

Band heaters are elements with different diameters and heights, designed to heat and to maintain the temperature of cylindrical parts.
Heat transfer is usually achieved by conduction or by radiation for high power heaters. They are suitable for solid heating as well as for liquids or gases heating.

The applications for band heaters are various : they can be fitted to nozzles or extruder barrels, used to process plastics or today's materials such as resins which require high temperature or for heating conducts.
They can also be used in plastic injection, moulding as the process of materials requires high heating power and high temperatures.
Acim Jouanin band heaters combine lightness, compactness and are used in applications requiring fast temperature rises.

Besides a wide range of standard sizes our technology offers multiple combinations of wiring and clamping systems.
Standard band heaters are available as specific products and perfectly suit your requirements thanks to the addition of holes and cutouts, various options and/or of thermal insulation material, in order to reduce heat losses.

This technology is suitable for different industrial heating applications :

- o High humidity **Encapsulated sealed mica nozzle heaters, Sealed mica band heaters**
- o Standard application..... **Mica band heaters**
- o Requirement of high temp. levels..... **Ceramic band heaters, Heaters with mineral insulation**
- o Need for robustness **Band heaters with radial connection plug**
- o Thermally Insulated installation..... **Band heaters with energy saving**
- o System with restricted thermal inertia..... **Ventilated band heaters assembly**



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SPECIAL BAND HEATERS

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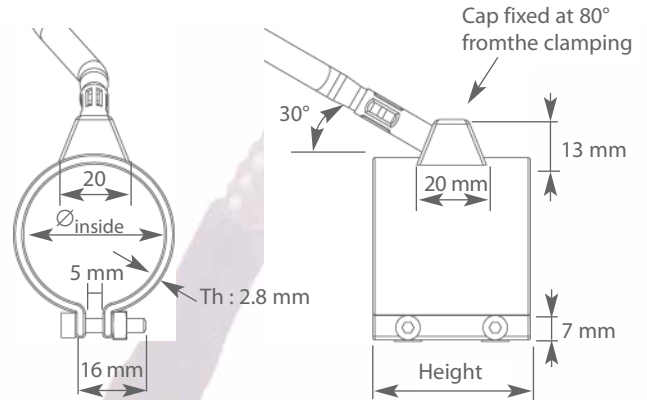


STANDARD ENCAPSULATED SEALED NOZZLE HEATERS

- Max. watt density over the surface of the heater: 6.5 W/cm²
- Max. operating temperature over the surface of the heater: 340°C, depending on working conditions.
- Diameter : 25 to 100 mm
Height : 20 to 80 mm
Wattage : 65 to 970 W, 230 V single phase
For other dimensions, not kept in stock, see p 5
- Sealed band heater in brass, with folded ends. Band heater connection, waterproof technology.
- Electric insulation by mica plate.
- Connection : nickel core, fiberglass insulated + earth wire; protected by a galvanized steel braid.
- Connection cap : axial 30°, centred on the height of the band heater, up to 38 mm height. Over 38 mm height, it is placed at 20 mm from the edge. (See sketch). (Except L2570C26G10*)
- Square angle flange clamping, screw BTR M4, self-locking square nuts.
- Our products are in accordance with EN 60335-1
Wattage tolerance: +5% -10%
Leakage current < 0.75 mA/kW
- Special manufactures :
 - Sealed stainless steel nozzle heater (see picture on next page).
 - Max. watt density : 5 W/cm².
 - Specific sealed nozzle heaters not kept in stock, see p 5.
 - Accessories and options, see p 12.
 - How to define a special band heater: see p 18.



- Dimensions of a standard insulated mica nozzle heater :



To each diameter of band heater corresponds a clamping capacity. For instance, a band heater with a diameter of 30 mm can be fitted on a nozzle of 30 mm to 31 mm. In charts below, the diameter of a band heater is written in green and below it, its clamping capacity is written in black between brackets.

Diameter Ø (mm)	Height H (mm)	Power P (W)	Braid L (mm)	Part number
25 (25 to 26)	20	65	500	L2520C6A5
	25	85	500	L2525C8A5
	30	105	500	L2530C10A5
	35	125	500	L2535C12A5
	38	145	500	L2538C14A5
	70	260	1000	L2570C26G10*
26 (26 to 27)	30	115	500	L2630C11A5
	35	135	500	L2635C13A5
28 (28 to 29)	20	75	500	L2820C7A5
		75	1000	L2820C7A10
		75	2000	L2820C7A20
	25	100	500	L2825C10A5
		125	500	L2830C12A5
		150	500	L2835C15A5
		170	500	L2838C17A5
		220	500	L2850C22A5
30 (30 to 31)	20	85	500	L3020C8A5
		110	500	L3025C11A5
		110	1500	L3025C11A15
	30	135	500	L3030C13A5
		135	1000	L3030C13A10
		135	1500	L3030C13A15
	35	160	500	L3035C16A5
		160	1000	L3035C16A10
		185	500	L3038C18A5
		185	1000	L3038C18A10
		235	500	L3050C23A5

Diameter Ø (mm)	Height H (mm)	Power P (W)	Braid L (mm)	Part number	
30 (30 to 31)	50	235	1000	L3050C23A10	
		285	500	L3060C28A5	
	60	285	1000	L3060C28A10	
		310	500	L3065C31A5	
32 (31 to 32)	20	90	500	L3220C9A5	
		115	500	L3225C11A5	
		145	500	L3230C14A5	
	30	145	1000	L3230C14A10	
			2000	L3230C20A20	
			2000	L3230C20A20	
		35	170	500	L3235C17A5
			195	500	L3238C19A5
			195	1000	L3238C19A10
	50	195	2000	L3238C19A20	
			250	500	L3250C25A5
		60	300	500	L3260C30A5
300			2000	L3260C30A20	
34 (34 to 35)		20	95	500	L3420C9A5
			125	500	L3425C12A5
	125		1000	L3525C12A10	
	30	125	1500	L3425C12A15	
		155	500	L3430C15A5	
		155	1000	L3430C15A10	
	35	180	500	L3435C18A5	
			2000	L3435C18A20	
		38	185	2000	L3438C18A20
			210	500	L3438C21A5
		50	265	500	L3450C26A5
			325	1000	L3460C32A10

Diameter Ø (mm)	Height (mm)	Watt. W (W)	Braid L (mm)	Part number	
38 (38 to 39)	25	140	500	L3825C14A5	
		170	500	L3830C17A5	
	30	200	500	L3835C20A5	
		235	500	L3838C23A5	
40 (40 to 41)	20	125	500	L4020C12A5	
		125	1000	L4020C12A10	
		125	2000	L4020C12A20	
		160	500	L4025C16A5	
		160	1000	L4025C16A10	
		160	1000	L4025C16A10	
	25	200	500	L4030C20A5	
		200	1000	L4030C20A10	
		200	2000	L4030C20A20	
		235	500	L4035C23A5	
	35	235	2000	L4035C23A20	
			235	2000	L4035C23A20
		38	200	500	L4038C20A5
			270	500	L4038C27A5
		270	1000	L4038C27A10	
		270	1500	L4038C27A15	
		270	2000	L4038C27A20	
		45	305	500	L4045C30A5
			305	1000	L4045C30A10
			305	2000	L4045C30A20
345	500		L4050C34A5		
50	345	1000	L4050C34A10		
		2000	L4050C34A20		
	55	380	1000	L4055C38A10	
		415	500	L4060C41A5	
	60	415	1000	L4060C41A10	
		415	1500	L4060C41A15	

* Cap off center at 0 mm from the edge of the band heater. One end of the clamping tab is bevel-edged at 45°

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STANDARD ENCAPSULATED SEALED NOZZLE HEATERS

Diameter Ø (mm)	Height H (mm)	Watt. W (W)	Braid L (mm)	Part number	
40 (40 to 41)	60	415	2000	L4060C41A20	
	65	430	500	L4065C43A5	
	70	450	500	L4070C45A5	
		450	2000	L4070C45A20	
42 (42 to 43)	25	155	500	L4225C15A5	
	30	190	500	L4230C19A5	
	38	260	500	L4238C26A5	
	50	330	500	L4250C33A5	
		330	2000	L4250C33A20	
44 (44 to 45)	20	125	500	L4420C12A5	
	25	160	500	L4425C16A5	
	30	200	500	L4430C20A5	
		200	1000	L4430C20A10	
		200	1500	L4430C20A15	
		235	500	L4435C23A5	
	35	270	1000	L4438C27A10	
	38	300	500	L4438C30A5	
		310	500	L4445C31A5	
		310	1000	L4445C31A10	
		345	500	L4450C34A5	
		345	1000	L4450C34A10	
		55	385	500	L4455C38A5
	60	420	500	L4460C42A5	
48 (48 to 49)	20	135	1000	L4820C13A10	
	25	180	500	L4825C18A5	
	30	220	1000	L4830C22A10	
	38	300	2000	L4838C30A20	
50 (50 to 51)	20	140	500	L5020C14A5	
	25	185	500	L5025C18A5	
		185	1000	L5025C18A10	
	30	225	500	L5030C22A5	
		225	1000	L5030C22A10	
	35	270	500	L5035C27A5	
		270	1000	L5035C27A10	
	38	310	500	L5038C31A5	
		310	1000	L5038C31A10	
		310	1500	L5038C31A15	
		310	2000	L5038C31A20	
		45	350	500	L5045C35A5
		50	390	500	L5050C39A5
	390	1000	L5050C39A10		
	60	475	500	L5060C47A5	
	475	1000	L5060C47A10		

