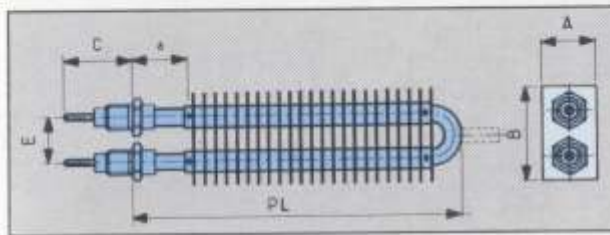
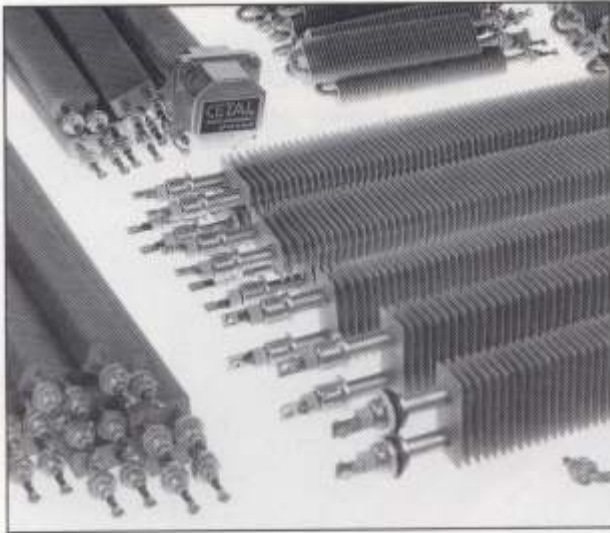


FINNED STRIP HEATERS

USE Heating of air or gas by natural convection for ambient temperatures lower than 200° C or by forced convection ; in this cas the temperatures depend on the fluid flowrate.

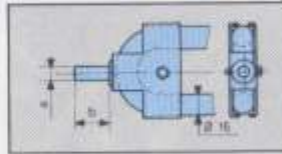
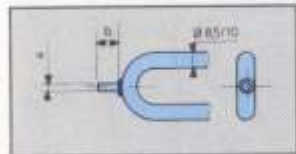
CHARACTERISTICS

- Shielded heating element in stainless steel AISI 321 tube fitting with electro-galvanized cooling fins, force-fitted to protective tube. It is equipped with electro-galvanized crimped steel connections and supplied with gaskets and nuts,
- Electrical connection on terminal series B 500
- The curved part of the finned element has reduced heating
- For certain applications such as high temperature or corrosive atmosphere, we can supply elements equipped with stainless stell fins and connections.



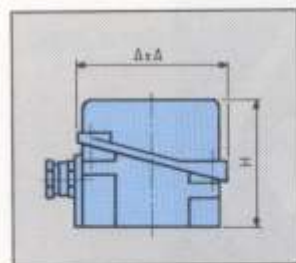
Tube Ø mm	Ref.	A x B mm	C mm	E mm	a mm	Nut
8,5/10	AR8/AR10	25 x 50	40	25	25	M14
16	AR16	40 x 80	55	40	35	M24

ACCESSORIES ON REQUEST

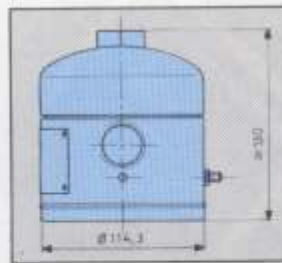


- end guide

Heater	Ø 8	Ø 10	Ø 16
a	4	4	8,5 x 1
b	20	20	20



ORPMA/ORGMA



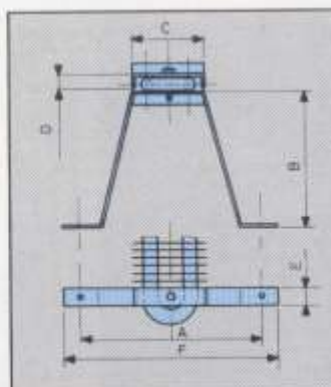
BRPM

- terminal protective cover
- normal or sealed : OR series

Ref.	Fixed connector	A x A	H	Packing box
ORPMA	AR8/AR10	85	80	13
ORGMA	AR16	110	105	16

