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Dados Tecnicos, Technical Data, Technische Daten, Données techniques, Datos Técnicos

Modelo, Modell, Modele, Modelo			650	0			20	200			7.	750	
Comprimento sem laterais, Length without ends, Länge ohne Seiten, Longeur sans joues, Longitud sin laterales	шш	1250	1875	2500	3750	1250	1875	2500	3750	1250	1875	2500	3750
Temp. de funcionamento, Working temperature, Betriebstemperatur, Temp. de fonctionnement, Temperatura de trabajo	ů,						+ 2°C/+4°C	'+4°C					
Temperaturas admissíveis, Allowed temperature, Zulässige Temperaturen Températures admissibles, Temperaturas admitidas - (Ts) 97/23 CE -	၁့					Š	ax + 32°C	Max + 32°C / Min - 10°C	ပ				
Área de exposição aberta, Open display surface, Sichtbare Ausstellefläche , Surface d'exposition ouverte, Area expositiva abierta	m ²	1,96	2,94	3,92	5,87	1,96	2,94	3,92	5,87	1,96	2,94	3,92	5,87
Superfície de exposição horizontal, Horizontal display surface, Gesamte Ausstellefläche, Surface d 'exposition horizontale , Superfície de exposición de apoyo	m^2	2,28	3,42	4,56	6,84	2,59	3,89	5,19	7,78	2,91	4,36	5,81	8,72
Volume líquido, Net volume, Netto inhalt, Volume net, Volumen neto	dm ³	724	1086	1448	2172	823	1235	1646	2469	922	1383	1844	2766
Potência frigorífica, Refrigeration Power, Kühlleistung, Puissance frigorifique, Potencia frigorígena	≥	1375	2063	2750	4125	1409	2113	2818	4226	1445	2168	2890	4335
Refrigerante, Refrigerant, Kühlmittel, Réfrigérant, Refrigerante							R404A	14A					
Pressão máxima admissível, Max allowed pressure, Maximal zulässiger Druck, Pression maximale admissible, Máxima presión admitida - (Ps) 97/23 CE -	bar						20 bar	bar					
Válvula expansão, Expansion Valve, Expansion-Ventil, Valve d'expansion, Válvula de expansión		TES 2-1,2	TES 2-1,2	TES 2-1,7	TES 2-1, 2 TES 2-1, 2 TES 2-1,7 TES 2-2, 2 TES 2-1, 2 TES 2-1,7 TES 2-2, 2 TES 2-1,2 TES 2-1,2 TES 2-1,7 TES 2-2,2	TES 2-1,2	TES 2-1,2	TES 2-1,7	TES 2-2,2	TES 2-1,2	TES 2-1,2	TES 2-1,7	TES 2-2,2
Ventiladores, Fans, Gebläse, Ventilateurs, Ventiladores	n° x W	1 x 29	2×29	3 x 29	4 x 29	1 x 29	2 x 29	3×29	4 x 29	1×29	2 x 29	3 x 29	4 x 29
 Resistência de descongelação, Defrost heater, Abtauwiderstand, Resistance de dégivrage, Resistencias de descongelation, 	*	460	069	920	1400	460	069	920	1400	460	069	920	1400
Tipo de descongelação, Defrosting type, Abtautyp, Type de dégivrage, Tipo descongelation,			Natura	e, Off-cyo	Naturale, Off-cycle, Zeitabtauung, Dégivrage naturel, Parada simple, Простая остановка	tauung, D	égivrage	naturel, P	arada simp	ole, Прос	тая оста	новка	
Nível de ruído, Noise level, Schallpegel, Niveau de bruit, Nivel de ruído	db (A)						· ·	< 65					
Conteúdo que pode ser alterado sem aviso prévio, Content that could be change without notice, Inhalt Veränderbar ohne Vorankündigung, Contenu modifiable sans préavis, Contenido modificable sin previo aviso,	ohne Vora	ınkündigun	g, Contenu	nodifiable s	sans préavis	s, Contenid	o modificab	le sin previ	o aviso,				

^{* -} OPTIONAL - Potências eléctricas totais absorvidas, referidas à tensão de alimentação 230 V / 50 Hz, Total electric power absorbed referred to 230 V / 50 Hz electric input, Puissances électriques totales absorbidas relativas a la tensión de alimentación 230 V / 50 Hz, Potencias eléctricas absorbidas relativas a la tensión de alimentación 230 V / 50 Hz,



Installation and Use manual

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English



1. Introduction - Purpose of the manual/Application field

This instruction manual refers to the **Avon** refrigerated cabinets line.

