

LION CUB LARGE
FOREST 3000 - GMS

***instructions for
installation***

Document number: SM00327V
Revision: "-" - first issue

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080.70	required refrigerating capacity	1	"_"

The wiring diagrams and setting specifications are contained in the cabinet, together with the "Instructions for use"

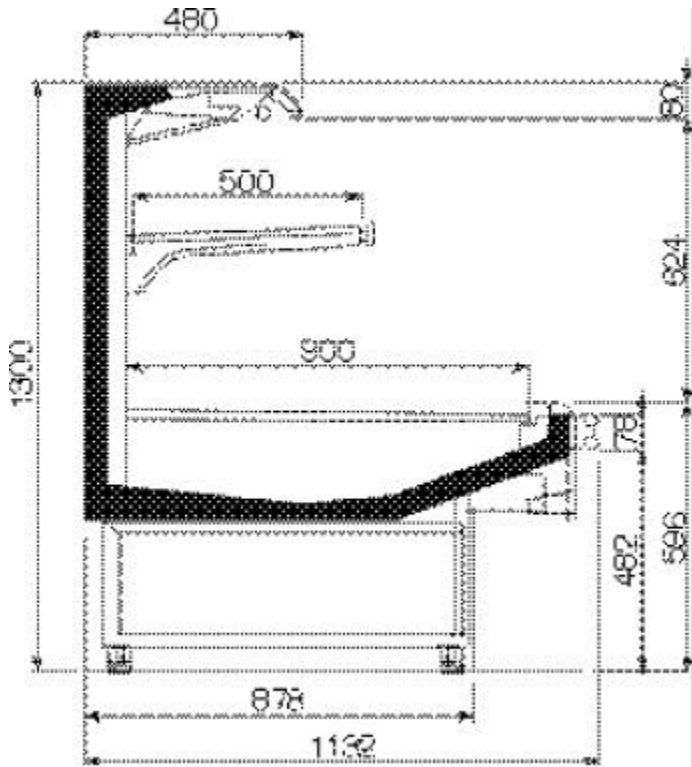
KEY

- "_" First issue
- A, B, C..... Chapter revision index
- AA, AB, AC.. General revision index of document

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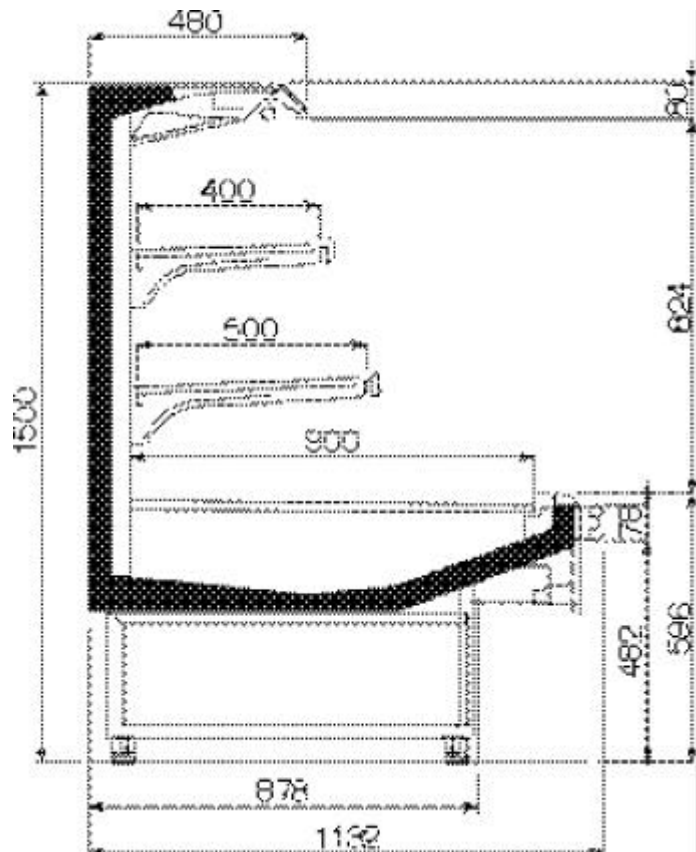
LION CUB LARGE F. 3000

- sections -



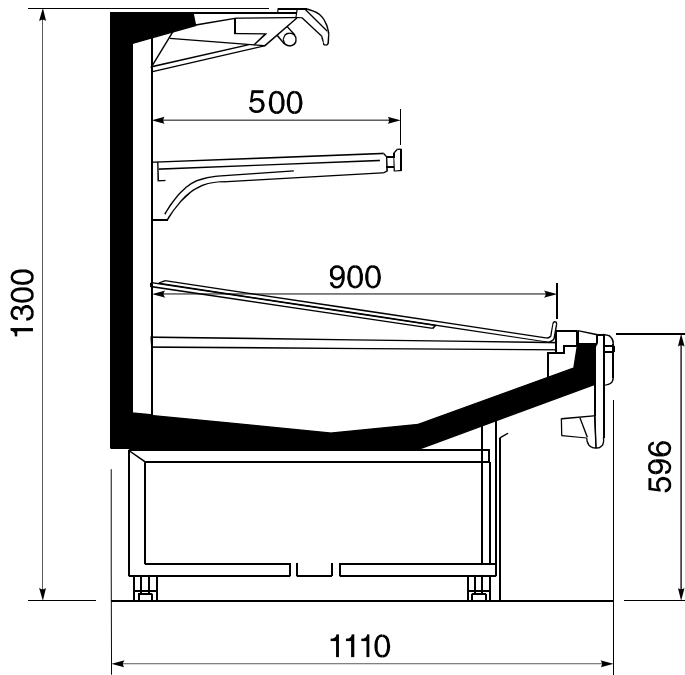
$h = 1300$

$h = 1500$



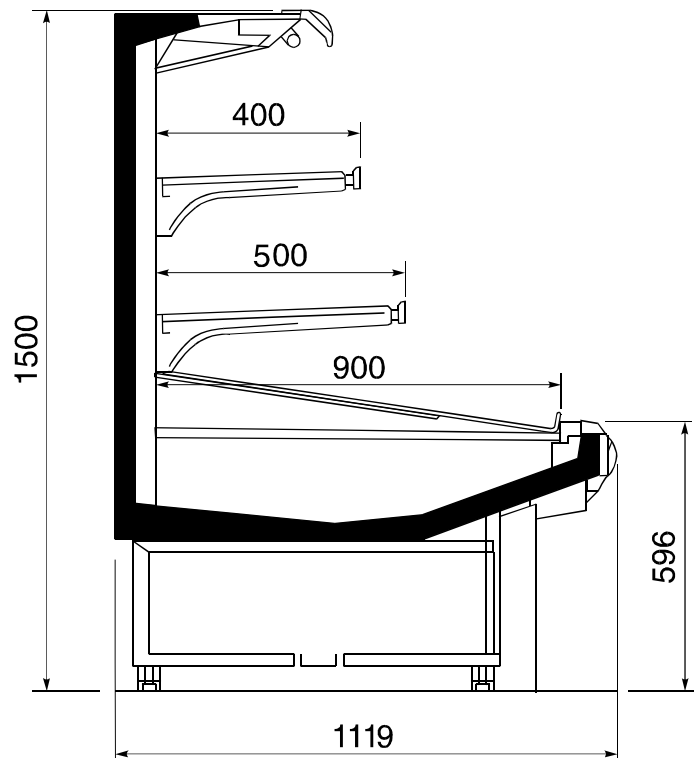
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LION CUB LARGE GMS - sections -



h = 1300

h = 1500



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FOREWORD: In accordance with the standards for electric systems, the appliance must be connected to a multipolar cutoff device with contact openings of at least 3 mm.

PRINCIPLE OF OPERATION OF TERMINAL-BOARD CABINETS

LION CUB LARGE cabinets with vertical display are available in a version for climatic class H with standard off-cycle defrost or optional electric defrost and for climatic class M with electric defrost. Besides the evaporator, the refrigerating circuit includes an externally compensated thermal expansion valve and a liquid distributor.

A pressure gauge connection mounted on the suction line outside the cabinet, is standard-supplied. A separate filter drier is also supplied, which must be installed on the discharge line.

Evaporator fans: they must work continuously.

Demist heating elements: they must work continuously.

Fan-assisted defrosting: use the number of defrost events and the duration values appearing on the table of chapter 080.10.

Running and defrost-end telethermostat

Cabinets with off-cycle defrost are fitted with a telethermostat that governs operation following the temperature values indicated in the table of chapter 080.10.

Electric-defrost cabinets include a telethermostat that controls machine performance and a thermostat that governs defrost end according to the information contained in the table of chapter 080.10.

Timer (off-cycle defrost versions): it is advisable to set the timer following the information contained in the table of chapter 080.10.

Electrical connections

Perform electrical connections following the functional and terminal-board diagrams provided in this manual.

ALTERNATIVES FOR VERSIONS INCLUDING A TELETHERMOSTAT

Defrosting: FAN-ASSISTED. The remote electrical board causes defrosting by providing 230V ac (pulse) to terminal 15 in the terminal board (see functional diagrams).

Control of functions: Terminal-board versions may include, as an optional extra, an electronic telethermostat that governs thermostatic, defrost-end and alarm functions.

The telethermostat controls cabinet functions by the aid of three ptc probes; probe "T1" measures air temperature and acts in the main thermostatic cycle, probe "T2" measures evaporator temperature for the purposes of ruling the defrost cycles, whilst probe "T3", which is located at the air inlet, measures and displays the temperature. The position of probe "T3" causes the display of the highest temperature inside the cabinet.

NB: Probe "T1" controls also alarm functions. In case of special requirements, probe "T3" too can be assigned to the control of alarm conditions.

The functions of fans and demist heating elements remain unchanged.

COSTAN TECHNICAL DOCUMENTATION PRODUCT: LION CUB LARGE DOC. no. SM00327V CHAP. no. 030.20 CHAPTER: PRINCIPLE OF OPERATION OF MASTER/SLAVE CASES	CHAPTER REVISION STATUS						SIGNED IN CONFORMITY WITH APPROVED ORIGINAL	PAGE: 1/1
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PRINCIPLE OF OPERATION OF CABINETS WITH BUILT-IN MASTER / SLAVE ELECTRIC SYSTEM

The MASTER-SLAVE electrical configuration for high and low-temperature applications envisages the use of an electronic controller, which is applied to all sections (either MASTER or SLAVE) and governs refrigeration, defrost-end (for electric and off-cycle defrost) and temperature alarm by the use of three probes.

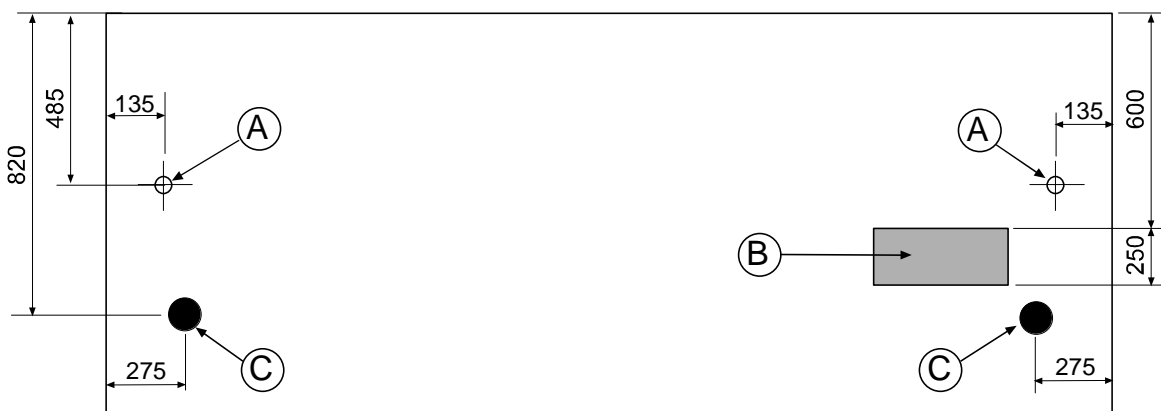
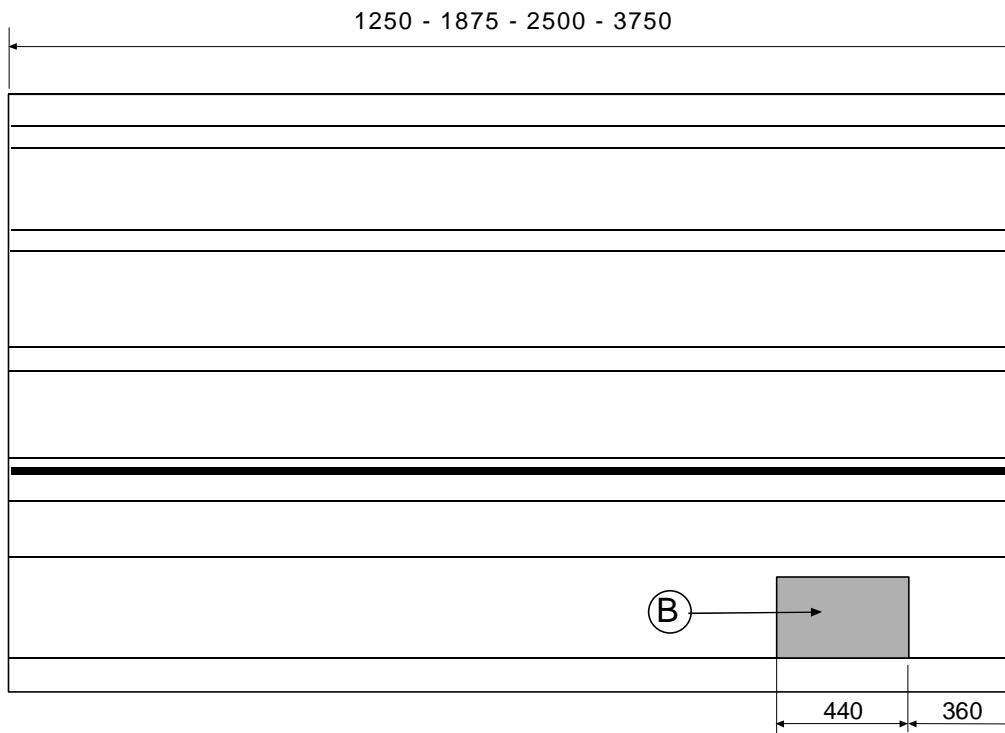
A probe termed "T1" measures air temperature and acts in the thermostatic cycle, a "T2" probe measures evaporator temperature for the regulation of defrost cycles and a "T3" probe gauges and reads the temperature in a certain position.

The defrost-start signal is transmitted simultaneously to the controllers belonging to MASTER and SLAVE sections from a unified timer board or similar device which as a rule is located on the MASTER section.

For further details, cfr. functional diagrams, chapter 090.40.

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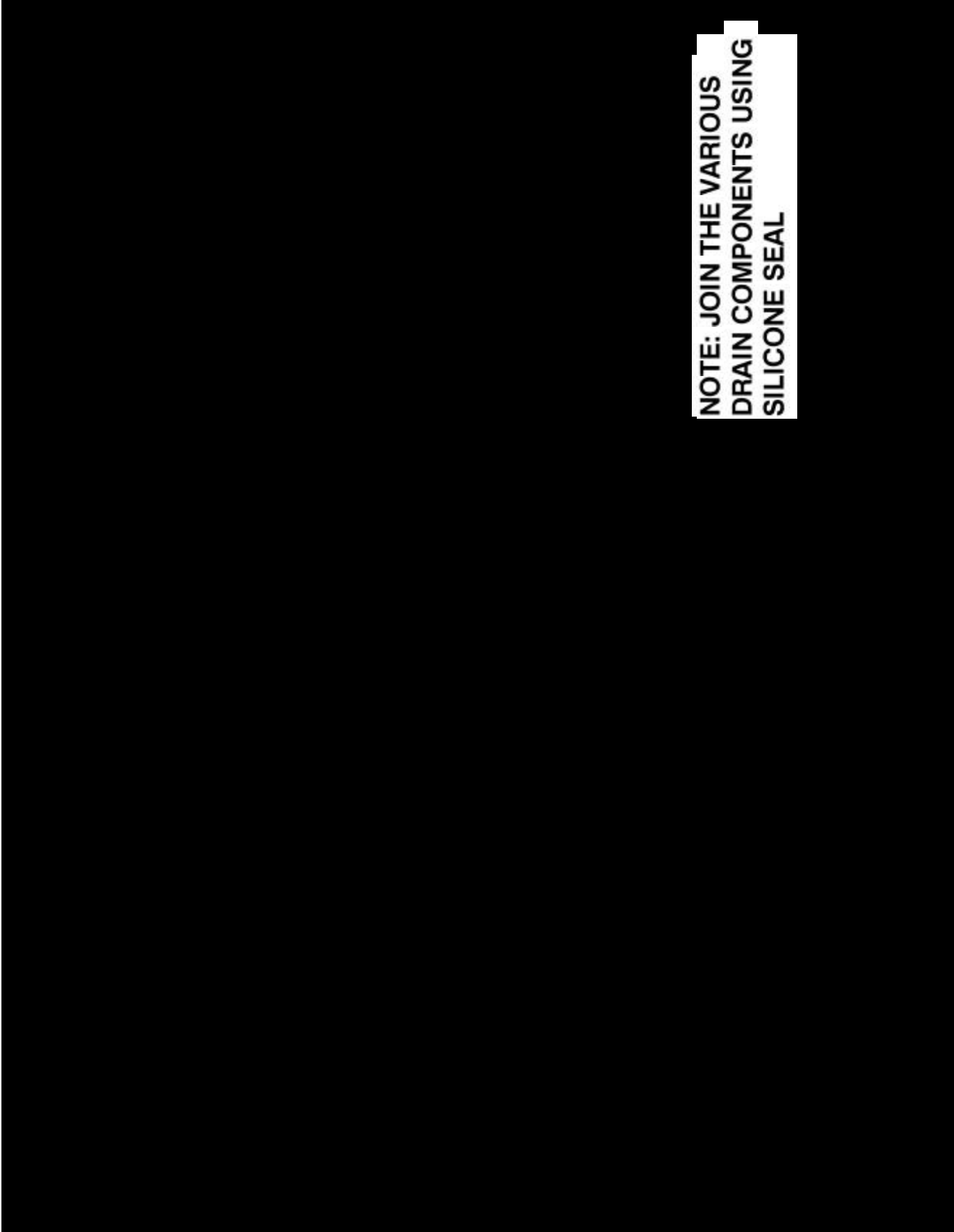
CONNECTIONS AND DRAINS LINEAR CASES OF VERSION FOREST 3000



