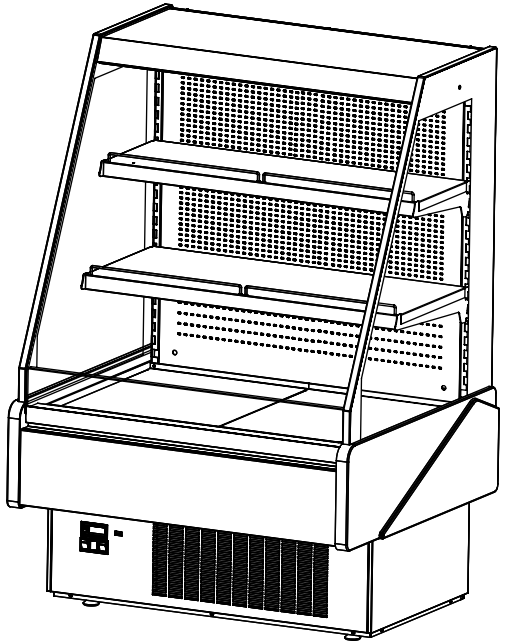
HYDRA KOOL



MVP GROUP CORPORATION
www.mvpgroupcorp.com

Intertek

Intertek

DOE Compliant

KGL SERIES - INSTALLATION AND OPERATION MANUAL - V0





3560 NW 56th Street
Fort Lauderdale, FL 33309
Tel.: 786.600.4687 / Toll Free: 844.218.8477
Fax.: 786.661.4100

5659 Royalmount Avenue
Montreal, Qc, Canada H4P 2P9
Tel.: 514.737.9701 / Toll Free: 888.275.4538
Fax.: 514.342.3854 / Toll Free: 877.453.8832

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8 Notes

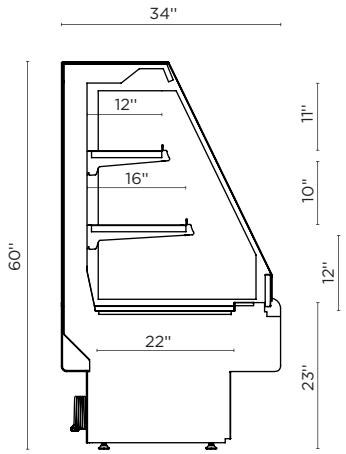
1 General information

1.1 Case description

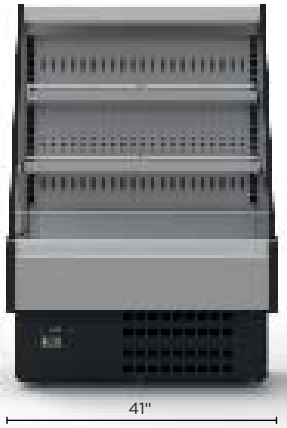
KGL series model (number) system.

KGL RS 40 S
AAA BB CC D

AAA	BB	CC	D
Basic model	Model variation	Length	Type of Unit.
	RS-Rear doors and electrical shutter	**40**''	**S**-Self Contained
	OF-Open front	**50**''	**R**-Remote
	OS-Open front and electrical shutter	**60**''	
	DL-Open front and rear doors		
	RM-Rear doors and manual shutter		



KGL-OF-XX-S(R)



KGL-OF-40-S(R)

7 Warranty

12 months warranty for all parts and labour from the invoice date. A new part will be provided free of charge. Defective part must be returned to the manufacturer.

Warranty claims: All claims must include model number, serial number, date of purchase, date of installation and additional information about the supposed defect.

All service work must be authorized by MVP group.

MVP group reserves the right to select the service company.

Loss of food or other damages caused by faulty equipment aren't covered by this warranty.

Warranty does not cover damage when uncrating.

Work made necessary, by lack of maintenance or cleaning are not covered by this warranty.

Warranty does not cover damage or malfunction result of improper use or installation.

Warranty does not cover negligence, misuse and operation on wrong voltage.

Warranty does not apply if the serial number is altered or defaced.

Failure to comply with the instructions in this manual shall avoid warranty.

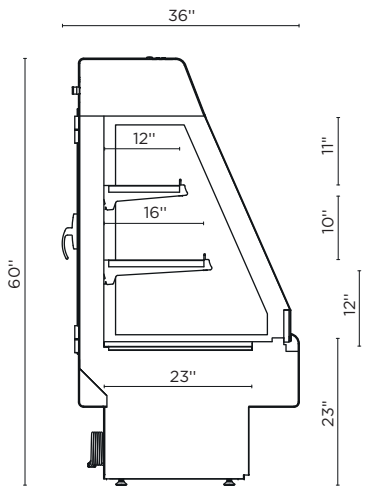
Service by	Type of action	Date	Serial number and model



KGL-OF-50-S(R)



KGL-OF-60-S(R)



KGL-RS/RM-XX-S(R)



KGL-RS/RM-40-S(R)

Low charge of refrigerant.

Relay defective.

Equipment runs constantly:

Condenser dirty.

Condenser fan malfunction.

Temperature and relative humidity too high.

Starting relay burns out:

Low voltage.

High voltage.

Compressor short cycles.

Incorrect running capacitor.

Incorrect relay.

Head pressure too high:

Unit overcharged.

Air or other non condensable gases in the system.

Clogged condenser.

Defective condenser fan motor.

Unit location too hot.

Restriction in charge line.

Head pressure too low:

Insufficient refrigerant charge.

Leak in the system.

Cold location.

Noisy unit:

Compressor oil charge low.

Fan blade causing vibrations.

Tube rattle.

Loose parts.

Case not leveled.

6.2 Service

⚠ This operation must be performed by a qualified technician.

⚠ For spare parts, contact your distributor.

5.9.2 Setting position

⚠ This operation must be performed by a qualified technician.

For more informations go to www.somfy.com

6 Troubleshooting/Service

6.1 Troubleshooting

⚠ Service must be performed by a qualified technician.

Doors not closing:

Check for leveled floor.

Check for obstruction.

Remove doors and check the bearings.

Lights not working:

Check light switch position.

Check light connections.

Warm case temperature:

Check for air return grille obstruction.

Check for air drafts.

Check store temperature.

Check for condenser obstruction and cleaning.

Check for frozen evaporator.

Check set point.

Display area is over filled.

Fans not working:

Check electrical connections.

Check for any debris.

Case not aligning:

Check for leveled floor.

Check instructions for joining.

Display not working:

Check main power switch position..

Check electrical connections.

Compressor not starting:

Disconnect switch open.

Blown fuse.

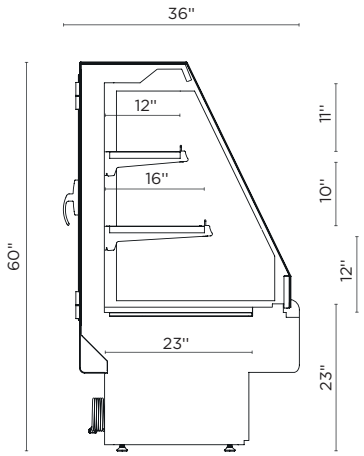
Overload protective tripped.



KGL-RS/RM-50-S(R)



KGL-RS/RM-60-S(R)



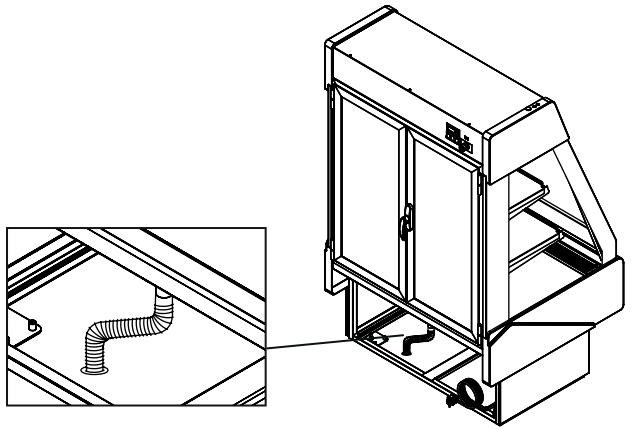
KGL-DL-XX-S(R)



KGL-DL-40-S(R)

5.8 Drain inspection

⚠ Check for drain obstruction and correct position every month (Remotes only).



5.9 Electric shutter

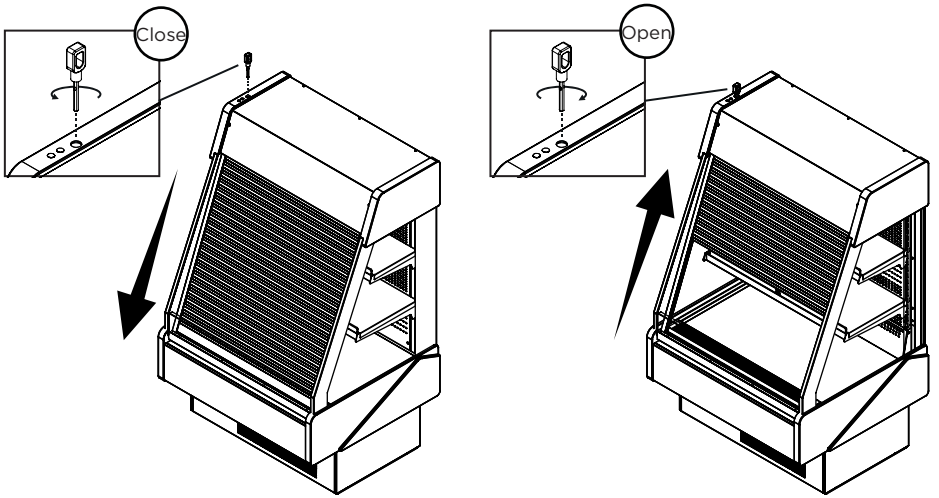
5.9.1 Manual operation

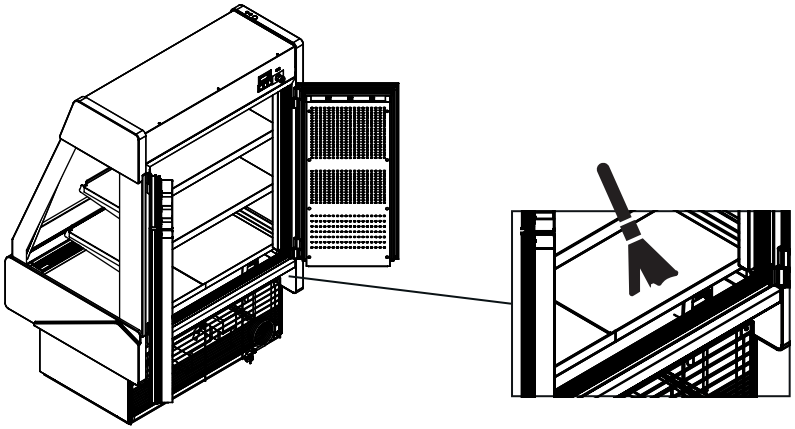
⚠ This operation must be performed by a qualified technician.

⚠ Manual opening of the shutter only for no power situation.

⚠ Make sure to insert the key in the correct place.

For more informations go to www.somfy.com





5.7 Evap Pan cleaning

⚠ This operation must be performed by a qualified technician.

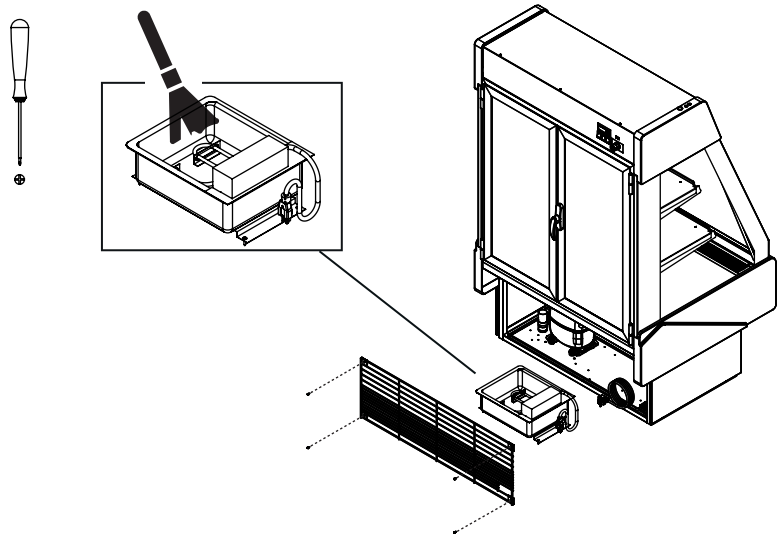
⚠ All operations must be done with the unit disconnected.

⚠ Pan can be hot!

⚠ This operation must be done weekly.

To access the evap pan:

- Remove protection grille.
- Unplug the evap pan.
- Relieve the screws and take the evap pan off.
- Clean with soft detergent or warm water.

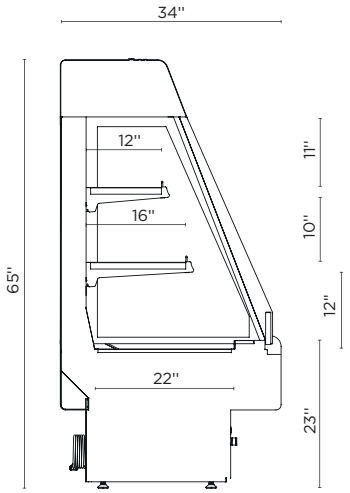




KGL-DL-50-S(R)



KGL-DL-60-S(R)

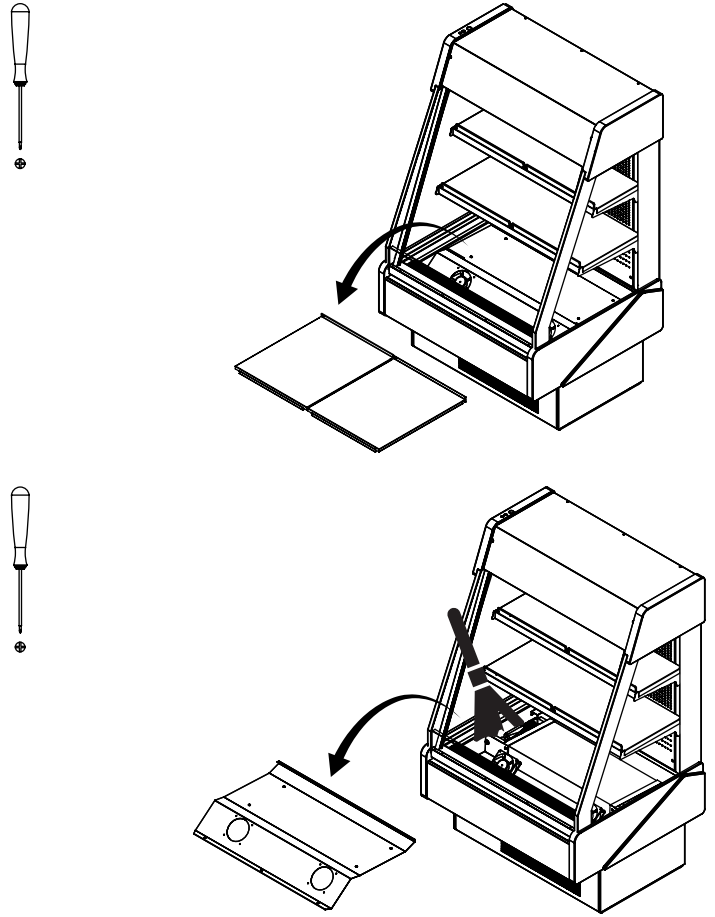


KGL-OS-XX-S(R)

-



KGL-OS-40-S(R)



5.6.1 Evaporator back cleaning (KGL-DL/RS/RM only)

⚠ The back of the evaporator must be checked for obstruction every day.

⚠ This operation must be performed by a qualified technician.

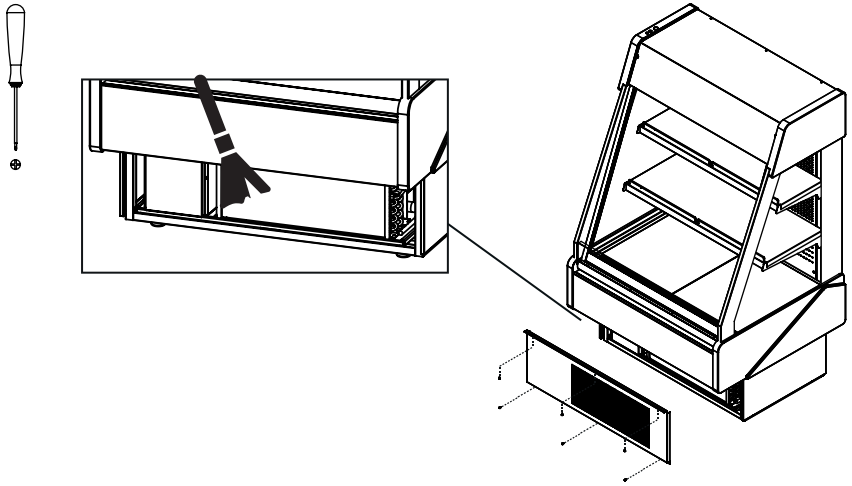
⚠ All operations must be done with the unit disconnected.

5.5 Condenser cleaning

⚠ This operation must be performed by a qualified technician.

⚠ All operations must be done with the unit disconnected.

Condenser must be regularly cleaned (every month). Use a brush or vacuum it.
To get to the condenser must remove frontal protection.



5.6 Evaporator cleaning

⚠ This operation must be performed by a qualified technician.

⚠ All operations must be done with the unit disconnected.

To access the evaporator:

- Lift and remove exposition panels

- Use tool for the screws and clean



KGL-OS-50-S(R)



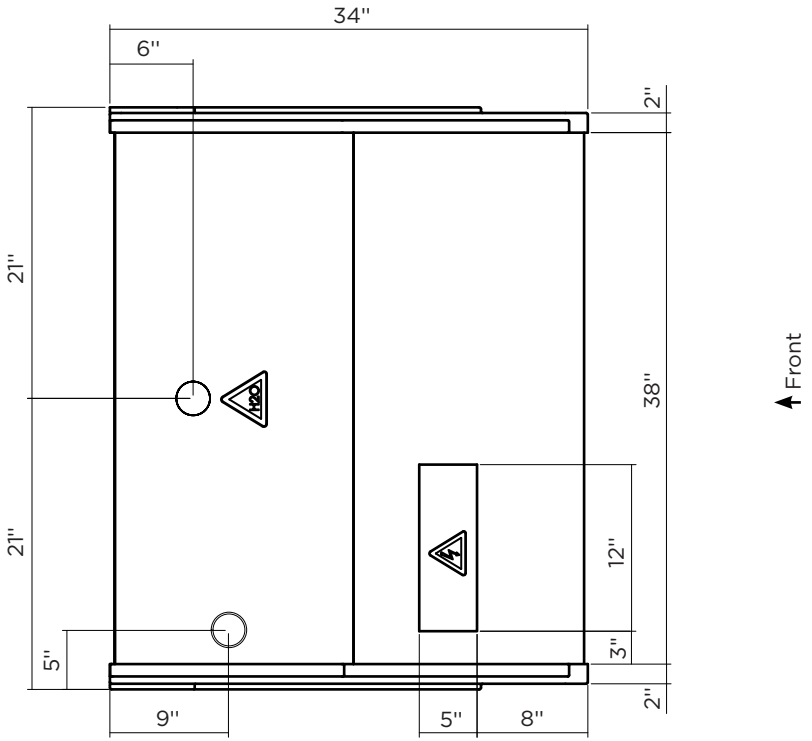
KGL-OS-60-S(R)

Implantation

Drain outlet

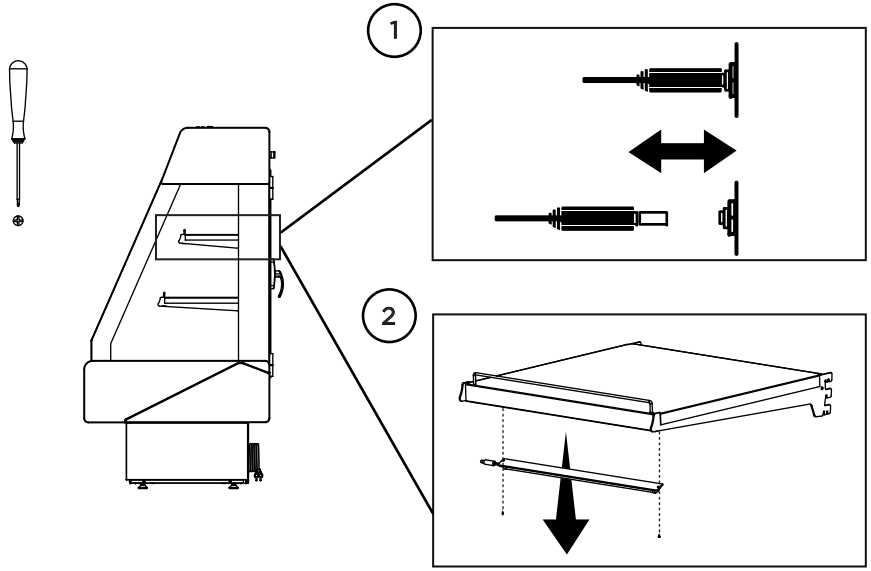
Electrical board

Refrigeration piping

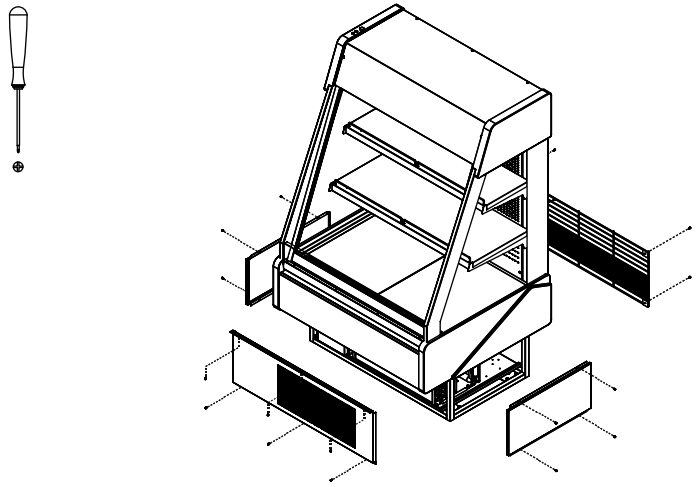


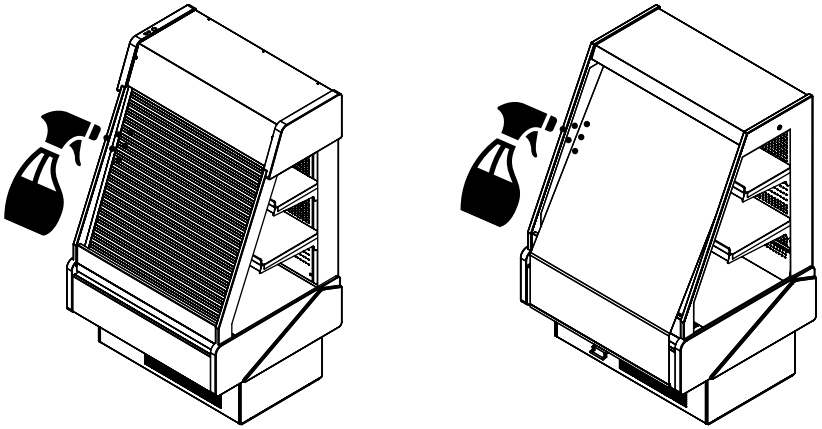
KGL-OF-40-S(R)

- Disconnect the light
- Unscrew the light and remove the light
- Insert a new light in the same place of the old one
- Screw the light and connect it
- Plug and turn on the light



5.4 Panels and protection grille removal

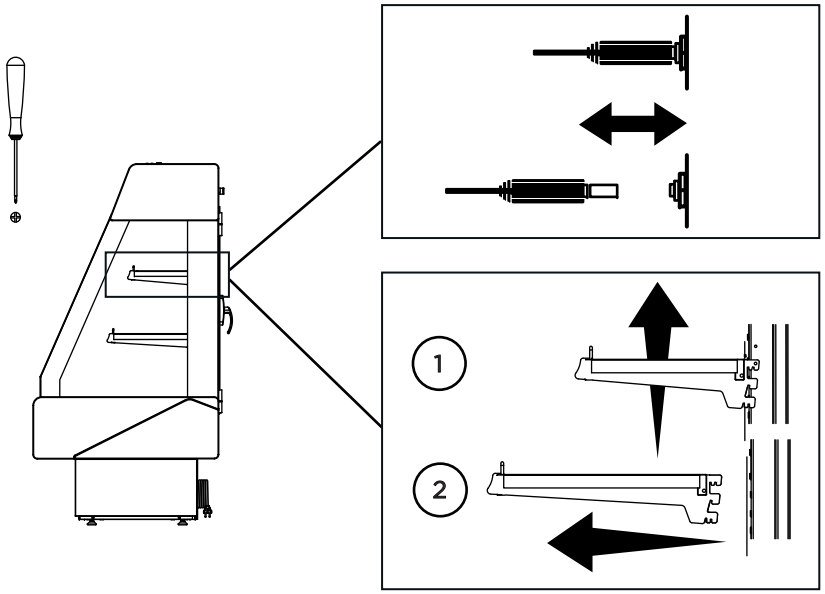




5.2 Shelf removing/adjustment

⚠ All operations must be done with the unit disconnected.

