

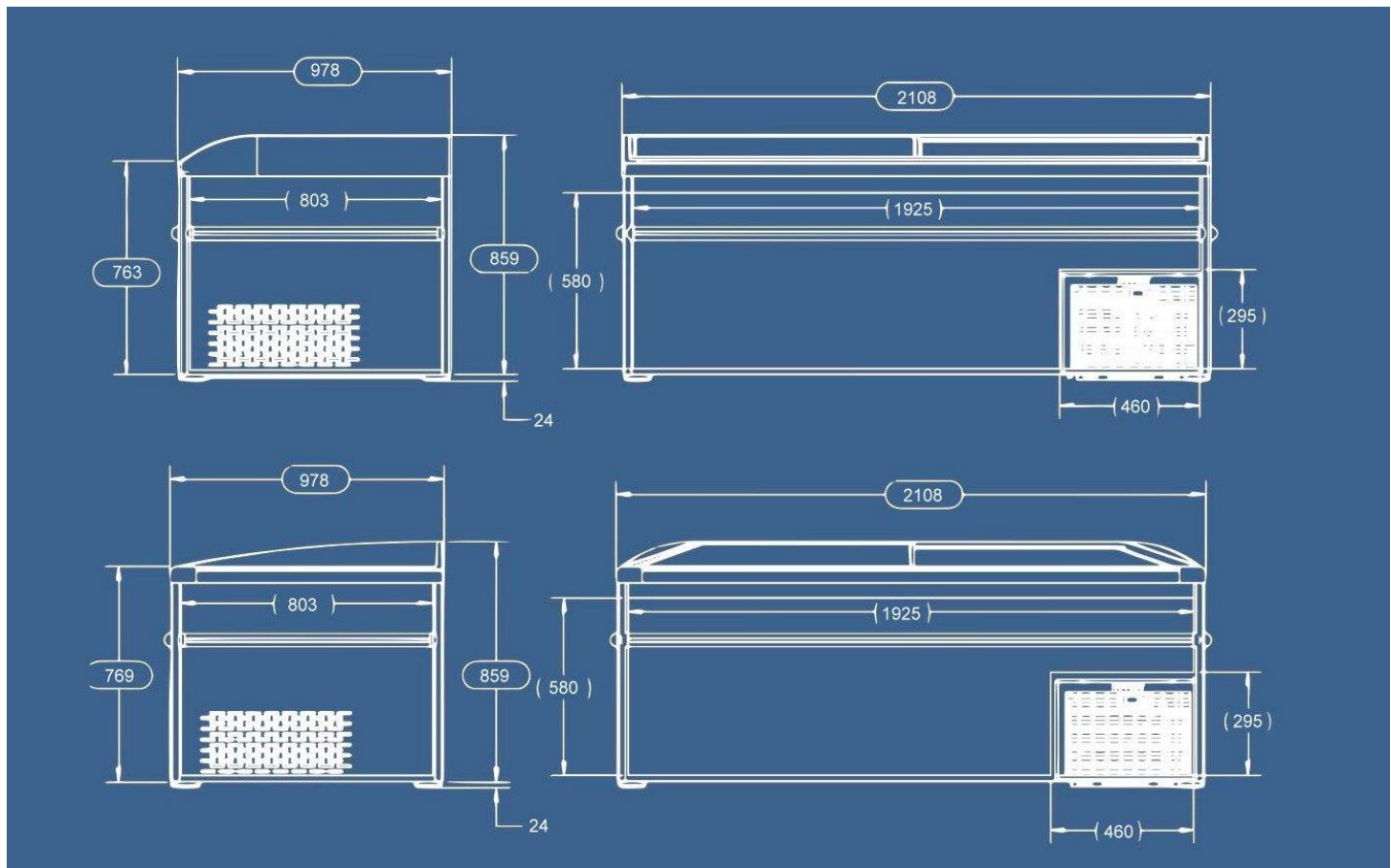
Models: Grand Cayman (Inline and End of Aisle) - Alaskan



Specifications

		In-Line	End of Aisle
Gross content	litre	1068	1068
Net Content	litre	830	830
Total Display Area (TDA)	m ²	1,55	1,55
Classification according to EN 23953		3L1	3L1
Ambient Temperature Range	°C	+16 to +25	+16 to +25
Inner Temperature Range	°C	-18 to -25, 0 to +2 or 0 to +5	-18 to -25, 0 to +2 or 0 to +5
Sound Pressure at 1m Distance	dB(A)	43,3	43,3
Nominal Voltage / Frequency	V / Hz	220-240/50	220-240/50
Nominal Power Cabinet	W	470	470
Nominal Power LED Light	W	24	24
Nominal Current	A	3	3
Fuse Protection	A	16	16
Energy consumption (at 25°C)	kWh/24h	5,5	5,5
Length of Power Supply Cord	mm	2000	2000
Refrigerant	Type	R290	R290
Gas Charge	g	85	85
Maximum Operating Pressure	bar	30	30
Heat Output	W/h (Btu/h)	855 (2915)	855 (2915)
Length Outside / Inside	mm	2108 / 1925	2108 / 1925
Depth Outside / Inside	mm	978 / 803	978 / 803
Front Access Height Outside / Inside	mm	788 / 884	788 / 884
Stacking Height at Front / Back	mm	580	580
Net Weight (excl. packaging, incl. internal accessories)	kg	140	140
Gross Weight (incl. packaging & internal accessories)	kg	150	150

Dimensions

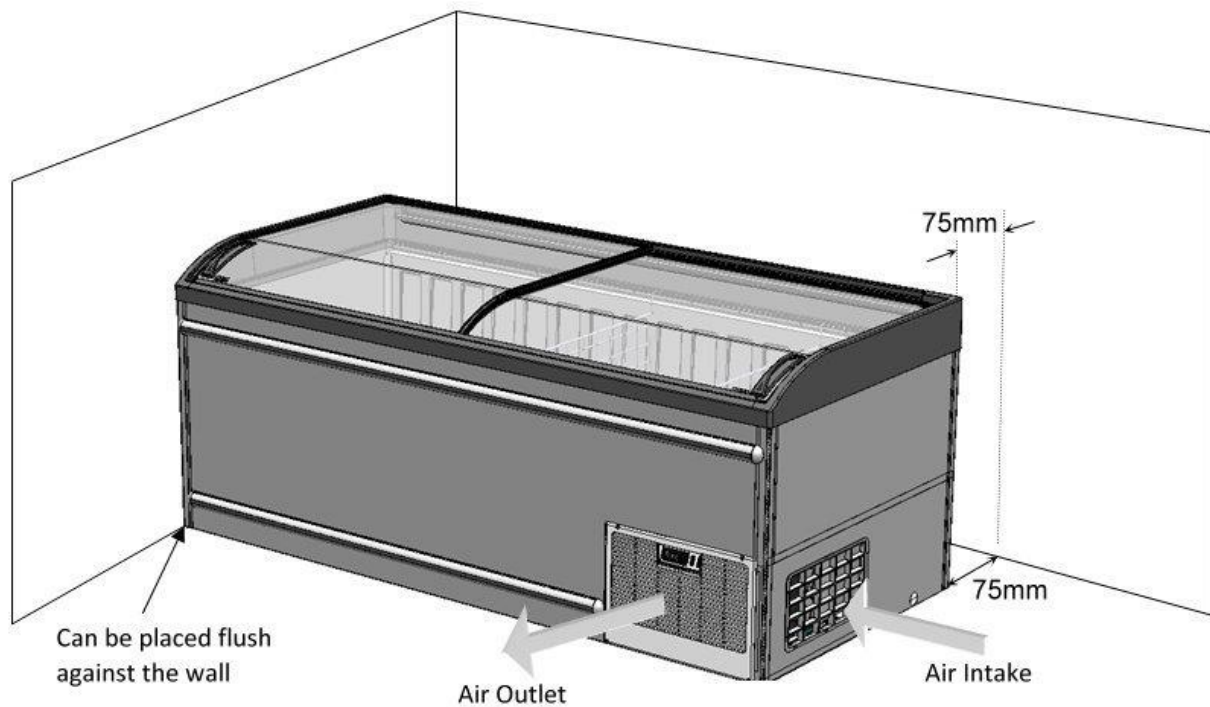


Model	Packed Dimensions mm (LxWxH)	Unpacked Dimensions mm (LxWxH)	Un-packed Weight Kg (Empty) Kg	Packed Weight Kg
In Line	2150 x 990 x 1150	2108 x 978 x 883	140	150
End of Aisle	2150 x 990 x 1150	2108 x 978 x 883	140	150

