

# GROUP 1 - Immersion heaters, drums heaters and accessories

## 1.1 – With coupling plug — NA / OV / T



### Usual applications

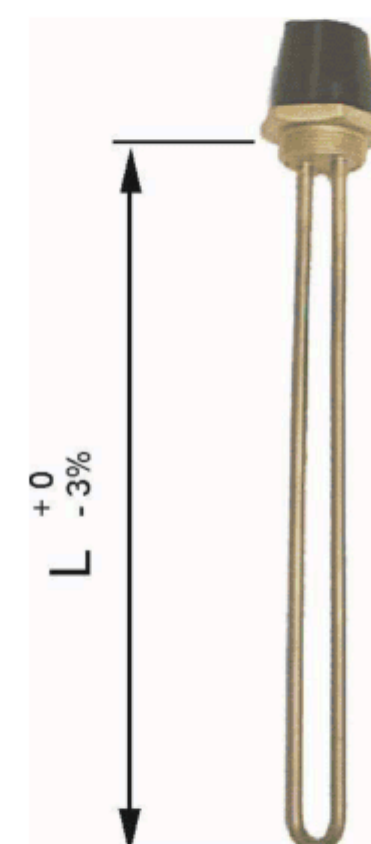
- Steam boilers
- Water baths
- Warming of diesel fuel
- Water heaters
- Oil chambers
- Distillation
- Cleaning
- Dyeing
- Liquid convection heating radiators
- Towel dryers
- Degreasing
- Endothermal or exothermal reactions requiring it
- Heating by circulation of liquids
- Fish farms
- Boiling vats
- Cooking vats
- Chemical industries
- Electromedicine...

### General characteristics

- Tubular element stainless steel AISI 316L of Ø8 mm  
**NOTE:** Consult models in nickel-plated copper until the end of stock
- BSP threaded plug of stamped brass
- Polyester with fiber glass or bichromed zinc-plated steel protection hood, with degree protection against moisture IP-40.
- Optionally, all the models with BSP thread of 1 1/2", 2" and 2 1/2" can be supplied with aluminum connection box IP-66.
- Welded with silver alloy for stainless steel tube and with copper alloy for copper tube.
- Standard voltage ~230 V
- By request, special heating elements can be made according to your specifications:
  - Material tube: AISI 316L, Incoloy®-800, Incoloy®-825 and Titanium
  - Stainless steel or titanium BSP threaded plugs.

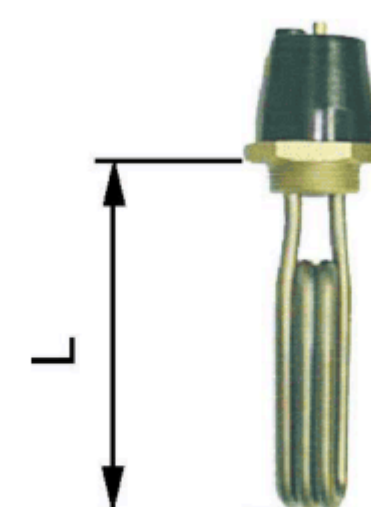
### U-SHAPED HEATING ELEMENT WITH BRASS COUPLING PLUG

Code	L in mm	BSP Threaded plug	Watts	W/cm²	Tube material	Peso en Kg	Electricfor's construct. thermic class	Box connection range	
								IP-40 (1)	IP-66 (2)
NA001	170	3/4"	500	8,3	SS 316L	0,21	T-301-E	C-FE-3/4"	---
NA002	180	1 1/4"	500	8,3	SS 316L	0,28	T-301-E	C-MENZ	Range P3
NA002C	180	1 1/4"	500	8,3	Cu	0,28	T-175-E	C-MENZ	Range P3
NA101	180	1"	500	8,3	SS 316L	0,21	T-301-E	C-MENZ	---
NA003	250	3/4"	750	7,5	SS 316L	0,24	T-301-E	C-FE-3/4"	---
NA004	260	1 1/4"	750	7,5	SS 316L	0,32	T-301-E	C-MENZ	Range P3
NA103	260	1"	750	7,5	SS 316L	0,25	T-301-E	C-MENZ	---
NA005	340	3/4"	1000	7	SS 316L	0,28	T-301-E	C-FE-3/4"	---
NA006	350	1 1/4"	1000	7	SS 316L	0,35	T-301-E	C-MENZ	Range P3
NA105	350	1"	1000	7	SS 316L	0,29	T-301-E	C-MENZ	---
NA105C	350	1"	1000	7	Cu	0,29	T-175-E	C-MENZ	---
NA008	520	1 1/4"	1500	6,6	SS 316L	0,44	T-301-E	C-MENZ	Range P3
NA108	520	1"	1500	6,6	SS 316L	0,36	T-301-E	C-MENZ	---
NA010	680	1 1/4"	2000	6,5	SS 316L	0,50	T-301-E	C-MENZ	Range P3



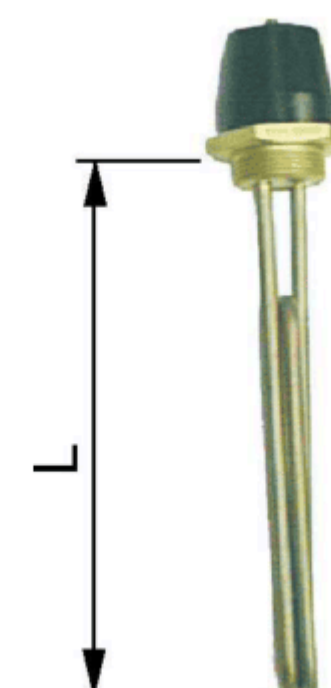
### DOUBLE LOOP U-SHAPED HEATING ELEMENT WITH BRASS COUPLING PLUG

Code	L in mm	BSP Threaded plug	Watts	W/cm²	Tube material	Peso en Kg	Electricfor's construct. thermic class	Box connection range	
								IP-40 (1)	IP-66 (2)
OV001	140	1 1/4"	600	7,1	SS 316L	0,29	T-301-E	C-MENZ	Range P3
OV003	170	1 1/4"	800	7	SS 316L	0,33	T-301-E	C-MENZ	Range P3
OV003C	170	1 1/4"	800	7	Cu	0,33	T-175-E	C-MENZ	Range P3
OV105	235	1 1/4"	400	2,2	SS 316L	0,37	T-301-E	C-MENZ	Range P3
OV005	235	1 1/4"	1200	6,7	SS 316L	0,42	T-301-E	C-MENZ	Range P3
OV107	345	1 1/4"	900	3,1	SS 316L	0,51	T-301-E	C-MENZ	Range P3
OV007	345	1 1/4"	1800	6,3	SS 316L	0,51	T-301-E	C-MENZ	Range P3
OV009	445	1 1/4"	2400	6,2	SS 316L	0,56	T-301-E	C-MENZ	Range P3
OV009C	445	1 1/4"	2400	6,2	Cu	0,56	T-175-E	C-MENZ	Range P3
OV111	505	1 1/4"	1000	2,2	SS 316L	0,61	T-301-E	C-MENZ	Range P3
OV211	505	1 1/4"	1500	3,4	SS 316L	0,61	T-301-E	C-MENZ	Range P3
OV011	505	1 1/4"	3000	6,7	SS 316L	0,61	T-301-E	C-MENZ	Range P3



### TRIPLE LOOP U-SHAPED HEATING ELEMENT WITH BRASS COUPLING PLUG

Code	L in mm	BSP Threaded plug	Watts	W/cm²	Tube material	Peso en Kg	Electricfor's construct. thermic class	Box connection range	
								IP-40 (1)	IP-66 (2)
T001	150	1 1/4"	750	5	SS 316L	0,36	T-301-E	C-MENZ	Range P3
T003	200	1 1/4"	1000	4,4	SS 316L	0,24	T-301-E	C-MENZ	Range P3
T005	250	1 1/4"	1500	5,7	SS 316L	0,49	T-301-E	C-MENZ	Range P3
T007	350	1 1/4"	2000	4,5	SS 316L	0,62	T-301-E	C-MENZ	Range P3
T108	250	2"	2000	4,9	SS 316L	0,86	T-301-E	C-FE-2"	---
T009	450	1 1/4"	2500	4,2	SS 316L	0,74	T-301-E	C-MENZ	Range P3
T011	550	1 1/4"	3000	4	SS 316L	0,88	T-301-E	C-MENZ	Range P3



**Note 1:** Standard junction box. It is always given with the heater.

**Note 2:** Aluminum junction box. Optional. Delivered on request (see page # 7)

**Note 3:** In the elements with 3/4" BSP coupling plug, the protection hood is optional and is not included in price. Code 108006001

**Note 4:** If you require weldable flanges, nuts and threaded adapters for all these elements, see page #r 9

# GROUP 1 - Immersion heaters, drums heaters and accessories

## 1.1 – With coupling plug — DP / ED / ET



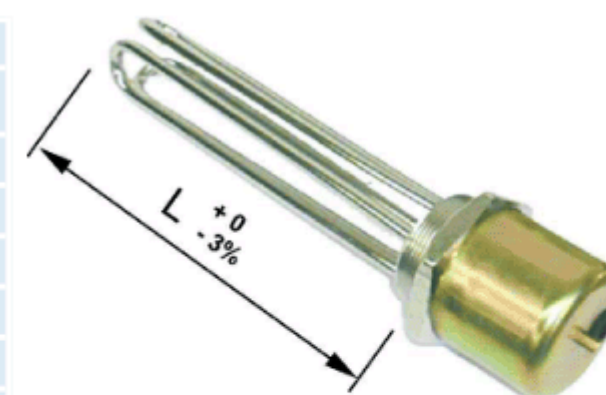
**CAUS**  
(Optional)

### General characteristics

- Tubular element of stainless steel AISI 316L of Ø8 mm
- **NOTE:** Consult models in nickel-plated copper until the end of stock
- BSP threaded plug of stamped brass
- Polyester with fiber glass or bichromed zinc-plated steel protection hood, with degree protection against moisture IP-40.
- Optionally, all the models with BSP thread of 1 1/2", 2" and 2 1/2" can be supplied with aluminum connection box IP-66.
- Welded with silver alloy for stainless steel tube and with copper alloy for copper tube.
- Standard voltage 3~230 V Δ, 3~400 V Y
- By request, special heating elements can be made according to your specifications:
  - Material tube: Nickel plated copper, Incoloy®-800, Incoloy®-825 and Titanium
  - Stainless steel or titanium BSP threaded plugs.

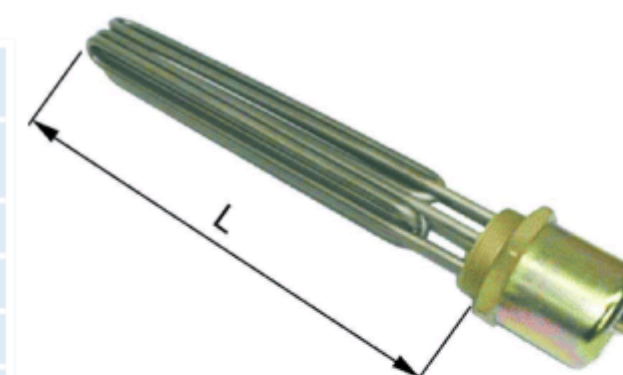
### TRIPLE U-SHAPED HEATING ELEMENT WITH BRASS COUPLING PLUG

Code	L in mm	BSP Threaded plug	Watts	W/cm <sup>2</sup>	Tube material	Peso en Kg	Electricfor's construct. thermic class	Box connection range		
								IP40 (1)	IP66 (2)	IP66 (3)
DP001	180	2"	1500	8,3	SS 316L	0,76	T-301-E	C-PA-2"	Range M1	Range MA1
DP001C	180	2"	1500	8,3	Cu	0,76	T-175-E	C-PA-2"	Range M1	Range MA1
DP003	260	2"	2250	7,5	SS 316L	0,87	T-301-E	C-PA-2"	Range M1	Range MA1
DP003C	260	2"	2250	7,5	Cu	0,87	T-175-E	C-PA-2"	Range M1	Range MA1
DP005	350	2"	3000	7	SS 316L	1,0	T-301-E	C-PA-2"	Range M1	Range MA1
DP007	520	2"	4500	6,6	SS 316L	1,2	T-301-E	C-PA-2"	Range M1	Range MA1
DP009	680	2"	6000	6,4	SS 316L	1,4	T-301-E	C-PA-2"	Range M1	Range MA1
DP010	680	2 1/2"	6000	6,4	SS 316L	1,6	T-301-E	C-FE-2"1/2	Range G1	Range GA1
DP025	180	1 1/2"	1500	8,3	SS 316L	0,53	T-301-E	C-MENZ	Range P1	Range PA1
DP026C	260	1 1/2"	2250	7,5	Cu	0,63	T-175-E	C-MENZ	Range P1	Range PA1
DP021	415	1 1/2"	1200	2,2	SS 316L	0,84	T-301-E	C-MENZ	Range P1	Range PA1
DP022	635	1 1/2"	2700	3,1	SS 316L	1,1	T-301-E	C-MENZ	Range P1	Range PA1
DP023	956	1 1/2"	3000	2,2	SS 316L	1,5	T-301-E	C-MENZ	Range P1	Range PA1
DP024	956	1 1/2"	4500	3,4	SS 316L	1,5	T-301-E	C-MENZ	Range P1	Range PA1
DP026	260	1 1/2"	2250	7,5	SS 316L	0,63	T-301-E	C-MENZ	Range P1	Range PA1
DP027	350	1 1/2"	3000	7	SS 316L	0,79	T-301-E	C-MENZ	Range P1	Range PA1
DP028	520	1 1/2"	4500	6,6	SS 316L	1,0	T-301-E	C-MENZ	Range P1	Range PA1
DP029	680	1 1/2"	6000	6,4	SS 316L	1,2	T-301-E	C-MENZ	Range P1	Range PA1
DP030	180	1 1/2"	2000	9,5	SS 316L	0,76	T-301-E	C-MENZ	Range P1	Range PA1
DP031	290	1 1/2"	3000	8,4	SS 316L	0,71	T-301-E	C-MENZ	Range P1	Range PA1
DP032	315	1 1/2"	6000	14,5	SS 316L	0,74	T-301-E	C-MENZ	Range P1	Range PA1