- explosion-proof : BRPM series constructed to meet standard EN 50014 EN 50018, covered by certificate LCIE N° 830003U

- set of 2 supports : F17 stainless steel



Heater	A	B	C	D	E	F
Ø 8 and 10	100	75	40	8	10	120
Ø 16	120	95	66	13	15	140

STANDARD FINNED HEATERS

LOAD 5 W/cm² - Series A-R8

- Stainless steel tube diameter 8.5 mm
- electro-galvanized steel fins
- 230 or 400 V

W	Pl. mm	Weight kg	Ref.
200*	140	0,25	A-R8-02
500	250	0,45	A-R8-05
750	350	0,60	A-R8-07
1000	450	0,75	A-R8-10
1500	650	1,05	A-R8-15
2000	850	1,35	A-R8-20

* Voltage 230 V only

LOAD 4 W/cm² - Series A-R10

- Stainless steel tube, diameter 10 mm
- electro-galvanized steel fins
- 230 or 400 V

W	Pl. mm	Weight kg	Ref.
500*	225	0,40	A-R10-05
750*	325	0,55	A-R10-07
1000	425	0,77	A-R10-10
1500	620	1,00	A-R10-15
2000	815	1,35	A-R10-20
3000	1305	2,10	A-R10-30

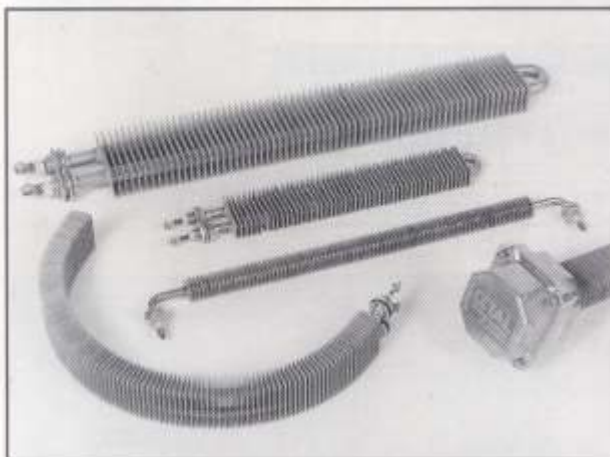
* Voltage 230 V only

LOAD 4 W/cm² - Series A-R16

- Stainless steel tube, diameter 16 mm
- electro-galvanized steel fins
- 220 V
- 400V to order

W	Pl. mm	Weight kg	Ref.
1000	290	1,10	A-R16-10
1250	340	1,30	A-R16-12
1500	390	1,50	A-R16-15
1750	440	1,70	A-R16-17
2000	490	1,85	A-R16-20
2500	590	2,25	A-R16-25
3000	690	2,65	A-R16-30
3500	790	3,05	A-R16-35
4000	890	3,40	A-R16-40
4500	990	3,75	A-R16-45
5000	1090	4,20	A-R16-50
6000	1290	5,25	A-R16-60
8000	1690	6,30	A-R16-80

FINNED STRIP HEATER ON REQUEST



CHARACTERISTICS

- Steel or stainless steel fins, round or rectangular
- Steel or stainless steel connections
- Voltage/rating to order
- Special connectors for corrosive, humid or tropicalized atmosphere
- Shape to order
- Un-heated length to order

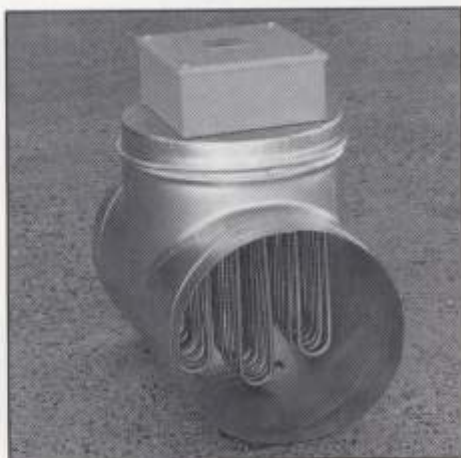
RECOMMENDED ASSEMBLY

- in natural circulation, use element in horizontal position, supporting it at end. In special conditions or altered natural circulation (operation in kiln), we recommend lower loads or coupling elements in series to reduce unit rating.
- in forced circulation, position the element perpendicular to the direction of flow