Installation

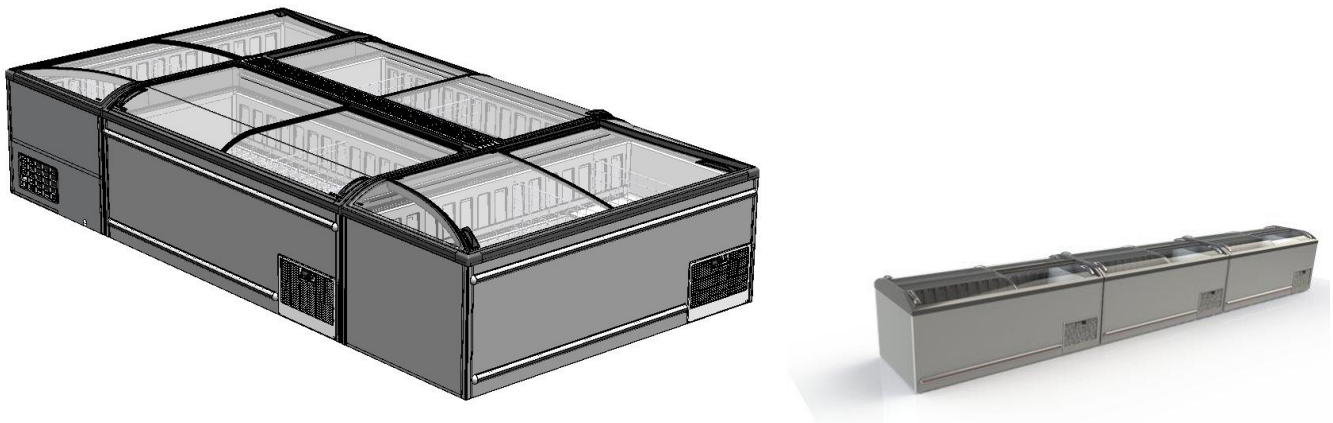
Stand Alone Installation

When the case is installed as stand-alone unit against a wall, a minimum distance of 75mm must be maintained between the back of the case and the wall to ensure air can circulate.



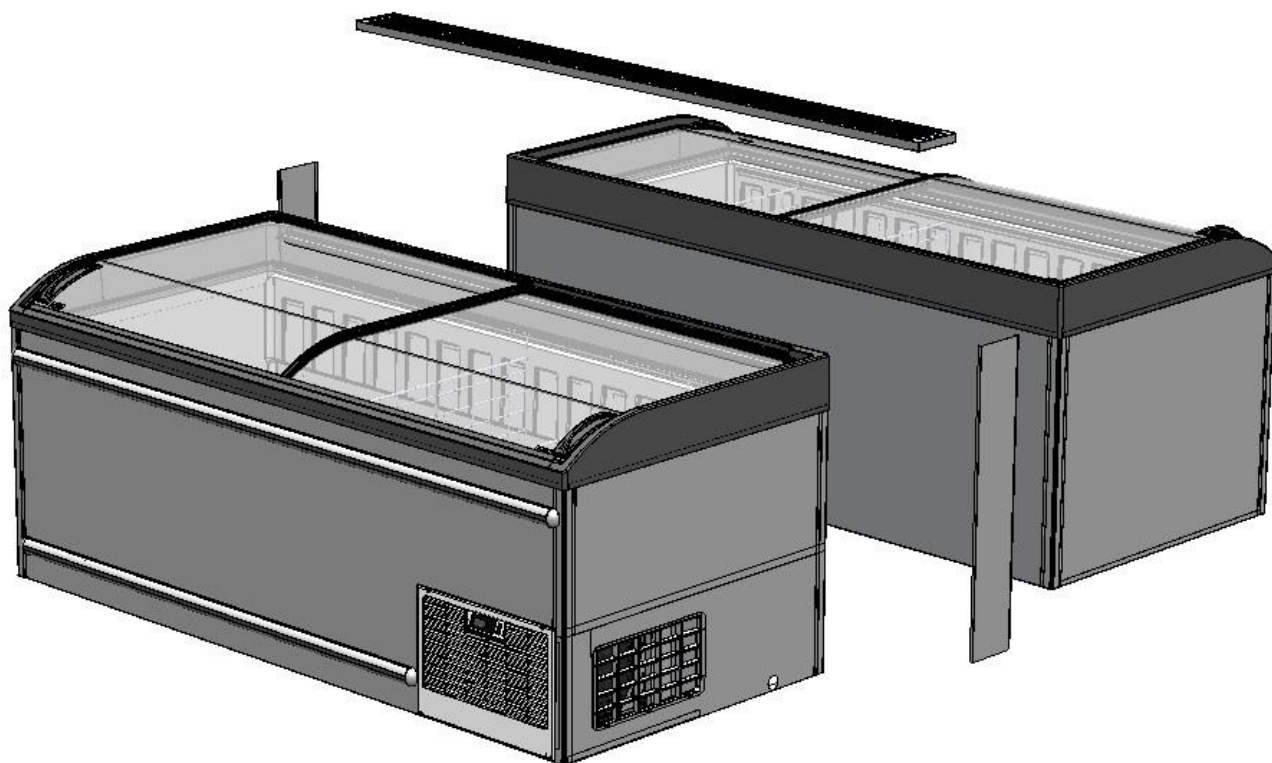
Back-to-Back Installation

If two Grand Cayman cases are to be installed back to back, a ventilation panel must be fitted to ensure adequate airflow. These are simply clipped into place (Fig 4). When an end of aisle case is fitted to an island configuration, an end of aisle ventilation kit must be fitted



Vent System

- Position cabinets back to back 150mm apart. Vent rests on back chest frame of cabinets.
- Side panels slide and click into the vent.



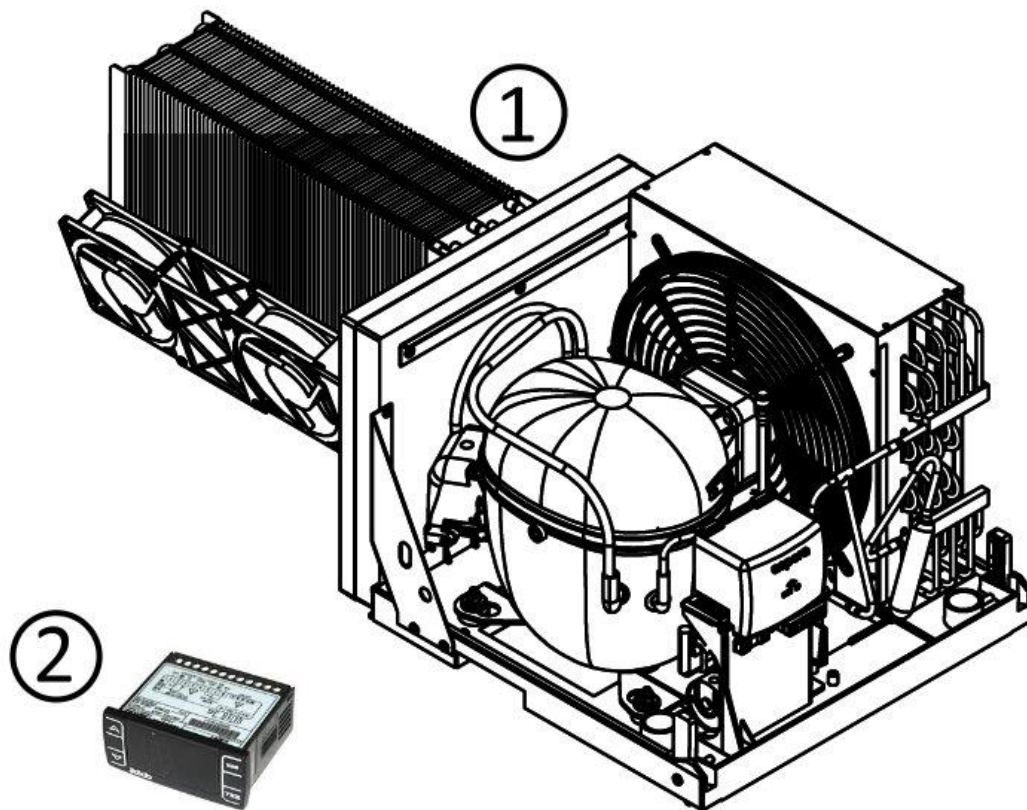
This is a Climate Class 3 product:
Maximum Temperature: 25°C Ambient Air
Relative Humidity: 60%

All Cabinets must be wired as per international standards.