- A** = WATER DRAIN
 - B** = ELECTRIC CONNECTION
 - C** = FREON CONNECTION
- lead-in pipes $\varnothing=8$ mm
 lead-out pipes $\varnothing=20$ mm

COSTAN TECHNICAL DOCUMENTATION PRODUCT: LION CUB LARGE DOC. no. SM00327V CHAP. no. 040 CHAPTER: CONNECTIONS AND DRAINS	CHAPTER REVISION STATUS						SIGNED IN CONFORMITY WITH APPROVED ORIGINAL PAGE: 2/9 DATE of 1 st ISSUE: 03.06.00 ISSUED BY: MARKETING
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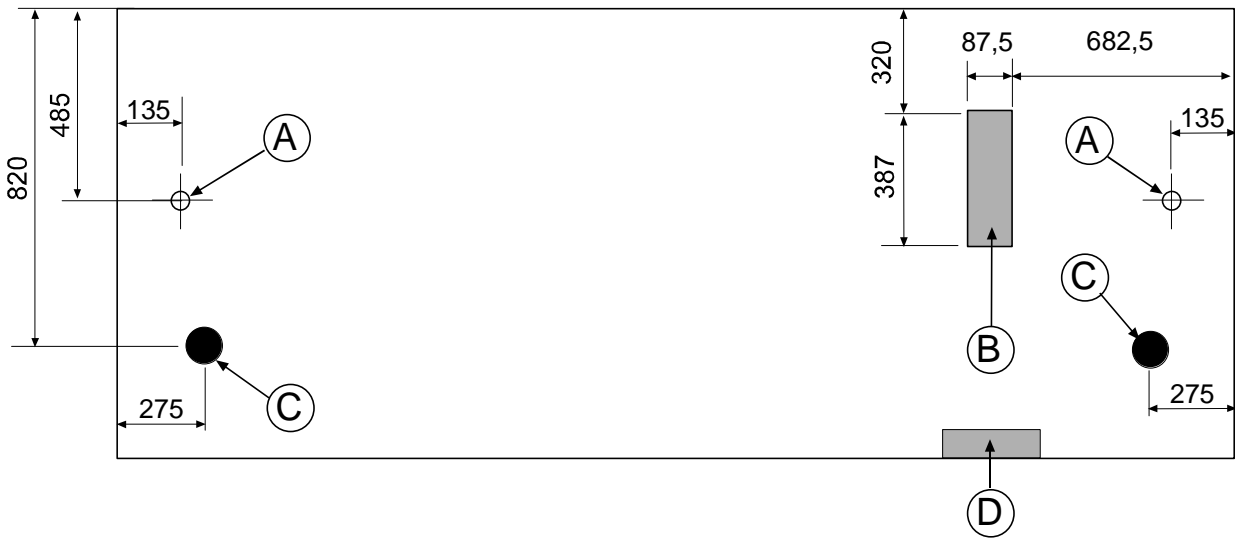
DRAIN CONNECTION DIAGRAM
 LINEAR CASES OF VERSIONS FOREST 3000 and GMS WITH FAIRED BASE



**NOTE: JOIN THE VARIOUS
 DRAIN COMPONENTS USING
 SILICONE SEAL**

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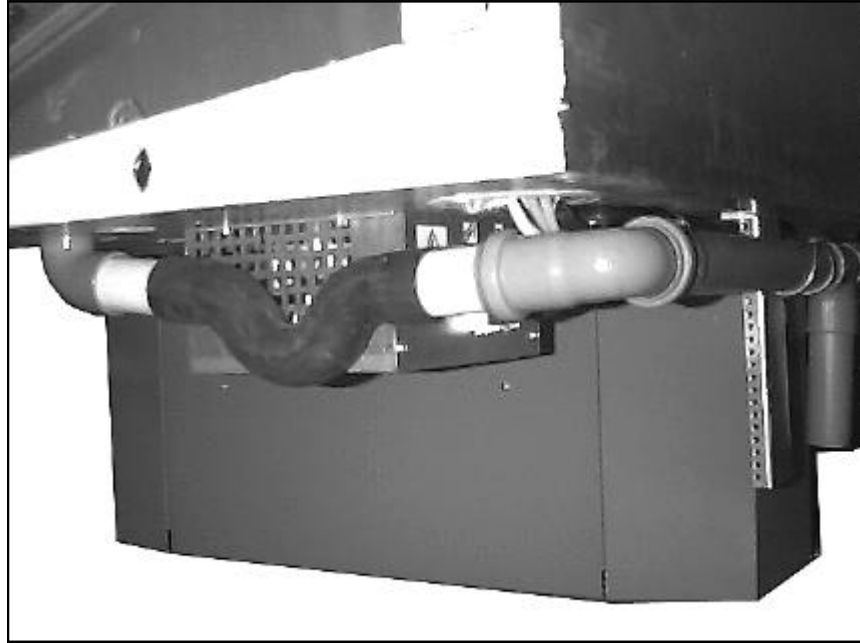
DRAIN CONNECTION DIAGRAM LINEAR CASES OF VERSION GMS WITH FAIRED BASE AND FEET



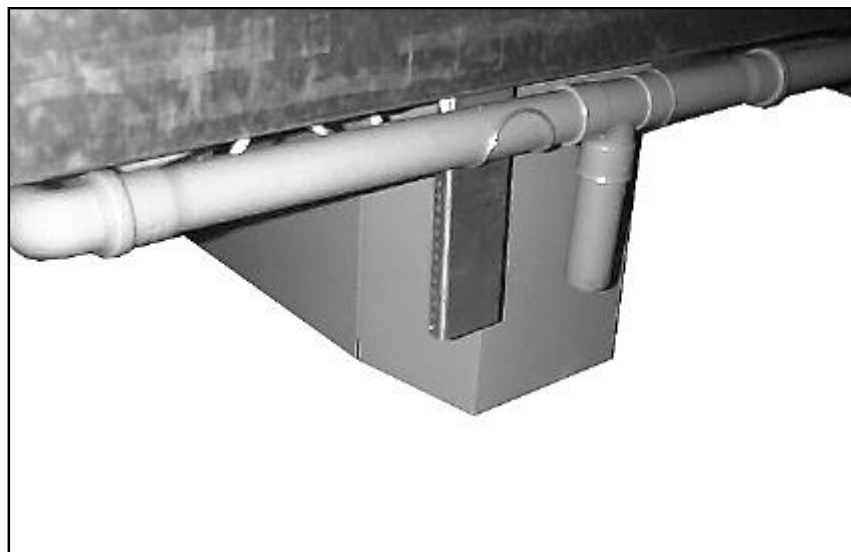
- A** WATER DRAIN
- B** ELECTRIC CONNECTION
- C** FREON CONNECTION
lead-in pipe \varnothing 8 mm
lead-out pipe \varnothing 20 mm
- D** ADDITIONAL ELECTRIC CONNECTION FOR MASTER/SLAVE VERSIONS
(in this event, remove the front band on the right).

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**DRAIN CONNECTION DIAGRAM
LINEAR CASES OF VERSION GMS WITH FAIRED FEET**

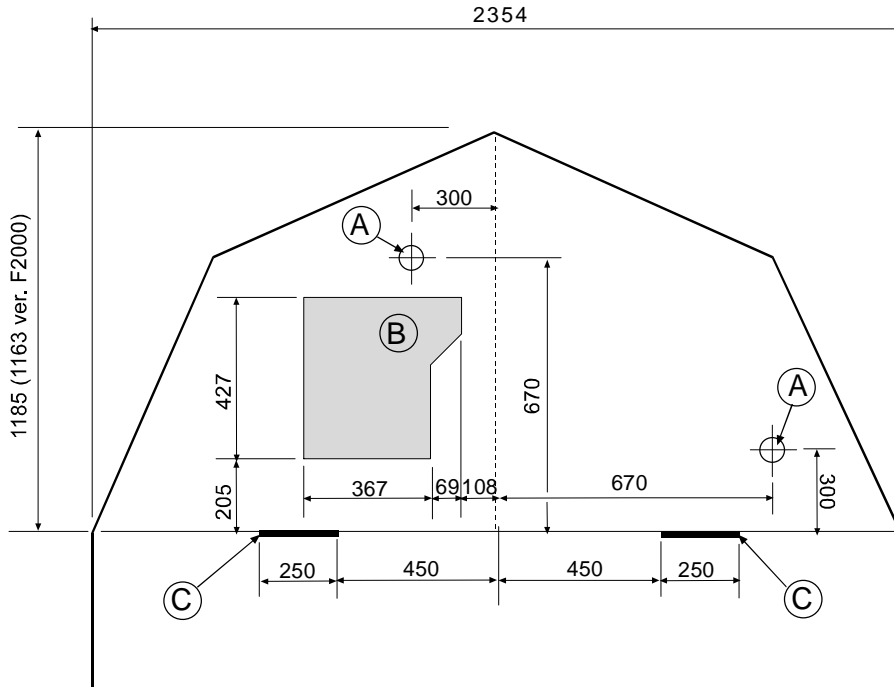


NOTE: JOIN THE VARIOUS DRAIN COMPONENTS USING SILICONE SEAL.



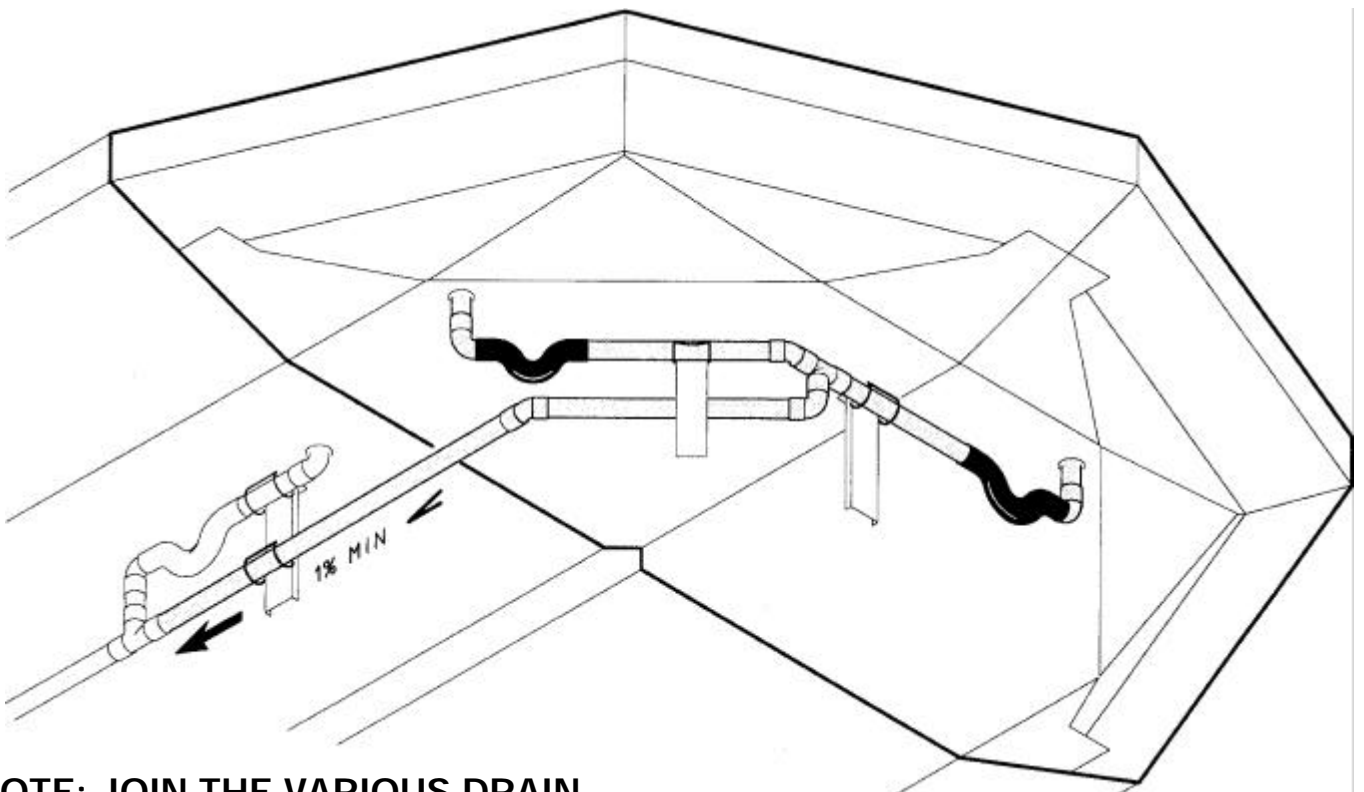
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DRAINS AND CONNECTIONS HEAD CASES OF VERSION FOREST 3000



- A** = WATER DRAIN
- B** = ELECTRIC CONNECTION
- C** = FREON CONNECTION
 lead-in pipe \varnothing 8 mm
 lead-out pipe \varnothing 20 mm

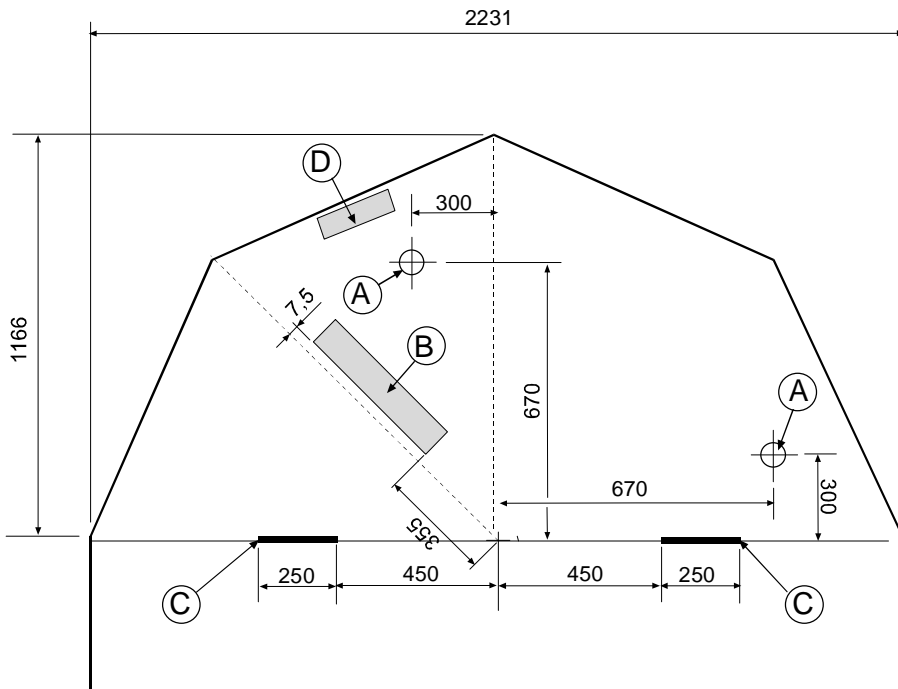
DRAIN CONNECTION DIAGRAM HEAD CASES OF VERSIONS FOREST 3000 and GMS WITH FAIRED BASE



NOTE: JOIN THE VARIOUS DRAIN COMPONENTS USING SILICONE SEAL

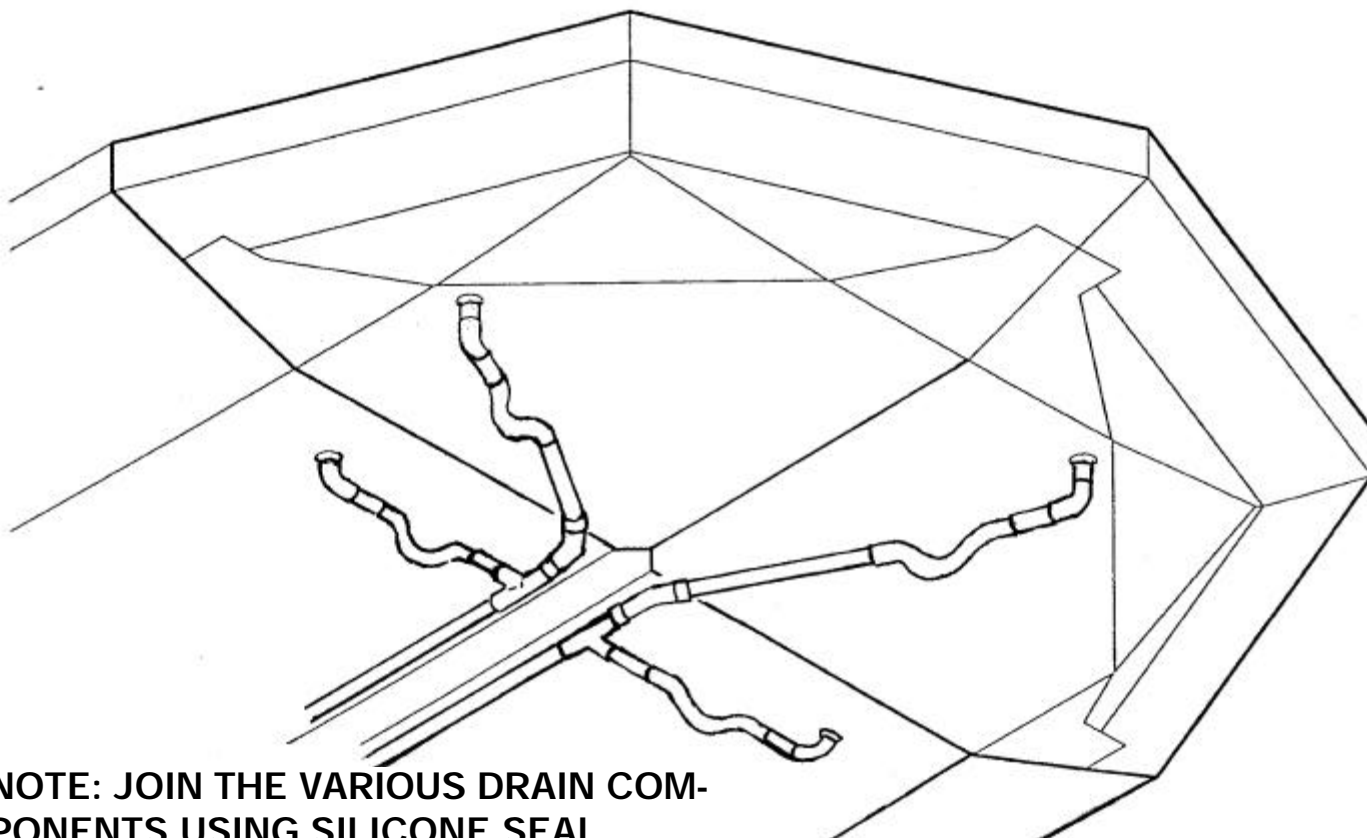
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CONNECTIONS AND DRAINS
VERSION GMS HEAD CASES (with base and feet)



- A** = WATER DRAIN
- B** = ELECTRIC CONNECTION
- C** = FREON CONNECTION
 lead-in pipe \varnothing 8 mm
 lead-out pipe \varnothing 20 mm
- D** = ADDITIONAL ELECTRIC CONNECTION FOR MASTER/SLAVE VERSIONS (in this event, remove the corresponding front band).