### DOUBLE LOOP TRIPLE U-SHAPED HEATING ELEMENT WITH BRASS COUPLING PLUG

Code	L in mm	BSP Threaded plug	Watts	W/cm <sup>2</sup>	Tube material	Peso en Kg	Electricfor's construct. thermic class	Box connection range		
								IP40 (1)	IP66 (2)	IP66 (3)
ED001	140	2"	1800	7,1	SS 316L	0,84	T-301-E	C-PA-2"	Range M1	Range MA1
ED003	170	2"	2400	7	SS 316L	0,92	T-301-E	C-PA-2"	Range M1	Range MA1
ED105	235	2"	1200	2,2	SS 316L	1,1	T-301-E	C-PA-2"	Range M1	Range MA1
ED005	235	2"	3600	6,7	SS 316L	1,1	T-301-E	C-PA-2"	Range M1	Range MA1
ED005C	235	2"	3600	6,7	Cu	1,1	T-175-E	C-PA-2"	Range M1	Range MA1
ED107	345	2"	2700	3,1	SS 316L	1,4	T-301-E	C-PA-2"	Range M1	Range MA1
ED007	345	2"	5400	6,3	SS 316L	1,4	T-301-E	C-PA-2"	Range M1	Range MA1
ED008	345	2 1/2"	5400	6,3	SS 316L	1,6	T-301-E	C-FE-2"1/2	Range G1	Range GA1
ED008C	345	2 1/2"	5400	6,3	Cu	1,6	T-175-E	C-FE-2"1/2	Range G1	Range GA1
ED009	445	2"	7200	6,2	SS 316L	1,6	T-301-E	C-PA-2"	Range M1	Range MA1
ED109	445	2 1/2"	7200	6,2	SS 316L	1,8	T-301-E	C-FE-2"1/2	Range G1	Range GA1
ED110	505	2"	3000	2,2	SS 316L	1,8	T-301-E	C-PA-2"	Range M1	Range MA1
ED111	505	2 1/2"	3000	2,2	SS 316L	1,9	T-301-E	C-FE-2"1/2	Range G1	Range GA1
ED210	505	2"	4500	3,4	SS 316L	1,8	T-301-E	C-PA-2"	Range M1	Range MA1
ED211	505	2 1/2"	4500	3,4	SS 316L	1,9	T-301-E	C-FE-2"1/2	Range G1	Range GA1
ED010	505	2"	9000	6,7	SS 316L	1,8	T-301-E	C-PA-2"	Range M1	Range MA1
ED011	505	2 1/2"	9000	6,7	SS 316L	1,9	T-301-E	C-FE-2"1/2	Range G1	Range GA1
ED012	570	2"	12000	7,7	SS 316L	2,3	T-301-E	C-PA-2"	Range M2	Range MA2
ED013	570	2 1/2"	12000	7,7	SS 316L	2,5	T-301-E	C-FE-2"1/2	Range G1	Range GA1
ED014	640	2"	15000	8,7	SS 316L	2,4	T-301-E	C-PA-2"	Range M2	Range MA2
ED015	640	2 1/2"	15000	8,7	SS 316L	2,4	T-301-E	C-FE-2"1/2	Range G1	Range GA1
ED016	640	2"	18000	10,5	SS 316L	2,4	T-301-E	C-PA-2"	Range M2	Range MA2
ED017	640	2 1/2"	18000	10,5	SS 316L	2,4	T-301-E	C-FE-2"1/2	Range G2	Range GA2



**Note 1:** Standard connection box. It is always given with the element.

**Note 2:** Aluminum connection box. Optional. Delivered on request (see page # 7)

**Note 3:** Poliamide connection box. Optional. Delivered on request (see page # 7)

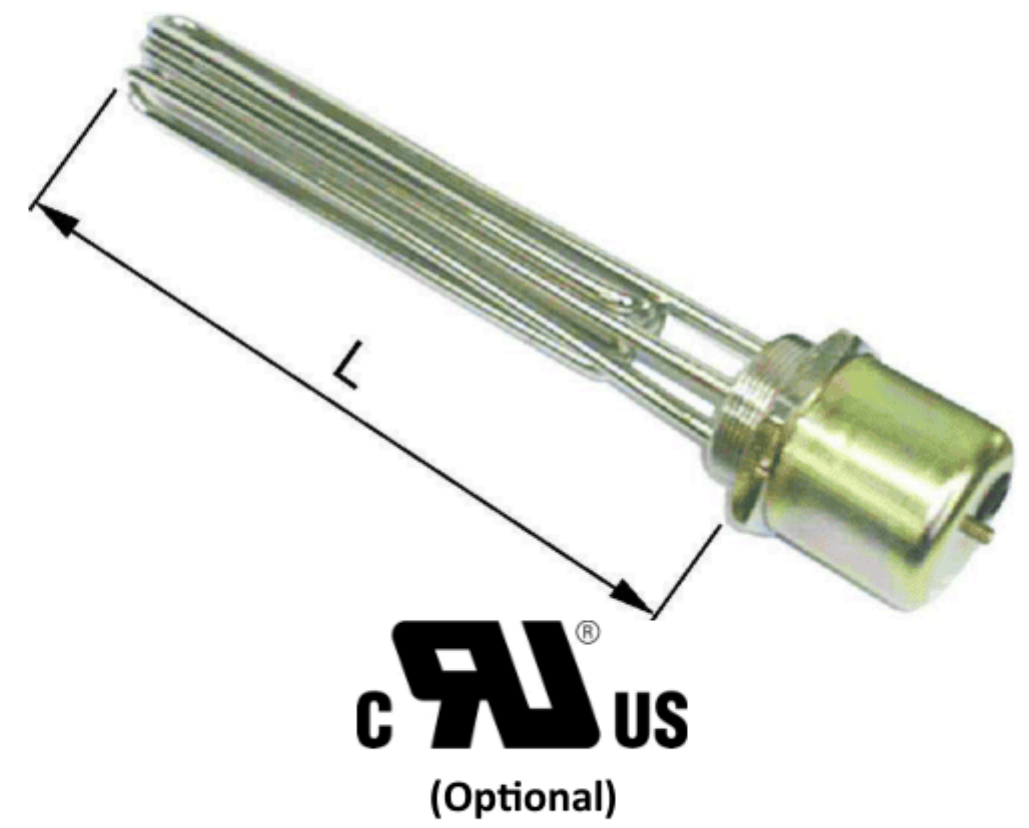
**Note 4:** If you require weldable flanges, nuts and threaded adapters for all these elements, see the catalogue page # 9

## GROUP 1 - Immersion heaters, drums heaters and accessories

### 1.1 – With coupling plug — ET

#### General characteristics

- Tubular element of stainless steel AISI 316L of Ø8 mm  
**NOTE:** Consult models in nickel-plated copper until the end of stock
- BSP threaded plug of stamped brass
- Polyester with fiber glass or bichromed zinc-plated steel protection hood, with degree protection against moisture IP-40.
- Optionally, all the models with BSP thread of 1 1/2", 2" and 2 1/2" can be supplied with aluminum connection box IP-66.
- Welded with silver alloy for stainless steel tube and with copper alloy for copper tube.
- Standard voltage 3~230 V Δ, 3~400 V Y
- By request, special heating elements can be made according to your specifications:
  - Material tube: Nickel plated copper, Incoloy®-800, Incoloy®-825 and Titanium
  - Stainless steel or titanium BSP threaded plugs.



#### TRIPLE LOOP TRIPLE U-SHAPED HEATING ELEMENT WITH BRASS COUPLING PLUG

Code	L in mm	BSP Threaded plug	Watts	W/cm²	Tube material	Peso en Kg	Electricfor's construct. thermic class	Box connection range		
								IP40 (1)	IP66 (2)	IP66 (3)
ET401	355	2 1/2"	9000	6,7	SS 316L	2,1	T-301-E	C-FE-2"1/2	Range G1	Range GA1
ET402	400	2 1/2"	12000	6,4	SS 316L	2,3	T-301-E	C-FE-2"1/2	Range G1	Range GA1
ET403	450	2 1/2"	15000	8,7	SS 316L	2,6	T-301-E	C-FE-2"1/2	Range G2	Range GA2
ET404	450	2 1/2"	18000	10,5	SS 316L	2,6	T-301-E	C-FE-2"1/2	Range G2	Range GA2

## GROUP 1 - Immersion heaters, drums heaters and accessories

### 1.2 - With coupling plug — TIM



#### TITANIUM HEATERS WITH COUPLING PLUG, TIM RANGE

The titanium tube and screw-cap TIM electrical resistors range is used to heat all kinds of water, of whatever source and treatment (e.g. seawater, chlorine treatment, bromine, ozone, electrophysical, electrochemical, and chlorine-free products).

#### General Characteristics

- Ø8 mm tubular elements in titanium
- Electrocasted and roll-compressed magnesium-oxide insulated resistor.
- 1" 1/2-thread Gas titanium screw heads
- Aluminium terminal box with damp protection grade IP-66  
**Attention:** aluminium connection box and thermostat of bulb not included in price. See page # 7
- With titanium casing of Ø9.5 x 0.5 mm for temperature sensors.
- Welds with titanium filler metal
- Standard voltage 3~230 V Δ, 3~400 V Y
- On request, resistors can be fabricated to order according to your specifications.

#### Standardised models

Code	L in mm	BSP Threaded plug	Watts	W/cm²	Tube material	Peso en Kg	Electricfor's construct. thermic class	Box connection range		Range termostato
								WITHOUT thermostat	WITH thermostat	
TIM005	255	1" 1/2	3000	9,7	Titanium Ø8	0,6	T-440-E	Range D	Range P2	EG
TIM010	255	1" 1/2	4500	14,5	Titanium Ø8	0,6	T-440-E	Range D	Range P2	EG
TIM015	255	1" 1/2	6000	19,4	Titanium Ø8	0,6	T-440-E	Range D	Range P2	EG

**GROUP 1**

**Immersion heaters, drums heaters and accessories**

**1.3 – Incoloy®-825 heaters with coupling plug – NY / OY / DY / EY**

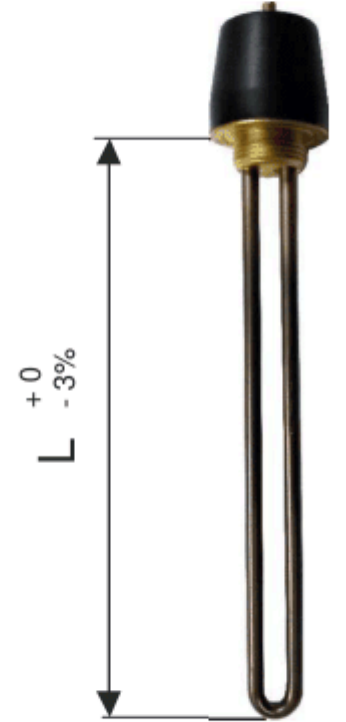


**General characteristics**

- Tubular element of Incoloy®-825 Ø8 mm
- BSP threaded plug of stamped brass.
- Polyester with fiber glass for models with coupling plug 1", 1"1/4, 1"1/2 and 2" BSP, with degree protection against moisture IP-40.
- Optionally, all the models with BSP thread of 1"1/4, 1"1/2 and 2" can be supplied with aluminum or polyamide connection box IP-66.
- Welded with silver alloy for stainless Steel
- Standard supply ~230 V / 3~230 V Δ / 3~400 V Y
- By request, special heating elements can be made according to your specifications:
  - Material tube: AISI 316L, Incoloy®-800, Incoloy®-825 and Titanium
  - Stainless steel or titanium BSP threaded plugs.

