elmiti

RISCALDATORI ELETTRICI

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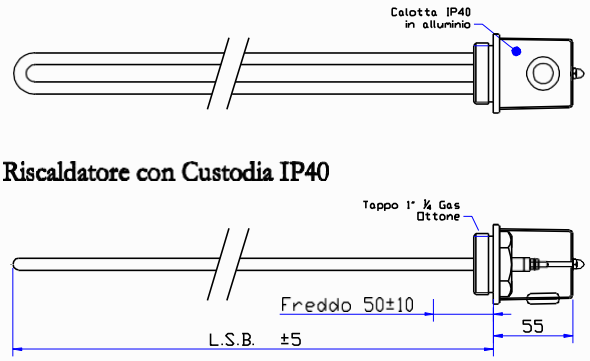
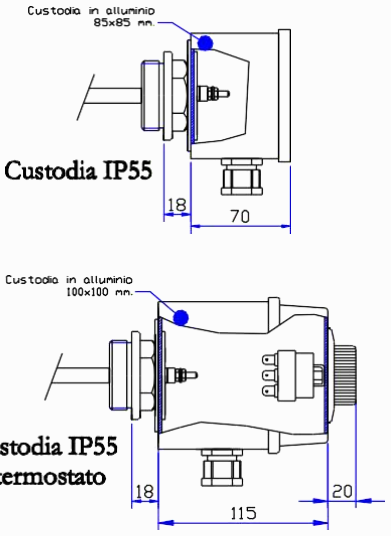
Riscaldatori tappo 1″1/4 Gas

Heaters on brass 1″ ¼ gas plug
1 U-shaped Element Ø8 mm
M3 terminals: Carbon steel
Nuts and washers: brass

GA4MX:
Tube: INCOLOY 800
Wire: Nickel Chrome 80/20
Oxide: High temperature

GO4M:
Tube: AISI 321
Wire: Nickel Chrome 60/40
Oxide: Medium temperature





GA4MX series: Heaters sized for operation in water with a specific power output of 9W/cm; the heaters in this series are characterised by a high output combined with very compact dimensions, while maintaining high reliability, thanks to the high quality materials used in their construction.

GO4M series: Low specific power heaters, 2 W/cm² specifically sized for operation in oil. Guarantee heating suitable for this type of application thanks to their low load.

In the normal version, the heater is intended with an IP40 electrical enclosure. When ordering, please specify any optional features in addition to the heater code:

Watertight enclosure: IP55

Bulb **thermostat** automatic reset 1 contact: **T1** Scale 4-40°C ; **T2** Scale 30-110°C ; **T3** Scale 50-300°C.

E.g.: **GA4MX01000** = 1000W L.285 mm With IP40 enclosure
GA4MX02000 IP55 = 2000w L. 510 mm With IP55 enclosure
GA4MX02000 IP55 T2 = 2000 W L. 510 mm With IP55 enclosure + thermostat 1 contact scale 30-110°C

GO4M for OIL 2W/cm²				GA4MX for OIL 9 W/cm²		
CODE	WATT POWER	LENGTH mm		CODE	WATT POWER	LENGTH mm
GO4 M00300	300	360		GA4 MX00500	500	175
GO4 M00500	500	560		GA4 MX00700	700	220
GO4 M00700	700	760		GA4 MX01000	1000	285
GO4 M01000	1000	1050		GA4 MX01300	1300	355
GO4 M01250	1250	1250		GA4 MX01500	1500	400
GO4 M01500	1500	1550		GA4 MX01700	1700	445
				GA4 MX02000	2000	510
				GA4 MX02500	2500	620
				GA4 MX03000	3000	735
				GA4 MX04000	4000	970

Note: Water heaters are suitable for operation with normal drinking water or with non-aggressive fluids where there are no abnormal concentrations of substances that could affect the life of the heater. In these cases, ELMITI S.r.l. shall not be liable for any damage to the heaters due to corrosion. In this regard we ask you to please carefully read the notes in the margin of this catalogue and, if any doubts should arise, please consult our technical department.

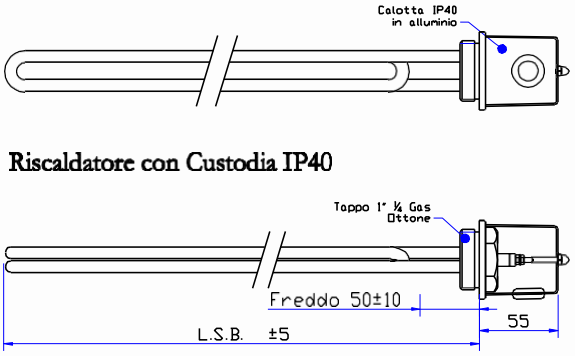
Serie: GO4MR GA4MRX

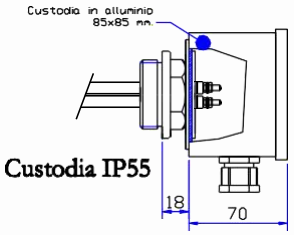
Riscaldatori tappo 1″1/4 Gas

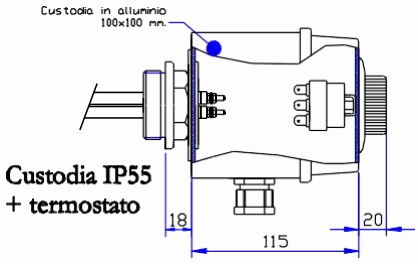
Heaters on brass 1″ ¼ gas plug 1
EYELET Element Ø8 mm
M3 terminals: Carbon steel
Nuts and washers: brass

GA4MRX:
Tube: INCOLOY 800
Wire: Nickel Chrome 80/20
Oxide: High temperature

GO4MR:
Tube: AISI 321
Wire: Nickel Chrome 60/40
Oxide: Medium temperature







GA4MRX series: Heaters sized for operation in water with a specific power output of 9W/cm; the heaters in this series are characterised by a high output combined with very compact dimensions, while maintaining high reliability, thanks to the high quality materials used in their construction.

GO4MR series: Low specific power heaters, 2 W/cm² specifically sized for operation in oil. Guarantee heating suitable for this type of application thanks to their low load.

In the normal version, the heater is intended with an IP40 electrical enclosure. When ordering, please specify any optional features in addition to the heater code:

Watertight enclosure: IP55

Bulb **thermostat** automatic reset 1 contact: **T1** Scale 4-40°C ; **T2** Scale 30-110°C ; **T3** Scale 50-300°C.

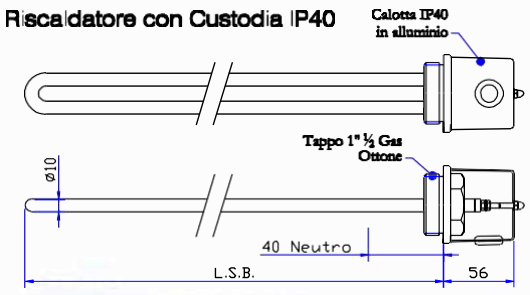
E.g.: **GA4MRX01000** = 1000W L.170 mm With IP40 enclosure
GA4MRX02000 IP55 = 2000w L. 280 mm With IP55 enclosure
GA4MRX02000 IP55 T2 = 2000 W L. 280 mm With IP55 enclosure + thermostat 1 contact scale 30-110°C

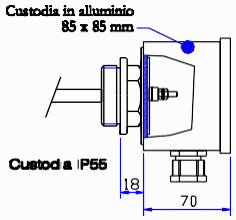
GO4MR for OIL 2W/cm²				GA4MRX for OIL 9 W/cm²		
CODE	WATT POWER	LENGTH mm		CODE	WATT POWER	LENGTH mm
GO4 MR00300	300	210		GA4 MRX00700	700	140
GO4 MR00500	500	310		GA4 MRX01000	1000	170
GO4 MR00700	700	410		GA4 MRX01300	1300	210
GO4 MR01000	1000	555		GA4 MRX01500	1500	230
GO4 MR01250	1250	680		GA4 MRX01700	1700	250
GO4 MR01500	1500	805		GA4 RMX02000	2000	280
				GA4 MRX02500	2500	340
				GA4 MRX03000	3000	400
				GA4 MRX04000	4000	510

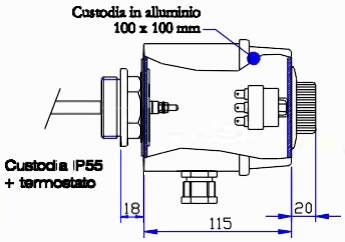
Note: Water heaters are suitable for operation with normal drinking water or with non-aggressive fluids where there are no abnormal concentrations of substances that could affect the life of the heater. In these cases, ELMITI S.r.l. shall not be liable for any damage to the heaters due to corrosion. In this regard we ask you to please carefully read the notes in the margin of this catalogue and, if any doubts should arise, please consult our technical department.

Serie: GO5M GA5M

Riscaldatori su tappo 1″ 1/2 Gas







Heaters on brass 1″ ¼ gas plug
1 U-shaped Element Ø10 mm
Tube: AISI 321
Wire: Nickel Chrome 60/40
Oxide: medium temperature
Terminals: Carbon steel
Nuts and washers: brass

GA5M series: Heaters sized for operation in water with a specific power output of 7W/cm; the main features of this series are good output and excellent reliability.

GO5M series: Low specific power heaters, 2 W/cm² specifically sized for operation in oil. Guarantee heating suitable for this type of application thanks to their low load.

In the normal version, the heater is intended with an IP40 electrical enclosure. When ordering, please specify any optional features in addition to the heater code:

Watertight enclosure: IP55

Bulb **thermostat** automatic reset 1 contact: **T1** Scale 4-40°C ; **T2** Scale 30-110°C ; **T3** Scale 50-300°C.

Bulb **thermostat** automatic reset 3 contacts: **T4** Scale 30-110°C ; **T5** Scale 50-300°C. E.g.:

GA5M01000 = 1000W L.290 mm With IP40 enclosure

GA5M02000 IP55 = 2000w L. 510 mm With IP55 enclosure

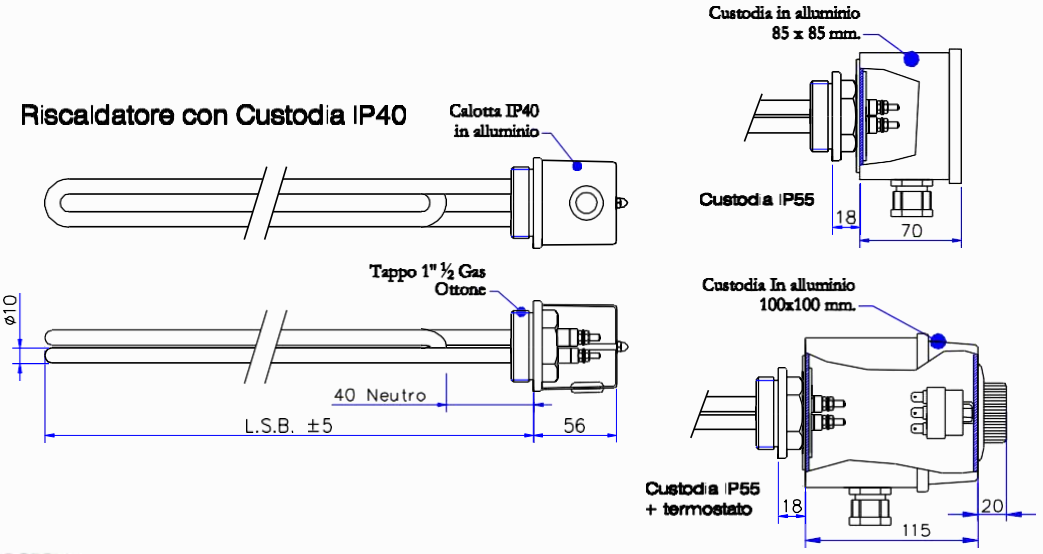
GA5M02000 IP55 T2 = 2000 W L. 510 mm With IP55 enclosure + thermostat 1 contact scale 30-110°C

GO5M for OIL 2W/cm²				GA5M for OIL 7 W/cm²		
CODE	WATT POWER	LENGTH mm		CODE	WATT POWER	LENGTH mm
GO5 M00300	330	330		GA5 M00670	670	210
GO5 M00400	400	390		GA5 M00830	830	250
GO5 M00500	500	460		GA5 M01000	1000	290
GO5 M00650	670	590		GA5 M01170	1170	330
GO5 M008300	830	720		GA5 M01330	1330	360
GO5 M01000	1000	860		GA5 M01670	1670	450
GO5 M01200	1170	990		GA5 M02000	2000	510
GO5 M01670	1670	1370		GA5 M02670	2670	670
				GA5 M03330	3330	820
				GA5 M04000	4000	970

Note: Water heaters are suitable for operation with normal drinking water or with non-aggressive fluids where there are no abnormal concentrations of substances that could affect the life of the heater. In these cases, ELMITI S.r.l. shall not be liable for any damage to the heaters due to corrosion. In this regard we ask you to please carefully read the notes in the margin of this catalogue and, if any doubts should arise, please consult our technical department.

