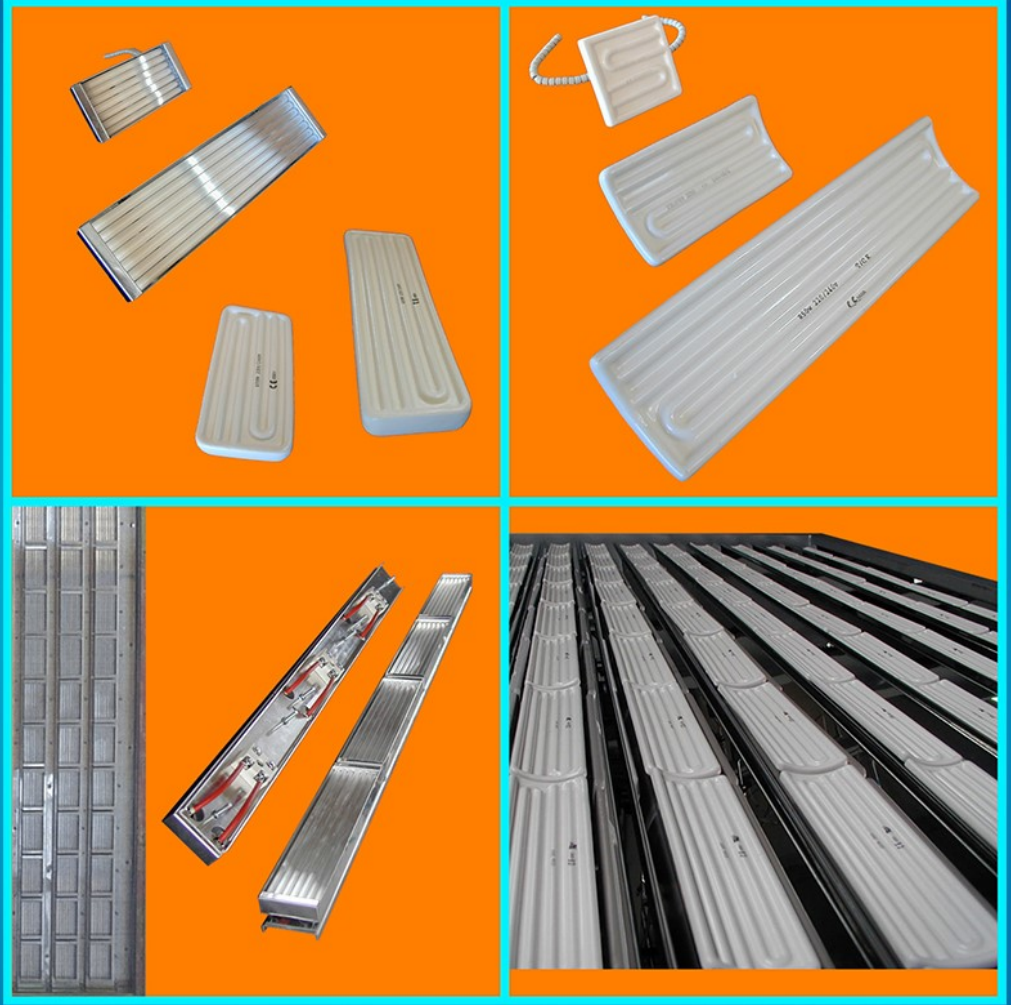


INDUSTRIAL HEATING AND CONTROL TECHNOLOGY

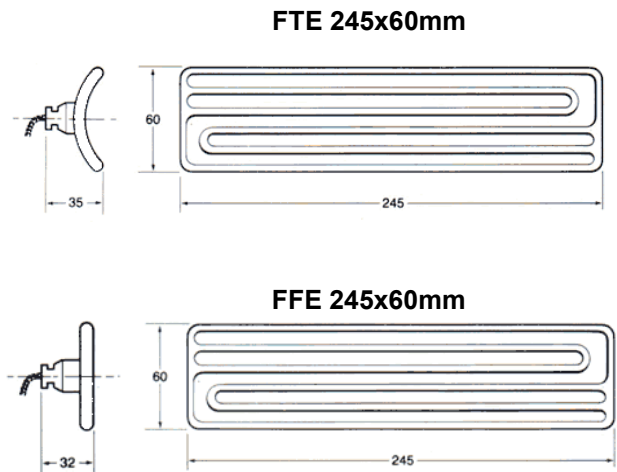
INFRARED HEATERS  
INFRARED HEATERS  
INFRARED HEATERS  
INFRARED HEATERS



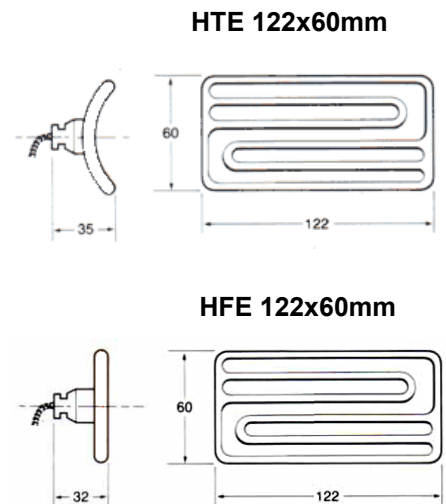
## RESISTENZE INFRAROSSO - CERAMICA E QUARZO

*CERAMIC / QUARTZ INFRARED HEATERS*

<b>FTE – FFE</b> dimensions 245x60 mm			
CODE	Power @ 230V [W]	Max Working Temp. (in oven) [°C]	Peak Wave Length μ
FTE150 FFE150	150	315	6.0
FTE250 FFE250	250	418	4.9
FTE400 FFE400	400	515	4.2
FTE500 FFE500	500	560	4.0