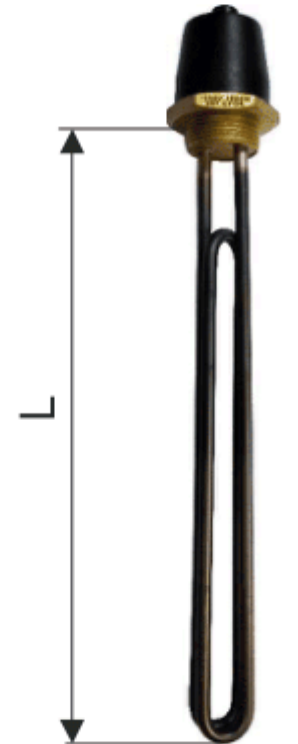
**U-SHAPED HEATING ELEMENT WITH BRASS COUPLING PLUG**

Code	L in mm	BSP Threaded plug	Watts	W/cm²	Weight in Kg	Electricfor's construct thermic class	Connection box IP40
NY001	180	1"	500	8,3	0,22	T-302-E	C-MENZ
NY003	260	1"	750	7,5	0,25	T-302-E	C-MENZ
NY007	350	1"	1000	6,9	0,29	T-302-E	C-MENZ
NY009	420	1"	1200	6,6	0,32	T-302-E	C-MENZ
NY011	520	1"	1500	6,5	0,36	T-302-E	C-MENZ
NY015	640	1"	1800	6,2	0,41	T-302-E	C-MENZ
NY017	680	1"	2000	6,4	0,43	T-302-E	C-MENZ
NY019	840	1"	2400	6,1	0,50	T-302-E	C-MENZ
NY021	960	1"	3000	6,6	0,55	T-302-E	C-MENZ
NY023	1320	1"	4000	6,3	0,70	T-302-E	C-MENZ



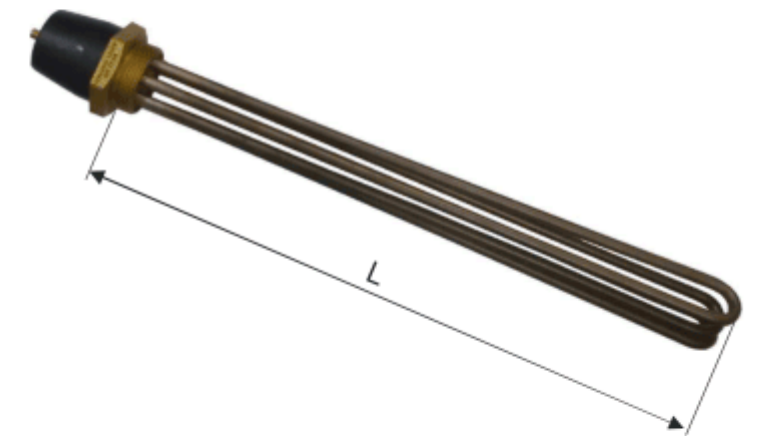
**DOUBLE LOOP U-SHAPED HEATING ELEMENT WITH BRASS COUPLING PLUG**

Code	L in mm	BSP Threaded plug	Watts	W/cm²	Weight in Kg	Electricfor's construct thermic class	Range connection box		
							IP40 (1)	IP66 (2)	IP66 (3)
OY003	205	1"1/4	1000	6,9	0,32	T-302-E	C-MENZ	Range P3	Range PA3
OY005	240	1"1/4	1200	6,6	0,35	T-302-E	C-MENZ	Range P3	Range PA3
OY007	290	1"1/4	1500	6,5	0,39	T-302-E	C-MENZ	Range P3	Range PA3
OY011	350	1"1/4	1800	6,2	0,44	T-302-E	C-MENZ	Range P3	Range PA3
OY013	370	1"1/4	2000	6,4	0,46	T-302-E	C-MENZ	Range P3	Range PA3
OY015	450	1"1/4	2400	6,1	0,53	T-302-E	C-MENZ	Range P3	Range PA3
OY017	510	1"1/4	3000	6,6	0,58	T-302-E	C-MENZ	Range P3	Range PA3
OY019	690	1"1/4	4000	6,3	0,73	T-302-E	C-MENZ	Range P3	Range PA3
OY021	860	1"1/4	5000	6,2	0,87	T-302-E	C-MENZ	Range P3	Range PA3
OY023	860	1"1/4	6000	7,3	0,99	T-302-E	C-MENZ	Range P3	Range PA3



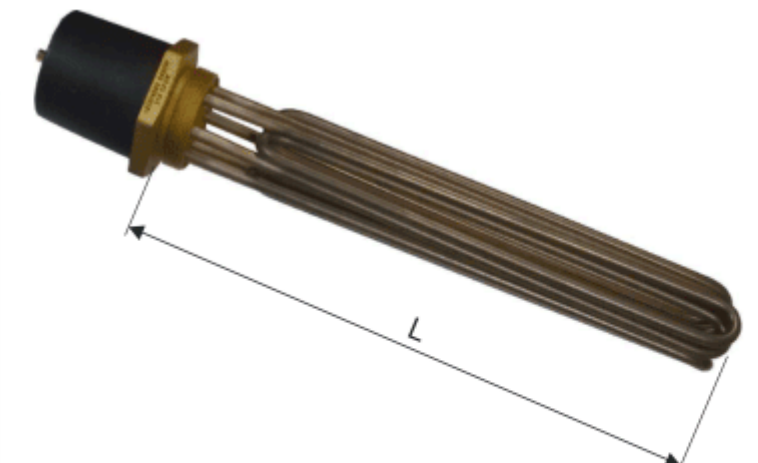
**TRIPLE U-SHAPED HEATING ELEMENT WITH BRASS COUPLING PLUG**

Code	L in mm	BSP Threaded plug	Watts	W/cm²	Weight in Kg	Electricfor's construct thermic class	Range connection box		
							IP40 (1)	IP66 (2)	IP66 (3)
DY001	180	1"1/2	1500	8,3	0,54	T-302-E	C-MENZ	Range P1	Range PA1
DY003	260	1"1/2	2250	7,5	0,64	T-302-E	C-MENZ	Range P1	Range PA1
DY007	350	1"1/2	3000	6,9	0,75	T-302-E	C-MENZ	Range P1	Range PA1
DY009	420	1"1/2	3600	6,6	0,84	T-302-E	C-MENZ	Range P1	Range PA1
DY011	520	1"1/2	4500	6,5	0,97	T-302-E	C-MENZ	Range P1	Range PA1
DY015	640	1"1/2	5400	6,2	1,12	T-302-E	C-MENZ	Range P1	Range PA1
DY017	680	1"1/2	6000	6,4	1,17	T-302-E	C-MENZ	Range P1	Range PA1
DY019	840	1"1/2	7200	6,1	1,37	T-302-E	C-MENZ	Range P1	Range PA1
DY021	960	1"1/2	9000	6,6	1,52	T-302-E	C-MENZ	Range P1	Range PA1
DY023	1320	1"1/2	12000	6,3	1,98	T-302-E	C-MENZ	Range P1	Range PA1



**DOUBLE LOOP TRIPLE U-SHAPED HEATING ELEMENT WITH BRASS COUPLING PLUG**

Code	L in mm	BSP Threaded plug	Watts	W/cm²	Weight in Kg	Electricfor's construct thermic class	Range connection box		
							IP40 (1)	IP66 (2)	IP66 (3)
EY003	205	2"	3000	6,9	0,98	T-302-E	C-PA-2"	Range M1	Range MA1
EY005	240	2"	3600	6,6	1,07	T-302-E	C-PA-2"	Range M1	Range MA1
EY007	290	2"	4500	6,5	1,20	T-302-E	C-PA-2"	Range M1	Range MA1
EY011	350	2"	5400	6,2	1,35	T-302-E	C-PA-2"	Range M1	Range MA1
EY013	370	2"	6000	6,4	1,40	T-302-E	C-PA-2"	Range M1	Range MA1
EY015	450	2"	7200	6,1	1,60	T-302-E	C-PA-2"	Range M1	Range MA1
EY017	510	2"	9000	6,6	1,75	T-302-E	C-PA-2"	Range M1	Range MA1
EY019	690	2"	12000	6,3	2,21	T-302-E	C-PA-2"	Range M1	Range MA1
EY021	860	2"	15000	6,2	2,63	T-302-E	C-PA-2"	Range M2	Range MA2
EY023	860	2"	18000	7,3	2,99	T-302-E	C-PA-2"	Range M2	Range MA2




**Note 1:** Standard connection box. It is always given with the element.

**Note 2:** Aluminum connection box. Optional. Delivered on request (see page # 7)

**Note 3:** Polyamide connection box. Optional. Delivered on request (see page # 7)

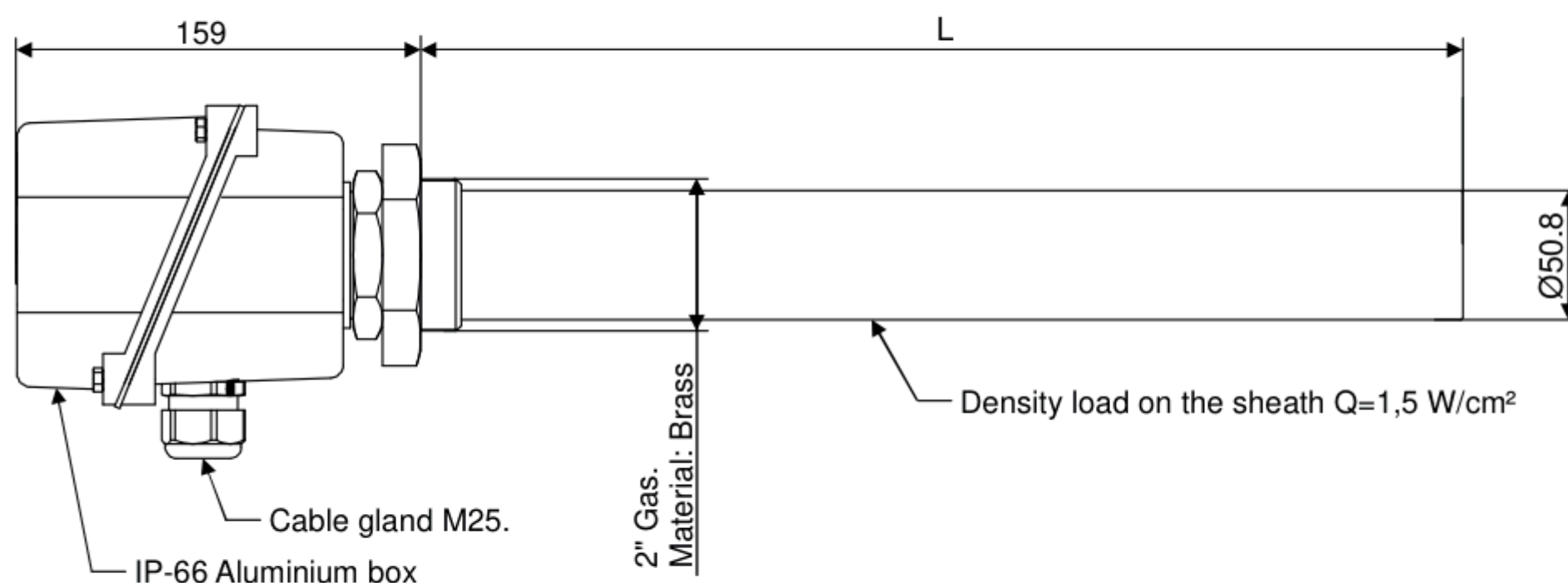
**Note 4:** If you require weldable flanges, nuts and threaded adapters for all these elements, see the catalogue page # 9

**General characteristics**


- Tubular elements of AISI 321 Ø8mm
- Sheath 2" in stainless steel AISI 304 with 1.5mm thickness
- BSP threaded plug of stamped brass
- Aluminium terminal box with damp protection grade IP-66 according to EN-60529.
- Exchangeable heating element without emptying the tank
- Heating elements with UL certification for USA and Canada with trade mark 
- By request, special heating elements can be made according to your specifications:
  - Material tube: AISI 316L, Incoloy®-800, Incoloy®-825 and Titanium
  - Stainless steel or titanium BSP threaded plugs.
  - Stainless Steel AISI 316L sheath

**Note:** If you require weldable flanges, nuts and threaded adapters for all these element, see page nº 9.

Code	L in mm	Volts	Watts	W/cm <sup>2</sup>	Weight in Kg	Electricfor's construct thermic class
TRV008	300	230/400 V	800	1,0	1,1	T-600-E
TRV010	410	230/400 V	1000	1,5	1,5	T-600-E
TRV015	630	230/400 V	1500	1,5	1,7	T-600-E
TRV020	870	230/400 V	2000	1,5	2,3	T-600-E
TRV030	1290	230/400 V	3000	1,5	3,2	T-600-E