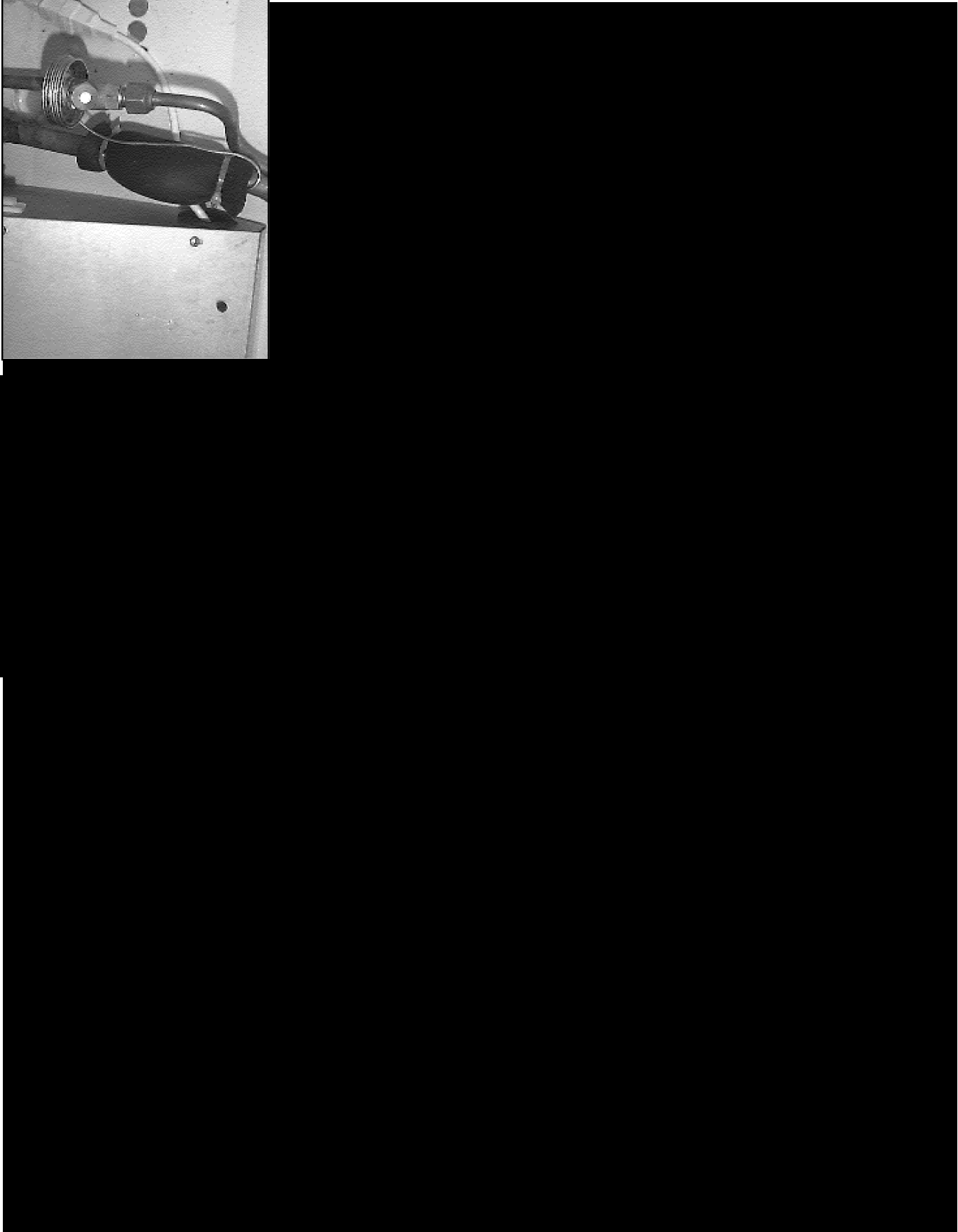
DRAIN CONNECTION DIAGRAM
HEAD CASES OF VERSION GMS WITH FAIRED FEET



NOTE: JOIN THE VARIOUS DRAIN COMPONENTS USING SILICONE SEAL.

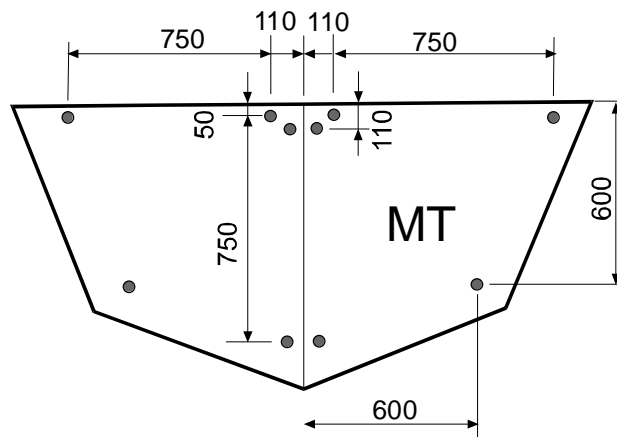
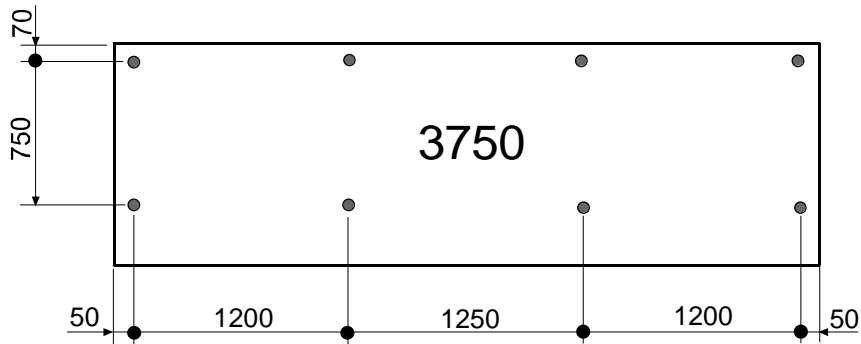
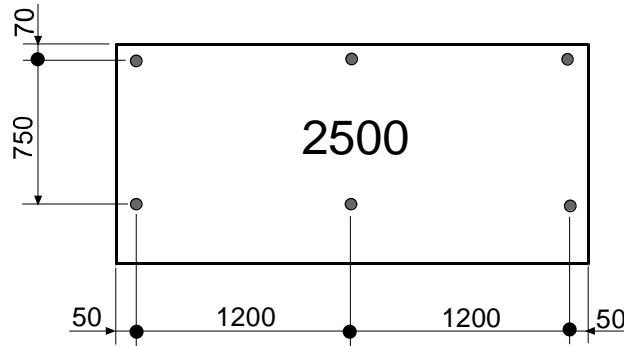
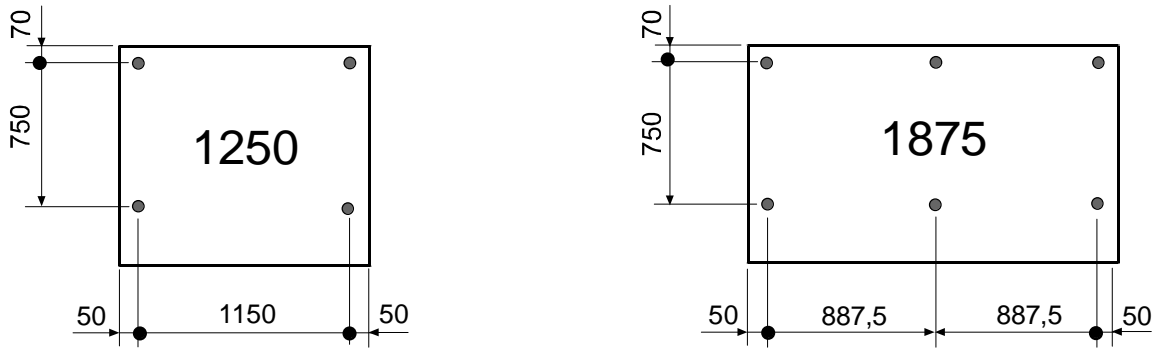
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DIAGRAM FOR CONNECTION OF REFRIGERANT PIPES
CASES F 3000 and GMS



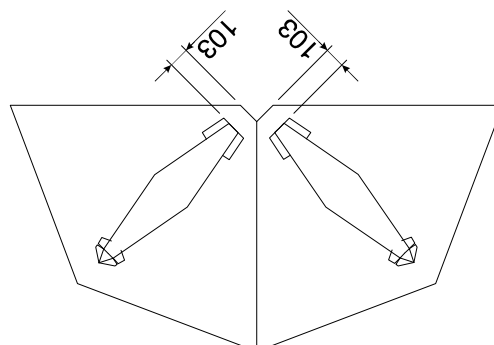
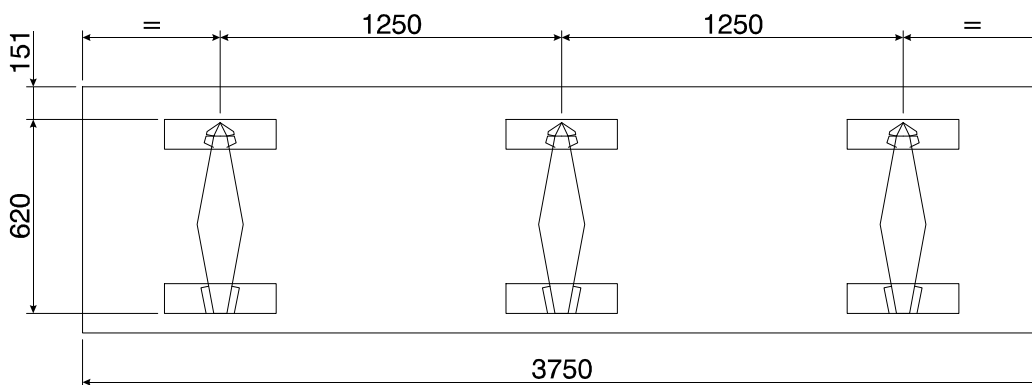
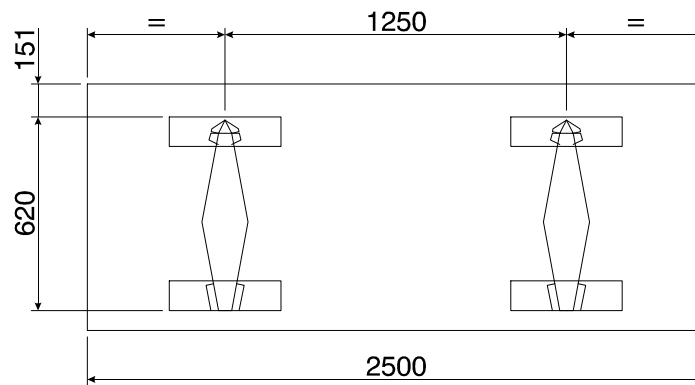
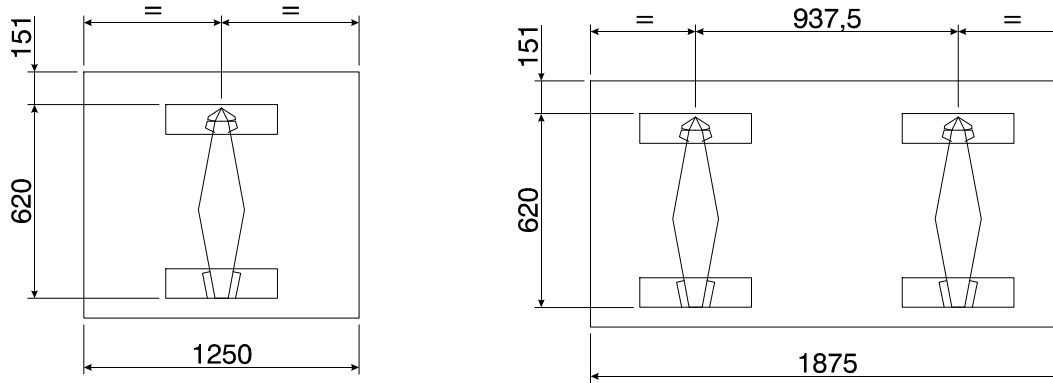
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POSITION OF FEET
CASES OF VERSIONS FOREST 3000 and GMS WITH FAIRED BASE



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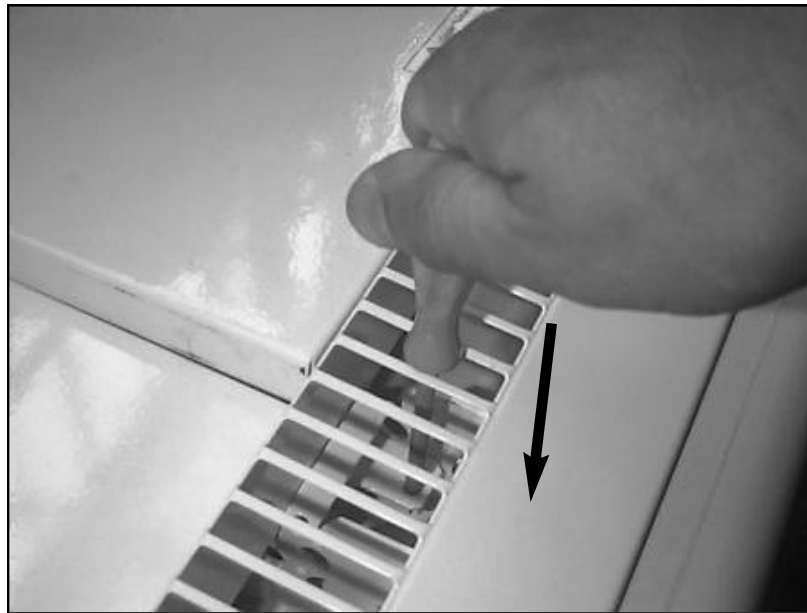
POSITION OF FEET CASES OF VERSION GMS WITH FAIRED FEET



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CHAPTER: REMOVING BOTTOM PLATES SHELF LIGHTS	C			F				

REMOVE BOTTOM PLATES

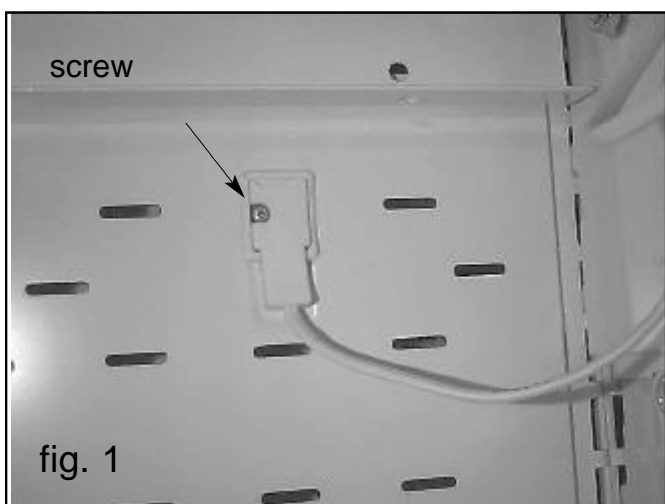
Inside the air-inlet grille, under the side bottom plates, there is a device that lifts bottom plates when pressed as shown in the picture.



SHELF LIGHTS

If the display case includes shelf lights or when lamps are installed at a later stage, make sure that the plugs are fastened to the appropriate sockets located inside the cabinet, by the appropriate screws (fig. 1).