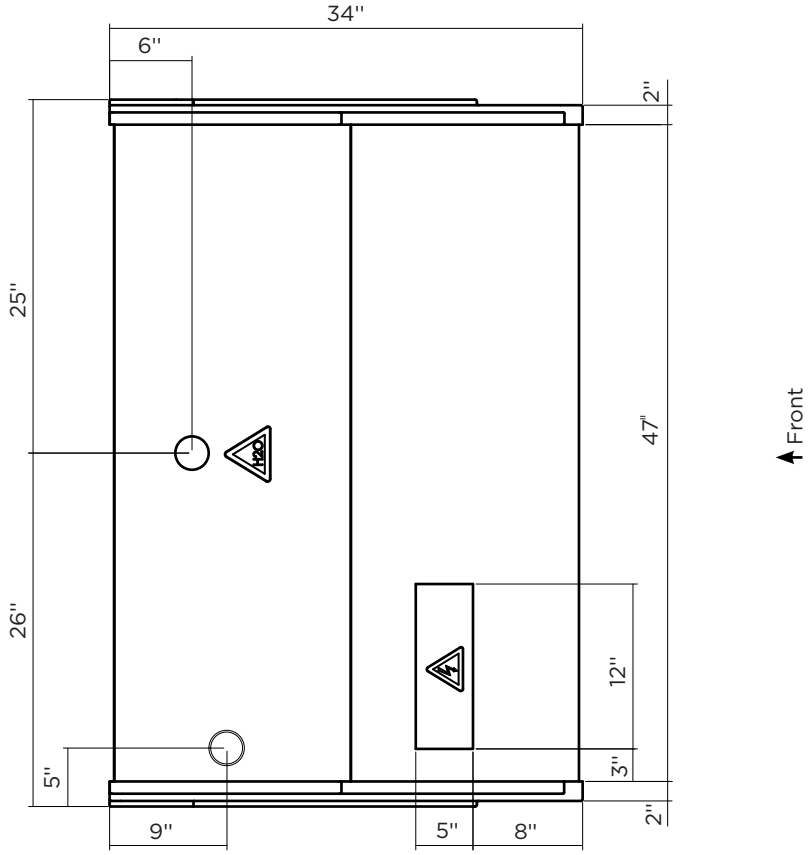
To remove or adjust shelves take care with light connections.



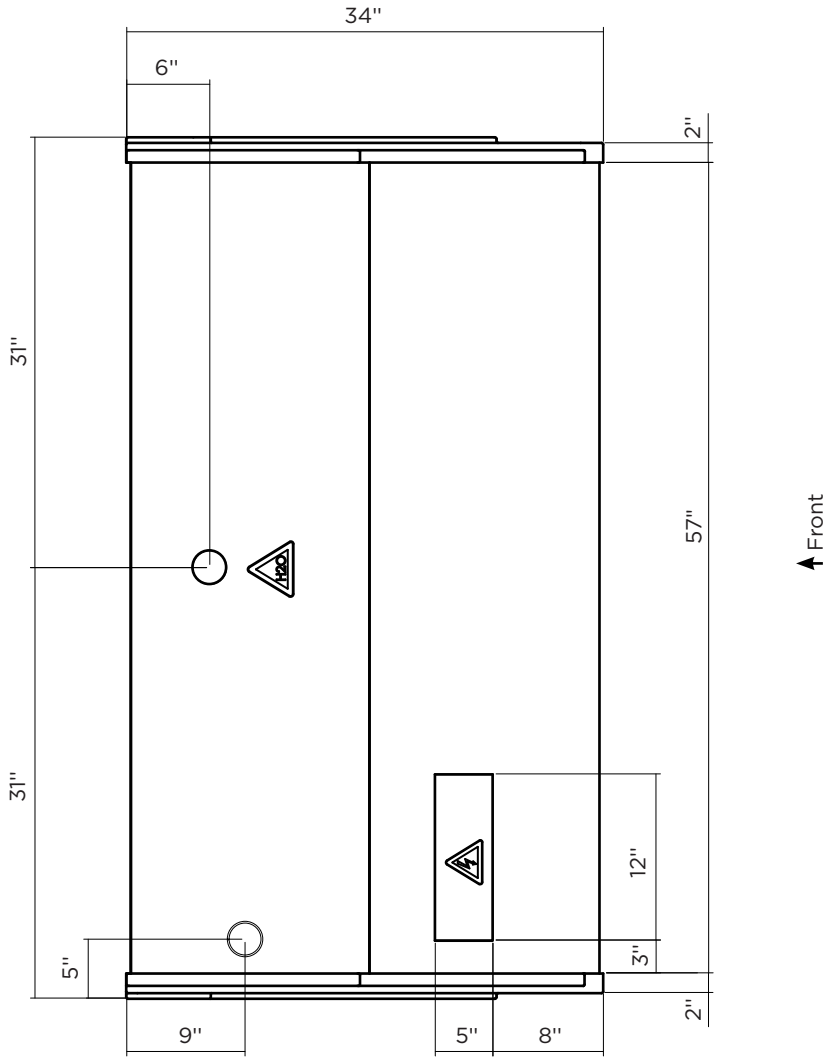
5.3 Light substitution

To replace lights follow the steps:

⚠ Turn off power and unplug the equipment.



KGL-OF-50-S(R)



KGL-OF-60-S(R)

Main parameters

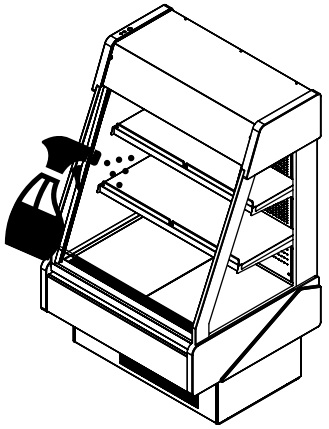
Symbol	*Code*	*Parameter*	*Models*	*UOM*	*Type*	*Min*	*Max*	*Def.*
	/3	*Probe display response*	*MSYF*	*-*	*C*	*0*	*15*	*0*
	/5	*Select °C or °F* *0: °C* *1: °F*	*MSYF*	*flag*	*C*	*0*	*1*	*0*
	/A2	*Configuration of probe 2 (S2)* *0: Probe absent* *1: Product probe (display only)* *2: Defrost probe* *3: Condenser probe* *4: Antifreeze probe*	*YF* *MS*	*-* *-*	*C* *C*	*0* *0*	*4* *4*	*2* *2*
	/c1	*Calibration of probe 1*	*MSYF*	*°C/°F*	*C*	*-20*	*20*	*0,0*
	St	*Temperature set point*	*MSYF*	*°C/°F*	*F*	*rl*	*r2*	*0,0*
	rd	*Control delta*	*SYF*	*°C/°F*	*F*	*0,1*	*20*	*2,0*
	c2	*Minimum compressor OFF time*	*SYF*	*min*	*C*	*0*	*15*	*0*
	dI *dP1*	*Interval between defrosts* *Maximum defrost duration, evaporator*	*SYF* *SYF*	*hours* *min*	*F* *F*	*0* *1*	*250* *250*	*8* *30*

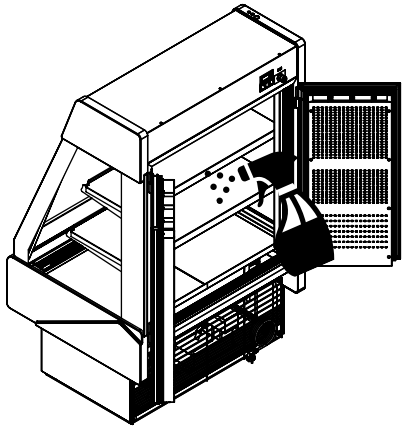
5 Maintenance

5.1 Cleaning

⚠ All operations must be done with the unit disconnected.

Clean surfaces (glass/metal/plastic) with soft detergents or warm water. Do not use abrasive cleanser.





Signals on the display

The blinking status indicates a request for activatuin that cannot be implemented until the end of the corresponding delay times.

Icon	Function	ON	OFF	blink	Startup
	COMPRESS.	compressor ON	comp. OFF	compressor request	
	FAN	fan ON	fan OFF	fan request	
	DEFROST	defrost in progress	defrost not required	defrost request	
AUX	**AUX**	auxiliary output AUX active	auxiliary output AUX not active	anti-sweat heater function active	
	ALARM	delayed external alarm (before the expiry of the time "A7")	no alarm present	alarms in normal operation (eg. high/low temp.) or alarm from ext. digital input immediate or delayed	
sent	**CLOCK**	at least one timed defrost has been set	no timed defrost is present	clock alarm	ON if Real-Time Clock present
	LIGHT	auxiliary output LIGHT ACTIVE	auxiliary output LIGHT NOT ACTIVE	anti-sweat heater function active	
	SERVICE		no malfunction	malfunction (eg. EEPROM error or probe fault)	
HACCP	**HACCP**	HACCP function	HACCP function enabled	HACCP alarm (HA and/or HF) not enabled	
	CONTINUOUS CYCLE	enabled	not enabled	request	

Controller must be handled by a qualified technician.

Buttons on the keypad

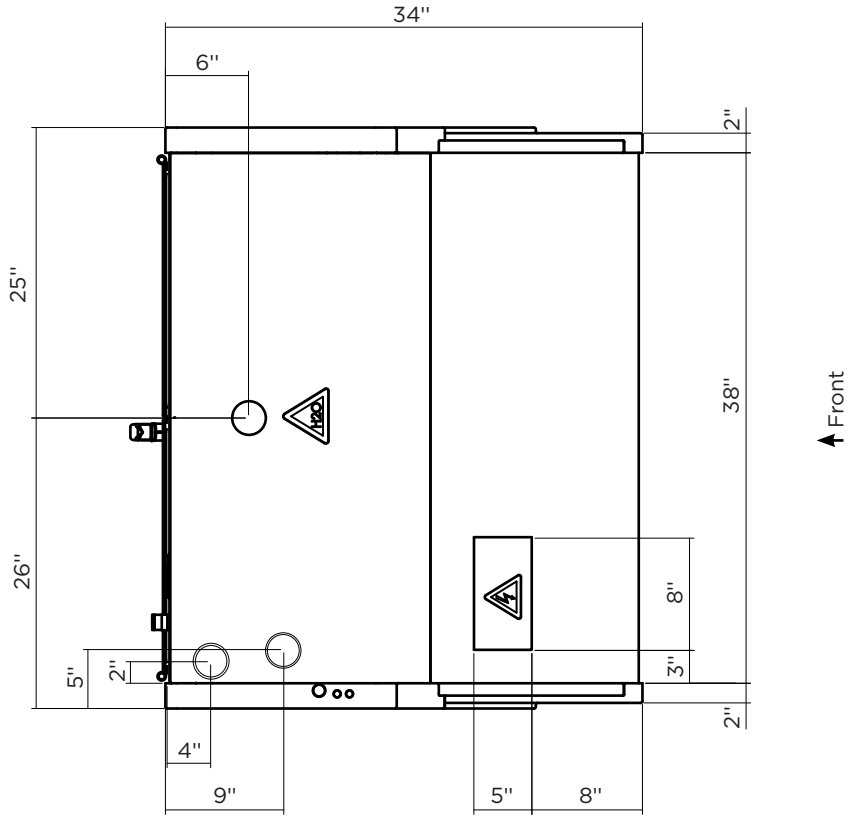
	Normal operation			
Button	**Press. the button alone**	**Pressing together with other buttons**		
Prg / mute	· if pressed for more than 5 s accessed the menu for setting type "F" (frequent) parameters · **in the event of alarm:** silences the audible alarm (buzzer) and disables the alarm relay	· if pressed for more than 5 s together with the **SET** button, accesses the menu for setting the type "C" (configuration) or downloading the parameters · if pressed for more than 5 s together with the **UP/AUX** button resets any alarm with manual reset	**Start-up :** if pressed for more than 5 s at start-up, starts the default parameter setting	**Automatic address assignment:** if pressed for 1 s enters the automatic serial address assigning procedure
▲ / aux	if pressed for more than 1 s, enables/disables the auxiliary output	· if pressed for more than 5 s together with **DOWN/DEF** button, enables/disables the continuous cycle operation · if pressed for more than 5 s with **SET** button, starts the procedure for printing the reports (function available, with management to be implemented) · if pressed for more than 5 s together with **PRG/MUTE** button, resets any active alarm with manual reset		
def / ▼	if pressed for more than 5 s, enables/disables a manual defrost	· if pressed for more than 5 s together with **UP/AUX** button, enables/disables the continuous cycle operation · if pressed for more than 1 s together with **SET** button, displays a submenu with the **HACCP** alarm parameters (HA, HAn, HF, HFn)		
Set	if pressed for more than 1 s, displays and/or set the set point	· if pressed for more than 5 s together with **PRG/MUTE** button, accesses the menu for setting the type "C" parameters "C" (configuration) or downloading the parameters · if pressed for more than 1 s together with **DOWN/DEF** button, displays a submenu with the **HACCP** alarm parameters (HA, HAn, HF, HFn) · if pressed for more than 5 s together with **UP/AUX,** starts the procedure for printing the report (function available, with management to be implemented)		

Drain outlet

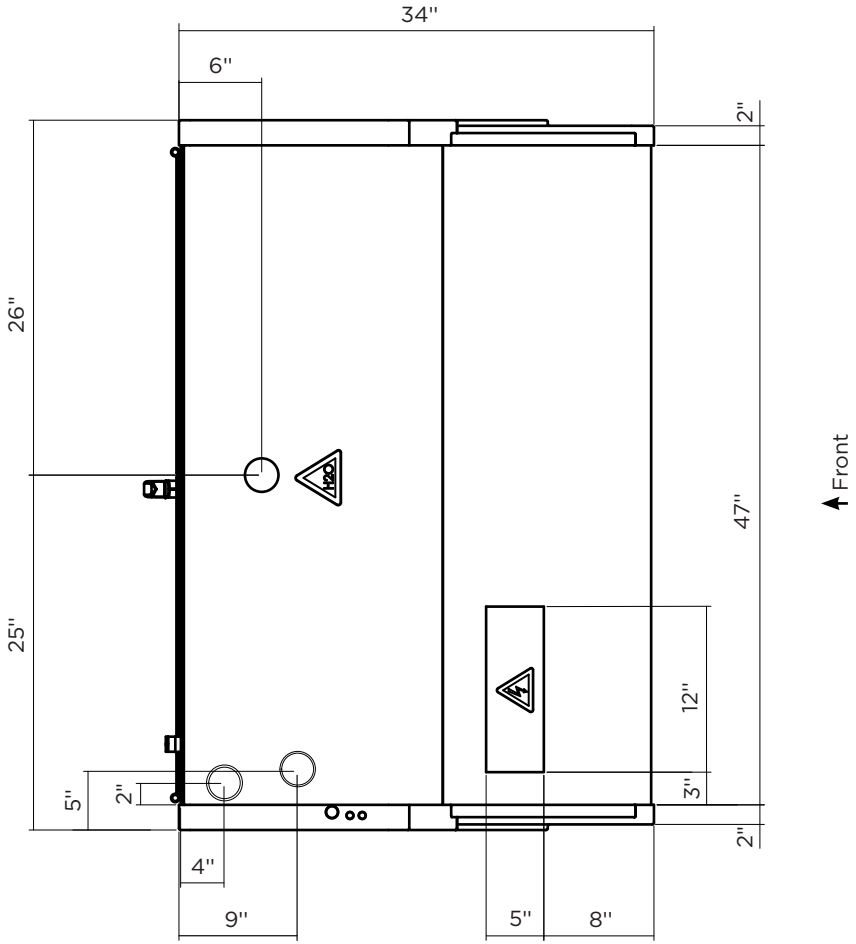
Electrical board

Refrigeration piping

Electrical wiring



KGL-RS/RM-40-S(R)



KGL-RS/RM-50-S(R)

Relay outputs	*depending on the model*					
		EN 60730-1			*UL 873*	
	model	*relay*	*250 V~*	*operating cycles*	*250 V~*	*operating cycles*
	IRxxxx(E,A) (P,Q,S,U,V,X,Y,Z)xxx	*R2 (*)*	*5(1)A*	*100000*	*5 A resistive 1FLA 6 LRA C 300*	*300000*
	IRxxxx(E,A) (N,R,C,B,A,M,L,T)xxx	*R3 (*)*	*5(1)A*	*100000*	*5 A resistive 1FLA 6 LRA C 300*	*300000*
	IRxxxx(E,A) (N,R,C,B,A,M,L,T)xxx IRxxxx(O,L,H) (N,R,C,B,A,M,L,T)xxx	*R1,R2 R2,R3 R4 (*)*	*8 (4)A N.O. 6 (4)A N.C. 2 (2)A N.O./N.C.*	*100000*	*8 A resistive 2FLA 12 LRA C300*	*300000*
	IRxxxx(E,A) (P,Q,S,U,V,X,Y,Z)xxx IRxxxx(O,L,H) (N,R,C,B,A,M,L,T)xxx	*R1 R1 (*)*	*12 (2)A N.O./N.C.*	*100000*	*12 A resistive 5FLA 30 LRA C300*	*300000*
	insulation from very low voltage parts			*reinforced*		
				6 mm clearance, 8 mm creepage		
				3750 V insulation		
	insulation between the relay outputs indipendent			*basic*		
				3 mm clearance, 4 mm creepage		
				1250 V insulation		
SSR outputs	Max output voltage : 12 Vdc, Output resistance: 600 Ω, Max output current: 20 mA					

(*): Relay not suitable for fluorescent loads (neon lights, ...) that use starters (ballasts) with phase-shift capacitors. Fluorescent lamps with electronic control devices or without phase-shift capacitors can be used, within the operating limits specified for each type of relay.

Connessioni		***Type of connection***			***Cross-section Max. current***
	Model	*Relay*	*P. Supply*	*Probes*	*for wires from 12 A 0.5 a 2.5 mm²*
	IRxxxxxx0xx	*screw*	*screw*	*screw*	
	IRxxxx(E,A)x1xx	*faston*	*faston*	*removable*	
	IRxxxxxx2xx	*removable*	*removable*	*removable*	
	IRxxxx(E,A)x3xx	*faston*	*faston*	*screw*	
	IRxxxx(E,A)x5xx	*vertical screw*	*vertical screw*	*vertical screw*	

the installer has to provide the correct dimensioning of the power supply and cable connection between the instruments and the loads. Depending on the model, the maximum current in the common terminals 1, 3 or 5 is 12 A. When using the controller at maximum operating temperature and full load, use cables featuring a maximum operating temperature of 105 °C at least.

⚠ Controller must be handled by a qualified technician.