FTE650 FFE650	650	630	3.6
FTE850 FFE850	750	670	3.5
FTE1000 FFE1000	1000	750	3.0



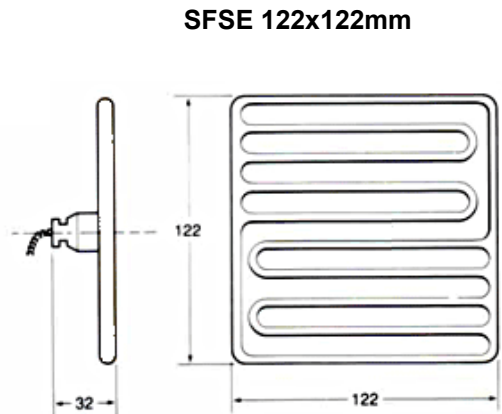
<b>HTE – HFE</b> dimensions 122x60 mm			
CODE	Power @ 230V [W]	Max Working Temp. (in oven) [°C]	Peak Wave Length μ
HTE125 HFE125	125	418	4.9
HTE200 HFE200	200	515	4.2
HTE250 HFE250	250	560	4.0
HTE325 HFE325	325	630	3.6
HTE500 HFE500	500	750	3.0



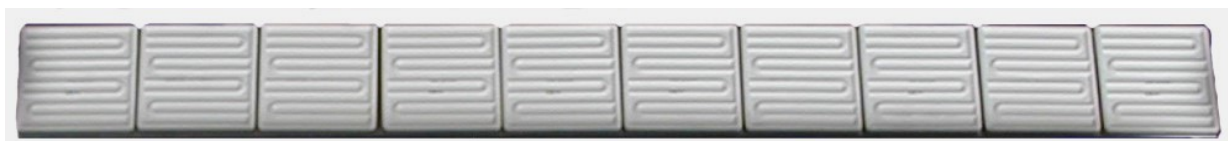
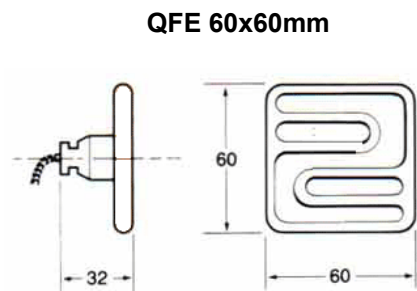
### ESEMPIO DI STRUTTURA RIFLETTENTE CON RESISTENZE FTE FTE CERAMIC HEATERS WITH REFLECTOR



