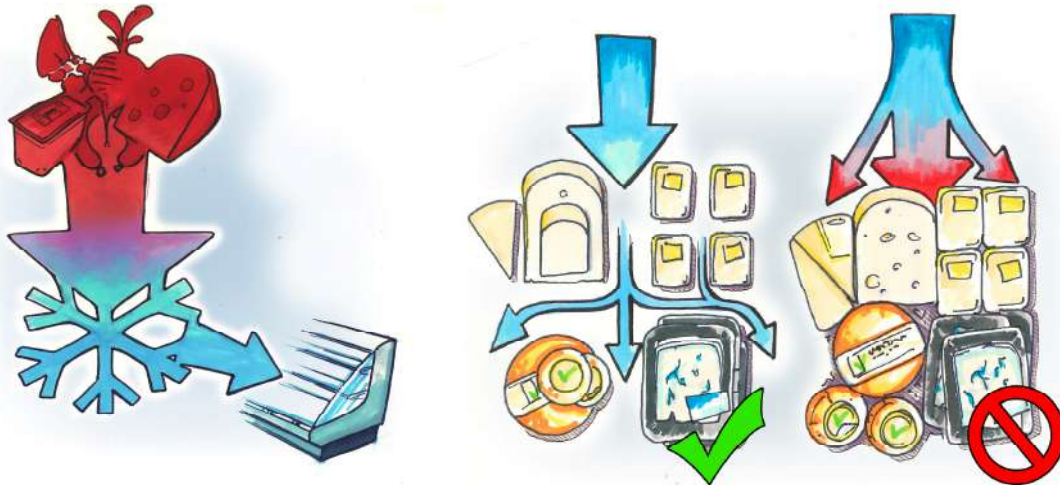
An open-cooled cabinet is sensitive to draughts. Therefore, take care, with air heating and extractor systems. Doors, windows, entrances and exits can also adversely affect the effectiveness of the cabinet by causing draughts.

Take the necessary measures to prevent draughts.

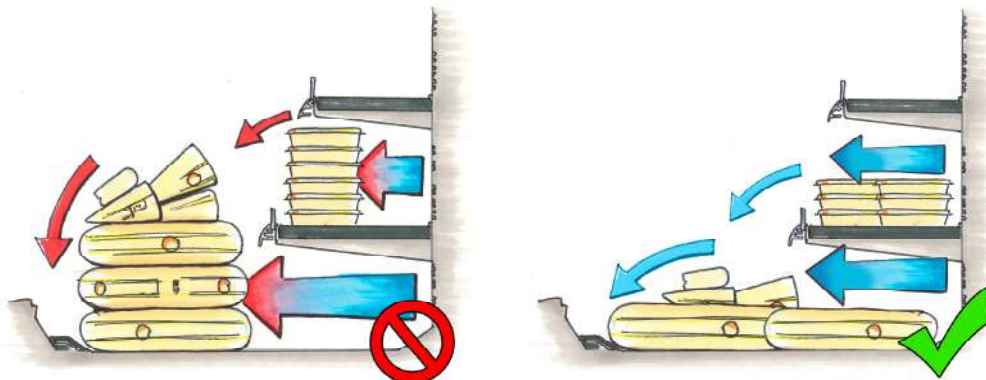
## 2.2 Load Arrangement.

Before start to load the cabinet it must be carefully cleaned and have reached the required temperature. The self-service cabinet is only mentioned for pre-packed goods.

- Make sure that the display is loaded in the right way. Because it can affect the air circulation and temperature.