Serie: GO5MR GA5MR

Riscaldatori su tappo 1″ 1/2 Gas



Heaters on brass 1″ ½ gas plug
1 EYELET Element
Tube: Ø10 mm AISI 321
Wire: Nickel Chrome 60/40
Oxide: medium temperature
Terminals: Carbon steel
Nuts and washers: brass

GA5MR series: Heaters sized for operation in water with a specific power output of 7W/cm; the main features of this series are good output and excellent reliability.

GO5MR series: Low specific power heaters, 2 W/cm² specifically sized for operation in oil. Guarantee heating suitable for this type of application thanks to their low load.

In the normal version, the heater is intended with an IP40 electrical enclosure. When ordering, please specify any optional features in addition to the heater code:

Watertight enclosure: IP55

Bulb **thermostat** automatic reset 1 contact: **T1** Scale 4-40°C ; **T2** Scale 30-110°C ; **T3** Scale 50-300°C.

Bulb **thermostat** automatic reset 3 contacts: **T4** Scale 30-110°C ; **T5** Scale 50-300°C. E.g.:

GA5MR01000 = 1000W L.170 mm With IP40 enclosure

GA5MR02000 IP55 = 2000w L. 280 mm With IP55 enclosure

GA5MR02000 IP55 T2 = 2000 W L. 280 mm With IP55 enclosure + thermostat 1 contact scale 30-110°C

GO5MR for OIL 2W/cm²				GA5MR for OIL 7 W/cm²		
CODE	WATT POWER	LENGTH mm		CODE	WATT POWER	LENGTH mm
GO5 MR00300	330	190		GA5 MR00670	670	135
GO5 MR00400	400	215		GA5 MR00830	830	150
GO5 MR00500	500	260		GA5 MR01000	1000	170
GO5 MR00650	670	320		GA5 MR01170	1170	190
GO5 MR00830	830	390		GA5 MR01330	1330	210
GO5 MR01000	1000	450		GA5 MR01670	1670	245
GO5 MR01200	1170	520		GA5 MR02000	2000	280
GO5 MR01670	1670	720		GA5 MR02670	2670	360
				GA5 MR03330	3330	435
				GA5 MR04000	4000	510

Note: Water heaters are suitable for operation with normal drinking water or with non-aggressive fluids where there are no abnormal concentrations of substances that could affect the life of the heater. In these cases, ELMITI S.r.l. shall not be liable for any damage to the heaters due to corrosion. In this regard we ask you to please carefully read the notes in the margin of this catalogue and, if any doubts should arise, please consult our technical department.

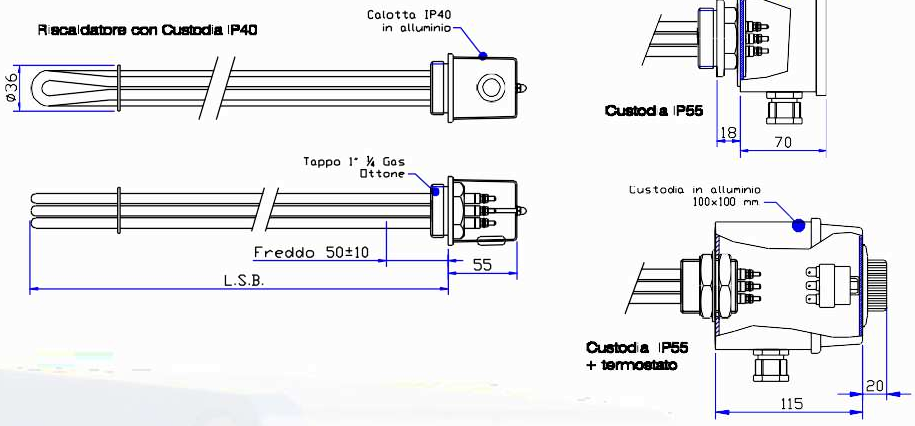
Serie: GO4T GA4TX

Riscaldatori tappo 1″1/4 Gas

Heaters on brass 1″ ¼ gas plug
3 U-shaped Elements Ø8 mm
M3 terminals: Carbon steel
Nuts and washers: brass

GA4TX:
Tube: INCOLOY 800
Wire: Nickel Chrome 80/20
Oxide: High temperature

GO4T:
Tube: AISI 321
Wire: Nickel Chrome 60/40
Oxide: Medium temperature



GA4TX series: Heaters sized for operation in water with a specific power output of 9W/cm; the heaters in this series are characterised by a high output combined with very compact dimensions, while maintaining high reliability, thanks to the high quality materials used in their construction.

GO4T series: Low specific power heaters, 2 W/cm² specifically sized for operation in oil. Guarantee heating suitable for this type of application thanks to their low load.

In the normal version, the heater is intended with an IP40 electrical enclosure. When ordering, please specify any optional features in addition to the heater code:

Watertight enclosure: IP55
Bulb **thermostat** automatic reset 1 contact: **T1** Scale 4-40°C ; **T2** Scale 30-110°C ; **T3** Scale 50-300°C.

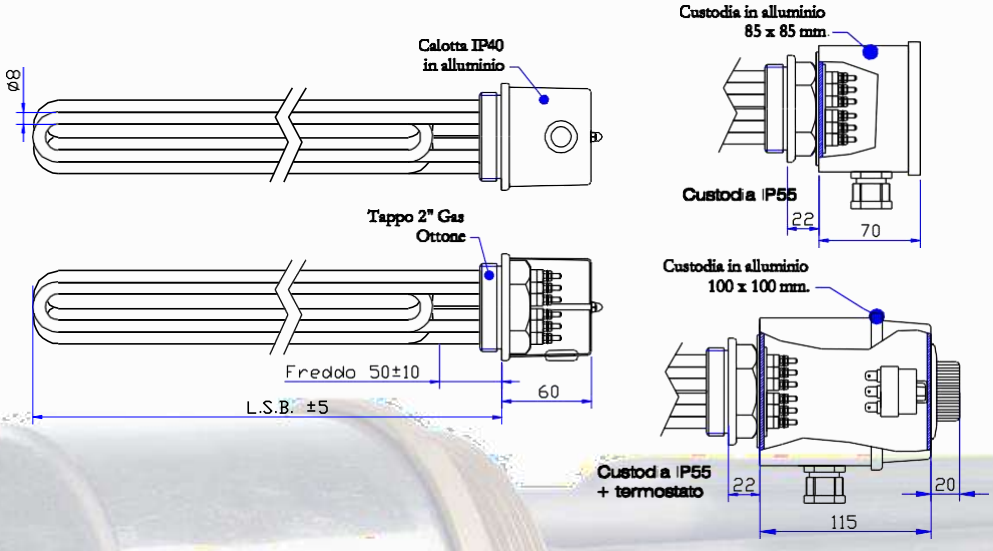
E.g.: **GA4TX03000** = 3000W L.285 mm With IP40 enclosure
GA4TX06000 IP55 = 6000w L. 510 mm With IP55 enclosure
GA4TX06000 IP55 T2 = 6000 W L. 510 mm With IP55 enclosure + thermostat 1 contact scale 30-110°C

GO4T for OIL 2W/cm²				GA4TX for OIL 9 W/cm²		
CODE	WATT POWER	LENGTH mm		CODE	WATT POWER	LENGTH mm
GO4 T00900	900	360		GA4 TX01500	1500	175
GO4 T01500	1500	560		GA4 TX02100	2100	220
GO4 T02100	2100	760		GA4 TX03000	3000	285
GO4 T03000	3000	1050		GA4 TX03900	3900	355
GO4 T03750	3750	1250		GA4 TX04500	4500	400
GO4 T04500	4500	1550		GA4 TX05100	5100	445
				GA4 TX06000	6000	510
				GA4 TX07500	7500	620
				GA4 TX09000	9000	735
				GA4 TX012000	12000	970

Note: Water heaters are suitable for operation with normal drinking water or with non-aggressive fluids where there are no abnormal concentrations of substances that could affect the life of the heater. In these cases, ELMITI S.r.l. shall not be liable for any damage to the heaters due to corrosion. In this regard we ask you to please carefully read the notes in the margin of this catalogue and, if any doubts should arise, please consult our technical department.

Serie: GO4TR GA4TRX

Riscaldatori tappo 2″ Gas



Heaters on brass 2″ gas plug
3 EYELET Elements Ø8 mm
M3 terminals: Carbon steel
Nuts and washers: brass

GA4TRX:
Tube: INCOLOY 800
Wire: Nickel Chrome 80/20
Oxide: High temperature

GO4TR:
Tube: AISI 321
Wire: Nickel Chrome 60/40
Oxide: Medium temperature

GA4TRX series: Heaters sized for operation in water with a specific power output of 9W/cm; the heaters in this series are characterised by a high output combined with very compact dimensions, while maintaining high reliability, thanks to the high quality materials used in their construction.

GO4TR series: Low specific power heaters, 2 W/cm² specifically sized for operation in oil. Guarantee heating suitable for this type of application thanks to their low load.