When removing shelf lights, it is indispensable to place and screw the suitable watertight covers (fig. 2).



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SHIPPING, HANDLING AND STORING

WARNING

- The cabinet is supplied on a pallet. It must be unloaded and handled with the pallet on;
- Should belts be employed to unload the case (which are not recommended), make sure that they do not damage any outer parts;
- Once the cabinet has been laid near its service site, remove the pallet following the instructions;
- Cabinets without pallet and not yet provided with front parts must be handled with care to prevent overturning.

The case is supplied in a package containing a pallet, so that it can be moved by the use of fork-lift trucks. The different handling possibilities are indicated by the standardised symbols stuck on the packing. To move and/or ship the machine, follow carefully the ensuing recommendations.

Move it on its own pallet or on a similar platform; use a fork-lift truck, either manual or electric, provided that it is adequate for handling such appliances and it has the requisite lifting capacity.

WEIGHT (lateral ends included)

height 1300

length 1250 = 170 kg (190 w/packing)
length 1875 = 240 kg (265 w/packing)
length 2500 = 315 kg (340 w/packing)
length 3750 = 400 kg (420 w/packing)
head case = 280 kg (300 w/packing)

height 1500

length 1250 = 190 kg (210 w/packing)
length 1875 = 270 kg (290 w/packing)
length 2500 = 350 kg (370 w/packing)
length 3750 = 440 kg (460 w/packing)
head case = 310 kg (330 w/packing)

When lifting the case by the use of a fork lift, keep a minimal fork spacing of 70 cm and make sure that the forks are centred on the appliance mid-line and are deeply introduced into the pallet.



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Check that the appliance can surmount any existing obstacle, such as staircases, doors, etc. Never drag it by the sides or by any other part. If the case must be shipped, use only its original packing, which ensures sufficient stability during transportation.

In view of the weight and operations involved in the start up, any displacement necessary at this stage and any further moving or transportation should be carried out by the licensed after sales service.

STORING

As for storing the appliance, pay attention to the standardised symbols appearing on the packing.

Storing temperature must be between -25°C and +55°C, air humidity between 30% and 95%. Keep the case safe from direct sunlight and from the elements.

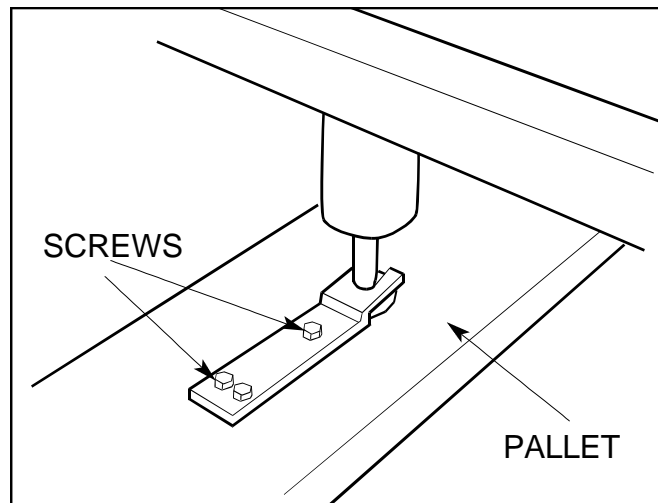
If the machine should be out of service for a long period before use, leave it in its original packing, which guarantees maximum protection. Make sure that storing conditions correspond with the above requirements. If the case should be laid off for a long time after use, be certain that it is materially disconnected from the electric power supply, clean it thoroughly with lukewarm water and mild soap, then wipe it carefully and cover it with its original plastic bag.

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UNPACKING THE CASE AND ADJUSTING FEET

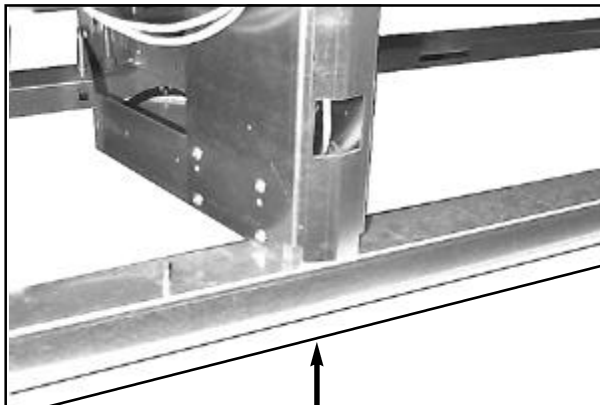
UNPACKING FAIRED-BASE CASES

Unpack the appliance with the utmost care to avoid damage. Mind wood splinters and nails especially. Loosen the screws that fasten the pallet to the feet of the case and remove it, as shown in the figure below.

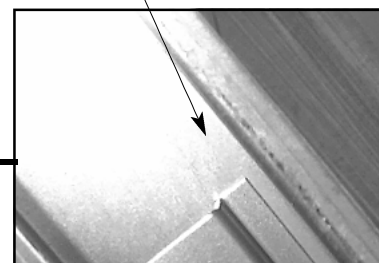


UNPACKING FAIRED-FEET CASES

Loosen the screws pallets attaching the pallets to the feet of the case and remove the pallet as shown in the figures below.



PALLET ATTACHING SCREWS

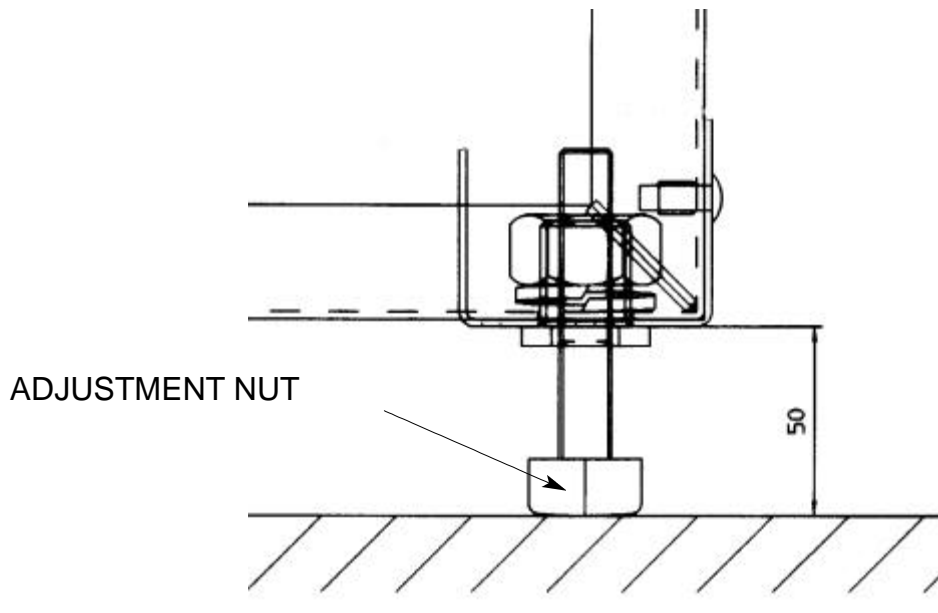


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FEET ADJUSTMENT

After removing the wooden bases, adjust the feet in height by the ad-hoc nut, as shown in the figure.

Basement height must be 50 mm at any rate.



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ELECTRICAL CONNECTION

IMPORTANT: A multipolar cut-off switch with contacts spacing at least 3mm and adequate circuit-breaking power must be installed ahead of the display case.

The showcase must be installed by professionally qualified personnel, in accordance with the instructions provided by the manufacturer and the local regulations. Incorrect installation may cause harm to persons, animals and property. The manufacturer disclaims whatever liability for such damage.

Make sure that power supply voltage corresponds to the value indicated on the rating plate of the cabinet. Consider also that the maximum allowable voltage variation is +/-6%.

IMPORTANT: Earthing the appliance is compulsory. The manufacturer accepts no responsibility for any damage resulting from nonobservance of this safety principle.

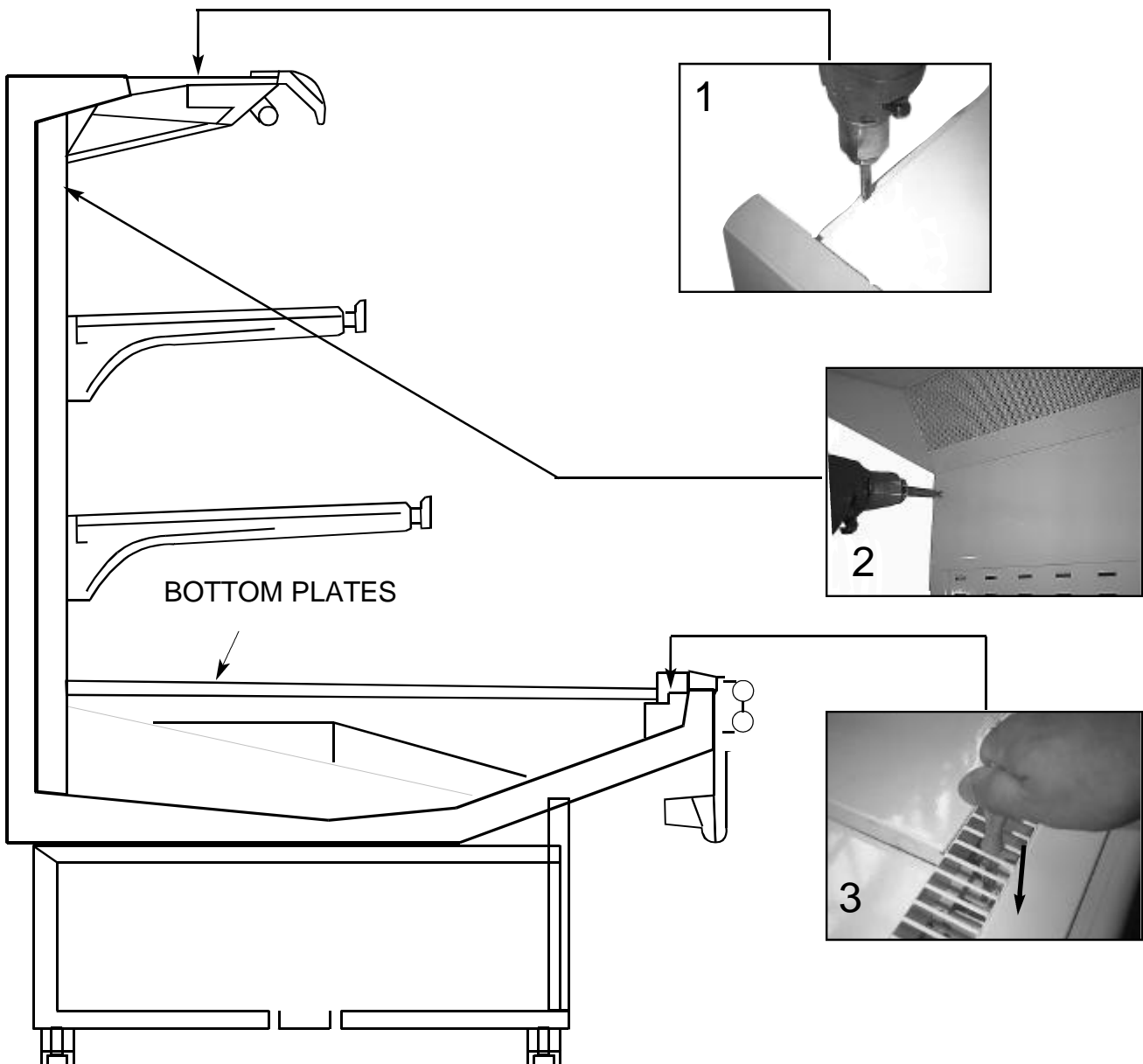
If the display case must be installed far from power sources, connect it in compliance with the standards in force.

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MULTIPLEXING AND COMPLETING LINEAR DISPLAY CASES

linear cases to linear cases and linear cases to head cases

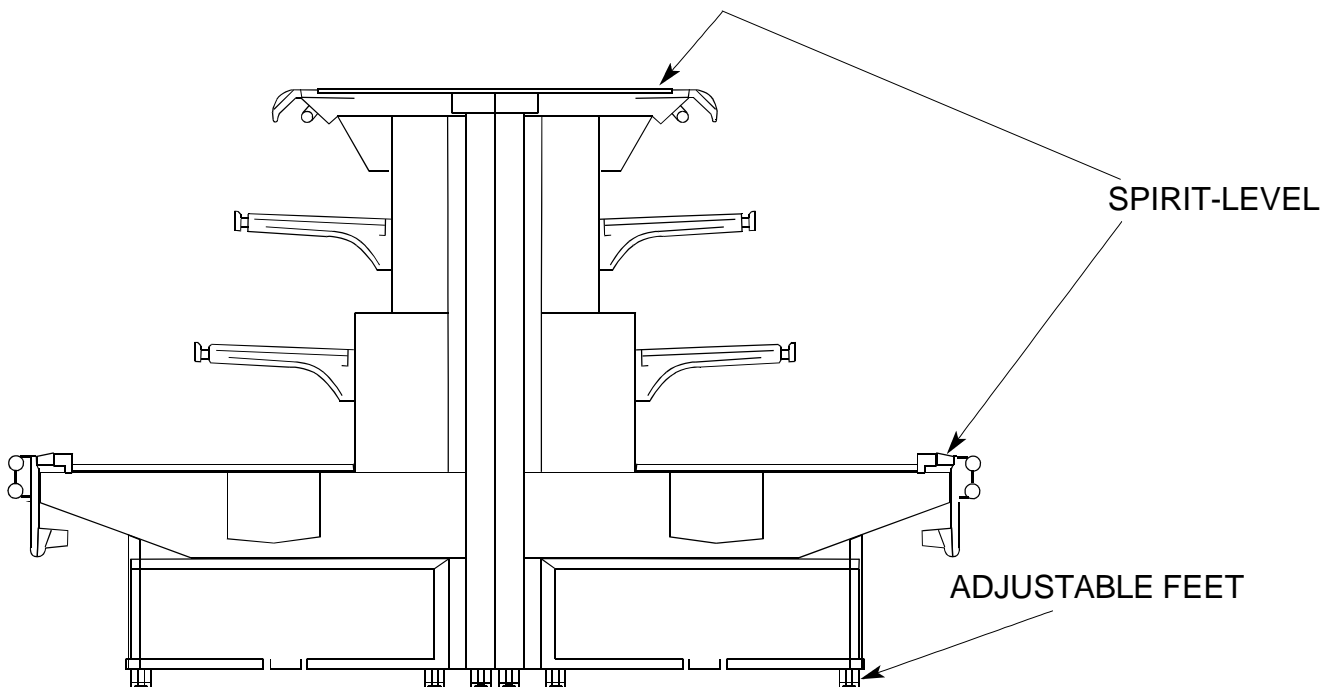
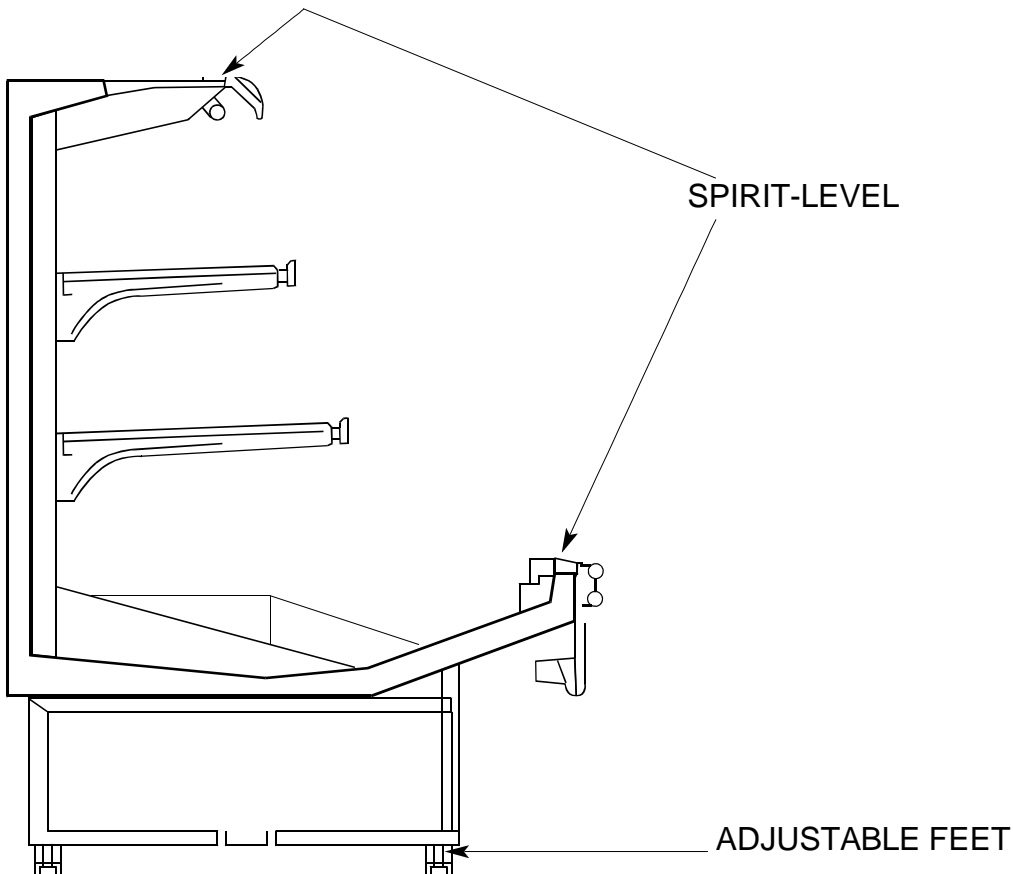
1. Before multiplexing the display cases, remove the roof cover and the slotted top fairing panel from the side to be multiplexed using a P2 cross-bit screwdriver, as shown in figures 1 and 2. Then withdraw bottom plates (3). These steps allow access to fastening points.



