



CRN TECNOPART, S.A.

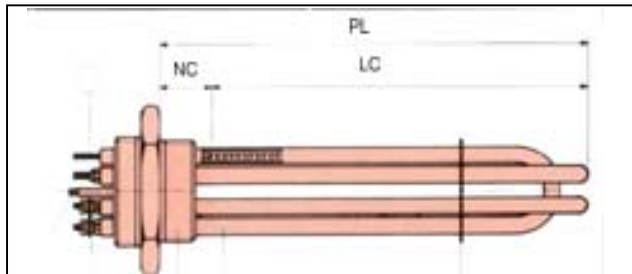
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CETAL

CT- 030.05E

SCREW ON IMMERSION HEATERS 230 / 400 V

- Formed by 2 or 3 forks welded cross on a brass cap (Standard), or steel or stainless steel. (On request)
 - Circuits at 230V (Includes jumpers)
 - Cover for thermostat optional.
 - Accessories, see page 3.
 - Pressure: 15 bar maximum
- NC** (unheated length) Racor M 45 o 1 1/2" NC = 40 mm
Racor M77 o 2 1/2" NC = 70 mm
- LC (PL-NC)** (Heated length). ou should always be black.



Load 2 W/cm² Inox AISI 321									
W	Screw M 77 x 200			Screw r M 45 x 200			Screw 1 1/2" G		
	PL mm.	Weigth Kg.	Reference	PL mm.	Weigth Kg.	Reference	PL mm.	Weigth Kg.	Reference
500				250	0,60	45-V8-005*			
750				250	0,75	45-V8-007	250	0,75	49-V8-007
1000				320	0,85	45-V8-010	320	0,85	49-V8-010
1500				470	1,05	45-V8-015	470	1,05	49-V8-015
2000	350	2,25	77-V8-020	600	1,35	45-V8-020	600	1,35	49-V8-020
3000	510	2,45	77-V8-030	920	1,75	45-V8-030	920	1,75	49-V8-030
4000	670	4,50	77-V16-040	* 230 V Mono					
6000	980	6,10	77-V16-060						
8000	1280	7,65	77-V16-080						
10000	1720	10,00	77-V16-100						
12000	1830	10,60	77-V16-120						

USEFUL INFORMATION

Load 2 W/cm², for air, oil and fueloil.

Load 4 W/cm², for water and thermal oil.

Load 8-12 W/cm², for water

For temperatures above 110 °C use models with terminal box separate

Load 4 W/cm² Inox AISI 316 Ti									
W	Screw M 77 x 200			Screw r M 45 x 200			Screw 1 1/2" G		
	PL mm.	Weigth Kg.	Reference	PL mm.	Weigth Kg.	Reference	PL mm.	Weigth Kg.	Reference
1000				180	0,65	45-C8-010	180	0,65	49-C8-010
1500				250	0,75	45-C8-015	250	0,75	49-C8-015
2000				300	0,85	45-C8-020	300	0,85	49-C8-020
3000	310	3,15	77-C16-030	440	1,00	45-C8-030	440	1,00	49-C8-030
4000				600	1,35	45-C8-040	600	1,35	49-C8-040
4500	435	3,55	77-C16-045	660	1,45	45-C8-045	660	1,45	49-C8-045
6000	540	4,00	77-C16-060	850	1,75	45-C8-060	850	1,75	49-C8-060
9000	810	5,25	77-C16-090						
12000	1055	6,95	77-C16-120						

Load 8 W/cm² Cobre									
W	Screw M 77 x 200			Screw r M 45 x 200			Screw 1 1/2" G		
	PL mm.	Weigth Kg.	Reference	PL mm.	Weigth Kg.	Reference	PL mm.	Weigth Kg.	Reference
1000				160	0,50	45-K8-010**			
1500				160	0,60	45-K8-015	160	0,60	49-K8-015
2000				185	0,65	45-K8-020	185	0,65	49-K8-020
3000	170	2,00	77-K8-030	260	0,80	45-K8-030	260	0,80	49-K8-030
4000				340	0,90	45-K8-040	340	0,90	49-K8-040
4500				380	0,95	45-K8-045	380	0,95	49-K8-045
5000	270	2,55	77-K16-050						
6000	310	2,80	77-K16-060	490	1,25	45-K8-060	490	1,25	49-K8-060
7500				600	1,35	45-K8-075	600	1,35	49-K8-075
8000	390	3,20	77-K16-080						
9000	435	3,40	77-K16-090	710	1,55	45-K8-090	710	1,55	49-K8-090
10000	470	3,65	77-K16-100						
12000	550	4,10	77-K16-120	990	2,00	45-K8-120	990	2,00	49-K8-120
15000	685	4,85	77-K16-150	* Only 400V ** 230V Mono Fitting models with M77 and M45 are available in nickel copper. Fitting models with 1 1/2" only in nickel copper.					
18000	810	5,60	77-K16-180						
20000	890	6,00	77-K16-200						
24000	1055	6,95	77-K16-240						
30000	1305	8,40	77-K16-300*						