Diameter Ø (mm)	Height H (mm)	Watt. W (W)	Braid L (mm)	Part number
50 (50 to 51)	60	475	2000	L5060C47A20
	65	510	500	L5065C51A5
	70	560	500	L5070C56A5
	75	600	2000	L5075C60A20
54 (54 to 55)	25	200	500	L5425C20A5
		200	1000	L5425C20A10
	30	245	500	L5430C24A5
	38	335	500	L5438C33A5
		335	2000	L5438C33A20
	45	380	500	L5445C38A5
56 (56 to 57)	38	350	500	L5638C35A5
58 (58 to 59)	38	360	500	L5838C36A5
60 (60 to 61)	20	170	1000	L6020C17A10
		250	500	L6020C25A5
	25	220	500	L6025C22A5
	30	275	500	L6030C27A5
		275	1000	L6030C27A10
		325	2000	L6030C32A20
	35	325	500	L6035C32A5
		325	1500	L6035C32A15
	38	375	500	L6038C37A5
		375	1000	L6038C37A10
	375	1500	L6038C37A15	
	45	425	500	L6045C42A5
	425	2000	L6045C42A20	
	50	475	500	L6050C47A5
	475	1000	L6050C47A10	
	55	525	500	L6055C52A5
	60	575	500	L6060C57A5
	65	625	500	L6065C62A5
	80	780	500	L6080C78A5
64 (64 to 65)	20	185	500	L6420C18A5
	25	240	500	L6425C24A5
	38	400	1500	L6438C40A15
	45	455	500	L6445C45A5
68 (68 to 69)	30	310	500	L6830C31A5

Diameter Ø (mm)	Height H (mm)	Watt. W (W)	Braid L (mm)	Part number
70 (70 to 71)	30	320	500	L7030C32A5
		320	1000	L7030C32A10
	35	380	500	L7035C38A5
	38	440	500	L7038C44A5
		440	1000	L7038C44A10
		440	1500	L7038C44A15
		550	1500	L7038C55A15
	45	500	500	L7045C50A5
	50	560	500	L7050C56A5
	65	730	500	L7065C73A5
	785	500	L7070C78A5	
72 (72 to 73)	30	330	1000	L7230C33A10
74 (74 to 75)	30	340	1000	L7430C34A10
	50	590	500	L7450C59A5
80 (80 to 81)	30	365	500	L8030C36A5
	35	435	2000	L8035C43A20
	38	500	500	L8038C50A5
		500	1000	L8038C50A10
	45	570	500	L8045C57A5
	50	630	500	L8050C63A5
	630	1000	L8050C63A10	
90 (90 to 91)	30	415	1000	L9030C41A10
	45	645	1000	L9045C64A10
	60	875	500	L9060C87A5
94 (94 to 95)	55	830	1000	L9455C83A10
100 (100 to 101)	30	460	500	L10030C46A5
	60	970	500	L10060C97A5
		970	1000	L10060C97A10



Stainless steel sealed nozzle heater
(Special manufacture)



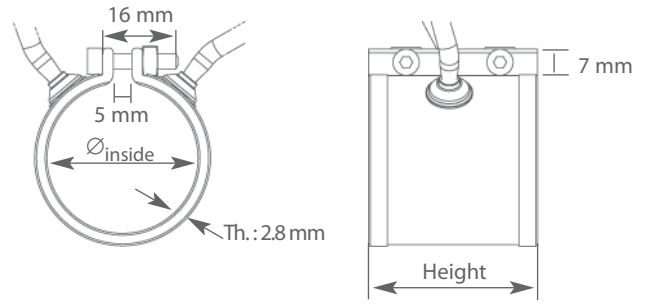
Sealed nozzle heater, in
brass.

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STANDARD MICA BAND HEATERS AVAILABLE FROM STOCK

- Max. watt density over the surface of the heater : 5 W/cm²
- Max. operating temperature over the surface of the heater: 340°C, depending on working conditions.
- Available in 2 versions:
 - wire connection: wiring with a large bending radius, nevertheless quite fragile.
 - metal braid connection, embossed exit: appreciated for its low profile.
- Nickel core, fiberglass insulated + earth wire.
For the model with embossement connection, the wires are protected with a galvanized steel braid.
- Voltage: 230 V single phase.
- Electric insulation with mica plates.
- Square angle flange, screw CHC M4 and square nuts.
- Products are in accordance with EN 60335-1
Wattage tolerance : +5% -10%
Leakage current < 0.75 mA/kW

- Dimensions of a standard mica band heater :



To each diameter of heater corresponds a clamping capacity. For instance, a heater with a diameter of 30 mm can be fitted on a nozzle with a diameter of 30 mm or 31 mm. In charts below, the diameter of a band heater is written in green and below it, its clamping capacity, is written in black between brackets.

WIRE CONNECTION



- Heaters available from stock :
 - Diameter : 25 to 60 mm
 - Height : 20 to 80 mm
 - Wattage : 85 to 515 W
- Outside sheath in aluminized steel.
- Connection with ceramic beads to avoid eventual pulling of the wires, 12 mm Ø, 4 mm height. Wiring centred over the height of the heater.

Diameter Ø (mm)	Height H (mm)	Watt. P (W)	Braid L (mm)	Part number
25 (25 to 26)	35	125	500	A2535C12A5
		125	1300	A2535C12A13
30 (30 to 31)	20	85	500	A3020C8A5
	30	135	500	A3030C13A5
	38	185	500	A3038C18A5
	50	235	3000	A3050C23A30
	60	285	3000	A3060C28A30
	70	315	3000	A3070C31A30
32 (32 to 33)	38	195	500	A3238C19A5
34 (34 to 35)	35	180	500	A3435C18A5

Diameter Ø (mm)	Height H (mm)	Watt. P (W)	Braid L (mm)	Part number	
38 (38 to 39)	38	235	1300	A3838C23A13	
	50	300	1300	A3850C30A13	
40 (40 to 41)	20	125	1500	A4020C12A15	
	30	200	3000	A4030C20A30	
	35	235	1500	A4035C23A15	
	38	200	500	A4038C20A5	
		270	500	A4038C27A5	
		270	1300	A4038C27A13	
		270	3000	A4038C27A30	
		45	305	1000	A4045C30A10
		50	345	1300	A4050C34A13
			345	3000	A4050C34A30
	55	380	1000	A4055C38A10	
	60	415	3000	A4060C41A30	
	70	375	500	A4070C37A5	

Diameter Ø (mm)	Height H (mm)	Watt. P (W)	Braid L (mm)	Part number
40 (40 to 41)	80	515	3000	A4080C51A30
		515	4000	A4080C51A40
44 (44 to 45)	38	300	500	A4438C30A5
	60	420	3000	A4460C420A30
48 (48 to 49)	70	500	2000	A4870C50A20
50 (50 to 51)	50	390	500	A5050C39A5
		390	1500	A5050C39A15
	80	450	500	A5080C45A5
60 (60 to 61)	38	375	500	A6038C37A5
	50	300	1500	A6050C30A15
	60	450	1500	A6060C45A15

BRAID CONNECTION, WITH EMBOSSEMENT



- Heaters available from stock:
 - Diameter : 25 to 60 mm
 - Height : 20 to 80 mm
 - Wattage : 85 to 515 W
- Outside sheath in brass.
- Embossement connection, wire + braid, low profile, 12 mm Ø, 5 mm height. Exit located at 16 mm from the edge.

Diameter Ø (mm)	Height H (mm)	Watt. P (W)	Braid L (mm)	Part number
30 (30 to 31)	32	135	500	B3032C13A5
32 (32 to 33)	32	145	1000	B3232C14A10
	38	185	500	B3238C18A5

Diameter Ø (mm)	Height H (mm)	Watt. P (W)	Braid L (mm)	Part number
32 (32 to 33)	60	300	1000	B3260C30A10
40 (40 to 41)	32	260	500	B4032C26A5
	38	250	4000	B4038C25A40

Diameter Ø (mm)	Height H (mm)	Watt. P (W)	Braid L (mm)	Part number
40 (40 to 41)	60	375	4000	B4060C37A40
	80	270	500	B4080C27A5
		500	4000	B4080C50A40
50 (50 to 51)	60	300	1000	B5060C30A10

Dimensions of the above heaters with wire connection, are also available with braid and embossement connection. Except heaters with heights smaller than 32 mm.