**Heating element spare part. General characteristics**

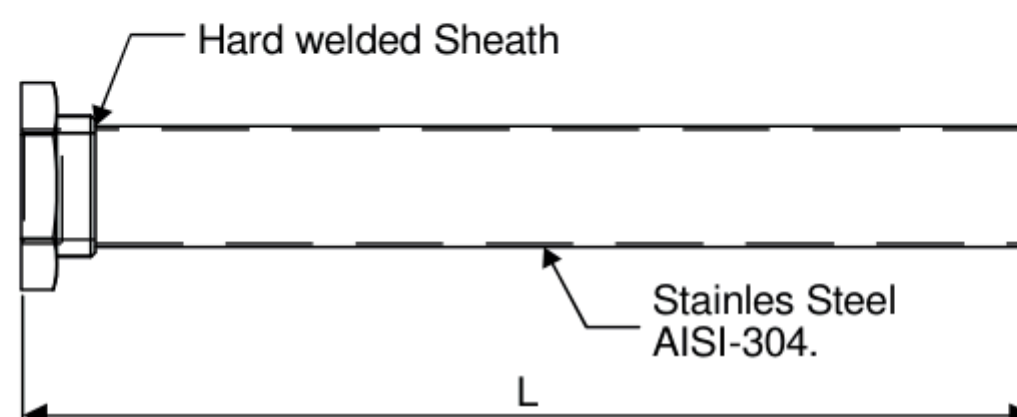
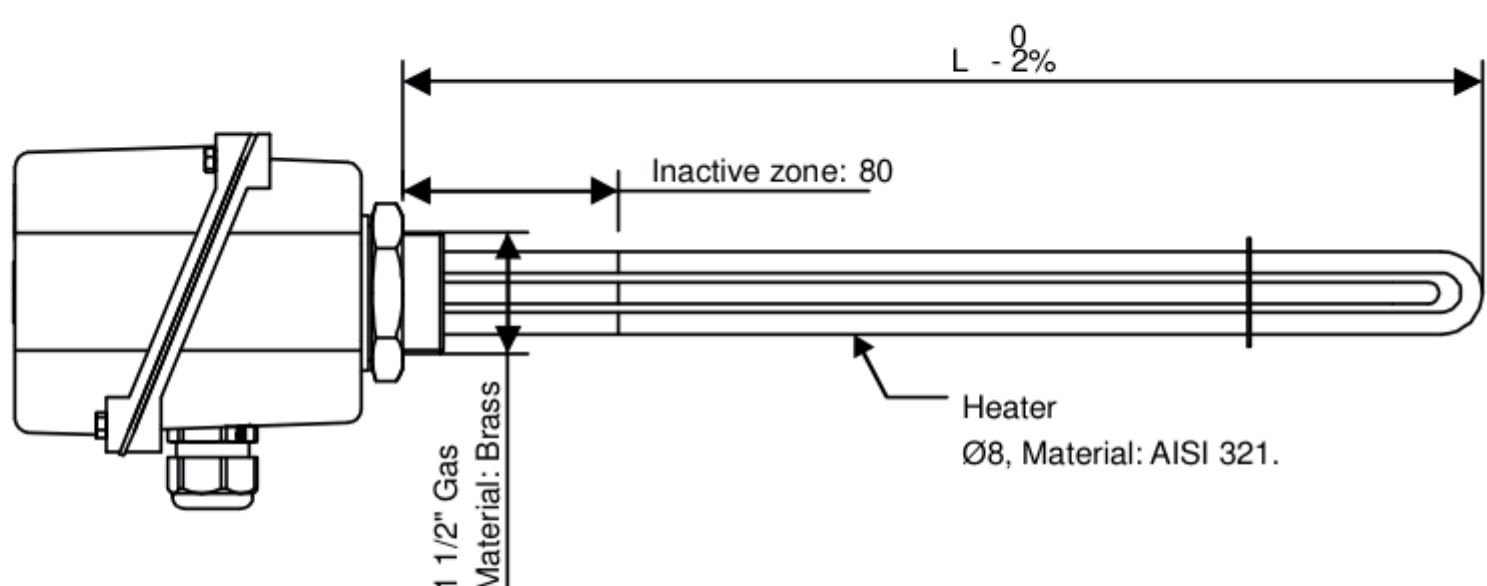
- Tubular element of AISI 321 Ø8mm.
- 1"1/2 BSP threaded plug of stamped brass
- Aluminium terminal box with damp protection grade IP-66 according to EN-60529.
- Heating elements with UL certification for USA and Canada with trade mark 

Code	L in mm	Volts	Watts	W/cm <sup>2</sup>	Weight in Kg	Electricfor's construct thermic class
RC-TRV008	290	230/400 V	800	2,5	1,1	T-600-E
RC-TRV010	400	230/400 V	1000	1,9	1,5	T-600-E
RC-TRV015	615	230/400 V	1500	1,8	1,7	T-600-E
RC-TRV020	870	230/400 V	2000	1,7	2,3	T-600-E
RC-TRV030	1265	230/400 V	3000	1,7	3,2	T-600-E

**Sheath spare part. General characteristics**

- 2 "BSP threaded plug of stamped brass.
- Sheath in stainless steel AISI 304
- By request, special heating elements can be made according to your specifications:
  - Stainless steel or titanium BSP threaded plugs.
  - Stainless Steel AISI 316L sheath

Code	L in mm	Weight in Kg
VA-TRV008	300	1,1
VA-TRV010	410	1,5
VA-TRV015	630	1,7
VA-TRV020	870	2,3
VA-TRV030	1290	3,2



**GROUP 1**

**- Immersion heaters, drums heaters and accessories**

**1.5 – With coupling plug. Europa range — RANGE EUROPA**



**CRUS**  
(Optional)

**General characteristics**

- Tubular element of nickel-plated copper, stainless steel AISI 321, stainless steel AISI 316l or steel
- Threaded plug of stamped brass or stainless steel AISI 304
- All the models are provided with sheath for thermostat of the same material as the tube, with the exception of models CR77CIA.
- Adjustable aluminium connection box, with degree protection against moisture IP-66 according to IEC-60529. Supplied with plastic pouch containing all connection, interlock and sealing accessories

**(\*) Note:** If you require heating elements with threaded Gas plug, change the corresponding code

**45 for 112**

**77 for 212**

**Example:** Threaded brass 1" 1/2 Gas plug with 3 nickeled copper U-Shaped elements of Ø8mm, 2000 W

Code: CR112CN0020

**Attention:** aluminium or polyamide connection box and thermostat of bulb not included in price. See page # 7

**Note:** If you require weldable flanges, nuts and threaded adapters for all these elements, see page # 9

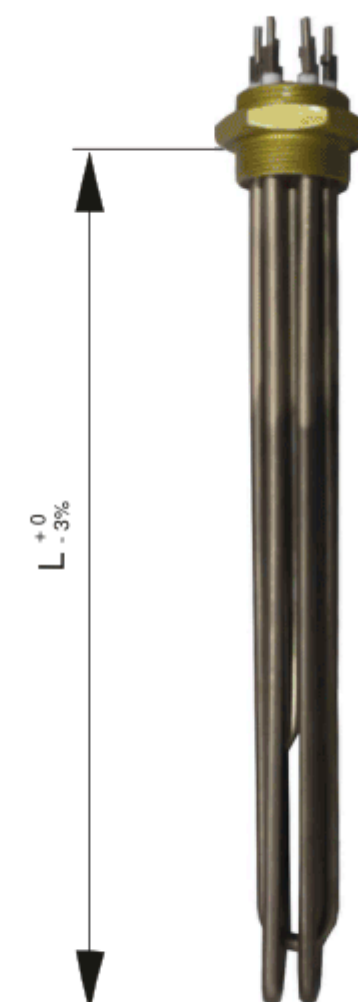
- Standard voltage:

1 Resistor: ~230 V

3 Resistors: 3~230 V Δ 3~400 V Y

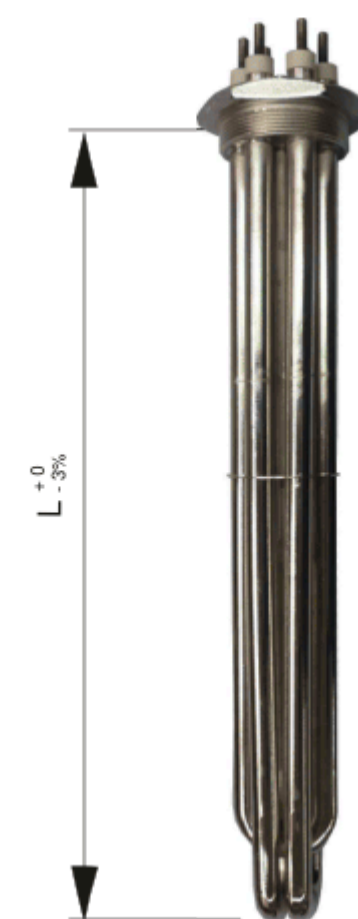
**THREADED BRASS M45x2 or 1"1/2 BSP PLUG  
WITH 1 or 3 U-SHAPED Ø8 ELEMENTS, WITH SHEATH FOR THERMOSTAT**

Code (*)	L in mm	N° elements	Watts	W/cm²	Weight in Kg	Electricfor's construct thermic class	Range connection box		Range thermostat	
							WITHOUT thermostat	WITH thermostat		
Nickleed copper	CR112CN0020	205	3	2000	10,3	0,60	T-175-E	Range D	Range P2 / PA2	EG
	CR112CN0030	285	3	3000	9,6	0,68	T-175-E	Range D	Range P2 / PA2	EG
	CR112CN0040	360	3	4000	9,5	0,80	T-175-E	Range D	Range P2 / PA2	EG
	CR112CN0060	520	3	6000	9,1	1,0	T-175-E	Range D	Range P2 / PA2	EG
Stainless Steel AISI 316L	CR112CI0010	160	3	1000	8,3	0,24	T-301-E	Range D	Range P2 / PA2	EG
	CR112CI0020	270	3	2000	7	0,48	T-301-E	Range D	Range P2 / PA2	EG
	CR112CI0030	380	3	3000	6,7	0,60	T-301-E	Range D	Range P2 / PA2	EG
	CR112CI0050	600	3	5000	6,5	0,89	T-301-E	Range D	Range P2 / PA2	EG
	CR112CI0065	770	3	6500	6,4	1,1	T-301-E	Range D	Range P2 / PA2	EG



**THREADED BRASS M77x2 or 2"1/2 BSP PLUG  
WITH 3 NICKELED COPPER U-SHAPED Ø16 ELEMENTS, WITH SHEATH FOR THERMOSTAT**

Code (*)	L in mm	Watts	W/cm²	Weight in Kg	Electricfor's construct thermic class	Range connection box		Range thermostat
						WITHOUT thermostat	WITH thermostat	
CR212CN0040	230	4000	8,7	1,8	T-175-E	Range G1	Range G1 / GA1	EG
CR212CN 0060	310	6000	8,6	2,1	T-175-E	Range G1	Range G1 / GA1	EG
CR212CN 0080	390	8000	8,6	2,6	T-175-E	Range G1	Range G1 / GA1	EG
CR212CN 0100	470	10000	8,7	3,0	T-175-E	Range G1	Range G1 / GA1	EG
CR212CN 0150	700	15000	8,1	4,2	T-175-E	Range G2	Range G3 / GA3	CA - CT
CR212CN 0200	900	20000	8,2	5,2	T-175-E	Range G2	Range G3 / GA3	CA - CT
CR212CN 0240	1070	24000	8,1	6,0	T-175-E	Range G2	Range G3 / GA3	CA - CT
CR212CN 0350	1500	35000	8,5	8,7	T-175-E	Range G2	Range G3 / GA3	CA - CT



**THREADED STAINLESS STEEL 304 M77x2 or 2"1/2 BSP PLUG  
WITH 3 STAINLESS STEEL 316L U-SHAPED Ø10 ELEMENTS, WITH SHEATH FOR THERMOSTAT**

Code (*)	L in mm	Watts	W/cm²	Weight in Kg	Electricfor's construct thermic class	Range connection box		Range thermostat
						WITHOUT thermostat	WITH thermostat	
CR212II0030	315	3000	6,6	1,1	T-301-E	Range G1	Range G1 / GA1	EG
CR212II0045	445	4500	6,5	1,3	T-301-E	Range G1	Range G1 / GA1	EG
CR212II0060	589	6000	6,2	1,5	T-301-E	Range G1	Range G1 / GA1	EG
CR212II0090	845	9000	6,3	2,1	T-301-E	Range G1	Range G1 / GA1	EG
CR212II0120	1110	12000	6,4	2,9	T-301-E	Range G1	Range G3 / GA3	CA - CT



**GROUP 1 - Immersion heaters, drums heaters and accessories**  
**1.5 – With Europa Range connection plug — RANGE EUROPA**



**General characteristics**

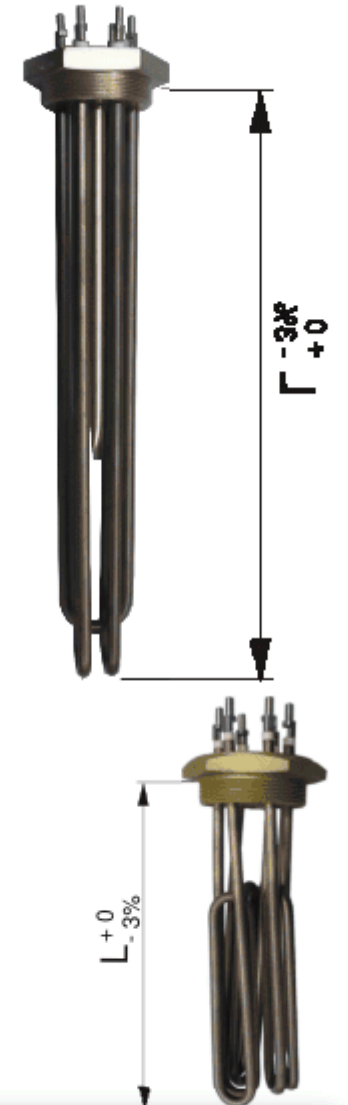
- AISI 321 stainless steel tubular elements
- Stamped brass threaded heads
- Aluminium, adjustable-angle, connection box with IP-66 protection according to standard EN-60529. Supplied with all connection accessories, screws and thermostat connection.

