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OWNER'S MANUAL
TERMINAL BATTERIES
FOR ROUND CASINGS
Ø 125 - 160 - 200 - 250
TYPES 60530/1/2 & 60540/1/2

1 - COMPOSITION :

These electrogalvanised sheet steel batteries, designed for an air speed of at least 2 m/s, consist of :

- a mechanism plate bearing the heating elements (1, 2 or 6 elements, unit voltage 230V single phase for the models referred to)
- an IP 307 electrical housing with 3 wire input points.
- a ferrule which fits into the connection piece of a T-piece with 3 equal output points (T-piece supplied for types 60540, 60541 and 60542),
- a glove-finger with a 90/100°C safety thermostat, which is rearmed automatically or manually.

2 - PRECAUTIONS FOR USE : Check that :

- 2 - 1 The dimensions of the battery to be fitted correspond to the diameter of the casing which is to receive it.
- 2 - 2 The supply voltage used is that stated in the instruction plate.
- 2 - 3 The connections to the elements are still tight following transportation and handling.
- 2 - 4 The heating elements are positioned at a distance from the fan which is at least equal to its diameter.

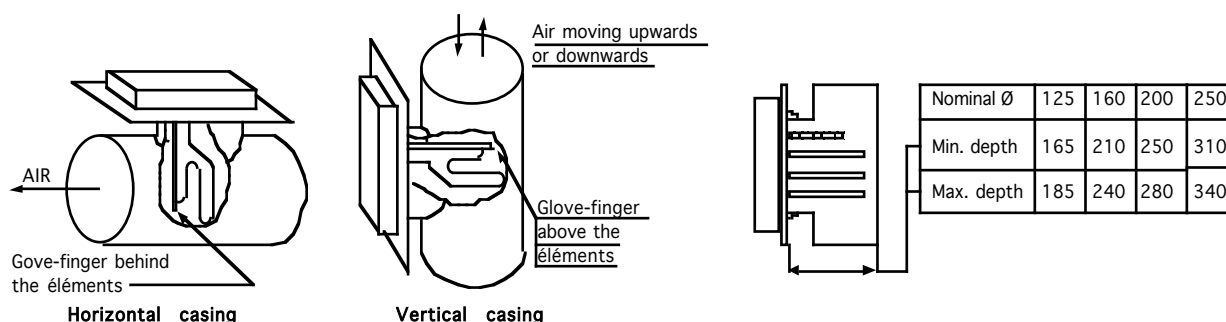
IMPORTANT: So as not to overheat the terminal box, it is recommended that wherever possible, this is positioned towards the bottom, where installing inside a horizontal casing.

3 - **FITTING AND ELECTRICAL CONNECTION :**

3.1 - **INSTALLATION :**

It is essential to keep to the recommended air direction : usually the glove-finger should be located on the air output side, where installing inside a horizontal casing, and above the heating elements where installing inside a vertical casing, irrespective of the direction of the air flow.

For batteries fitted onto a T-piece, make sure that all of the heating part of the heating elements is swept by the air, and that the depth of the T-piece is between the minimum and maximum recommended values given in the table below; if not, recut the T-piece. Fit the ferrule onto the T-piece. Install the glove finger as indicated above, then fix the ferrule to the T-piece with Parker screws or POP rivets.



3.2 - **ELECTRICAL CONNECTION :**

Connect up :

- the earth screw to the installation earth.
- the thermostat safety device. If this rearms itself automatically, the control device must irreversibly cut off the electrical supply in the event of a fault.
- the power circuit :
 - where the battery is supplied coupled, it is merely necessary to connect the TERMINALS marked in RED. The batteries per diagrams 12 and 14 (see "diagram table" on next page) may be converted to 2-speed by removing the parallel positioning straps.
 - Where the battery is supplied UNCOUPLED (ref. 60540-00, 60541-00 or 60542-00), the user may produce one of the diagrams (see "diagram table" on next page) by using all or only some of the elements (the necessary coupling straps are attached to the battery). After coupling, check that the resistance between the terminals at each speed is correct:

values to be measured in accordance with the table below where P is the rating power in kW :

	VOLTAGE FOR USE			
	230 SINGLE	400 SINGLE	230 THREE	400 THREE
Résistance to be measured (in ohms)	52,9 / P	158,7 / P	105,8 / P	317,4 / P

TABLES OF DIAGRAMS WICH CAN BE PRODUCED ON AN INCOUPLED BATTERY

The power achievable for each battery diameter and each supply voltage are shown below, with the corresponding :

Voltage of use	Diag- ram N°	Connection terminals	TABLE OF POWER ACHIEVABLE ACCORDING TO POWER SUPPLY VOLTAGE (in KW)											
			Nominal Ø 160 Réf.60530... - 60540...				Nominal Ø 200 Réf.60531... - 60541...				Nominal Ø 250 Réf.60532... - 60542...			
			3 éléments, max. : 0,5 kW - 230V single				3 éléments, max. : 1 kW - 230V single				3 éléments, max. : 1,5 kW - 230V single			
			Single 230	Single 400	Three 230	Three 400	Single 230	Single 400	Three 230	Three 400	Single 230	Single 400	Three 230	Three 400
SINGLE 230 V	11		0,5	---	---	---	1	---	---	---	1,5	---	---	---
	12		0,75	---	---	---	1,5	---	---	---	2,25	---	---	---
	13		1	---	---	---	2	---	---	---	3	---	---	---
	14		1,5	---	---	---	3	---	---	---	4,5	---	---	---
	15		0,25	0,75	---	---	0,5	1,5	---	---	0,75	2,25	---	---
SINGLE 400 V	16		---	0,5	---	---	---	1	---	---	---	1,5	---	---
THREE 230 V	17		---	---	1,5	---	---	---	3	---	---	---	4,5	---
THREE 400 V	18		---	---	---	1,5	---	---	---	3	---	---	---	4,5
UN- COUPLED	10		Supplied with coupling kit réf. 54231-01											

4 - COMMISSIONING PROCEDURE :

4.1 - COMMISSIONING :

CAUTION : the battery must not be switched on UNDER ANY CIRCUMSTANCES unless the air flow is operating.

4 - 1 - 1 Before switching on, make sure that at least the minimum air flow is operating.

4 - 1 - 2 Start up : switch on the battery and set the regulation devices.

IMPORTANT : Check that when the flow stops, this automatically halts the heating (i.e. switches off the battery).

4.2 - SWITCHING OFF :

It is recommended that when the installation is switched off, the air flow should be maintained for several minutes, after the battery has been switched off (to evacuate calories accumulated within the heating elements).

5 - MAINTENANCE :

5 - 1 After 50 hours operating : check that all the connections and heating elements are tight. Tightening torque on the heating elements : 2.5 mN.

5 - 2 Every six months : same operations as in § 5-1.

5 - 3 Once a year: check that the elements have not become furred up; if they have, clean them.

CAUTION : Where dismantling the unit for cleaning or repairs, once it has been reassembled, follow § 2, 3 and 4.

RECOMMENDATIONS : It is recommended that when the temperature limiter is triggered, as well as irreversibly switching off the appliance, it should also operate an alarm circuit with manual locking and rearming (it should only be rearmed after the installation has been checked).

: For manual rearming : switch off the power before pressing the rearming button.

6 - GUARANTEE :

Our guarantee conforms to inter-union electrical construction agreements, and our general terms and conditions of sale.

On the other hand, we cannot be held liable for any deterioration caused by :

- using the appliance above 10% over the voltage intended,
- lack of maintenance, rough handling or inexperience on the part of the user.