

SKOPE Remote Glass Chiller GC110r



User Manual

MAN2900 Rev. 2.1 Aug. 2022

SKOPE[®]
Refrigeration

SKOPE Remote Glass Chiller
Model GC110r
User Manual

MAN2900
Rev. 2.1 Aug. 2022

Copyright © 2008 SKOPE Industries Limited. All rights reserved.

SKOPE Industries Limited reserves the right to alter specifications without notice.

SKOPE® is a registered trademark of SKOPE Industries Limited.
SKOPE INDUSTRIES LIMITED

Head Office
PO Box 1091, Christchurch
New Zealand
A.B.N. 73 374 418 306
AU: 1800 121 535
NZ: 0800 947 5673
E-mail: skope@skope.com
Website: www.skope.com

Trademark Infringement

The SKOPE trademark on this product is infringed if the owner, for the time being, does any of the following:

- Applies the trade mark to the product after its state, condition, get-up or packaging has been altered in any manner
- Alters, removes (including part removal) or obliterates (including part obliteration) the trade mark on the product
- Applies any other trade mark to the product
- Adds to the product any written material that is likely to damage the reputation of the trade mark

Notice of the above contractual obligations passes to:

- Successors or assignees of the buyer
- Future owners of the product

Contents

Installation

Safety Information	4
Function	4
Positioning the Cabinet	5
Refrigeration System Installation	6

Electronic Controller

Controller Overview	8
Controller Display	8
Temperature Setpoint	9
Messages and Alarms	9

Maintenance

Cleaning	11
Servicing	11
Warranty	11
Troubleshooting	11

Installation

Safety Information

When using any electrical appliance, safety precautions should always be observed. Read these instructions carefully and retain for future reference.

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
- Do not use this appliance for other than its intended use.
- Do not insert fingers/foreign objects into any holes.
- Only use this appliance with the voltage specified on the cabinet rating label.
- Ensure the appliance has adequate ventilation as this is essential to economical, high performance.
- Be careful not to touch moving parts and hot surfaces.
- For your own safety and that of others, ensure that all electrical work is done by authorised personnel.
- If the power supply flexible cord becomes damaged, it must be replaced by an authorised service agent or similarly qualified person in order to avoid a hazard.
- If installing or removing the refrigeration unit, refer to the Installation Guidelines below, and observe all necessary safety precautions.
- The appliance is not designed to be stable while in motion. Use extreme caution when moving or transporting it.
- Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.
- If the cabinet is to be scrapped, ensure the cabinet is unplugged from the power supply and cut off the mains flex close to the back of the cabinet. Be mindful of the risk of animals or children becoming trapped in the appliance – either remove or secure doors if necessary.
- Refrigerant must be removed by a qualified service person and the cabinet recycled/disposed of in accordance with local regulations.

Caution

Disconnect the cabinet from the mains power supply before attempting any cleaning or maintenance.

Function

The SKOPE Remote Glass Chiller is designed to chill glasses. The chiller can hold three standard 14" wide x 17" deep (355 mm x 432 mm) glass racks. The racks of glasses (not included with the cabinet) are loaded from the front of the cabinet by opening the glass door. The chilled glasses can then be accessed from the top of the cabinet after removing the acrylic lid. For efficient operation of the chiller, the removable acrylic lid should be replaced when not in use.

Controls

The chiller can be turned on and off using the power switch beside the electronic controller. See “Electronic Controller” on page 8 for further control options.



Figure 1: Glass Chiller Cabinet

Positioning the Cabinet

This appliance is intended to be positioned underneath a bench top, with a cutout in the top to allow access to the removable lid on top of the chiller (see “Cabinet Dimensions” on page 6).

Positioning the cabinet

- Avoid direct sunlight and warm draughts.
- Make sure normal operating conditions do not exceed 40°C at 65% relative humidity.
- Allow adequate space in front of the cabinet for the door to open fully.
- Ensure the cabinet is positioned on a level surface so the door will shut and seal correctly. The self-closing door has an internal torsion bar, pre-tensioned at the factory, and should not require any further adjustment.

Installing the cabinet

- Do not overload the power supply. See the cabinet rating label for power supply and current draw.
- This appliance is intended to be connected to a remote refrigeration system (see “Refrigeration System Installation” on page 6).
- The chiller requires no additional ventilation around the cabinet.

Adjustable Legs

The four adjustable legs can adjust the cabinet height up to 30 mm. To adjust the height of each leg, turn the black plastic foot at the bottom of the leg counter-clockwise to raise the height or clockwise to lower the height of the cabinet.