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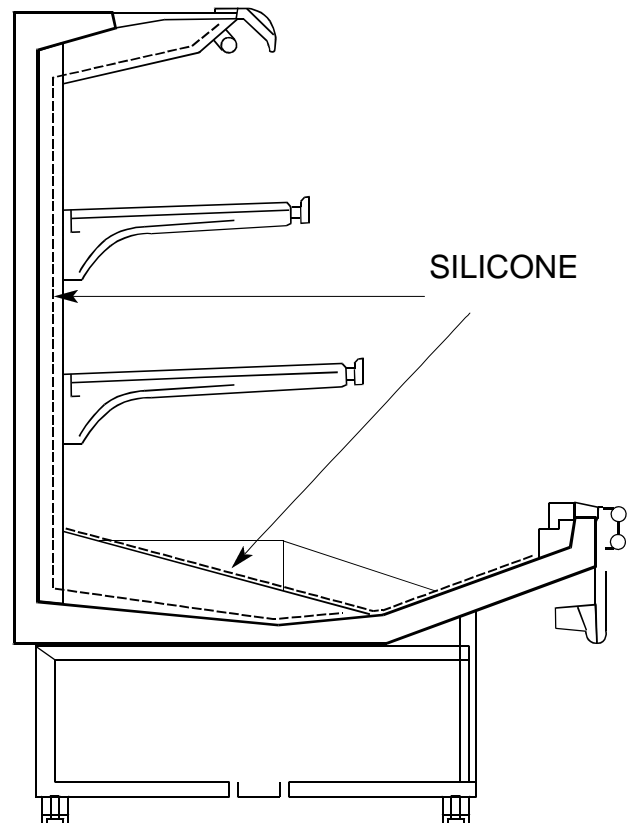
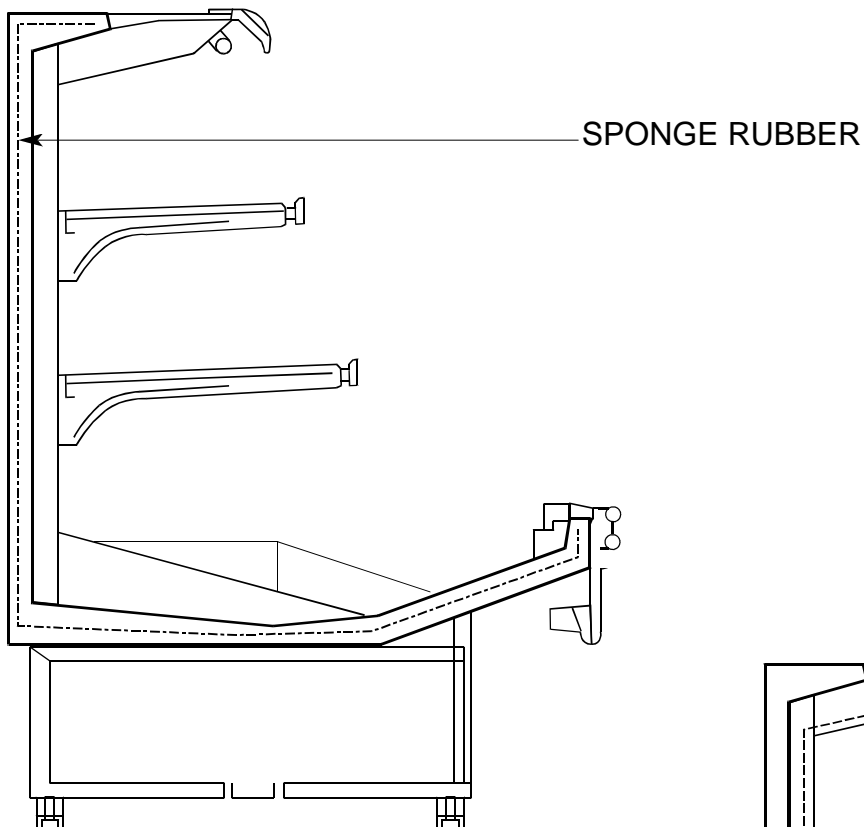
2. Bring the display cases to their installation site. By the use of a spirit level check that the cases are level both lengthways and crossways. Correct alignment by applying a round-section tool ($\varnothing = 8 \text{ mm}$) to the feet. Feet height must be 50 mm as indicated in chapter 080.10.

When multiplexing linear cases to a head case, position the latter, then check its levelness and lastly bring the appliances back-to-back (again, check their levelness).



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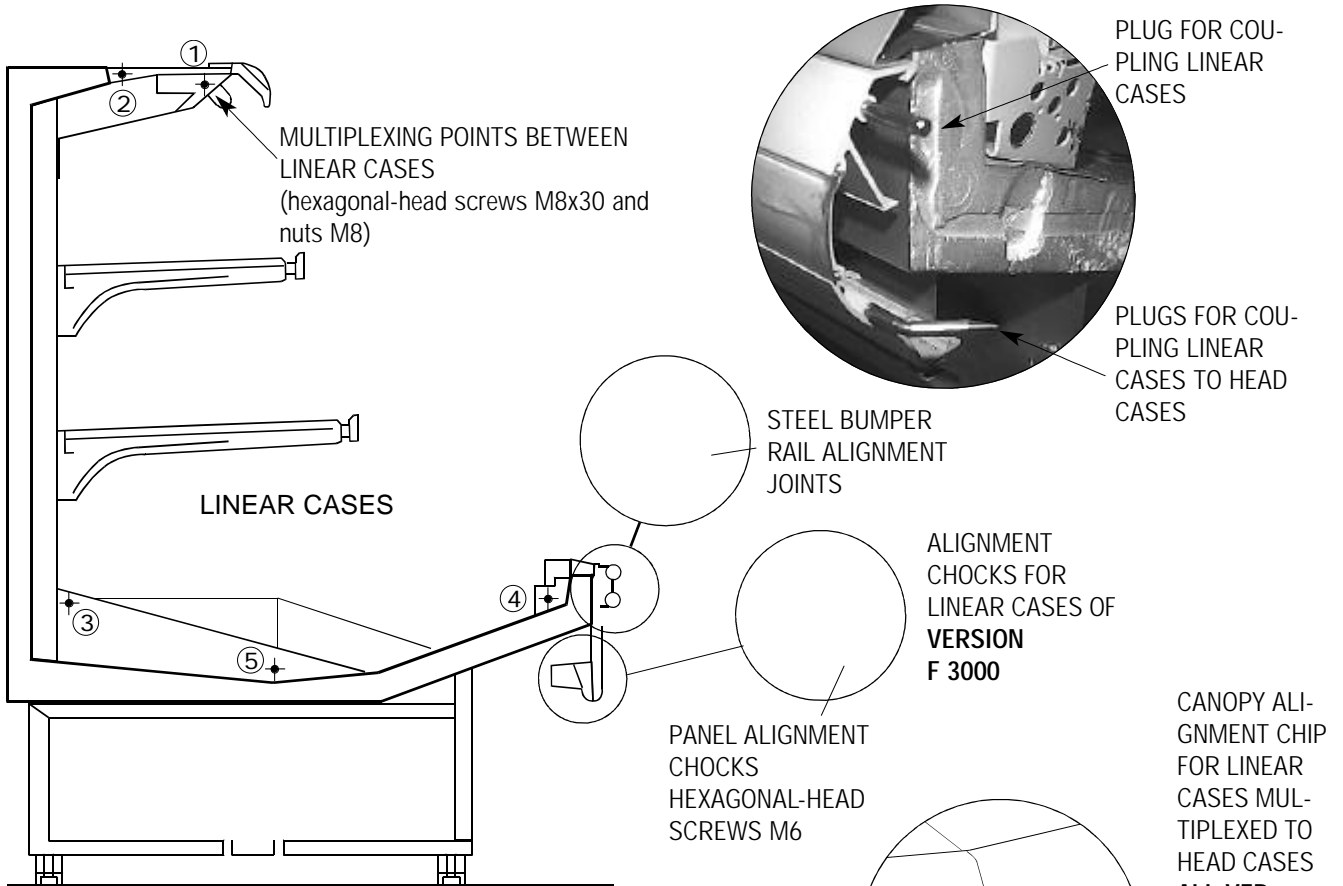
3. Apply sponge rubber and silicone (a smooth 5 mm thick seam) on the side of one of the cases to be multiplexed as shown in the pictures. When multiplexing a head case, the silicone seam and sponge rubber must be applied onto the linear cases.



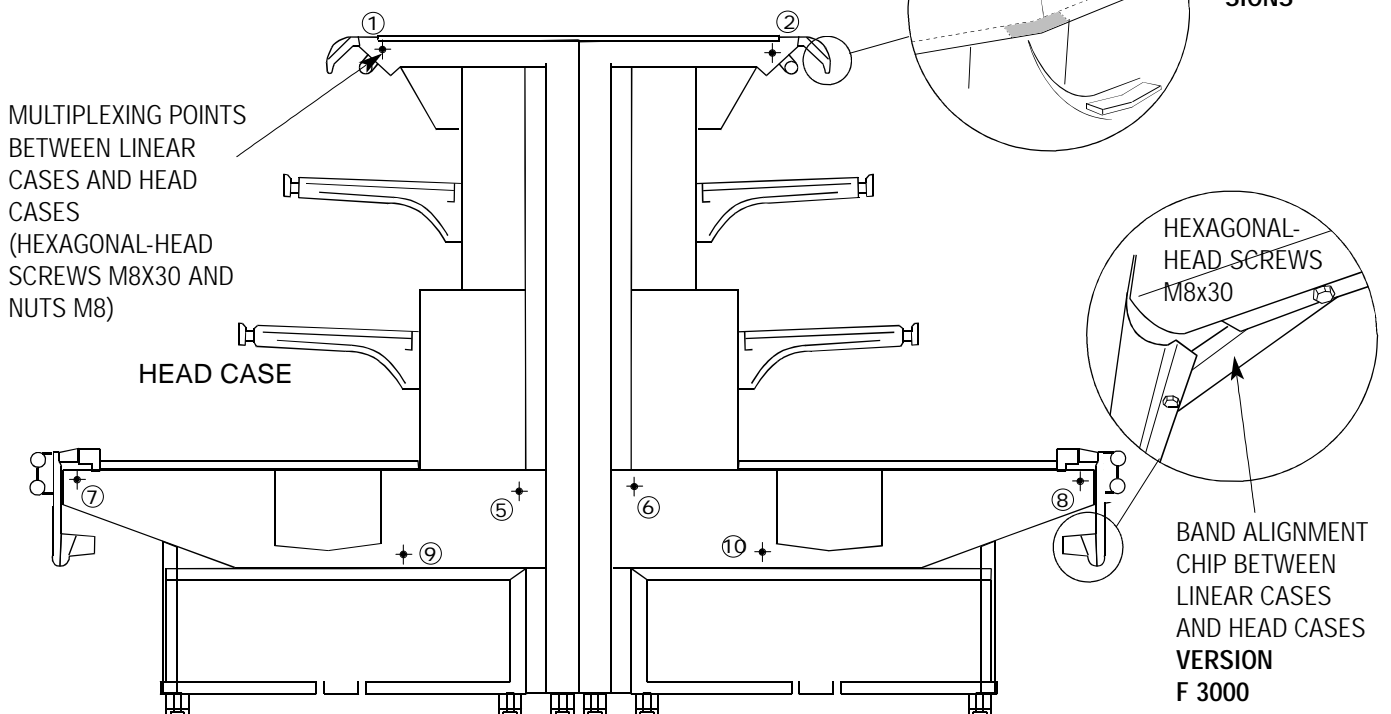
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4. Multiplex F.3000 or GMS version display cases as shown in the drawings.
 Check their levelness using a spirit-level. If necessary, correct using the adjustable feet.

COUPLING FRONT BANDS
VERSION GMS (use two bevel plugs)



CANOPY ALIGNMENT CHIP FOR LINEAR CASES MULTIPLEXED TO HEAD CASES **ALL VERSIONS**



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5. ALIGNMENT OF BUMPER RAILS ON HEAD CASES AND LINEAR CASES

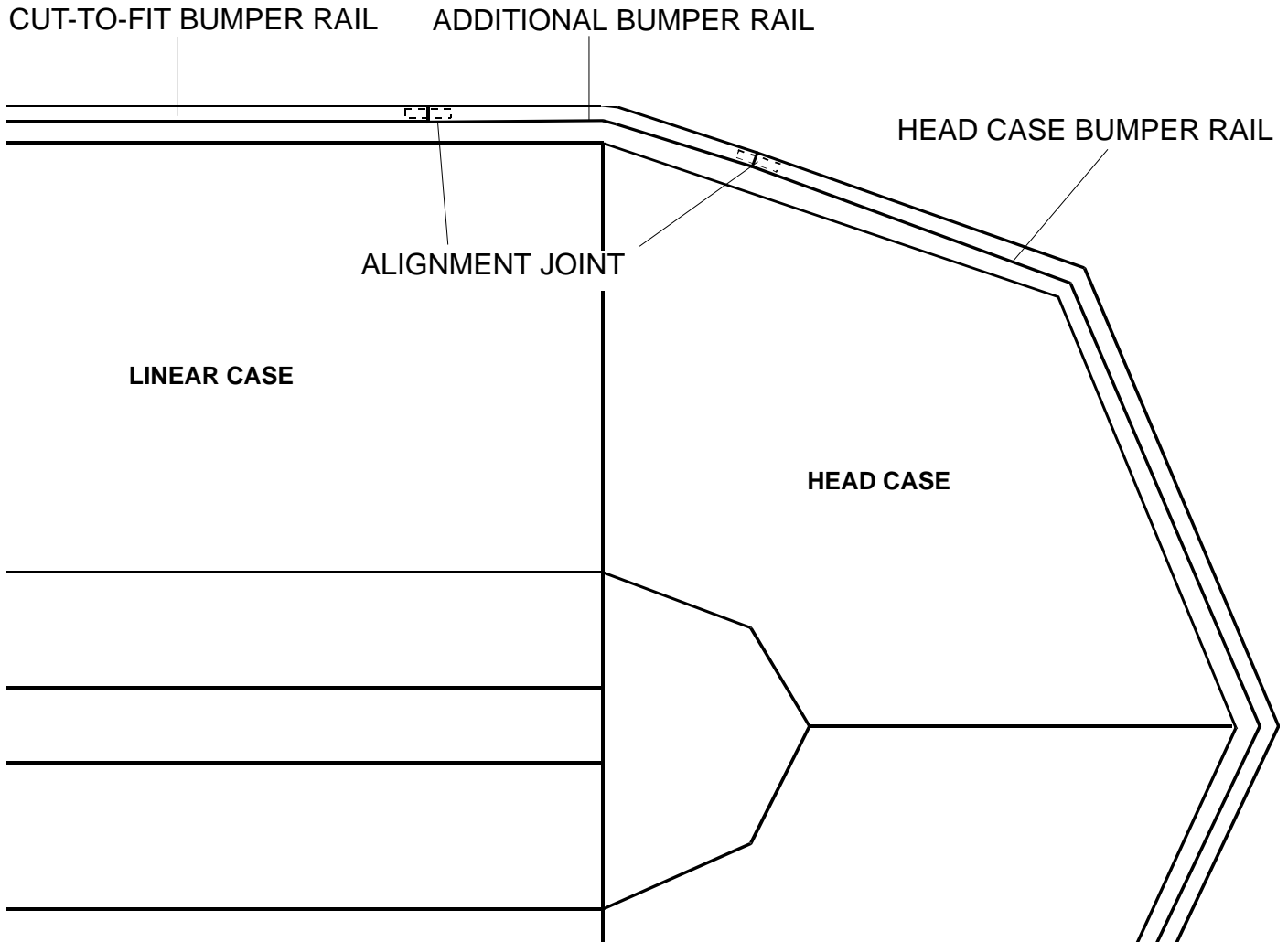
Couple the showcases. The steel bumper rail belonging to the head case is factory cut to the measure.

Unscrew and remove the bumper rail belonging to the linear case.

Fit the additional bumper rail cuts onto the head case using the ad-hoc plastic joints.

Measure the length of linear case bumper rail to be cut and clip it.

Install linear case bumper rails and align to the additional cuts by the use of the plastic joints.



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6. CASES WITH F. 2000 BUMPER RAIL - For perfect alignment of the F2000 bumper rails, additional bumper-rail cuts have been created.

LINEAR CASES - Mount the additional bumper rail flush with one of the lateral ends closing the run. Then fix all the remaining bumper rails on their supports but the last; measure the remaining length, cut the last bumper rail accordingly and fix it on its support (fig. 1).

