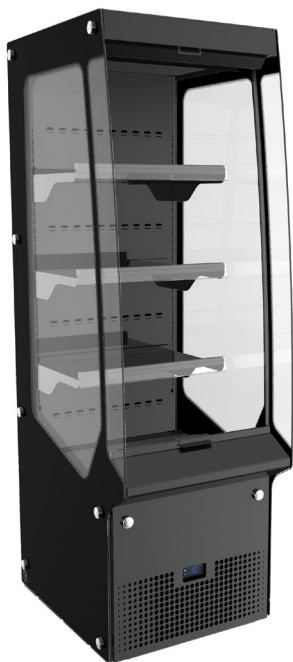




ASTE  
FINLAND

USER MANUAL

# AVO series



## Harmony®

AVO Harmony® 135-50

AVO Harmony® 135-60, AVO Harmony® 135-60 ECO

AVO Harmony® 135-87, AVO Harmony® 135-87 ECO

AVO Harmony® 140-60, AVO Harmony® 145-60

AVO Harmony® 145-87, AVO Harmony® 170-54

AVO Harmony® 170-87

# Congratulations on the purchase of your new Aste premium product!

At Aste we develop products with complete devotion to quality and ease of use. That's our passion. To obtain the best results, we advise you to read this user manual\* carefully. Even though this product has been designed according to the highest standards, it is important to use and maintain your appliance correctly.

*On behalf of the Aste-team*



Jussi Salonen  
CEO and Founder, Aste Finland Oy

\*Aste constantly works on the further development of all models. Therefore please understand that we have to reserve the right to make design, equipment and technical modifications.

# TABLE OF CONTENTS

1. SAFETY INSTRUCTIONS.....	4
2. PUTTING INTO OPERATION .....	7
3. USE OF THE APPLIANCE .....	8
4. CLEANING AND MAINTENANCE .....	11
5. TROUBLESHOOTING.....	13
6. TECHNICAL SPECIFICATIONS.....	16
7. ENVIRONMENTAL POLICY & RECYCLING.....	20
8. DISPOSING OF THE APPLIANCE .....	20
9. DETAILED PRODUCT INFORMATION .....	21

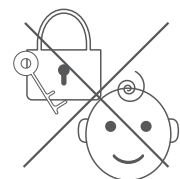
# 1. SAFETY INSTRUCTIONS



Please **read** this operating and maintenance **manual carefully**. We suggest to **keep the guide** into your possession **during the entire life cycle** of the product.

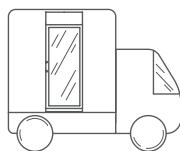


After delivery, immediately check the appliance for possible **transport damage** and make sure it **works properly**. All **safety devices must be present and functional** before operating the appliance.

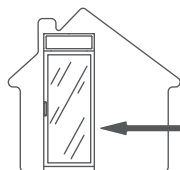


**Do not leave children without supervision. Ensure that they do not play with the appliance.** In the case of appliances provided with locks, the key must be kept at a site where children cannot have access to it to **avoid unintentional locking**.

## 1.1.INSTALLATION AND USE



The appliance always has to be **transported and displayed vertically**.

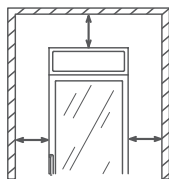


The appliance is designed for **inside use only**.



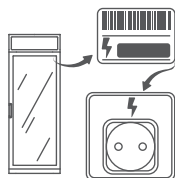
The surroundings should not transcend the following conditions (based on a standard environment):

- **25°C temperature**
- **60% humidity**
- **0,2 m/s air speed**



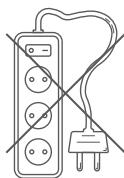
Keep a **minimum distance of 10 cm between the appliance and neighbouring surfaces** (walls, roof, furniture etc.).

Keep clear of obstructions all ventilation openings in the appliance enclosure or for built-in structure.

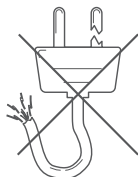


Before connecting the device, **check:**

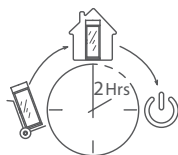
- **The power rating** (on the type plate)
- The relevant local **electrical safety regulations**



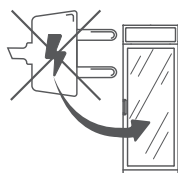
**Do not use an extension cord** to connect the appliance to the **electrical circuit**.