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SPECIAL SEALED MICA NOZZLE HEATERS

Diam. (mm)	Heig. (mm)	Watt. (W)
70	55	520
(70 to 71)	55	620
	60	500
	60	675
	65	730
	75	850
	80	915
	90	1030
72	20	210
(72 to 73)	25	270
	30	390
	35	450
	38	515
	45	575
	55	635
	60	695
	65	755
	70	815
	75	880
	80	940
	90	1060
74	20	215
(74 to 75)	25	275
	30	210
	35	400

Diam. (mm)	Heig. (mm)	Watt. (W)
74	38	465
(74 to 75)	45	525
	55	650
	60	715
	65	780
	70	840
	75	910
	80	965
	90	1090
76	20	220
(76 to 77)	25	285
	30	350
	35	415
	38	480
	45	545
	50	605
	55	670
	60	735
	65	800
	70	865
	75	930
	80	995
	90	1120
78	20	225
	25	290

Diam. (mm)	Heig. (mm)	Watt. (W)
78	30	360
(78 to 79)	35	425
	38	490
	45	555
	50	625
	55	690
	60	755
	65	820
	70	885
	75	960
	80	1020
	90	1150
80	20	230
(80 to 81)	25	300
	55	705
	60	775
	65	850
	70	910
	75	980
	80	1045
	90	1180
82	20	235
(82 to 83)	25	305
	30	375
	65	608

Diam. (mm)	Heig. (mm)	Watt. (W)
	38	515
	45	585
	50	655
	55	720
	60	795
	65	863
	70	930
	75	1000
	80	1070
	90	1210
84	20	245
(84 to 85)	25	315
	30	385
	35	460
	38	530
	45	600
	50	670
	55	745
	60	815
	65	885
	70	955
	75	1030
	80	1100
	90	1240
86	20	250

Diam. (mm)	Heig. (mm)	Watt. (W)
86	25	320
(86 to 87)	30	395
	35	470
	38	540
	45	615
	50	690
	55	760
	60	835
	65	910
	70	980
	75	1053
	80	1125
	90	1270
88	20	255
(88 to 89)	25	330
	30	405
	35	480
	38	555
	45	630
	50	705
	55	780
	60	855
	65	930
	70	1000
	75	1075
	80	1150

Diam. (mm)	Heig. (mm)	Watt. (W)
88	90	1300
90	20	260
(90 to 91)	25	340
	35	490
	38	570
	50	720
	55	800
	65	950
	70	1025
	75	1100
	80	1180
	90	1335
92	20	265
(92 to 93)	25	345
	30	425
	35	500
	38	580
	45	660
	50	740
	55	815
	60	895
	65	980
	70	1050
	75	1130
	80	1205

Diam. (mm)	Heig. (mm)	Watt. (W)
92	90	1360
94	20	270
(94 to 95)	25	350
	30	430
	35	510
	38	590
	45	670
	50	750
	55	830
	60	910
	65	990
	70	1070
	75	1150
	80	1230
	90	1390
Ø 98 (98 to 99 mm) H : 20 to 90 mm W : 285 W to 1450 W		
Ø 100 (100 to 101 mm) H : 20 to 90 mm W : 290 to 1480 W		

MICA BAND HEATERS UL CERTIFIED

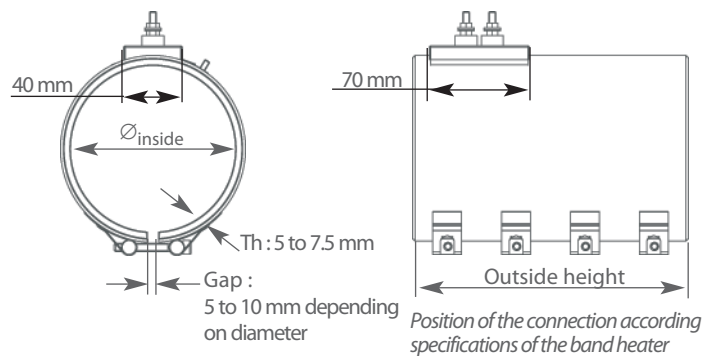


- Tailor made heaters, with UL components.
Certificate number : E251509.
- Max. watt density over the surface of the heater : 8 W/cm²
- Max. operating temperature over the surface of the heater: 350°C, depending on working conditions.
- Range of products :
Inside diameter : 120 to 630 mm
Outside height : 90 to 424 mm
Max. wattage 6000 W
Max. voltage : 600 V single phase or three phase, with a maximum intensity of 20 A per connection.
- Sheath and clamping sheath in aluminised steel (standard)
Band heaters also available in stainless steel.
- Electric insulation with mica.
- Connection bolts mounted on rectangular base 40 x 70 mm (single phase). *Three phase : please get in touch with us.*
- Connection :
- Without cap : terminals, leads.
- With cap : plug (V < 300V) , braid.
Cap direction : axial, radial or tangential.
Band heaters provided with earth wire .
- Clamping: barrel nuts or spring loaded screws (compensated clamping) for diameters over 300 mm. See definition p 9.
- Thickness of the band heater (without connection) : 5 to 7.5 mm, according voltage.
(The thickness of standard bandheaters is between 2.8 and 4 mm according the technology.)
- Wattage tolerance : +5% -10%



Band heaters certified UL for USA and CSA for Canada, according to certificate : E251509

- Dimensions of UL band heater, with terminals connection



- Optional accessories : support bridge, welded bracket, thermocouple. (Pictures p 12).
- How to define a special band heaters see p18.

Manufacturing depending on feasibility study and compatibility between watt density, voltage and dimension.

Our products specifications are subject to change without notice. We reserve the right to modify them according to the technical evolution

MICA BAND HEATER WITH CLAMPING SHEATH

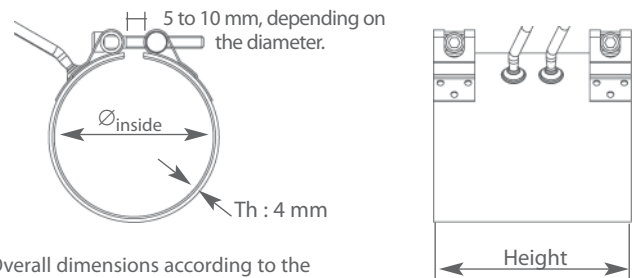
Tailor-made band heaters.

- Max. watt density over the surface of the heater: 4.5 W/cm².
- Max. working temperature: 340°C, depending on working conditions.
- Diameter : 50 to 380 mm.
- Heating height : 50 to 420 mm, depending on connection type.
- Clamping sheath in aluminised steel allows a proper support of heaters with important cutouts or large dimension.
- Electric insulation with mica.
- Connection: - Without cap : wire, stud or pins terminals
- With cap : stud, pin terminals or braid.
Cap directing : axial, radial or tangential.
See the connection definition p 10.
- Voltage: 230 V single phase (standard). Other voltages on request, from 12 to 500V.
- Clamping: barrel nuts or spring loaded screws (compensated clamping) for diameters over 300 mm. See definition p 9.
- Products are in accordance with EN 60335-1
Wattage tolerance : +5% -10%
Leakage current < 0.75 mA/kW



Mica band heater with stainless steel clamping sheath and pictogram

- Overall dimensions of a mica band heater with clamping sheath



Overall dimensions according to the connection type. Ex : wire connection.

- Special manufactures:
 - Accessories and options, see p 12.
 - How to define a special band heater, see p 18.

MICA BAND HEATERS

The band heaters shown below are tailor-made and are not kept in stock.

They can be fitted with accessories and options, see p 12. To define your requirements, please, see form p 18.

SEALED MICA HEATER



- Heater designed to complete our range of nozzle heaters, with heights over 90 mm.
- Max. operating temperature over the surface of the heater: 340°C, according to the working conditions.

- Max. watt density over the surface of the heater : 6.5 W/cm².
- Diameter : 50 to 380 mm. Height: 50 to 420 mm. Thickness : 2.8 mm
- Brass or stainless steel sheath metal, brazed or welded.
- Electric insulation with mica plates.
- Connection: galvanized steel braid in CMBPE type cap, axial directing at 30° angle. See p 10.
- Clamping types : square angle flange or barrel nuts. See p9
- Standard clamping gap of the heater: 5 mm.

HIGH WATT DENSITY MICA BAND HEATER



- Model designed for heating applications requiring high watt density.
- Max. working temperature over the surface of the heater : 340°C, depending on the working conditions.

- Max. watt density over the surface of the heater: 8 W/cm².
- Diameter : 50 to 150 mm. Height: 30 to 111 mm. Thickness: 3 mm
- Sheath metal : aluminized steel.
- Electric insulation with mica.
- Connection : Wire connection coming from the thickness. p 10.
- Clamping with straps fitted with barrel nuts and M4 screws, lenght according to the diameter of the heater.
- Standard clamping gap of the heater: 5 mm

LARGE DIMENSIONS MICA BAND HEATERS

- Max. manufacturing dimensions for mica band heaters: 630 mm diameter, 600 mm height.
- Possibility of manufacturing heaters with very large diameters, to be used for drum heating. Several models of belts, with or without thermal insulation or waterproof are available from stock. See the "Drum heater" section.

Our products specifications are subject to change without notice. We reserve the right to modify them according to the technical evolution

CERAMIC BAND HEATERS

Tailor-made heaters.

- Max. watt density over the surface of the heater: 9 W/cm^2 .
- Max. working temperature over the surface of the surface of the heater: 900°C , depending on working conditions.
- Diameter : 60 à 630 mm.
(min \varnothing : 80 mm, for tangential connection box with terminals.)

Heating height : 30 to 450 mm (multiple of 15 mm).

- Mini height is defined according to the chosen connection type.

Total height : heating height + 4 mm for the thickness of the clamping sheath folded over the edges.

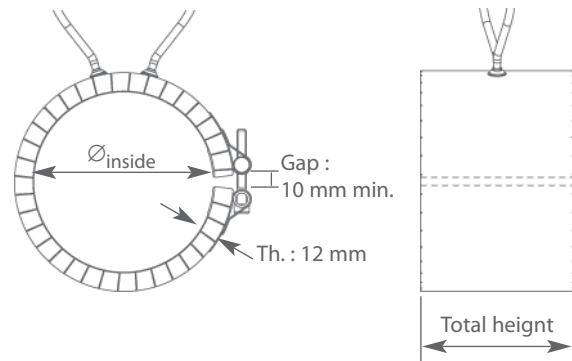
- Clamping sheath in aluminized steel, stainless steel or inconel, depending on the working temperature and surroundings.
- Electric insulation with steatite elements.
- Thermal insulation, located between the ceramic mat and the clamping sheath.
- Connection:
 - Without cap : wires, stud, terminals.
 - With cap : stud terminals, pins or braid.
 Directing of the cap : axial, radial or tangential direction. See the definition of the connection, p 10.
- Voltage: from 230 V single phase (standard) to 400 V three-phase, star or delta, according to the connection.
Max voltage : 500 V. Other voltage available. Please consult us.
- Clamping: barrel nuts or spring loaded screws (compensated clamping) for diameters over to 300 mm. See the definition of clamping variations, p 9.