TERMINAL AIR DUCT HEATERS

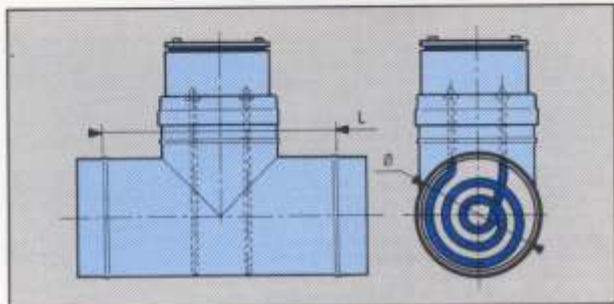
USE These batteries are used in air-conditioning systems to heat areas, with a minimum air velocity of 2 m/s.
Electrical connection is on connectors or terminal blocks depending on rating.

ROUND SERIES - BTO CHARACTERISTICS

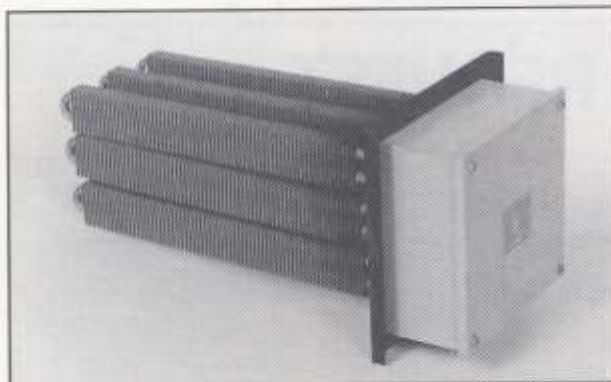


- Stainless steel tube heating elements (1 to 6 depending on battery rating) mounted in a T, of a diameter to allow installation on a standard jacket of the same diameter
- Wired on B 500 series terminals
- Protective cover with packing box
- Voltage 230/400 V
- Single or 3-phase coupling
- To order : thermostat or limiter
- Standard equipment : see table below

W min.	W max.	Ø mm	L mm
500	1500	160	260
500	3000	200	330
750	4500	250	380
1000	6000	315	465
1500	9000	400	570

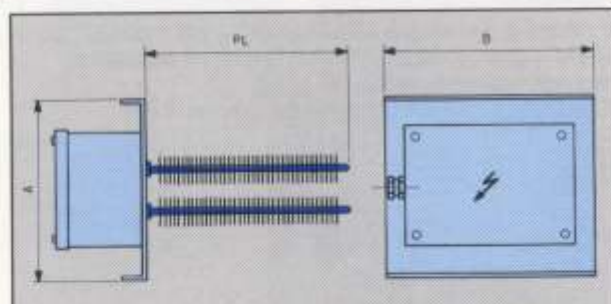


RECTANGULAR SERIES BTR CHARACTERISTICS



- Heating elements (3 to 9 depending on battery rating) with electro-galvanized fins mounted on strip for installation on jackets with rectangular section
- Wired on B 500 series terminals
- Protective cover with packing box
- Voltage 230/400 V
- Single or 3-phase coupling
- To order : thermostat or limiter
- Standard equipment : see table below

W min.	W max.	PL mm	A mm	B mm
600	1800	140	170/220	400
1500	4500	250	170/220	400
2250	6750	350	170/220	400
3000	9000	450	170/220	400
4500	13500	650	170/220	400



N.B. For all other terminal air duct heaters for round or rectangular jackets, electrical characteristics or different dimensions, please inquire.