Make sure that **power cable and plug are undamaged** before connecting the appliance. The **damaged cable can only be replaced** with a cable identical to the original part.



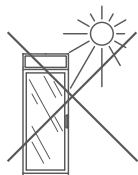
After delivery, **keep the appliance in a warm ambient temperature for 2 hours** before starting it.



**Do not use electrical appliances inside** the storage compartments of the appliance, unless they are of the type recommended by the manufacturer.



**Do not store explosive substances** such as aerosol cans with a **flammable** propellant in the appliance. The user is **solely responsible** for damages to properties or products, or injuries to persons resulting from **careless** and **improper** use of the appliance.



**Do not expose** the appliance into **direct sunlight**.  
**Do not heat** the appliance to **more than 70°C**.

## 1.2.DEFECTS

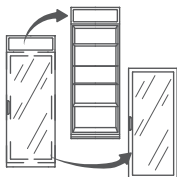


**Only authorised service specialists may perform work on the electrical and refrigeration systems.** If this is not observed, all warranty and liability claims become invalid. Damaging the refrigerant circuit can lead to severe injuries. **Do not damage the refrigerant circuit!**

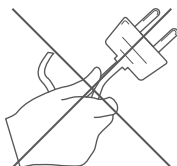
## 1.3.WHEN OUT OF USE



**Make sure** that the appliance is **thoroughly cleaned and dried**. Proper cleaning prevents corrosion and mould formation.



Appliances out of use may be **dangerous for children**, therefore position the appliance in such manner that **no person can get locked up**.



When disconnecting the appliance from the power supply, always **take hold** of the plug. **Do not pull** the cable.

## 2. PUTTING INTO OPERATION

### 2.1. INSTALLATION

#### IMPORTANT!

Never move the appliance by grasping the edge of the glass sides.

Position the device where it is protected from **sunlight** and other **heat sources**, since operation may be disturbed if the ambient temperature **exceeds +25°C**.

- The appliance **should not be operated** in rooms where the temperature **drops below +10°C** since this disrupts the lubrication of the compressor.

Leave at least **10 cm space between the appliance's side walls/roof/back** and neighbouring surfaces such as other devices, walls, furniture and ceiling to provide free air flow behind the device to enable proper operation.

If the furnishing of the room allows positioning only close to the heat source the following minimum clearances must be kept:

- Put a **0.5-1 cm** thick insulation board between two devices if they are **3 cm or less** apart.
- **Min. 30 cm from oil or coal-fired ovens.**

#### IMPORTANT!

If the humidity is **above 60%**, condensation may occur on the glass.

### 2.2. ELECTRICAL CONNECTION

The appliance may be connected to **220-240 V, 50 Hz mains** via properly mounted grounded socket. Check if the voltage meets the local voltage and make sure that the connecting cable isn't stuck anywhere.

A fuse/circuit breaker of **10 A** is required for the operation of the appliance.

- If the connection cable is damaged or it has to be extended, the job must be done by a qualified electrician to avoid the dangerous situations.

**Do not use an extension cord!** The appliance must be positioned in a way that the **main plug is easily accessible**.

## 3. USE OF THE APPLIANCE

### 3.1. STARTING UP

#### IMPORTANT!

All packaging materials are recyclable/energy waste.

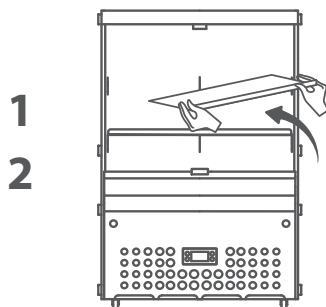
1. **Clean** the appliance with detergent before switching it on, **dry** it with a soft, clean cloth and let it **ventilate** for a while.
2. It is advised to keep the appliance in an **upright** position for at least **2 hours after** transport before using it.
3. It is advised to **switch on** the appliance and **check its operation before positioning** it at the final place.
4. **Place** the shelves on the shelf holders.
5. It is advised to **switch on** the appliance and **check its operation before positioning** it at the final place. **Connect** the plug into the socket.
6. **Leave** the appliance **connected** in an empty state for **2 hours** to check the functioning before adding goods for the first time. **Do not load** food to be chilled **before** the temperature display reads **+6°C**.

### 3.2. SHELF INSTALLATION

#### IMPORTANT!

**Wear safety gloves** during the installation.

1. **Attach** shelf supports to shelf rails at the desired height.
2. **Slide** the shelf into the appliance and **mount** it on supports.
3. **Make sure** the shelf stays stable on its supports.