US Rating		Europe Rating	
Black	Live	Brown	Live
Light grey, white or silver	Neutral	Blue	Neutral
Green	Earth	Green	Earth

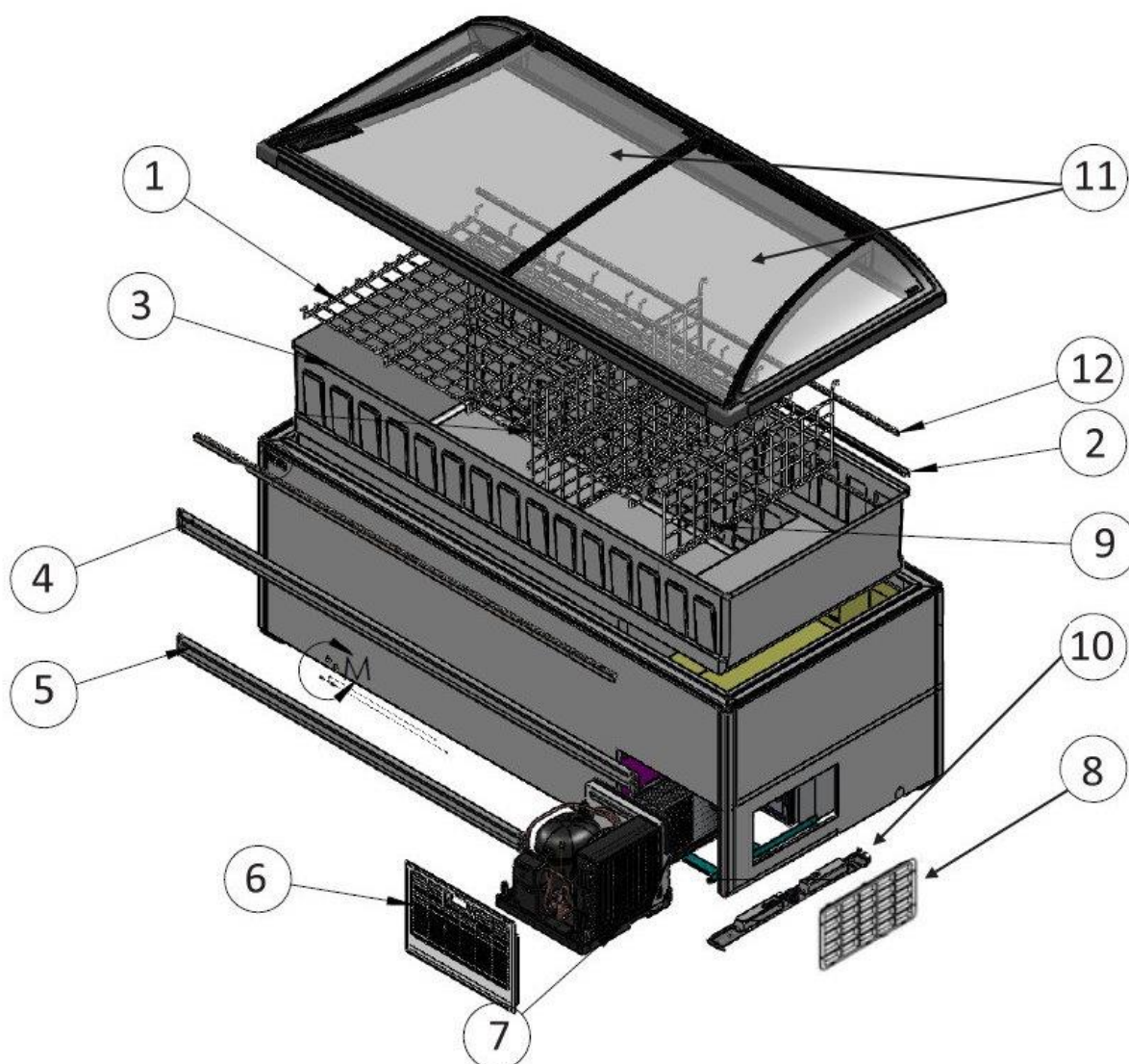
Refrigeration Cassette Assembly

Item No	Description	Part No
1	Refrigeration Cassette 220V	003.1000.201
	Refrigeration Cassette 115V	003.1000.101
2	Dixell XR06CX Controller 220V	018.6FF.106
	Dixell XR06CX Controller 110V	018.1000.006