In the normal version, the heater is intended with an IP40 electrical enclosure. When ordering, please specify any optional features in addition to the heater code:

Watertight enclosure: IP55

Bulb **thermostat** automatic reset 1 contact: **T1** Scale 4-40°C ; **T2** Scale 30-110°C ; **T3** Scale 50-300°C. E.g.:

GA4TRX03000 = 3000W L.170 mm With IP40 enclosure

GA4TRX06000 IP55 = 6000w L. 280 mm With IP55 enclosure

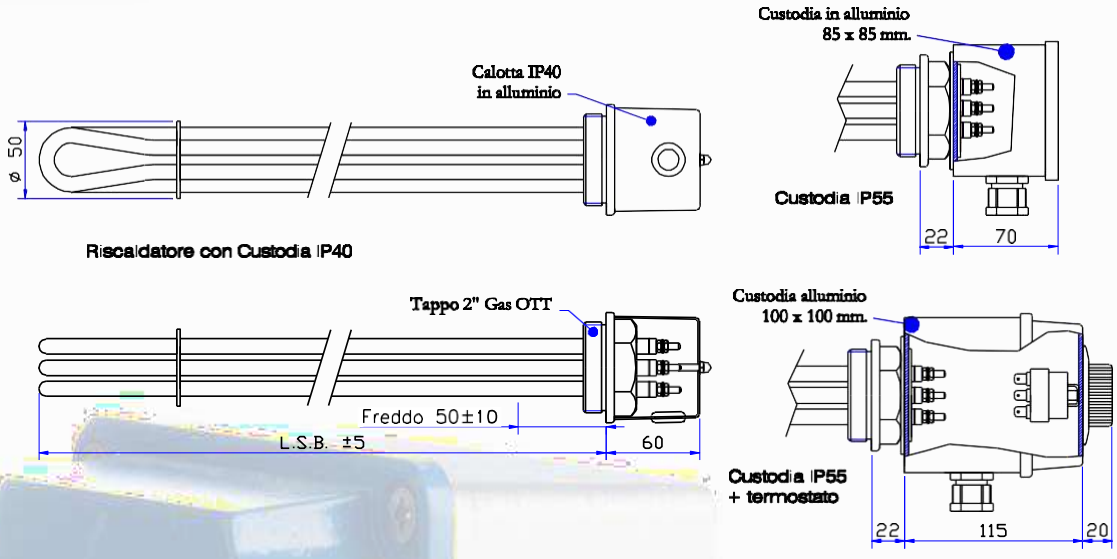
GA4TRX06000 IP55 T2 = 6000 W L. 280 mm With IP55 enclosure + thermostat 1 contact scale 30-110°C

GO4TR for OIL 2W/cm²			GA4TRX for OIL 9 W/cm²		
CODE	WATT POWER	LENGTH mm	CODE	WATT POWER	LENGTH mm
GO4 TR00900	900	210	GA4 TRX02100	2100	140
GO4 TR01500	1500	310	GA4 TRX03000	3000	170
GO4 TR02100	2100	410	GA4 TRX03900	3900	210
GO4 TR03000	3000	555	GA4 TRX04500	4500	230
GO4 TR03750	3750	680	GA4 TRX05100	5100	250
GO4 TR04500	4500	805	GA4 TMX06000	6000	280
			GA4 TRX07500	7500	340
			GA4 TRX09000	9000	400
			GA4 TRX12000	12000	510

Note: Water heaters are suitable for operation with normal drinking water or with non-aggressive fluids where there are no abnormal concentrations of substances that could affect the life of the heater. In these cases, ELMITI S.r.l. shall not be liable for any damage to the heaters due to corrosion. In this regard we ask you to please carefully read the notes in the margin of this catalogue and, if any doubts should arise, please consult our technical department.

Serie: GO5T GA5T

Riscaldatori su tappo 2" Gas



Heaters on brass 2″ gas plug
3 U-shaped Elements Ø10 mm
Tube: AISI 321
Wire: Nickel Chrome 60/40
Oxide: medium temperature
Terminals: Carbon steel
Nuts and washers: brass

GA5T series: Heaters sized for operation in water with a specific power output of 7W/cm; the main features of this series are good output and excellent reliability.

GO5T series: Low specific power heaters, 2 W/cm² specifically sized for operation in oil. Guarantee heating suitable for this type of application thanks to their low load.

In the normal version, the heater is intended with an IP40 electrical enclosure. When ordering, please specify any optional features in addition to the heater code:

Watertight enclosure: IP55

Bulb **thermostat** automatic reset 1 contact: **T1** Scale 4-40°C ; **T2** Scale 30-110°C ; **T3** Scale 50-300°C.

Bulb **thermostat** automatic reset 3 contacts: **T4** Scale 30-110°C ; **T5** Scale 50-300°C.

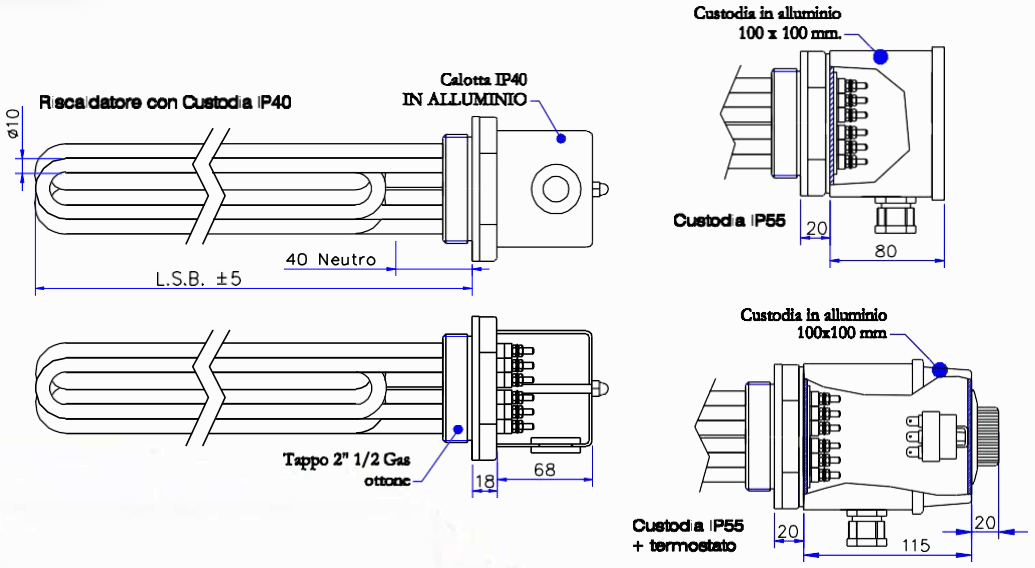
E.g.: **GA5T03000** = 3000W L.290 mm With IP40 enclosure
GA5T06000 IP55 = 6000w L. 510 mm With IP55 enclosure
GA5T06000 IP55 T2 = 6000 W L. 510 mm With IP55 enclosure + thermostat 1 contact scale 30-110°C

GO5T for OIL 2W/cm²				GA5T for OIL 7 W/cm²		
CODE	WATT POWER	LENGTH mm		CODE	WATT POWER	LENGTH mm
GO5 T01000	**1000**	**330**		**GA5 T02000**	2000	210
GO5 T01200	**1200**	**385**		**GA5 T02500**	2500	250
GO5 T01500	**1500**	**460**		**GA5 T03000**	3000	290
GO5 T02000	**2000**	**590**		**GA5 T03500**	3500	330
GO5 T02500	**2500**	**720**		**GA5 T04000**	4000	360
GO5 T03000	**3000**	**860**		**GA5 T05000**	5000	445
GO5 T03500	**3500**	**990**		**GA5 T06000**	6000	510
				GA5 T08000	8000	670
				GA5 T10000	10000	820
				GA5 T12000	12000	970

Note: Water heaters are suitable for operation with normal drinking water or with non-aggressive fluids where there are no abnormal concentrations of substances that could affect the life of the heater. In these cases, ELMITI S.r.l. shall not be liable for any damage to the heaters due to corrosion. In this regard we ask you to please carefully read the notes in the margin of this catalogue and, if any doubts should arise, please consult our technical department.

Serie: GO5TR GA5TR

Riscaldatori su tappo 2" ½ Gas



Heaters on brass 2″ ½ gas plug
3 U-shaped Elements
Tube Ø10 mm.: AISI 321
Wire: Nickel Chrome 60/40
Oxide: medium temperature
Terminals: Carbon steel
Nuts and washers: brass

GA5TR series: Heaters sized for operation in water with a specific power output of 7W/cm; the main features of this series are good output and excellent reliability.

GO5TR series: Low specific power heaters, 2 W/cm² specifically sized for operation in oil. Guarantee heating suitable for this type of application thanks to their low load.

In the normal version, the heater is intended with an IP40 electrical enclosure. When ordering, please specify any optional features in addition to the heater code:

Watertight enclosure: IP55

Bulb **thermostat** automatic reset 1 contact: **T1** Scale: 4-40°C ; **T2** Scale 30-110°C ; **T3** Scale 50-300°C.

Bulb **thermostat** automatic reset 3 contacts: **T4** Scale 30-110°C ; **T5** Scale 50-300°C. E.g.:

GA5TR03000 = 3000W L.170 mm With IP40 enclosure

GA5TR06000 IP55 = 6000w L. 280 mm With IP55 enclosure

GA5TR06000 IP55 T2 = 6000 W L. 280 mm With IP55 enclosure + thermostat 1 contact scale 30-110°C

GO5TR for OIL 2W/cm²			GA5TR for OIL 7 W/cm²		
CODE	WATT POWER	LENGTH mm	CODE	WATT POWER	LENGTH mm
GO5 TR01000	**1000**	**190**	**GA5 TR02000**	2000	135
GO5 TR01200	**1200**	**215**	**GA5 TR02500**	2500	150
GO5 TR01500	**1500**	**260**	**GA5 TR03000**	3000	170
GO5 TR02000	**2000**	**320**	**GA5 TR03500**	3500	190
GO5 TR02500	**2500**	**390**	**GA5 TR04000**	4000	210
GO5 TR03000	**3000**	**450**	**GA5 TR05000**	5000	245
GO5 TR03500	**3500**	**520**	**GA5 TR06000**	6000	280
GO5 TR05000	**5000**	**720**	**GA5 TR08000**	8000	360
			GA5 TR10000	10000	435
			GA5 TR12000	12000	510

Note: Water heaters are suitable for operation with normal drinking water or with non-aggressive fluids where there are no abnormal concentrations of substances that could affect the life of the heater. In these cases, ELMITI S.r.l. shall not be liable for any damage to the heaters due to corrosion. In this regard we ask you to please carefully read the notes in the margin of this catalogue and, if any doubts should arise, please consult our technical department.

Serie: GO6T GA6T

Riscaldatori su tappo 2" ½ Gas

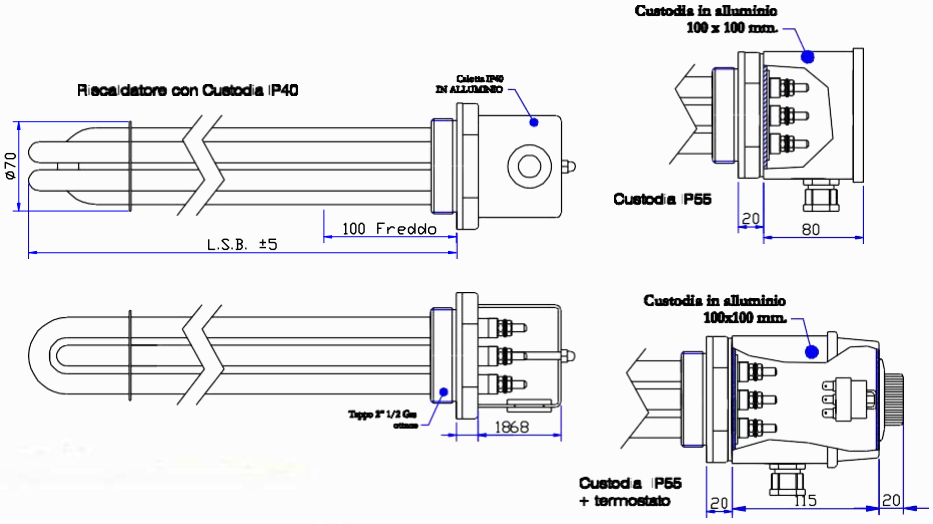
Heaters on brass 2″ ½ gas plug
3 U-shaped Elements
Terminals: M6 in Carbon steel
Nuts and washers: brass

GO6T

Tube Ø16 mm.: Fe 360
Wire: Nickel Chrome 60/40
Oxide: medium temperature

GA6T

Tube Ø16 mm.: AISI 321
Wire: Nickel Chrome 60/40
Oxide: medium temperature



GA6T series: Heaters sized for operation in water with a specific power output of 7W/cm; the main features of this series are discrete output and high reliability and robustness.

GO6T series: Low specific power heaters, 2 W/cm² specifically sized for operation in oil. Guarantee heating suitable for this type of application thanks to their low load.

In the normal version, the heater is intended with an IP40 electrical enclosure. When ordering, please specify any optional features in addition to the heater code:

Watertight enclosure: IP55
Bulb **thermostat** automatic reset 1 contact: **T1** Scale 4-40°C ; **T2** Scale 30-110°C ; **T3** Scale 50-300°C.
Bulb **thermostat** automatic reset 3 contacts: **T4** Scale 30-110°C ; **T5** Scale 50-300°C.