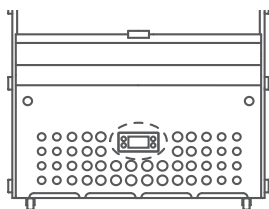




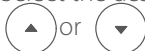
### 3.3. DIGITAL CONTROLLER

#### HINT!

The **digital temperature controller** is located behind the ventilation grating.




Select the desired target temperature by pressing



Turn lights ON/OFF by pressing



Press and hold  for **3 seconds** to switch ON or turn OFF the appliance.

Start defrosting by pressing and holding  for **3 seconds**.

Thawing is fully automatic. It is recommended to **defrost and clean** the appliance **every 6 months** (see chapter 4. Cleaning and Maintenance).

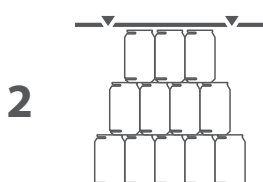
#### WARNING!

Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the current user manual.

### 3.4. FILLING

To achieve optimal cooling, it is advised to **fill up the appliance when it is less frequently used**.

1. Check the **maximum load**.
2. **Do not overload** the device with products.
3. **Be careful not to block air circulation**.



### 3.5. ENERGY SAVING TIPS

**Do not place** the appliance in direct sunlight, HVAC outlets or near heat-producing appliances (like ovens, boilers and heaters).

The appliance reaches its **top efficiency** when it works **24/7**, do not switch it off during the night.

**Keep** your appliance **clean and well maintained**: dust on the condenser or any unsolved problem can cause increased energy consumption.

Fill the appliance **according to the prescribed instructions** to allow energy-efficient operation.

**Wipe goods dry** before placing them in the appliance. This cuts down on moisture build-up inside the appliance.

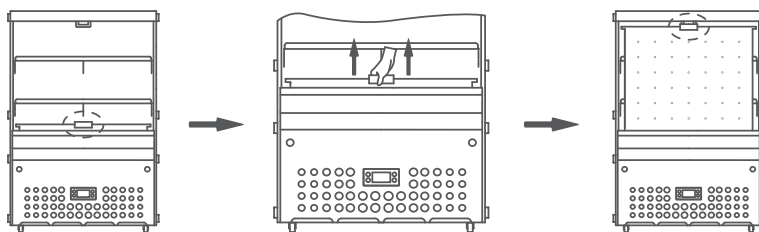
**Turn off** the interior **lighting** of the appliance for the night.

**Maintain and clean the appliance** in a proper way. If the condenser coil is not cleaned **at least 2 times per year**, the efficiency of the appliance will **decrease significantly**.

**Use the ECO frame** provided with ECO models to increase the efficiency of the appliance\*.

#### IMPORTANT!

Use the **night curtain** during the night to **save more energy**.



#### IMPORTANT!

Once the appliance is switched off, or in case the power is cut off, **wait for at least 5 minutes before plugging in again** to avoid damaging the compressor or cooling system of the appliance.

\*You can upgrade your appliance with ECO frame. To do so please contact the seller, your local service partner or get in touch with our after-sales service:

**+358 (0)29 7020 0150** or via e-mail: **service@sisucoolers.com**

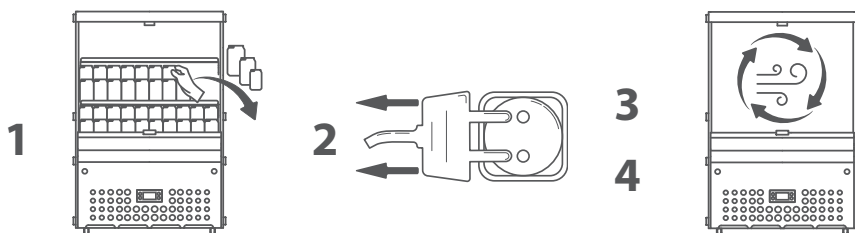
## 4. CLEANING AND MAINTENANCE

### IMPORTANT!

Lack of maintenance will cause the appliance to break down.

### 4.2. PREPARATION

1. **Remove** or **relocate** appliance's contents.
2. Disconnect the appliance **from the mains**.
3. **Open the night curtain** to allow free air circulation.
4. **Let** the appliance **defrost for 12 hours**.