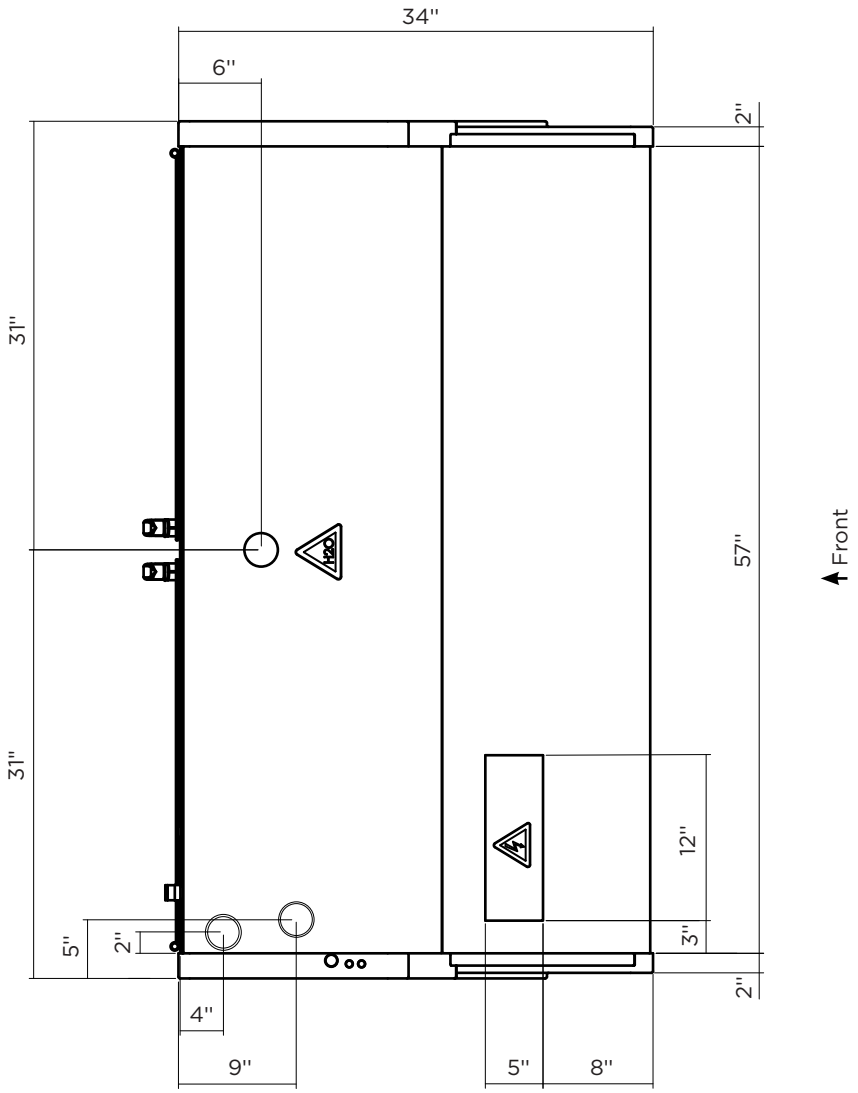
4.4. Electronic controller



Carel - IR33F0AHE0

TECHNICAL SPECIFICATIONS

	Model	Voltage	Power
Power supply	*IRxxxxExxxx*	*230 V~, 50/60 Hz*	*3 VA, 25 mA~max.*
	IRxxxxAxxxx	*115V~, 50/60 Hz*	*3 VA, 50 mA~max.*
	IRxxxxHxxxx	*115 to 230 V~, 50/60 Hz*	*6 VA, 50 mA~max.*
	IRxxxxLxxxx *IRxxxx0xxxx*	*12 to 24V~, 50/60 Hz, 12 to 30 Vdc* *12V~, 50/60 Hz, 12 to 18 Vdc*	*3 VA, 300 mA~/mAdc max.* *Use only SELV power supply*
Insulation guaranteed by the power supply	*IRxxxxExxxx* *IRxxxxAxxxx* *IRxxxxHxxxx*	*insulation in reference to very low voltage parts*	*reinforced* *6mm clearance, 8 mm creepage* *3750 V insulation*
		insulation from relay outputs	*basic* *3mm clearance, 4 mm creepage* *1250V insulation*
	IRxxxxLxxxx *IRxxxx0xxxx*	*insulation in reference to very low voltage parts*	*externally guaranteed by safety transformer (SELV power supply)*
		insulation from relay outputs	*reinforced* *6mm clearance, 8 mm creepage* *3750 V insulation*
Inputs	*S1 (probe 1)*	*NTC (IRxxx0xxxxx) o NTC e PTC (IRxxx7xxxxx)*	
	S2 (probe 2)	*NTC (IRxxx0xxxxx) o NTC e PTC (IRxxx7xxxxx)*	
	DI 1 *S3 (probe 3)*	*free contact, contact resistance < 10 Ω, closing current 6 mA* *NTC (IRxxx0xxxxx) o NTC e PTC (IRxxx7xxxxx)*	
	DI 2 *S4 (probe 4)*	*free contact, contact resistance < 10 Ω, closing current 6 mA* *NTC (IRxxx0xxxxx) o NTC e PTC (IRxxx7xxxxx)*	
	Maximum ditance of probes and digital inputs less than 10 m. ***Note:** during installation keep the power and loads connection separate from probe cables, digital inputs, repeater display and supervisory system.*		
Probe type	*Std. CAREL NTC*	*10 kΩ at 25 °C, - 50T90 °C range*	
		measurement error:	*1 °C in the - 50T50 °C range*
			3 °C in the - 50T90 °C range
	NTC high temperature	*50 kΩ at 25 °C, - 40T150 °C range*	
		measurement error:	*1,5 °C in the - 20T115 °C range*
			4 °C in the - 20T115 °C range
	PTC std. CAREL (specific model)	*985 Ω a 25 °C, range da - 50T150 °C*	
		measurement error:	*2 °C in the - 50T50 °C range*
			4 °C in the - 50T150 °C range

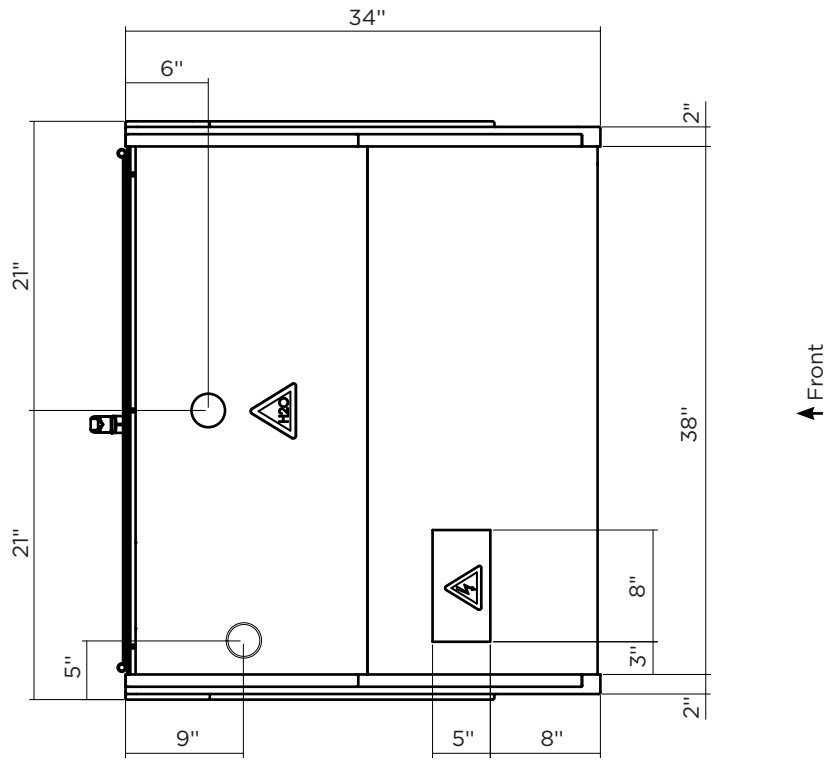


KGL-RS/RM-60-S(R)

Drain outlet

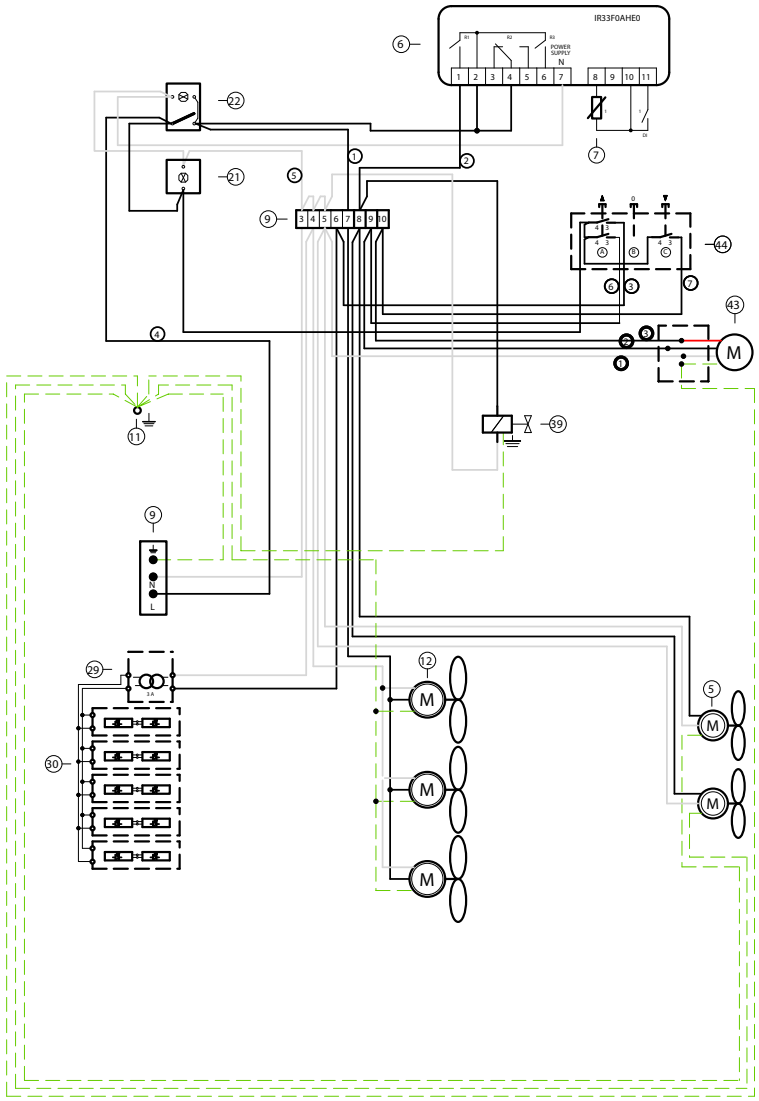
Electrical board

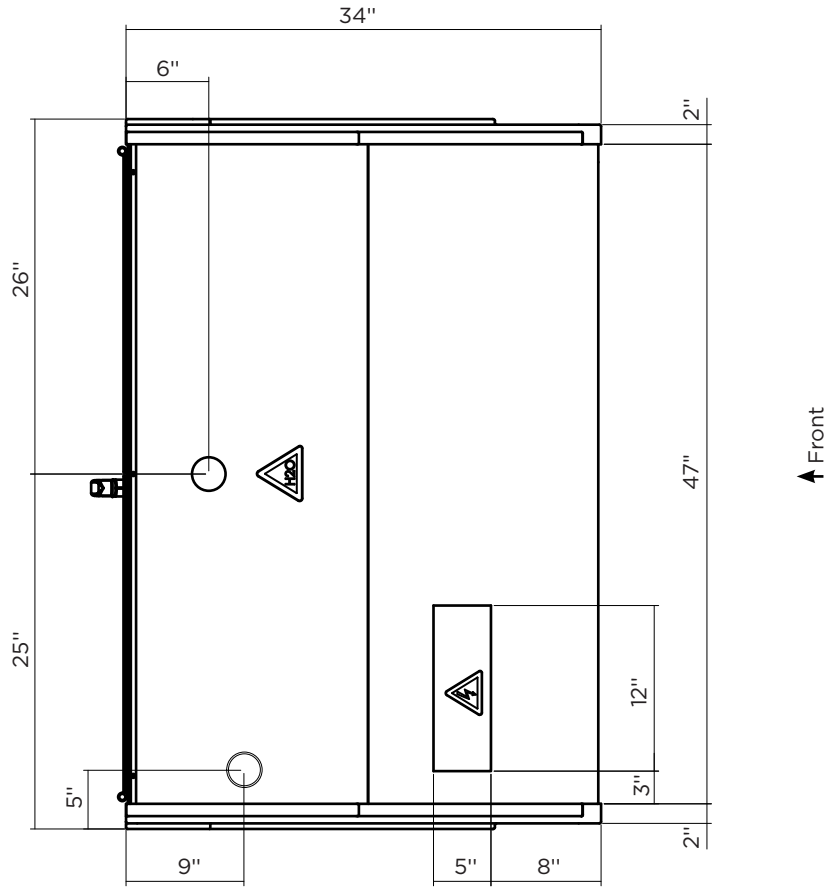
Refrigeration piping



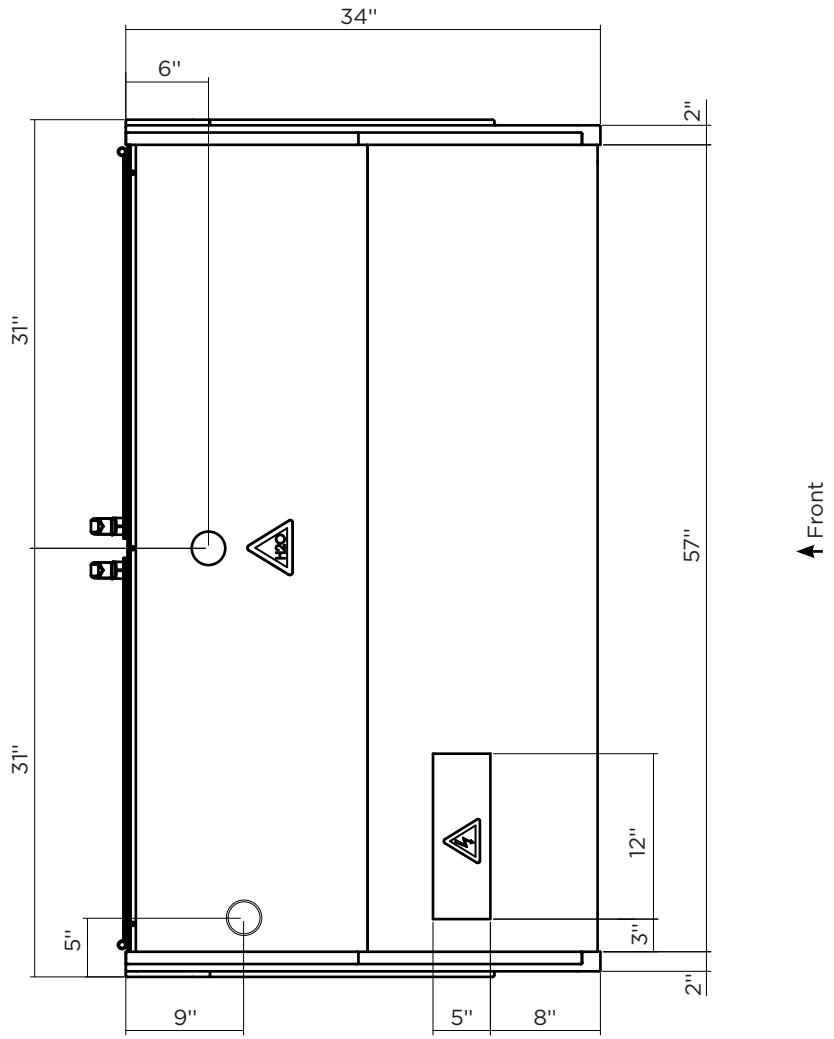
KGL-DL-40-S(R)

N°	Discription	Number for length	
		50 Inch	60 Inch
6	Controller	1	1
7	Temperature probe	1	1
9	Terminal block	2	2
11	Ground connection	1	1
12	Evaporator fan	3	4
21	Pilot light	1	1
22	Switch	1	1
29	Transformer	1	1
30	Led lighting	3	5
39	Solenoide valve	1	1
43	Electrical shutter	1	1
44	A key switch shutter	1	1





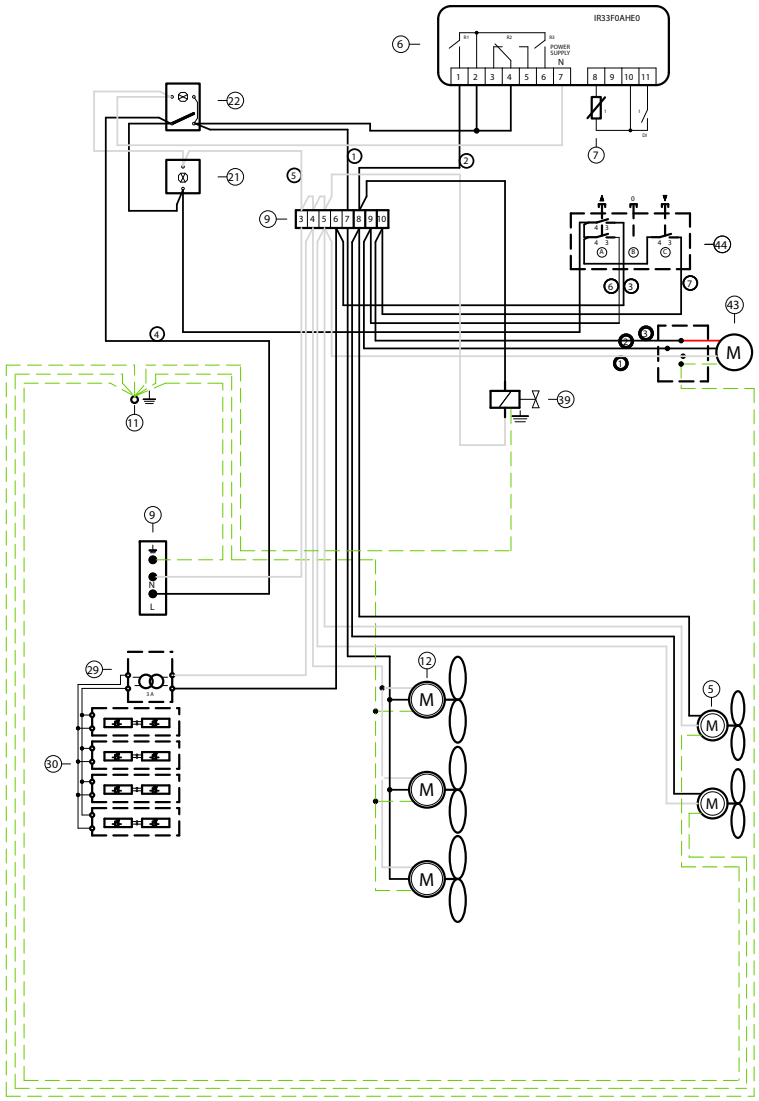
KGL-DL-50-S(R)



KGL-DL-60-S(R)

N°	Discription
6	Controller
7	Temperature probe
9	Terminal block
11	Ground connection
12	Evaporator fan
21	Pilot light
22	Switch
29	Transformer
30	Led lighting
39	Solenoide valve
43	Electrical shutter
44	A key switch shutter