The information that follows provides indications relating to:

- Use of the cabinet - technical features- installation and assembly - information for the operator in charge of use - maintenance interventions.

This manual is to be considered part of the cabinet and must be preserved for its entire duration.

The manufacturer cannot be held responsible for:

- Improper use of the cabinet - incorrect installation not carried out in compliance with the standards indicated - electric power supply faults - lack of envisioned maintenance - unauthorised modifications and interventions - use of non original spare parts - partial or total non observance of the instructions.

This manual must be available at all times for consultation by the operators and the staff in charge of maintenance. In case of transfer to third parties, this manual must be provided to the new user or owner. The supplier must also be informed of the transfer.

In case of damage or loss, request a copy from the supplier.

N.B.Electric appliances may be dangerous for ones health. Regulations and existing laws in force must be respected during installation and use.

Whoever uses this cabinet must read this manual.

2. Presentation - Declared use (Fig. 1)

The **Avon** refrigerated cabinets line consists in vertical wall cabinets open at the front, prearranged for food products with a remote condensing unit. They are suitable for preserving and selling self service **Deli meats, Milk products, Fruit and Vegetables**.

Their large display and load capacity together with a reduced overall size makes them suitable for any sales surface.

3. Regulations and certifications

The regulations according to which the cabinet has been tested and approved are:

EN-ISO 23953 - 1/2; EN 60335-2-89; EN 61000-3-2; EN 61000-3-3; EN 55014

ENVIRONMENT CLIMATIC CATEGORIES

These cabinets have been checked respecting climatic category 3 (25°C;H.R.60%):

Climatic category	Dry bulb temperature	Relative Humidity	Dew point
1	16°C	80%	12°C
2	22°C	65%	15°C
3	25°C	60%	17°C
4	30°C	55%	20°C
5	40°C	40%	24°C
6	27°C	70%	21°C

The cabinets conform to the essential requisites requested by the following directives:

- Machine Directive 98/37 EEC
- Electromagnetic compatibility directive **89/336 EEC** and successive modifications**92/31 EEC**, **93/68 EEC**;
- Low Voltage Directive 2006/95/CE.

The application field of the directive **EEC 97/23 (PED)** is excluded because it is covered in Art.1 paragraph 3.

4. Identification - Plate data (Fig. 2)

On the back of the cabinet a plate with the following characteristics data is present:

- 1. Name and address of the manufacturer
- 2. Name and length of the cabinet
- 3. Cabinet code number
- 4. Cabinet serial number
- 5. Supply voltage
- 6. Power frequency
- 7. Input current
- 8. Electric power absorbed during the refrigeration phase.
- 9. Electric power absorbed during the defrost phase.

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- 10. Lighting power (where foreseen)
- 11. Net display surface
- 12. Type of refrigerant fluid with which the plant operates
- 13. Mass of refrigerant gas with which each single plant is loaded
- 14. Environment climatic categories and reference temperature
- 15. Protection class against humidity
- 16. Job order number with which the cabinet has been manufactured
- 17. Order number with which the cabinet has been produced
- 18. Cabinet year of production

In case of technical assistance, in order to identify the cabinet communicate the following:

- name of the product(Fig. 2 2);
- serial number(Fig. 2 4);
- job order number(Fig. 2 18);

5. Transport (Fig. 3)

The cabinets are provided with a wooden support fixed to the base for moving with fork lift trucks. Use a suitable manual or electric fork lift truck for lifting the cabinet in question.

6. Receipt and first cleaning

When receiving the cabinet:

- Make sure that the packaging is integral and no evident damage is present;
- Remove the packaging with care so as not to damage the cabinet;
- Check all parts of the cabinet ensuring that its components are integral;
- If damaged, immediately call the supplier;
- Use neutral products for a first cleaning of the cabinet. Dry with a soft cloth, do not use abrasive substances or metallic sponges.