<b>SFSE</b> dimensions 122x122 mm			
CODE	Power @ 230V [W]	Max Working Temp. (in oven) [°C]	Peak Wave Length $\mu$
SFSE150	150	315	6.0
SFSE250	250	418	4.9
SFSE400	400	480	4.5
SFSE500	500	515	4.2
SFSE650	650	560	4.0
SFSE850	850	630	3.6
SFSE1000	1000	670	3.5



<b>QFE</b> dimensions 60x60 mm			
CODE	Power @ 230V [W]	Max Working Temp. (in oven) [°C]	Peak Wave Length $\mu$
QFE125	125	560	4.0
QFE250	250	750	3.0



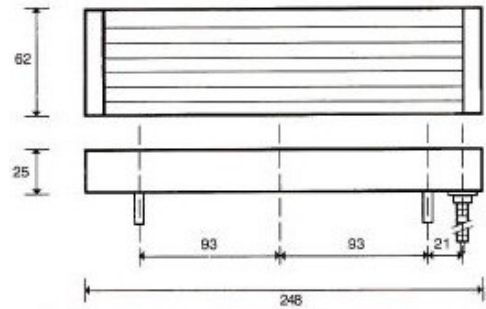
**ESEMPIO DI STRUTTURA RIFLETTENTE CON RESISTENZE SFSE**  
**SFSE CERAMIC HEATERS WITH REFLECTOR**



**ESEMPIO DI STRUTTURA RIFLETTENTE CON RESISTENZE QFE**  
**QFE CERAMIC HEATERS WITH REFLECTOR**

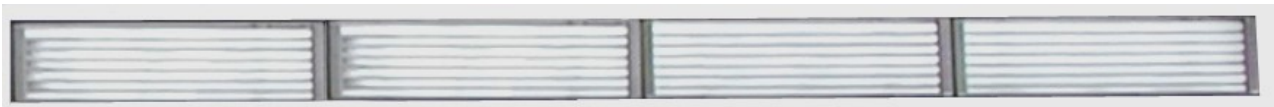
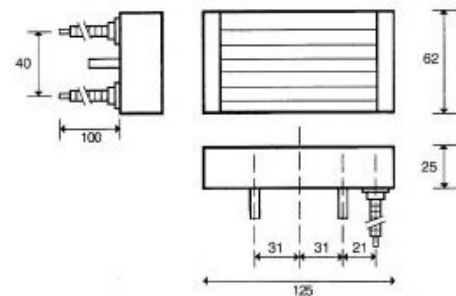
<b>FQE</b> dimensions 248x62.5 mm			
CODE	Power @ 230V [W]	Max Working Temp. (in oven) [°C]	Peak Wave Length $\mu$
FQE150	150	343	Da 1.5 a 5.6 $\mu$
FQE250	250	438	
FQE400	400	542	
FQE500	500	593	
FQE650	650	664	
FQE750	750	690	
FQE1000	1000	772	

FQE 248x62.5mm



<b>HQE</b> dimensions 125x62.5 mm			
CODE	Power @ 230V [W]	Max Working Temp. (in oven) [°C]	Peak Wave Length $\mu$
HQE150	150	470	Da 1.5 a 5.6 $\mu$
HQE250	250	593	
HQE400	400	720	
HQE500	500	772	