**Attention:** Aluminium connection box and bulb thermostat are ordered separately. See page nº. 7

**Note:** If you need them we have solderable flanges, nuts and adaptors for these heating elements on page nº. 9 of the catalogue.

**BRASS PLUG 2"1/2 GAS THREAD**  
**WITH 3 STAINLESS STEEL 321 U-SHAPED Ø12.5 ELEMENTS, WITH SHEATH FOR THERMOSTAT**

Code (*)	L in mm	Watts	W/cm <sup>2</sup>	Weight in Kg	Electricfor's construct thermic class	Range connection box		Range thermostat
						WITHOUT thermostat	WITH thermostat	
CR212AC0010	290	1250	2,5	1,1	T-300-E	Range G1	Range G1 / GA1	EG
CR212AC0022	450	2250	2,5	1,5	T-300-E	Range G1	Range G1 / GA1	EG
CR212AC0030	565	3000	2,6	1,7	T-300-E	Range G1	Range G1 / GA1	EG
CR212AC0045	840	4500	2,5	2,3	T-300-E	Range G1	Range G1 / GA1	EG
CR212AC0060	1100	6000	2,5	3,2	T-300-E	Range G1	Range G1 / GA1	EG
CR212AC0090	1500	9000	2,7	4,7	T-300-E	Range G1	Range G1 / GA1	EG



**BRASS PLUG M77X2 THREAD OR 2"1/2 GAS THREAD**  
**WITH 3 "DL-HAIRPIN" Ø8 mm AISI321 HEATING ELEMENTS (WITHOUT THERMOSTAT SHEATH)**

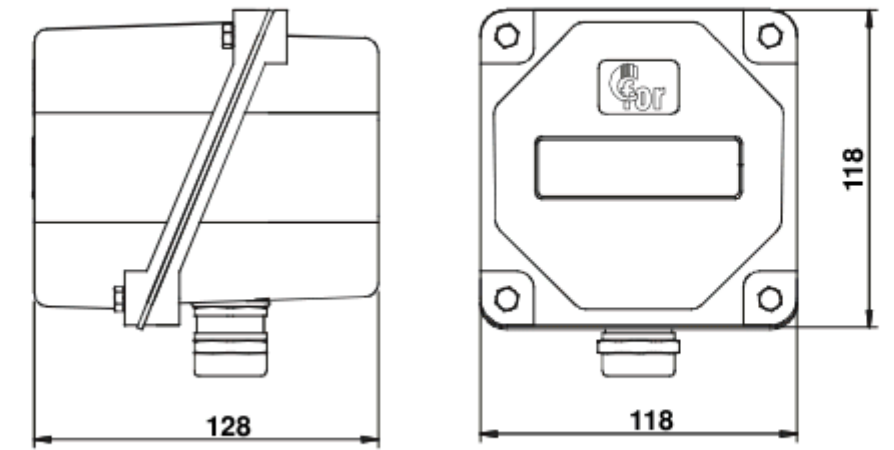
Code (*)	L in mm	Watts	W/cm <sup>2</sup>	Weight in kg	Electricfor's construct thermic class	Range connection box
CR212CIA2012	235	1200	2,2	0,75	T-300-E	Range G1 / GA1
CR77CIA2030	505	3000	2,2	1,90	T-300-E	Range G1 / GA1

**GROUP 1 - Immersion heaters, drums heaters and accessories**  
**1.6.– Accessories: Connection box — ALUMINIUM CONNECTION BOXES**

**P-M-G and PA-MA-GA RANGES**

**VALID FOR ALL DP – ED - ET - TIM and EUROPA HEATING ELEMENT RANGES.**

- Aluminium or polyamide, adjustable-angle, connection box with IP-66 protection according to standard EN-60529.
- Supplied with all connection accessories, screws and thermostat connection.
- Aluminium box range, with black oven-painted finish resistant to temperatures up to 220°C.
- Polyamide box range, with blue color resistant to temperatures up to 220°C.
- The entire kit includes joints, screws, nuts, metal M25 or M32 stuffing box for power entry, metal M12 stuffing box for single-phase thermostat supply; and tightening discs needed for ensuring IP-66 level of protection against damp.



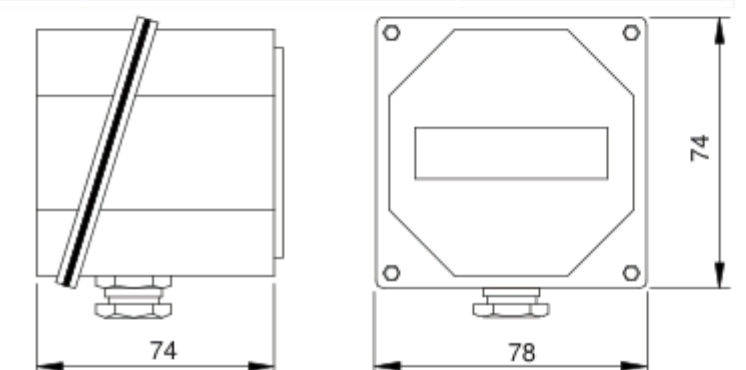
Connection box range	Material	Code	Characteristics	Ready for:			Weight in Kg
				WITHOUT thermostat	Monophase thermostat	Triphase thermostat	
Range P1	Aluminium	128088005	• For M45 and 1"1/2 • Maximum power: 10 KW • M25 Packing gland	X	---	---	0,95
Range PA1	Polyamide	128088105	• For M45 and 1"1/2 • Maximum power: 10 KW • M25 Packing gland	---	X (Ranges CA / CT) Only until 3,6 KW	X (Range EG)	0,75
Range P2	Aluminium	128088006	• For 2"	X	---	X (Range EG)	0,95
Range PA2	Polyamide	128088106	• For 2" • Maximum power: 10 KW • M25 Packing gland	---	X (Ranges CA / CT)	---	0,75
Range M1	Aluminium	128088007	• For 2"	X	---	X (Range EG)	0,95
Range MA1	Polyamide	128088107	• For 2" • Power: 15 KW to 35 KW • M32 Packing gland	---	X (Ranges CA / CT)	---	0,75
Range M2	Aluminium	128088008	• Para 2"	X	---	---	0,95
Range MA2	Polyamide	128088108	• Para 2" • Power: 10 KW to 35 KW • M32 + M12 Packing gland	---	X (Ranges CA / CT)	---	0,75
Range M3	Aluminium	128088009	• For M77 and 2"1/2 • Maximum power: 10 KW • M25 Packing gland	X	---	X (Range EG)	0,95
Range MA3	Polyamide	128088109	• For M77 y 2"1/2 • Power: 15 KW to 35 KW • M32 Packing gland	X	---	---	1,0
Range G1	Aluminium	128088010	• For M77 y 2"1/2 • Power: 10 KW to 35 KW • M32 + M12 Packing gland	---	X (Ranges CA / CT)	---	0,80
Range GA1	Polyamide	128088110	• For M77 y 2"1/2 • Power: 10 KW to 35 KW • M32 + M12 Packing gland	---	X (Ranges CA / CT)	---	0,80
Range G2	Aluminium	128088011	• For M77 y 2"1/2 • Power: 15 KW to 35 KW • M32 Packing gland	X	---	---	1,0
Range GA2	Polyamide	128088111	• For M77 y 2"1/2 • Power: 15 KW to 35 KW • M32 Packing gland	X	---	---	0,80
Range G3	Aluminium	128088012	• For M77 y 2"1/2 • Power: 10 KW to 35 KW • M32 + M12 Packing gland	---	X (Ranges CA / CT)	---	1,0
Range GA3	Polyamide	128088112	• For M77 y 2"1/2 • Power: 10 KW to 35 KW • M32 + M12 Packing gland	---	X (Ranges CA / CT)	---	0,80

**P, D RANGE and**

**VALID FOR NA – OV - T – TIM AND CR45 EUROPA MODELS.**  
**NOT SUITABLE FOR INCORPORATING BULB THERMOSTAT**

- Aluminium, adjustable-angle, connection box with IP-66 protection according to standard EN-60529.
- Supplied with all connection accessories and screws
- The entire kit includes joints, screws, nuts, metal M20 stuffing box for power entry, and tightening discs needed for ensuring IP-66 level of protection against damp.

Connection box range	Code	Characteristics	Weight in Kg
Range P	108050999	• For M45 and 1"1/2 • M20 Packing gland	0,35
Range D	108050997	• For M45 and 1"1/2 • M20 Packing gland	0,35
Range P3	128088013	• For 1"1/4 • M20 Packing gland	0,35

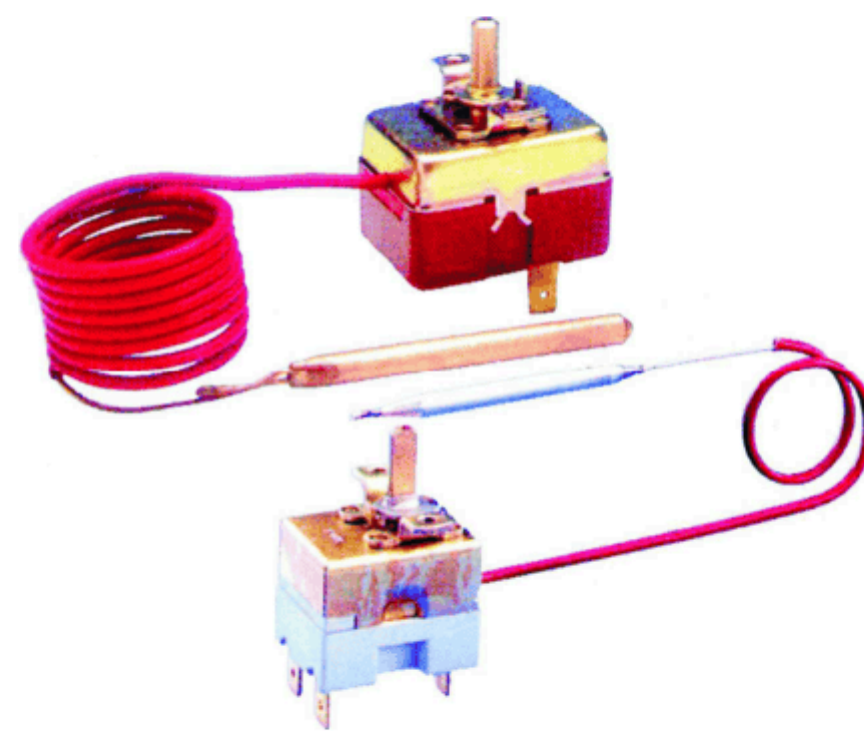


**Single-pole bulb and capillary thermostats**

Bulb and capillary thermostats to include in the Europa Range

Single-pole snap action thermostats. 3 to 5 °C differential depending on temperate scales. Bulb and capillaries in copper up to 160°C, and in stainless steel for over 160°C. Connection to 6.3 mm fastons.

The thermostat units for each of the temperatures comprise the standard thermostat with its respective buttons, cover and connection screws.



Code	Thermostat Range	Range	Characteristics	Max current (~240 V)	Weight in Kg
3509310324	CA	0 / 40 °C	Bulb in copper Ø6,5x142 mm Capillary 1m. 3 Faston	16 A	0,11
3509310320	CA	0 / 90 °C	Bulb in copper Ø6,5x66 mm Capillary 1m. 3 Faston	16 A	0,11
3509310321	CA	0 / 120 °C	Bulb in copper Ø6,5x66 mm Capillary 1m. 3 Faston	16 A	0,11
3509310321/ESP	CA	0 / 120 °C	Bulb in copper Ø6,5x66 mm Capillary 1m with PVC sheet. 3 Faston	16 A	0,11
3509310322	CA	0 / 200 °C	Bulb in S. Steel Ø5x98 mm Capillary 1m. 3 Faston	16 A	0,11
3509310322/ESP	CA	0 / 200 °C	Bulb in S. Steel Ø5x98 mm Capillary 1m with silicone sheet. 3 Faston	16 A	0,11
3509310323	CA	0 / 320 °C	Bulb in S. Steel Ø3x195 mm Capillary 1m. 3 Faston	16 A	0,11
517350000	CT1	0 / 90 °C	Bulb in copper Ø6x99 mm Capillary 1m. 2 Faston	20 A	0,06
517355000			Button + Face plate 0 / 90 °C		0,01
517352000	CT2	30 / 160 °C	Bulb in copper Ø6x88 mm Capillary 1m. 2 Faston	20 A	0,06
517357000			Button + Face plate 30 / 160 °C		0,01
517377000	TE	120 °C	Manual reset thermostat. Capillary 1m. Bulb in S.Steel Ø6x72 With M9x1 gland .	16 A	0,12
517578000	CT	65 °C	Capillary 1m. Bulb in S.Steel Ø6x72 With M9x1 gland .	16 A	0,12

**NON-pluggable cane thermostats**

Bulb and capillary thermostats to include in the Europa Range

Three-pole snap action thermostats. 2 to 13°C differential depending on temperate scales. Bulb and capillaries in stainless steel. Connection to 6.3mm fastons.