- Products are in accordance with EN 60335-1
Wattage tolerance: +5% -10%



Ceramic band heater in stainless steel, with barrel nuts clamping

- Overall dimensions of a ceramic band heater.



Overall dimensions according the connection type. Sketch hereabove : leads termination.

- Products are in accordance with EN 60335-1
Leakage current $< 0.75 \text{ mA/kW}$
- Special manufactures :
 - Accessories and options, see p 12.
 - How to define a special band heater, see p 18.



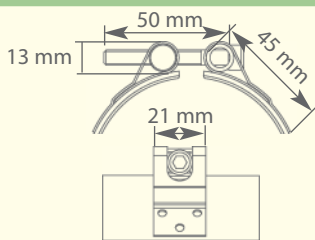
Ceramic band heater , with B.A.J. option stud terminals in terminal box and barrel nuts clamping.

Ceramic band heater , with cutouts, (holes and slots). 3 pins UTFCEE plug connection and compensated clamping.

Ceramic band heater, 2 pins radial plug connection with compensated clamping.

Ceramic band heater with thermocouple bridge, 2 pins radial plug connection and barrel nuts clamping.

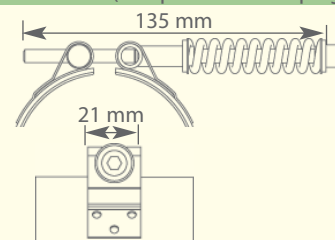
Barrel nuts



Barrel nuts clamping, threaded barrel and BTR M6 screws.

According to the dimensions of the heater, and/or depending on space restriction, the clamping system can be fitted: either on straps, independently of the heater or on a clamping sheath.

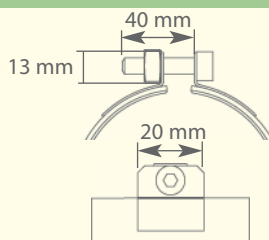
Barrel nuts and spring loaded screws (compensated clamping)



Barrel nuts clamping, threaded barrel and BTR M6 screws and heavy duty springs, allowing a powerful positive clamping.

According to the dimensions of the heater, and/or depending on space restriction, the clamping system can be fitted either on a clamping sheath (used in most applications), on straps independently of the heater.

Square angle flange



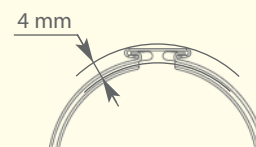
Clamping with BTR M6 screw and square locking nuts.

Mica band heaters: Square formed by clamping sheath with edges folded at 90° angle.

Clamping sheath band heaters: heavy gauge metal square welded to the clamping sheath.

As standard, the clamping height is equal to the height of the heater.

Sliding keyway



Both ends of the clamping sheath are shaped as a channel. Clamping is achieved with a trapezoidal keyway sliding over these channels.

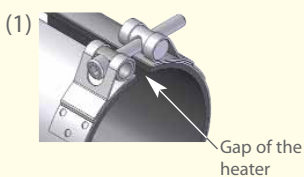
The keyway is forced fitted.

Clamping sheath has the same height as the heater. The height of the keyway is the same as the heater minus 10 to 15 mm.

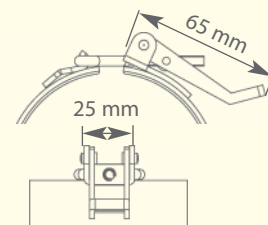
The number of clamping devices is defined according to the dimensions and to the electrical characteristics of the band heater.

Clamping assembly :

- As standard : clamping is in the gap of the active element ⁽¹⁾
 - Special manufacture: clamping is out of line with the gap ⁽²⁾.
- These heaters are fitted with a clamping sheath.



Quick release fasteners



Clamping system fitted on anti-burning clamping sheath or on energy saving heaters, BAJ type. (See p 15). Band heaters fitted with a clamping sheath.

Barrel nuts	Spring loaded screws	Square angle flange	Key way	Quick release fastener
By default: - Mica clamping sheath, - Sealed mica heater with clamping sheath. - Ceramic.	By default: - Mica $\varnothing \geq 300$ mm - Ceramic $\varnothing \geq 300$ mm.	By default: - Mica $\varnothing < 200$ mm. - Encapsulated sealed nozzle heater	Optional assembly: - Mica $\varnothing < 100$ mm.	Optional assembly: - Ceramic, - Energy saving band heaters, - Band heaters fitted with an anti-burning sheath.
Optional assemblies: - Mica $\varnothing < 300$ mm.	Optional assemblies : - Mica clamping sheath, - Sealed mica heater with clamping sheath, - Encapsulated nozzle heater, and clamping sheath.	Optional assemblies : - Mica clamping sheath, - Ceramic. Possible assembly but not recommended : - Mica $\varnothing > 100$ mm	Possible assemblies but not recommended: - Mica clamping sheath (option 60) - Mica $\varnothing \geq 100$ mm. - Ceramic $\varnothing < 100$ mm.	

In case of space restrictions, please consult us. See p18 , How to define special band heaters.

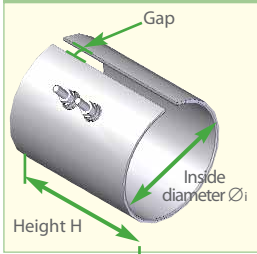
Our products specifications are subject to change without notice. We reserve the right to modify them according to the technical evolution

CONNECTIONS FOR BAND HEATERS

- Description of the different connections, with and without cap:
 - Wires : flexible wires, nickel core, fiberglass insulated, designed for a maximum operating temperature of 340°C.
 - Connection with embossement and leads in the thickness : each conductor is protected by a galvanized steel braid.
 - Terminals : M4, M5 or M6 threaded terminals, depending on the watt density, mounted with 2 washers and 1 nut per terminal.
 - Plugs : 2 pins, \varnothing 6 mm, axe 19 mm, in nickered stainless steel. Connection boxes, other models of pins in option. See p12.
 - Braid (specific for termination with cap) : 2 conductors wire termination, protected by a galvanized steel braid.
- All of our band heaters are provided with an earth wiring, by default. Delivery without ground wire, only on request.

CONNECTIONS WITHOUT CAP

Legend



Orientation of the connections

Both terminations on the same side, parallel to the gap



Both terminations on the same side, perpendicular to the gap



One termination on each side of the gap



Standard band heaters are in aluminised sheath or stainless steel as option (no stainless for steel band heaters with wires in the thickness and connection with embossement). The dimensional ranges are the same for those two types mentioned above, except special specifications.

Connection without cap, single phased, are centered on the band heater's height . (except for connections leads in the thickness and leads under embossement). Dim. between the two axes: 19 mm.

Connections , on the same side, parallel to the gap

Pins

Intensity < 9 A



Mica

\varnothing i : 50 to 150 mm
H : 55 to 215 mm

Mica with clamping sheath

\varnothing i : 70 to 380 mm
H : 60 to 215 mm

Terminals

Intensity < 13.5 A



Mica

\varnothing i : 50 to 150 mm
H : 55 to 215 mm

Mica with clamping sheath

\varnothing i : 70 to 380 mm
H : 60 to 215 mm

Ceramic : on request

Wires

Intensity < 20 A



Mica

\varnothing i : 50 to 150 mm (alu)
 \varnothing i : 50 to 150 mm (st. steel)
H : 55 to 215 mm

Mica with clamping sheath

\varnothing i : 70 to 380 mm
H : 60 to 215 mm

Ceramic : on request

Connections , on the same side, perpendicular to the gap

Terminals

Intensity < 13.5 A



Mica with clamping sheath

\varnothing i : 70 to 380 mm
H : 45 to 215 mm

Ceramic : on request

Wires

Intensity < 20 A



Mica

\varnothing i : 70 to 380 mm
H : 45 to 215 mm

Ceramic

\varnothing min: 70 to 380 mm
H : 30 to 450 mm

Connections located on each side of gap

Terminals

Intensity < 13.5 A



Mica

\varnothing i : 50 to 150 mm
H : 30 to 111 mm

Mica with clamping sheath

\varnothing i : 70 to 380 mm
H : 65 to 111 mm

Ceramic : on request

Wires

Intensity < 20 A



Mica

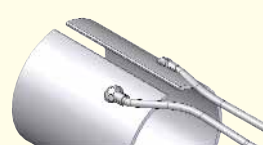
\varnothing i : 25 to 150 mm (alu)
 \varnothing i : 40 to 150 mm (st. steel)
H : 20 to 111 mm

Ceramic

\varnothing i : 70 to 380 mm
H : 60 to 215 mm

Wires under bossage

Rated current < 4.5 A



Mica

\varnothing i : 30 to 150 mm
H : 32 to 111 mm

(This heater is only available in brass)

Wires in the thickness

Intensity < 4.5 A



Mica

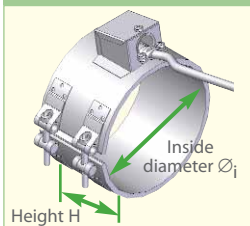
\varnothing i : 30 to 150 mm
H : 30 to 111 mm

Possibility to add plugs, in option. See chapter "Options" p 12 and "Accessories" documentation.