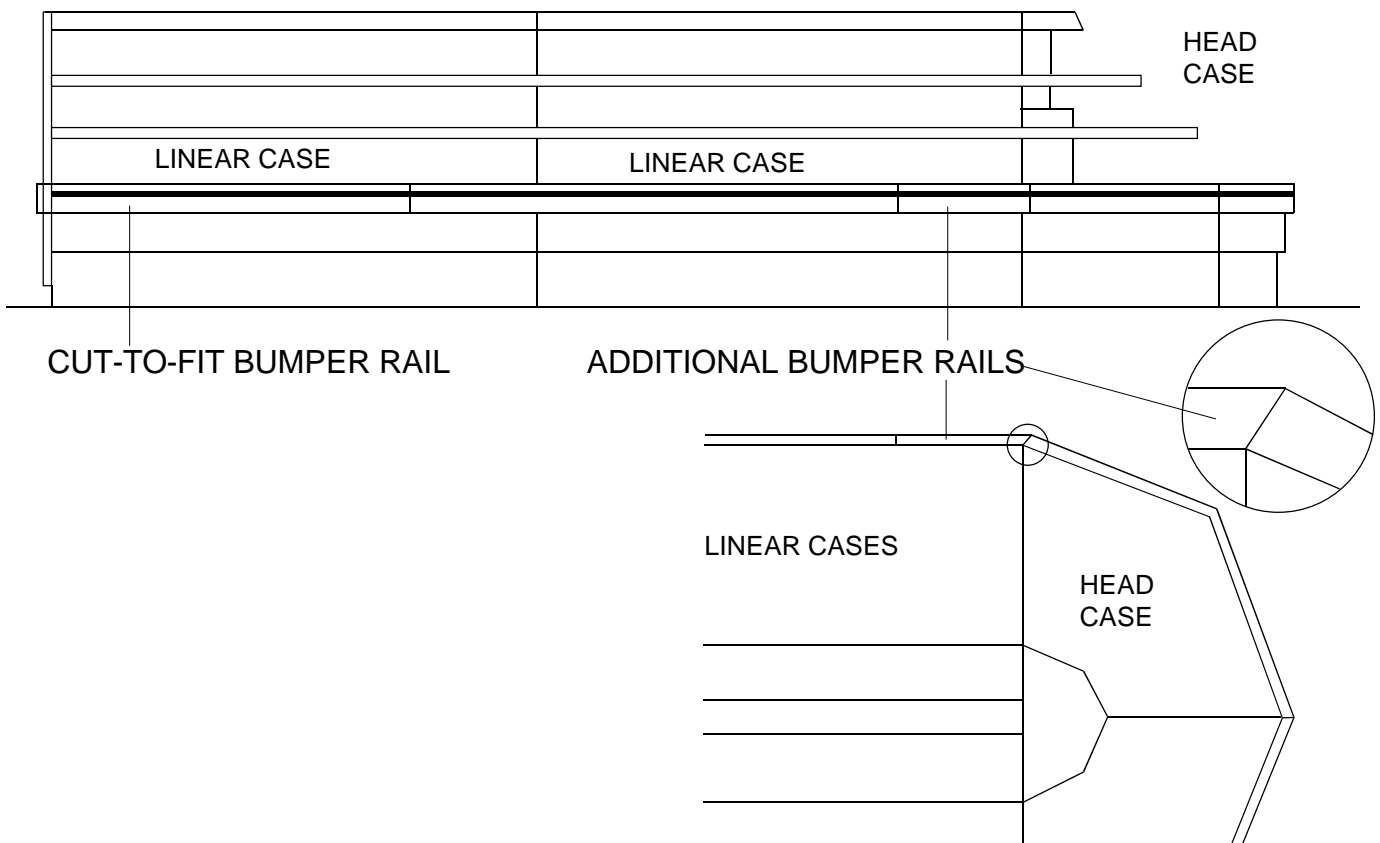
HEAD CASES - Two 45° bumper rail cuts are supplied for coupling linear cases to head cases. They must be mounted flush with the 45° bumper rail supplied with the head case or cases (fig. 2). Then place the remaining bumper rails, cut to fit and mount.

FIG. 1



OPTIONS FOR F 2000 VERSIONS

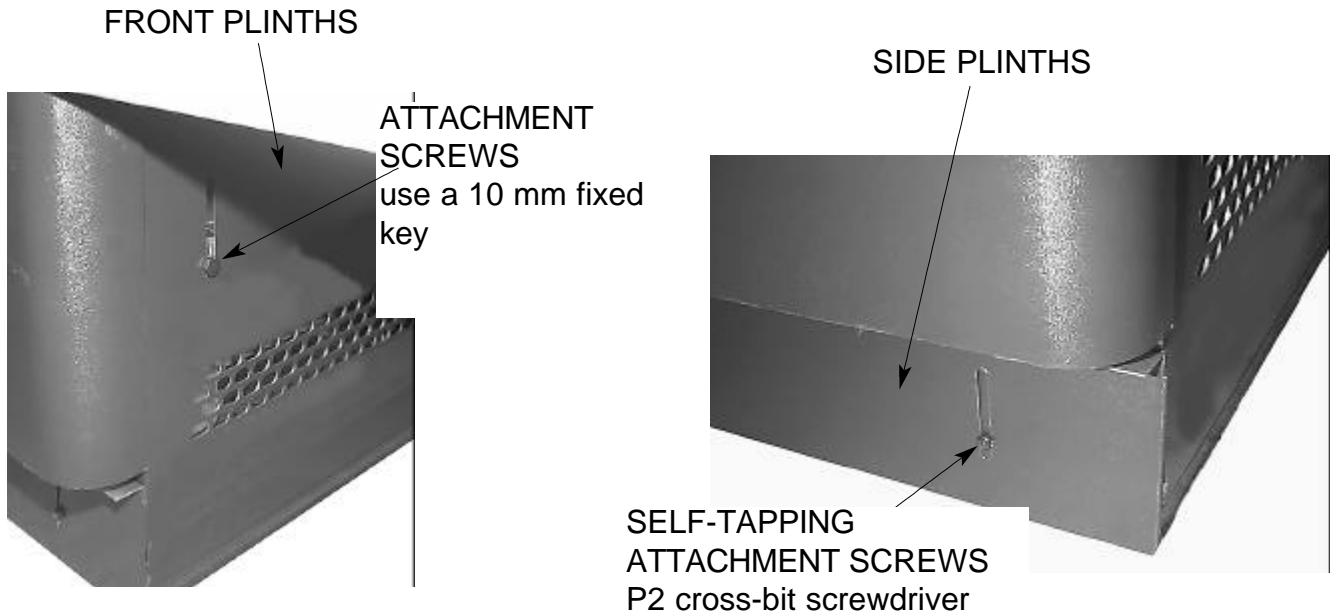
FIG. 2



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7. Complement the display cases: screw the fairing onto the base or feet as indicated in the figures below. Adjust base plinth height using the appropriate slots.

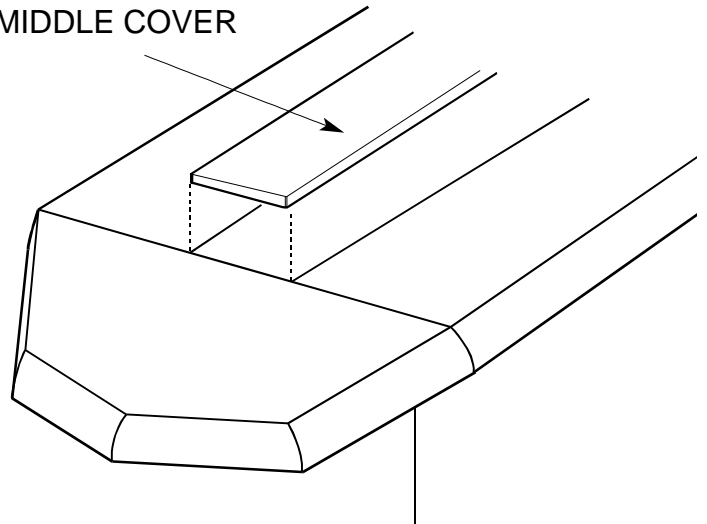
F.3000 AND GMS VERSIONS WITH FAIRED BASE



GMS VERSIONS WITH FAIRED FEET



MIDDLE COVER



8. When multiplexed to a head case, back-to-back cases need that middle covers be attached with silicone sealant.

COSTAN TECHNICAL DOCUMENTATION PRODUCT: LION CUB LARGE DOC. no. SM00327V CHAP. no. 080.10 CHAPTER: CONTROLS AND ADJUSTMENTS	CHAPTER REVISION STATUS						SIGNED IN CONFORMITY WITH APPROVED ORIGINAL PAGE: 1/1 DATE of 1 st ISSUE: 03.06.00 ISSUED BY: MARKETING
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ELECTRICAL AND REFRIGERATING CONTROLS AND ADJUSTMENTS

LION CUB LARGE

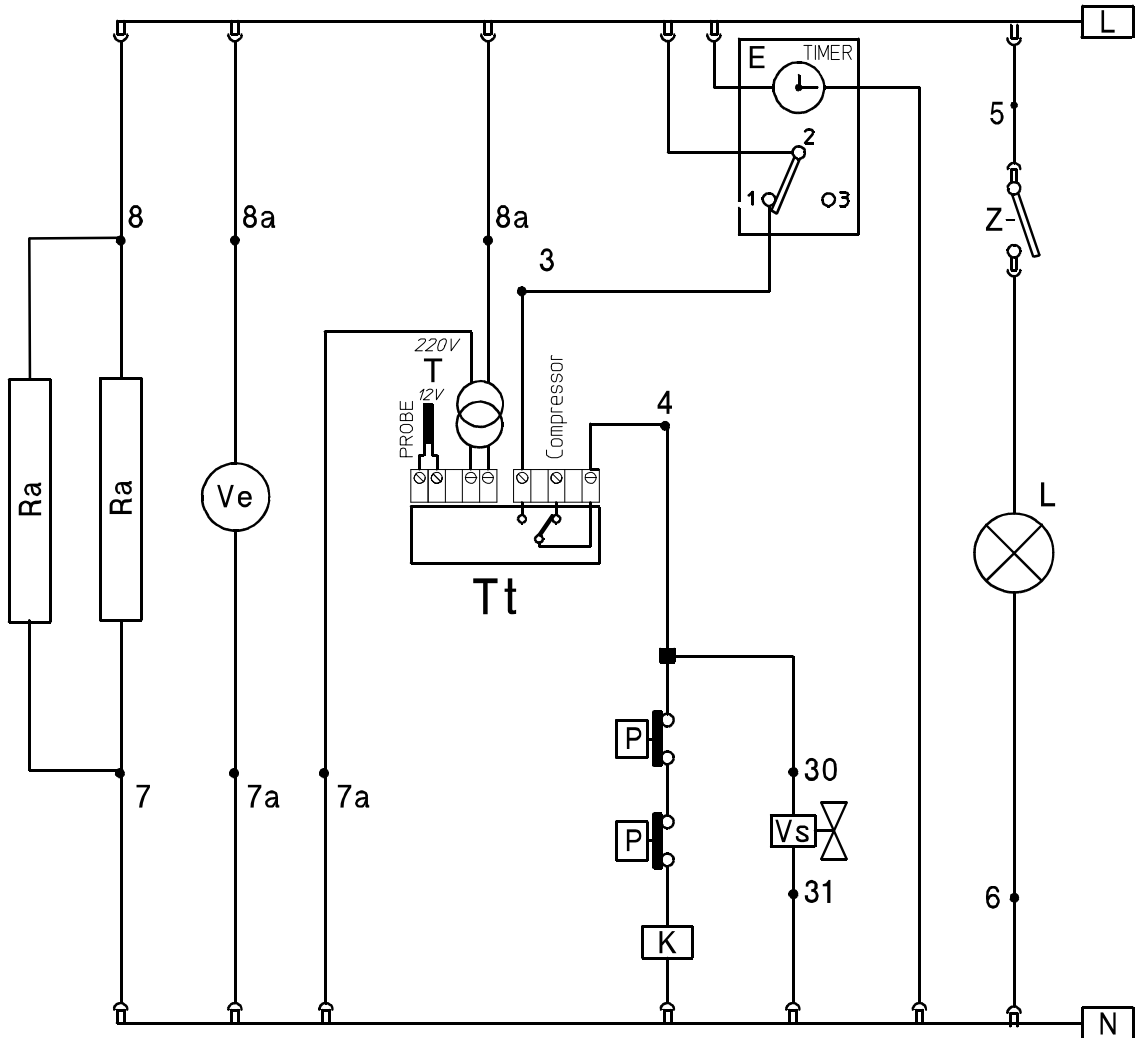
NOTE: Thermostats are factory-set.

Ambient conditions: 25°C - 60% R.H.

ELECTRICAL AND REFRIGERATION CONTROLS AND SETTINGS			Evaporating temperature C°	BUILT-IN CONTROLS		EXTERNAL CONTROLS	
				Setting for running thermostat C° Thermostat differential	Setting for defrost-end thermostat C°	Setting for defrost-end timer in min.	Number of defrosts per day
LION CUB LARGE h=1300 cl. H off-cycle defrost	linear cases	Class 3	- 7	Tset= 0 Diff= +3	+10	45	6
	head cases	Class 3	- 7	Tset= 0 Diff= +3	+15	45	6
LION CUB LARGE h=1300 cl. M electric defrost	linear cases	Class 3	- 9	Tset= -4 Diff= +3	+10	20	6
	head cases	Class 3	- 9	Tset= -4 Diff= +3	+15	20	6
LION CUB LARGE h=1500 cl. H off-cycle defrost	linear cases	Class 3	- 8	Tset= 0 Diff= +3	+10	45	6
	head cases	Class 3	-8	Tset= 0 Diff= +3	+15	45	6
LION CUB LARGE h=1500 cl. M electric defrost	linear cases	Class 3	-10	Tset= -4 Diff= +3	+10	20	6
	head cases	Class 3	-10	Tset= -4 Diff= +3	+15	20	6

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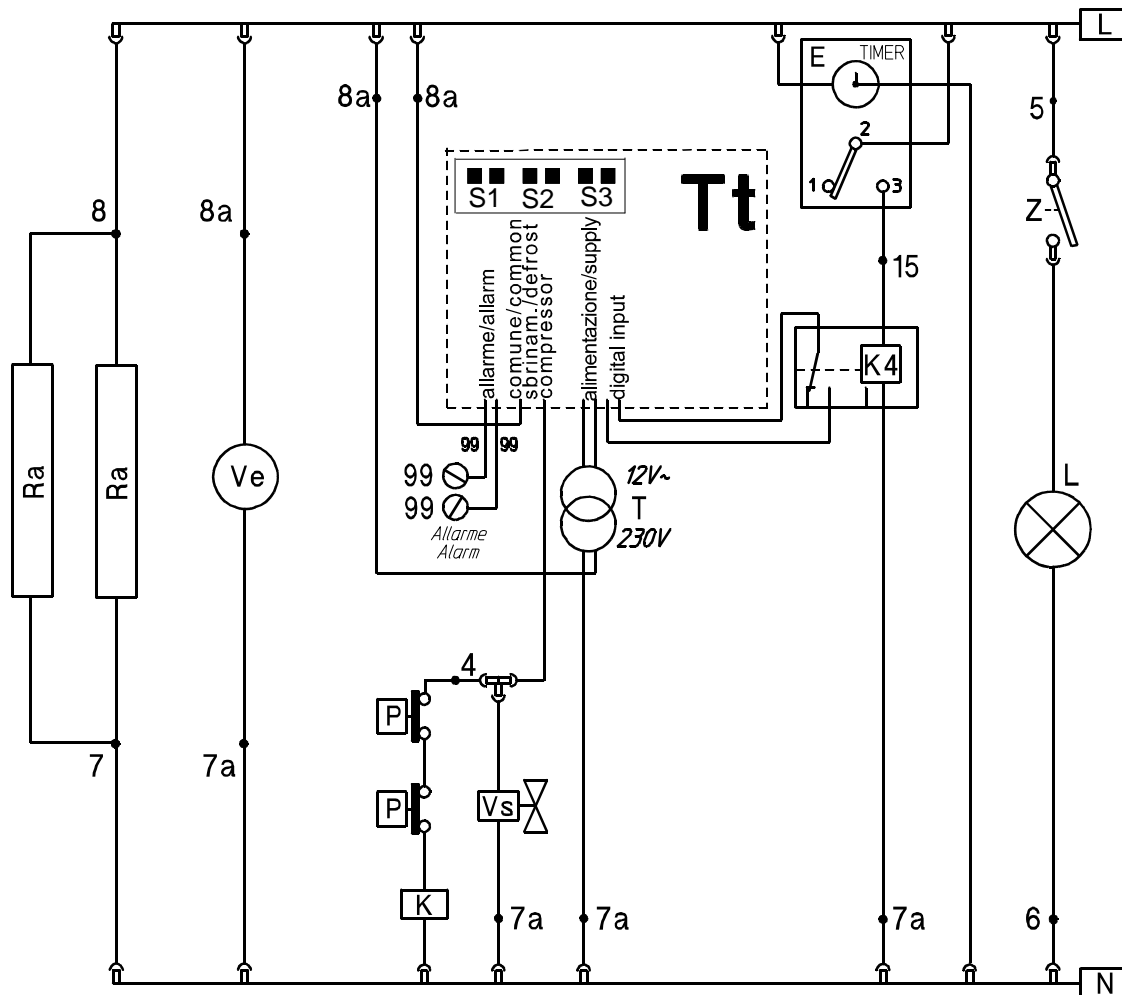
FUNCTIONAL DIAGRAM FOR LION CUB LARGE cl. H - FS terminal-board version



- E** Timer
- K** Compressor contactor
- K1** Lighting contactor
- L** Lights
- P** Pressure switch (high and low pressure)
- Ra** Demist heating elements
- Tt** Running telethermostat
- Ve** Evaporator fans
- Vs** Solenoid valve
- Z** Light switch

NOTE: the functional diagram outlines the principle ruling showcase operation. The components shown are not necessarily envisaged in the case.