Code	Thermostat Range	Range	Characteristics	Max current (~240 V)	Weight in Kg
517370000	EG	1 / 40 °C	Bulb in copper Ø6x215 mm Capillary 880 mm	16 A	0,19
517370001			Button range 0 / 40 °C		0,02
517371000	EG	28 / 85 °C	Bulb in copper Ø6x129 mm Capillary 880 mm	16 A	0,19
517371001			Button range 30 / 85 °C		0,02
517372000	EG	36 / 125 °C	Bulb in copper Ø6x138 mm Capillary 880 mm	16 A	0,19
517372001			Button range 30 / 120 °C		0,02
517373000	EG	60 / 200 °C	Bulbo Inox Ø6x142 mm Capillary 880 mm	16 A	0,19
517373001			Button range 60 / 200 °C		0,02
517374000	EG	50 / 300 °C	Bulbo Inox Ø6x77 mm Capillary 880 mm	16 A	0,19
517374001			Button range 50 / 300 °C		0,02

**Rod thermostats**

Single-pole rod thermostats. 5 to 10°C differential depending on temperature scales. Connection by leads through side inputs.

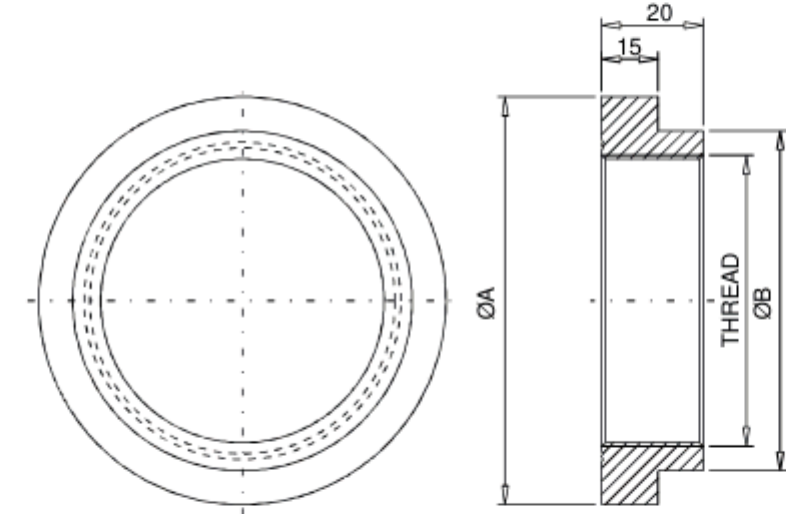
Code	Description	Thermostat Range	Operation temperatures		Characteristics	Maximum current (~240 V)
			Control (Automatic reset)	Safety (Manual reset)		
517330000	TER-CO-165-0-80-NEF	NEF	0 / 80 °C	---	Sheath Ø7,5x165 mm	20 A
517335000	TER-CO-265-5-80-NEF	NEF	5 / 80 °C	---	Sheath Ø7,5x265 mm	20 A
517337000	TER-CO-265-45-120-NEF	NEF	45 / 120 °C	---	Sheath Ø7,5x265 mm	20 A
517358000	TER-CO-165-0-73-87-NEF	NEF	-10 / 73 °C	87 °C	Sheath Ø7,5x165 mm	20 A
517347000	TER-SV-280-45-95-NEF	NEF	45 / 95 °C	---	Sheath Ø7,5x280 mm	16 A

**ACCESSORIES FOR THERMOSTATS**

Code	Description
570004330	Mounting clip for bulb thermostat Ø <sub>nominal</sub> 7,5 mm to sheath Ø <sub>int</sub> 3,5 to 8
570004331	Mounting clip for bulb thermostat Ø <sub>nominal</sub> 6 mm to sheath Ø <sub>int</sub> 3,5 to 7
570004332	Mounting clip for bulb thermostat Ø <sub>nominal</sub> 8 mm to sheath Ø <sub>int</sub> 3,5 to 12

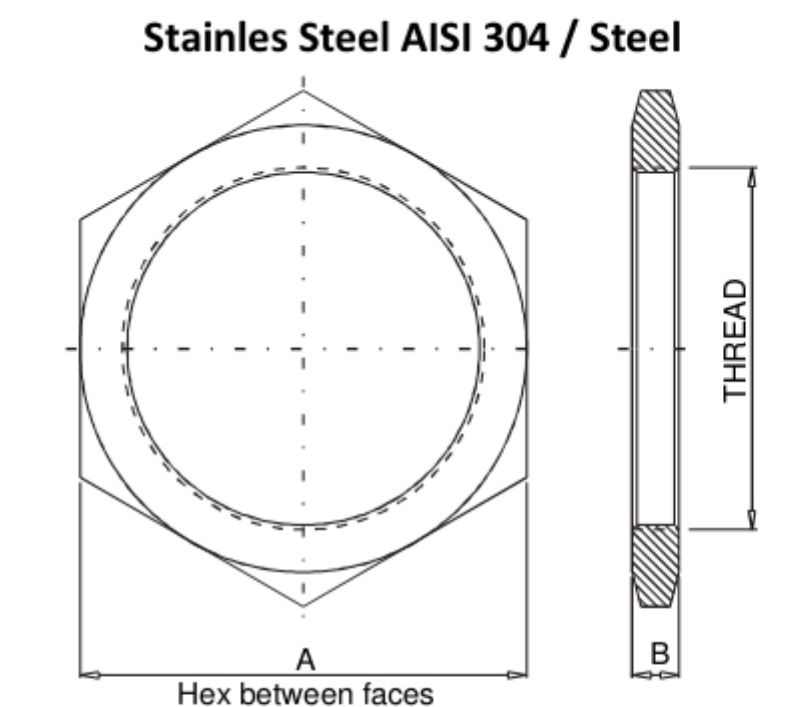
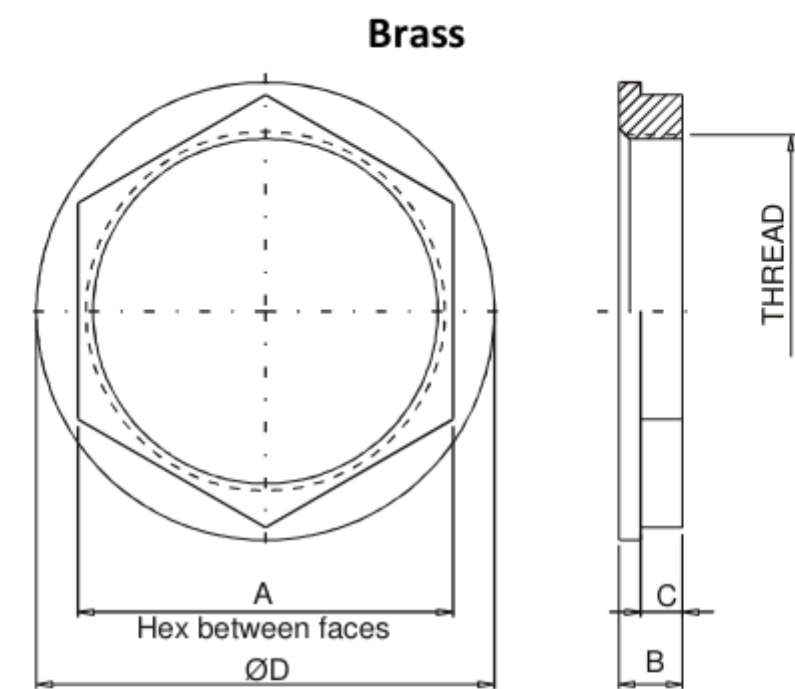
Weldable flanges

Code	Dimensions in mm		Thread	Material	Weight in Kg
	ØA	ØB			
106073000	70	60	M45	SS 304	0,35
106071000	108	90	M77	SS 304	0,60
106077000	65	54	1 1/4"	SS 304	0,27
106075000	70	60	1 1/2"	SS 304	0,28
106081000	93	75	2"	SS 304	0,54
106079000	108	90	2 1/2"	SS 304	,064
106072002	70	60	M45	Steel	0,31
106070002	108	90	M77	Steel	0,57
106076002	65	54	1 1/4"	Steel	0,26
106074002	70	60	1 1/2"	Steel	0,27
106080002	93	75	2"	Steel	0,53
106078002	108	90	2 1/2"	Steel	0,60



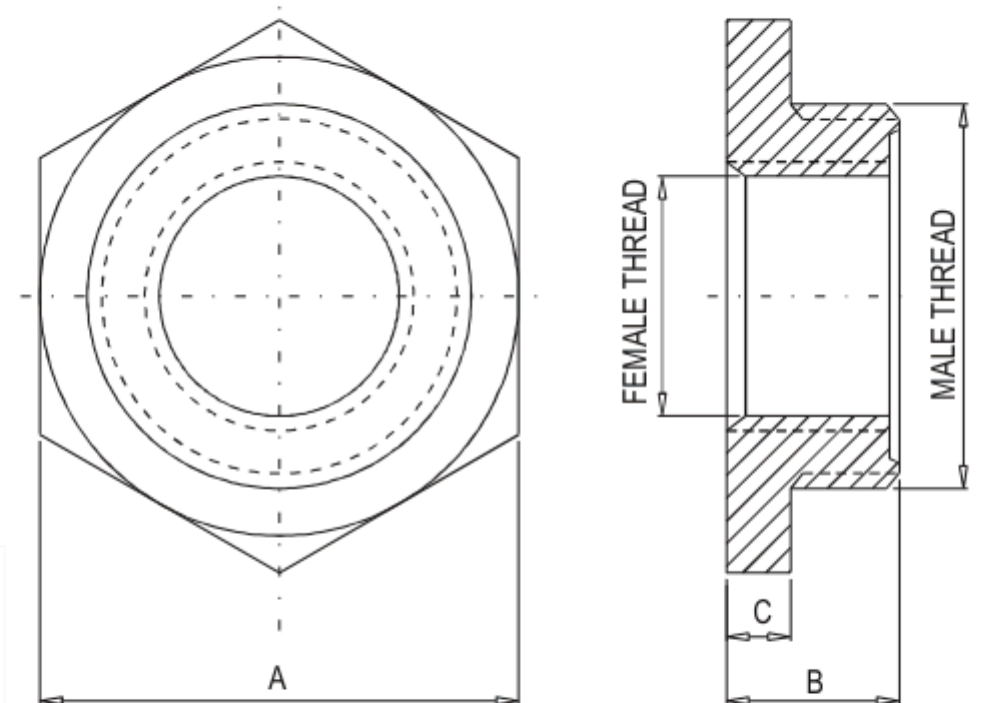
Nuts

Code	Dimensions in mm				Thread	Material	Weight in Kg
	A	B	C	Ø D			
106065000	60	7,5	-	-	M45	SS 304	0,15
106083000	95	10	-	-	M77	SS 304	0,27
106096000	55	7,5	-	-	1 1/4"	SS 304	0,11
106068000	60	7,5	-	-	1 1/2"	SS 304	0,13
106102000	85	10	-	-	2"	SS 304	0,20
106099000	95	10	-	-	2 1/2"	SS 304	0,28
106066002	60	7,5	-	-	M45	Steel	0,12
106084002	95	10	-	-	M77	Steel	0,24
106097000	55	7,5	-	-	1 1/4"	Steel	0,08
106069002	60	7,5	-	-	1 1/2"	Steel	0,12
106103000	85	10	-	-	2"	Steel	0,26
106100002	95	10	-	-	2 1/2"	Steel	0,24
106005000	28,7	7,3	5	35,4	3/4"	Brass	0,02
106007000	35,8	7,8	5	45,1	1"	Brass	0,02
106008000	44,8	8,2	5	55,9	1 1/4"	Brass	0,03
106064000	60	7,5	-	-	M45	Brass	0,08
106009000	60	7,5	-	-	1 1/2"	Brass	0,05
106010000	65	9	6	86,6	2"	Brass	0,12
106011000	90,8	11,5	9	112,2	2 1/2"	Brass	0,25



Threaded adapters

Code	Dimensions in mm			BSP Thread		Weight in Kg
	A	B	C	Male	Female	
106090000	57	25	10	R 1 1/2"	R 1 1/4"	0,12
106091000	60	24	7	R 2"	R 1 1/4"	0,43
106093000	88	28	10	R 2 1/2"	R 2"	0,51



Gaskets

Code	Thread for	Material
107058000	ACL-CAL (Electric boiler flange P-EB-110)	Basic
107097000	3/4"	Basic
107095000	1"	Basic
107031000	1 1/4"	Goma
107042000		Basic
107072000	1 1/2"	Basic
107032000	2"	Goma
107050000		Basic
107075000	2 1/2" and M77x2	Goma
107076000		Basic
107069000	M45x2	Goma
107070000		Basic