- Only load the cabinet with pre-cooled goods.  
- Make sure the goods are not stacked too close together. In this way sufficient air circulation around the goods is ensured

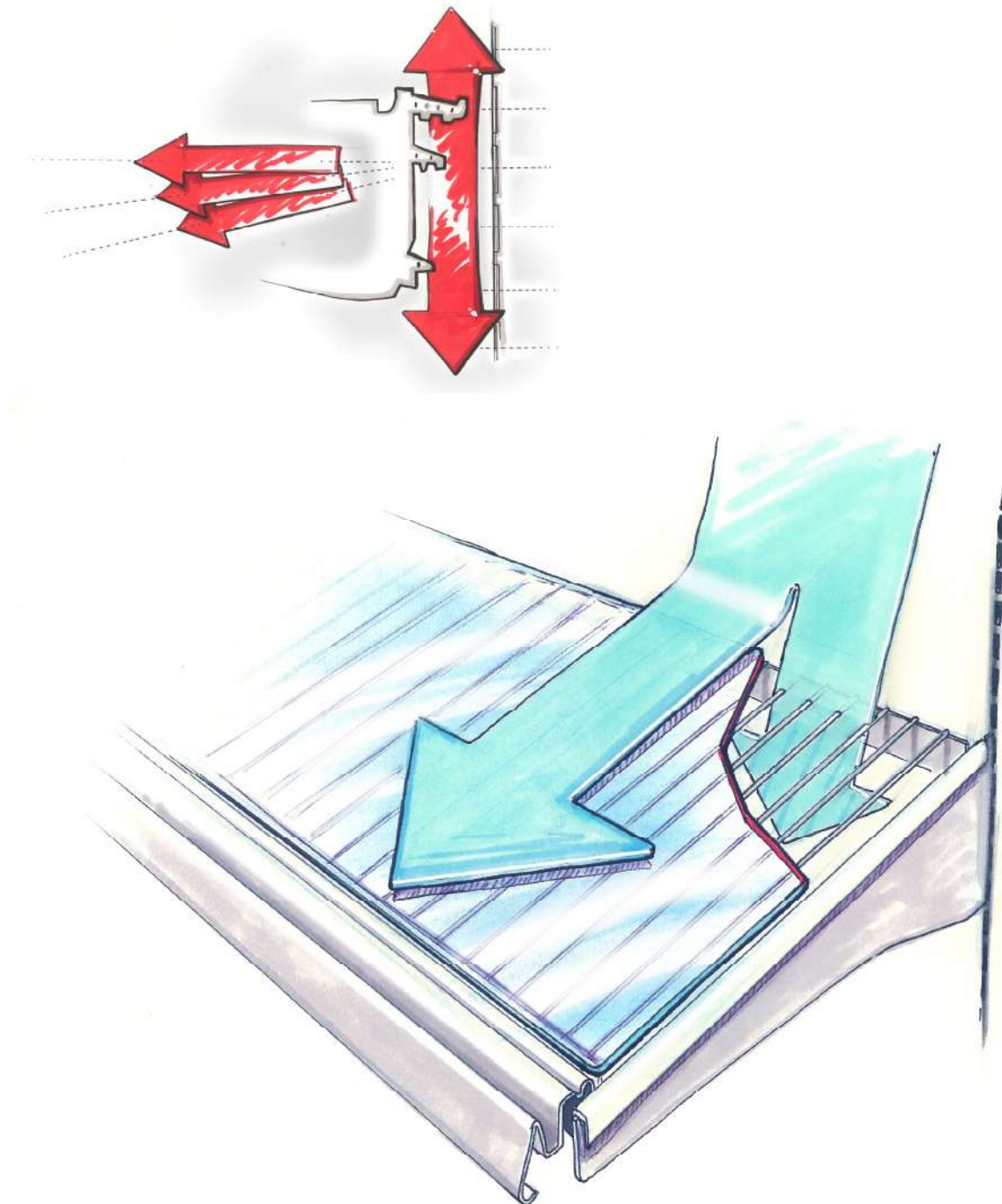


- Respect the maximum load level. If goods are piled up too high the air circulation will be affected as well.  
- Make sure that the goods are not staged in front of the air discharge at the back, neither on top of the air return in the front.  
- Take care that the openings of the inlet grill are not blocked by products, shelves, doilies, etc. This can impede air circulation, which in turn may result in unacceptably high product temperatures!