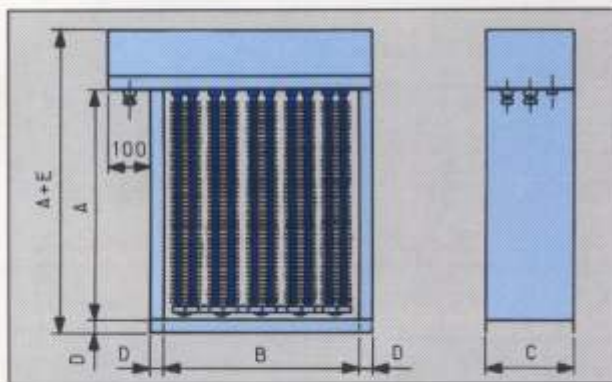
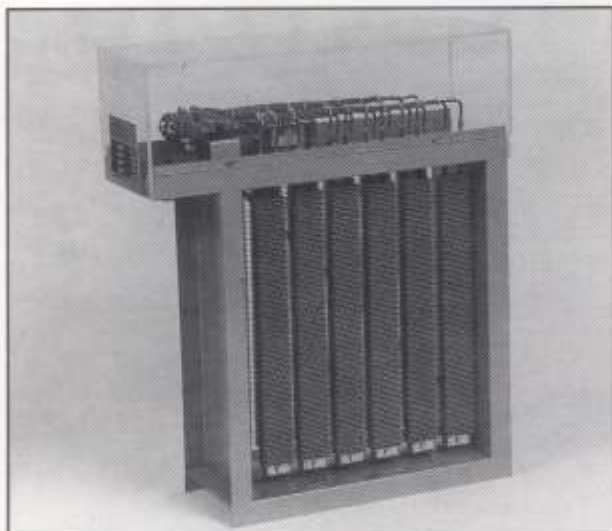
AIR DUCT HEATERS

USE Heating of air or gas with a minimum circulating speed of 2 m/s.

ON CASE SERIES B

CHARACTERISTICS

- electro-galvanized finned strip heaters, stainless steel sheathed tube
- unit voltage 230 V
- galvanized steel casing without insulation
- connection by angle steel to ventilation ducts and motor fan block
- supplied with or without thermostat, range 50 to 300° C
- outlet air temperature: 250° C max.
- A vertical position is recommended for the battery, with the connector at the bottom or side
- Standard equipment : see table below



Total rating kW	Equipment			Dimensions					Ref.			
	Fin-type	No. on elements	Circuit rating	A	B	C	D	E				
3	AR 8	3	1000 W	460	390	180	35	190	B 3			
6	25 x 50	6							B 6			
9		9							B 9			
12		12							B 12			
18	AR 10	12	1500 W	630					B 18			
22,5	25 x 50	15										B 22
27		18										B 27
31,5		21			B 31							
36		24			700	300	40	230	B 36			
42		21							2000 W	825	B 42	
48		24							B 48			
54		27							B 54			
60		30							B 60			
67,5		AR 16							15	4500 W	1010	1000
80	40 x 80	18							B 81			
94,5		21							B 94			
108		24							B 108			

- Special construction : stainless steel casing, stainless steel fins, dimensions and ratings
- for service temperatures over 250° C, the electrical connector should be offset to limit temperature rise on the electrical connection terminals.

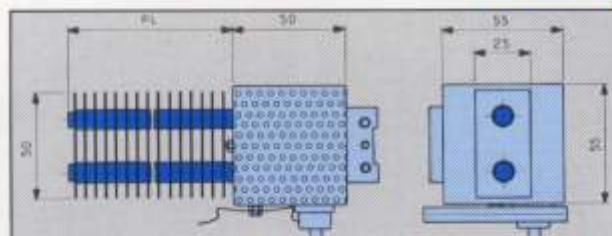
ELECTRICAL SWITCHCUPBOARD HEATER

USE Low temperature heating element to prevent freezing or condensation in electrical switchcupboards.