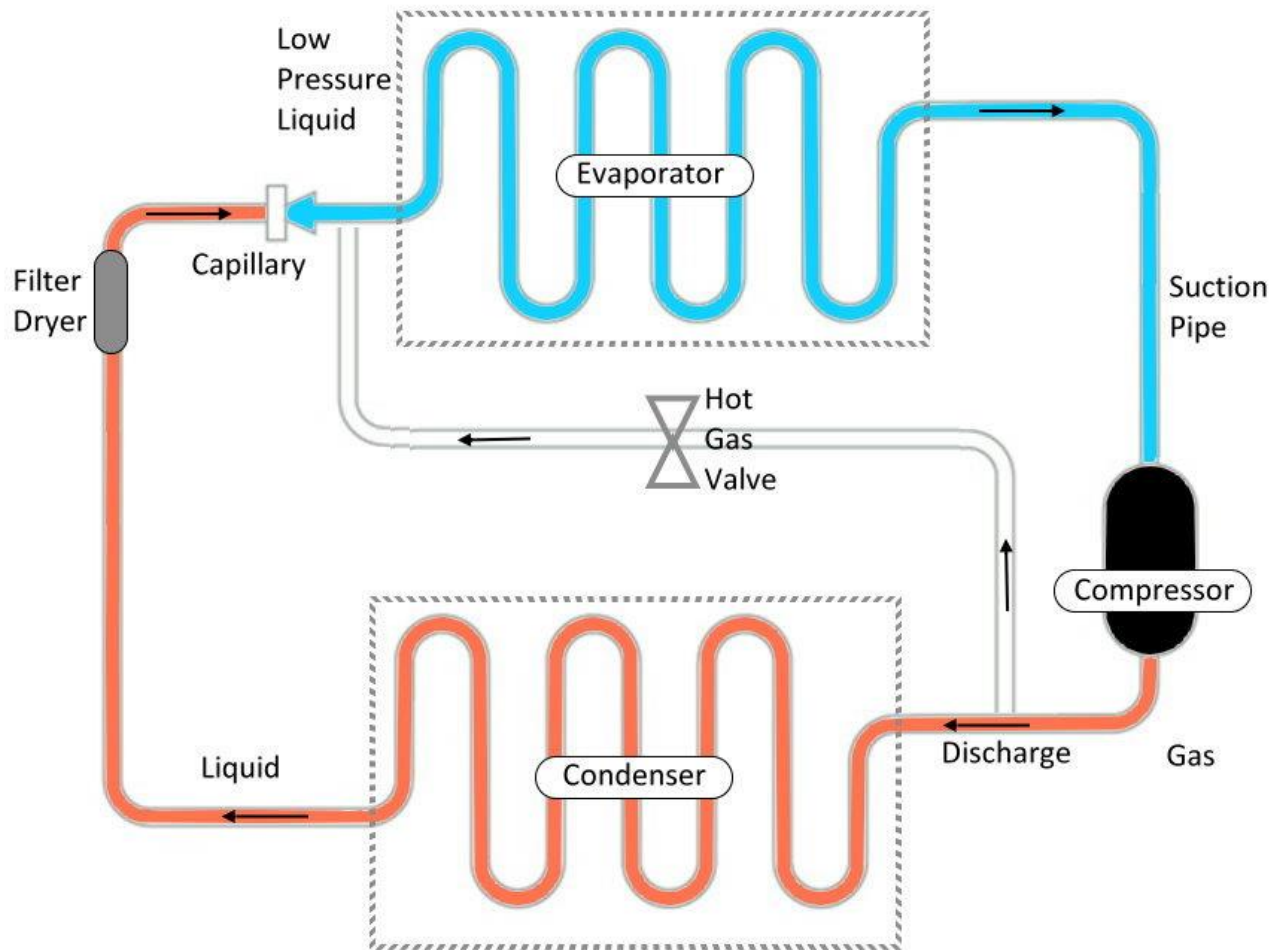


Cabinet Assembly

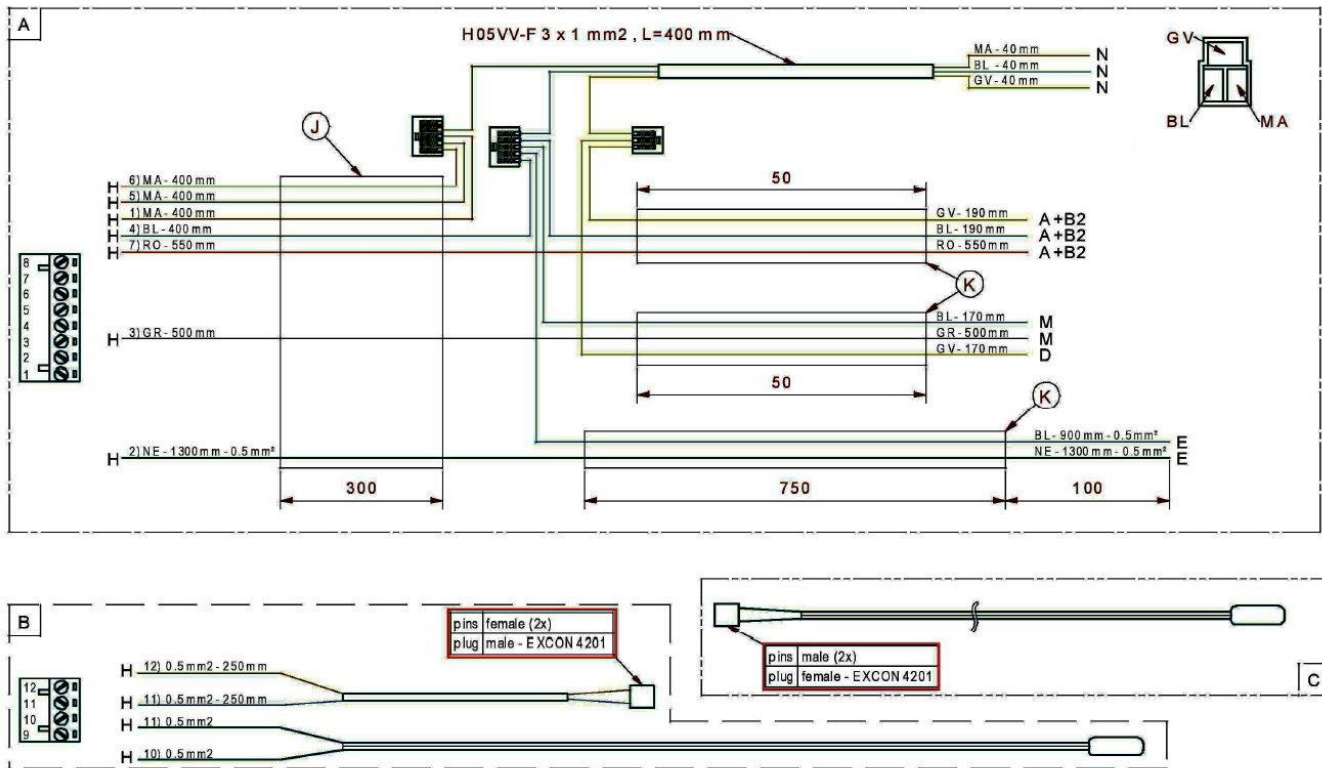
Item No	Description	EU Part No.
1	False Floor	015.1000.103
2	Internal Rail	012.1000.215
3	Tub (Liner)	006.1000.002
4	Buffer	006.1000.347
5	Kick Strip	006.611.285
6	Control Panel	006.1000.118
7	Frost Free Cassette	EU: 003.1000.001 – USA: 003.1000.101
8	Side Grille	006.111.911
9	Short Dividers	015.1000.204
10	LED Driver	018.610.704
11	Lid Inline	Upper: 009.1000.210 – Lower: 009.1000.211
11	Lid End of Aisle	Upper: 009.1000.310 – Lower: 009.1000.310
12	LED Light	018.1000.001



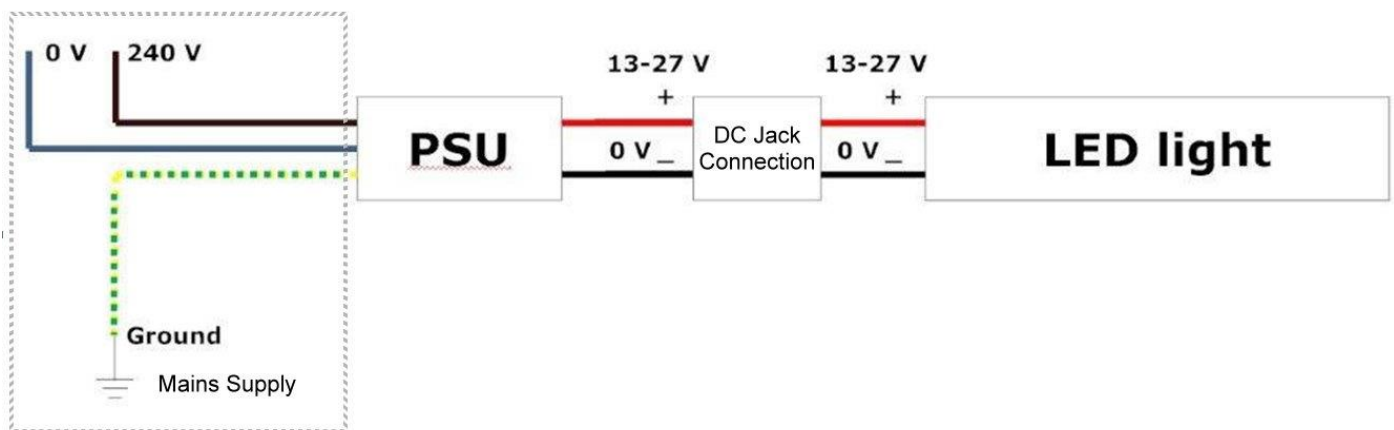
Refrigeration Circuit



Refrigeration Cassette Wiring



LED Wiring

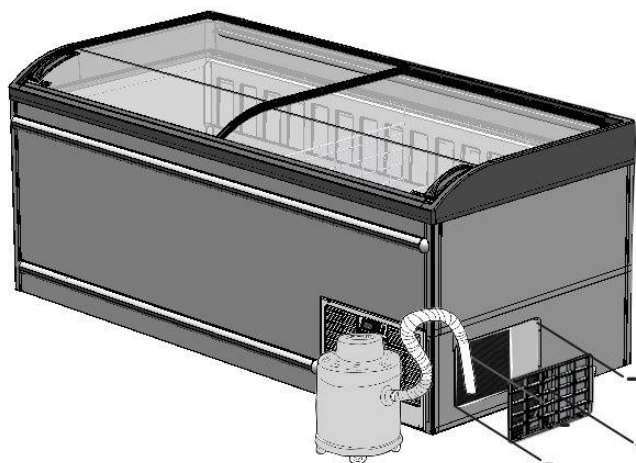


Care & Maintenance

Note! Always unplug your Conservator before beginning any maintenance work.

To ensure trouble free operation of your Novum Cabinet, the following routine should be instituted.

- Inspect the area behind Cabinets periodically and remove any debris.
- Clean the interior and exterior plastic components of your cabinet with a mild detergent. (Never use bleach or abrasive material)
- **Using only a damp cloth**, clean the interior tub and interior plastic components with a mild detergent, water/vinegar or 'Vim' liquid is also suitable. (Never use bleach or abrasive material) After cleaning, wipe away excess residue.
- Use proprietary glass cleaner with soft cloth to clean glass lid and front. (Never use abrasive materials to clean glass)

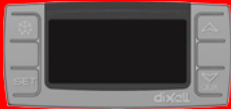


- Periodically inspect the Condenser for dust build up.
 - Disconnect freezer from mains supply.
 - Remove side grille by removing 4 x pozi screws.
 - Remove any dust build up with a non-metallic brush or vacuum cleaner.
 - Refit side grille
 - Condenser should be checked 2-3 times per year and cleaned as required.
- Best practice demands that all Cabinets should be thoroughly cleaned a minimum of once per year.