Models with screw M77 also can provide with screw 2 1/2". The reference becomes 76-.....

Load 10 W/cm ² Incoloy 800			
Screw M 77 x 200			
W	PL mm.	Weight Kg.	Reference
6000	300	2,60	77-A16-060
9000	400	3,00	77-A16-090
12000	500	3,60	77-A16-120
15000	600	4,15	77-A16-150
18000	700	4,70	77-A16-180
24000	895	5,85	77-A16-240
30000	1095	6,95	77-A16-300*
35000	1260	7,40	77-A16-350*

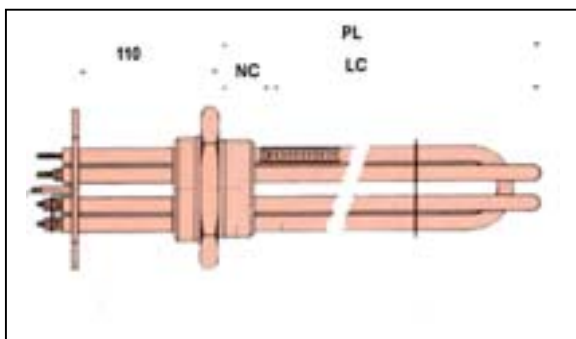
*Only 400V

Load 12 W/cm ² Incoloy 825			
Screw M 77 x 200			
W	PL mm.	Weight Kg.	Referencia
6000	265	2,60	77-AA16-060
9000	350	3,00	77-AA16-090
12000	430	3,60	77-AA16-120
15000	510	4,15	77-AA16-150
18000	590	4,70	77-AA16-180
24000	760	5,85	77-AA16-240
30000	930	6,95	77-AA16-300*
35000	1070	7,40	77-A1A6-350*

* Only 400V

MODELS WITH TERMINAL BOX SEPARATE

- Formed by 2 or 3 forks welded cross on a brass cap (Standard), or steel or stainless steel. (On request)
- The terminal box is offset 110 mm. With regard to screw fitting
- Expect to work in the heating fluid to over 110 ° C
- Circuits at 230V (Includes jumpers)
- Cover for thermostat optional.
- Pressure: 15 bar maximum



Load 2 W/cm ² Inox AISI 321						
W	Screw M 77 x 200			Screw M 45 x 200		
	PL mm.	Weight Kg.	Reference	PL mm.	Weight Kg.	Reference
500				250	0,85	45-V8-005D*
750				250	1,00	45-V8-007D
1000				320	1,10	45-V8-010D
1500				470	1,30	45-V8-015D
2000	350	3,00	77-V8-020D	600	1,60	45-V8-020D
3000	510	3,20	77-V16-030D	920	2,00	45-V8-030D
6000	980	6,85	77-V16-060D	* 230V Monofásico		
8000	1280	8,40	77-V16-080D			
10000	1720	10,75	77-V16-100D			
12000	1830	11,35	77-V16-120D			

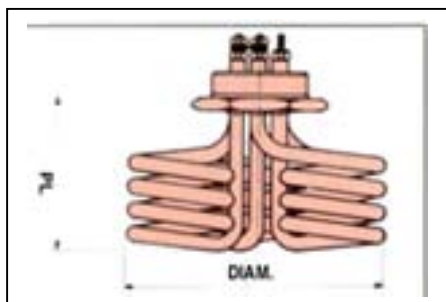
BARREL BOTTOM HEATERS

Heating of fluids. 2 W/cm², for thermal fluids and chemicals

8 W/cm², for water

Formed by 3 spiral elements arranged in a circle and welded on a brass cap

- On demand cap in steel or stainless-steel
- Circuits at 230V (Includes jumpers)
- Cover for thermostat optional.