- DO NOT use alcohol to clean the methacrylate (plexiglass) parts

For a correct disposal of the packaging take into consideration that it consists of: Wood - Polyester - Polythene - PVC - Cardboard.

In compliance with the EEC 94/62 directive the suitability of the materials stated above is declared.

7. Installation and environment conditions (Fig. 3)

When installing respect the following:

- Do not position the cabinet:
- in environments with the presence of explosive gas substances;
- in open areas and therefore exposed to atmospheric agents;
- near to heat sources (direct solar light, heating plants, incandescent lamps etc.);
- near to air currents (doors, windows, air conditioning plants etc) that exceed the speed of **0.2m/sec**.
- Remove the wooden supports on the base (used for transport) and mount the adjustable feet (Rif. 2) positioning them so that the cabinet is horizontally positioned and with the aid of a leveller (Rif. 1) check its position. If the cabinet is moved repeat the levelling control.
- If the cabinet is moved repeat the levelling control.
- Remove the wooden protections located on the top of the cabinet.
- Do not install the cabinet at less than 60mm from other surfaces. This distance must never exceed 200mm.
- Before connecting the cabinet to the power line make sure that the data on the plate corresponds to the characteristics of the electric plant to which it must be connected.
- For a correct functioning of the cabinet, the temperature and the environment relative humidity must respect the parameters envisioned by the EN-ISO 23593-1/2 standard that foresee a Climatic Class 3 (+25°C; H.R. 60%).

ATTENTION!: Install a maximum of 3 cabinets on the same electric power line and refrigerator (1 Master + 2 Slave).

N.B. All of these operations must be carried out by specialised technical staff.

8. Electric connection

- The cabinet must be protected upstream with an omni polar magnetothermic automatic type switch with adequate characteristics and will function also as the main line disconnecting switch.).

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English



- Instruct the operator to the position of the switch so that it can be reached quickly in case of an EMERGENCY.
- The electric plant must be earthed
- First check that the supply voltage is that indicated on the data plate (Fig. 2).
- In order to guarantee correct functioning, it is necessary that the maximum voltage variation is between +/- 6% of the nominal value.
- Check that the power line has appropriate section cables and however not less than 2.5mm² and that it is protected against over currents and dispersions towards mass in compliance with existing laws in force.
- For power lines longer than 4-5m, increase adequately the cables section.
- In the case that the power supply is interrupted, make sure that all the electric appliances of the shop are capable of restarting without activating the overload protections. On the contrary, modify the plant in order to differentiate the start up of various devices.
- The magnetothermic automatic switch must not open the circuit on neutral without opening it on phases at the same time. In each case the opening distance of the contacts must be at least 3 mm.

N.B. All of these operations must be carried out by specialised technical staff.

9. Position of probes (Fig. 7)

S1	Control probe for air delivery
S2	Control probe for the end of defrosting thermostat
S3	Control probe for the suction air

- Temperature probe: NTC IP67 L=4000 cod.04510153.
- Probes S1 S3 must be blocked with clamps and insulation is not necessary.
- Probe S2 must be fixed with the copper pipe (<u>never in correspondence with the fan</u>) by means of the stainless steel bulb stop spring cod.02230134.

N.B.All of these operations must be carried out by specialised technical staff

10.Temperature control (Fig. 4)

The refrigeration temperature is carried out by means of the mechanical thermometer (Rif. 10) and on the display with the CAREL IR33 electronic controller (Rif. 11) at the base of the cabinet.

The electronic controller is usually set in the factory during the testing phase. It is possible, if necessary to vary the temperature as follows:

- press for more than 1 second the SET key set to visualise the set value (SET-POINT) until the set value flashes:
- increase/reduce the SET-POINT values with the UP or DOWN keys
- press the SET key again | Set | to confirm the value.

11.Loading the cabinet (Fig. 4)

When stocking the cabinet the following rules must be observed:

- arrange the merchandise in an even and tidy way to prevent overloading the shelves (max load 160 kg/m²) (Rif. 5).
- the disposition of the merchandise without empty areas, guarantees better function of the cabinet;
- allow approximately 30mm of air between the merchandise and the shelf immediately above (Rif. 6).
- it is recommended that old merchandise in the cabinet be used before a new entry (food products rotation).
- The maximum load allowed on the shelves and in the tank is approximately 160 kg/m²
- The shelves can be inclined in 2 positions 0°; -10° (Rif. 5).