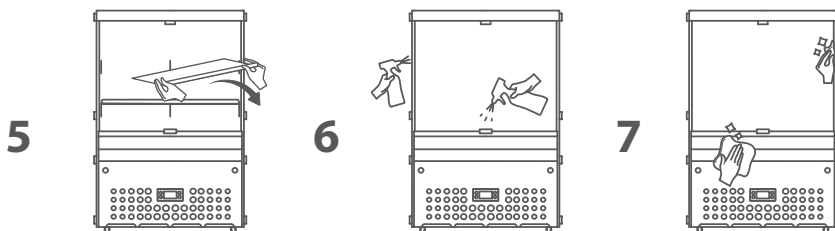


### 4.1. CLEAN INSIDE/OUTSIDE

### IMPORTANT!

**Do not clean** the appliance with high-pressure or steam cleaners.

5. **Remove** shelves to reach all surfaces.
6. **Clean** the inside and outside of the appliance with water and **non-aggressive** detergent.
7. **Dry** previously cleaned surfaces with a soft, clean and dry cloth.



### IMPORTANT!

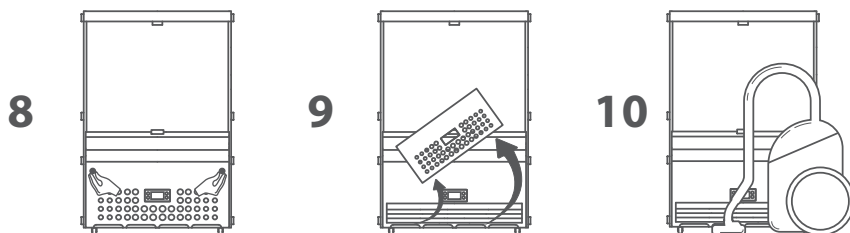
**Wear safety gloves** to avoid the danger of injury during cleaning.

### 4.3. CLEAN CONDENSER

#### IMPORTANT!

**Only the ventilation grating** to the condenser may be opened.  
**Only a trained specialist** may open other covers of the appliance.

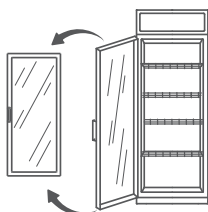
8. Unscrew two knobs holding the ventilation grating.
9. Remove the ventilation grating.
10. **The condenser** must be cleaned **at least 2 times a year** with a brush or vacuum cleaner. Make sure that the fins are **not damaged** or bent.



### 4.4. RE-INSTALL

1. Install **ventilation grating** and shelves back.
2. **Connect the appliance to the main circuit.**
3. Switch on the appliance.
4. Put **contents back in** after 1 hour.

### 4.5. TAKING THE APPLIANCE OUT OF SERVICE



**Empty** the appliance's **contents** and **pull out the power plug.**

Make sure that the appliance is **thoroughly cleaned and dried.** Thus mould formation and corrosion are prevented.

The appliance out of use may be **dangerous for children**, therefore position the appliance in such manner that **no person can get locked up.**

#### IMPORTANT!

**Secure loose parts** of the appliance before moving it to the storage.

## 5. TROUBLESHOOTING

EN

Problem	Possible causes	Remedy
The appliance does not operate	The appliance is not switched ON.	Switch ON the appliance
	The power plug is not plugged in correctly	Reconnect the appliance to the power supply in a correct way
	Power relay tripped	Wait for at least 5 minutes then restart the appliance
	The power cable/plug is damaged	Contact the seller or your local service provider
	The airflow is restricted	Check the distance between the appliance and its surroundings / Nothing blocks the airflow inlets/outlets / Condenser is not dirty
	The fuse is blown/the circuit breaker tripped	Replace the fuse/reset the circuit breaker
	The digital controller may be defective	Contact the seller or your local service provider
Water condensation on surfaces	Too high ambient temperature and/or relative humidity %	Install the appliance in an adapted environment
Appliance gets too cold	Too low ambient temperature	Install the appliance in an adapted environment
	The temperature regulation may be incorrect	Contact the seller or your local service provider
LED lights do not operate	The appliance is not switched ON	Switch ON the appliance
	Lights are turned OFF	Switch ON lights using the digital controller
	LED lights are burned out	Contact the seller or your local service provider