Load 2 W/cm ² Inox AISI 321				
W	Ø mm.	PL mm.	Weight Kg.	Reference
Screw M45 x 200				
2000	280	55	1,4	45FC-V020
3000	350	55	1,9	45FC-V030
Screw M77 x 200				
4000	280	55	2,9	77FC-V040
6000	350	100	4,0	77FC-V060

Load 8 W/cm ² Cooper				
W	Ø mm.	PL mm.	Weight Kg.	Reference
Screw M45 x 200				
1500	140	50	0,60	45FC-K015
3000	140	65	0,80	45FC-K030
4500	190	65	0,95	45FC-K045
6000	190	75	1,25	45FC-K060
7500	240	90	1,35	45FC-K075
9000	240	110	1,55	45FC-K090
12000	240	110	2,00	45FC-K120
Screw M77 x 200				
15000	300	100	2,90	77FC-K150
18000	300	100	3,30	77FC-K180
24000	300	110	4,25	77FC-K240

HEATERS FOR ACIDS OR CORROSIVE SOLUTIONS

Heating element in stainless steel, coated with a protective PTFE

Load 2W/cm², and are manufactured according to customer needs, and depending on the desired application.

HEATER WINDINGS ON BASE CERAMICS

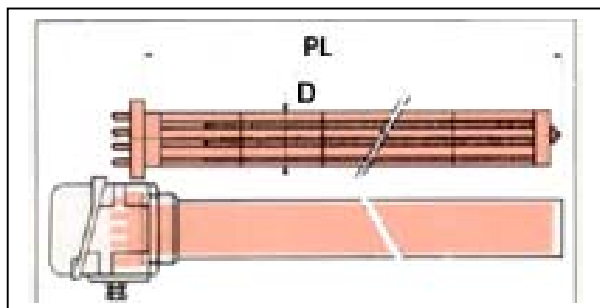
Made from 80/20 Nichrome wire-wound coil and mounted on a ceramic base.

They should be mounted in pods that may be of corrosion material

Allow replacement without having to empty the container.

Standard voltages 230V. Can be manufactured in diameters 24, 28, 32 and 35 mm.

SERIE 35 Ø = 35 mm.		
W	L mm.	Reference
500	280	35-B-05
1000	480	35-B-10
1500	600	35-B-15



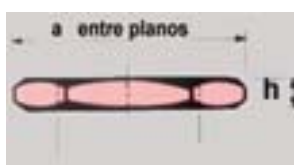
SERIE 47 Ø = 47 mm.		
W	L mm.	Reference
1000	380	47-B-10
2000	480	47-B-20
2000	630	47-B-21
3000	580	47-B-30
3000	830	47-B-31
4000	730	47-B-40*

*voltage 400V triphase

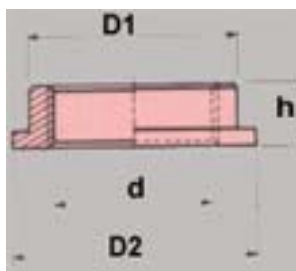
SERIE 58 Ø = 58 mm.		
W	L mm.	Reference
2000	300	58-B-20
3000	400	58-B-30
4000	500	58-B-40
5000	650	58-B-50
6000	750	58-B-60
8000	950	58-B-80
10000	1200	58-B-100

MOUNTING ACCESORIES FOR STANDARD MODELS

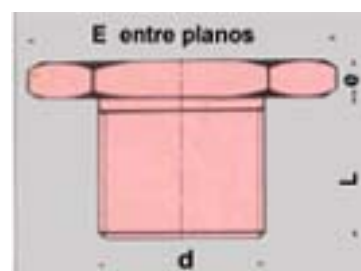
	SCREW M 45 x 200		SCREW 1 1/2"		SCREW M 77 x 200	
	Dim. mm.	Reference	Dim. mm.	Reference	Dim. mm.	Reference
Seal						
Kligerit Ø45		MP 397790	Ø48	MP 397890	Ø77	MP 398190
St. Steel Ø45		MP 395720			Ø77	MP 395820
Nut						
Brass E/P = 60		MP 155060	E/P = 60	MP 160060	E/P = 90	MP 157060
Steel E/P = 60		MP 155020			E/P = 90	MP 157020
Welding ring						
Steel		MP 165000		MP 170000		MP 167000
St. Steel		MP 165020				MP 167020
Screw top						
Brass E/P = 60		MP 131760	E/P = 60	MP 145760	E/P = 90	MP 135660
Steel E/P = 60		MP 131600			E/P = 90	MP 135600
St. Steel E/P = 60		MP 131620	E/P = 60	MP 145720	E/P = 90	MP 135620
Aluminium casing						
HxØ 100x65		40045A	100x65	40045A	125x100	40077A
PE N° 11 o 13			N° 11 o 13		N° 16	
Pivoting aluminium casing						
AxA 90x90		ORPM45PE13	90x90	ORPM45PE13	110x110	ORGM77PE16
H 80		ORPM45PE16	80	ORPM45PE16	105	ORGM77PE21
						ORGM77PE29
Pivoting casing protected metal						
AxB 165x20		ORS45PE13	165x20	ORS45PE13	165x120	ORS77PE16
H 75		ORS45PE13+16	75	ORS45PE13+16	75	ORS77PE21
						ORS77PE16+11
						ORS77PE16+11