**- Use of Shelving, Front risers, Price marking rail, Ticket holder, Night blinds.**

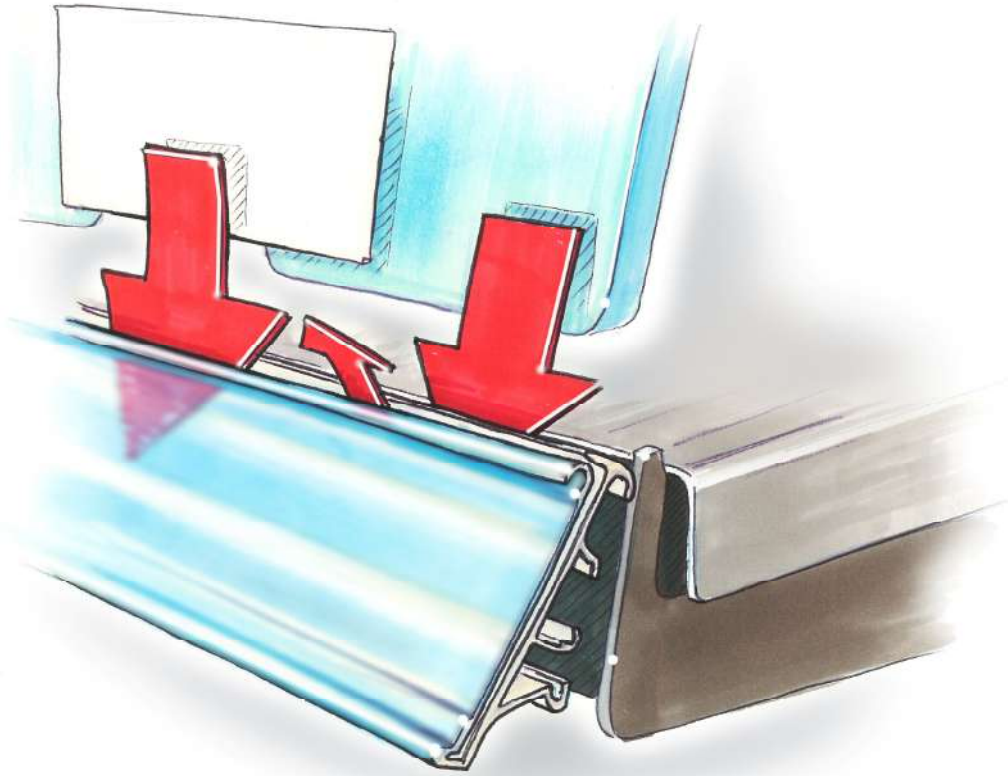
The shelves can be moved in 3 different angles (0°, 7,5°, 15°). They can also be moved up and down the shelf rail. When (re)moving the shelves the lighting plug must be disconnected in advance. The max load for the shelves is 60Kg/m. with reinforcement strip 90Kg/m.



If shelf grid is used a transparent perspex layer is required to distribute the cold air in the correct way.