PRODUCT LOADING

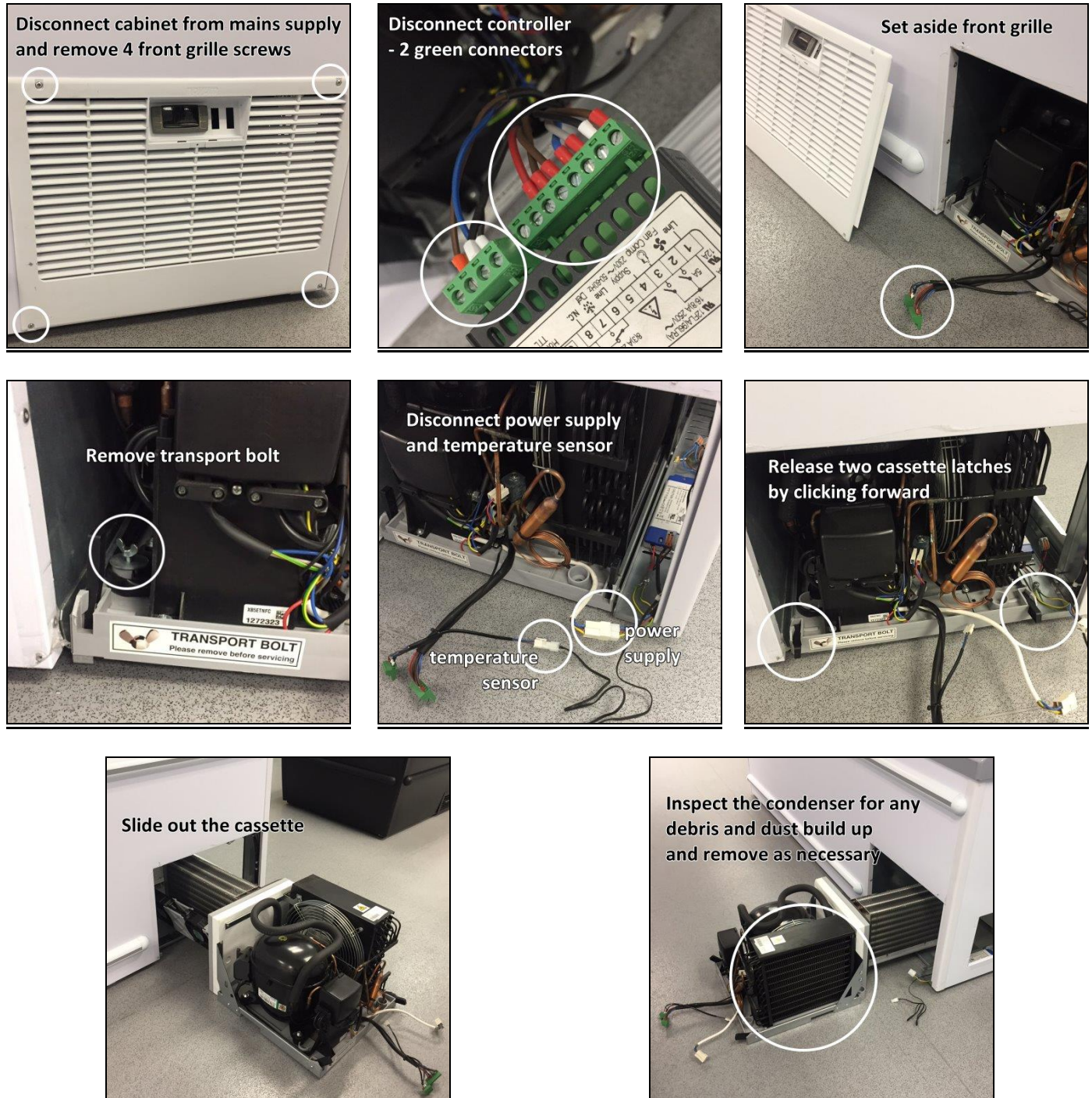
- Novum Cabinets are conservators in nature and can be used to store and display previously frozen food.
- NEVER merchandise product above the red load limit sticker.
- As soon as the Cabinet has reached a storage temperature of below -18°C (as indicated by the Electronic Controller display), it can be loaded with Frozen Foods up to the maximum of the Load Limit line.
- Do not load the Cabinet with non-frozen foods or try to freeze products in the Cabinet.
- DO NOT LEAVE LID OPEN for extended periods during merchandising.
- Exercise due care when loading heavy product, do not damage internal liner.



Symptom	Status	Cause	Action
 No Display	Critical	No Power	1. Check product temp, if above -12°C, move product. 2. Check plug connected to socket. 3. Check plug is connected to back of cabinet. 4. Check breaker is not tripped on distribution panel.. 5. Check plug fuse. 6. Call Service Agent.
 HA Alarm	Critical	High Cabinet Temperature	1. Check product temp, if above -12°C, move product. 2. Call Service Agent.
 P1 Alarm	Not Critical	Loose Temperature Probe	1. Call Service Agent.
 P2 Alarm	Not Critical	Loose Temperature Probe	1. Call Service Agent.
 Temp Variation	Not Critical	Normal Operation. Temp varies between -16°C to -24°C	1. No Action required. 2. Monitor Temperature
Condensation on Glass	Not Critical	Excess Humidity	1. Check Air conditioning is working. 2. Check product not above load limit line. 3. Check frozen product has not been placed on glass. 4. Check lid is closed correctly 5. Call service Agent.

Refrigeration Cassette

Periodically inspect the refrigeration cassette unit as follows:



SAFETY INFORMATION

- Ensure all ventilation openings are free from obstruction.
- Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.
- Do not damage the refrigerant circuit.
- Do not use electrical appliances inside the food storage compartments of the appliance, unless they are the type recommended by the manufacturer.
- Do not use multiple socket outlet strips or extension cables. This may cause a fire or electric shock in the event of a thermal overload.
- Do not store explosive substances, such as aerosol cans with flammable propellant, in this appliance.
- The appliance is fitted with single capped LED lights, and must be replaced by identical Lamps only. These replacement Lamps must be fitted by a qualified electrician / service engineer.
- Do not stand on top of the glass lid or into the cabinet.
- Objects should not be placed on the glass lid or on top of the cabinet.
- Condensed water may leak from the cabinet and must be cleaned immediately as it risks slipping and causing injury.
- Use protective gloves when cleaning the cabinet to prevent sharp edges from injuring hands.
- Use protective gloves when loading the cabinet with frozen products to protect hands from frostbite.

Caution: When necessary, all component parts should be replaced with like components and service should only be carried out by factory authorized service personnel so as to minimize the risk of possible ignition due to incorrect parts or improper service.

1. TRANSPORT AND HANDLING

- Cabinets must be transported and stored in an upright position.
- During transport, Cabinets must be protected from water and direct sunlight.
- Cabinet lids must be covered with tar paper to protect the cabinet from sunlight during loading, transport and unloading.
- Forklift tines should be set more than 800mm apart to avoid damage to control panel and motor tray.
- Cabinets should only be lifted from the back and never from the front or sides.
- Novum Cabinets are heavy, so take appropriate care when lifting or moving.
- Cabinets should only be lifted or moved when empty and using equipment appropriate to lifting heavy goods.
- A visual inspection must be carried out to determine if any damage has occurred during transit, before and during unpacking.

Caution: Due care and attention must be observed when handling or using this freezer so as to avoid damaging the refrigerant tubing or increasing the risk of a leak.

Controller Settings

Version: Frost Free reverse flow

Date : 09/11/2017

Model : XR06CX

Group	Parameter	Description	Edit	Orig	Level	Min	MaX	Unit
Regulation	Hy	Differential	3	3	Pr1	1	25	°C
Regulation	LS	Minimum set point	-25	-25	Pr2	-55	-23	°C
Regulation	US	Maximum set point	-20	-20	Pr2	-23	150	°C
Probes	ot	Thermostat probe calibration	-2	-2	Pr1	-12	12	°C
Probes	P2P	Evaporator probe presence	y	y	Pr1			
Probes	oE	Evaporator probe calibration	0	0	Pr2	-12	12	°C
Regulation	odS	Outputs delay at start up	1	1	Pr2	0	255	min
Regulation	AC	Anti-short cycle delay	3	3	Pr1	0	60	min
Regulation	rtr	P1-P2 percentage for regulation	100	100	Pr2	0	100	
Regulation	CCt	Continuous cycle duration	00:0	00:0	Pr2			h
			0	0				
Regulation	CCS	Set point for continuous cycle	-5	-5	Pr2	-55	150	°C
Regulation	Con	Compressor ON time with faulty probe	30	30	Pr2	0	255	min
Regulation	CoF	Compressor OFF time with faulty probe	5	5	Pr2	0	255	min
Regulation	CF	Temperature measurement unit	C	C	Pr2			
Regulation	rES	Resolution	in	in	Pr1			
Regulation	Lod	Probe displayed	P1	P1	Pr2			
Regulation	dLy	Display temperature delay	03:0	03:0	Pr2			min
			0	0				
Regulation	dtr	P1-P2 percentage for display	50	50	Pr2	1	99	
Defrost	tdF	Defrost type	in	in	Pr1			
Defrost	dFP	Probe selection for first defrost	P2	P2	Pr2			
Defrost	dtE	Defrost termination temperature first defrost	14	14	Pr1	-55	50	°C
Defrost	idF	Interval between defrost cycles	24	24	Pr1	0	120	h
Defrost	MdF	(Maximum) length for first defrost	30	30	Pr1	0	255	min
Defrost	dSd	Start defrost delay	0	0	Pr2	0	255	min
Defrost	dFd	Displaying during defrost	it	it	Pr2			
Defrost	dAd	Max display delay after defrost	30	30	Pr2	0	255	min
Defrost	Fdt	Draining time	0	0	Pr2	0	255	min
Defrost	dPo	First defrost after start-up	y	y	Pr2			
Defrost	dAF	Defrost delay after fast freezing	00:0	00:0	Pr2			h
			0	0				
Fan	FnC	Fan operating mode	c-n	c-n	Pr1			
Fan	Fnd	Fan delay after defrost	0	0	Pr1	0	255	min
Fan	FSt	Fan stop temperature	-5	-5	Pr1	-55	50	°C
Fan	Fon	Fan on time with compressor off	0	0	Pr2	0	15	min
Fan	FoF	Fan off time with compressor off	0	0	Pr2	0	15	min
Fan	FAP	Probe selection for fan	P2	P2	Pr2			
Alarm	ALC	Temperature alarms configuration	Ab	Ab	Pr2			
Alarm	ALU	Maximum temperature alarm	-10	-10	Pr1	-30	150	°C
Alarm	ALL	Minimum temperature alarm	-30	-30	Pr1	-55	-10	°C
Alarm	AFH	Differential for temperature alarm recovery	1	1	Pr2	1	25	°C
Alarm	ALd	Temperature alarm delay	15	15	Pr2	0	255	min
Alarm	dAo	Delay of temperature alarm at start up	02:0	02:0	Pr2	0	0	h