N.B.On request it is possible to add a third inclination of -20°C

ATTENTION!: Do not place boxes, parcels or other on the roof of the cabinet (Rif. 9).

N.B. All of these operations must be carried out by specialised technical staff.

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12.Defrosting and water draining (Fig. 6)

The **Avon** refrigerated cabinets line is equipped with an off cycle defrosting system (by stopping the refrigeration cycle).

It is possible to request as an optional **electric** defrosting (defrosting takes place by stopping the refrigeration cycle and using an electric resistance armoured in the evaporator).

In order to evacuate the water after defrosting it is necessary:

- to foresee a floor drain with slight inclination.
- to install a siphon between the drain pipe of the cabinet and the floor connection.
- hermetically seal the area of the floor drain.

In this way, bad smells inside the cabinet, the dispersion of refrigerated air and possible malfunction of the cabinet due to humidity can be prevented.

N.B.Periodically check the perfect efficiency of the hydraulic connections by referring to a qualified installer.

13.Lighting (Fig. 4)

Lighting inside the cabinet is obtained by means of a florescent lamp type OSRAM 76 natura de luxe. The light switch is located at the side of the lamp (Rif. 8)

14. Night blind - optional -(Fig. 5)

In order to prevent useless cold dispersions and to guarantee the hygiene of the merchandise displayed during the night, manual or motorised night blinds are available (Rif. 12) as an optional (Rif. 13).

The position of the night blind, if motorised, is adjusted during the testing phase.

For a correct functioning of the cabinet, the bottom end of the blind must keep a distance of approximately 10mm from the suction plate. It must not rest on or exceed this limit. The switch for the motorised blind is at the side of the light switch (Rif. 8).

Instruction for mounting the manual night blinds

- Fix blind supports 1 as shown in Figure A
- Load the spring by turning the flat pivot clockwise. Hold the blind still so that the triangle on the plug of the pipe is at the top (with the point facing downwards) as shown in Figure B
- Insert the flat pivot in the blind support. To use the automatic stop so that the blind blocks at each turn, insert the flat pivot in the position with the writing "UP" at the top as shown in Figure B. If the blind is mounted in a position different to this, the stop is automatically disconnected.
- Position blind fitting 3 on the pivot, insert it in the blind support and rotate it 90°C as shown in Figure C.

Indicative table for spring units load					
	Width of ma	nual blinds			
	< 1250mm	>1250			
Recommended preload (with the blind rolled up)	20 - 30	25 - 30			
Max springs load (with the blind completely unrolled)	50	55			

15.Replacing the lamps (Fig. 4)

The lamps are to be replaced as follows:

- Remove the power supply from the cabinet.
- Rotate the protective case and the lamp approximately 90° (Rif. 7) (up to the click). Remove it from the lamp holder by withdrawing towards the bottom.
- Remove the caps, withdraw the lamp from the protective case and replace it with a new one.
- Insert the caps again and check that the contacts are correctly seated in their appropriate holes.
- Reposition the lamp and case in the lamp holder rotating it 90°C up to the blocking click.
- Restore the electric power supply.

16. Joining the cabinets

Join two or more cabinets as follows:

- Disassemble the ends (if present).
- Position the cabinets side by side
- Remove the back panels in order to access the holes of the uprights
- Join the uprights and the brackets by means of the screws provided

- Remount the back panels.



CHANNEL JOINING KIT

Ref.	Code	Q.ty	Description
1	04711065	3	TCEI M8X120 screw (Hexagonal recessed cylinder head screw)
2	04711042	2	TCEI M8X60 screw (Hexagonal recessed cylinder head screw)
3	04480112	4	Washer D 8.5x24
4	04230600	5	Hexagonal nut M8
5	02940652	6	Handrail alignment plug D.4 x 80

17. Maintenance and cleaning

ATTENTION!: BEFORE CARRYING OUT ANY MAINTENANCE OPERATION OR CLEANING REMOVE

THE VOLTAGE SUPPLY FROM THE CABINET BY MEANS OF THE MAIN SWITCH.