E.g.: **GA5TR03000** = 3000W L.170 mm With IP40 enclosure
GA5TR06000 IP55 = 6000w L. 280 mm With IP55 enclosure
GA5TR06000 IP55 T2 = 6000 W L. 280 mm With IP55 enclosure + thermostat 1 contact scale 30-110°C

GO6 for OIL 2W/cm²				GA6 for OIL 7 W/cm²		
CODE	WATT POWER	LENGTH mm		CODE	WATT POWER	LENGTH mm
GO6 T03000	3000	600		GA6 T09000	9000	550
GO6 T04500	4500	850		GA6 T12000	12000	700
GO6 T06000	6000	1100		GA6 T15000	15000	850
GO6 T07500	7500	1350		GA6 T18000	18000	950
GO6 T09000	9000	1600		GA6 T20000	20000	1050

Note: Water heaters are suitable for operation with normal drinking water or with non-aggressive fluids where there are no abnormal concentrations of substances that could affect the life of the heater. In these cases, ELMITI S.r.l. shall not be liable for any damage to the heaters due to corrosion. In this regard we ask you to please carefully read the notes in the margin of this catalogue and, if any doubts should arise, please consult our technical department.

Introduction:

In immersion heaters, heat is generated by tubular heating elements, the heating part of which is in direct contact with the liquid to be heated.
Some examples of use are kettles, washing machines, steam generators, fryers, hydraulic power units, cooling towers and any application where heating a liquid is required.
Given the multitude of uses, there are various types of liquid heating elements, and there is usually a choice of different options for each application. The mounting methods are also varied and are part of the variables to be taken into account when choosing a heater, along with the material of the tubular heating element, the type of process connection (threaded plug or flange, mainly) of the filler metal, the different ratios between power and element surface area (specific power) etc.
Heat transfer from the tubular heating element to the environment is typically very effective in liquid heaters, so there are normally no problems with overheating of the sheath or degradation of the electrical conductor. Rather, problems relating to the corrosive effects of the environment could arise. Among the various causes: lack of knowledge of the composition of the liquid to be heated, exceptional stress on the tubular heating element, sedimentation of contaminants, different materials of the elements of which the liquid heater is composed (heating element, flange and filler metal) could cause corrosion.

Liquid heating element materials

ELMITI offers a wide assortment of heating elements in different materials. The coating material is chosen according to the intended use of the heating element. Materials used for heating elements in air, such as ordinary steel, stainless steel and especially Incoloy 800 can also be used for heating liquids. The use of ordinary steel in the coating of liquid heating elements is limited to oil and closed water systems, where corrosion cannot damage the otherwise very sensitive steel surface. In such contexts, the use of steel is certainly an excellent solution, thanks to its cost-effectiveness.

The type AISI 321 stainless steel that we generally use is very good for certain liquid heating applications for which this material has proven to be an excellent choice, for example in heating elements used for defrosting applications, in washing machines and dishwashers, as well as in fryer oil and generally in non-aggressive food liquids.

Incoloy 800, apart from being a suitable material for high temperatures, is also very useful for coating those heating elements used in environments prone to corrosion, e.g. for heating hard water, or rather containing a lot of calcium.

With a suitable alloy, the corrosion resistance capabilities of normal stainless steel can be greatly improved. An especially effective substance is molybdenum, which already in very small quantities significantly improves the strength of stainless steels against corrosion, e.g. in reducing and chloride-containing liquids. In these cases, the steel grade used is AISI 316L, which is resistant to most acids and is suitable for use as a coating material for liquid heating elements in many fields.

Classification			Chemical composition												
			MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX	MAX
AISI	DIN	Atro	% C	%MN	%SI	%P	%S	%NI	%CR	%N	%TI	%MO	%CU	%FE	Altro
321	1.4541	-	0.08	2.00	1.00	0.045	0.015	12.00	19.00	NO	0.70	NO	NO	-	NO
316L	1.4404	-	0.03	2.00	1.00	0.045	0.015	13.00	18.50	0.11	NO	2.50	NO	-	NO
-	-	Incoloy 800	0.08	1.00	0.60	0.015	0.010	32.00	21.50	-	0.50	NO	0.50	-	0.7

Corrosion

Corrosion is intended as the erosion of material due to a reaction with the surrounding substance. In liquids, corrosion is an electrochemical reaction, whereas the oxidation that occurs in gases is a chemical reaction.

With liquid heaters, it is always best to take the possibility of corrosion into account, as it can have a considerable impact on the durability of the heating element.

The choice of the right material is a key factor to prevent corrosion, without underestimating the role that other factors such as surface power, for example, play in the durability of heating elements used to heat liquids.

As already mentioned, the main use of immersion heaters is in hot water systems. Heating elements, being heat-releasing components, are used in special conditions and are very susceptible to corrosion stress, compared to the other passive components in systems. The water in contact with the surfaces of the heating element is clearly warmer than the water in other parts of the system, so that diffuse corrosion increases as does the sedimentation of "fouling" on the heat-transmitting surfaces, which in turn can cause localised corrosion.

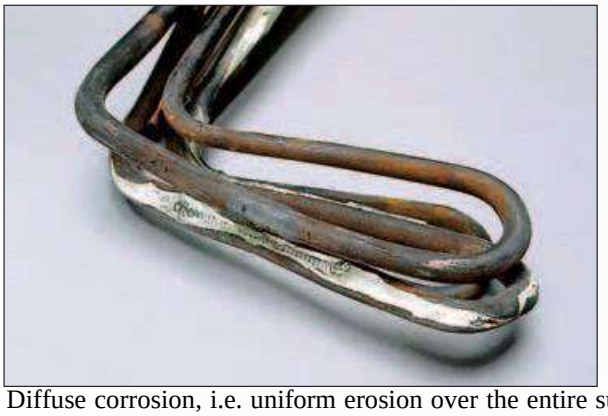
Diffuse corrosion rarely causes destruction of the heating element, whereas localised pitting can result in damage to the heating element in a short time. Once the corrosive reaction has started, it can advance very quickly, perforating the coating and destroying the heating element.

There can be many causes of localised corrosion: water composition, impurity and also factors related to system use.

Unfortunately, it is very often difficult, if not impossible, to predict all the triggering factors for a corrosion reaction, which is why practical experience is the best basis for estimating the danger and likelihood of corrosion.

This is particularly true for water heating. In closed systems, the danger of corrosion is almost non-existent, the causes are obvious: there is a lack of oxygen in the water, which promotes corrosion, and sedimentation is also minimal.

Corrosion of common steel



Steel is known to be a material prone to corrosion; already the relative humidity in the air can cause a thin layer of rust. Thus it is understandable that steel is only used in limited cases for heating liquids. As an exception, we can name closed systems with "dead" water, i.e. without oxygen, in which steel resists well. Provided that no air or fresh water enters the system, as this would cause rapid corrosion and subsequent destruction of the strength.

Corrosion of stainless steels and nickel alloys

It may come as a surprise that it is precisely in steels that are generally very resistant that different types of corrosion phenomena can occur, and this requires careful consideration when choosing material according to its intended use.

Diffuse corrosion, i.e. uniform erosion over the entire surface, rarely causes problems in heating elements. The reason for this is that important corrosion phenomena only occur in particular environments, such as in strong acid solutions, and therefore the fact is easily predictable.

In stainless steels, among other things, so-called grain-boundary corrosion can occur in acidic or seawater solutions. Corrosion of this type can be eliminated with a suitable combination of additional substances (e.g. Ti, Nb) and in this case we are talking about stabilised steels, or keeping the amount of carbon contained in the steel at very low levels, less than 0.03%. Chloride solutions also create a very difficult environment, where corrosion phenomena are frequently triggered, which is why it is important to assess their presence in applications as even very small contents can cause localised corrosion.

Depending on the development of the erosion, different types can be identified: point, fissure, live.

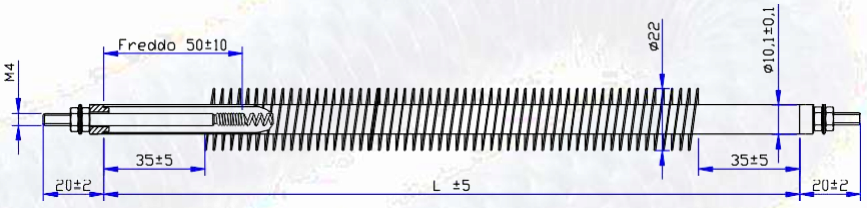
These types of corrosion are the most dangerous because localised erosion advances quickly through the tubular coating and subsequently causes damage to the resistance. The prevention of localised corrosion can be improved through the right choice of materials: stainless steels e.g. AISI 316L enriched with molybdenum are in this respect much better than ordinary stainless steels.

The same applies with stainless steel heating elements: the heating element is normally the most heavily loaded and utilised component of the system. The phenomenon of corrosion depends on so many factors that are not easily controllable - soluble and non-soluble impurities, liquid currents, etc. - **and many times only experience can**

2661 SERIES **8 W/cm² These heating elements, designed for operation in ventilated air, guarantee high performance at high air velocities (min. 6 m/s) with a maximum temperature of approx. 350°C. They allow high power to be installed in small coils and ducts, while maintaining high reliability.**

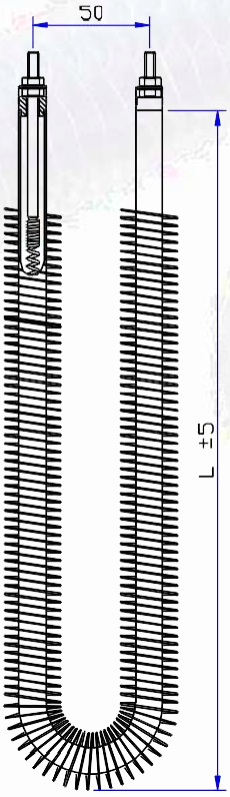
2761 SERIES 4 W/cm² This series is also designed to operate in ventilated air, having a lower specific power, it can also work with lower air speed (min 2 m/s) and a maximum temperature of 350°C.

Tube: AISI 321
Finning: AISI 304
Wire: Nickel Chrome 80/20
Magnesium oxide for high temp.
Terminals: Carbon steel
Nuts and washers: Brass

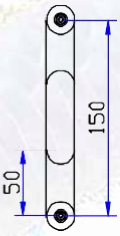


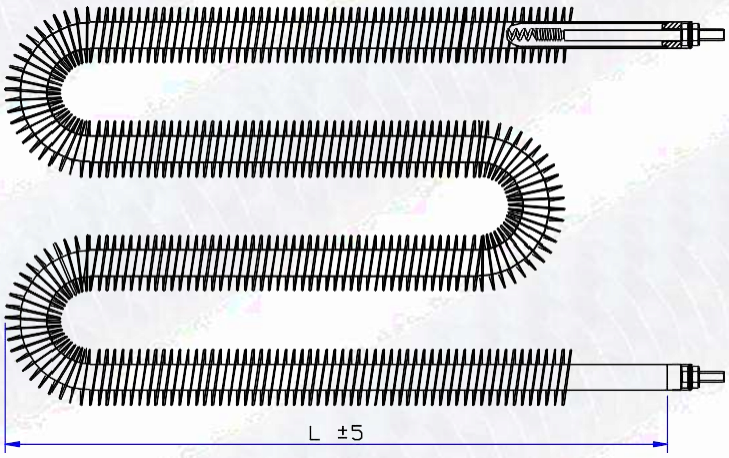
Type: STRAIGHT

Type: U



Type MA





Type MB

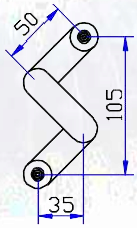


PLATE P

U-SHAPED HEATING ELEMENTS

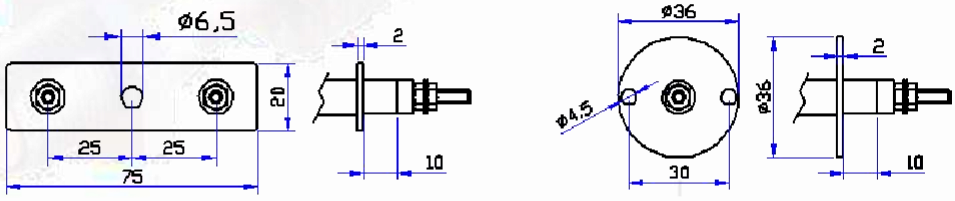
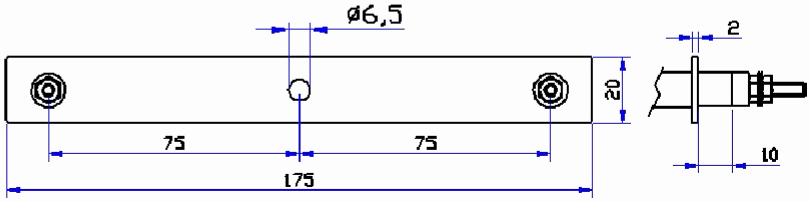