Group	Parameter	Description	Edit	Orig	Level	Min	MaX	Unit
Digital inputs	i1P	Digital input polarity	CL	CL	Pr1			
Digital inputs	i1F	Digital input configuration	dor	dor	Pr1			
Digital inputs	did	Digital input alarm delay	15	15	Pr1	0	255	min
Digital inputs	nPS	Number of activation of pressure switch	15	15	Pr2	0	15	
Digital inputs	OdC	Compress and fan status when open door	F_C	F_C	Pr2			
Alarm	rrd	Regulation restart with door open alarm	y	y	Pr2			
Probes	HES	Differential for Energy Saving	0	0	Pr2	-30	30	°C
Other	Adr	Serial address	1	1	Pr2	1	247	
Other	dP1	Room probe display	0	0	Pr2			
Other	dP2	Evaporator probe display	0	0	Pr2			
Other	rSE	Real set point	0	0	Pr2			
Other	rEL	Software release	0	0	Pr2			
Other	Ptb	Map code	4	4	Pr2	0	65535	
Regulation	SEt	Set point	-23	-23		-25	-20	°C

Dixell

Installing and operating instructions

EMERSON

DIGITAL CONTROLLER WITH DEFROST AND FANS MANAGEMENT

XR06CX

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1 GENERAL WARNINGS

1.1 PLEASE READ BEFORE USING THIS MANUAL

- This manual is part of the product and should be kept near the instrument for easy and quick reference.
- The instrument shall not be used for purposes different from those described hereunder. It cannot be used as a safety device.
- Check the application limits before proceeding.
- Dixell Srl reserves the right to change the composition of its products, even without notice, ensuring the same and unchanged functionality.

1.2 SAFETY PRECAUTIONS

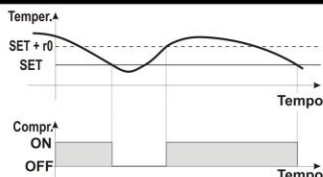
- Check the supply voltage is correct before connecting the instrument.
- Do not expose to water or moisture: use the controller only within the operating limits avoiding sudden temperature changes with high atmospheric humidity to prevent formation of condensation
- Warning: disconnect all electrical connections before any kind of maintenance.
- Fit the probe where it is not accessible by the End User. The instrument must not be opened.
- In case of failure or faulty operation send the instrument back to the distributor or to "Dixell S.r.l." (see address) with a detailed description of the fault.
- Consider the maximum current which can be applied to each relay (see Technical Data).
- Ensure that the wires for probes, loads and the power supply are separated and far enough from each other, without crossing or intertwining.
- In case of applications in industrial environments, the use of mains filters (our mod. FT1) in parallel with inductive loads could be useful.

2 GENERAL DESCRIPTION

The XR06CX, format 32 x 74 x 60 mm, is microprocessor based controller, suitable for applications on medium or low temperature ventilated refrigerating units. It has three relay outputs to control compressor, fan, and defrost which can be either electrical or reverse cycle (hot gas). The device is also provided with 2 NTC probe inputs, the first one for temperature control and the second one to be located onto the evaporator, to control the defrost termination temperature and to managed the fan and it's provided with a configurable digital input. With the HOTKEY it's possible to program the instrument in a quick and easy way.

3 REGULATION

The regulation is performed according to the temperature measured by the thermostat probe with a positive differential from the set point: if the temperature increases and reaches set point plus differential the compressor is started and then turned off when the temperature reaches the set point value again.



In case of fault in the thermostat probe the start and stop of the compressor are timed through parameters "Cy" and "Cn".

4 DEFROST

Two defrost modes are available through the "td" parameter:

- td=EL → defrost through electrical heater (compressor OFF)
- td=in → hot gas defrost (compressor ON).

Other parameters are used to control the interval between defrost cycles (id), its maximum length (Md) and two defrost modes: timed or controlled by the evaporator's probe. At the end of defrost dripping time is started, its length is set in the dt parameter. With dt=0 the dripping time is disabled.

5 FANS

With FC parameter it can be selected the fans functioning:

- FC=cn → will switch ON and OFF with the compressor and **not** run during defrost
- FC=on → fans will run even if the compressor is off, and **not** run during defrost

After defrost, there is a timed fan delay allowing for drip time, set by means of the "Fd" parameter.

- FC=cy → fans will switch ON and OFF with the compressor and **run** during defrost
- FC=oy → fans will run continuously also during defrost.

An additional parameter "FS" provides the setting of temperature, detected by the evaporator probe, above which the fans are always OFF. This is used to make sure circulation of air only if his temperature is lower than set in "FS"

5.1 FANS AND DIGITAL INPUT

When the digital input is configured as door switch IF=do, fans and compressor status depends on the dC parameter value:

- dC=no → normal regulation;
 - dC=Fn → fans OFF;
 - dC=cP → compressor OFF;
 - dC=Fc → compressor and fans OFF.
- When rd=y, the regulation restart with door open alarm.

6 FRONT PANEL COMMANDS



SET



AUX

To display target set point, in programming mode it selects a parameter or confirm an operation

To start a manual defrost

In programming mode it browses the parameter codes or increases the displayed value

In programming mode it browses the parameter codes or decreases the displayed value

KEYS COMBINATION



To lock or unlock the keyboard

To enter in programming mode

To return to room temperature display

LED	MODE	SIGNIFICATO
❄️	On	Compressor enabled
	Flashing	Anti short cycle delay enabled (AC parameter)
❄️	On	Defrost in progress
	Flashing	Dripping in progress
🌀	On	Fans output enabled
	Flashing	Fans delay after defrost
°C	On	Measurement unit
	Flashing	Programming mode
°F	On	Measurement unit
	Flashing	Programming mode

6.1 HOW TO SEE THE SET POINT

- Push and immediately release the SET key, the set point will be showed;
- Push and immediately release the SET key or wait about 5s to return to normal visualisation.

6.2 HOW TO CHANGE THE SETPOINT

- Push the SET key for more than 2 seconds to change the Set point value;
- The value of the set point will be displayed and the "°C" or "°F" LED starts blinking;
- To change the Set value push the ▲ or ▼ arrows.
- To memorise the new set point value push the SET key again or wait 10s.

6.3 HOW TO START A MANUAL DEFROST

Push the DEF ❄️ key for more than 2 seconds and a manual defrost will start

6.4 HOW TO CHANGE A PARAMETER VALUE

To change the parameter's value operate as follows:

- Enter the Programming mode by pressing the SET+ ▼ keys for 3s ("°C" or "°F" LED starts blinking).
- Select the required parameter. Press the "SET" key to display its value
- Use ▲ or ▼ to change its value.
- Press "SET" to store the new value and move to the following parameter.

To exit: Press SET+ ▲ or wait 15s without pressing a key.

NOTE: the set value is stored even when the procedure is exited by waiting the time-out to expire.