KGL-OS-40-R

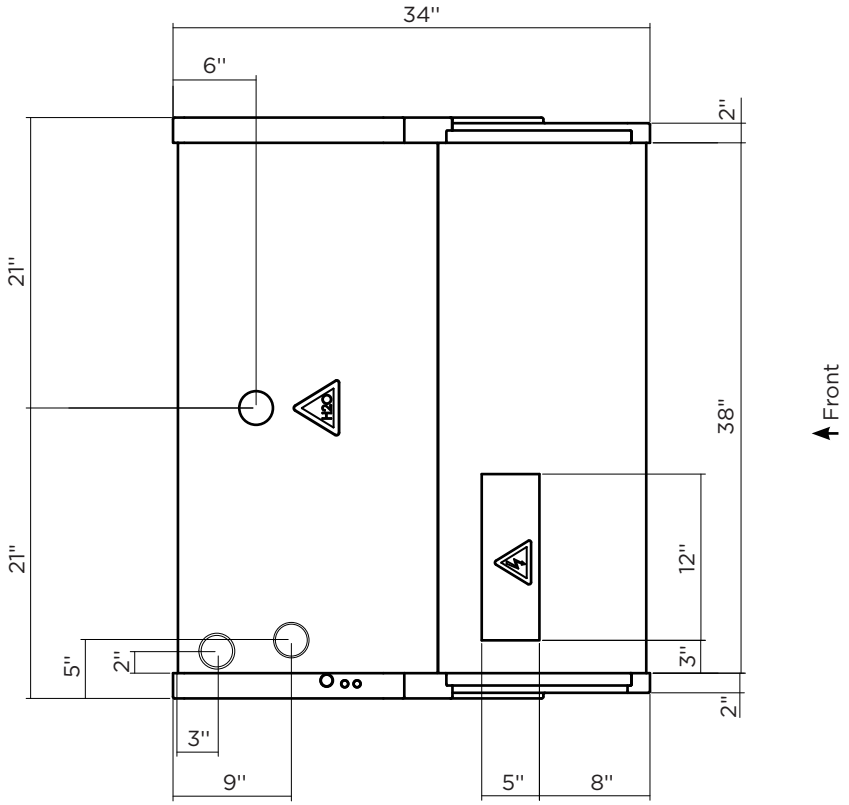


Drain outlet

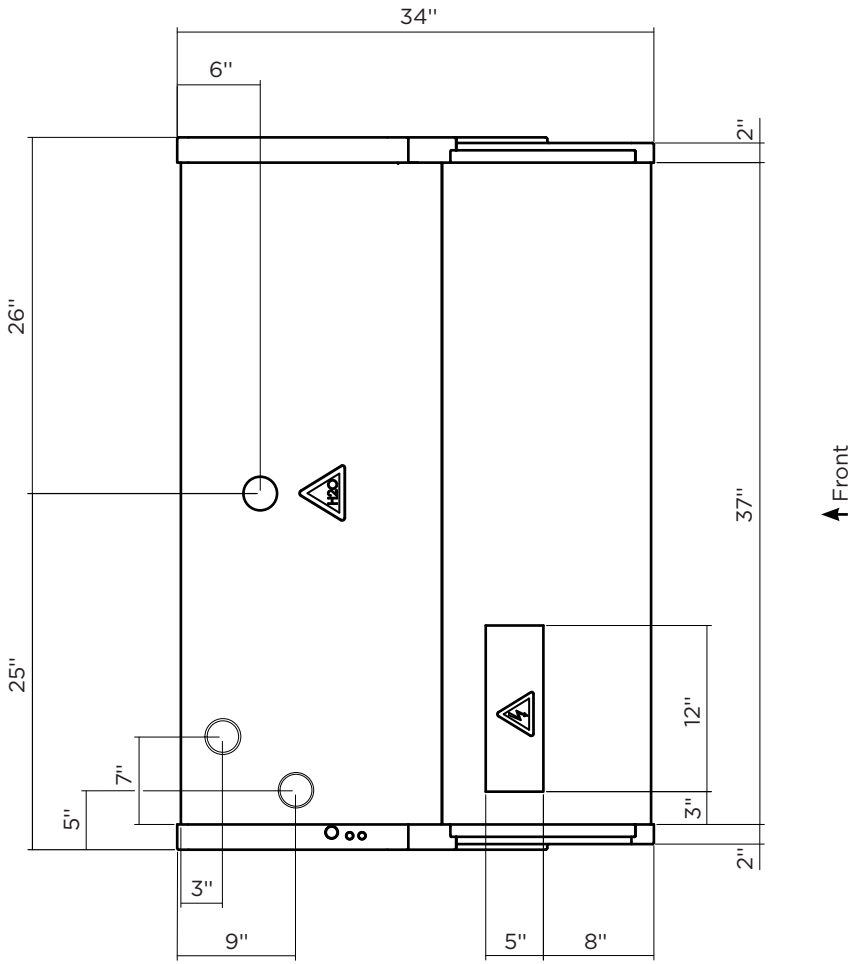
Electrical board

Refrigeration piping

Electrical wiring

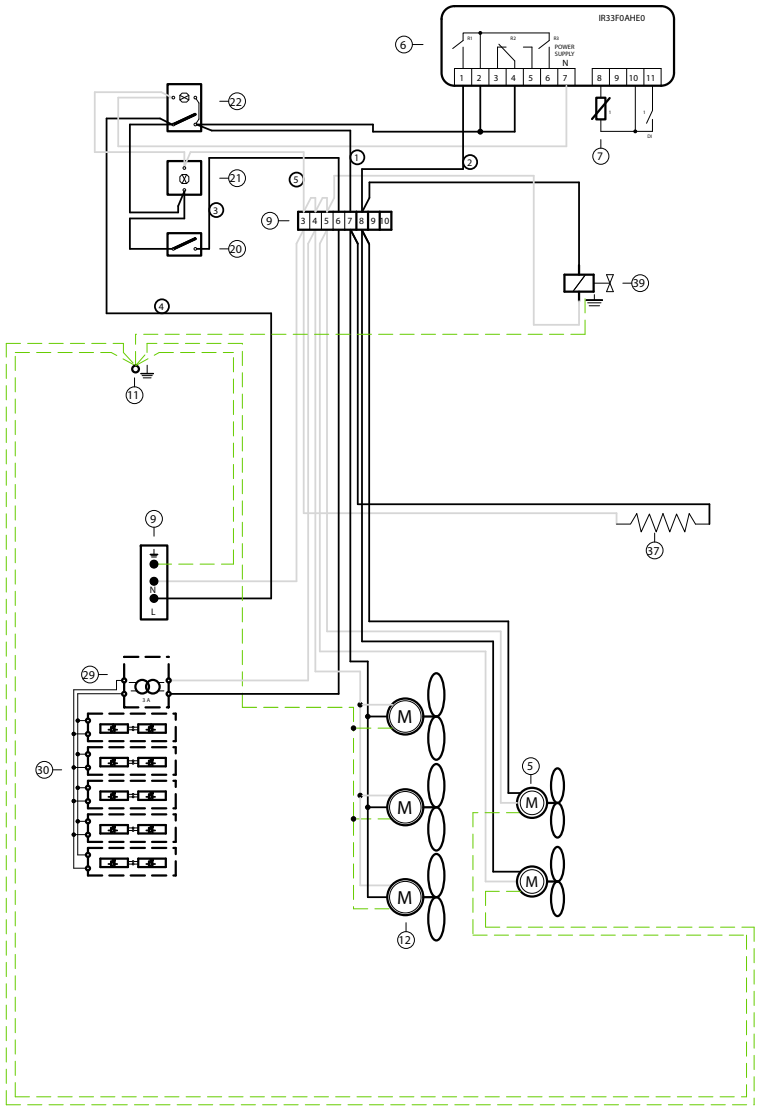


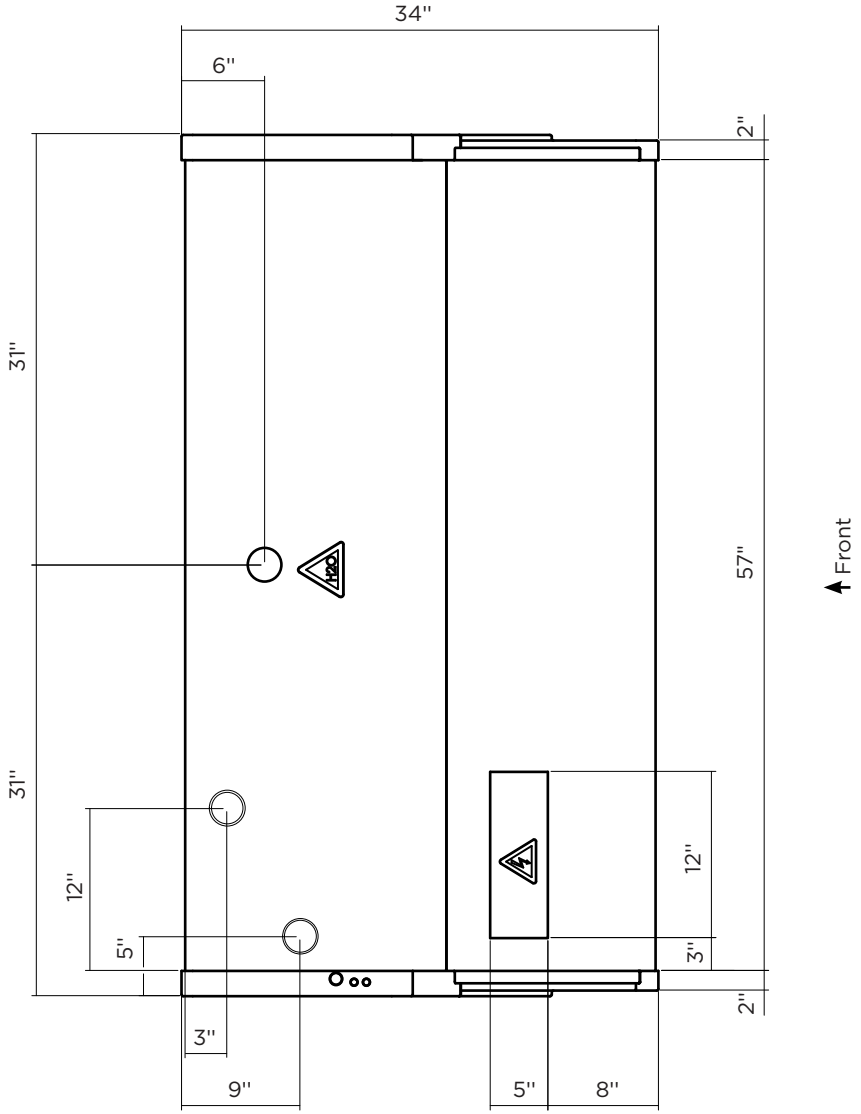
KGL-OS-40-S(R)



KGL-OS-50-S(R)

Nº	Discription	Number for length	
		50 Inch	60 Inch
6	Controller	1	1
7	Temperature probe	1	1
9	Terminal block	2	2
11	Ground connection	1	1
12	Evaporator fan	3	4
20	Lamp switch	1	1
21	Pilot light	1	1
22	Switch	1	1
29	Transformer	1	1
30	Led lighting	3	5
37	Anti sweat heater	2	2
39	Solenoide valve	1	1


IR33F0AHE0
POWER SUPPLY
N
M
M
M
M


34"
6"
2"
31"
31"
57"
12"
12"
5"
3"
3"
2"
9"
5"
8"
Front

KGL-OS-60-S(R)

KGL series intended for grab-n-go, beverage and produce, are type 1 equipment - 75°F/55%RH.
Temperature of the KGL-OF/OS cases is set for 36°F.
Temperature of the KGL-RS/DL/RM cases is set for 39°F.
All shelves of the KGL series have a 31 lb/ft² loading limit.

Model	Dimensions (LxDxH in inches)	Service dimensions (LxDxH in inches)	Volume (ft³)
KGL-OF-40-S(R)	40¾'' x 59¼'' x 33⁷⁄₁₆''	40¾'' x 59¼'' x 35¹³⁄₁₆''	13,0
KGL-OF-50-S(R)	50'' x 59¼'' x 33⁷⁄₁₆''	50'' x 59¼'' x 35¹³⁄₁₆''	19,9
KGL-OF-60-S(R)	60⁷⁄₁₆'' x 59¼'' x 33⁷⁄₁₆''	60⁷⁄₁₆'' x 59¼'' x 35¹³⁄₁₆''	16,2
KGL-DL-40-S(R)	40¾'' x 59¼'' x 35¹⁵⁄₁₆''	40¾'' x 59¼'' x 51¾''	13,0
KGL-DL-50-S(R)	50'' x 59¼'' x 35¹⁵⁄₁₆''	50'' x 59¼'' x 56⁵⁄₁₆''	19,9
KGL-DL-60-S(R)	60⁷⁄₁₆'' x 64¹⁵⁄₁₆'' x 35¹⁵⁄₁₆''	60⁷⁄₁₆'' x 64¹⁵⁄₁₆'' x 61''	16,2
KGL-OS-40-S(R)	40¾'' x 64¹⁵⁄₁₆'' x 33⁷⁄₁₆''	40¾'' x 59¼'' x 35¹³⁄₁₆''	13,0
KGL-OS-50-S(R)	50'' x 64¹⁵⁄₁₆'' x 33⁷⁄₁₆''	50'' x 59¼'' x 35¹³⁄₁₆''	19,9
KGL-OS-60-S(R)	60⁷⁄₁₆'' x 64¹⁵⁄₁₆'' x 33⁷⁄₁₆''	60⁷⁄₁₆'' x 59¼'' x 35¹³⁄₁₆''	16,2
KGL-RS/RM-40-S(R)	40¾'' x 64¹⁵⁄₁₆'' x 35¹⁵⁄₁₆''	40¾'' x 64¹⁵⁄₁₆'' x 51¾''	13,0
KGL-RS/RM-50-S(R)	50'' x 64¹⁵⁄₁₆'' x 35¹⁵⁄₁₆''	50'' x 64¹⁵⁄₁₆'' x 56⁵⁄₁₆''	19,9
KGL-RS/RM-60-S(R)	60⁷⁄₁₆'' x 64¹⁵⁄₁₆'' x 35¹⁵⁄₁₆''	60⁷⁄₁₆'' x 64¹⁵⁄₁₆'' x 61''	16,2

2 Getting started with your KGL series

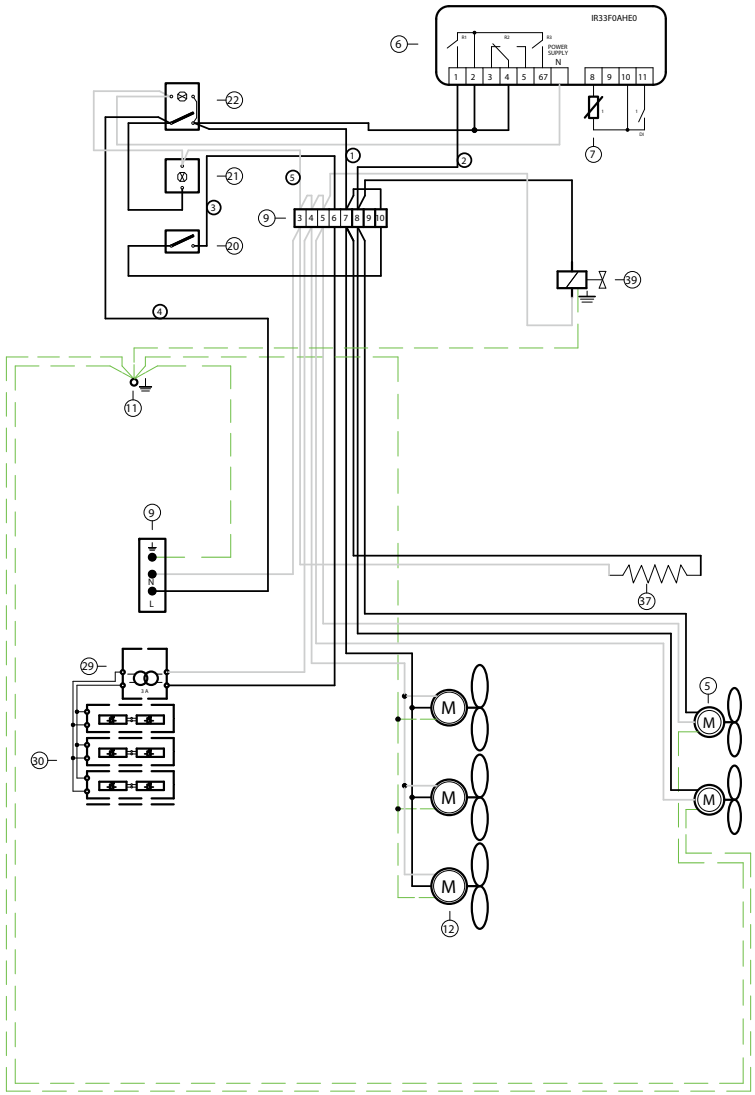
2.1 Location

To your new equipment perform well please respect the following warnings:

- ⚠ This is type 1 equipment, inte nded to work with 75°F / 55%RH.
- ⚠ This equipment is intended for maintaining temperature only.
- ⚠ Be sure products are not ambient temperature (must be cold)
- ⚠ This equipment must be located in an indoor environment.
- ⚠ Check for airdrafts and avoid them.
- ⚠ Air movement from ac units shouldn't be directed to the equipment.
- ⚠ The equipment must not be directly or indirectly exposed to the sun.
- ⚠ Check for rejected heat from another refrigeration units and avoid that.

Nº	Discription
6	Controller
7	Temperature probe
9	Terminal block
11	Ground connection
12	Evaporator fan
21	Pilot light
22	Switch
29	Transformer
30	Led lighting
37	Anti sweat heater
39	Solenoide valve

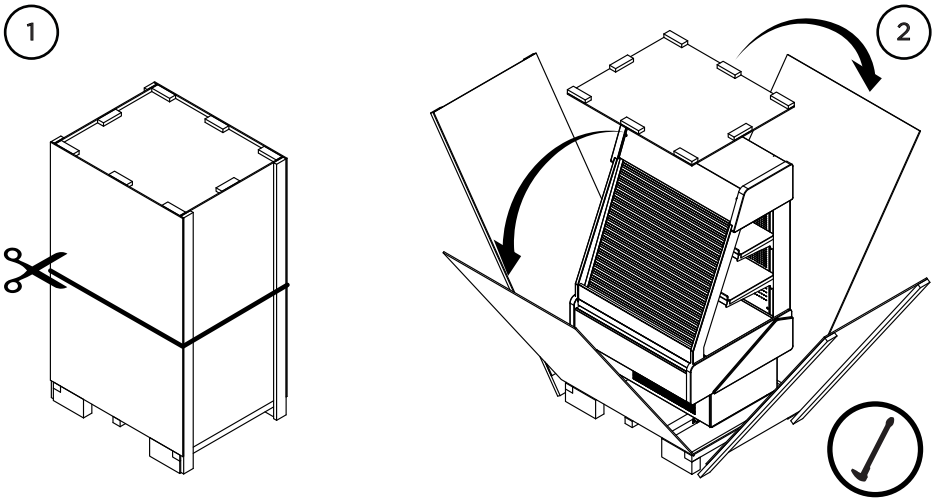
KGL-DL-40-R



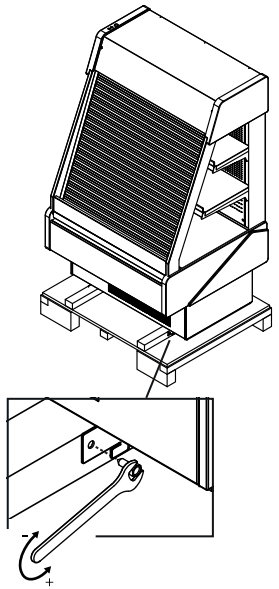
- Place the equipment in a levelled floor.
- Do not obstruct the air way in front of the condenser.
- Make sure there is a drain preparation (remotes only).
- KGL series with shutter must be handled carefully. Open and close shutter only when needed.
- Models to be positioned against a wall keep a safe distance of 2³/₈''.
- This equipment should be handled by a qualified technician.

2.2 Uncrating

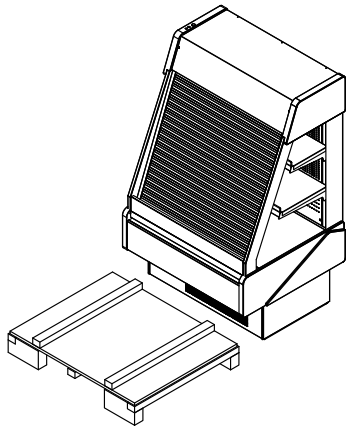
- All operations must be done carefully.
- All plastic protective films must be removed before using the equipment for the first time.



3



4



Nº	Discription	Number for length	
		50 Inch	60 Inch
6	Controller	1	1
7	Temperature probe	1	1
9	Terminal block	2	2
11	Ground connection	1	1
12	Evaporator fan	3	4
21	Pilot light	1	1
22	Switch	1	1
29	Transformer	1	1
30	Led lighting	3	5
37	Anti sweat heater	2	2
39	Solenoide valve	1	1
43	Electrical shutter	1	1
44	A key switch shutter	1	1

2.3 Check for damage

At the end of production HYDRA KOOL products are carefully inspected. No damaged units are sent out.
HYDRA KOOL doesn't take responsibility for damage between factory and client.

Possible damage on the unit must be checked to file a claim near the transportation company.

The unit must be checked in the following points:

Exterior panels

Doors

Shelves

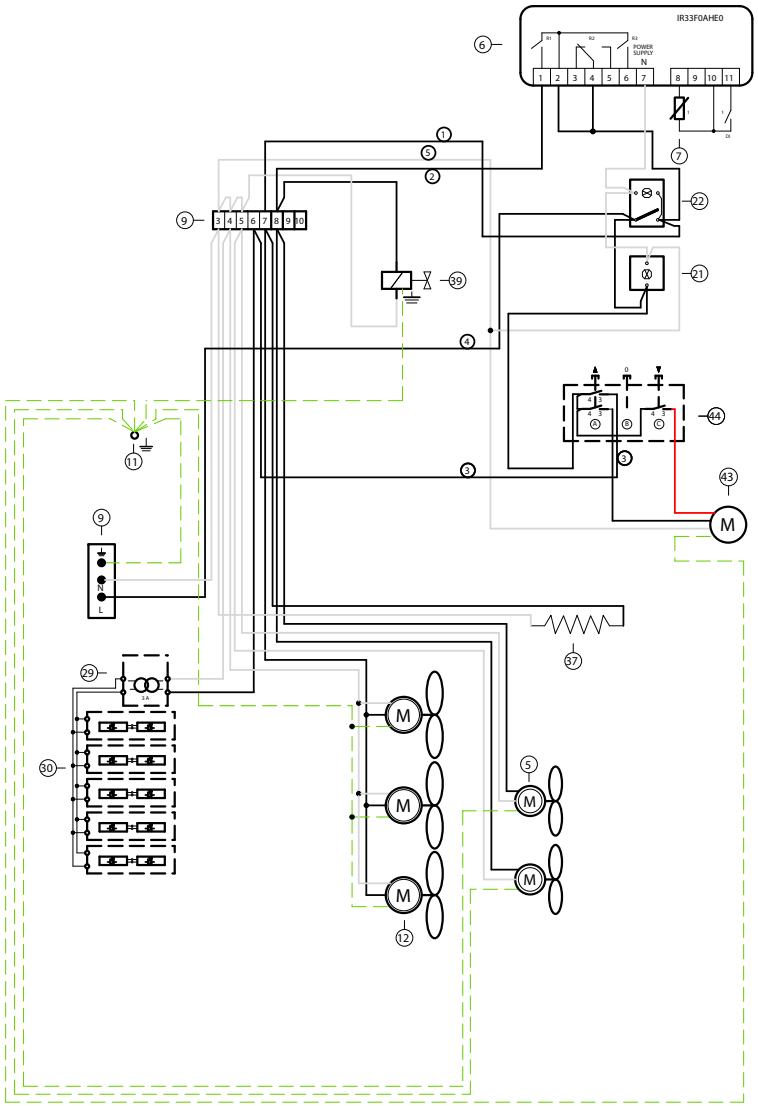
Glasses

Paint job

Door handles

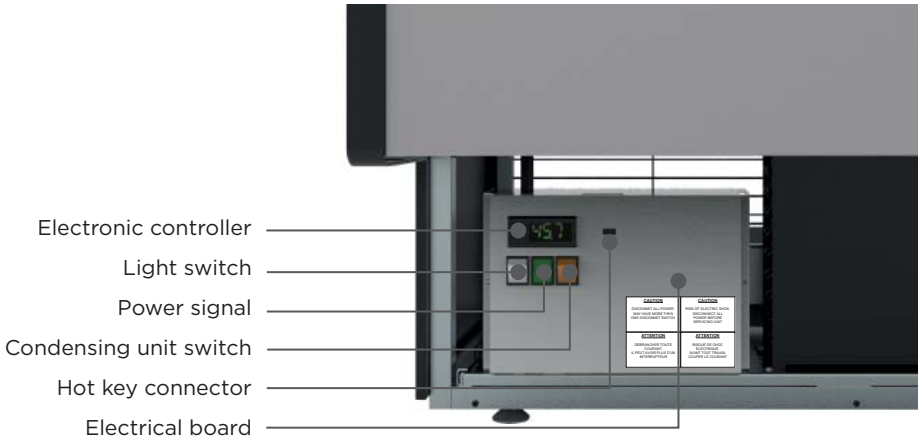
Base structure

Shutter

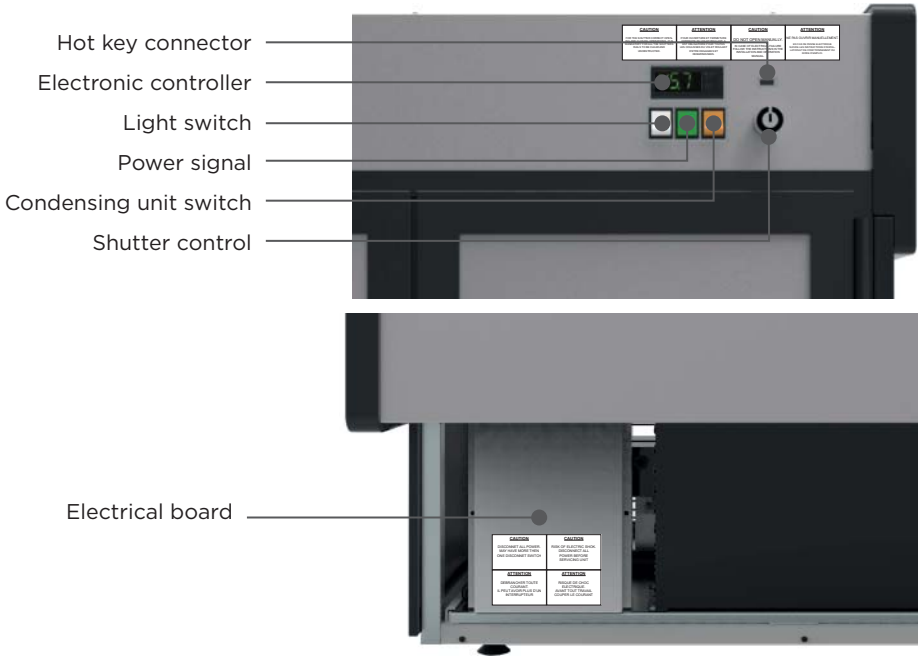


2.4 Control panel and main features

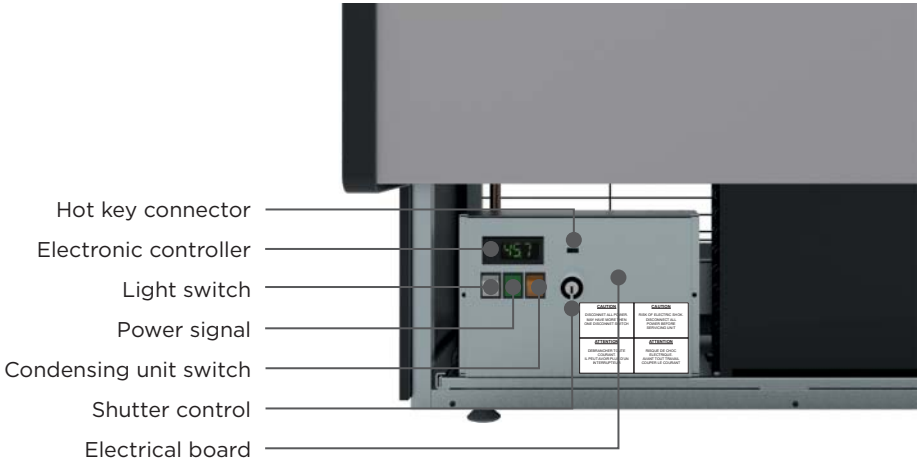
The pictures below, shows the main features and all necessary controls.