PLATE P

EMME HEATING ELEMENTS



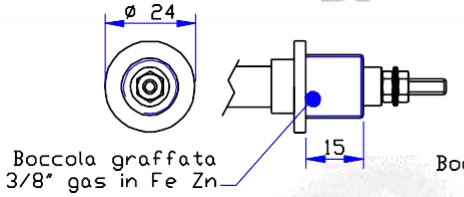
2661 series 8 W/cm²								
WATT		Straight Code	L. mm		U Code	L. mm		M Code	L. mm
500		2661 01	260		2661 20	125			
700		2661 02	340		2661 21	165			
800		2661 03	380		2661 22	185		2661 41	105
1000		2661 04	450		2661 23	225		2661 42	125
1200		2661 05	540		2661 24	265		2661 43	145
1300		2661 06	580		2661 25	285		2661 44	155
1500		2661 07	660		2661 25	325		2661 45	175
1800		2661 08	780		2661 27	385		2661 46	205
2000		2661 09	860		2661 28	425		2661 47	225
2500		2661 10	1060		2661 29	525		2661 48	275
3000		2661 11	1260		2661 30	625		2661 49	325

2761 series 4 W/cm²								
WATT		Straight Code	L. mm		U Code	L. mm		M Code	L. mm
500		2761 01	550		2761 20	270		2761 41	155
800		2761 02	750		2761 21	370		2761 42	205
1000		2761 03	900		2761 22	445		2761 43	245
1300		2761 04	1150		2761 23	570		2761 44	305
1500		2761 05	1300		2761 24	645		2761 45	345
1800		2761 06	1550		2761 25	770		2761 46	405
2000		2761 07	1700		2761 26	845		2761 47	445
2500		2761 08	2150		2761 27	1070		2761 48	555
3000		2761 09	2500		2761 28	1245		2761 49	645

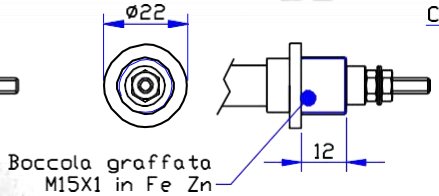
FITTINGS

THREADED

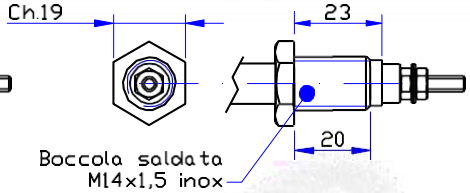
B1



B2



B3



The heating element code indicates the characteristics (power – length). When ordering, please specify any optional accessories from those available: **BUSHINGS, PLATE OR** fixing **WASHER.**

E.g.: **REDAR 266104** straight heating element 1000W L.tube 460 mm
REDAR 266104 B1 straight heating element 1000W L.tube 460 mm With 1 bushing 3/8″G in Fe zinc.
REDAR 266104 R straight heating element 1000W L.tube 460 mm With 1 washer Ø36 in Fe zinc.
REDAR 266126 B2 U-shaped heating element 1500W L. U 325 mm With 2 bushings M15x1 in Fe zinc.
REDAR 266126 P U-shaped heating element 1500W L. U 325 mm Plate 75 x 20 mm in Fe zinc.

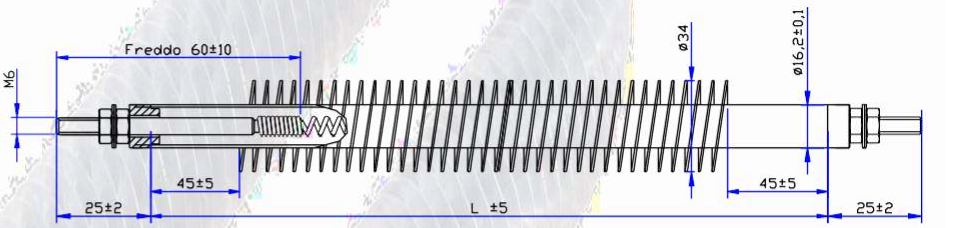
Resistenze alettate LOVAR

2351 SERIES 2 W/cm² These heating elements, with their low specific power, are suitable for slow heat exchange or natural convection heating with high heat storage (450°C) and are generally used for heating rooms, static dryers, ovens or incubators.

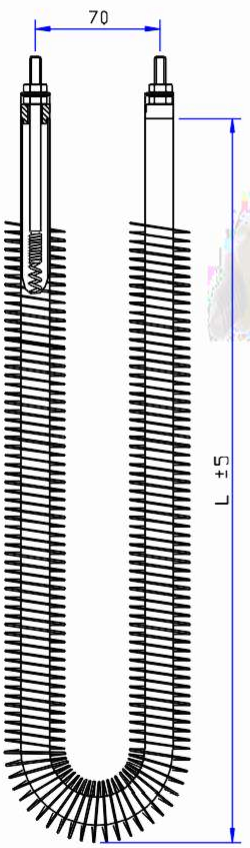
2451 SERIES 3 W/cm² This series is designed for heating gas in ducts with low heat exchange, even at natural convection, with limited heat accumulation (250°C) ventilated dryers, room heating, stoves and medium-power batteries.

2551 SERIES 4 W/cm² Heating elements suitable for heating gases in penstocks, industrial and air conditioning coils, high heat exchange systems.

Tube: Ø16 mm in Fe 360
Finning: Ø34 mm in Fe Zn
Wire: Nickel Chrome 60/40
Oxide for medium temp.
Terminals: Carbon steel
Nuts and washers: Brass

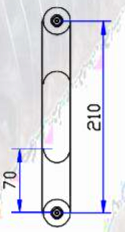


Type: U

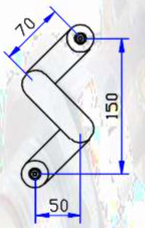


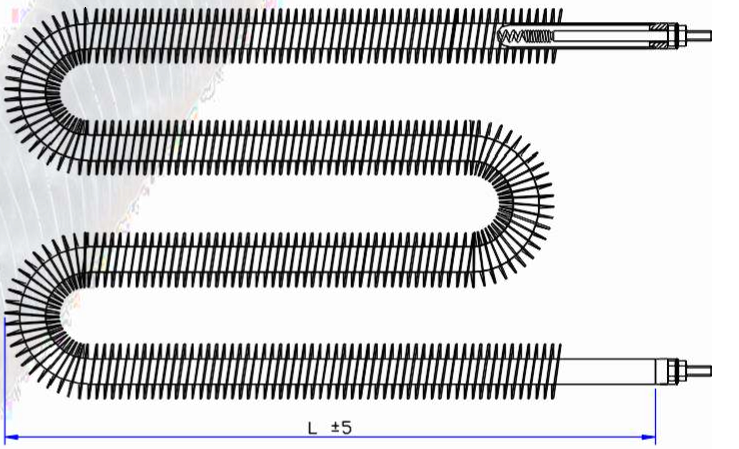
Type: STRAIGHT

Type MA



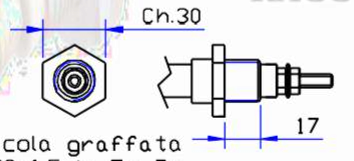
Type MB





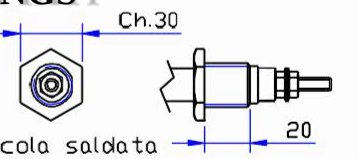
THREADED FITTINGS

B1



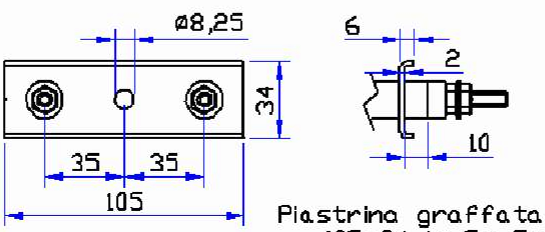
Boccola graffata
M20x1,5 in Fe Zn

B2



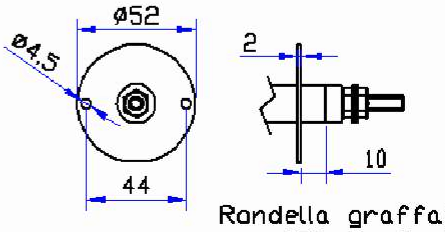
Boccola saldata
1/2"gas Inox

PLATE P



Piastrina graffata
105x34 in Fe Zn

WASHER R



Rondella graffata
ø52 in Fe Zn

Resistenze alettate LOVAR

WATT		Straight Code	L. mm		U Code	L. mm		M Code	L. mm
500		2351 02	550		2351 21	275			
700		2351 03	750		2351 22	375			
800		2351 04	850		2351 23	425			
1000		2351 05	1050		2351 24	525		2351 44	285
1200		2351 06	1250		2351 25	625		2351 45	335
1300		2351 07	1350		2351 26	675		2351 46	360
1500		2351 08	1550		2351 27	775		2351 47	410
1800		2351 09	1850		2351 28	925		2351 48	485
2000		2351 10	2050		2351 29	1025		2351 49	535
2500		2351 11	2550		2351 30	1275		2351 50	660
3000		2351 12	3050		2351 31	1525		2351 51	785

Serie 2351
2 W/cm²

WATT		Straight Code	L. mm		U Code	L. mm		M Code	L. mm
500		2451 01	400						
700		2451 02	500		2451 21	250			
800		2451 03	600		2451 22	300			
1000		2451 04	700		2451 23	350			
1200		2451 05	850		2451 24	425		2451 44	235
1300		2451 06	900		2451 25	450		2451 45	250
1500		2451 07	1050		2451 26	525		2451 46	285
1800		2451 08	1250		2451 27	625		2451 47	335
2000		2451 09	1400		2451 28	700		2451 48	370
2500		2451 10	1700		2451 29	850		2451 49	445
3000		2451 11	2050		2451 30	1025		2451 50	535
3500		2451 12	2350		2451 31	1175		2451 51	605

2451 series
3 W/cm²

WATT		Straight Code	L. mm		U Code	L. mm		M Code	L. mm
700		2551 01	400						
800		2551 02	450		2551 20	225			
1000		2551 03	550		2551 21	275			
1200		2551 04	650		2551 22	325			
1300		2551 05	700		2551 23	350			
1500		2551 06	800		2551 24	400			
1800		2551 07	950		2551 25	475		2551 45	260
2000		2551 08	1050		2551 26	525		2551 46	285
2500		2551 09	1300		2551 27	650		2551 47	350
3000		2551 10	1550		2551 28	775		2551 48	410
3500		2551 11	1800		2551 29	900		2551 49	475
4000		2551 12	2050		2551 30	1025		2551 50	535

2551 series
4 W/cm²

The heating element code indicates the characteristics (power – length). When ordering, please specify any optional accessories from those available: **BUSHINGS, PLATE OR** fixing **WASHER.**

E.g.: **LOVAR 255104** straight heating element 1200W L.tube 650 mm
LOVAR 255104 B1 straight heating element 1200W L.tube 650 mm With 1 bushing M20x1.5 in Fe zinc.
LOVAR 255104 R straight heating element 1200W L.tube 650 mm With 1 washer Ø52 in Fe zinc.
LOVAR 255126 B1 U-shaped heating element 2000W L. U 525 mm With 2 bushings M20x1.5 in Fe zinc.
LOVAR 255126 P U-shaped heating element 2000W L. U 525 mm Plate 105 x 34 mm in Fe zinc.