Cabinet Dimensions

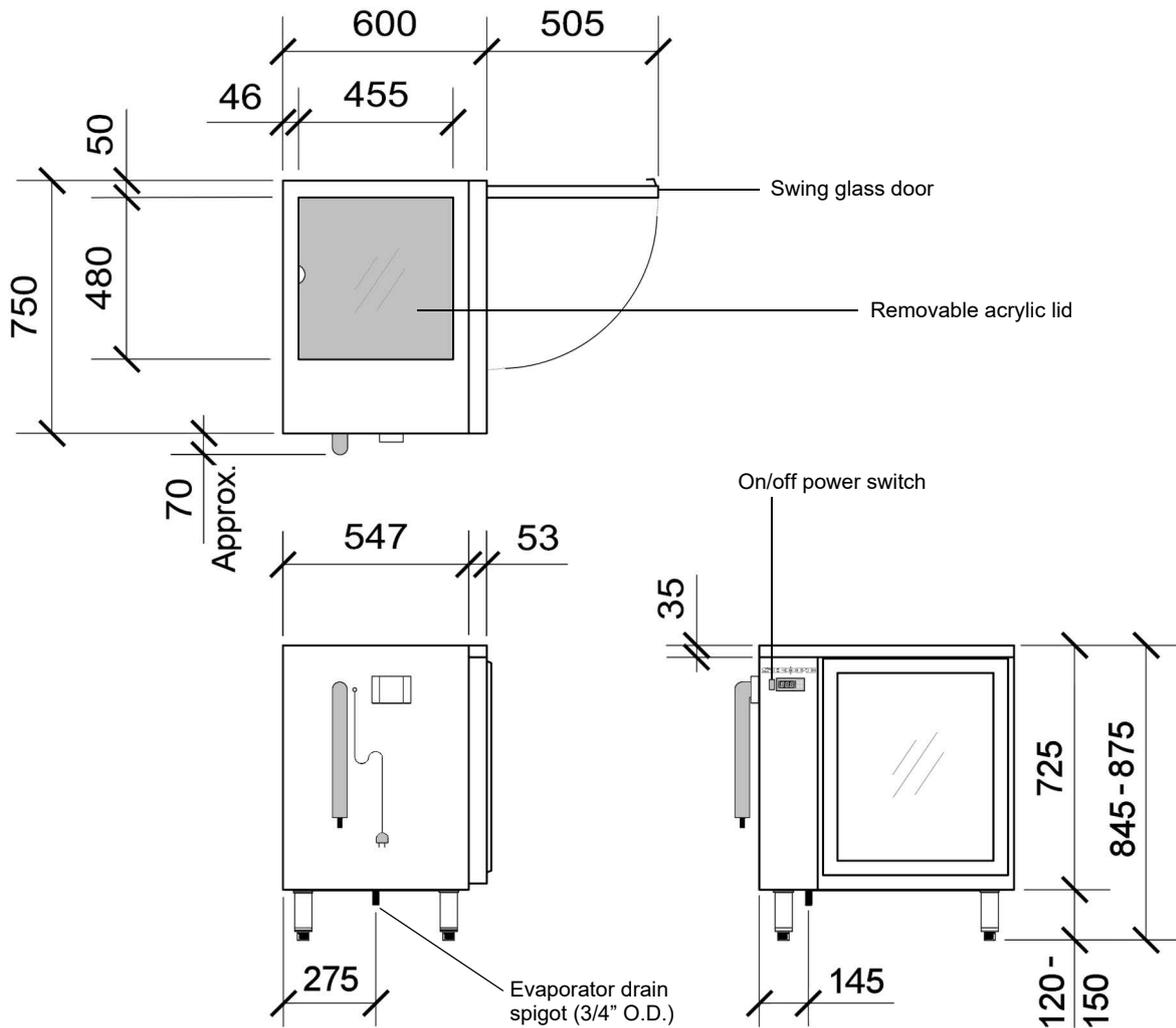


Figure 2: Cabinet dimensions

Refrigeration System Installation

Specifications

REFRIGERATION OPERATIONAL SPECIFICATIONS *	
Mean product temperature	3.5°C
Condensing temperature	45°C
Liquid temperature	40°C
Evaporating temperature	-5°C
Operation basis	18 / 24 hours

* Maximum 40°C ambient (optimised at 32°C/65% relative humidity)

Model	Refrigerant	Refrigeration duty - R134a / R404A
GC110r-C	R134a	450 watts (at -5°C SST)
GC110r-D	R404A	450 watts (at -5°C SST)

Refrigeration Practice

Installation must be performed by a refrigeration tradesperson, to an appropriate standard complying with all local regulations.