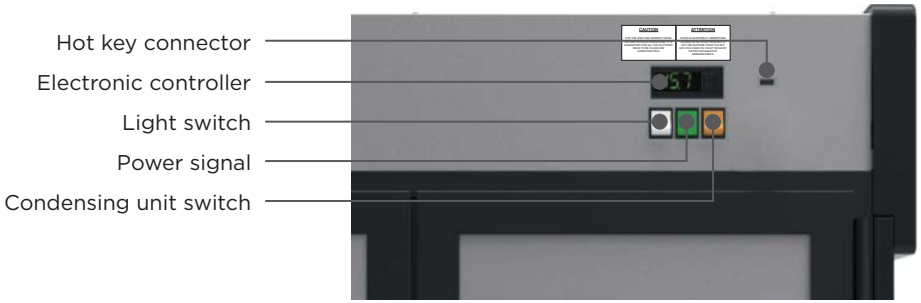
Self contained control panel (KGL-OF/DL only)

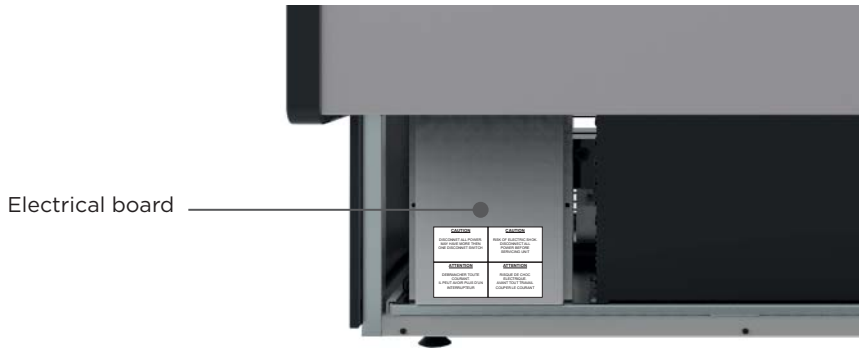


Self contained control panel (KGL-RS only)



Self contained control panel (KGL-OS only)

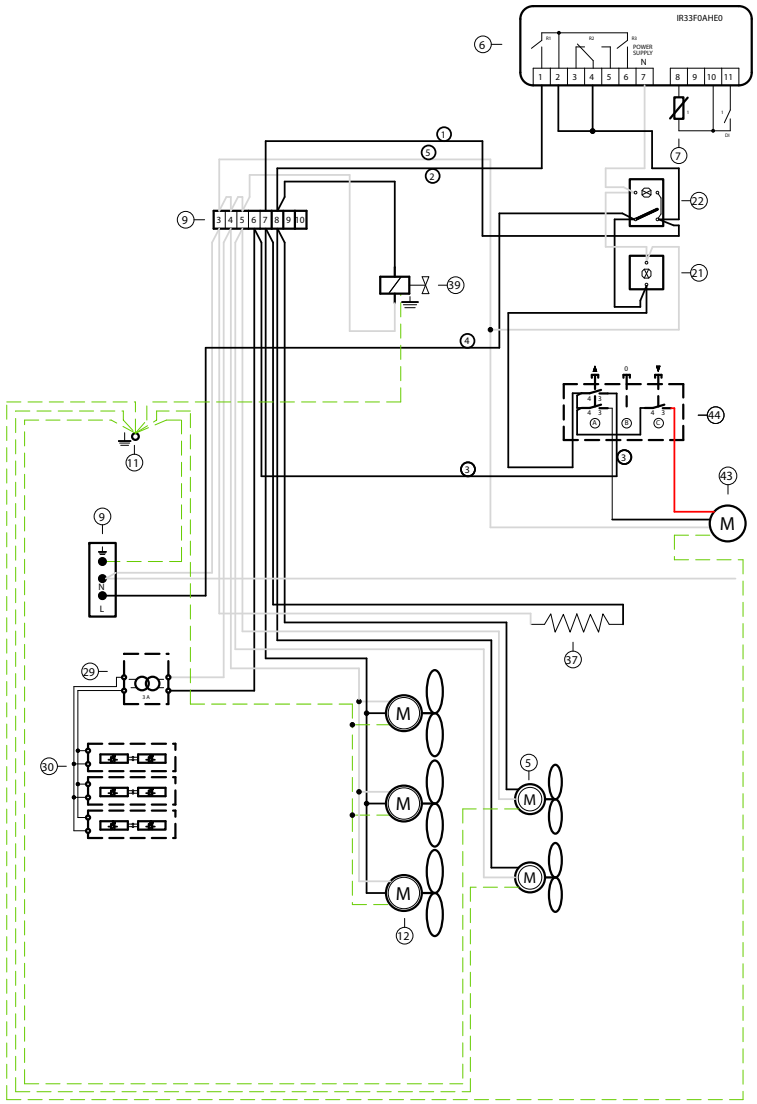




Self contained control panel (KGL-RM only)

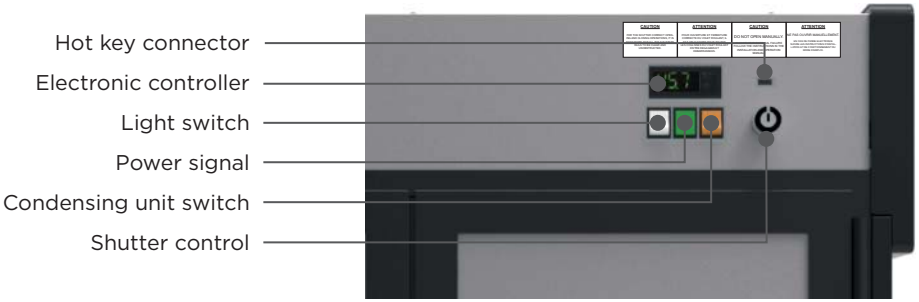
N°	Discription
6	Controller
7	Temperature probe
8	Earth two pin plug
9	Terminal block
11	Ground connection
12	Evaporator fan
21	Pilot light
22	Switch
29	Transformer
30	Led lighting
37	Anti sweat heater
39	Solenoide valve
43	Electrical shutter
44	A key switch shutter

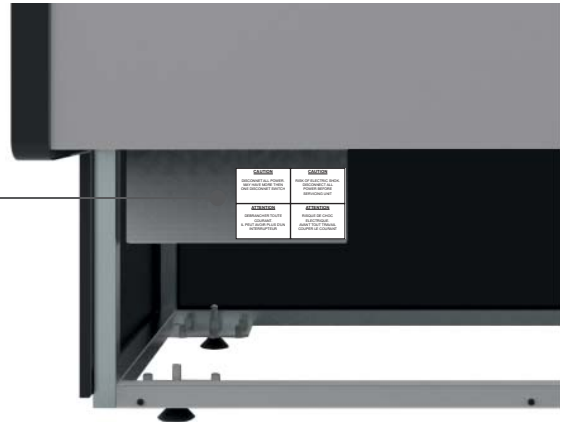
KGL-RS-40-R



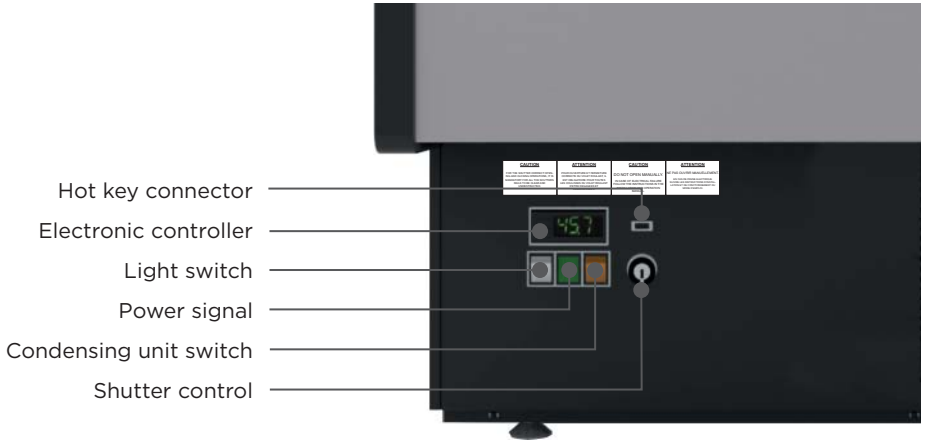


Remote control panel (KGL-OF/DL only)

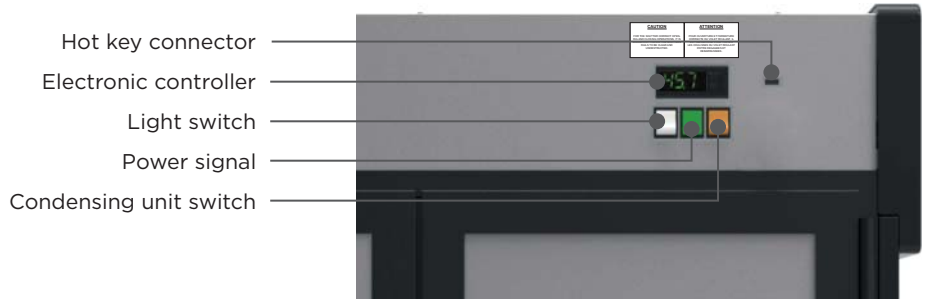


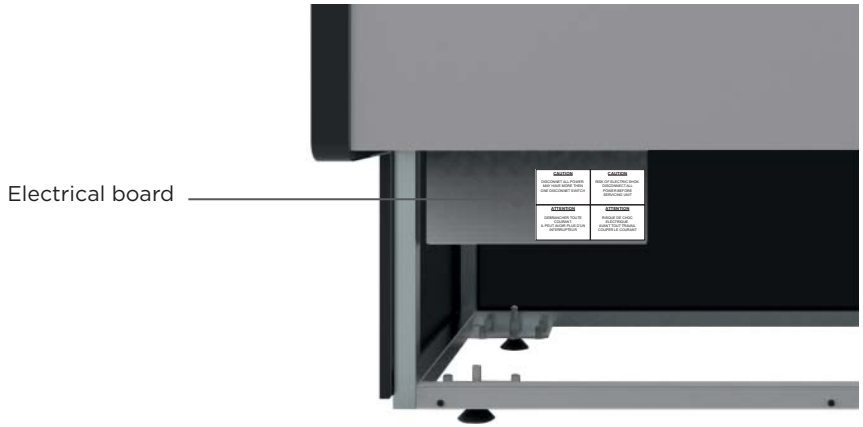


Remote control panel (KGL-RS only)



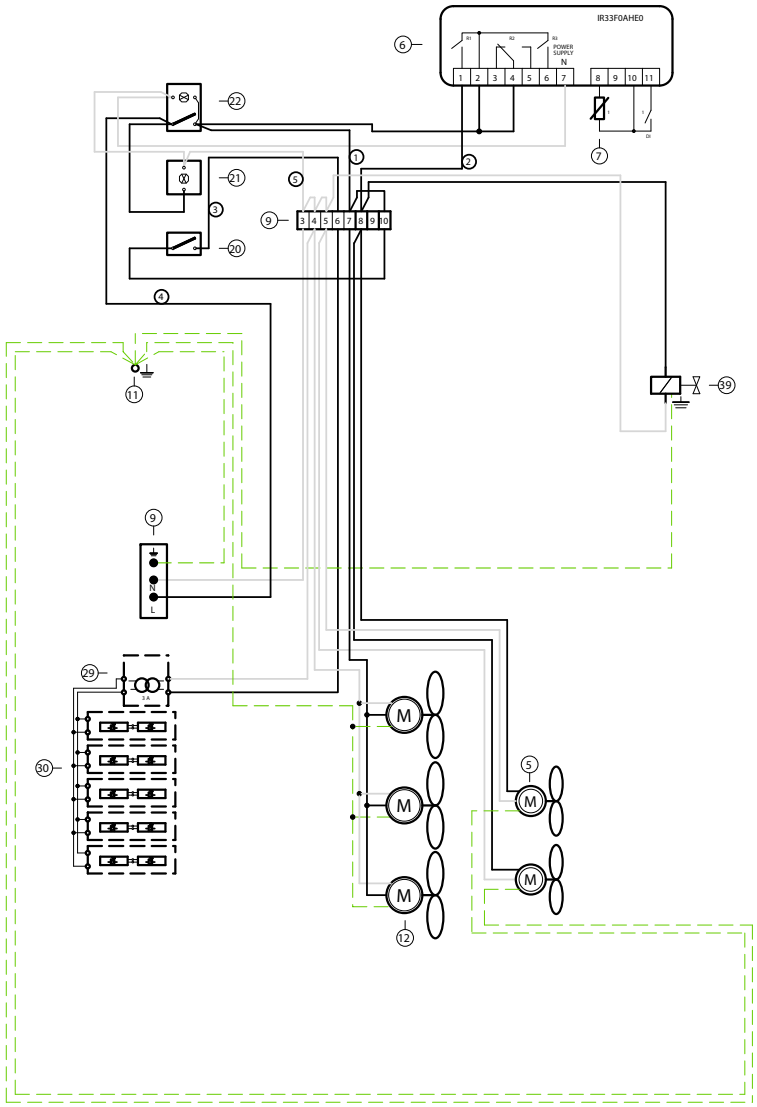
Remote control panel (KGL-OS only)

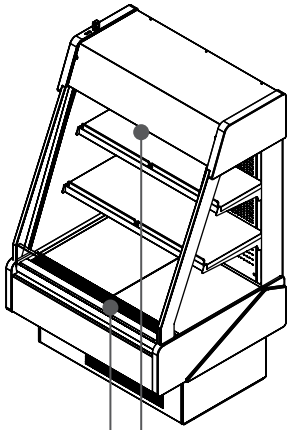




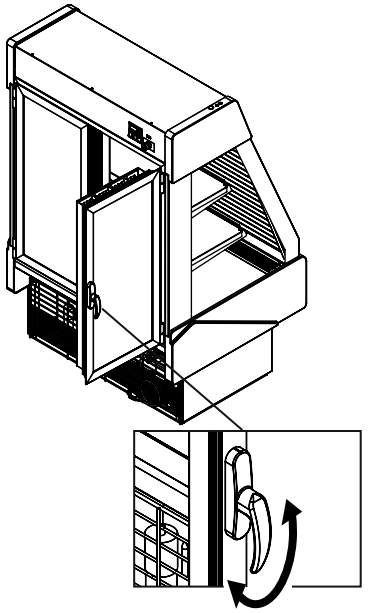
Remote control panel (KGL-RM only)

N°	Discription	Number for length	
		50 Inch	60 Inch
6	Controller	1	1
7	Temperature probe	1	1
9	Terminal block	2	2
11	Ground connection	1	1
12	Evaporator fan	3	4
20	Lamp switch	1	1
21	Pilot light	1	1
22	Switch	1	1
29	Transformer	1	1
30	Led lighting	3	5
39	Solenoide valve	1	1

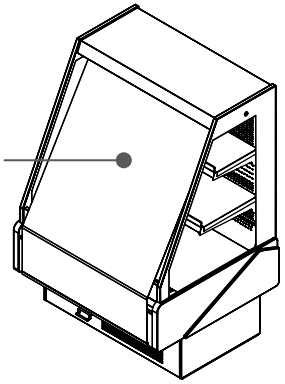




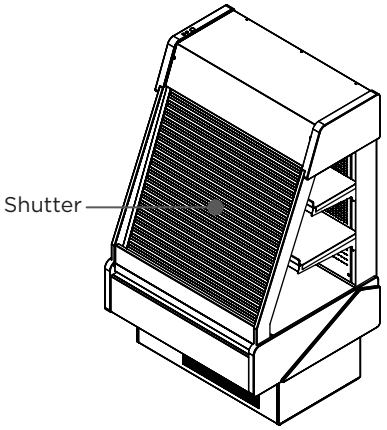
Return air grille
Discharge air grille



Only for rear doors model.



Night curtain



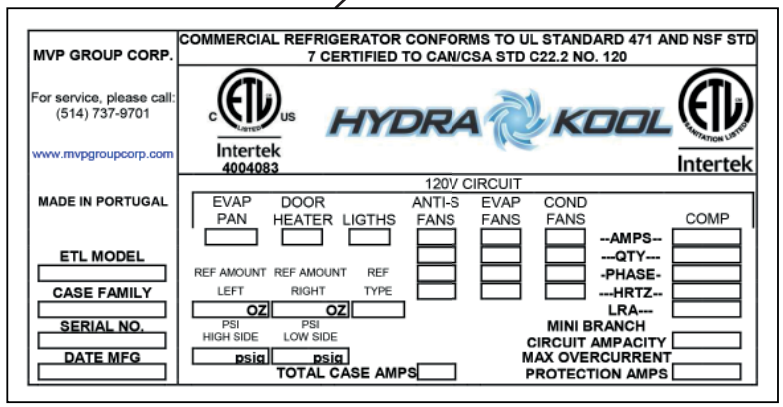
Shutter

2.5 Check serial, model numbers and requested options

Before starting your equipment, check the serial number, model numbers and requested options. This inspection should be made visually in the following items:

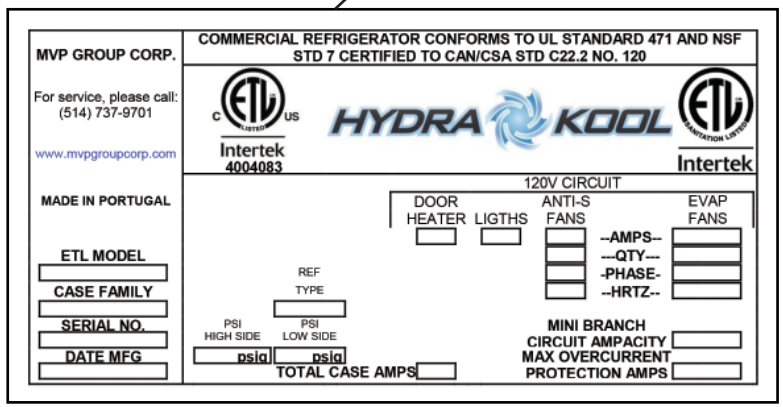


Self contained numbers

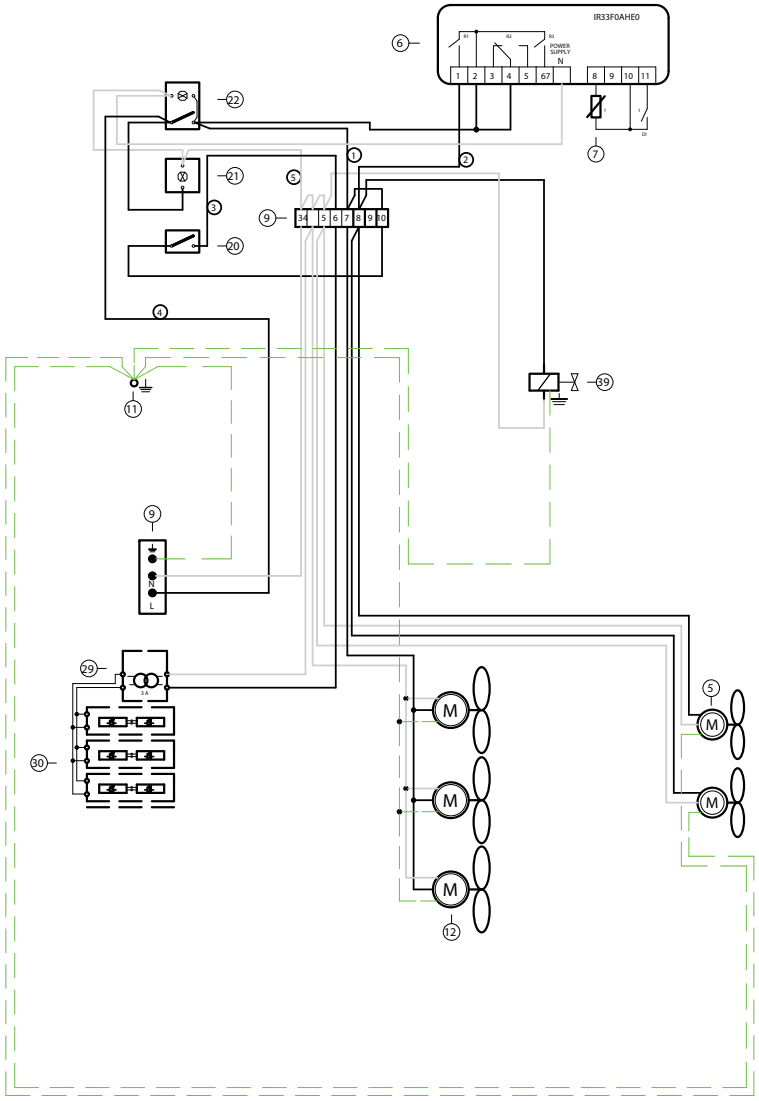




Remote numbers



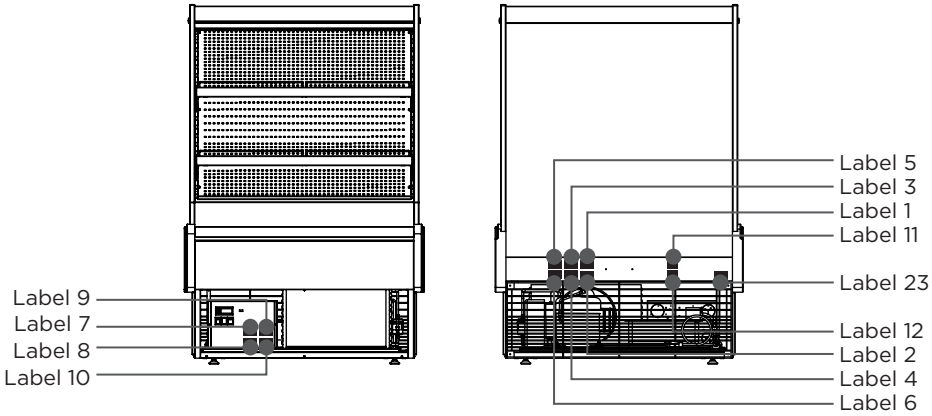
Nº	Discription
1	Compressor
7	Temperature probe
9	Terminal block
11	Ground connection
12	Evaporator fan
20	Lamp switch
21	Pilot light
22	Switch
29	Transformer
30	Led lighting
39	Solenoide valve



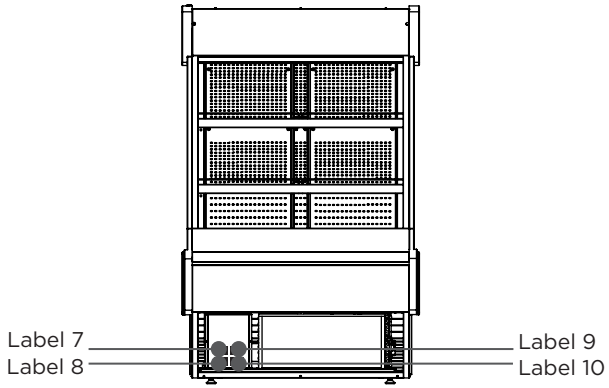
2.6 Warning/Caution labels

⚠ Before starting, HYDRA KOOL products have caution and warning labels to be respected.