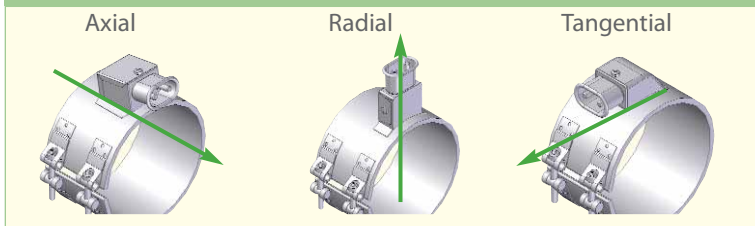
Refer to p18 "How to define special band heaters" to help you to define your quotation. Choose the connection type and fill in the enclosed form.

CONNECTIONS WITH CAP

Legend

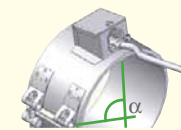


Orientation of the caps



Std positioning of the cap

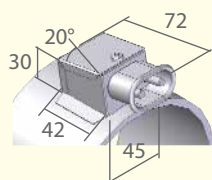
$\text{Ø}_{\text{band h.}} < 100 \text{ mm}$ $\alpha : 180^\circ$
 $\text{Ø}_{\text{band h.}} \geq 101 \text{ mm}$ $\alpha : 90^\circ$
 Other angles on request



- Connection description : Other models, in option: p.12.
- Mica and ceramic b. h. : standard aluminised sheath, option stainless steel.
Caps : standard aluminised plate, option stainless steel.
- Sealed nozzle heaters & caps : all pieces made of brass or stainless steel
- Positioning of caps on the height : please consult us.
- The sketches of the connection shown below, correspond to Øi and H ranges mentioned in the table. Other ranges, see note(1).
- Models of caps, below, for single phase connection. Possibility of three phase (stud terminals and braid), commutable or not. Please, consult us.

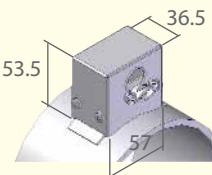
Axial orientation

Pins- Intensity < 16 A (single phase)



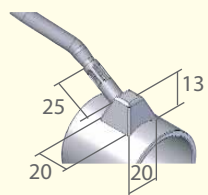
Mica
 $\text{Øi} : 70 \text{ to } 380 \text{ mm} / \text{H} : 44 \text{ to } 424 \text{ mm}$
Other range (1) :
 $\text{Øi} : 60 \text{ to } 250 \text{ mm} / \text{H} : 35 \text{ to } 43 \text{ mm}$
Ceramic
 $\text{Ø}_{\text{min}} : 60 \text{ mm} / \text{H} : 45 \text{ to } 450 \text{ mm}$

Terminals - Intensity < 13.5 A (single phase)



Mica
 $\text{Øi} : 95 \text{ to } 380 \text{ mm} / \text{H} : 70 \text{ to } 424 \text{ mm}$
Other range(1) :
 $\text{Øi} : 95 \text{ to } 250 \text{ mm} / \text{H} : 40 \text{ to } 69 \text{ mm}$

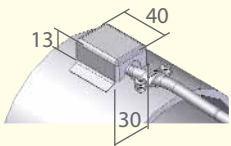
Braid + CMBPE type cap, angle 30° - Intensity < 7.5 A (single phase)



Sealed mica (brass)
 $\text{Øi} : 30 \text{ to } 250 \text{ mm} / \text{H} : 91 \text{ to } 215 \text{ mm}$
Sealed mica (stainless steel)
 $\text{Øi} : 30 \text{ to } 250 \text{ mm} / \text{H} : 61 \text{ to } 215 \text{ mm}$
Mica
 $\text{Øi} : 45 \text{ to } 250 \text{ mm} / \text{H} : 41 \text{ to } 130 \text{ mm}$

Other orientations : radial or tangential, with different slopes . (see p12)

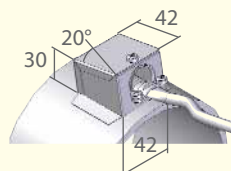
Braid + small bulk cap - Intensity < 20 A (single phase)



Mica
 $\text{Øi} : 90 \text{ to } 250 \text{ mm} / \text{H} : 30 \text{ to } 49 \text{ mm}$
 & $\text{Øi} : 60 \text{ to } 380 \text{ mm} / \text{H} : 50 \text{ to } 111 \text{ mm}$
 $I_{\text{max}} : \text{H} \leq 111 \text{ mm} : 13.5 \text{ A, beyond } 20 \text{ A.}$
Other range (1) :
 $\text{Øi} : 60 \text{ to } 380 \text{ mm} / \text{H} : 112 \text{ to } 424 \text{ mm} (I_{\text{max}} 20 \text{ A})$

Also available with radial or tangential ends.

Braid - Intensity < 20 A (single phase)



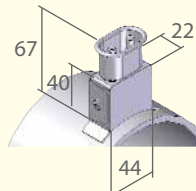
Mica
 $\text{Øi} : 60 \text{ to } 380 \text{ mm} / \text{H} : 44 \text{ to } 69 \text{ mm}$
 & $\text{Øi} : 70 \text{ to } 380 \text{ mm} / \text{H} : 70 \text{ to } 424 \text{ mm}$
Ceramic
 $\text{Ø}_{\text{min}} : 60 \text{ mm} / \text{H} : 45 \text{ to } 450 \text{ mm}$

In case of particular bulks, please consult us.

Note (1) : for these ranges, please consult us for cap dimensions.

Radial orientation

Pins - Intensity < 16 A (single phase)

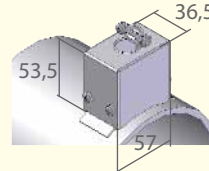


Also perpendicular available on the edge of the band heater

Mica
 $\text{Øi} : 50 \text{ to } 250 \text{ mm} / \text{H} : 22 \text{ to } 43 \text{ mm}$
 et $\text{Øi} : 50 \text{ to } 380 \text{ mm} / \text{H} : 44 \text{ to } 424 \text{ mm}$
 $I_{\text{max}} : \text{H} \leq 29 \text{ mm} : 4.5 \text{ A, beyond } 16 \text{ A.}$
Other range (1) :
 $\text{Øi} : 35 \text{ to } 49 \text{ mm} / \text{H} : 22 \text{ to } 285 \text{ mm}$

Ceramic
 $\text{Ø}_{\text{min}} : 60 \text{ mm} - \text{H} : 30 \text{ to } 450 \text{ mm}$

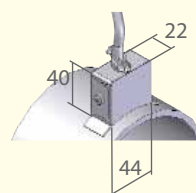
Terminals - Intensity < 13.5 A (single phase)



Mica
 $\text{Øi} : 75 \text{ to } 250 \text{ mm} / \text{H} : 35 \text{ to } 43 \text{ mm}$
 and $\text{Øi} : 75 \text{ to } 380 \text{ mm} / \text{H} : 44 \text{ to } 424 \text{ mm}$

Ceramic
 $\text{Ø}_{\text{min}} : 60 \text{ mm} / \text{H} : 30 \text{ to } 450 \text{ mm}$

Braid - Intensity < 20 A (single phase)



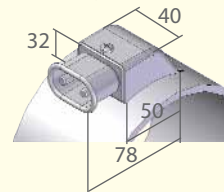
Mica
 $\text{Øi} : 50 \text{ to } 250 \text{ mm} / \text{H} : 22 \text{ to } 43 \text{ mm}$
 and $\text{Øi} : 50 \text{ to } 380 \text{ mm} / \text{H} : 44 \text{ to } 424 \text{ mm}$
 $I_{\text{max}} : \text{H} \leq 29 \text{ mm} : 4.5 \text{ A, beyond } 20 \text{ A.}$

Other range (1) :
 $\text{Øi} : 35 \text{ to } 49 \text{ mm} / \text{H} : 22 \text{ to } 285 \text{ mm}$

Ceramic
 $\text{Ø}_{\text{mini}} 60 \text{ mm} / \text{H} : 30 \text{ to } 450 \text{ mm}$

Tangential orientation

Pins Intensity < 16 A (single phase) Or braid - Intensity < 20 A (single phase)



Mica
 $\text{Øi} : 70 \text{ to } 380 \text{ mm} / \text{H} : 51 \text{ to } 424 \text{ mm}$
Other range (1) : pins
 $\text{Øi} : 110 \text{ to } 250 \text{ mm} / \text{H} : 32 \text{ to } 50 \text{ mm}$

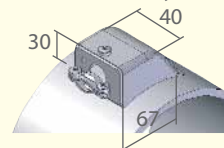
Other range (1) : braid
 $\text{Øi} : 90 \text{ to } 250 \text{ mm} / \text{H} : 35 \text{ to } 50 \text{ mm} (I_{\text{max}} 20 \text{ A})$
 et $\text{Øi} : 60 \text{ to } 380 \text{ mm} / \text{H} : 112 \text{ to } 424 \text{ mm}$
 $\text{Øi} : 60 \text{ to } 250 \text{ mm} / \text{H} : 50 \text{ to } 111 \text{ mm} (I_{\text{max}} 13.5 \text{ A})$