Performance depends on the overall installation (including condensing unit). Cabinet suitability must always be quantified for the application. The final responsibility for condensing unit performance and component selection rests with the installer. The installer must check matters such as:

- Heat and refrigeration load
- Variable operating conditions (usage, ambient and humidity)
- Refrigeration pipe sizing and length (distance, elevation and pressure drop)
- Location and ventilation (cabinet and condensing unit)
- Drainage and power supply
- Evacuating the unit fully prior to charging

Drain

The cabinet is supplied with a 45 mm long, 3/4" (19 mm) O.D. evaporator drain spigot, which exits out the bottom of the cabinet (see "Figure 2: Cabinet dimensions" on page 6 for dimensions). All drainage is to comply with local regulations, covering removal of condensate to waste water. Ensure the cabinet is level and the drain has adequate fall. Venting the drain may be required for a restrictive run.

Power Supply

The chiller is supplied with a 3.0 metre 10A flexible power cord fitted with a 3-pin plug, which exits the left hand side of the cabinet. The chiller can be turned off and on using the power switch beside the electronic controller.

Refrigeration lines

A 1/4" liquid line and 3/8" suction line are provided to attach pipe lines to. The suction line must be insulated.

The electronic controller supplied with the cabinet can switch a solenoid. No solenoid is supplied with the standard remote unit. If a solenoid valve is fitted and controlled by the electronic controller, the solenoid will need to be connected to the connector block behind the cover attached to the left hand side of the cabinet (see "Figure 3: Refrigeration Services" on page 7). Ensure the solenoid connection is accessible after installation.

Operation

On initial start up, the evaporator fan and cabinet heater wire will not immediately operate, as they are thermostatically controlled. The evaporator fan and cabinet heater wire will only operate once the evaporator coil temperature reaches 10°C.

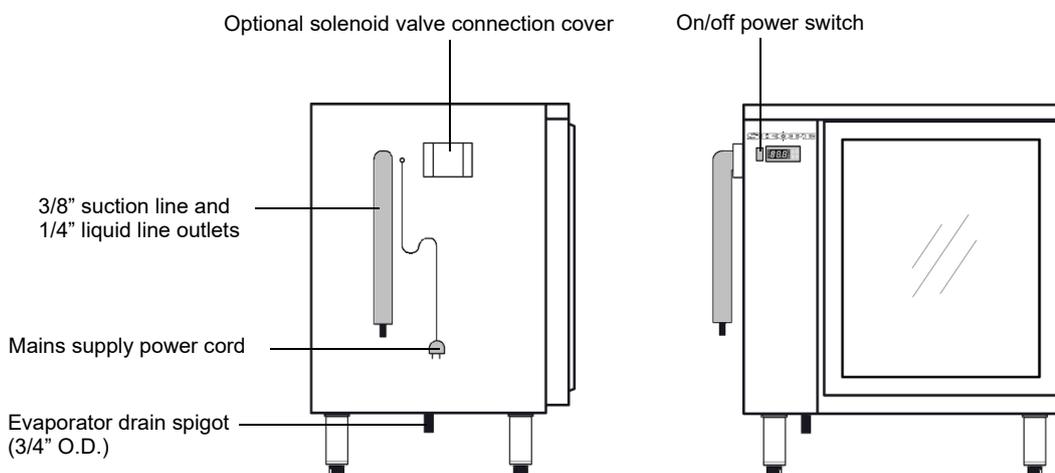


Figure 3: Refrigeration Services

Electronic Controller

Controller Overview

Function

The electronic controller controls and displays the internal cabinet temperature. The preset temperature setting controls the product temperature between 1°C and 5°C. The controller also signals temperature alarms (see “Alarms” on page 10).

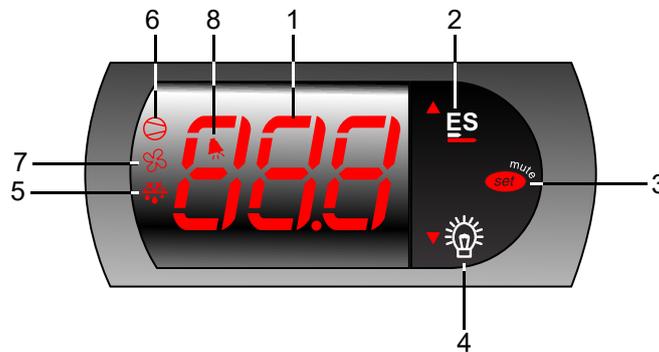
Operation

For general operation, the electronic controller requires no initial setup or additional programming. To ensure efficient operation, the electronic controller forces 6 hourly defrosts. During the defrost cycle, the compressor and condenser fan switch off and the evaporator fan stays on.

Controller Display

Faceplate

Because the electronic controller plays such an important role, it's helpful to know the parts of the faceplate you may use.