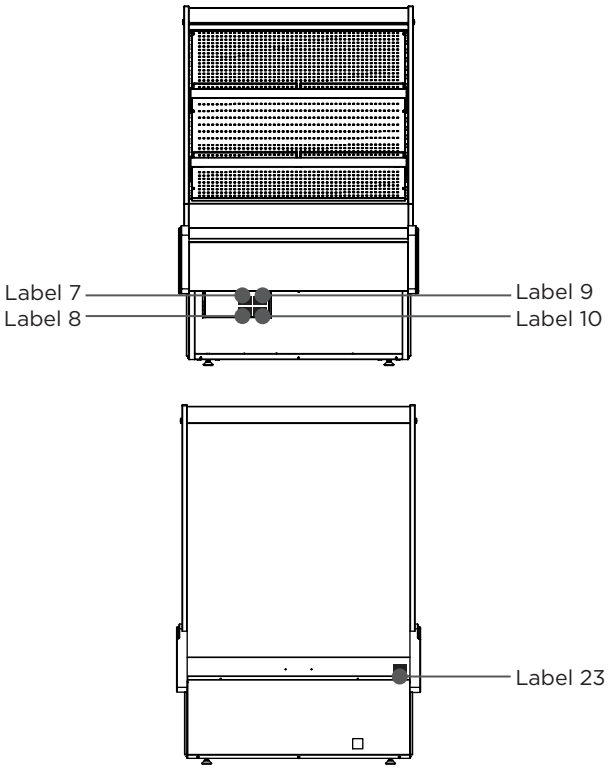
Self contained labels



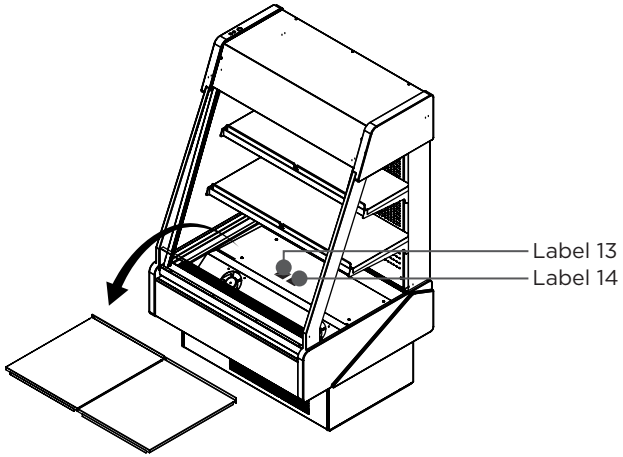
Self contained labels (RS/MR only)



Remote labels

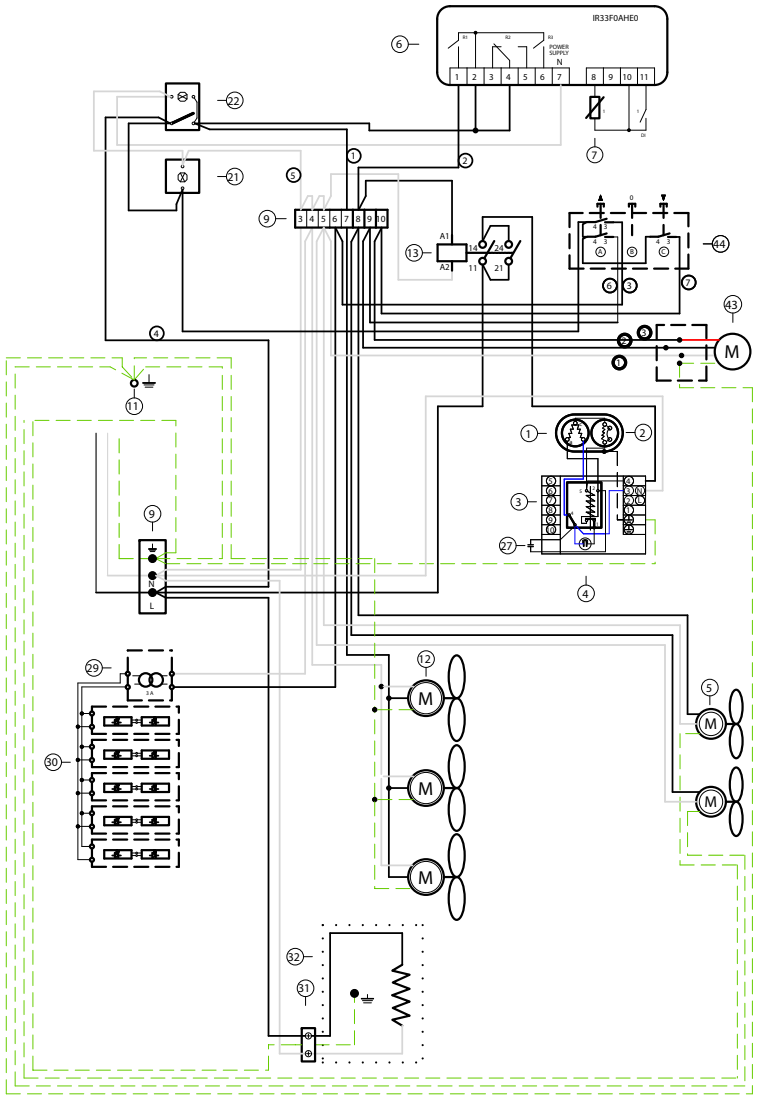


Self contained and remote labels (evaporator)

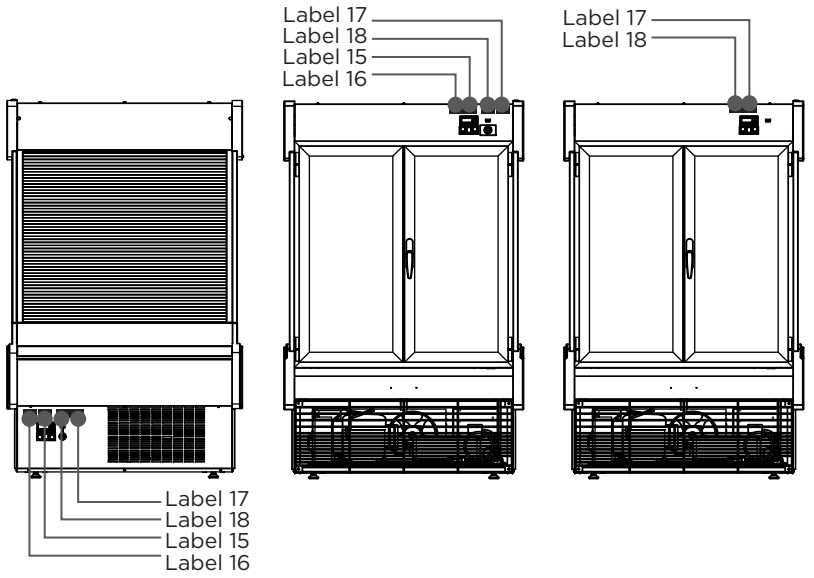


N°	Discription	Number for length	
		50 Inch	60 Inch
1	Compressor	1	1
2	Overload	1	1
3	Relay	1	1
4	Start capacitor	1	1
5	Condenser fan	1	1
6	Controller Controller	1	1
7	Temperature probe	1	1
9	Terminal block	2	2
11	Ground connection	1	1
12	Evaporator fan	3	4
13	Compressor relay	1	1
21	Pilot light	1	1
22	Switch	1	1
27	Run capacitor	1	1
29	Transformer	1	1
30	Led lighting	3	5
31	Socket	1	1
32	Evaporative condensate pan	1	1
37	Anti sweat heater	2	2
43	Electrical shutter	1	1
44	A key switch shutter	1	1

KGL-OS/RM-50(60)-S

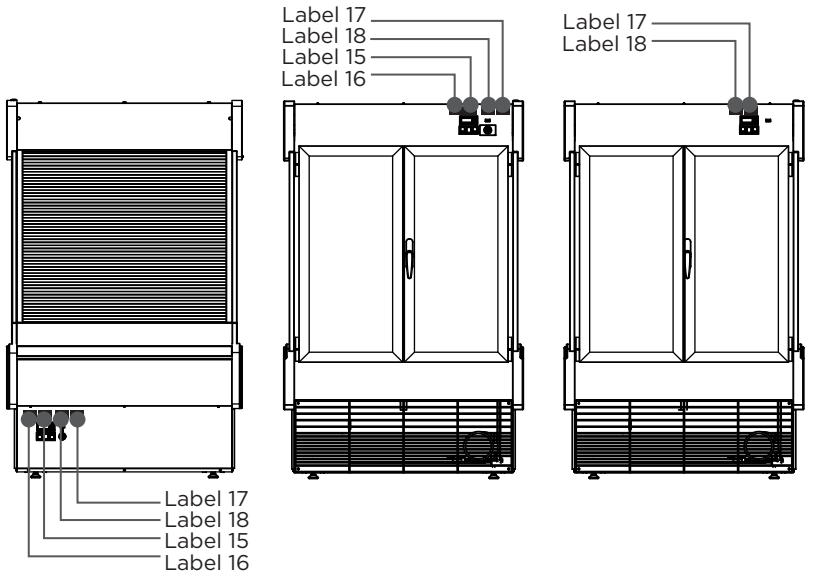


Self contained labels (OS/RS only)



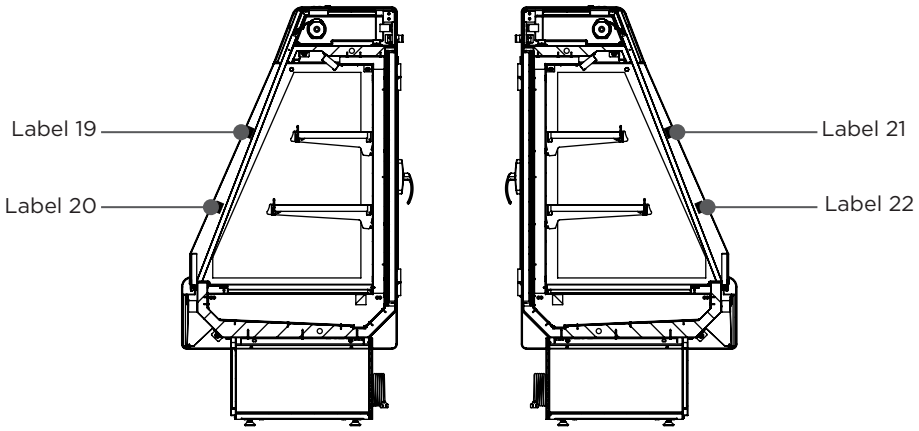
KGL-OS-XX-S KGL-RS-XX-S KGL-RM-XX-S

Remote labels (OS/RS only)

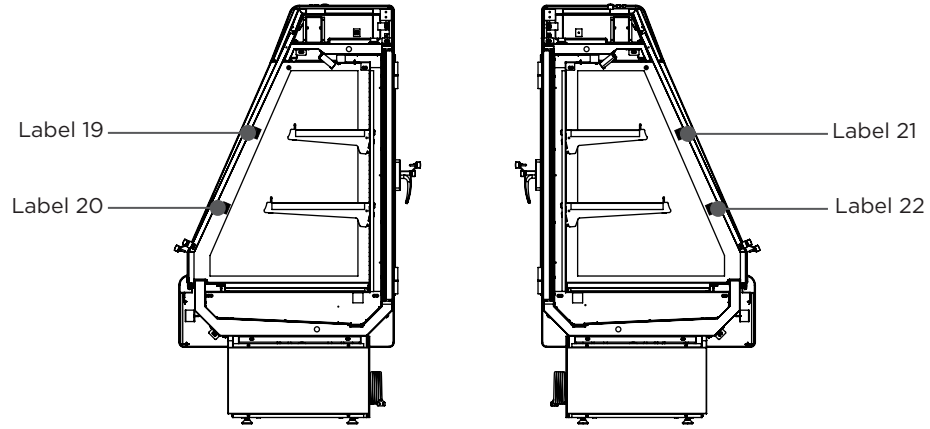


KGL-OS-XX-R KGL-RS-XX-R KGL-RM-XX-R

Shutter rails (OS/RS only)



Shutter rails (RM only)



Label 1

CAUTION

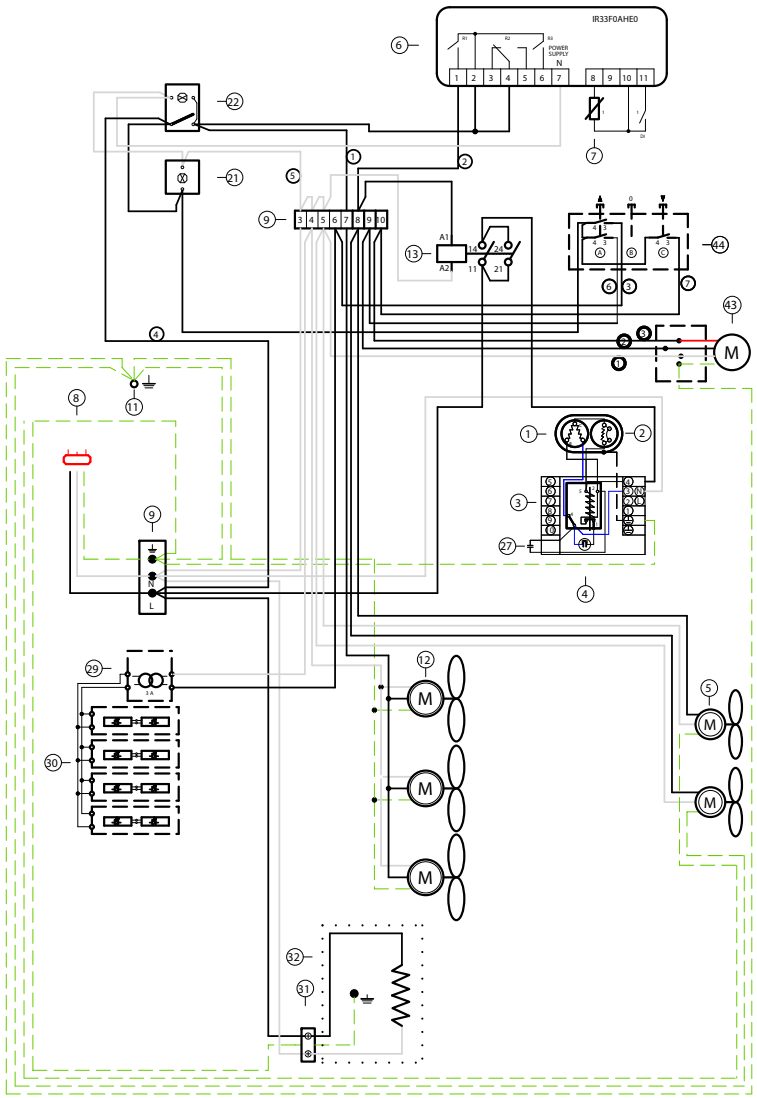
MOVING PARTS.
DO NOT OPERATE UNIT
WITH (PART) REMOVED

Label 2

ATTENTION

PIÈCES MOBILES.
NE FAIRE PAS
FONCTIONNER AVEC
DES PIÈCES ENLEVER

N°	Discription
1	Compressor
2	Overload
3	Relay
4	Start capacitor
5	Condenser fan
6	Controller
7	Temperature probe
8	Earth two pin plug
9	Terminal block
11	Ground connection
12	Evaporator fan
13	Compressor relay
21	Pilot light
22	Switch
27	Run capacitor
29	Transformer
30	Led lighting
31	Socket
32	Evaporative condensate pan
37	Anti sweat heater
43	Electrical shutter
44	A key switch shutter



Label 3

-NOTE-
THIS A TYPE 1 CASE AND IS DESIGNED TO OPERATE AT THE FOLLOWING STORE CONDITIONS THAT DOES NOT EXCEED
75 F AND 55% R.H.

Label 4

-NOTE-
CETTE VITRINE TYPE 1 EST CONÇUE POUR FONCTIONNER SELON LES CONDITIONS DU MAGASIN ET NE DOIT DÉPASSER
75 F AND 55% R.H.

Label 5

-NOTE-

THIS EQUIPMENT IS INTENDED FOR THE STORAGE AND DISPLAY OF PACKAGED FOOD PRODUCTS ONLY

Label 6

-NOTE-

CET EQUIPEMENT EST PREVU UNIQUEMENT POUR LE STOCKAGE ET EXPOSITION DE PRODUITS ALIMENTAIRES EMBALLER

Label 7

CAUTION

DISCONNET ALL POWER.
MAY HAVE MORE THEN ONE DISCONNET SWITCH

Label 8

ATTENTION

DEBRANCHER TOUTE COURANT.
IL PEUT AVOIR PLUS D'UN INTERRUPTEUR

Label 9

CAUTION

RISK OF ELECTRIC SHOK.
DISCONNECT ALL POWER BEFORE SERVICING UNIT

Label 10

ATTENTION

RISQUE DE CHOC ELECTRIQUE.
AVANT TOUT TRAVAIL COUPER LE COURANT

Label 11

CAUTION

HOT PARTS.
DO NOT OPERATE UNIT
WITH (PART) REMOVED

Label 12

ATTENTION

PIÈCES BRULANTES.
NE FAIRE PAS
FONCTIONNER AVEC LES
PIÈCES ENLEVER

Label 13

CAUTION

HAZARDOUS MOVING PARTS.
DO NOT OPERATE UNIT
WITH DECK PANS

Label 14

ATTENTION

PIÈCES MOBILES
DANGEREUSES. NE FAIRE
PAS FONCTIONNER AVEC
DES PIÈCES ENLEVER

Label 15

CAUTION

DO NOT OPEN MANUALLY.

IN CASE OF ELECTRICAL FAILURE FOLLOW THE INSTRUCTIONS IN THE INSTALLATION AND OPERATION MANUAL.

Label 16

ATTENTION

NE PAS OUVRIR MANUELLEMENT.

EN CAS DE PANNE ELECTRIQUE SUIVRE LES INSTRUCTIONS D'INSTALLATION ET DE FONCTIONNEMENT DU MODE D'EMPLOI.

Label 17

CAUTION

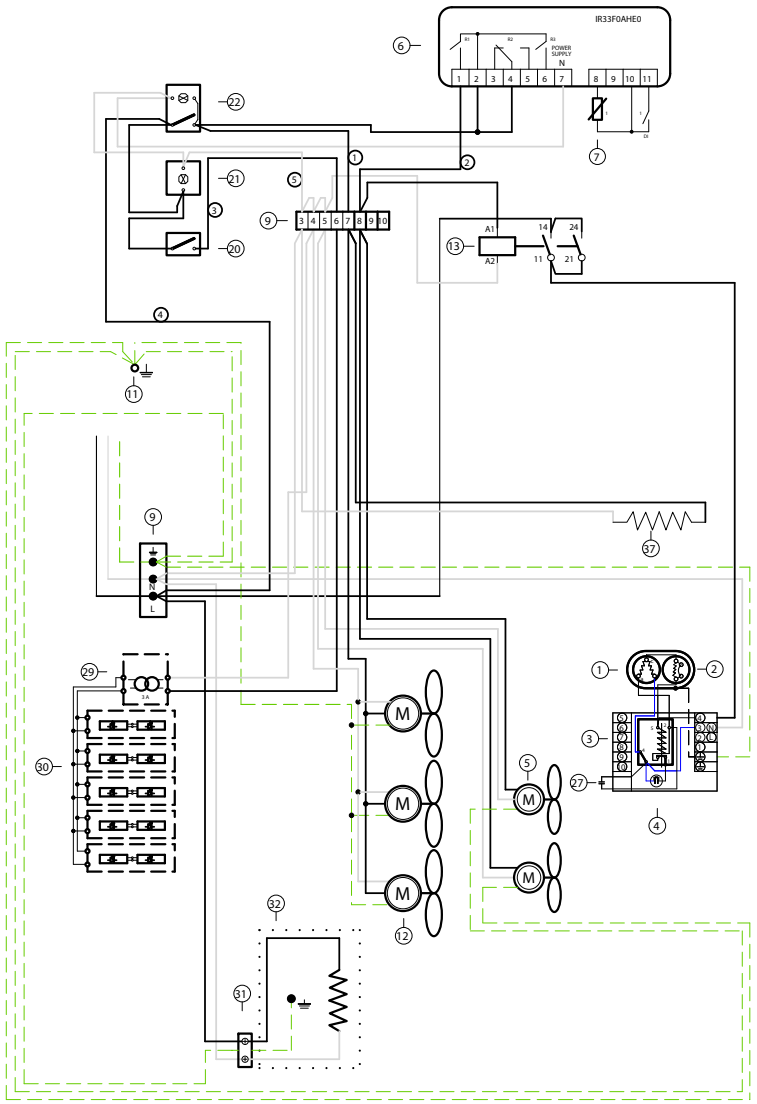
FOR THE SHUTTER CORRECT OPENING AND CLOSING OPERATIONS, IT IS MANDATORY FOR ALL THE SHUTTERS RAILS TO BE CLEAR AND UNOBSTRUCTED.