6.5 HIDDEN MENU

The hidden menu includes all the parameters of the instrument.

HOW TO ENTER THE HIDDEN MENU

- Enter the Programming mode by pressing the SET+ ▼ keys for 3s ("°C" or "°F" LED starts blinking).
- Released the keys, then push again the SET+ ▼ keys for more than 7s. The L2 label will be displayed immediately followed from the Hy parameter.

NOW YOU ARE IN THE HIDDEN MENU.

- Select the required parameter.
- Press the "SET" key to display its value
- Use ▲ or ▼ to change its value.
- Press "SET" to store the new value and move to the following parameter.

To exit: Press SET+ ▲ or wait 15s without pressing a key.

NOTE1: if there aren't any parameter in L1, after 3s the "nP" message is displayed. Keep the keys pushed till the L2 message is displayed.

NOTE2: the set value is stored even when the procedure is exited by waiting the time-out to expire.

HOW TO MOVE A PARAMETER FROM THE HIDDEN MENU TO THE FIRST LEVEL AND VICEVERSA.

Each parameter present in the HIDDEN MENU can be removed or put into "THE FIRST LEVEL" (user level) by pressing SET+ ▼. In HIDDEN MENU when a parameter is present in First Level the decimal point is on.

6.6 TO LOCK THE KEYBOARD

- Keep pressed for more than 3s the ▲ and ▼ keys.
- The "OF" message will be displayed and the keyboard will be locked. If a key is pressed more than 3s the "OF" message will be displayed.

6.7 TO UNLOCK THE KEYBOARD

Keep pressed together for more than 3s the Δ and ∇ keys till the "on" message will be displayed.

7 PARAMETERS

REGULATION

- Hy Differential:** (0,1°C ÷ 25°C / 1°F ÷ 45°F) Intervention differential for set point. Compressor Cut IN is SET POINT + differential (Hy). Compressor Cut OUT is when the temperature reaches the set point.
- LS Minimum SET POINT:** (-55°C+SET/-67°F+SET): Sets the minimum value for the set point..
- US Maximum SET POINT:** (SET+99°C/ SET+99°F). Set the maximum value for set point.
- ot First probe calibration:** (-9.9÷9.9°C / -17°F ÷ 17°F) allows to adjust possible offset of the first probe.
- P2 Evaporator probe presence:** n= not present; y= the defrost stops by temperature.
- oE Second probe calibration:** (-9.9÷9.9°C / -17°F ÷ 17°F) allows to adjust possible offset of the second probe.
- od Outputs activation delay at start up:** (0÷99min) This function is enabled at the initial start up of the instrument and inhibits any output activation for the period of time set in the parameter.
- AC Anti-short cycle delay:** (0÷50 min) minimum interval between the compressor stop and the following restart.
- Cy Compressor ON time with faulty probe:** (0÷99 min) time during which the compressor is active in case of faulty thermostat probe. With Cy=0 compressor is always OFF.
- Cn Compressor OFF time with faulty probe:** (0÷99 min) time during which the compressor is OFF in case of faulty thermostat probe. With Cn=0 compressor is always active.

DISPLAY

- CF Measurement unit:** (°C÷°F) °C=Celsius; °F=Fahrenheit. **WARNING:** When the measurement unit is changed the SET point and the values of the parameters Hy, LS, US, oE, o1, AU, AL have to be checked and modified if necessary.
- rE Resolution (only for °C):** (dE ÷ in) dE= decimal between -9.9 and 9.9°C; in= integer
- Ld Default display:** (P1 ÷ P2) P1= thermostat probe; P2= evaporator probe. SP=Set point (only XR04CX)
- dy Display delay:** (0÷15 min.) when the temperature increases, the display is updated of 1 °C/1°F after this time.

DEFROST

- td Defrost type:** (EL – in) EL= electrical heater, compressor OFF; in= hot gas, compressor ON;
- dE Defrost termination temperature:** (-55÷50°C / -67÷99°F) if P2=Y it sets the temperature measured by the evaporator probe, which causes the end of defrost.
- id Interval between defrost cycles:** (0÷99 minutes) Determines the time interval between the beginning of two defrost cycles.
- md Maximum length for defrost:** (0÷99 min. with 0 no defrost) when P2=n, (not evaporator probe: timed defrost) it sets the defrost duration, when P2=y (defrost end based on temperature) it sets the maximum length for defrost.
- dd Start defrost delay:** (0÷99min) This is useful when different defrost start times are necessary to avoid overloading the plant.
- dF Display during defrost:** (rt / it / SP / dF) rt= real temperature; it= start defrost temperature; SP= SET-POINT; dF= label dF.
- dt Drip time:** (0÷99 min) time interval between reaching defrost termination temperature and the restoring of the control's normal operation. This time allows the evaporator to eliminate water drops that might have formed due to defrost.
- dP Defrost at power – on:** (y=n) y= at power on defrost starts; n= defrost doesn't start at power-on

FANS

- FC Fans operating mode:** (cn, on, cY, oY) cn= in runs with the compressor, OFF during defrost; on= continuous mode, OFF during defrost; cY= runs with the compressor, ON during defrost; oY= continuous mode, ON during defrost.
- Fd Fans delay after defrost:** (0÷99 min) Interval between end of defrost and evaporator fans start.
- FS Fans stop temperature:** (-55÷50°C / -67°F ÷ 99°F) setting of temperature, detected by evaporator probe, above which fans are always OFF.

ALARMS

- AU Maximum temperature alarm:** (AL+99°C/99°F) when this temperature is reached the alarm is enabled, after the "Ad" delay time.
- AL Minimum temperature alarm:** (-55÷AU°C /-67÷AU°F) when this temperature is reached the alarm is enabled, after the "Ad" delay time.
- Ad Temperature alarm delay:** (0÷99 min) time interval between the detection of an alarm condition and alarm signalling.
- dA Exclusion of temperature alarm at startup:** (0÷99 min) time interval between the detection of the temperature alarm condition after instrument power on and alarm signalling.

DIGITAL INPUT

- IP Digital input polarity:** (oP ÷ cL) oP= activated by closing the contact; cL= activated by opening the contact;
- IF Digital input configuration:** (EA/bA/do/dF/Au/Hc) EA= external alarm: "EA" message is displayed; bA= serious alarm "CA" message is displayed; do= door switch function; dF= defrost activation; Au=not used; Hc= inversion of the kind of action;
- di Digital input delay:** (0÷99 min) with IF=EA or bA delay between the detection of the external alarm condition and its signalling. With IF=do it represents the delay to activate the door open alarm.
- dC Compressor and fan status when open door:** (no/Fn/cP/Fc) no= normal; Fn = Fans OFF; cP =Compressor OFF; Fc = Compressor and fans OFF;
- rd Regulation with door open:** (n=y) n = no regulation if door is opened; Y= when di is elapsed regulation restarts even if door open alarm is present;

OTHER

- d1 Thermostat probe display (read only)**
- d2 Evaporator probe display (read only)**
- Pt Parameter code table**
- rL Software release**

8 DIGITAL INPUTS (ONLY XR03CX)

The free voltage digital input is programmable in different configurations by the "1fF" parameter.

8.1 DOOR SWITCH (IF=DO)

It signals the door status and the corresponding relay output status through the "dC" parameter: no = normal (any change); Fn = Fan OFF; CP = Compressor OFF; FC = Compressor and fan OFF. Since the door is opened, after the delay time set through parameter "di", the door alarm is enabled, the display shows the message "dA" and the regulation restarts if rd = y. The alarm stops as soon as the external digital input is disabled again. With the door open, the high and low temperature alarms are disabled.

8.2 EXTERNAL ALARM (IF=EA)

As soon as the digital input is activated the unit will wait for "di" time delay before signalling the "EA" alarm message. The outputs status don't change. The alarm stops just after the digital input is deactivated.

8.3 SERIOUS ALARM (IF=BA)

When the digital input is activated, the unit will wait for "di" delay before signalling the "CA" alarm message. The relay outputs are switched OFF. The alarm will stop as soon as the digital input is deactivated.

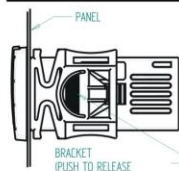
8.4 START DEFROST (IF=Df)

It starts a defrost if there are the right conditions. After the defrost is finished, the normal regulation will restart only if the digital input is disabled otherwise the instrument will wait until the "Md" safety time is expired.

8.5 INVERSION OF THE KIND OF ACTION: HEATING - COOLING (IF=HC)

This function allows to invert the regulation of the controller: from cooling to heating and viceversa.