Braid



Ceramic
 $\text{Ø}_{\text{min}} : 60 \text{ mm} / \text{H} : 45 \text{ to } 450 \text{ mm}$

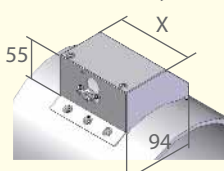
Terminals - Intensity < 13.5 A (single phase)



Mica
 $\text{Øi} : 70 \text{ to } 380 \text{ mm} / \text{H} : 51 \text{ to } 424 \text{ mm}$

Other range(1) :
 $\text{Øi} : 95 \text{ to } 250 \text{ mm} / \text{H} : 40 \text{ to } 50 \text{ mm}$
 and $\text{Øi} : 110 \text{ to } 250 \text{ mm} / \text{H} : 35 \text{ to } 39 \text{ mm}$

Terminals - Intensity < 20 A (single phase)



Ceramic
 $\text{Ø}_{\text{min}} : 60 \text{ mm} / \text{H} : 45 \text{ to } 450 \text{ mm}$

X: If the cap height equals the band height

OPTIONS FOR BAND HEATERS

The options mentioned below come in addition to options already described before

ACCESSORIES

Heat sensor bridge



Mica
Sealed mica h.
Sealed mica nozzle h.
Mica w. clamping sheath
Ceramic

Support inserted on the heater, then welded. Thread according to the diameter of the support :

Ø	1/8	1/4	3/8	8	8	10	10	12	12	14	14	16
Pas	gas	gas	gas	100	125	100	150	100	175	100	150	100

Welded brackets



Mica
Mica w. clamping sheath
Ceramic

Welded bracket which can be used as cable guides or clips for all kind of small equipment.

TEMPERATURE SENSORS

Thermocouple

Type J - 0 to 700°C
Type K - 0 to 1000°C

Sealed mica h.
Sealed mica nozzle h.
Mica w. clamping sheath
Ceramic

2 possibilities:

- Insulated thermocouple: under bossage connection , axial.
- Insulated or not insulated thermocouple blended, brazed into a small cap type CMBPE (max. rated current 4.5 A)

MARKING

Special marking

By default:

Diameter Height Wattage
Voltage Code ACIM

Mica
Sealed mica h.
Sealed mica nozzle h.
Mica clamping plate
Ceramic

Modification of customized marking . Please, consult us.

SPECIAL MOUNTING

Hinge on a clamping sheath



Mica w. clamping sheath

Clamping sheath fitted with a hinge to make mounting easier. It is highly recommended to put notches on the external sheath of the heating element.

Part of bandheater



Mica
Sealed mica h.
Sealed mica nozzle h.
Mica w. clamping sheath
Ceramic

Band heaters can be manufactured in several parts, for different reasons like bulk, easiness of installation or manufacturing problems.

WIRING

Options for CMBPE* type caps

Intensity : 7.5 A

Slope



0° 45° Other angle

Sealed mica h.
Sealed mica nozzle h.
Mica w. clamping sheath

Orientation



Axial

Radial

Tangential

Possibility to combine options of tube slope and options of orientation cap.

CMBPE* type square cap



Sealed mica h.
Sealed mica nozzle h.
Mica clamping plate

Insulated brazed cap, just like the pyramidal CMBPE cap. All positions available (axial, radial, tangential). Please , mention the angle you need.

CMBPE* cap installed at the edge of the band heater



Sealed mica h.
Sealed mica nozzle h.

CMBPE type cap positionned at 11 mm from the edge and at 180° from the clamping.

CMBPE cap moved forward other than 180°



Ex : Cap installed at 90° from the gap

Sealed mica h.
Sealed mica nozzle h.
Mica clamping plate

For this kind of option, please, mention the angular value you need, from the gap of the band.

Extended tube on CMBE cap



Sealed mica h.
Sealed mica nozzle h.
Mica clamping plate

This option is available for tubes longer than 25 mm, for all orientations : axial, radial and tangential. Please, mention the angle.

*CMBPE : Insulated mica nozzle band heater

Connection

Special plug's assembly



Ref: CEE22



Ref: STAS.3.N (male)
STAK.3.N (female)

Sealed mica h.
Sealed mica nozzle h.
Mica w. clamping sheath
Ceramic

Plug CEE : plug 2 poles + earth, 250V, 10A.
Plug STAS : plug 3 poles + earth, 400V, 16A.
For the other kinds of plugs, please, consult us.

UTFCE plug



Mica w. clamping sheath
Ceramic

2 poles 5x2 mm, space between poles 12.5 mm + earth 6x2 mm. 240V, 16A.

Beaded wires

They protect the wires from high temperatures. Length to be specified, by multiple of 100 mm.

Mica
Sealed mica nozzle h.
Ceramic

Pins cap brazed on tube



Ex : band equipped with a sensor support

Sealed mica h.
Sealed mica nozzle h.
Mica w. clamping sheath

Option: box with pins, brazed on the tube of a CMBPE box type. Radial position only. Pins with 2 poles, Ø 6 mm, TCT 19 mm, in nicked steel.

Interlink connector



Mica w. clamping sheath
Ceramic

Ex. of assembly on a band heater equipped with a hinge

Thanks to this option, you can connect 2 parts with only one connection.

Without earth ground wire

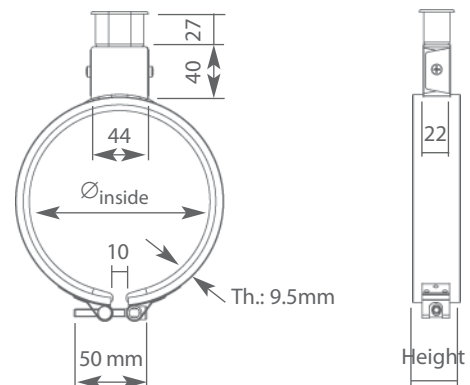
Our bands are equipped with earth ground wire. If you don't need it, please mention it on your order.

SHEATHED HEATER WITH RADIAL CONNECTOR

- Max. watt density on the tubular element : 4.8 W/cm².
- Max. operating temperature over the surface of the heater : 450°C
- Diameter min : 139 mm
Height min : 18 mm
Wattage : 500 to 1015 W - Voltage: 230 V or 400 V single phase.
Other dimensions upon request.
- Clamping sheath in aluminised steel
- Stainless steel tubular element.
- Radial box connection, with nicked steel pins Ø 6 mm, space between axes 19 mm, and cover pins.
Earth connection, thanks to the pin connector.
- Clamping : welded clamping barrels and BTR M6 screws, positioned on the clamping sheath
- Our products follow the EN 60335-1 norm
Wattage tolerance : +5% -10%
Leaking current < 0.75 mA/kW
- Special manufacturings:
- How to define a special band heater, see p 18.
- As the tubular element is bent on a specific diameter, heaters must perfectly suit to the support.



- Dimensional of a standard radial connector band heater:



Diameter Ø (mm)	Height H (mm)	Voltage (V)	Wattage (W)	Stock
139	18	230	500	B13918C50U22
	38	230	1015	B13938C101U22
139	18	400	500	B13918C50U38
	38	400	1015	B13938C101U38

Our products specifications are subject to change without notice. We reserve the right to modify them according to the technical evolution

MINERAL INSULATED BAND HEATERS AVAILABLE FROM STOCK

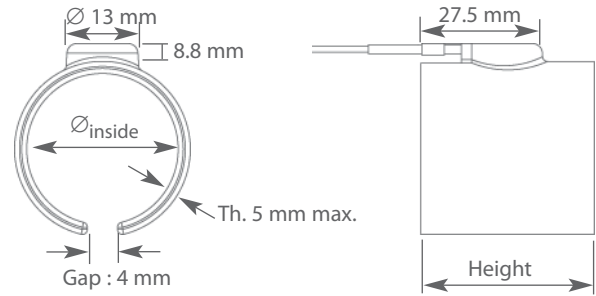
- Very high watt density band heaters (W/cm^2)

CHARACTERISTICS

- Standard watt density over the surface of the heater: $10 W/cm^2$
- Max. operating temp. over the surface of the heater: $800^\circ C$, under specific conditions.
- Diameter : 25 to 70 mm
Height : 25 to 60 mm
Wattage : from 200 to 880 W, 230 V .
- Covering sheath in stainless steel.
- High watt density, electric mineral insulation.
- Standard connection : nickel core, silicone fiberglass insulated high temperature. Leads protected by a galvanized metallic braid, length 330 mm.
- Axial cap, at the edge of the band heater.
- Standard clamping : clamping sheath + barrel nuts. Special clamping : sliding keyway (see below).
- Products are in accordance with the EN 60335-1 norm:
Wattage tolerance : +5% -10%
Leakage current $< 0.75 mA/kW$
- Clamping sheath + barrel nuts :
Clamping by BTR M4 screw, mounted on a sheath having the same height as the heater. This sheath is set directly on the heater to avoid any expansion.

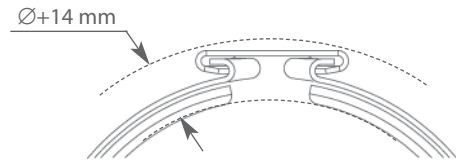
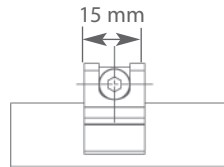
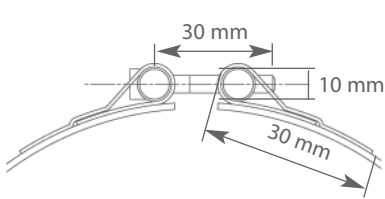
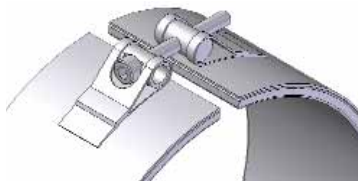


- Dimensional of a standard mineral insulated band heater:



Dimensional of a heater without its clamping system.
Clamping type to be defined according to your available space.