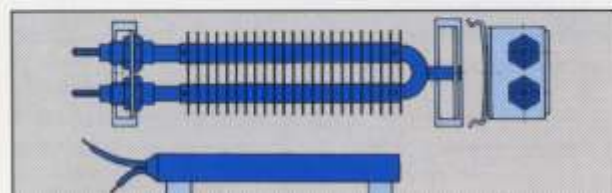
INSTALLED RATING

Switchcupboard-volume	Rating per dm ³
50 - 200 dm ³	1,5 - 2 W/dm ³
200 - 1000 dm ³	0,8 - 1,5 W/dm ³
1000 dm ³ or mor	0,5 - 0,8 W/dm ³

CHA SERIES



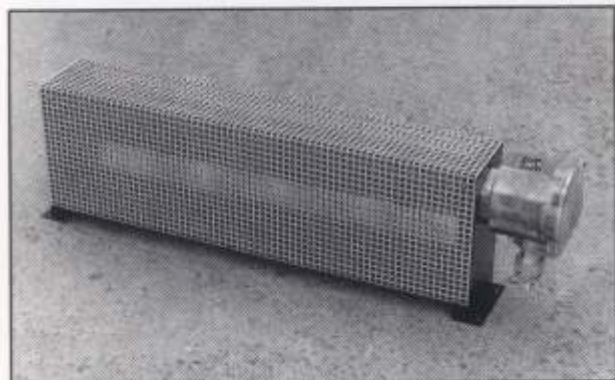
- Rating in W: 10, 20, 35, 45, 70, 90
- Voltage: 110, 230 ac
12, 24, 48 dc
- Immersion depth PL = 80 mm
- with temperature regulation 20-50° C



OTHER OPTIONS
Please inquire

EXPLOSION-PROOF EQUIPMENT

EXPLOSION-PROOF RADIATORS



USE

- heating of air or gas in : - painting chamber
 - inflammable goods storage area
 - premises with dangerous atmospheres
 - maintaining explosive areas above freezing

CONSTRUCTION

The appliance consists of 1 to 3 heating elements with enamelled fins, with a load of 0.9 or 0.44 W/cm². The maximum temperature in natural convection is either 200° C (T3) or 135° C (T4) for an ambient temperature of 40° C.

Electrical connection is an explosion-proof aluminium box.

The unit is protected by a painted perforated sheet steel cover.

It can be supplied with temperature control.

CHARACTERISTICS

The radiators can be single or three-phase, up to 690 V.

The specific load (W/cm²) determines the length of the unit as a function of nominal rating.

A safety margin should be allowed in the event of shrinkage of the protective cover.

- Standard equipment : see table below

Rating	T3 200° C		T4 135° C	
	L in mm	Ref.	L in mm	Ref.
500 W*	475	RAE 5/T3	680	RAE 5/T4
750 W*	575	RAE 7/T3	870	RAE 7/T4
1000 W	670	RAE 10/T3	1060	RAE 10/T4
1250 W	760	RAE 12/T3	1250	RAE 12/T4
1500 W	855	RAE 15/T3	1435	RAE 15/T4
2000 W	1040	RAE 20/T3		

* 1 x 220V coupling only

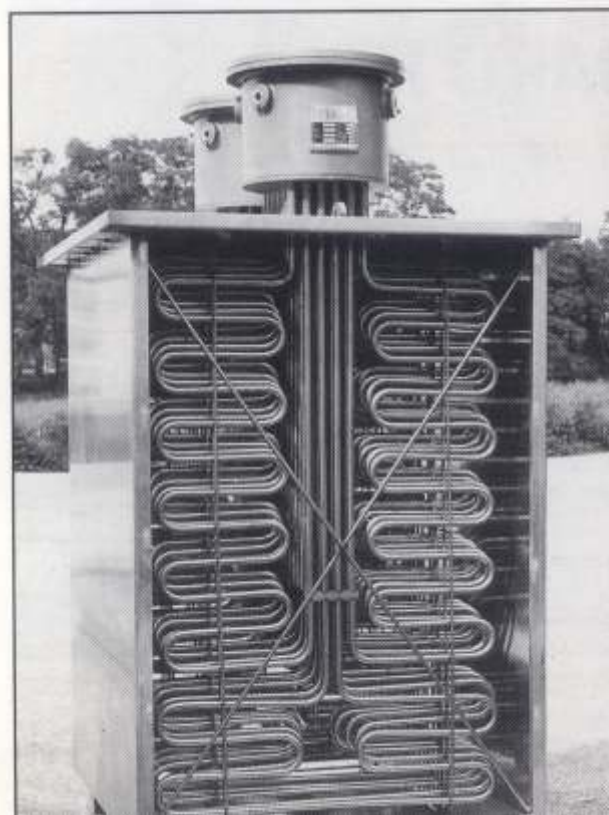
OTHER OPTIONS

Electrical characteristics and dimensions to order.