9 INSTALLATION AND MOUNTING



Instrument **XR06CX** shall be mounted on vertical panel, in a 29x71 mm hole, and fixed using the special bracket supplied. The temperature range allowed for correct operation is 0÷60 °C. Avoid places subject to strong vibrations, corrosive gases, excessive dirt or humidity. The same recommendations apply to probes. Let air circulate by the cooling holes.

10 ELECTRICAL CONNECTIONS

The instrument is provided with screw terminal block to connect cables with a cross section up to 2,5 mm². Before connecting cables make sure the power supply complies with the instrument's requirements. Separate the probe cables from the power supply cables, from the outputs and the power connections. Do not exceed the maximum current allowed on each relay, in case of heavier loads use a suitable external relay.

10.1 PROBES

The probes shall be mounted with the bulb upwards to prevent damages due to casual liquid infiltration. It is recommended to place the thermostat probe away from air streams to correctly measure the average room temperature. Place the defrost termination probe among the evaporator fins in the coldest place, where most ice is formed, far from heaters or from the warmest place during defrost, to prevent premature defrost termination.

11 HOW TO USE THE HOT KEY

11.1 HOW TO PROGRAM THE HOT KEY FROM THE INSTRUMENT (UPLOAD)

- Program one controller with the front keypad.
- When the controller is ON, insert the "Hot Key" and push Δ key; the "uP" message appears followed by a flashing "Ed"
- Push "SET" key and the "Ed" will stop flashing.
- Turn OFF the instrument remove the "Hot Key", then turn it ON again.

NOTE: the "Er" message is displayed for failed programming. In this case push again a key if you want to restart the upload again or remove the "Hot key" to abort the operation.

11.2 HOW TO PROGRAM AN INSTRUMENT USING HOT KEY (DOWNLOAD)

- Turn OFF the instrument.
- Insert a programmed "Hot Key" into the 5 PIN receptacle and then turn the Controller ON.
- Automatically the parameter list of the "Hot Key" is downloaded into the Controller memory, the "do" message is blinking followed by a flashing "Ed".
- After 10 seconds the instrument will restart working with the new parameters.
- Remove the "Hot Key".

NOTE: the "Er" message is displayed for failed programming. In this case push again a key if you want to restart the upload again or remove the "Hot key" to abort the operation.

12 ALARM SIGNALLING

Mess.	Cause	Outputs
"P1"	Room probe failure	Compressor output according to "Cy" e "Cn"
"P2"	Evaporator probe failure	Defrost end is timed
"HA"	Maximum temperature alarm	Outputs unchanged
"LA"	Minimum temperature alarm	Outputs unchanged
"EA"	External alarm	Outputs unchanged
"CA"	Serious external alarm	All outputs OFF
"dA"	Door Open	Compressor and fans restarts

12.1 ALARM RECOVERY

Probe alarms **P1** and **P2** start some seconds after the fault in the related probe; they automatically stop some seconds after the probe restarts normal operation. Check connections before replacing the

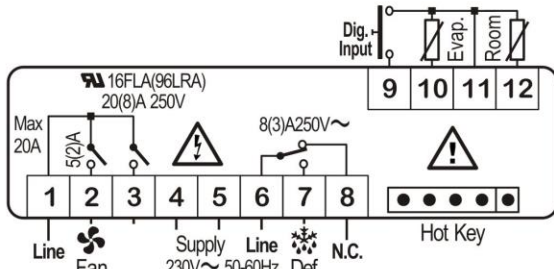
probe. Temperature alarms "HA" and "LA" automatically stop as soon as the temperature returns to normal values.
Alarms "EA" and "CA" (with iF=bL) recover as soon as the digital input is disabled.

13 TECHNICAL DATA

Housing: self extinguishing ABS.
Case: frontal 32x74 mm; depth 60mm;
Mounting: panel mounting in a 71x29mm panel cut-out
Protection: IP20; **Frontal protection:** IP65
Connections: Screw terminal block ≤ 2.5 mm² wiring.
Power supply: according to the model 230Vac $\pm 10\%$, 50/60Hz --- 110Vac $\pm 10\%$, 50/60Hz
Power absorption: 3.5VA max
Display: 2 digits, red LED, 14.2 mm high; **Inputs:** Up to 2 NTC.
Digital input: free voltage contact
Relay outputs: compressor SPST 8(3) A, 250Vac; SPST 16(6)A 250Vac or 20(8)A 250Vac
defrost: SPDT 8(3) A, 250Vac
fan: SPST 8(3) A, 250Vac or SPST 5(2) A
Data storing: on the non-volatile memory (EEPROM).
Kind of action: 1B; **Pollution degree:** 2; **Software class:** A;
Rated impulsive voltage: 2500V; **Overvoltage Category:** II
Operating temperature: 0+60 °C; **Storage temperature:** -25+60 °C.
Relative humidity: 20+85% (no condensing)
Measuring and regulation range: NTC -40+110°C;
Resolution: 0.1 °C or 1°C or 1 °F (selectable); **Accuracy (ambient temp. 25°C):** ± 0.1 °C ± 1 digit

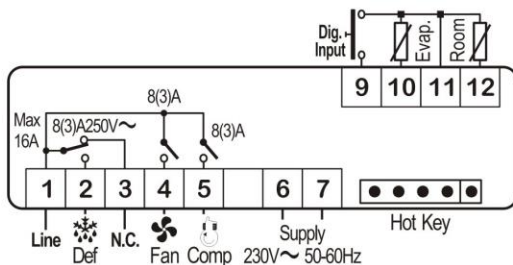
14 CONNECTIONS

14.1 XR06CX -- 20+8+5A OR 16+8+5A -- 110VAC OR 230VAC



NOTE: The compressor relay is 20(8)A or 16(6)A depending on the model.
NOTE: Connect the 120Vac power supply to 4-5

14.2 XR06CX -- 8+8+8A -- 110VAC OR 230VAC



NOTE: Connect the 120Vac power supply to 6-7

15 DEFAULT SETTING VALUES

LABEL	DESCRIPTION	RANGE	DEFAULT
REGULATION			
Hy	Differential	0.1 + 25°C/1 + 45°F	2.0°C / 4 °F
LS	Minimum Set Point	-55°C+SET/-67°F+SET	-55 °C / -55 °F
US	Maximum Set Point	SET+99°C/ SET+99°F	99 °C / 99 °F
ot	First probe calibration	-9.9+9.9°C/-17+17°F	0.0
P2	Second probe presence	n - Y	y
oE	Second probe calibration	-9.9+9.9°C/-17+17°F	0.0
od	Outputs activation delay at start up	0 + 99 min	0
AC	Anti-short cycle delay	0 + 50 min	1
Cy	Compressor ON time faulty probe	0 + 99 min	15
Cn	Compressor OFF time faulty probe	0 + 99 min	30
DISPLAY			
CF	Measurement units	°C - °F	°C / °F
rE	Resolution (only for °C)	dE - in	dE

Ld	Default Display	P1 - P2 - SP	P1
dy	Display delay	0 + 15 min	0
DEFROST			
td	Defrost type	EL - in	EL
dE	Defrost termination temperature	-55+50°C/-67+99°F	8.0 °C / 46 °F
id	Interval between defrost cycles	0 + 99 hours	6
Md	Maximum length for defrost	0 + 99 min.	30
dd	Start defrost delay	0 + 99 min.	0
dF	Display during defrost	rt - in - SP - dF	it
dt	Drip time	0 + 99 min	0
dP	Defrost at power-on	y - n	n
FANS			
FC	Fans operating mode	cn - on - cY - oY	on
Fd	Fans delay after defrost	0 + 99 min	10
FS	Fans stop temperature	-55+50°C/-67+99°F	2.0 °C / 36 °F
ALARMS			
AU	Maximum temperature alarm	ALL+99°C / ALL+99°F	99 °C / 99 °F
AL	Minimum temperature alarm	-55°C+ALU/-67°F+ALU	-55 °C / -55 °F
Ad	Temperature alarm delay	0 + 99 min	15
dA	Exclusion of temperature alarm at startup	0 + 99 min	90
DIGITAL INPUT			
iP	Digital input polarity	cL - oP	cL
iF	Digital input configuration	EA - bA - do - dF - Au - Hc	EA
di	Digital input delay	0 + 99 min	5
dC	Compressor and fan status when open door	no /Fn / cP / Fc	FC
rd	Regulation with door open	n - Y	y
OTHER			
d1	Thermostat probe display	Read Only	---
d2	Evaporator probe display	Read Only	---
Pt	Parameter code table	Read Only	---
rL	Firmware release	Read Only	---