BASIC: basic composition rubber NBR + Fibers of aramide (asbestos free)

# GROUP 1 - Immersion heaters, drums heaters and accessories

## 1.7 – Accessories — GASKETS



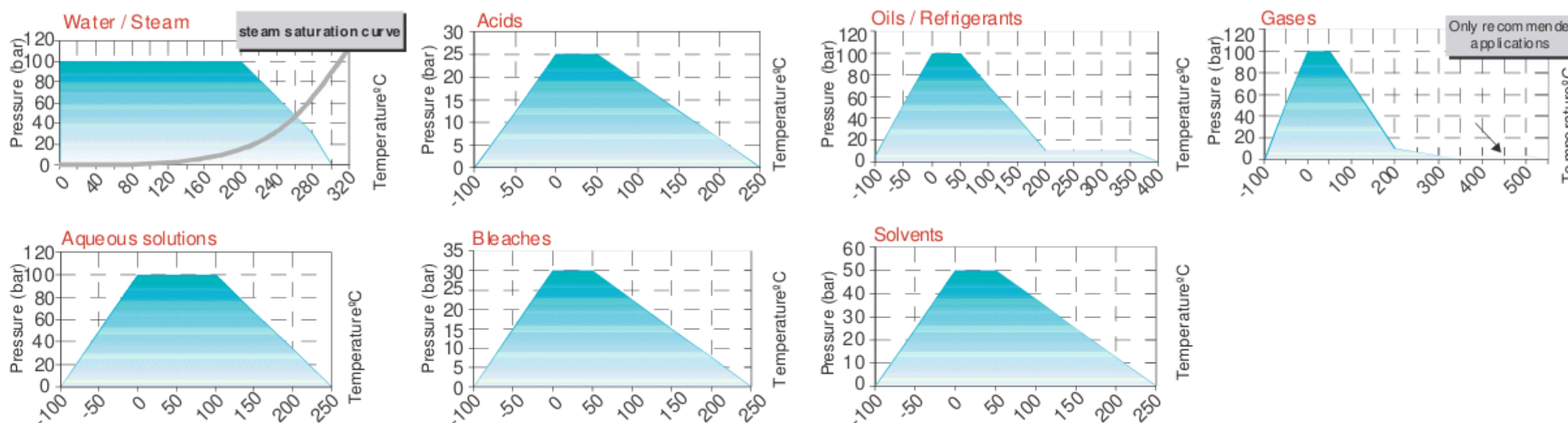
### Novatec Premium II

Premium II Novatec material is composed of compressed graphite, Kevlar® fibers and a low percentage of high quality NBR. Their excellent chemical and thermal resistance, high stability and low permeability to gases allows to replace the graphite materials reinforced with steel (fragile and difficult to work) in situations previously unthinkable for compressed fiber gaskets. With Novatec Premium II you can cover 80% of the different applications available in the industry.

#### Material characteristics

- NBR Binder
- Approvals DVGW-HTB-KTW-WRC-BAM ( 130 bar/80°C)
- Jacket Color: Blue Purple
- Marked Frenzelit on honeycomb
- A310-stick coating on both sides
- Available thickness: 1 - 1.5 - 2 - 3 mm
- Tolerance of thickness < 1 mm.: ±0.1 mm. > 1 mm.: ± 0.2 mm.

#### Recommended Application Limits



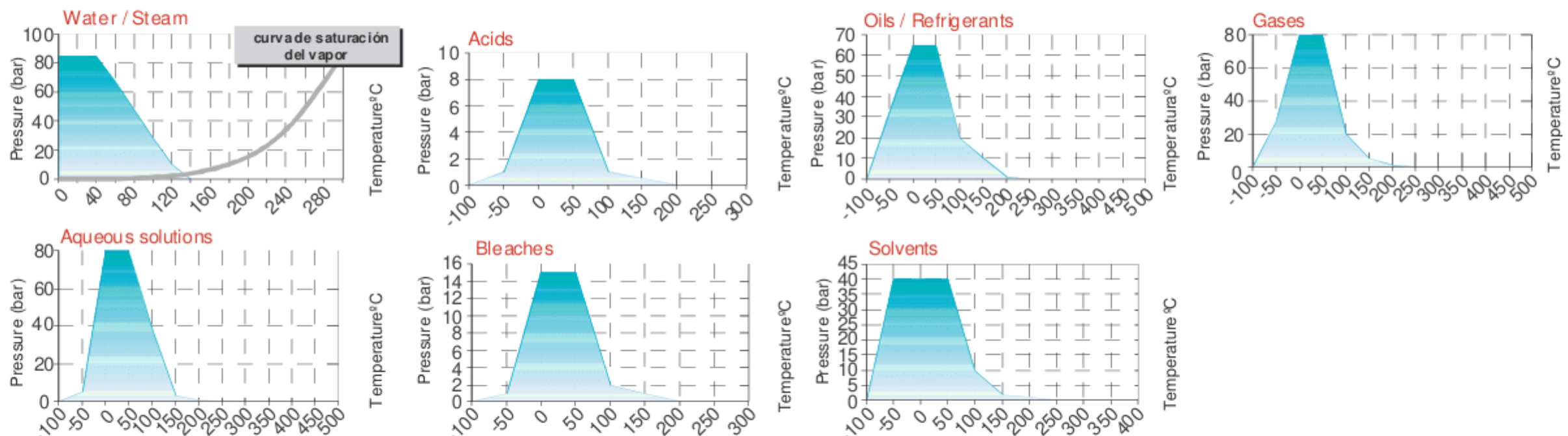
### Novatec Basic

Mixture composed of aramid fibers, special materials filler and NBR rubber.

#### Material characteristics

- NBR Binder
- Approvals DVGW-HTB-KTW
- Jacket Color: Orange
- Marked Frenzelit on honeycomb
- A300-stick coating on one side
- Maximum continuous temperature: 120 °C
- Available thickness: 0.3 - 0.5 - 0.75 - 1 - 1.5 - 2 - 3 - 4 mm
- Peak temperature: 250 °C

#### Recommended Application Limits

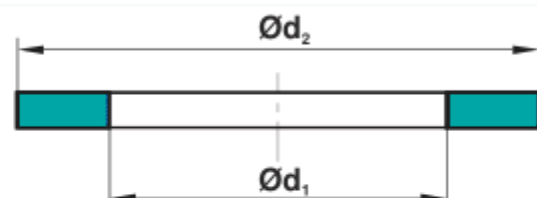


**NOTE:** Other materials and dimensions for standardized flanges and special flanges. Please contact our Technical Sales Department

Standard dimensions (standard thickness for gaskets is 2mm).

According to DIN2690 for RF flanges

DN	Dimensions in mm					
	Ød1	Ød2				
		PN6	PN10	PN16	PN25	PN40
40	49	85	92	92	92	92
50	61	95	107	107	107	107
65	77	115	127	127	127	127
80	90	132	142	142	142	142
100	115	152	162	162	168	168
125	141	182	192	192	195	195
150	169	207	218	218	225	225
175	195	237	248	248	255	267
200	220	262	273	273	285	292
250	274	318	328	330	342	353
300	325	373	378	385	402	418
350	368	423	438	445	458	475
400	420	473	490	497	515	547

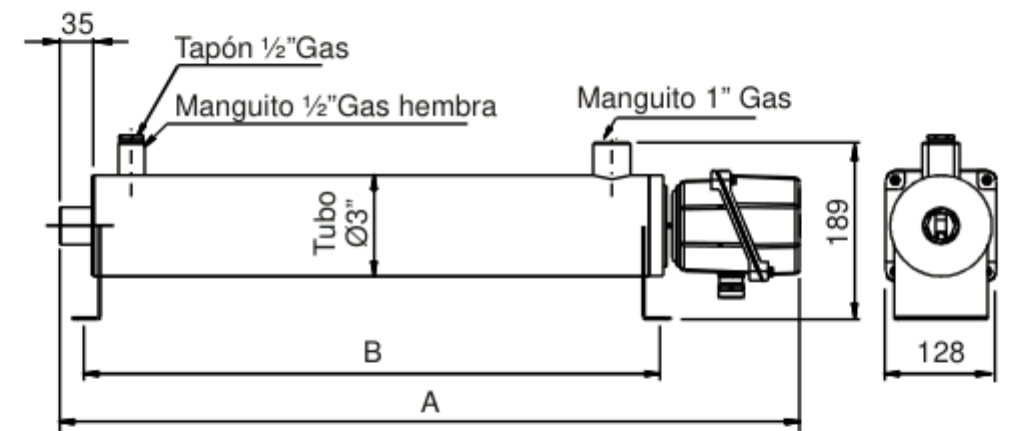


According to ANSI B16.21 for ANSI B16.5 RF flanges

DN	Dimensions in mm						
	Ød1	Ød2					
		150# (PN20)	300# (PN50)	400# (PN68)	600# (PN100)	900# (PN150)	1500# (PN250)
¾"	27	57	67	67	67	70	70
1"	33	67	73	73	73	79	79
1 ¼"	42	76	82	82	82	88	88
1 ½"	48	86	95	95	95	98	98
2"	60	105	111	111	111	142	142
2 ½"	73	124	130	130	130	165	165
3"	89	136	149	149	149	168	174
3 ½"	102	161	165	161	161	—	—
4"	114	174	181	178	194	206	209
5"	141	196	210	213	241	247	254
6"	168	222	250	247	266	288	282
8"	219	279	308	305	320	358	352
10"	273	340	362	359	400	434	434
12"	324	410	422	419	457	498	520
14"	356	451	486	483	492	520	577
16"	406	514	540	537	565	574	641

**General characteristics**

- Tubular elements in AISI 316L stainless steel, AISI 321 stainless steel or nickel-plated copper.
- Recipient of 3" in diameter in St37 steel, with an outer layer of anticorrosive paint
- Circuit input/output connection hoses of 1" female gas thread.
- Threaded heads of stamped brass or AISI 304 stainless steel.
- All models include a sheath of the same material as the heating element pipe, and a bulb thermostat with automatic reset, regulating scales 0/90°C; 30/85°C or 36/125°C according to models.
- Adjustable aluminium connection box, with IP-66 protection according to standard EN-60529.
- It is supplied with all accessories for connection, attachment and connection of the thermostat.
- All models include a 1/2" female gas thread hose for attaching a temperature probe (Not included)
- GCP-TR in line heaters are designed for working at a maximum design pressure of 6 bar and maximum design temperature indicated according to models.
- Optionally, together with the GCP-TR heater unit we can provide the switchboard with all the components and protections needed for its connection: heat-controllers, buttons, contactors, differential, magneto-thermal, etc.
- Standardised current 3~230 V Δ, 3~400 V
- To order, made to measure heating elements can be manufactured according to your specifications:
  - Tubular elements in: AISI 316L, Incoloy®-800 e Incoloy®-825 and Titanium
  - Stainless steel or Titanium heads.
- Units according to Para. 3 Art. 3 of the Pressurised Units Directive 97/23 CE.



**Standardised GCB-TR-AC models, range for heating oil, with AISI 321 stainless steel tube heating elements.**

**Design temperature 125 °C**

Code		Watts	W/cm <sup>2</sup>	Thermostat range	I/O Sleeve	Dimensions in mm	
Steel St 37.0 vessel	Stainless steel AISI 316L vessel					A	B
GCP-TR-AC0010	GCP-TR-INOX-AC0010	1250	2,5	36 / 125 °C	1" Gas-H	565	390
GCP-TR-AC0022	GCP-TR-INOX-AC0022	2250	2,5	36 / 125 °C	1" Gas-H	665	490
GCP-TR-AC0030	GCP-TR-INOX-AC0030	3000	2,6	36 / 125 °C	1" Gas-H	790	615
GCP-TR-AC0045	GCP-TR-INOX-AC0045	4500	2,5	36 / 125 °C	1" Gas-H	1100	925
GCP-TR-AC0060	GCP-TR-INOX-AC0060	6000	2,5	36 / 125 °C	1" Gas-H	1315	1140
GCP-TR-AC0090	GCP-TR-INOX-AC0090	9000	2,7	36 / 125 °C	1" Gas-H	1715	1540

**Standardised GCB-TR-CN models, range for heating water, with nickel-plated copper tube heating elements.**

**Design temperature 90 °C**

Code (Steel St 37.0 vessel)	Wattss	W/cm <sup>2</sup>	Thermostat range	I/O Sleeve	Dimensions in mm	
					A	B
GCP-TR-CN0040	4000	8,7	30 / 85 °C	1" Gas-H	565	390
GCP-TR-CN0060	6000	8,6	30 / 85 °C	1" Gas-H	565	390
GCP-TR-CN0080	8000	8,6	30 / 85 °C	1" Gas-H	665	490
GCP-TR-CN0100	10000	8,7	30 / 85 °C	1" Gas-H	665	490
GCP-TR-CN0150	15000	8,1	0 / 90 °C	1" Gas-H	1100	925
GCP-TR-CN0200	20000	8,2	0 / 90 °C	1" Gas-H	1100	925
GCP-TR-CN0240	24000	8,1	0 / 90 °C	1" Gas-H	1315	1140
GCP-TR-CN0350	35000	8,5	0 / 90 °C	1" Gas-H	1715	1540