PROTECTION

The equipment has a certificate of conformity N° 88 B 6064 X issued by the LCIE for group IIC.

EXPLOSION-PROOF BATTERIES



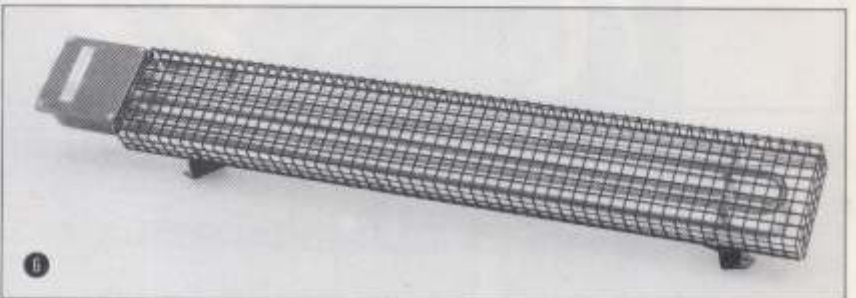
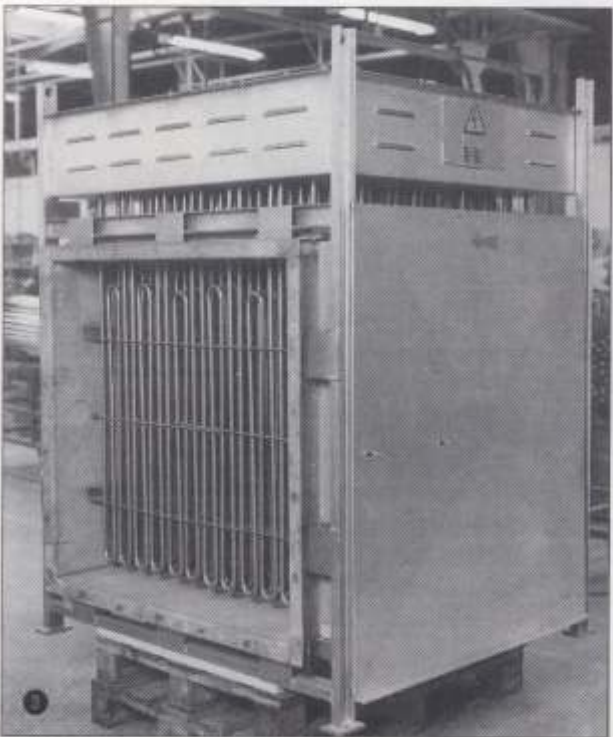
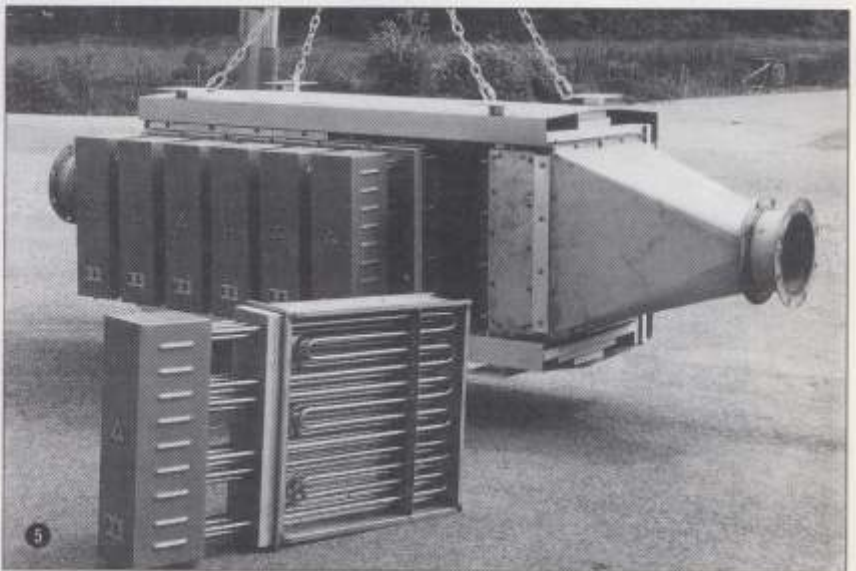
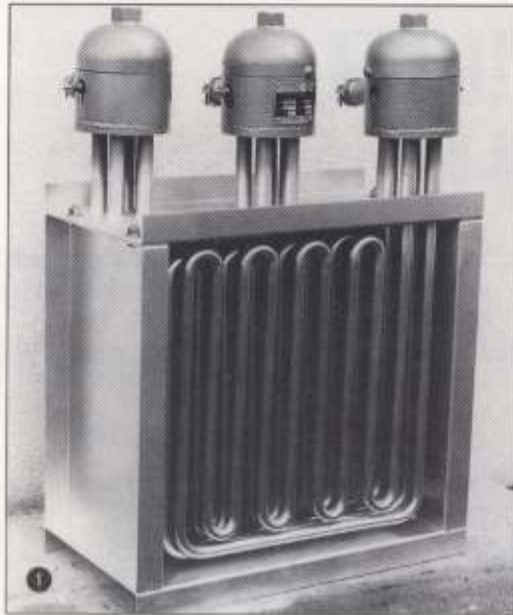
USE