WINE HEATERS

WINE series

Barrique heater TRCB

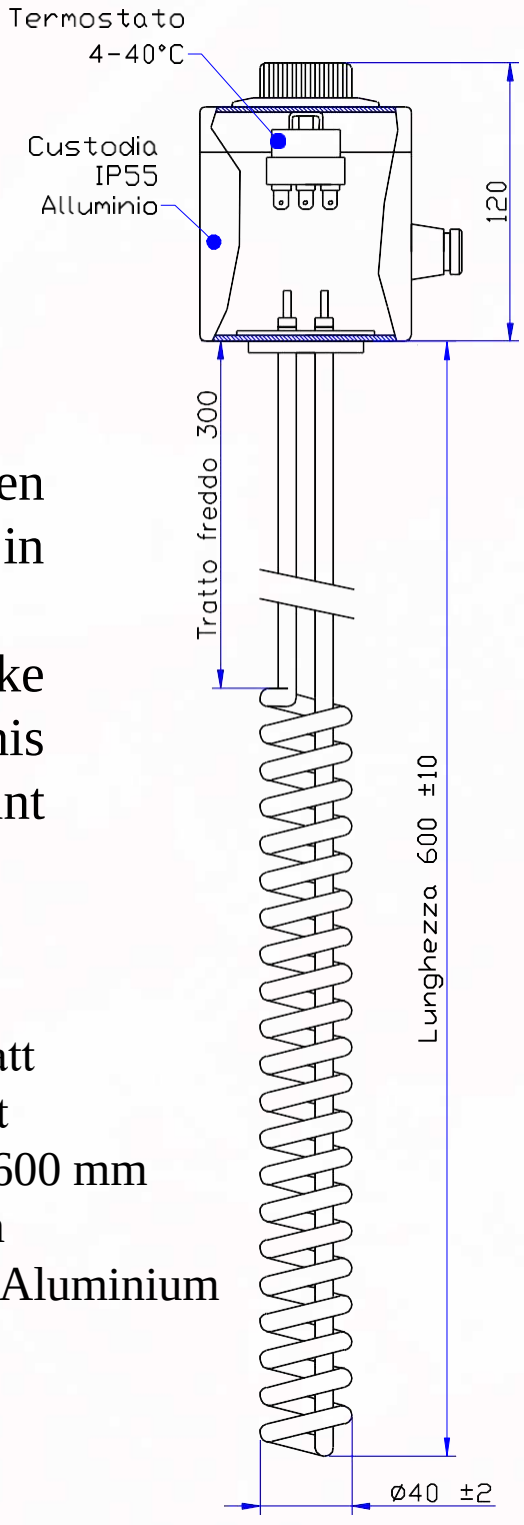
Small tank heaters TRCV

Large tank heaters RIPV

As every producer knows, temperature is one of the determining factors for triggering wine fermentation processes.
The alcoholic or primary fermentation transforms the must into wine, to which subsequently the malolactic or secondary fermentation, gives qualities of maturity and biological stability.
There are several ways to achieve temperature control: mainly with the use of air-conditioned tanks or by managing the temperature of the environment through an air-conditioning system or again through the use of coils or exchangers.
It is however not always possible to adopt these sophisticated types of systems, either due to reasons of practicality, the impossibility of adapting existing structures or tanks or once again for economic factors.
Our company, active for 35 years in the construction of electric heaters and solicited by the requests from the wine sector, has over the years developed a series of specific products to help solve the problem of heating wine in the most diverse types of containers, starting from barriques or small vats up to large tanks.
The main problem was to heat the wine without “cooking” it. To overcome this, our WINE series heaters are built with a very low power/surface ratio, which allows for a maximum contact temperature of about 40°C in normal conditions even in the absence of control over the sheath.
It was necessary to build a product that would be robust and reliable, even working in sometimes difficult conditions, so we opted for materials and construction types that would let us achieve this important result. All of this, together with our product quality, has always been appreciated by our customers and an active collaboration with end users has allowed us to understand and remedy the various problems.
Finally, we can state in full confidence that we have developed a product that entirely meets the needs for which it was designed and that allows us to be leaders in the sector, while not abandoning the research that has brought us here.

Barrique heaters

TRCB



This heating element has been expressly conceived for use in Barriques or in small containers.
Its small size and limited power make it the ideal tool for heating wine in this type of container, where a large amount of calories is not required.

Power: ……..600 Watt
Voltage: ……...230 Volt
Dimensions: ..... Ø40 x 600 mm
Cold part: .....300 mm
Enclosure: .....IP55 in Aluminium
Thermostat Scale: .....4-40°C

Small tank heaters TRCV

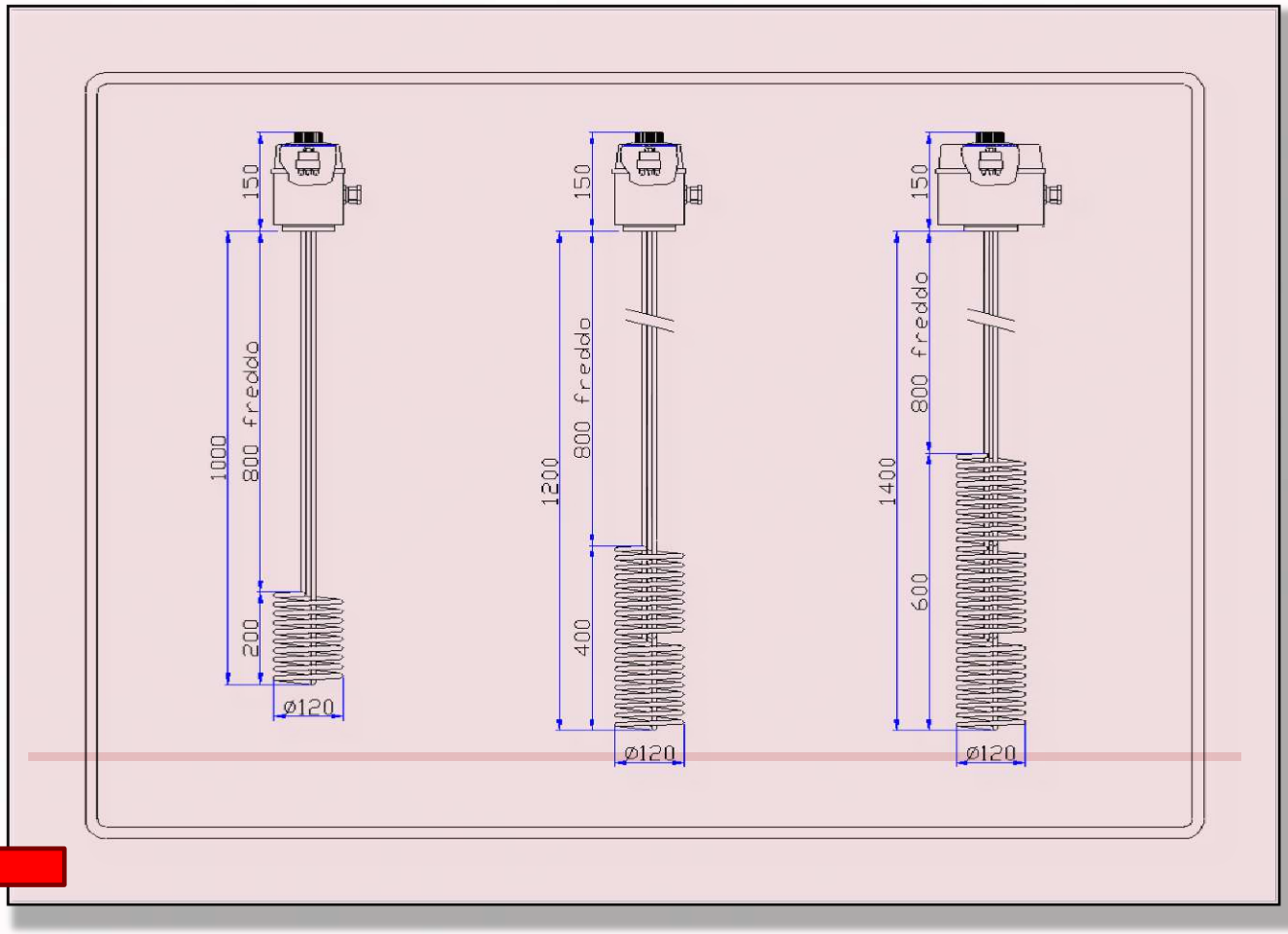
These heaters are ideal for small or medium-sized tanks, they are characterised by a long cold part which allows them to be inserted from above, leaving the electrical enclosure outside the fluid, which makes it possible for them to be equipped with temperature control via a thermostat.

Sheath material Ø10 mm.: ……...……AISI 321 Electro-polished

Enclosure: ……..……..….IP55 in Aluminium

Thermostat Scale .....…4-40°C

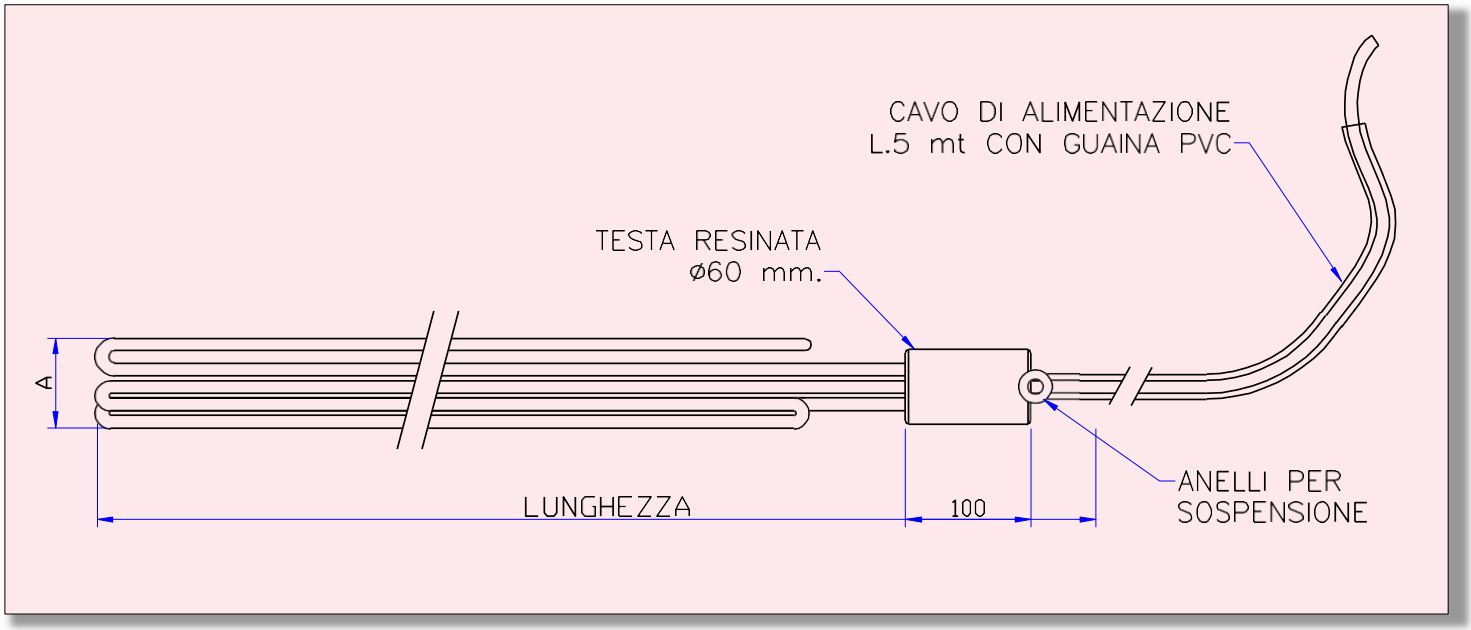
Code	Power	Voltage	Total Length	Hot Part	Diameter
	Watt	Volt	mm	mm	mm
TRCV 1500	1500	230	1000	200	150
TRCV 3000	3000	230	1200	400	150
TRCV 4500	4500	230/400	1400	600	150