- Clamping with sliding keyway :
System designed for assemblies with little space. Mainly used for little diameters of band heaters. Folded clamping sheath on which slides the sliding keyway.



Diameter Ø (mm)	Height H (mm)	Wattage (W)	Stock
25	25	200	M2525C20A3
	30	250	M2530C25A3
30	25	250	M3025C25A3
	30	300	M3030C30A3
	35	350	M3035C35A3
	38	380	M3038C38A3
	50	500	M3050C50A3
32	30	320	M3230C32A3
35	30	340	M3530C34A3
	35	400	M3535C40A3

Diameter Ø (mm)	Height H (mm)	Wattage (W)	Stock
38	38	480	M3838C48A3
40	25	330	M4025C33A3
	30	400	M4030C40A3
	35	460	M4035C46A3
	38	500	M4038C50A3
	45	580	M4045C58A3
	50	650	M4050C65A3
42	30	420	M4230C42A3
	30	440	M4530C44A3

Diameter Ø (mm)	Height H (mm)	Wattage (W)	Stock
45	38	550	M4538C55A3
50	30	500	M5030C50A3
	35	580	M5035C58A3
	38	625	M5038C62A3
	50	800	M5050C80A3
60	30	600	M6030C60A3
	38	750	M6038C75A3
70	38	880	M7038C88A3

- With high watt density and high working temperatures, mineral insulated band heaters must be perfectly adapted to their support. Therefore, their clamping capacity has to be the same as the diameter of their support.

Our products specifications are subject to change without notice. We reserve the right to modify them according to the technical evolution

- The energy saving BAJ band heaters are specially set up on injection moulding machines and extrusion heads. By combining a band heater to a BAJ insulation system, we can guarantee a very low heating loss, both conductive and radiative. This system allows a lower energy consumption than compared to an installation equipped with standard, non insulated band heaters.

This system exists in 2 types :

- mini B.A.J. : insulation provided by a thin layer of insulator, energy saving of 15% on average.
- B.A.J. : insulation provided by a thick layer of insulator, energy saving of 40% on average.

- The energy saving band heater technology also called BAJ (Brevet Acim Jouanin), can be adapted to all kind of band heaters, mica and ceramic.

- The particular design allows a very good preservation of the insulator even with high temperature.

The advantage of the BAJ is the thermal isolation of each

- bandheater, which enables to respect the different heating zones on injection and extrusion lines.

CHARACTERISTICS

External sheath, in polished steel or steel treated in the surface, protecting the insulator from all sort of compression.

- It acts like a reflector, spreading the radiation towards the surface to be heated. The outside frame is made of two halves cylinder connected by a hinge for easy mounting on the sheath.

Insulating structure with a low thermal conductivity, placed between the frame and the band heater. The thickness of the the insulator has been specially improved in order to minimize eventual loss.

- Mica or ceramic band heaters, depending on the application.
- Their thermal capacity respects all insulation factors in order to avoid overheating problems and premature failure of the band heater. IP 40 band heater.

The band heater and the frame are clamped with barrel nuts, which allows a strong clamping and is specially designed for a mounting where space is limited.

- Connection under cap : axial, radial or tangential, set up on the outside frame. Different types of connection, see p 11.

Products are in accordance with the EN 60335-1norm

- Wattage tolerance : +5% -10%
- Leakage current < 0.75 mA/kW.

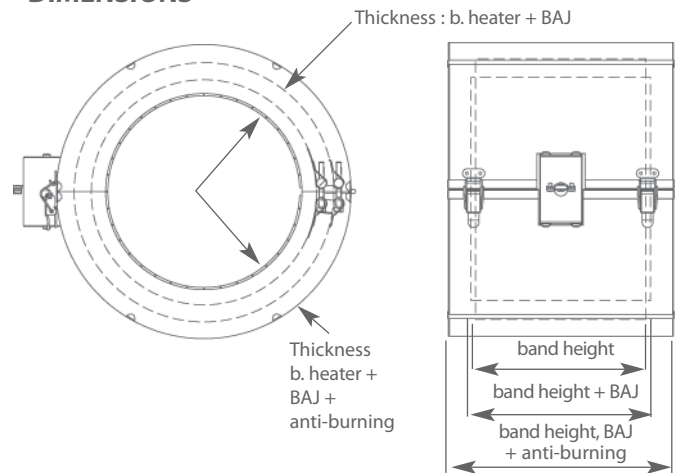
Manufacturing depending on feasibility study and compatibility between watt density, sizes and accessories.



Cut showing us different thickness of materials of a heater fitted with a B.A.J. system and an anti-burning plate.

Mica heater supplied with a B.A.J. system and an anti-burning plate.

DIMENSIONS



Kind of band heater	Thickness	Total height
Insulated ceramic heater (B.A.J.)	28 mm	H + 6 mm
Insulated ceramic heater (B.A.J.) with anti-burning sheath	50 mm	H + 11 mm
Insulated mica heater (mini B.A.J.)	10 mm	H
Insulated mica heater (B.A.J.)	20 mm	H + 6 mm
Insulated mica heater (mini B.A.J.) with anti-burning sheath	50 mm	H + 11 mm

Sizes without connection cap.

OPTIONS

- Mini BAJ assembly on a mica band heater : Option 6
- BAJ assembly on a mica or ceramic band heater.
- In order to protect users from eventual burning, an anti-burning sheath (also called open work sheath) can be installed on a band heater supplied with the BAJ system.
- The energy saving band heaters can be fitted with sensors supports. See option 2, p12.

BAND HEATERS WITH BLOWER ASSEMBLY

- Ventilated band heaters are some heating units fitted with forced air blowers. This system enables a faster cooling of the scabbard.
Mostly used for extruders and press moulding machines, this technology allows efficient working of the resin and of the sensitive plastic materials, which need high and stable working temperatures.
- A ventilated band heaters assembly enables to prevent barrels from the self-overheating effect.
- The association between band heater and ventilation is a good answer to these requests :
 - quick heating process thanks to band heaters,
 - quick cooling thanks to the ventilation system by forced air heating, minimizing the thermal inertia of the scabbard.



Ceramic band heater with blower assembly

CHARACTERISTICS

- The frame made in polished or treated stainless steel consists of 2 halves cylinders connected by a hinge. This one will channel the air on the scabbard in order to optimize the cooling effect.
A security system maintains the frame on the scabbard to enable intervention without the risk that it separates from the scabbard .
- Band heaters are set up on a frame gathering the connections of band heaters.
(Number of band heaters depending on space).
- An intensive cooling effect generated by the forced air blowers and combined to a good thermal conductivity thanks to the dielectric insulator of the band h. will allow rapid elimination of calories.
- Ceramic or mica band heaters, according to the application.
- IP 40 band heater

The band heaters' clamping is made barrel nuts. The frame is closed by adjustable fasteners.

Connection : terminals under box, single or three phase voltage. Tangential or radial position, centered on the height of the ventilated assembly and fitted on the frame opening.

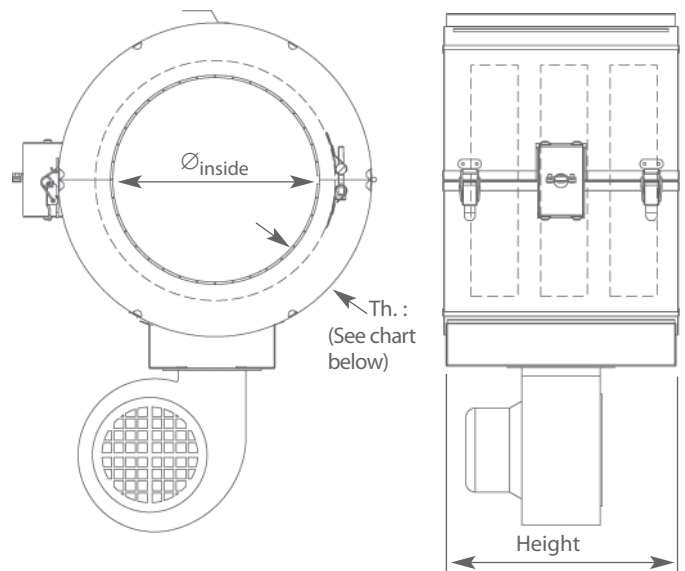
Products are made in accordance with the EN 60335-1 norm
Wattage tolerance : +5% -10%
Leakage current < 0.75 mA/kW.

OPTIONS

- To define your product, refer to p 18.
In order to protect users from eventual burning, an anti-burning sheath (also called open work sheath) can be installed in a band heater with blower assembly.

Band heaters with blower assembly, can be fitted with temperature regulating sensors. In this case a special boring should be foreseen. See option 2, p12.

DIMENSIONS



The dimensions of the fans cannot be mentioned because their bulk is particular to each application.

H : height of the band heater

Kind of band heater	Thickness
Ventilated ceramic band heater	30 mm
Ventilated ceramic band heater and anti-burning sheath	50 mm
Ventilated mica band heater	30 mm
Ventilated mica band heater and anti-burning sheath	50 mm

Dimensions without fan.