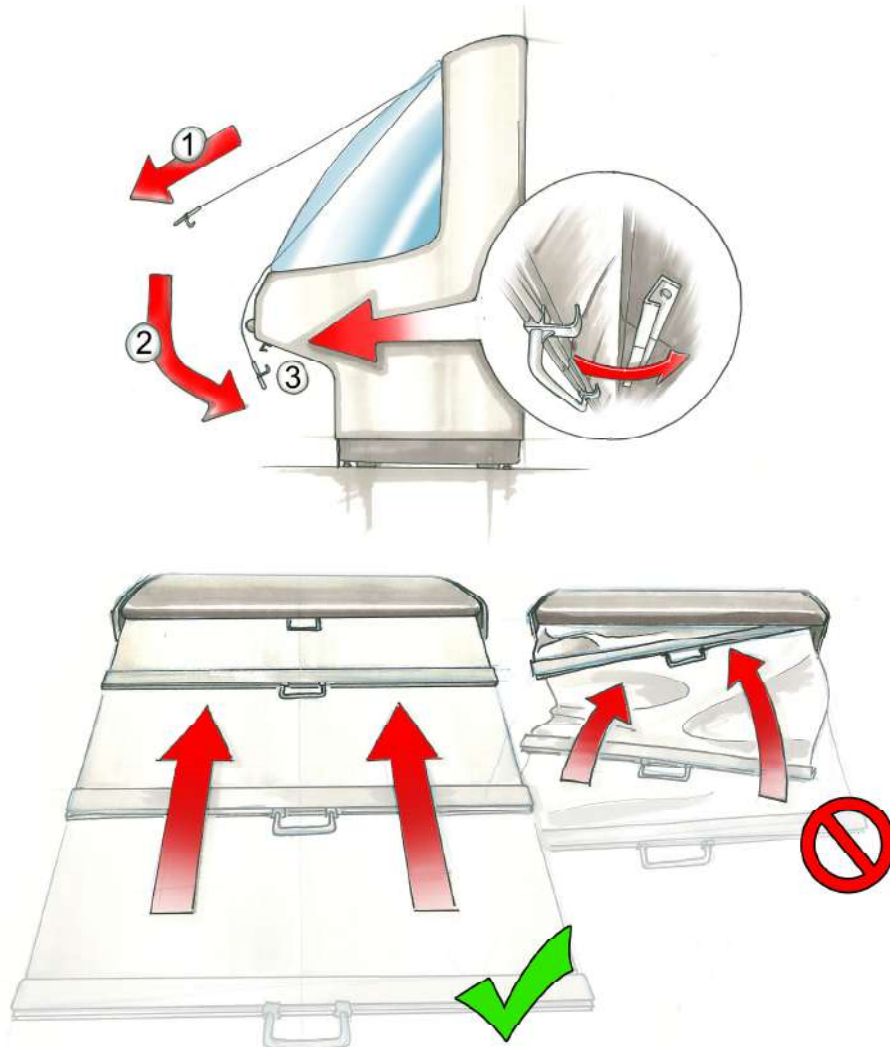
The front riser is a transparent strip at the front of the shelves which keeps the goods in place. If not installed (correctly), goods could fall out of the shelves! The strips have to be put in the slots at the front of the shelves.

To put any kind of labels, prices or consumer information in the price marking rail, the transparent cover can be pulled forward at the top and labels, prices ect. can be slid in.



If the Night blinds are closed, the lights will switch off and an energy saving program will set in. See chapter 2.3 Control panel / Thermostat – Night program.

When the night blind gets pulled out, this has to be done carefully and in a straight motion. First pull the curtain forwards, then downwards and attach it to the hook. To open the night blind unhook the curtain and pull it forwards. Then guide the curtain in a careful, straight motion back in place. This ensures that the night blind winds up equally.



## 2.3 Control panel / Thermostat.

Based on the product order, the cabinet is equipped with a various range of control units, types and fabrics.

Like the service switch, the control unit is located behind the kick plate/front panel of the cabinet section.

For a detailed description and the operation of these control units, see the separate user's manual for the control unit fitted in your cabinet.

### - Temperature settings.

The temperature is normally controlled by the air off temperature. Factory setting Set point at -4 °C. Differential 2 Kelvin.

### **- Night program.**

If the night blinds are closed and the lights are switched off the set point may be raised with 2 Kelvin. The refrigeration system can still generate the right product temperatures with a higher temperature cycle.

### **- Defrost program.**

For low temperature applications (< +2°C) the evaporator coil can be fitted with an electric defrosting element for defrosting the coil.

For higher temperatures the ice will cycle off by the fans only. (with normal store conditions.)

The defrost cycle is started minimum of 4 times each day to defrost the ice on the evaporator coil. The defrost termination probe located in the coil will start up the cooling again if the maximum defrost termination temperature is reached before the end of the set defrost length.

Factory settings; 4 defrost cycles each 24 hours.

Cycle off defrost length 45 minutes. Defrost termination temperature +6°C

Electrical defrost length 30 minutes. Defrost termination temperature +8°C

### **- Thermometer - display.**

The temperature displayed is normally the air off temperature from the evaporator coil. During defrost cycle the temperature will raise for a short period of time.

This will not effect the average temperature off the goods over the entire day.

**N.B. If the cabinet has corners, the length of the cooling element (evaporator) may be shorter than the length of the cabinet, as a result the temperature in the cooled corners may be different from other parts.**

## **2.4 Lighting.** *(if present)*

Tube light T8 and T5 are located in the canopy and/or under the shelves.