Large tank heaters: RIPV

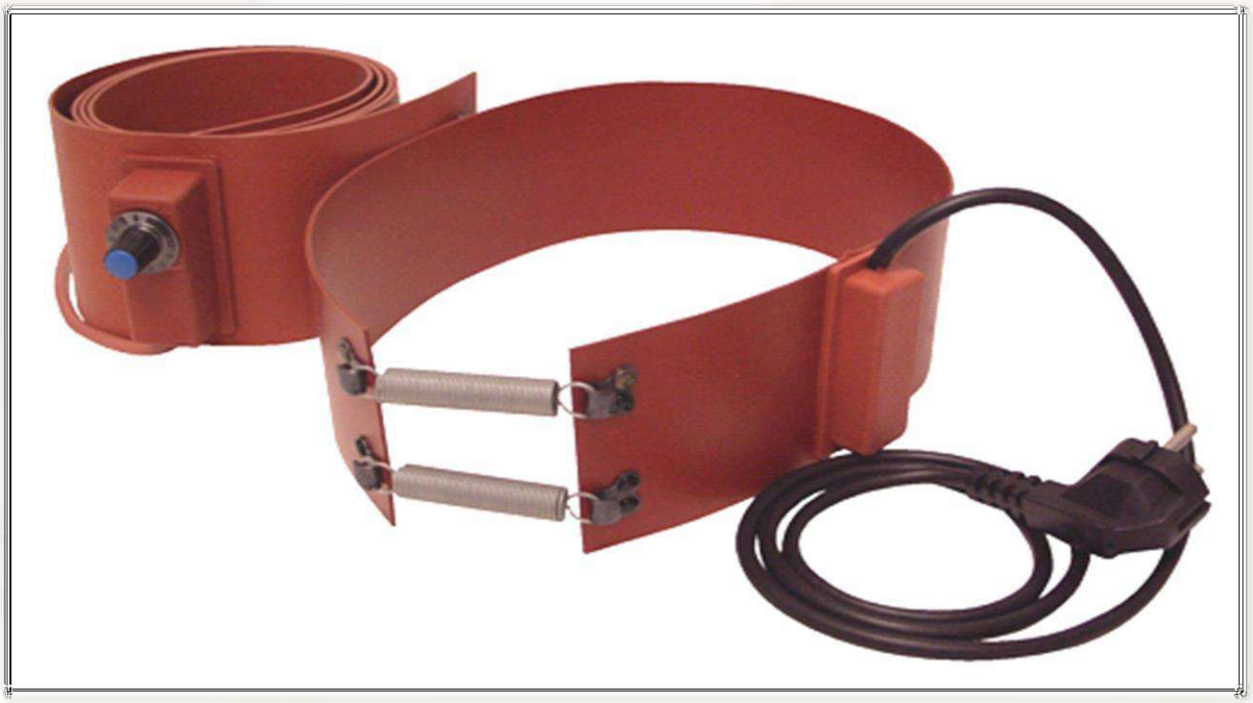
The heaters that are part of this series are designed for medium or large tanks. They are inserted from above and can be completely immersed in the liquid, they are equipped with a protected cable with a standard length of 5 meters, to be lowered from the top of the tank.

Voltage.....230/400 Volt



Code	Power	Length	Height	No. elem.
	W	mm	mm	
RIP V2000	2000	400	90	3
RIP V3000	3000	600	90	3
RIP V4500	4500	900	90	3
RIP V6000	6000	1150	90	3
RIP V7500	7500	1450	90	3
RIP V9000	9000	900	140	6
RIP V9000U	9000	1750	90	6

RESISTENZE FLESSIBILI IN SILICONE



These are used for heating containers, such as drums, bins, vases or on pipes; to avoid condensation, freezing or reduce the viscosity of the fluids, to preserve their characteristics or facilitate transfer and complete outflow.

GENERAL CHARACTERISTICS

· Power supply voltage 230 Volt.
· Standard characteristics according to the table
· Adjustable thermostat 0-180°C
· Power cable without plug L.1500mm
· Closing system with hooks and springs

Code	Voltage	Power	Length	Height	Diameter
	Volt	Watt	mm	mm	mm
ELHD0051	230	1500	1710	100	580
ELHD0054	230	1000	1100	100	380
ELHD0055	230	315	980	75	300
ELHD0057	230	400	700	80	250

REFERENCE REGULATIONS AND APPROVALS

· Design, construction and testing according to the harmonised standards EN 60335
· Conformity with DIRECTIVE 2006/95 EEC
· Declaration of conformity on the whole TESTING range

All heating elements are electrically tested in accordance with the regulations before delivery to the customer.

RESISTENZE SCALDA FUSTI INOX

These are used for heating containers, such as drums, bins, vases or on pipes; to avoid condensation, freezing or reduce the viscosity of the fluids, to preserve their characteristics or facilitate transfer and complete outflow.

Compared to silicone resistors, they can reach a temperature of 300°C and are more robust, bulkier and more cumbersome to transport and store.

STANDARD STAINLESS STEEL BAND HEATING ELEMENT FOR 200 L DRUMS

Power 1500 W Voltage 230 V

Dimensions Ø575 x H 200mm

Internal insulation in mica

Control thermostat 50-300°C.

Power cable L.1000mm in silicone without plug

Cable outlet with aluminium protection box

Closing system with threaded rods

OTHER NON-STANDARD DIMENSIONS UPON REQUEST

The above products comply with standard cei en 60204-1 for electrical equipment of machines part 1: general rules based on the provisions of: directive 73/23eec, amended by directive 93/68/eec, implemented in Italy by law no. 791 of 15/10/1977 and by the legislative decree no.626 of 25.11.1966

RESISTENZE AD INFRAROSSO

Infrared ceramic heaters are characterised by:

Fast heat transmission — Constant radiation over time

Uniform heating — Easy assembly

They can be supplied individually or assembled on a heating element bar, complete with a reflector dish if necessary.

Technical features

- Powers from 2.5W/cm² to 15 W/cm² at 230 Volt
- Applications from 10 kW/m² to 60 kW/m²
- Maximum operating temperature: 700 ºC (1292 ºF)
- Infrared emission rate: 96%
- Nickel Chrome 80/20 spiral resistive winding
- High purity ceramic insulation with high mechanical resistance to thermal shock and high dielectric strength
- Nickel power cord, ceramic insulated and high temperature resistant
- Can be supplied with and without thermocouple

Dimensions mm	Watt Power	Surface T. °C.		Dimensions mm	Watt Power	Surface T. °C.
245 x 60	150	235		122 x 60	125	340
245 x 60	250	340		122 x 60	150	370
245 x 60	300	370		122 x 60	200	420
245 x 60	350	400		122 x 60	250	450
245 x 60	400	420		122 x 60	325	520
245 x 60	500	450		122 x 60	350	535
245 x 60	600	495		122 x 60	400	570
245 x 60	650	520		122 x 60	500	600
245 x 60	750	555				
245 x 60	800	570				
245 x 60	1000	600				

RESISTENZE PER UGELLO

Nozzle heaters are mainly used in cases where the space available is especially limited (hot chamber moulds) or even where there is a corrosive action of the plastic material to be injected.

The power cable connection is incorporated inside the heater and excellent anchoring is ensured thanks to a particular processing of the casing.

FEATURES:
Specific power up to 5 W/cm2
Standard power supply voltage 230V
Operating temperature 350/370° C
Ø maximum 100 mm
maximum width 100 mm
maximum L 200 mm
Power cable L. 1000 mm

MATERIALS USED:
Casing in aluminised sheet
Resistive winding Ni-Cr 80/20
Continuous mica insulation
Teflon/fibreglass insulated single core nickel conductors with protective metal braid

Wide range of standard products in stock (see tables) available, upon request, with type J thermocouple inside
Upon request, for special needs, we can supply heaters with non-standard characteristics, based on customer specifications.

RESISTENZE PER UGELLO

Nozzle heating elements 230 V

Diameter mm	Length mm	Watt Power
25	30	90
30	25	120
	30	140
	35	165
	40	185
35	25	135
	30	165
	35	190
	40	220
	45	235
40	25	155
	30	190
	35	220
	40	250
	45	280
42	25	165
	30	200
	35	230
	40	265
45	25	175
	30	210
	35	250
	40	280
	45	320
	50	350

Nozzle heating elements 230 V

Diameter mm	Length mm	Watt Power
50	20	155
	25	195
	30	235
	35	275
	40	315
	50	390
55	20	170
	25	215
	30	260
	35	300
	40	345
	50	430
60	20	190
	25	235
	30	280
	35	330
	40	375
	50	470
	60	565
65	20	200
	25	255
	30	305
	35	355
	40	405
	50	510
	60	610

RESISTENZE PER UGELLO

Nozzle heating elements 230 V

Diameter mm	Length mm	Watt Power
70	20	220
	25	270
	30	330
	35	380
	40	440
	50	550
	60	660
75	20	235
	25	295
	30	355
	35	410
	40	470
	50	590
	60	705
80	20	250
	25	310
	30	375
	35	440
	40	500
	50	630
	60	750
85	20	265
	25	330
	30	400
	35	465
	40	530
	50	665
	60	800

Nozzle heating elements 230 V

Diameter mm	Length mm	Watt Power
90	20	280
	25	350
	30	420
	35	490
	40	565
	50	705
	60	845
95	20	300
	25	370
	30	445
	35	520
	40	595
	50	745
	60	895
100	20	315
	25	390
	30	470
	35	550
	40	630
	50	785
	60	940

RESISTENZE A CARTUCCIA

Cartridge heating elements are divided into three types: high, medium and low power. They differ from each other in their construction characteristics, which determine their maximum applicable specific power.

HIGH POWER CARTRIDGE HEATING ELEMENT

This type of heating element can be built with very high specific powers, in some conditions even up to 25/30 W/cm². It allows the concentration of large powers in particularly small dimensions, guaranteeing high reliability even in the most demanding working conditions, thanks to to the technology used in its construction. The nickel chrome heating wire is in fact wrapped around a core of magnesium oxide and is located very close to the external metal armour, separated from it by a very thin and strongly compressed insulating wall. In this in this way a very effective heat exchange is achieved which ensures that the temperature of the resistive wire is maintained at a safe value, while still guaranteeing adequate insulation values.
The high power density cartridges can be supplied with a type J thermocouple in iron-constantan, with insulated joint, which is normally positioned near the bottom disc of the heating element, with a temperature range of -20 +750°C.

WIDE RANGE OF STANDARD MODELS (SEE TABLES)

LOW-MEDIUM POWER CARTRIDGE HEATING ELEMENTS

In this type of heater, the heating wire is located in a deeper position than the external shell, inside suitably drilled ceramic material insulating tubes. This involves a slower heat transmission and consequently it is necessary to keep the specific power within certain limits:
10 W/cm² for medium power cartridges
6 W/cm² for low power cartridges
The advantage in utilising these heaters, which are produced exclusively upon request, is mainly the greater cost-effectiveness compared to high power heating elements.