The manufacturing of "heaters with blower assembly", units are subjected to our approval, depending on power rating, current, sizes, terminations and accessories. Please, consult us..

To define this kind of bandheater, we request you to send us your precise specifications.
Pictures for information only.

Part of mica band heater with clamping sheath, equipped with optional UTFCEE plug (option).



Mica band heater, with brass sheet and specific clamping

Mica band heater fitted with a B.A.J. system and various cut and holes.



Mica band heater divided in several heating parts, each one having its own connection



Mica band heater with cutouts and clamping by specific square angle flange



Mica band heater with cutouts in various shapes and clamping by adjustable fasteners.



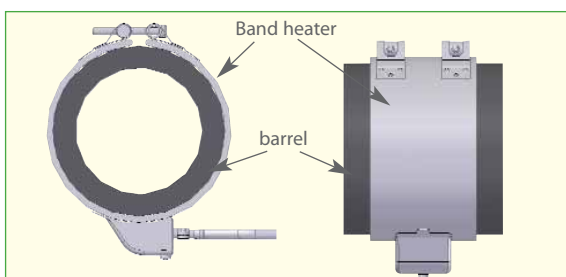
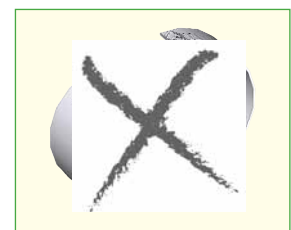
Small diameter ceramic band heater equipped with the optional temperature sensor support.



ASSEMBLY RECOMMENDATIONS FOR BAND HEATERS

To favour heating transfer between the band heater and its sheath, some precautions have to be taken. For further information, please see the assembly instructions :

- We advise you to use a band heater whose wattage covers the heating needs. A band heater with too high power could increase not only the risk of overheating but also the switching frequency of the temperature controller. Do not operate above rated voltage, watt density or temperatures. Excess voltage, wattage or temperature could alter the life time of the band heater.
- Our band heaters are designed to operate according the principle of heating conduction : they must never operate in air without any support.
- **Please avoid to open band heaters during their assembly** on the sheath : irreversible internal damage could occur. If possible, they must be slipped over the end of the scabbard. Only the mica band heaters equipped with a hinge or the ceramic band heaters can be opened.
- Band heaters and wirings must be protected from eventual material contamination in order to preserve their heating capacity. Before the assembly, the barrels have to be cleaned.



- **Advised disposition :**
 - the inside diameter of the band heater must perfectly fit on the diameter of the barrel in order to facilitate a good heating exchange.
 - the connection must be placed upside down, in order to avoid any overheating.
- Band heaters undergo a loosening effect after the first heating cycle. It is necessary to tight them again in order to improve heating transfer.

HOW TO DEFINE A BAND HEATER

Also available on our web-site : www.acim-jouanin.fr

Company Tel : / Fax :
 Contact name : Department : Date :
 Brand of machine where the heater is installed on :

Kind of band heaters : <input type="checkbox"/> Mica band heater (p 4 and 7) <input type="checkbox"/> Sealed nozzle mica heater (p 2 et 5) <input type="checkbox"/> Ceramic band heater (p 8) <input type="checkbox"/> Mica b. h. with radial connection (p 13)	Dimensional of the heater : Diameter (mm) : Height (mm) : Wattage (W) : Voltage (V) : Single / Three phase	Material of the heater : <input type="checkbox"/> Aluminised steel <input type="checkbox"/> Stainless steel <input type="checkbox"/> Brass Number of pieces:
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Connection : Please, precise type of bandheater and type of connection. For cable connection, please precise type of wires and length.

Same side, ⊥ gap		Same side, // gap			Connections on each side			
Mica - Ceramic	Mica - Ceramic	Mica	Mica - Ceramic	Mica - Ceramic	Mica - Ceramic	Mica - Ceramic	Mica	Mica

Wire connection : Standard (fiberglass) High temperature wires Silicone cable Metallic braid Other :
 Length multiple by 500 mm (mm) : Protection : Bead Length (mm) :

Connection under cap

Axial					
Radial					
Tangential					
	Mica - Ceramic	Mica - Ceramic	Mica - Ceramic	Mica	Mica - Sealed mica

Options and special manufactures:
 For the following information, please, specify the position and the dimensional on the sketch below.

Hole : Diameter (mm) : Quantity :

Cutout : Length x width (mm) : Quantity :

Support for sensor : Diameter + thread pitch :

Other options (all usefull information) :

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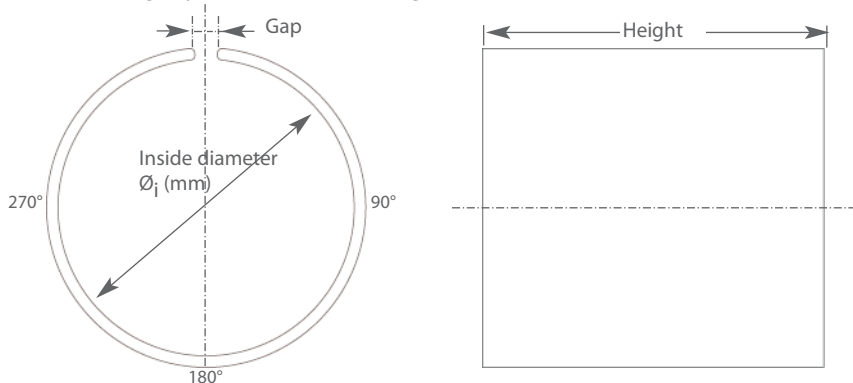
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Connection braid : Mutiple by 500 mm (mm) :
 CMBPE cap : Mention the angle of the cap : 0° 45° Other :

Clamping:

① - Barrel nuts ② - Compensated clamping ③ - Square angle flange ④ - Sliding keyway ⑤ - Quick release fasteners	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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The angular values for position of connection, holes and sensor support have to be written clockwise, with the clamping as the point of reference. This form is only used to make an quotation. A drawing may be asked for manufacturing.



Other information

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The manufacturing of bandheaters depends on copmpatibility between wattage, intensity, dimensions, connection, accessories and options.

ACIM JOUANIN - 650, Rue Vulcain - Z.I. n°1 Nétreville - BP 1725 - 27017 EVREUX Cedex - FRANCE
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Our products specifications are subject to change without notice. We reserve the right to modify them according to the technical evolution

To process your order or quotation for a mica or a ceramic band heater please specify the following technical information. When placing your order do not forget to enclose this shuttle form which will allow us to determine the parameters of your product.

Company: **Tel :** / **Fax :**

Contact name : **Department :** **Date**.....

- **Application :**
 - Rise in temperature Heating + Maintain in temperature Maintain in temperature only
- **Product to be heated:**
 - Mass or volume (static product) (kg or m³) : Flow (m³/h) :
 - Initial temperature (°C) : Final temperature (°C) : Ambient temperature(°C) :
 - Time for rising in temperature (hours) :
 - Characteristics : Density (kg/m³): Specific heat (J/ kg.K) : Thermal conductivity (W/m².°C)
 - Special information about the product :
 - Does the state of the product change during the heating (e.g. : a solid becomes liquid) :
Melting point (°C) : Latent heat of fusion (J/kg)
- **Brand of the engine on which the band heater will be mounted :**
 - Area to be heated: Diameter (mm) : Height (mm) :
Number of band heaters needed : (subject to manufacturing)
 - Electrical energizing of the band heater: Voltage (V): Single phase / Three-phase
Connection of the band heater: Wires or braid : lenght (mm) : Pins Terminal
 - Description of the band heater :
Materials of the support on which the b.a will be mounted..... Dimensions (mm) :
Weight or volume of the support (kg or m³) :
 - Description : Density (kg/m³): Specific heat (J/ kg.K) : (W/m².°C)
 - Bulk around the support :
 - Band heater clamp (if defined) :
 - If the band heater needs holes or any other drilling, please, mention it on the drawing on left.

Please send a drawing of the element you need to heat. This will help us to calculate the heat losses and to adapt the heater, taking into account the possible dimension requirements (e.g., indentations)
- **Environment:**
 - Use: food, industry, plastic... corrosive surrounding ... Special leak tightness, reinforced insulation:
 - Band heater material (if known): Alluminated Stainless steel brass
 - Operating place : inside or outside, heated place or not, wind,.....
- **Regulation :**
 - Temperature controllers : J thermocouple K thermocouple PT100 sensor
 - Model (bayonet to screw ...): ○ Sensor fittings: Diameter Lead
 - Regulation type: On/Off PID Other :

Do not hesitate to consult our documentation "Temperature sensors"

Band heaters are subject to compatibility of the watt density, voltage, dimension, termination, accessories and options.

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Temperature control



Band heaters



Fan heaters



Flexible heaters



Immersion heaters



Tubular elements



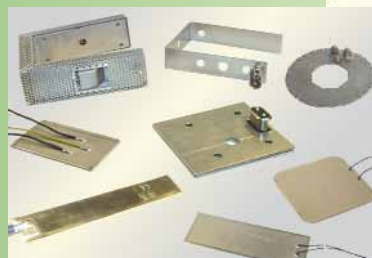
Carridge heaters



Formable coil heaters



Infrared emitters



Flat (plate) heaters



Ovens



Barrel heating



Cast in heaters



Cables, sheath and accessories

But also other families : Tracing, heaters on cylinder



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