FUNCTIONAL DIAGRAM FOR LION CUB LARGE cl. H - FS terminal-board version with telethermostat

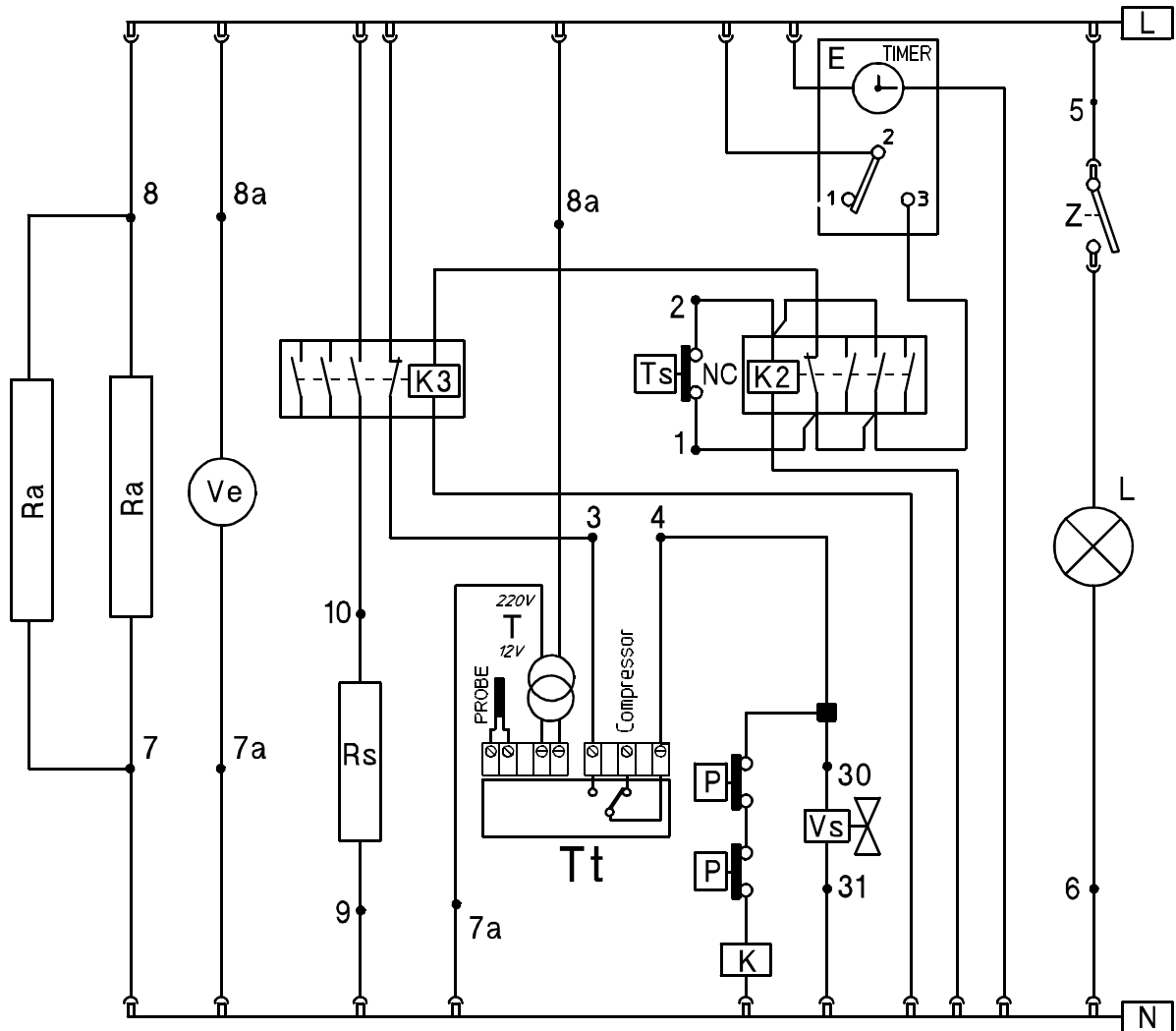


- E** Timer
- K** Compressor contactor
- K1** Lighting contactor
- K4** Defrost start relay
- L** Lights
- P** Pressure switch (high and low pressure)
- Ra** Demist heating elements
- Tt** Running, defrost end and alarm telethermostat
- Ve** Evaporator fans
- Vs** Solenoid valve
- Z** Light switch

NOTE: the functional diagram outlines the principle ruling showcase operation. The components shown are not necessarily envisaged in the case.

ORD.	DATE	CHANGE ORDER	ORD.	DATE	CHANGE ORDER
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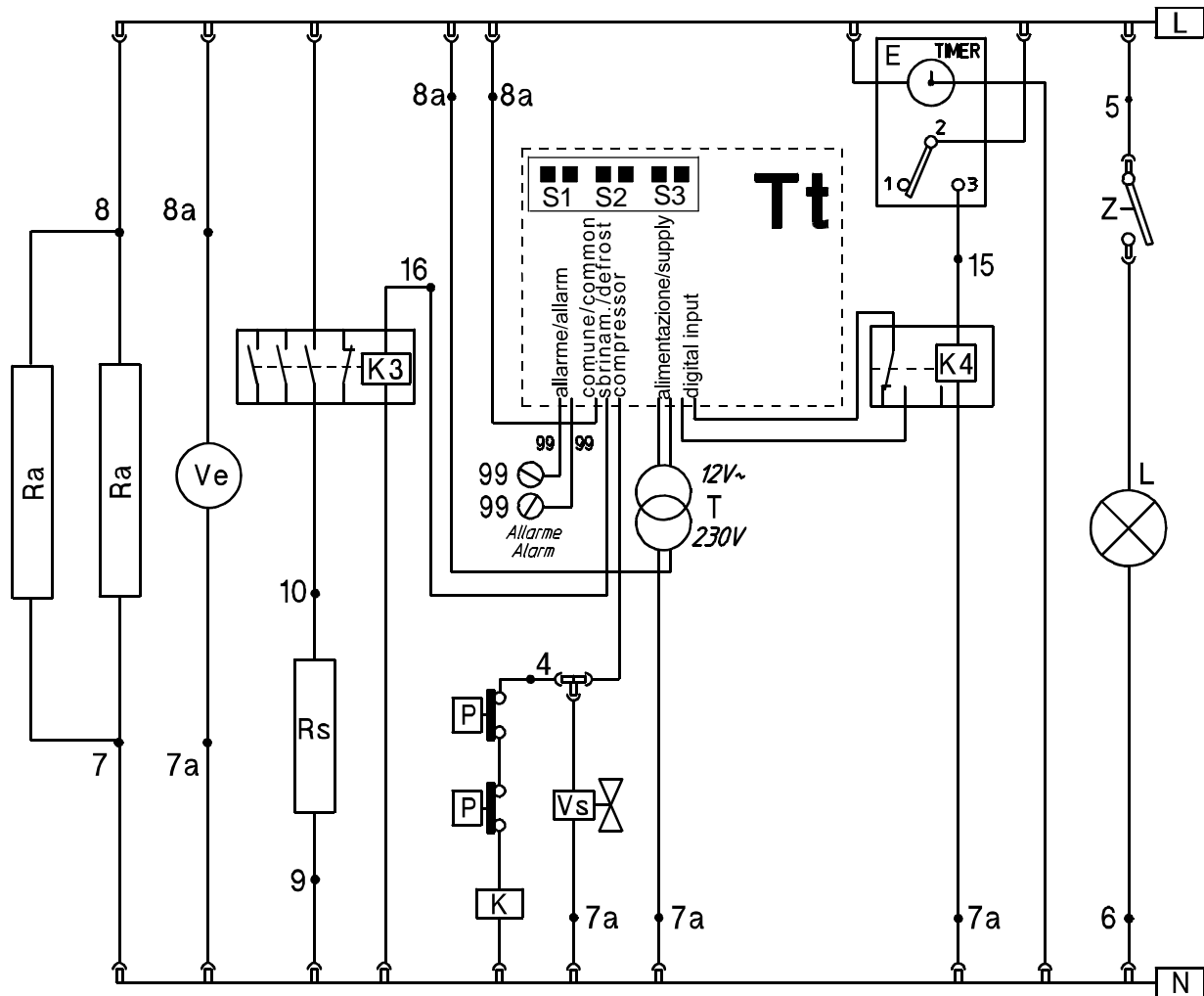
FUNCTIONAL DIAGRAM FOR LION CUB LARGE cl. H/M - ED terminal-board version



- E Timer
- K Compressor contactor
- K1 Lighting contactor
- K2 Defrost-end contactor
- K3 Defrost contactor
- L Lights
- P Pressure switch (high and low pressure)
- Ra Demist heating elements
- Rs Defrost heating elements
- T Transformer
- Ts Defrost-end thermostat
- Tt Running telethermostat
- Ve Evaporator fans
- Vs Solenoid valve
- Z Light switch

NOTE: the functional diagram outlines the principle ruling showcase operation. The components shown are not necessarily envisaged in the case.

FUNCTIONAL DIAGRAM FOR LION CUB LARGE cl. H/M - ED
terminal-board version with telethermostat

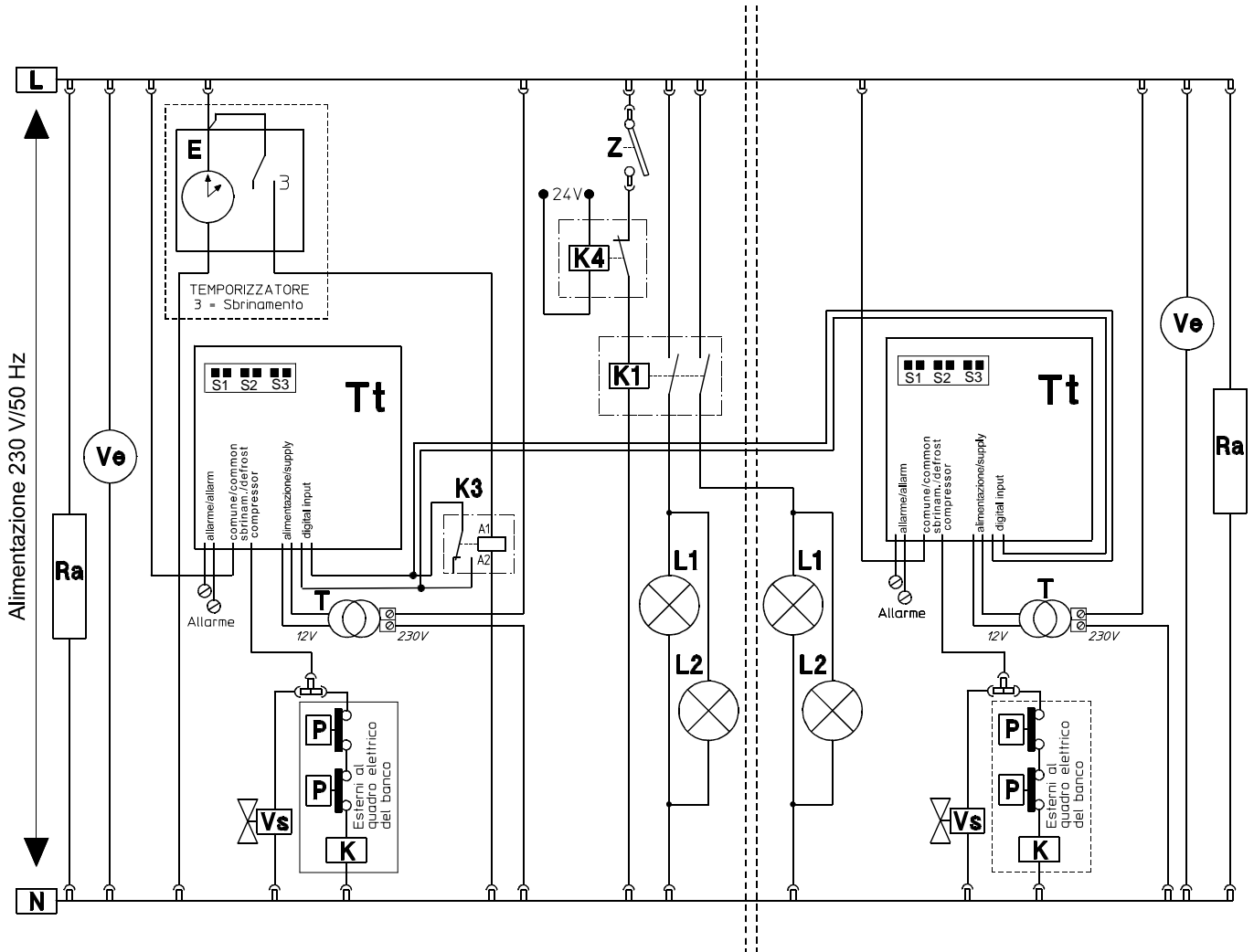


- E** Timer
- K** Compressor contactor
- K1** Lighting contactor
- K3** Defrost contactor
- K4** Defrost-start relay
- L** Lights
- P** Pressure switch (high and low pressure)
- Ra** Demist heating element
- Rs** Defrost heating elements
- T** Transformer
- Tt** Running, defrost end and alarm telethermostat
- Ve** Evaporator fans
- Vs** Solenoid valve
- Z** Light switch

NOTE: the functional diagram outlines the principle ruling showcase operation. The components shown are not necessarily envisaged in the case.

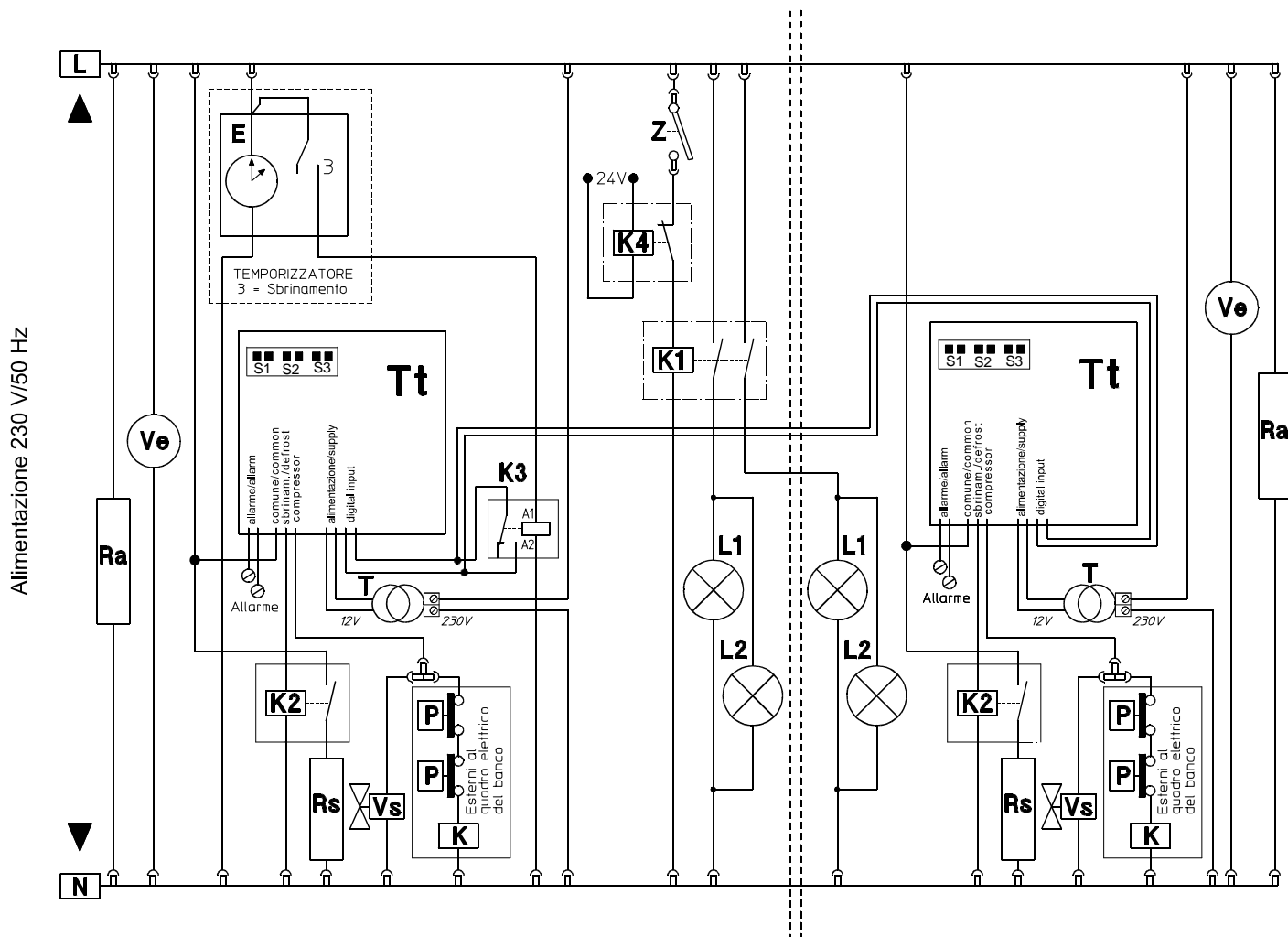
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FUNCTIONAL DIAGRAM FOR LION CUB LARGE cl. H - FS master/slave version