RESISTENZE A CARTUCCIA

Heating elements Ø 6.5 -0.03 /-0.05 mm. 230 V

L mm	25	40	50	60	80	100	130	160
Watt	75	100	125	125	125	100	220	200
	100	125	150	150	175	125	250	300
	150	150	175	175	200	150	350	350
	175	175	200	200	250	200	400	
		200	250	250	300	250		
		250		315	350	300		
						350		
						400		

Heating elements Ø 8.0 -0.04 /-0.05 mm. 230 V

L mm	40	50	60	80	100	130	160
Watt	100	100	125	150	175	250	250
	125	125	150	175	200	300	300
	150	150	200	200	250	400	400
	200	200	250	250	300		500
	250	250	300	300	400		630
				400			

Heating elements Ø 10 -0.04 /-0.07 mm. 230 V

L mm	25	40	50	60	80	100	130	160	200
Watt	75	100	125	125	150	200	250	300	400
	100	125	150	150	200	250	300	400	500
	150	150	200	200	250	300	400	500	600
	200	200	250	250	300	350	500	600	800
		250	300	300	400	400	600	800	1000
		300	400	400	500	500	800		
						600			

RESISTENZE A CARTUCCIA

Heating elements Ø 12.5 -0.05 /-0.08 mm. 230 V

L mm	40	50	60	80	100	130	160	200	250	300
Watt	125	160	125	125	160	250	400	300	500	500
	160	200	160	160	200	300	500	500	800	800
	200	250	200	200	250	400	600	600	1000	1000
	250	300	250	250	300	500	800	800	1250	1250
	300	350	300	300	400	600	1000	1000	1500	1500
	350	400	350	350	500	800	1200	1200	2000	2000
	400	500	400	400	600	1000		1500		
	500	600	500	500	800					
			600	600	1000					
				750						

Heating elements Ø 16 -0.05 /-0.08 mm. 230 V

L mm	40	50	60	80	100	130	160	200	250	300	350	400
Watt	160	160	160	250	300	400	400	500	500	500	750	1000
	200	200	200	300	400	500	500	800	800	800	1000	1300
	250	250	250	400	500	600	600	1000	1000	1000	1300	1600
	300	300	300	500	600	800	800	1250	1300	1300	1600	2000
	400	400	400	600	800	1000	1000	1500	1600	1500	2000	2500
	500	500	500	800	1000	1200	1300	2000	2000	1800	2500	
		600	600	1000	1200		1600			2000		
										2500		

Heating elements Ø 20.0 -0.06 /-0.10 mm. 230 V

L mm	60	80	100	130	160	200	250	300	350	400	450	500
Watt	200	300	400	400	500	800	800	1000	1500	1500	2000	2000
	300	400	600	500	800	1000	1000	1500	2000	2000	2500	3000
	500	500	800	600	1000	1300	1500	2000	2500	2500	3000	4000
	600	600	1000	800	1500	1600	2000	2500	3000	3000	3500	5000
	800	800	1300	1000	2000	2000	2500		3500	3500	4000	
		1000	1600	1500		2500				4000		
		1250		2000								

RESISTENZE SCIOGLIPAR PER PARABOLE SATELLITARI

SCIOGLIPAR

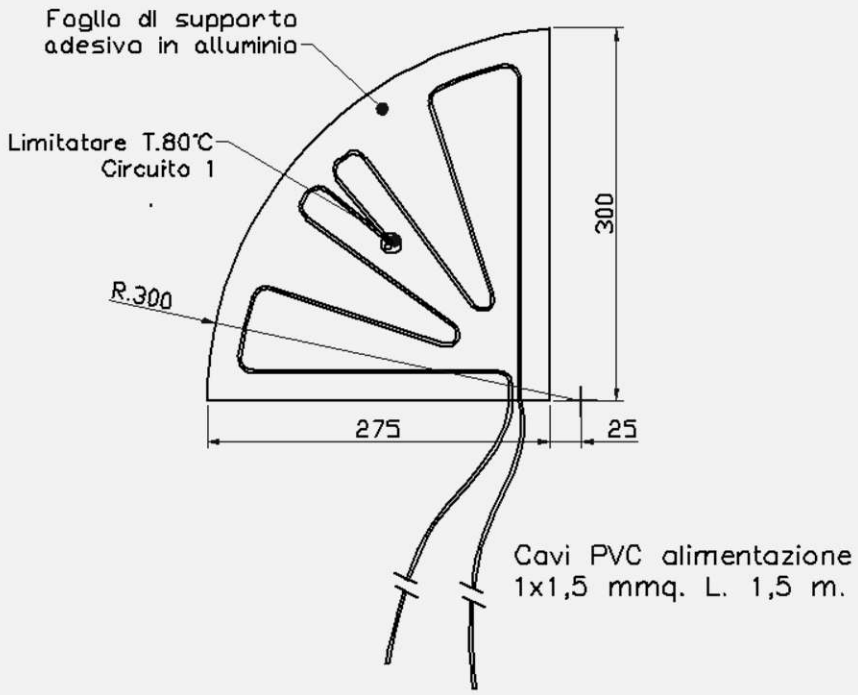
RECOMMENDED BY ANTENNA INSTALLERS!!

SCIOGLIPAR satellite dish heaters are the ideal, definitive solution to prevent snow and frost accumulation, preventing annoying signal interruptions and disturbances.

The SCIOGLIPAR snow melting kit for satellite dishes is made up of two triangular-shaped aluminium sheets (275 x 300 mm.) to which a heating circuit is applied with a power of 40W 48V for each single sheet.
A third heating sheet (210 x 80 mm.) of 20W 48V is also supplied to be positioned on the arm or behind the eye of the dish itself.
The dimensions and power of the heating elements have been studied so that they can be used both on Ø 60 cm dishes and on those with Ø 80 cm.
Assembly is very simple. Simply glue the heating sheets to the back of the dish, already provided with adhesive suitable for withstanding the conditions due to the bad weather to which they are normally exposed.

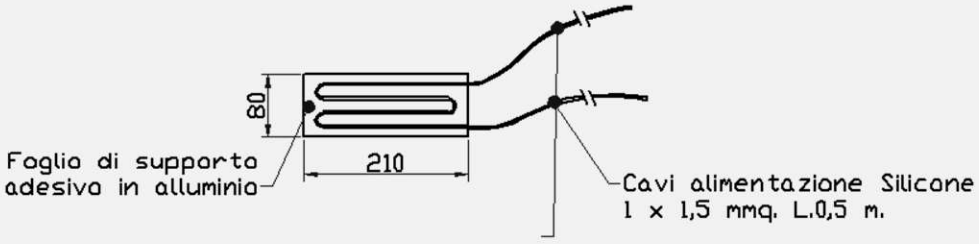
RESISTENZE SCIOGLINEVE PER PARABOLA

RESISTENZE SCIOGLI NEVE PER PARABOLE SATELLITARI



SCIOGLIPAR R300: 40 Watt 48 Volt Raggio R. = 300 mm.

RESISTENZA SCIOGLI NEVE PER BRACCIO PARABOLA



RPB: 20 Watt 48 Volt Dim. 210 x 80 mm.

ELMITI RISCALDATORI ELETTRICI Avigliana TO ITALY	COD. CLIENTE - / CLIENTE - / NOTE -	
	DISEGNATO G. M. / CONTROLLO G. M.	DENOMINAZIONE: RES. SCIOGLI NEVE PER PARABOLE SATELLITARI
	DATA - / SCALA -	COD. / N. DIS. SCIOGLIPAR

Via E. Fermi N.36 TEL. +39 0119367 310 - 196 FAX +39 0119367 181 E-mail elmiti@tiscali.it www.elmiti.com

RESISTENZE SCIOGLIPANN PER PANNELLI FOTOVOLTAICI

SCIOGLIPANN heaters are used to melt snow and ice, restoring the correct functioning of the photovoltaic panels.
They consist of a heating circuit on an aluminium adhesive film, to be glued directly on the back of the panel, facilitating application and significantly reducing work time.
They are equipped with IP67 watertight connectors to connect up to 12 elements in series.

APPLICATION:
- Clean the back of the photovoltaic panel from dust, grease, oil and release agents, with suitable tools.
- Remove the protective sheet and apply SCIOGLIPANN on the back of the panel applying light pressure, if necessary using a rubber roller, to ensure perfect adhesion of the film over the entire surface.
- Install the photovoltaic panel and connect the SCIOGLIPANN connectors in series up to a maximum of 12 elements (the last female connector of the string must be closed with the appropriate plug).
- Connect the circuit to the mains, using a suitable electrical panel, taking care to comply with the safety standards.

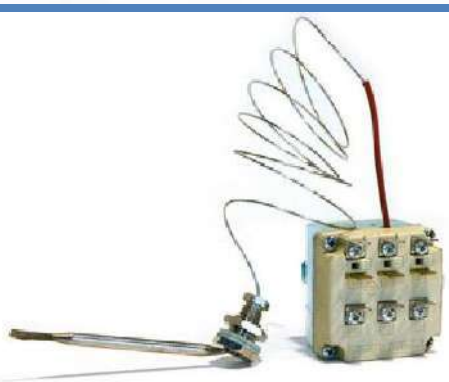
WARNINGS:
Never turn on at temperatures above 10°C.
Installation temperature between +18°C and +35°C. (In case of applications at lower temperatures the adhesion strength is reduced)
For product storage, it is advisable not to exceed a period of one year at a temperature of 20°C, air humidity between 50 and 70%, taking care not to expose it to UV rays.

Power voltage	230	Vac		Aluminium film thickness	0.155	mm
Power	250	W		Weight	1	kg
Power cable	3x1.5 FG7			Operating temperature	-50 - + 110	°C
Power cable length	1000	mm		Type of adhesive	Acrylic	
Degree of protection	IP67			Steel adhesion	5	N/cm2
Maximum connector current	16	A		Elongation	3	%
Max no. panels in 1 string	12	No.		Tensile strength	25	N/cm2
Dimensions	1500x900x4	mm				

TERMOREGOLAZIONE

SINGLE-POLE THERMOSTATS

model TU 20A - 240 V
With automatic reset, ST type
contacts with Faston connections
Available temperature scales: 4°-40°C ; 30-110°C and 50-300°C
Version with capillary L. 1000 mm. and copper bulb



THREE-POLE THERMOSTATS

model TC 16A - 400 V
With automatic reset, DT type
contacts with Faston connections
Available temperature scales: 30-110°C and 50-300°C
Version with capillary L. 1000 mm. and copper bulb

TEMPERATURE REGULATOR

Dimensions 48×48 mm
Characterised by high configurability
Selection for different types of sensor
For industrial applications

Type J or K THERMOCOUPLE PT100 THERMISTORS

Wide choice of materials, dimensions, accessories and connection types
Standard or upon customer request

CAVI – GUAINE
FILI RESISTIVI

CABLES FOR HIGH TEMPERATURE
Operating temperature -60 / +320°C.
Nickel conductor
Insulation with P.T.F.E. tape + double spiral in P.T.F.E. impregnated electroglass + P.T.F.E. impregnated electroglass sheath
Cross-sections normally available: from 1.0 to 6.0 mm²

CABLES FOR MEDIUM TEMPERATURE
Operating temperature -60 / +180°C.
Copper conductor
Silicone rubber insulation
Cross-sections normally available: from 1.0 to 6.0 mm²

SHEATHS FOR HIGH TEMPERATURE
Operating temperature -60 / +250°C.
Silicone rubber impregnated electroglass sleeve
Diameters norm. available: from 4.0 to 10.0 mm

RESISTIVE WIRES
Material: Nickel/Chrome 80/20
Available diameters: from 0.15 to 1.0 mm

Material: Nickel/Chrome 60/40
Available diameters: from 0.15 to 1.0 mm

elmiti

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