- heating of air or gases in areas requiring equipment with a connector suitable for use in an explosive atmosphere.
- heating of charged air or gas requiring explosion-proof batteries : in this case, the surface load (W/cm²) relating to conditions of use (flowrate, temperature, self-ignition) is adapted accordingly and the unit has European certification (certificate of conformity N° 86 B 6159 x for group IIC and N° 86 B 6158 X for group IIB).

CHARACTERISTICS

- One or more explosion-proof housings of steel or aluminium, depending on the number of heating elements to be wired
- Steel or stainless steel box depending on environment
- Heating elements of stainless steel AISI 321 or other grades
- Dimensions and electrical characteristics (rating, voltage) to specifications.

EXAMPLES OF APPLICATIONS



1 15 kW battery equipped with explosion-proof cover for drying tunnel in explosive atmosphere.

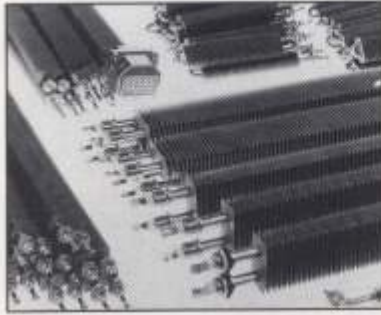
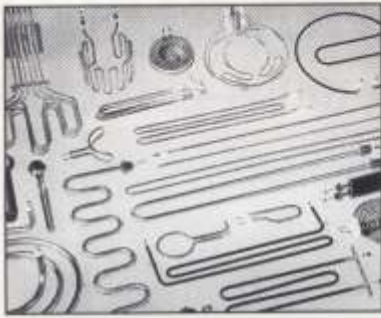
2 Discharge battery for 80 kW rating.

3 500 kW hot air generator to heat air to 650° C in a tunnel furnace replacing a fuel generator for drying and calcination of

4 Battery in an atomization tower in a dairy. Two-energy source system, rating 1200 kW. Stainless steel throughout.

5 Series of 8 slide-batteries, stainless steel throughout, 420 kW, for heating air to 450° C for talc drying process

6 Infrared radiator.



TECHNICAL DOCUMENTATION

A series of catalogues is available on request giving detailed information on each product line.

- TECHNICAL INFORMATION/MANUFACTURING RANGE
- SCREW-ON OR MOVABLE IMMERSION HEATERS
- FLANGE/IMMERSION HEATERS
- FINNED STRIP HEATERS/AIR DUCT HEATERS
- CARTRIDGES AND BAND HEATERS
- THP (Très Haute Performance) HEATERS