Label 18

ATTENTION

POUR OUVERTURE ET FERMETURE CORRECTE DU VOLET ROULANT, IL EST OBLIGATOIRE POUR TOUTES LES COULISSES DU VOLET ROULANT D'ETRE DEGAGEES ET DEBARRASSEES.

Nº	Discription	Number for length	
		50 Inch	60 Inch
1	Compressor	1	1
2	Overload	1	1
3	Relay	1	1
4	Start capacitor	1	1
5	Condenser fan	1	1
6	Controller	1	1
7	Temperature probe	1	1
9	Terminal block	2	2
11	Ground connection	1	1
12	Evaporator fan	3	4
13	Compressor relay	1	1
20	Lamp switch	1	1
21	Pilot light	1	1
22	Switch	1	1
27	Run capacitor	1	1
29	Transformer	1	1
30	Led lighting	3	5
31	Socket	1	1
32	Evaporative condensate pan	1	1
37	Anti sweat heater	2	2



Label 23

Warning

- This appliance requires a properly grounded dedicated circuit using a NEMA rated wall receptacle do not remove the grounding prong on the plug or the risk of an injury due to shock from the ungrounded electrical service may occur.

- This product can expose an individual to chemicals that have been identified by the state of California to possibly be dangerous leading to various diseases birth defects or other human reproductive system harm. For more information go to www.p65warnings.ca.gov.

Label 19



Label 20



Label 21



Label 22

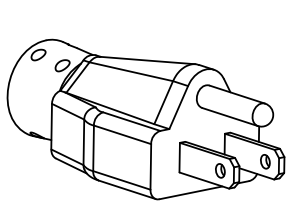


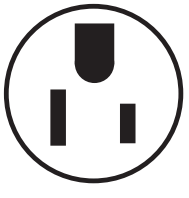
2.7 Check your electrical installation

2.7.1 Cord connected

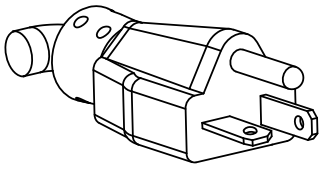
⚠ This equipment must be connected to an outlet with 115V/ 60Hz/ 1 phase.

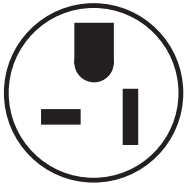
⚠ For the wright connection check tension and frequency stated In the marking plate.





Nema-5-15P





Nema-5-20P

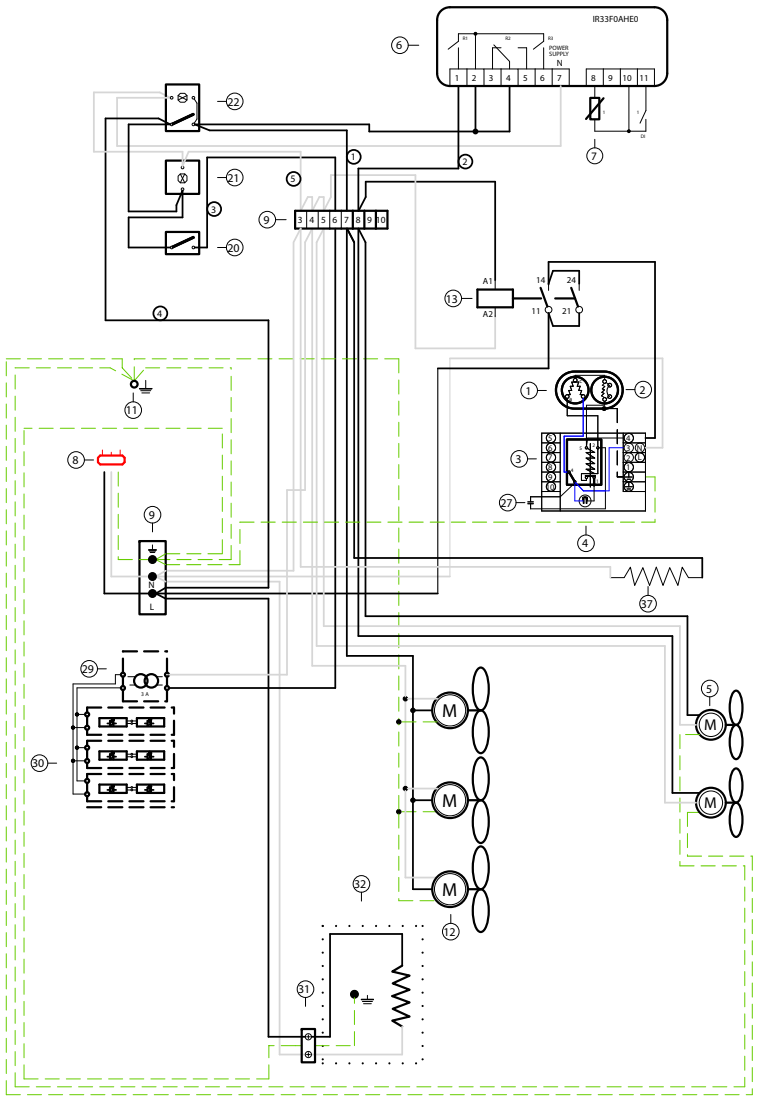
2.7.2 Permanently connected (remotes only)

⚠ This equipment must be connected to an outlet with 115V/ 60Hz/ 1 phase or 220V/ 60Hz/ 1 phase

⚠ For the wright connection check tension and frequency stated In the marking plate.

To proceed to electrical to safe electrical connections follow the steps below:
-Check connections box behind protection grilles (use proper tool);
-Select wiring accordingly with labeling;
-Check ratings on the nameplate for the tension applicable;
-Open connections box and identify correct connector (check tension);
-Prepare wire through correct passage (hole) and connect the 3 wire cable correctly (check phase/neutral/earth labeling);
-Secure connections;
- Close box;

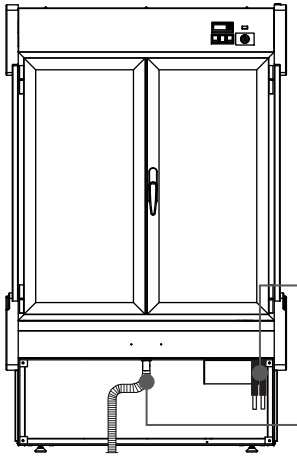
Nº	Discription
1	Compressor
2	Overload
3	Relay
4	Start capacitor
5	Condenser fan
6	Controller
7	Temperature probe
9	Terminal block
11	Ground connection
12	Evaporator fan
13	Compressor relay
20	Lamp switch
21	Pilot light
22	Switch
27	Run capacitor
29	Transformer
30	Led lighting
31	Socket
32	Evaporative condensate pan
37	Anti sweat heater



2.8 Refrigeration and drain assemblies (remotes only)

⚠ Installation and service must be performed by a qualified technician.

Equipments for remote installation come with nitrogen under pressure and an easy prep kit (tubing connections needed only) for installation.

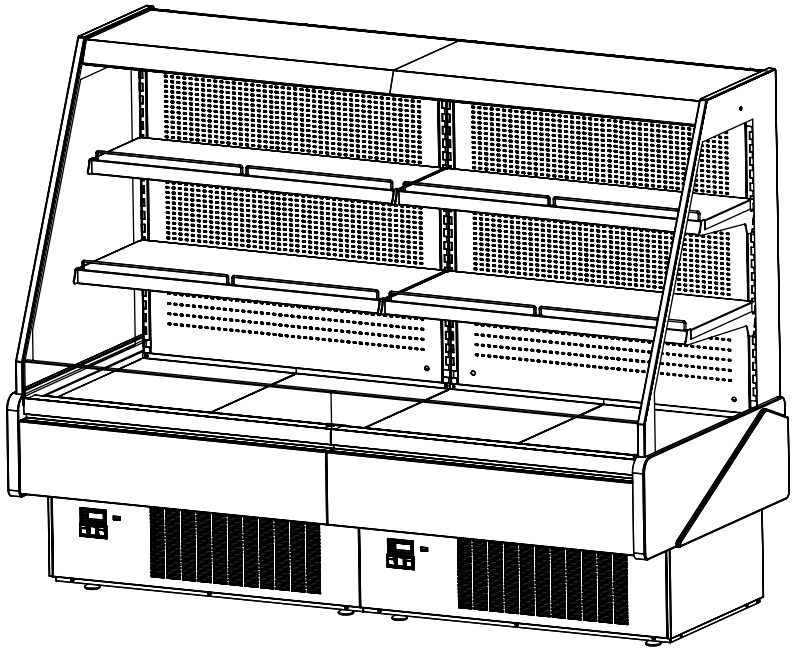


Equipments for remote installation come with nitrogen under pressure and an easy prep kit (tubing connections needed only) for installation.

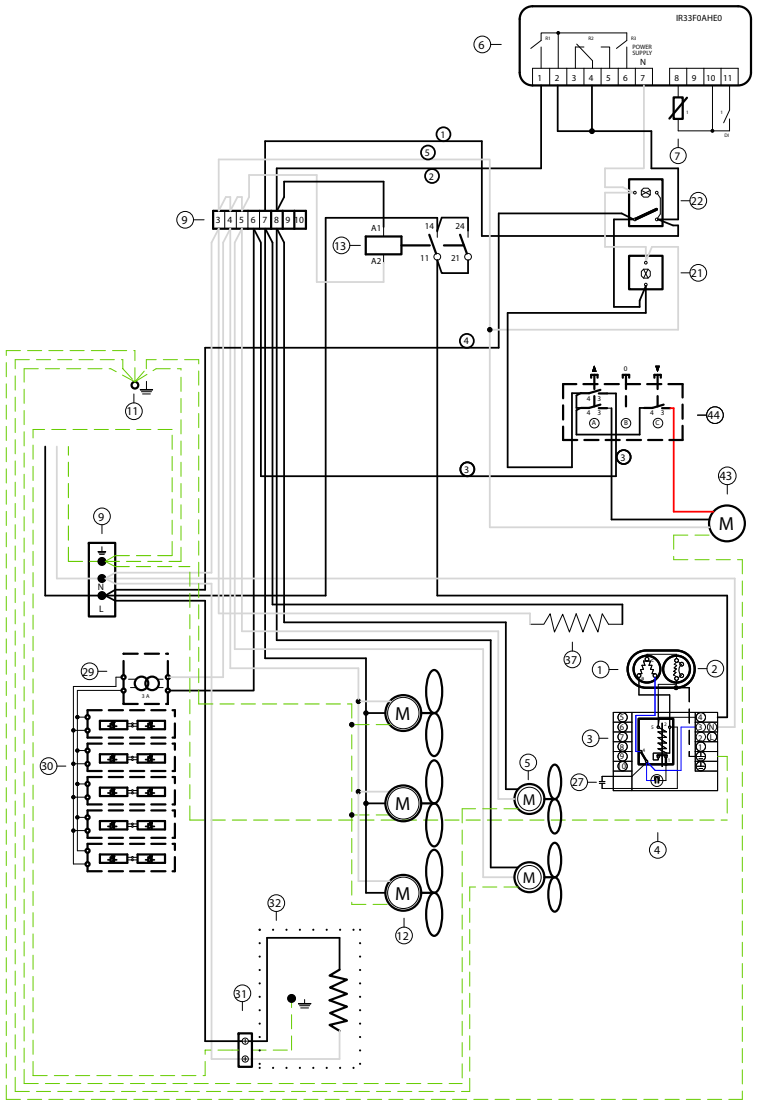
Prepare a drain installation

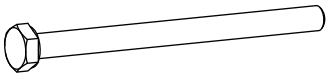
2.9 Joining

For joining follow the steps described (KGL-OF/DL only).



№	Discription	Number for length	
		50 Inch	60 Inch
1	Compressor	1	1
2	Overload	1	1
3	Relay	1	1
4	Start capacitor	1	1
5	Condenser fan	1	1
6	Controller	1	1
7	Temperature probe	1	1
9	Terminal block	2	2
11	Ground connection	1	1
12	Evaporator fan	3	4
13	Compressor relay	1	1
21	Pilot light	1	1
22	Switch	1	1
27	Run capacitor	1	1
29	Transformer	1	1
30	Led lighting	3	5
31	Socket	1	1
32	Evaporative condensate pan	1	1
37	Anti sweat heater	2	2
43	Electrical shutter	1	1
44	A key switch shutter	1	1





2x - DIN933 M6x80



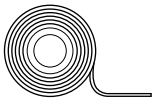
4x - DIN933 M6x25



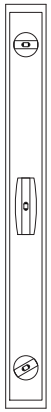
12x- DIN9021 M6



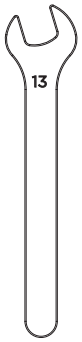
6x - DIN934 M6



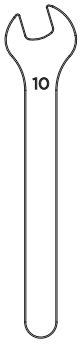
2X FIT00201301 (189'')



1x



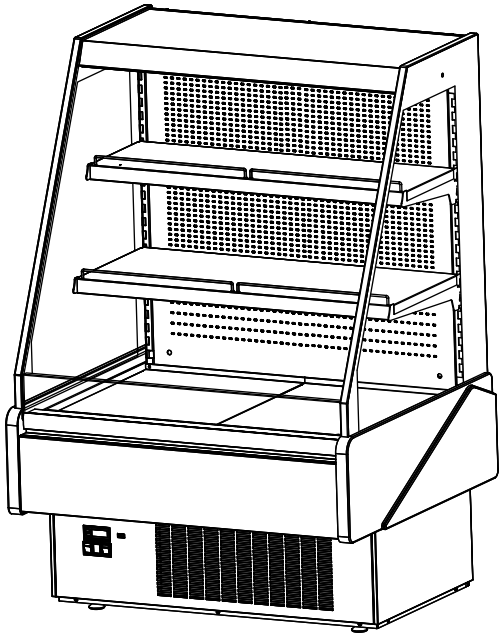
1x



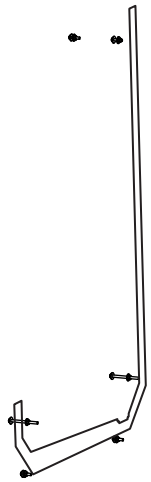
1x



1x

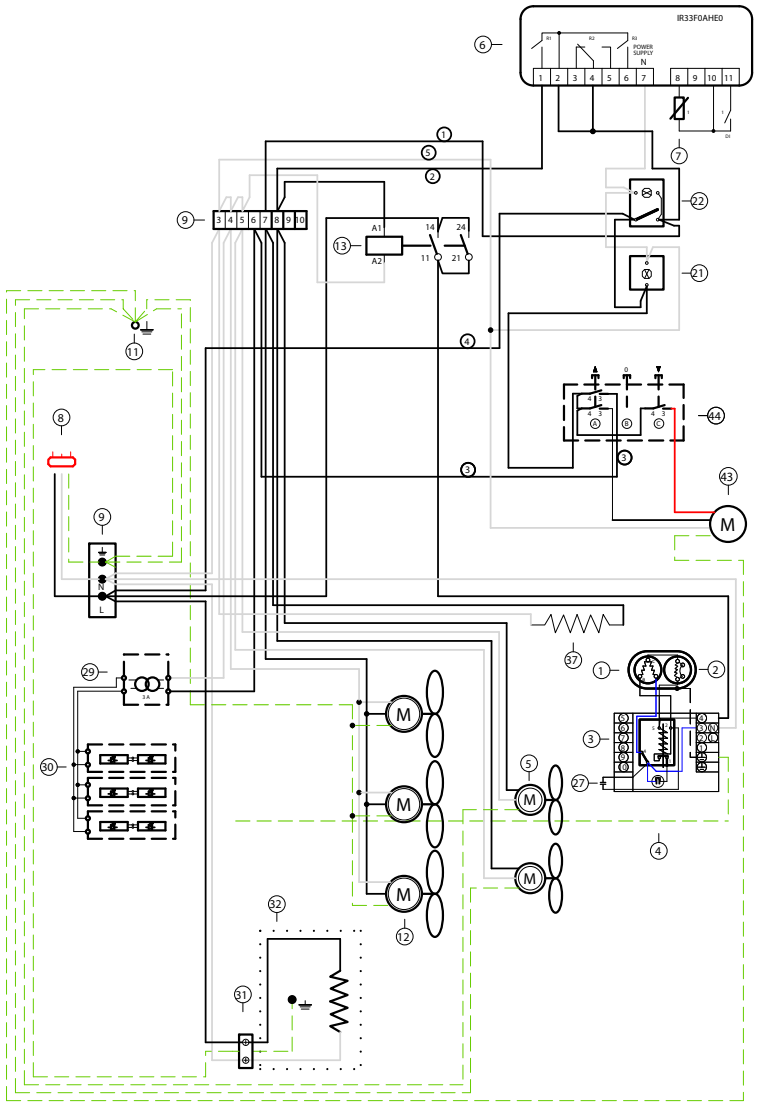


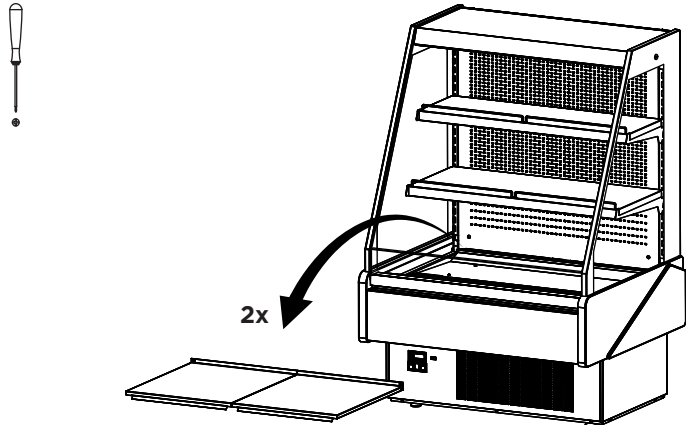
2x KGL-DL

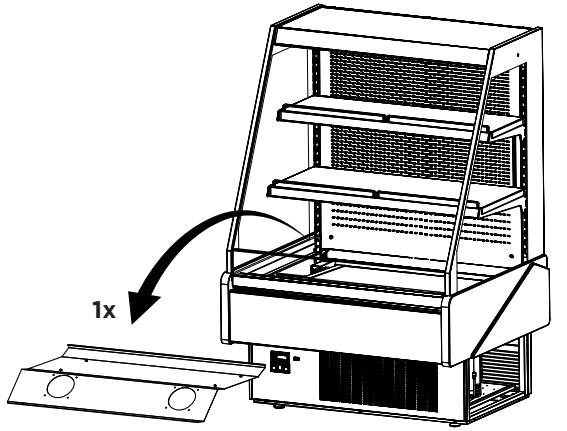


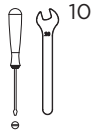
KIT0004U01000

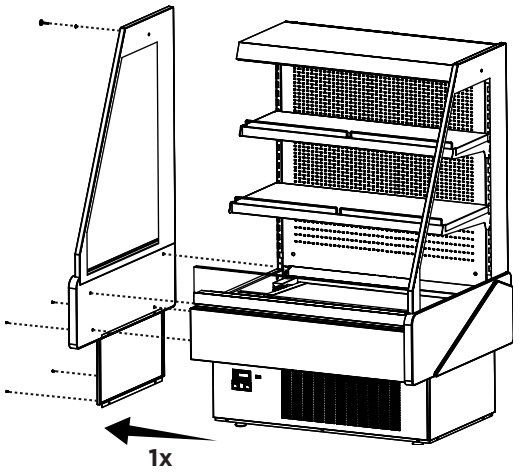
N°	Discription
1	Compressor
2	Overload
3	Relay
4	Start capacitor
5	Condenser fan
6	Controller
7	Temperature probe
8	Earth two pin plug
9	Terminal block
11	Ground connection
12	Evaporator fan
13	Compressor relay
21	Pilot light
22	Switch
27	Run capacitor
29	Transformer
30	Led lighting
31	Socket
32	Evaporative condensate pan
37	Anti sweat heater
43	Electrical shutter
44	A key switch shutter