**Standardised GCB-TR-II models, range for heating water or other fluids, with AISI 316L stainless steel tube heating elements.**

**Design temperature 90 °C**

Code		Watts	W/cm <sup>2</sup>	Thermostat range	I/O Sleeve	Dimensions in mm	
Steel St 37.0 vessel	Stainless steel AISI 316L vessel					A	B
GCP-TR-II0030	GCP-TR-INOX-II0030	3000	6,6	30 / 85 °C	1" Gas-H	565	390
GCP-TR-II0045	GCP-TR-INOX-II0045	4500	6,5	30 / 85 °C	1" Gas-H	665	490
GCP-TR-II0060	GCP-TR-INOX-II0060	6000	6,2	30 / 85 °C	1" Gas-H	790	615
GCP-TR-II0090	GCP-TR-INOX-II0090	9000	6,3	30 / 85 °C	1" Gas-H	1100	925
GCP-TR-II0120	GCP-TR-INOX-II0120	12000	6,4	0 / 90 °C	1" Gas-H	1315	1140

For heating element spares, please consult our Europa Range heating elements, models CR212CN

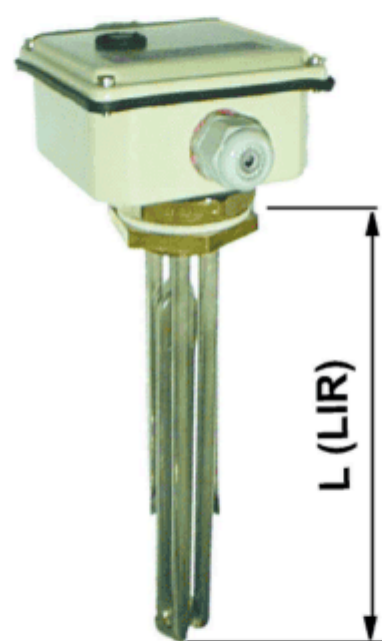
## GROUP 1 - Immersion heaters, drums heaters and accessories

### 1.9 – Heaters for knife sterilizers — ECU

#### THERMOSTATIC HEATER ASSEMBLY FOR KNIFE STERILIZERS OR OTHER INSTRUMENTS

##### General characteristics

- Tubular element of stainless steel AISI 316L of Ø8mm
- BSP threaded plug of stamped brass
- Steel painted connection box with degree protection against moisture IP-66.
- Stuffing box
- Watertightness gasket
- Welded with silver alloy for stainless steel tube
- Standard voltage ~230 V
- Sheath with manual reset safety thermostat of 105 ± 4 °C. Differential 20 ± 10 °C.
- Sheath with automatic reset control thermostat of 93 ± 3 °C. Differential 6 ± 2 °C.
- On demand, special heating elements can be made according to your specifications:
  - Material tube: AISI 316L, Incoloy®-800, Incoloy®-825 and Titanium
  - Stainless steel or titanium BSP threaded plugs.



Code	L (LIR) in mm	Thread	Watts	W/cm <sup>2</sup>	Tube material	Electricfor's construct. thermic class	Weight in Kg
ECU1	190	M45	1000	6,9	Ø8 AISI 316L	T-301-E	1,1
ECU2	190	1 1/4"	1000	6,9	Ø8 AISI 316L	T-301-E	1,1

**Note:** The complete set of heating element, connection box, thermostats, lock nut and klingerit joint is included in the price.

**Usual applications:** Especially appropriate for knife sterilizers in refrigerated slaughterhouses.

It may also be used for other applications such as heating slightly salted waters, or with low chlorine content, neutral or marginally basic pH, high oxygen content, etc., for which the most suitable sheath material for the element is 316L stainless steel, or when airtightness is required in the connection box, or double safety in the temperature control. In case of doubt, please consult NTT n°4101 or else our Technical Department.

#### SPARE PARTS FOR KNIFE STERILIZERS ECU

Code	Spare part for	L (LIR) in mm	Thread	Watts	W/cm <sup>2</sup>	Tube material	Electricfor's construct. thermic class	Weight in Kg
RECU1	ECU1	190	M45	1000	6,9	Ø8 AISI 316L	T-301-E	0,7
RECU2	ECU2	190	1 1/4"	1000	6,9	Ø8 AISI 316L	T-301-E	0,7

#### SPARE THERMOSTATS FOR THERMOSTATIC HEATER ASSEMBLY ECU

Description	Code	Thermostat range	Range	Reset	Max current	Capillary length	Bulb		Weight in Kg
							Material	Dimensions	
TER-BU-90-AUT-ECU	517105000	ECU	93 °C	Automatic	10 A (~250 V)	180	Copper	Ø6 x 102 mm	0,75
TER-BU-105-MAN-ECU	517106000	ECU	104 °	Manual	10 A (~250 V)	180	Copper	Ø6 x 102 mm	0,75

## GROUP 1 - Immersion heaters, drums heaters and accessories

### 1.10 – With coupling plug and sheath for thermostat — NOB

#### MONOBLOCK GROUP OF HEATING ELEMENT WITH SHEATH FOR THERMOSTAT WITH BRASS 1 1/4" BSP COUPLING PLUG

##### General characteristics

- Tubular element of stainless steel AISI 321, AISI 316L or nickel-plate copper of Ø8 mm, according models.
- BSP threaded plug of stamped brass
- Protection hood IP-40
- Welded with silver alloy for stainless steel tube.
- Sheath for rod thermostat connectable to heating element.
- Standard voltage ~230 V



#### RANGE FOR WATER OR HIGH QUALITY THERMAL OIL

Code	L (LIR) in mm	Watts	W/cm <sup>2</sup>	Thermostat range according to appli.		Shape	Tube material	Electricfor's constructive thermic class	Weight in Kg
				Water	Oil				
NOB11	135	500	5,3	A1	A2	VD	AISI 321 or 304L	T-300-E	0,23
NOB12	150	750	7,7	A1	A2	VD	AISI 321 or 304L	T-300-E	0,24
NOB13	315	1000	7,9	B1	B2	U	AISI 321 or 304L	T-300-E	0,27
NOB14	315	1500	7,5	B1	B2	1/2 VD	AISI 321 or 304L	T-300-E	0,34
NOB15	315	2000	7,8	B1	B2	VD	AISI 321 or 304L	T-300-E	0,38
NOB16	285	2500	7,6	B1	B2	TVC	AISI 316L	T-301-E	0,45
NOB17	325	3000	7,8	B1	B2	TVC	AISI 316L	T-301-E	0,50
NOB18	375	3500	7,7	B1	B2	TVC	AISI 316L	T-301-E	0,58
NOB21	300	1000	8,3	B1	-	U	Nickeled copper	T-175-E	0,28
NOB23	290	1500	7,7	B1	-	1/2 VD	Nickeled copper	T-175-E	0,35
NOB24	330	2000	9,3	B1	-	1/2 VD	Nickeled copper	T-175-E	0,38
NOB25	450	1500	7,3	B1	-	U	Nickeled copper	T-175-E	0,34

L = Maximum length (sheath or resistor) including thread.

Dimensional tolerances for element shape:

"U" = <sup>+0</sup>/<sub>-3%</sub>

"1/2 VD" - "VD" - "TVC" - "CVC" = IT15

#### RECOMMENDATIONS

- To heat water don't use the A2 and B2 thermostat range. (Range 30-150 °C).
- To heat thermal oil of high quality or high velocity of movement don't use heating elements in copper or nickeled copper tube. The corrosive effect of the oil over the copper may seriously damage the life of the heating element.



Code: CNOB

#### PROTECTION ACCESSORIES AND PROTECTION HOOD

Degree protection against moisture IP40

## GROUP 1 - Immersion heaters, drums heaters and accessories

### 1.10 – With coupling plug and sheath for thermostat — NOB

#### MONOBLOCK GROUP OF HEATING ELEMENT WITH SHEATH FOR THERMOSTAT WITH BRASS 1"1/4 BSP COUPLING PLUG. RANGE FOR OIL

##### General characteristics

- Tubular element of stainless steel AISI 321, of  $\varnothing 8$  mm, according models.
- BSP threaded plug of stamped brass
- Protection hood IP-40
- Welded with silver alloy for stainless steel tube.
- Sheath for rod thermostat connectable to heating element.
- Standard voltage ~230 V

Code	L (LIR) in mm	Watts	W/cm <sup>2</sup>	Thermostat range	Shape	Tube material	Electricfor's constructive thermic class	Weight in Kg
NOB3	315	1000	4	B1 - B2	VD	AISI 321 or 304L	T-300-E	0,39
NOB5	450	1500	3,9	B1 - B2	VD	AISI 321 or 304L	T-300-E	0,50
NOB7	420	2000	3,9	B1 - B2	TVC	AISI 321 or 304L	T-300-E	0,63
NOB30	450	2500	3,3	B1 - B2	CVC	AISI 321 or 304L	T-300-E	0,80
NOB32	530	3000	3,3	B1 - B2	CVC	AISI 321 or 304L	T-300-E	0,95



L = Maximum length (sheath or resistor)

Dimensional tolerances for element shape according to IT-15

## GROUP 1 - Immersion heaters, drums heaters and accessories

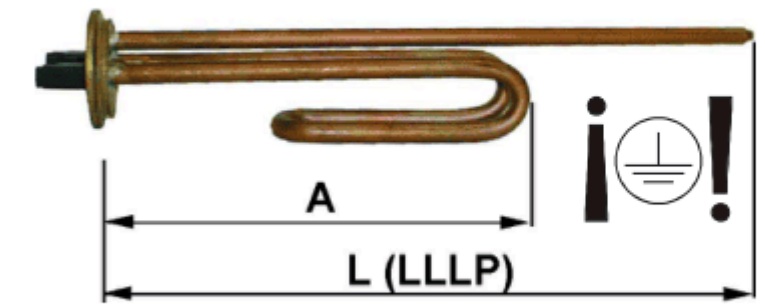
### 1.11 – With round flange and sheath for thermostat — PNOB

#### MONOBLOCK GROUP OF HEATING ELEMENT WITH $\varnothing 48$ mm ROUND BRASS FLANGE AND SHEATH FOR THERMOSTAT

##### General characteristics

- Tubular element of copper of  $\varnothing 8$  mm
- $\varnothing 48$  mm round stamped brass flange
- Sheath for rod thermostat connectable to heating element.
- Standard voltage ~230 V

Code	Dimensions in mm		Watts	W/cm <sup>2</sup>	Thermostat range	Shape	Tube material	Electricfor's constructive thermic class	Weight in Kg
	L (LLLPP)	A							
PNOB12AR	280	200	1500	10,9	E1-E3	VD	Copper	T-175-E	0,21



L = Maximum length (sheath or resistor)

Dimensional tolerances for element shape:

"1/2 VD" =  $\pm 2$  mm.

## GROUP 1 - Immersion heaters, drums heaters and accessories

### 1.12 – With coupling plug, sheath for thermostat and connection box IP-66 — NOBxxCH

#### MONOBLOCK GROUP OF HEATING ELEMENT WITH BRASS 1"1/4 BSP COUPLING PLUG AND SHEATH FOR THERMOSTAT. SUITABLE FOR CONNECTING ADJUSTABLE ALUMINUM COUPLING BOX IP-66

##### General characteristics

- Tubular element of stainless steel AISI 321 or AISI 316L of  $\varnothing 8$  mm, according models
- BSP threaded plug of stamped brass
- Welded with silver alloy for stainless steel tube.
- Adjustable connection box with degree protection against moisture IP-66
- Sheath for rod thermostat connectable to heating element.
- Standard voltage ~230 V

##### RANGE FOR WATER OR HIGH QUALITY THERMAL OIL

Code	L (LIR) in mm	Watts	W/cm <sup>2</sup>	Range thermostat according to appli.		Shape	Tube material	Electricfor's constructive thermic class	Weight in Kg
				Water	Oil				
NOB19CH	425	4000	7,6	CT1	CT2	TVC	AISI 316L	T-301-E	0,80

##### RANGE FOR OIL

Code	L (LIR) in mm	Watts	W/cm <sup>2</sup>	Range thermostat	Shape	Tube material	Electricfor's constructive thermic class	Weight in Kg
NOB36CH	680	4000	3	CT2	CVC	AISI 321 or 304L	T-300-E	1,35

**NOTE:** The complete set is made up of element + adjustable aluminum coupling box + bulb thermostat range CT1 or CT2.

The aluminum coupling box, as well as the bulb thermostat are not included in the price

##### C-HER-TER-MO RANGE

##### SUITABLE FOR THERMOSTAT BULB

Code	Dimensions in mm			Weight in Kg
	A	B	C	
108072000	78	74	98	0,41

The complete set includes the joints, screws, nuts, flange attachment to bulb thermostat, metallic packing glands M20 for voltage supply and tightening disc necessary to assure the degree protection against moisture IP-66