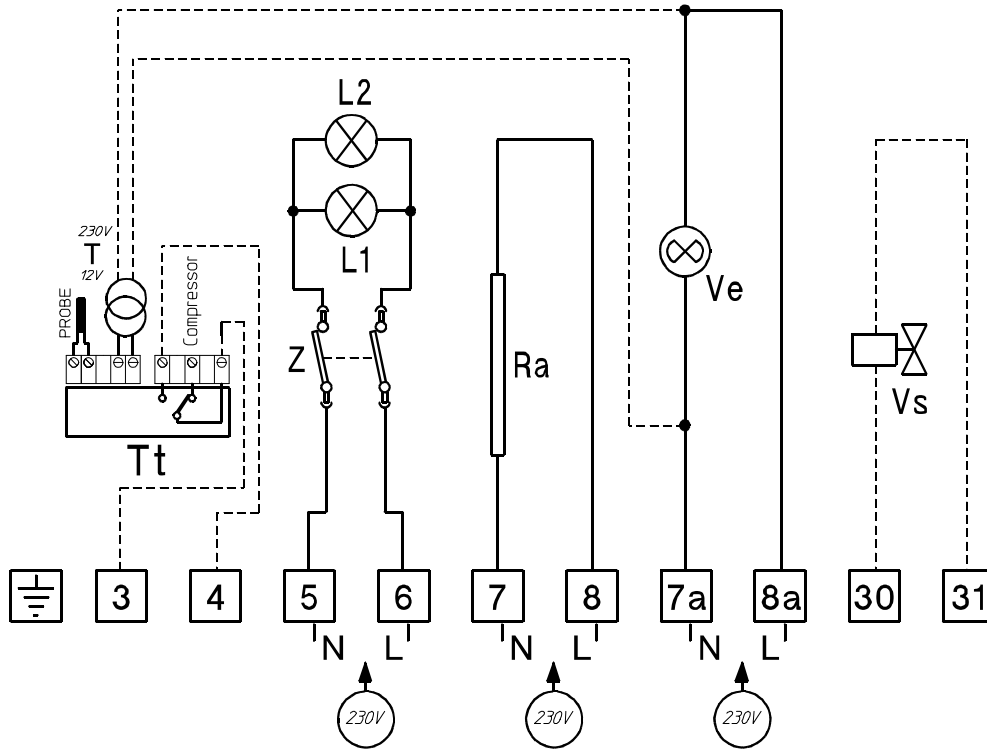
- E** Timer
- K** Compressor contactor, condenser fans
- K1** Lights On /Off switch
- K3** Defrost-start relay
- K4** Lights remote-control relay
- L1** Lights
- L2** Canopy lights
- P** Pressure switch (high and low pressure)
- Ra** Demist heating element
- T** Transformer
- Tt** Compressor, defrost-end and alarm telethermostat
- Ve** Evaporator fans
- Vs** Solenoid valve
- Z** Light switch

FUNCTIONAL DIAGRAM FOR LION CUB LARGE cl. H/M - ED master/slave version

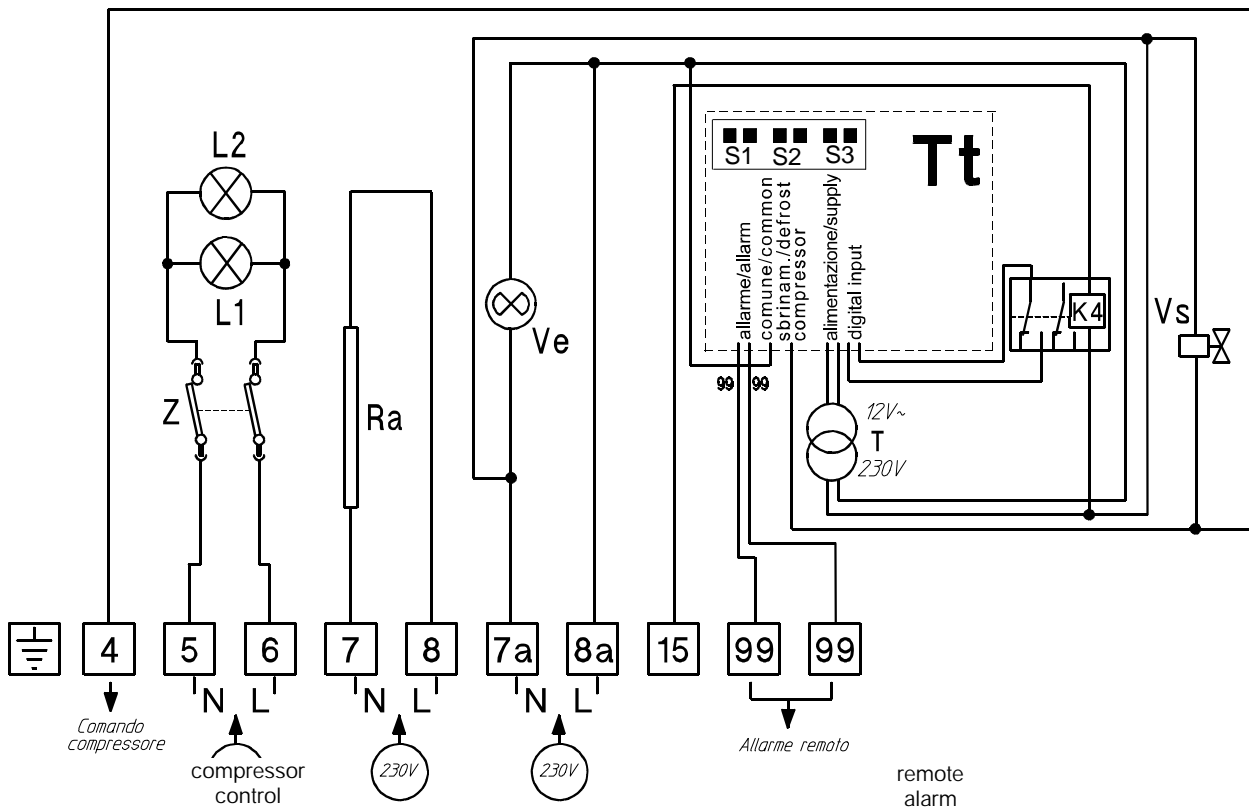


- E** Timer
- K** Compressor contactor, condenser fans
- K1** Lights On /Off switch
- K2** Defrost heater contactor
- K3** Defrost-start relay
- K4** Lights remote-control relay
- L1** Lights
- L2** Canopy lights
- P** Pressure switch (high and low pressure)
- Ra** Demist heating element
- Rs** Defrost heating element
- T** Transformer
- Tt** Compressor, defrost-end and alarm telethermostat
- Ve** Evaporator fans
- Vs** Solenoid valve
- Z** Light switch

TERMINAL-BOARD DIAGRAM FOR LION CUB LARGE cl. H - FS off-cycle defrost



TERMINAL-BOARD DIAGRAM FOR LION CUB LARGE cl. H - FS off-cycle defrost with telethermostat



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KEY

TERMINAL-BOARD DIAGRAM FOR LION CUB LARGE cl. H - FS

- L1** =Canopy lights
- L2** =Shelf lights
- Ra** =Demist heating elements
- T** =Transformer
- Tt** =Running telethermostat (optional)
- Ve** =Evaporator fans
- Vs** =Solenoid valve (optional)
- Z** =Light switch

TERMINAL-BOARD DIAGRAM FOR LION CUB LARGE cl. H - FS with telethermostat

- K4** =Defrost-start relay
- L1** =Canopy lights
- L2** =Shelf lights
- Ra** =Demist heating elements
- T** =Transformer
- Tt** =Running, defrost-end and alarm telethermostat
- Ve** =Evaporator fans
- Vs** =Solenoid valve (optional)
- Z** =Light switch

ELECTRICAL INPUT

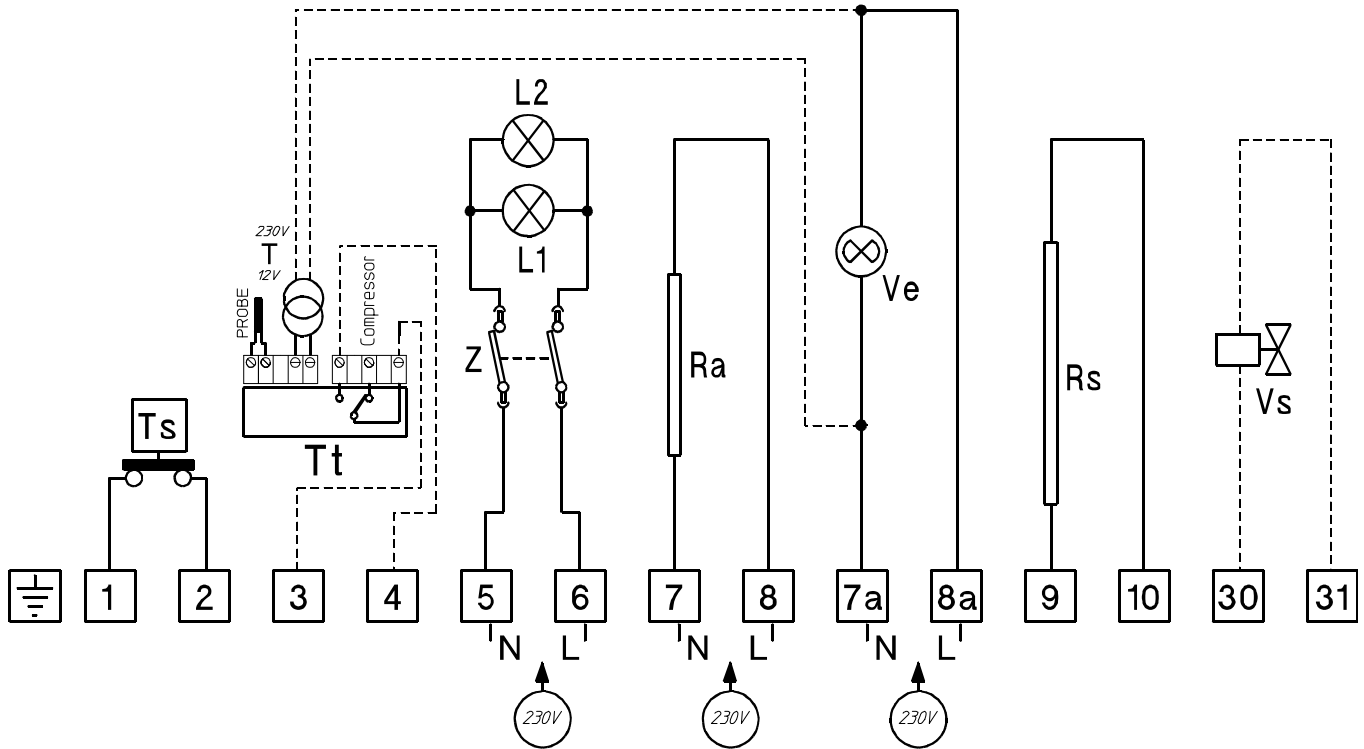
TAB III - LION CUB LARGE cl. H Off-cycle defrost - Electrical input 220V/50Hz

ELECTRICAL INPUT (Watt)		1250	1875	2500	3750	MT
L1	Canopy lights	30	65	80	120	38
L2	Shelf lights (per shelf)	40	30	40	40	38
Ve	Evaporator fans	100	150	200	300	400
Ra	Demist heating elements	33	48	63	93	-
Nominal power FS *		163	263	343	513	438
Defrost power FS *		163	263	343	513	438

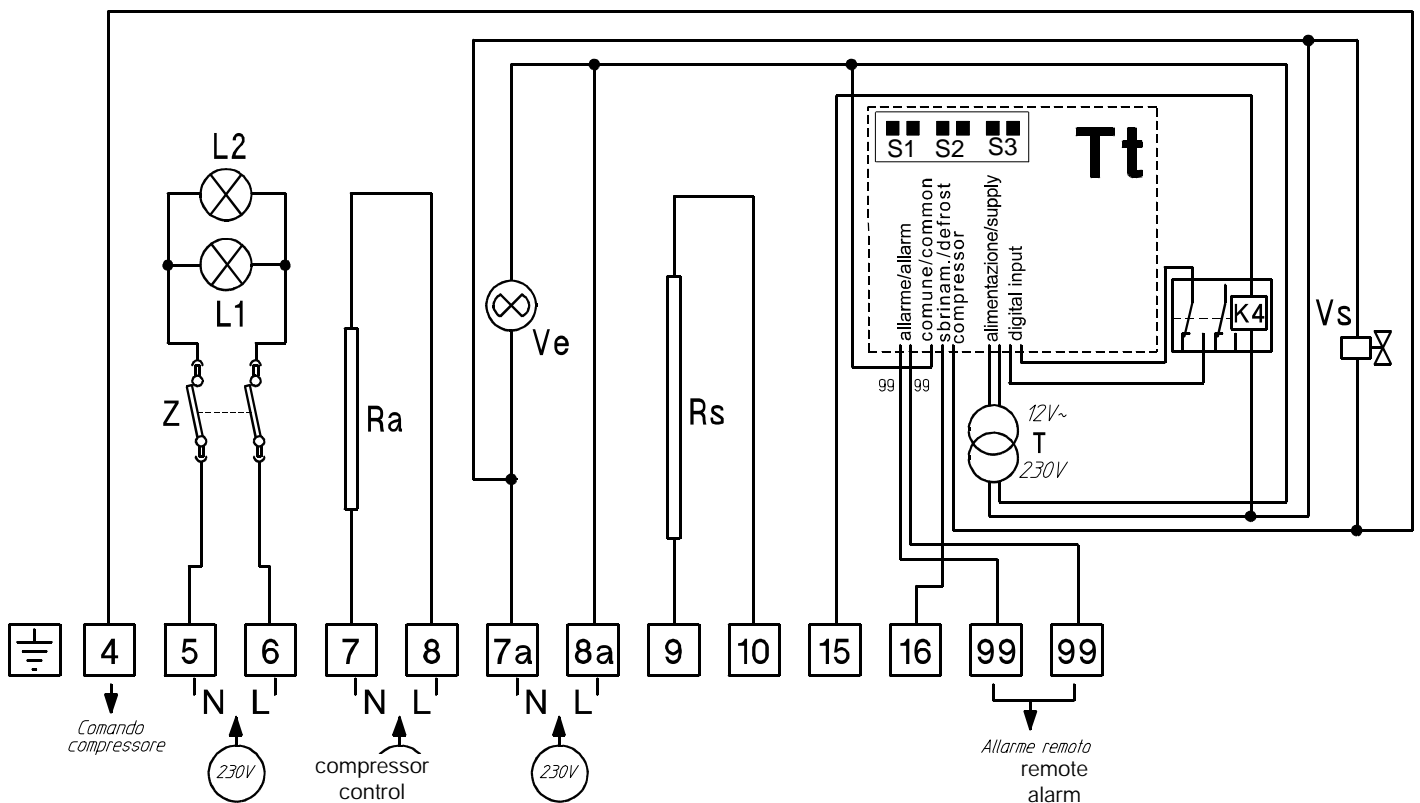
* Add shelf lights.

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TERMINAL-BOARD DIAGRAM FOR LION CUB LARGE cl. H/M - ED electric defrost



TERMINAL-BOARD DIAGRAM FOR LION CUB LARGE cl. H/M - ED electric defrost with telethermostat



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PRODUCT: LION CUB LARGE DOC. no. SM00327V CHAP. no. 080.60 CHAPTER: TERMINAL-BOARD DIAGRAM AND ELECTRICAL INPUT OF ED CASES								

KEY

TERMINAL-BOARD DIAGRAM FOR LION CUB LARGE cl. H/M - ED

- L1** =Canopy lights
- L2** =Shelf lights
- Ra** =Demist heating elements
- Rs** =Defrost heating element
- T** =Transformer
- Tt** =Running telethermostat (optional)
- Ve** =Evaporator fans
- Vs** =Solenoid valve (optional)
- Z** =Light switch

TERMINAL-BOARD DIAGRAM FOR LION CUB LARGE cl. H/M - ED with telethermostat

- K4** =Defrost-start relay
- L1** =Canopy lights
- L2** =Shelf lights
- Ra** =Demist heating elements
- Rs** =Defrost heating element
- T** =Transformer
- Tt** =Running, defrost-end and alarm telethermostat
- Ve** =Evaporator fans
- Vs** =Solenoid valve (optional)
- Z** =Light switch

ELECTRICAL INPUT

TAB IV - LION CUB LARGE cl. H/M Electric defrost (ED) - Electrical input 220V/50Hz

ELECTRICAL INPUT (Watt)		1250	1875	2500	3750	MT
L1	Canopy lights	30	65	80	120	38
L2	Shelf lights (per shelf)	40	30	40	40	38
Ve	Evaporator fans	100	150	200	300	400
Rs	Defrost heating element	850	1400	1700	2550	1400
Ra	Demist heating elements	33	48	63	93	-
Nominal power ED *		163	263	343	513	438
Defrost power ED *		1013	1663	2043	3063	1838

* Add shelf lights.

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REFRIGERATING CAPACITY REQUIREMENT

The same value applies both to stand-alone and multiplexed cases.

REQUIRED REFRIGERATING CAPACITY (Watt)		Evaporating temperature	LENGTH				
			1250	1875	2500	3750	MT
LION CUB LARGE h=1300 cl. H - FS	Class 2	- 5.5 °C	1220	1830	2440	3655	3470
	Class 3	- 7 °C	1390	2080	2775	4165	3940
	Class 4	- 9.5°C	1695	2540	3390	5080	4800
LION CUB LARGE h=1300 cl. H /M - ED	Class 2	- 7.5 °C	1505	2260	3015	4520	4260
	Class 3	- 9 °C	1545	2315	3090	4630	-
	Class 4	-	-	-	-	-	-
LION CUB LARGE h=1500 cl. H - FS	Class 2	- 7 °C	1400	2120	2800	4240	4700
	Class 3	- 8 °C	1500	2250	3000	4500	5000
	Class 4	- 10 °C	1700	2570	3400	5140	5700
LION CUB LARGE h=1500 cl. H /M - ED	Class 2	- 8.5 °C	1850	2755	3700	5550	-
	Class 3	- 10 °C	1900	2850	3800	5700	-
	Class 4	-	-	-	-	-	-

Class 2 = +22°C - 65% R.H.

Class 3 = +25°C - 60% R.H.

Class 4 = +27°C - 55% R.H.

NOTE: the thermal expansion valve is roughly factory-set. Valves so treated are marked with a blue spot. Nonetheless, adjust properly after installing.