To avoid breaking of the tubes and glass fall on to the goods the tubes are guarded by plastic hygienic transparent covers.

The light switch is situated behind the front panel in the left unit section (viewed from the consumer side)

The light switch may have a double function: depending on the controller type a night program starts automatically when the light is switched off. The night mode only works properly when the night blinds are closed.

## **2.5 Connection of Outlets.** *(if present)*

The Fjorda with one presentation level can be fitted with wall sockets (4) for connecting equipment such as scales and cash registers. Designed for a maximum load 230 Volt - 16 Ampere.

Next to the wall socket there is a plastic cover in which a cross can be cut.

The lead from the equipment can be neatly stowed away by folding it double and pressing it inwards through the cross.

### **3 Cleaning Instructions.**

**BEFORE YOU START TO CLEAN OR WORK ON THE CABINET MAKE SURE THAT THE POWERSUPPLY IS SWITCHED OFF!!!**

**Possible shock hazards from shelf lighting, fan plate assemblies etc. may occur if you work in the interior of the cabinet.**

**Based on the product order specification a service switch is located behind the kick plate/front panel of each cabinet section. If there is no service switch, please switch off the electrical current by using the switch located in the central fuse box in the shop.**

The exterior of the cabinet can be cleaned with a damp cloth or with little lukewarm soapy water. Never use aggressive detergents. Ensure that (soapy) water can never run into the switch box behind the kick plate!

The interior can be cleaned with warm soapy water and rinse with plenty of water. Never use aggressive detergents.

If the bottom shelves are moved to clean the base and evaporator area make sure the power is switched off in order to prevent:

- possible shock hazard
- running fans, moving parts
- hot defrost element

In case of cleaning with detergents, always read the instructions of the used product in advance.

### **4 General Maintenance Instructions.**

It is recommended that you have your cabinet inspected by a qualified engineer at least once a year. In addition national regulations may lay down a legally required inspection frequency per year.

During this inspection, attention has to be paid to the setting of the control system and the functioning of the cooling equipment. The cooling circuit is examined for leakage and the fans are inspected. Technical cleaning and removal of dust in the evaporator coil and air circulation system. Cleaning and inspection of the drainage system.

Consult your Smeva dealer regarding maintenance inspections.

### **5 End of lifecycle, Disassembly, Disposal.**

By the development and material choice of the cabinet, a 15 year lifecycle is considered, depending on use and circumstances. The cabinet has a factory warranty of 1 year.

Damage caused by third parties is not covered by the warranty.

Due to abrasion some parts can be replaced during the lifecycle. These are electrical components as control switches, fan motors, tube lighting. External components as price rails, nose profiles, ect.

The cabinet can be handed over for revision of technical elements and appearance.

Refrigerated cabinets decommissioned for disposal must be disposed of in a proper manner. The end user is responsible for ensuring proper disposal by law.

For disposal purposes, distinction is to be made between

- Operating materials/substances (refrigerant and refrigerator oil or coolant)
- The cabinet body materials (metals, plastics, polyurethane foam ect.)
- Electronic parts and light bulbs (controllers, ballast boxes and tube lights)

If a cabinet is getting demolished, all materials/substances have to be transported and disposed by law of local, present, governmental regulations!

For cabinet materials see chapter 8 Technical specifications.

## **6 Minor Malfunction List.**

**This list has been drawn up on the assumption that the cabinet has been functioning normally and that, while being used normally, malfunctions suddenly occur.**

### **6.1 General Failure.**

If all of the functions have failed, check the power supply. Further check the fuses in the group box and in particular the group to which the cabinet is connected. Check that the earth leakage circuit breaker is still switched on. If you cannot find anything wrong, contact your installer!

### **6.2 Partial Failure.**

If only a number of functions on your cabinet are not working and you are unable to rectify this by turning the function in question on and off: **Contact your installer at once!** The installer can, for instance, check the fuses in the cabinet's switch box/control unit and, after rectifying the problem, replace them. Any other faults can also be fixed by a qualified engineer.