No.	Item	Description
1		Digital display of cabinet temperature or messages. The temperature is what the sensor inside the chiller detects, and not necessarily the product temperature. However, they may be very close depending on how the controller is set to sense temperature.
2		Up: Button. Used for programming.
3		Set (mute): Press to mute the alarm. Press and hold to access parameters. Also used for programming.
4		Light (down): Press to switch the cabinet light on and off. Also used for programming.
5		Defrost: ON when the defrost is activated. Flashes when activating the defrost is temporarily delayed due to other procedures in progress.
6		Compressor: ON when the compressor and condenser fan starts. Flashes when activating the compressor is temporarily delayed.
7		Fan: ON when the internal cabinet fans are activated. Flashes when activating the fans is temporarily delayed.
8		Alarm: ON when an alarm is signalled.

Temperature Setpoint

The chiller temperature setpoint is factory set at 2.0°C. If necessary the standard setting can be adjusted between 0.5°C and 4.5°C.

SKOPE does not recommend that the setpoint be changed unless it is absolutely necessary, and then only by small increments at a time.

To view and adjust the temperature setpoint

1. Press and hold the **Set (mute)** button for 3 seconds until **PS** is shown on the display, indicating entry into the controller settings menu.

1. Press the **ES (up)** or **Light (down)** button to scroll the menu until **St** is shown on the display.

2. Press the **Set (mute)** button. The current setpoint value is shown on the display.

3. Press the **up** or **down** button to increase or decrease the setpoint value to the required temperature.

4. Press the **Set (mute)** button to temporarily save the setpoint value.

5. Press and hold the **Set (mute)** button for 3 seconds to permanently save the setpoint value and exit the controller settings menu.

Messages and Alarms

Controller Display

The following tables explain messages and alarms that the electronic controller displays.

Alarms signal unexpected operational changes in the chiller and can be muted by pressing the Set (mute) button on the electronic controller faceplate (see page 8).

Messages

Display	Description
	The chiller is in Normal mode and the electronic controller displays the chiller temperature.
	The chiller's internal temperature is above 13°C.
	The chiller is in Cold Climate Protection (CCP) mode. The chiller enters CCP mode if the control probe detects the interior temperature is below parameter St - CCt temperature for more than CCd time. The lights remain on and cannot be switched off (see over page for more information).

Alarms

E0	Control probe error.	
E1	Condenser probe error.	
E2	Evaporator probe error.	
L0	Low temperature alarm. An alarm sounds. The temperature inside the chiller is too cold. The controller will automatically reset the alarm once the temperature inside the chiller rises.	
H1	High temperature alarm. An alarm sounds. The temperature inside the chiller is too warm. The controller will automatically reset the alarm once the temperature inside the chiller drops.	
cht	Refrigeration system high temperature Pre-warning (auto reset)	<ol style="list-style-type: none"> 1. Check refrigeration ventilation and ensure the cabinet is installed in a suitable location (see page 5). 2. To reset the 'CHt' alarm - unplug the cabinet from the power supply for 1 minute, then reconnect to power supply.
[CHt]	Refrigeration system high temperature Shutdown (manual reset)	
ELO	Low voltage alarm. An alarm sounds. The mains voltage is low. The controller switches the compressor off. The controller will automatically reset the alarm once the mains voltage rises.	
EHI	High voltage alarm. An alarm sounds. The mains voltage is high. The controller switches the compressor off. The controller will automatically reset the alarm once the mains voltage drops.	
EE	Electronic controller fault.	
EF		

Maintenance

Cleaning

Ensure the cabinet is disconnected from the mains power supply before cleaning. When necessary, wipe both the interior and exterior of the cabinet with a damp cloth. To help with cleaning, remove both the internal shelf support panels from the cabinet by lifting up off the keyhole screws.

Servicing

Servicing should be carried out by an authorised service agent. Detailed service and spares information is available in the SKOPE Remote Glass Chiller Service Manual (MAN2901).

Warranty

To receive a warranty for your purchased cabinet, you **MUST** register your cabinet within four weeks from the date of invoice by filling out either:

- the in-cabinet warranty form, and posting or faxing it back to SKOPE.
- the online warranty form.

Cabinets that are not registered within the four weeks are not eligible for a warranty.

Troubleshooting

Complaint	Possible Cause	Repair
Cabinet not operating and no controller display	Loss of power supply.	<ul style="list-style-type: none"> • Check mains power supply. • Check that the cabinet power switch is turned on (see page 6).
Power consumption is higher than expected	Cabinet has been left with lid off. Cabinet door is opened excessively.	Replace lid when not in use. Keep door open for minimum time.

SKOPE Contacts

SKOPE Industries Limited

ABN: 73 374 418 306

AU: 1800 121 535

NZ: 0800 947 5673

skope@skope.com

www.skope.com