Problem	Possible causes	Remedy
Unpleasant smell	Re-evaporation tray is dirty	Contact the seller or your local service provider
Appliance's performance level of cooling is not enough	Too high ambient temperature and/or relative humidity %	Install the appliance in an adapted environment
	The airflow is restricted	Check the distance between the appliance and its surroundings / Nothing blocks the airflow inlets/outlets / Condenser is not dirty
	A large number of goods inserted	Fill the appliance according to instructions
	Wrong temperature setting	Check settings using digital controller
	The cooling system may be defective	Contact the seller or your local service provider
Disturbing noise / Disturbing vibration	The gurgling sound is produced by the flow of refrigerant	Such sound is normal
	Popping and cracking sounds are produced by the contraction and expansion of refrigerant	Such sounds are normal
	The surface under the appliance is not flat enough	Position the appliance steadily on a flat surface
	The appliance is not levelled correctly	Level the appliance to ensure that its position is steady
The digital controller does not operate	The appliance is turned OFF	Switch ON the appliance
	The electronic board may be defective	Contact the seller or your local service provider

Problem	Possible causes	Remedy
Excessive ice formation in the evaporator area	Too high ambient temperature and/or relative humidity %	Install the appliance in an adapted environment
The night curtain does not operate correctly	The night curtain is released incorrectly	Use the night curtain according to instructions
	The night curtain may be defective	Please contact the seller or your local service provider

In case the malfunction is not caused by any of the above-mentioned factors or persists over a long period of time or in order to order spare parts\*, please contact the seller, your local service partner or get in touch with our after-sales service:

**+358 (0)29 7020 0150** or via e-mail: **service@sisucoolers.com**

\*The minimum period during which spare parts, necessary for the repair of the appliance is 8 years after placing the last unit of the model on the market

## 6. TECHNICAL SPECIFICATIONS

Type	AVO Harmony® 135-50	AVO Harmony® 135-60	AVO Harmony® 135-60 ECO
Net Weight	83 kg	91 kg	91 kg
Gross Volume	143 l	158 l	158 l
Net Volume	120 l	133 l	133 l
Width (external)	495 mm	598 mm	598 mm
Depth (external)	700 mm	700 mm	700 mm
Height (external)	1350 mm	1350 mm	1350 mm
Power Input	480 W	480 W	480 W
Defrosting	Automatic	Automatic	Automatic
Avg. Consumption	7.6 kWh/24h	7.6 kWh/24h	7.4 kWh/24h
Classification*	3H2	3H2	3H2
Temperature range	+1°C ... +6°C	+1°C ... +6°C	+1°C ... +6°C
Factory Setting	+6°C	+6°C	+6°C
Energy Class	E	E	D
Compressor	Danfoss	Danfoss	Danfoss
Refrigerant	R290	R290	R290
Temperature Control	Electronical	Electronical	Electronical
Evaporator	Finned Coil	Finned Coil	Finned Coil
Condenser Material	Aluminium	Aluminium	Aluminium
Condenser Type	Low Maint.	Low Maint.	Low Maint.
Lighting	LED	LED	LED
Cable Length	3 m	3 m	3 m
Service Frequency	36 months	36 months	36 months

\*You can find the detailed explanation of product classification according to applicable standard using the link: [www.astecoolers.com/products](http://www.astecoolers.com/products)





Type	AVO Harmony® 135-87	AVO Harmony® 135-87 ECO	AVO Harmony® 140-60
Net Weight	115 kg	115 kg	100 kg
Gross Volume	230 l	230 l	178 l
Net Volume	215 l	215 l	150 l
Width (external)	865 mm	865 mm	598 mm
Depth (external)	700 mm	700 mm	666 mm
Height (external)	1350 mm	1350 mm	1400 mm
Power Input	480 W	480 W	480 W
Defrosting	Automatic	Automatic	Automatic
Avg. Consumption	8.6 kWh/24h	8.2 kWh/24h	7.6 kWh/24h
Classification	3H2	3H2	3H2
Temperature range	+1°C ... +6°C	+1°C ... +6°C	+1°C ... +6°C
Factory Setting	+6°C	+6°C	+6°C
Energy Class	E	D	D
Compressor	Danfoss	Danfoss	Danfoss
Refrigerant	R290	R290	R290
Temperature Control	Electronical	Electronical	Electronical
Evaporator	Finned Coil	Finned Coil	Finned Coil
Condenser Material	Aluminium	Aluminium	Aluminium
Condenser Type	Low Maint.	Low Maint.	Low Maint.
Lighting	LED	LED	LED
Cable Length	3 m	3 m	3 m
Service Frequency	36 months	36 months	36 months