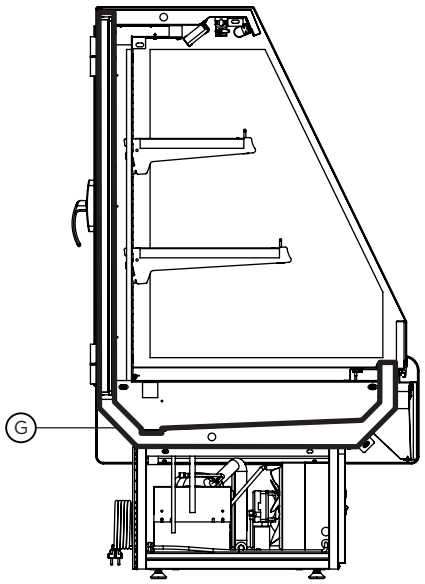

IR33F0AHE0
POWER SUPPLY
N
A1
A2
14
24
11
21
M

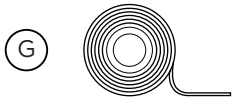

2x


1x


10

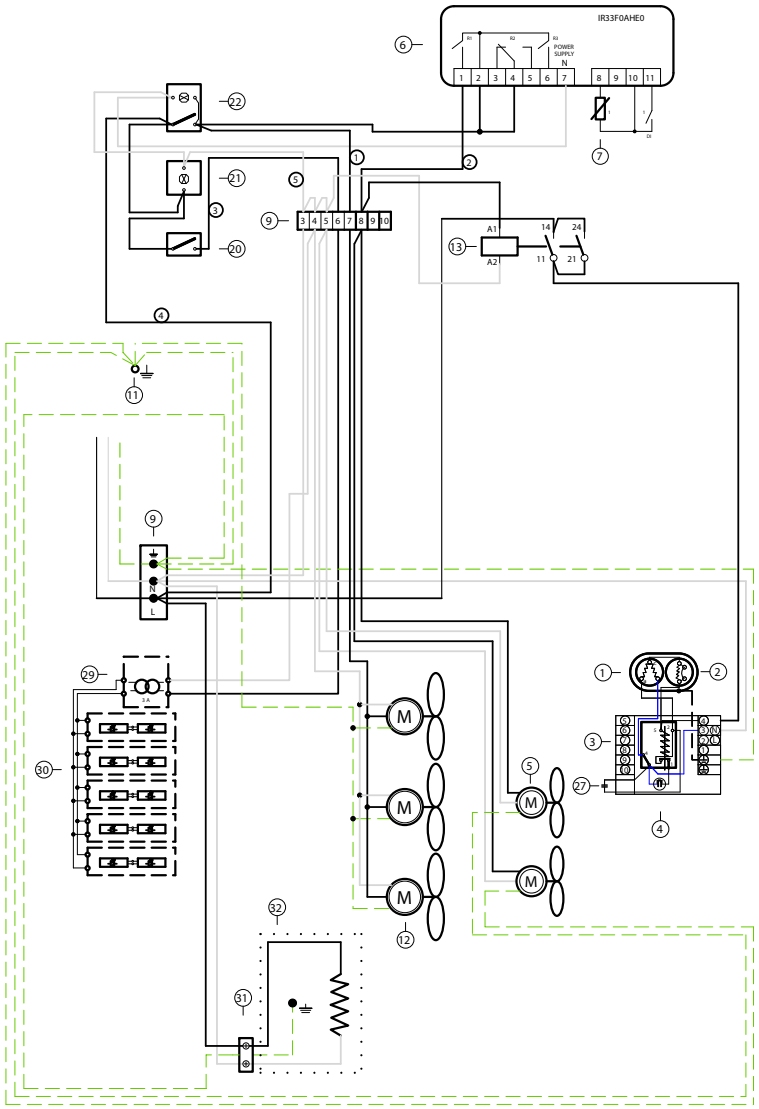

1x

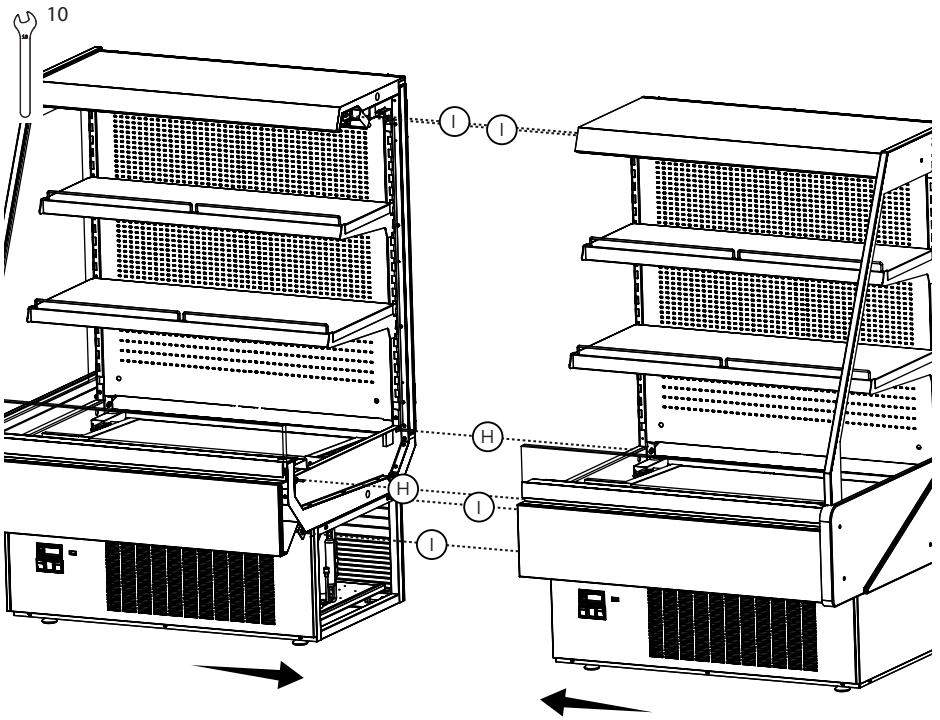


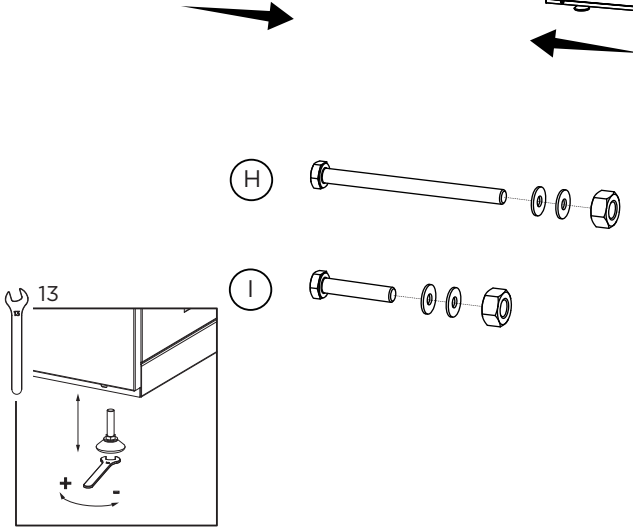


2X - FIT00201301 (189")

Nº	Discription	Number for length	
		50 Inch	60 Inch
1	Compressor	1	1
2	Overload	1	1
3	Relay	1	1
4	Start capacitor	1	1
5	Condenser fan	1	1
6	Controller	1	1
7	Temperature probe	1	1
9	Terminal block	2	2
11	Ground connection	1	1
12	Evaporator fan	3	4
13	Compressor relay	1	1
20	Lamp switch	1	1
21	Pilot light	1	1
22	Switch	1	1
27	Run capacitor	1	1
29	Transformer	1	1
30	Led lighting	3	5
31	Socket	1	1
32	Evaporative condensate pan	1	1





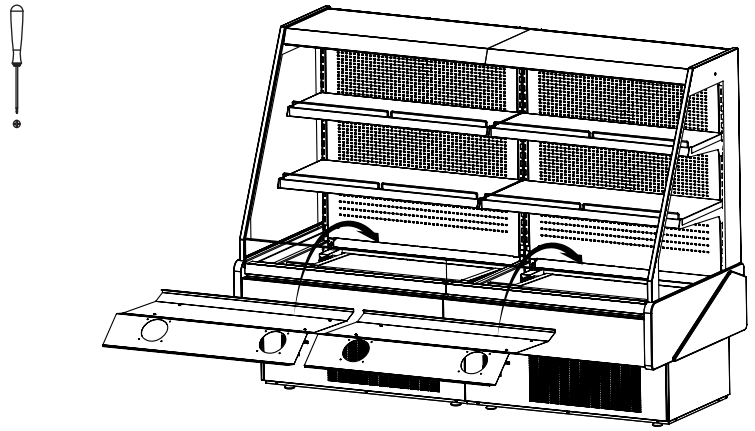


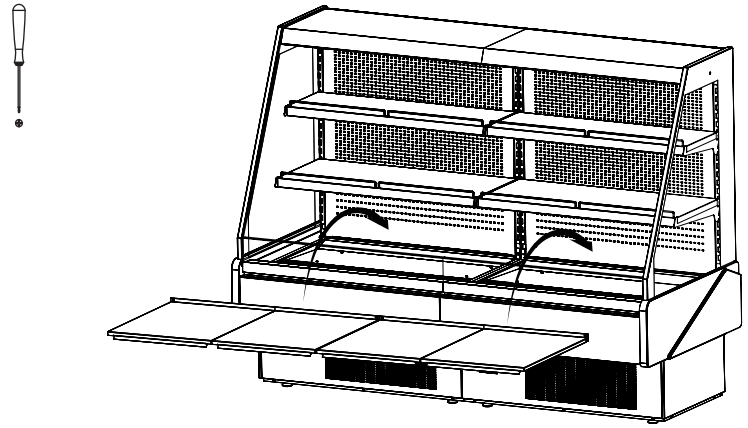
H

1x - DIN933 M6x80
2x - DIN9021 M6
1x - DIN934 M6

I

1x - DIN933 M6x25
2x - DIN9021 M6
1x - DIN934 M6





Nº	Discription
1	Compressor
2	Overload
3	Relay
4	Start capacitor
5	Condenser fan
6	Controller
7	Temperature probe
9	Terminal block
11	Ground connection
12	Evaporator fan
13	Compressor relay
20	Lamp switch
21	Pilot light
22	Switch
27	Run capacitor
29	Transformer
30	Led lighting
31	Socket
32	Evaporative condensate pan

2.10 Plugging and start

To start your equipment follow the steps:

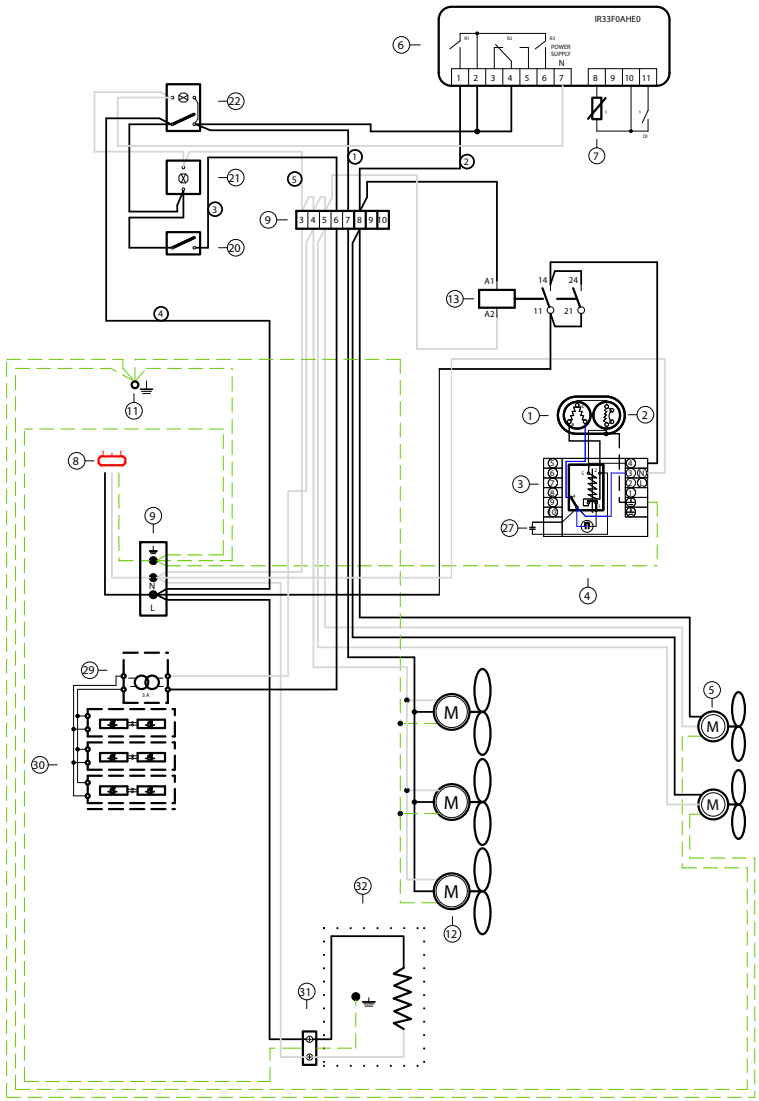
1 - Check for page with parameters inside the manual.

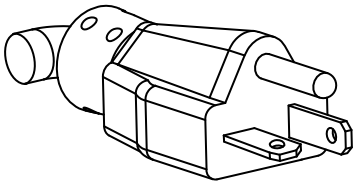
2 - After uncrating and placed the equipment respecting all warnings set in 2.1 chapter, and all switches are set to off position, connect the equipment.

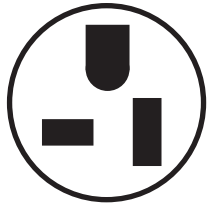
⚠ Make sure you have the correct outlet!

4.3. Electrical diagrams

KGL-OF/RM-40-S







Nema-5-20P

3 - Check lights, using button referenced on chapter 2.4. If not working consult the maintenance chapter. KGL-OF/DL/RM only.

3.1 - For KGL-OS/RS, lights and shutter are controlled by key referenced on 2.4 chapter. Turn the key to check lights and shutter. (Open shutter = lights ON)

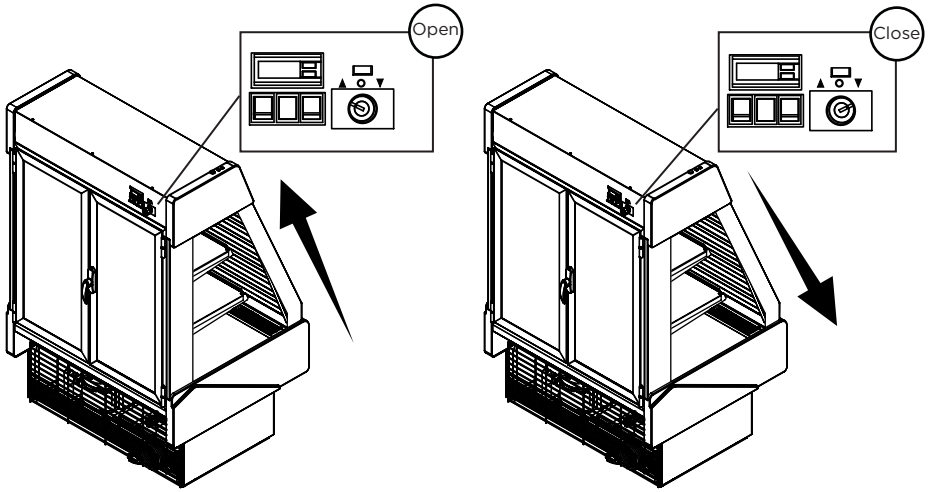
⚠ Open or close shutter only when needed, to prevent motor burning.

4 - Check for shutter normal operation.

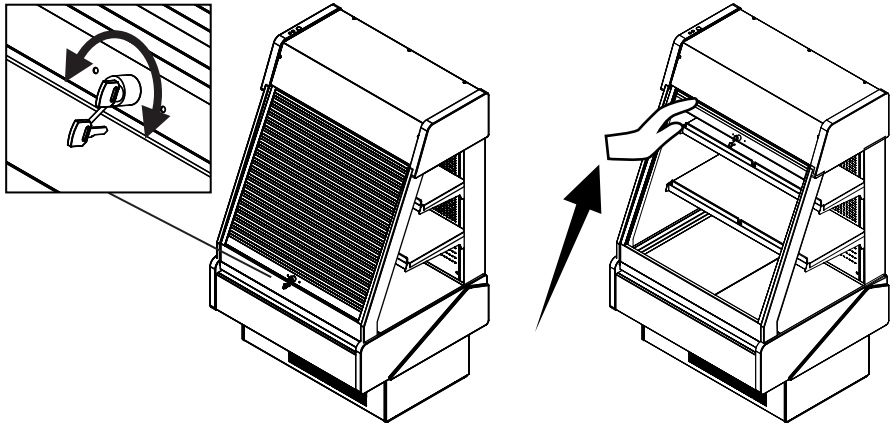
4.1 - Electrical shutter.

⚠ Keep the shutter rails clear for proper operation.

Turn the key to control the shutter.



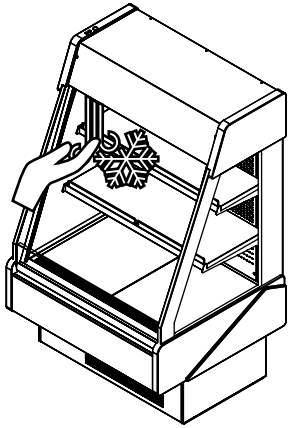
4.2 - Manual shutter.



5 - Turn ON power button referenced in 2.4 chapter.

⚠ Noise will be heard when compressor starts! If compressor doesn't start, call a technician!

6 - Check for air movement in the discharge air grille.



7 - Before loading, leave the equipment working for about 30 min. With night curtain or shutter on.

⚠ Rear doors closed (KGL-RS/DL/RM only).

115V/60Hz/1 phase-self contained amps

Model	Compressor F.L.A./L.R.A.	Lights (all shelves and top)	Fans		Evap pan	Anti sweat heaters	Total amps (self contained)
			EVP	CND		REAR	
KGL-OF/OS-40-S	8,9/47	0,12	0,28	0,45	6,67		16,42
KGL-OF/OS-50-S	16/64	0,54	0,28	0,9	6,67		24
KGL-OF/OS-60-S	16/64	0,19	0,30	0,9	6,67		24,06
KGL-DL/RS/RM-40-S	8,9/47	0,12	0,20	0,45	6,67	0,52	16,86
KGL-DL/RS/RM-50-S	16/64	0,15	0,42	0,9	6,67	0,52	24,66
KGL-DL/RS/RM-60-S	16/64	0,19	0,40	0,9	6,67	0,86	25,02

The data regards to standard options only.

115V/60Hz/1 phase-remote amps

Model	Total amps (remote)
KGL-OF/OS-40-R	0,40
KGL-OF/OS-50-R	0,43
KGL-OF/OS-60-R	0,49
KGL-DL/RS/RM-40-R	0,84
KGL-DL/RS/RM-50-R	1,09
KGL-DL/RS/RM-60-R	1,45

All self contained KBD series use the following equipment: capillary tube, finned coil ventilated systems (condenser/evaporator), hermetic compressor, electrical water evaporation system.

Model	Circuit pressure (psig)		Refrigerant and charge (OZ)	Defrost
	High side	Low side		
KGL-OF/OS-40-S	331	174	R 404A 24,7	Automatic 4/day
KGL-OF/OS-50-S	331	174	R 404A 26,5	Automatic 4/day
KGL-OF/OS-60-S	331	174	R 404A 33,5	Automatic 4/day
KGL-DL/RS/RM-40-S	331	174	R 404A 35,62	Automatic 4,8/day
KGL-DL/RS/RM-50-S	331	174	R 404A 31,04	Automatic 4,8/day
KGL-DL/RS/RM-60-S	331	174	R 404A 46,91	Automatic 4,8/day

3.2 Refrigeration loads (remotes only)

Installation of remote equipment must be done by a qualified technician.

Model	BTU*/h	Expansion valve type	
KGL-OF/OS-40-R	4125	TS2	00
KGL-OF/OS-50-R	4897	TS2	00
KGL-OF/OS-60-R	5141	TS2	00
KGL-DL/RS/RM-40-R	4190	TS2	00
KGL-DL/RS/RM-50-R	4982	TS2	00
KGL-DL/RS/RM-60-R	5835	TS2	00

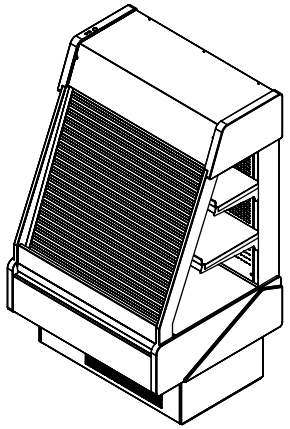
*values presented are indicative for 14°F evap, and 90°F ambient.

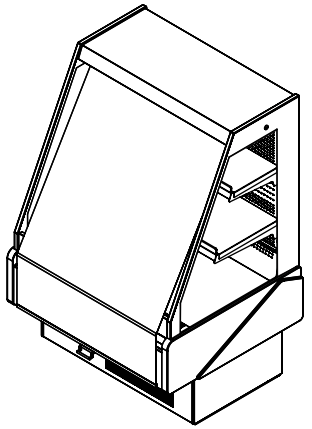
4 Electrical

4.1. Electrical specifications data

⚠ Electrical data can be found on the marking plate.

Standard equipment includes led lighting in all shelves and top, and anti sweat heaters. (RS/DL/RM only)

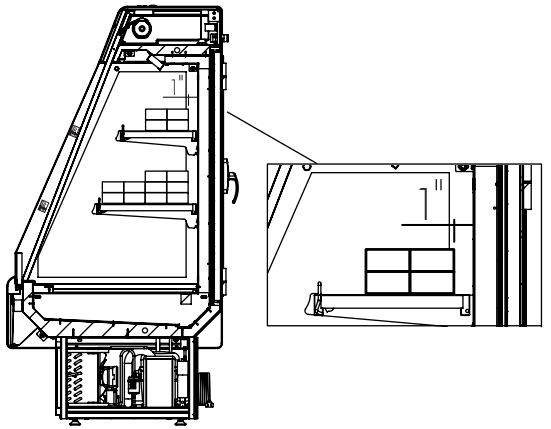




8 - Load your KGL-Series.

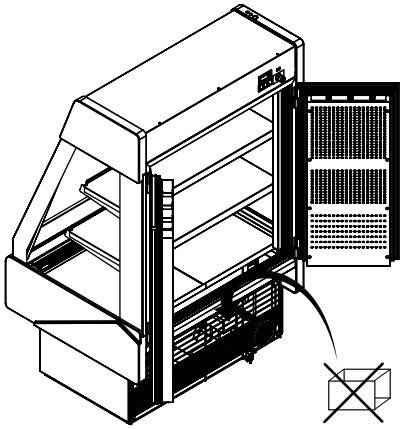
⚠ Loading must be done respecting loading limits and weight per square foot mentioned in chapter 1. This equipment is intended for maintaining temperature, be sure the products are cold, and not ambient temperature.

⚠ After loading check for any obstruction in the discharge and return air grilles.

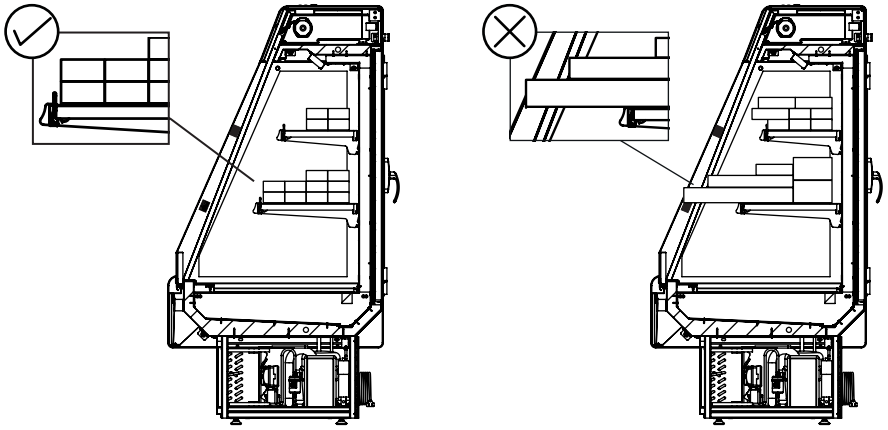


⚠ Maintain doors closed after loading. (KGL-DL/RS only)

⚠ When loading KGL-OS/RS, using the back doors, objects can fall into the evaporator. Remove them if any encountered there.



⚠ Volumes inside the KGL must respect the refrigerated shelf area.



9 - If any problem encountered, see troubleshooting or call a technician!

3 Refrigeration

3.1 Self contained refrigeration equipment and defrost

The refrigeration equipment it's laid out in the base of the equipment.