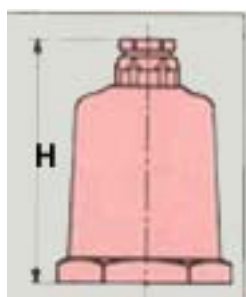
NUT



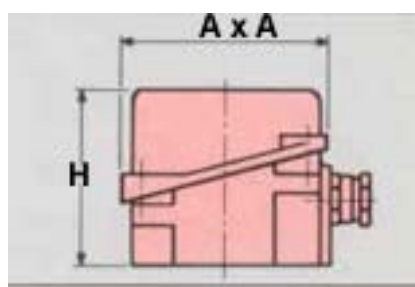
WELDING RING



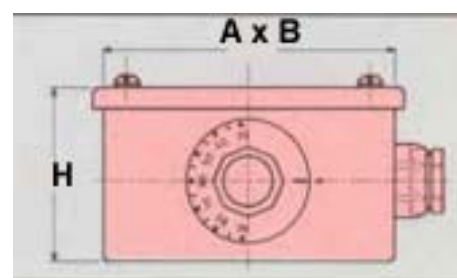
SCREW TOP



ALUMINIUM CASING



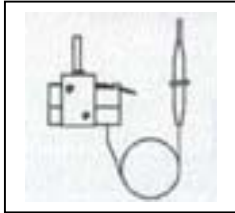
PIVOTING
ALUMINIUM CASING



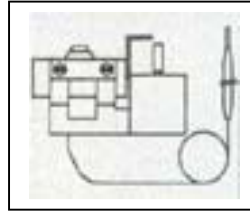
PIVOTING POTECTED
MATERIAL CASING

TEMPERATURE REGULATION

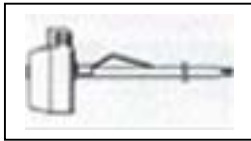
Whether one can install a temperature control system with electronic controller and thermocouple probe have mechanical temperature controls, thermostats and limiters, separate wings that are coupled to terminal boxes can be equipped heaters. Single phase or three phase models are available with cutting capacities from 5 to 16A.. For higher intensities is necessary to install auxiliary contactor



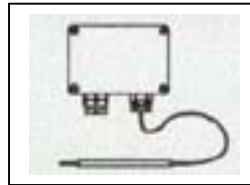
Liquid expansion thermostat, stainless steel bulb and capillary, single-pole 16A / 400Vac or three-pole 3x16A / 400V with internal controls. Model available with external controls and adjustment button



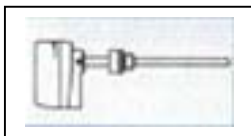
Single-pole liquid expansion limiter with manual reset and positive safety system 10A / 250V breaking power



Direct bulb thermostat, opening contact 10 / 70 °C adjustment range, 100 °C safety limit, single pole 16A / 250V



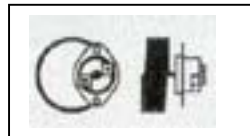
Single pole explosion-proof thermostat EExdIICT6 in IP54 casing with bulb and capillary 5A/250V reversing contact



Direct bulb thermostat sealed casing, single-pole reversing contact 6A / 250V, fastened with a 1/2" G connector



Metal expansion threshold limiter with manual reset, pre-set to 90 °C 16A/250V breaking power



Vapour tension limiter pre-set 98 °C or 128 °C, with positive safety system and manual or automatic reset. Single-pole opening contact, 16A/380V breaking power