N.B.It is recommended that hand protection is worn in order to protect hands during cleaning operations.

Food products may deteriorate due to microbes and bacteria.

Hygiene standards must be respected and are essential in order to guarantee the health of the consumer. The cold chain from which the sale point forms the last ring that can be controlled must also be respected. The cleaning of the refrigerated cabinets is distinguished as follows:

Cleaning of the external parts (Daily / Weekly)

- Weekly clean all external parts of the cabinet using neutral detergents for domestic use or water and soap.
- Rinse with clean water and dry with a soft cloth.
- DO NOT use abrasive products and solvents that can alter the cabinet surfaces.
- DO NOT spray water or detergent on the electric parts of the cabinet.
- DO NOT use alcohol to clean the methacrylate (plexiglass) parts.

Cleaning of the internal parts (Monthly)

The cleaning of the internal parts of the cabinets destroys the pathogenous micro organisms in order to **protect the merchandise.**

Before cleaning inside the cabinet or part of it, it is necessary that:

- The merchandise be completely removed from the cabinet;
- The power supply is removed by means of the main switch;
- All movable parts such as display plates, grids etc are removed and washed with warm water, soap and disinfectant and dried accurately;
- Accurately clean the bottom of the tank eliminating all foreign bodies that have dropped on to the fan holder plate through the suction grid;
- If abnormal formation of ice is noted, call the qualified refrigerator technician.

At the end of cleaning reassemble the movable parts (dried) and restore the voltage supply. Once the internal functioning temperature is reached, it is possible to load the cabinet with the products to be displayed.

N.B.Prevent the fans, lamps, electric cables and all electric appliances from becoming wet during the cleaning operations.

18. Dismantling the cabinet

In compliance with the standards for dismantling refuse in each single country and for respecting the environment, divide the parts of the cabinet so that they can be disposed of separately or recuperated. All parts that make up the bench cannot be disposed of together with municipal solid waste except for the metallic components that do not result amongst special waste for the majority of European countries.

Materials used for constructing the cabinet:

- Coated steel: uprights, shelves, feet

- Copper, Aluminium: refrigerant circuit, electricplant and top lamp

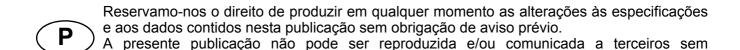
- Zinc coated plate: bottom panels, coated panels, basic structure, shelves, trays

Polyurethane foam (R134a): thermal insulation
 Tempered glass: crystal sides

- Wood: lateral frames foam insulated tank

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IMPORTANT NOTICE



Read prior to installation and keep this information

This product made by Arneg Portuguesa is covered by Directive 2012/19/UE WEEE (Waste Electrical and Electronic Equipment) designed to halt the increase of this type of waste and promote recycling as well as decreasing disposal.

The symbol of the crossed-out waste bin that appears on the

- that the product was put in circulation after 13th August 2005;
- that the product is subject to separate collection and must not be treated like normal domestic waste or sent to dumps for disposal.

The user is required to delivery the product for disposal to the collection center specified by the local authorities for recovery and recycling of professional WEEE. In case of trade-in of the old product for a new one, the user can ask the seller to take delivery of the old one, no matter what the brand.

The manufacturer is responsible for making recovery, disposal and treatment of its products feasible at the end of their useful life, either directly or via a collective system.

Violations of the regulation call for specific sanctions, to be established autonomously by each EU member country with its own legislation, binding equally on all those subject to its laws.

For further information see your Municipal Authorities, the Seller or the Manufacturer.

The directive does not apply to products sold outside the European Community

Declaration of RoHS conformity

The undersigned, **ARNEG PORTUGUESA** with headquarters in Estrada Nacional 9 2710 Ral Sintra Portugal, declares under its sole responsibility that the refrigerated cabinet models comply with the provisions of Directive 2011/65/UE (RoHS).

In all the homogeneous materials used for its production, any content of lead, mercury, hexavalent chrome, polybrominated biphenyl (PBB), and polybrominated diphenyl ether (PBDE) does not exceed, in weight 0.1%: that of cadmium does not exceed, in weight 0.01%.

Arneg Portuguesa

Gerente / Managing director / Geschëftsführer Directeur général / Gerênte