**NEVER OPEN THE SWITCH BOX!!! It is live, EVEN when the main switch is in the "off" position.**

### **6.3 Lighting failure.**

If the lighting fails, check the following:

Always turn the power off or disconnect the socket when carrying out one of the following procedures and make sure your hands are dry.

If the fluorescent lamps are glowing red at the ends, start by replacing the STARTER. If this does not solve the problem, replace the lamp. If this has no effect either, contact your installer! If the light intensity is reduced, check whether the ends of the fluorescent lamp are black. If they are, replace the lamp and the starter, as they are worn out. Note the colour of the lamp: the colour number is shown on the lamp.

If the fluorescent lamps need to be changed, it has to be done the same way as with any other type of fixture: turn the lamp including the cover until a distinct "click" is heard and the lamp can then be removed by pulling it downwards.

### **6.4 Ice-Blocked Evaporator.**

Switch the cabinet on manual defrosting. See control panel / thermostat instructions.

If this is not possible, switch of the cabinet for several ours till the evaporator is completely free of ice.

First unload the cabinet because the set cooling temperature can no more be ensured.

If the problem keeps occurring contact a qualified service engineer.

## 7 Product Identification.

To provide you with rapid assistance in the event of questions or defects, your cabinet is equipped with a product identification label. Based on the product order specification, the product identification label is always situated at the bottom left side of the air discharge panel at the back. Should information be required concerning a particular component or if a component is defective, copy the information shown on this label and pass it on to your installer. This will ensure rapid rectification of the problem.

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Nederland

Identificatienummer	0	
Productiedatum	Januari 2012	
Type	Buffer	
Lengte	2	m
Spanning	-240	Voh
Frequentie	50	Hz
Electrisch vermogen meubel	0,05	KWatt
Electrisch vermogen doeling	0,05	KWatt
Overstroombeveiliging	15	A

Class 89/31EEG

Cert.-nummer

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J.F. Kennedylaan 27  
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Nederland

Identificatienummer	0	
Productiedatum	Januari 2012	
Type	Buffer	
Lengte	2	m
Koudemiddel	R607	
Circuitvolume	1,8	dm3
Ontwerp druk	HP 27,8	Bar(c)
	LP 10,0	Bar(c)
Ontwerp temperatuur	50,0	°C

Aggregaat op afstand  
Hermetisch afgesloten

Class 97/23IEG Art. 3 B  
Modula A

Cert.-nummer

Bevat onder het Protocol van Kyoto vallende gefluoreerde broeikasgassen

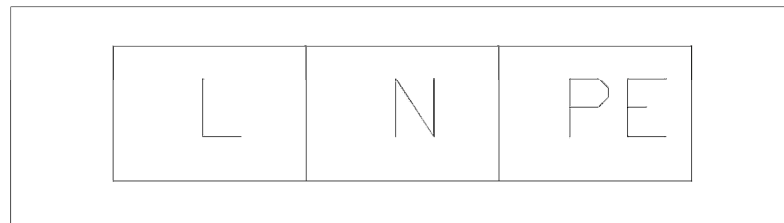
## **8 Technical Specifications**

### **8.1 Furniture-related Specifications.**

- worktop (if present): laminated pressed wood or stainless steel as option.
- evaporator: copper/aluminium coil, uncoated.
- central structure: steel-plate galvanised shell, filled with PU foam.
- sub-frame: steel electrophoretically painted, profiles and adjustable feet.
- nose profile: aluminium extrusion, anodized technical silver
- end/intermediate gable ends: eco-board, pressed recycled material, spray painted in RAL colour.
- glass panels: straight, tempered glass.  
mirror glass as option for end walls
- canopy and front plates: galvanised steel plate, sprayed to customer colour.
- Interior and display area: galvanised steel plate, powder coated to customer colour. Stainless steel as option.
- lighting: TLD or T5 Philips 83 as standard, other brands on request.
- control unit: various options.

### **8.2 Electrical Specifications.**

- connections: Each section based on 230VAC – 16 Amp. max,  
connected as per corresponding circuit diagrams.  
The junction boxes display the necessary stickers for connecting.



All technical specifications can be found in the corresponding datasheet. Which can be requested by your Smeva dealer.