Type	AVO Harmony® 145-60	AVO Harmony® 145-87	AVO Harmony® 170-54
Net Weight	91 kg	115 kg	105 kg
Gross Volume	158 l	230 l	267 l
Net Volume	133 l	215 l	203 l
Width (external)	600 mm	865 mm	535 mm
Depth (external)	660 mm	660 mm	700 mm
Height (external)	1450 mm	1450 mm	1700 mm
Power Input	480 W	480 W	580 W
Defrosting	Automatic	Automatic	Automatic
Avg. Consumption	7.8 kWh/24h	9.8 kWh/24h	9.8 kWh/24h
Classification	3H2	3H2	3H2
Temperature range	+1°C ... +6°C	+1°C ... +6°C	+2°C ... +7°C
Factory Setting	+6°C	+6°C	+6°C
Energy Class	E	E	E
Compressor	Danfoss	Danfoss	Danfoss
Refrigerant	R290	R290	R290
Temperature Control	Electronical	Electronical	Electronical
Evaporator	Finned Coil	Finned Coil	Finned Coil
Condenser Material	Aluminium	Aluminium	Aluminium
Condenser Type	Low Maint.	Low Maint.	Low Maint.
Lighting	LED	LED	LED
Cable Length	3 m	3 m	3 m
Service Frequency	36 months	36 months	36 months

Type	<b>AVO Harmony® 170-87</b>
Net Weight	150 kg
Gross Volume	397 l
Net Volume	318 l
Width (external)	865 mm
Depth (external)	700 mm
Height (external)	1700 mm
Power Input	480 W
Defrosting	Automatic
Avg. Consumption	9.8 kWh/24h
Classification	3H2
Temperature range	+5°C ... +10°C
Factory Setting	+6°C
Energy Class	E
Compressor	Danfoss
Refrigerant	R290
Temperature Control	Electronical
Evaporator	Finned Coil
Condenser Material	Aluminium
Condenser Type	Low Maint.
Lighting	LED
Cable Length	3 m
Service Frequency	36 months

## 7. ENVIRONMENTAL POLICY & RECYCLING

Environmental awareness is key throughout the complete life cycle of our products: from designing to producing it to finally recycling it.

We keep a close eye on the economical and effective use of new environmentally friendly materials in our products and production. Our target is to minimise the use of non-renewable natural resources.

We are convinced that sustainable production is the only correct way of working with respect for our customers, consumers and our planet today and in the future.

**We strongly advise** you to visit **[www.astecoolers.com/products](http://www.astecoolers.com/products)** to check the optimal storing temperatures for food and beverages. Incorrect temperature setting may result in spoilage and food waste.

## 8. DISPOSING OF THE APPLIANCE

### **WARNING!**

Thermal insulation material is EPP.

The appliance contains some reusable materials and should be disposed of properly — not simply with unsorted household refuse. Appliances which are no longer needed must be disposed of in a professional and appropriate way, in accordance with the current local regulations and laws.

Please check your obligations in accordance with the national WEEE\* provisions and the local WEEE disposal partner. Ensure that the piping is not damaged in the process.

Both insulating material and the coolant of the appliance bought by you are environment-friendly materials, which do not damage the ozone layer around the globe in any form.

\*Waste Electrical and Electronic Equipment Directive

### **The warranty\*\* terminates upon:**

- outside & wrong usage
- not following the instructions
- negligence of maintenance

\*\*The minimum duration of the warranty is 12 months. For more information, please contact the seller, your local service partner or get in touch with our after-sales service:

**+358 (0)29 7020 0150** or via e-mail: **[service@sisucoolers.com](mailto:service@sisucoolers.com)**

## 9. DETAILED PRODUCT INFORMATION

Detailed product information is available from European product database (EPREL).

1. **Use the QR code** on the rating plate to find the product information from EPREL.
2. You can also **access the EPREL** using the link:  
**<https://eprel.ec.europa.eu/>**
3. You will be asked to **enter the model ID**. You can find the model ID on the rating plate.

### **HINT!**

You can find product specifications, hints, recommendations, product cards and other helpful information from **[www.astecoolers.com](http://www.astecoolers.com)**



ASTE  
FINLAND

Aste Finland Oy  
Koskivuorenkatu 5  
30420 FORSSA - FINLAND

[service@astecoolers.com](mailto:service@astecoolers.com)  
Tel. +358 (0)2 970 200 160

[www.astecoolers.com](http://www.astecoolers.com)