HQE 125x62.5mm



**ESEMPIO DI STRUTTURA RIFLETTENTE CON RESISTENZE AL QUARZO FQE  
QFE QUARTZ HEATERS WITH REFLECTOR**



## STRUTTURE RADIANTI PER FORNI

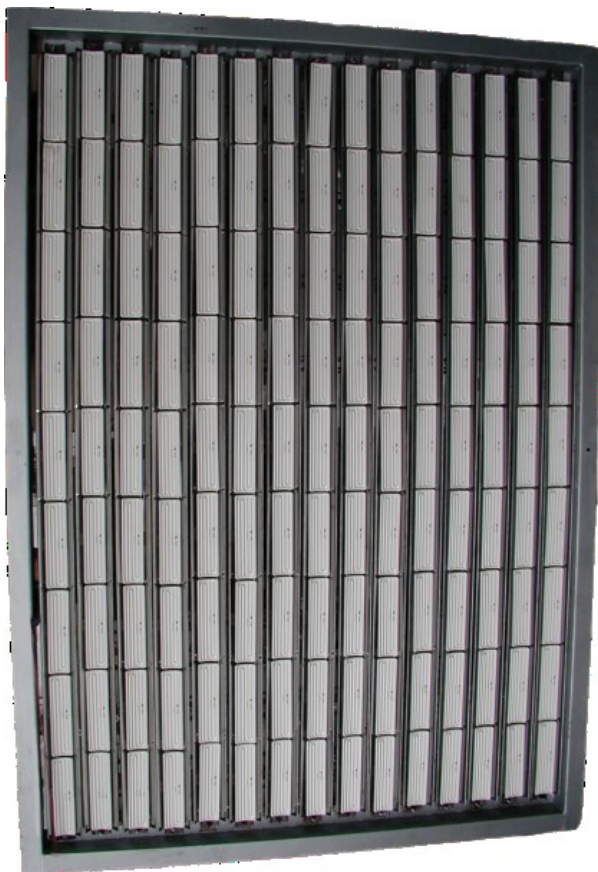
### *INFRARED PLATENS FOR OVENS*



#### **STRUTTURA RADIANTE 2300x1200 mm**

Struttura in acciaio dolce con supporti modulari corredati di resistenze infrarosso in tubo di quarzo 124x62 mm .

Struttura cablata con bandelle in acciaio inox.  
Applicazione: Termoformatura sottovuoto.



#### **STRUTTURA RADIANTE 2250x1500 mm**

Struttura in acciaio dolce con riflettori inox modulari corredati di resistenze infrarosso ceramiche 245x60 mm curve.

Struttura cablata con bandelle in acciaio inox.  
Applicazione: Termoformatura sottovuoto.

## PIASTRE CALDE IN ALLUMINIO HEATING PLATENS MADE OF ALUMINIUM

### APPLICAZIONE TIPICA

Preriscaldamento di film termoplastico per la lavorazione in stazione successiva.

### TYPICAL APPLICATION

*To preheat a thermoplastic film that will be worked in a further station.*



### CARATTERISTICHE TECNICHE

Piano di lavoro rettificato  
Spessore tipico 20mm  
Piastra isolante (fino a 250°C) spessore 6/8mm  
Termocoppia TIPO J (standard), a richiesta PT100  
Cablaggio completo delle resistenze installate

### TECHNICAL SPECIFICATIONS

*Rectified upper surface  
Typical thickness 20mm  
Insulating plate (up to 250°C) thickness 6/8mm  
Thermocouple TYPE J (standard), PT100 upon request  
Electrical wiring*



### ESEMPIO DI REALIZZAZIONE

PIASTRA 1900 x 2000 mm SP. 30 mm

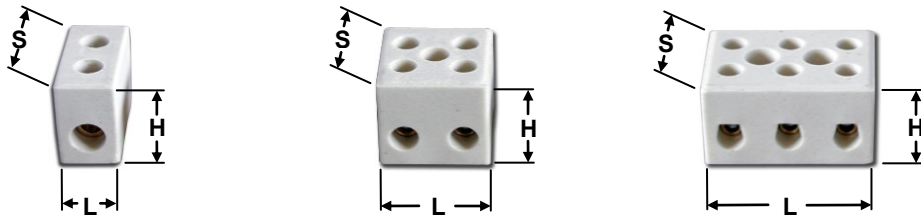
### EXAMPLE

*HEATING PLATEN 1900 x 2000mm  
THICKNESS 30mm*



# MORSETTI IN STEATITE PER ALTE TEMPERATURE

## HIGH TEMPERATURE STEATITE TERMINAL BLOCKS



MODELLO TYPE	CODICE CODE	SEZIONE CROSS SECTION [mm <sup>2</sup> ]	SPESSORE THICKNESS S [mm] ±1	LARGHEZZA WIDTH L [mm] ±1	ALTEZZA HEIGHT H [mm] ±1
UNIPOLARE SINGLE POLE	MOR104	4	24	10	19
	MOR106	6		12	
	MOR116	16		16	
BIPOLARE BI-POLAR	MOR204	4	24	22	19
	MOR206	6		24	
	MOR216	16		37	
TRIPOLARE TRI-POLAR	MOR304	4	25	34	20
	MOR306	6		36	
	MOR316	16		45	

### CARATTERISTICHE TECNICHE

Corpo in STEATITE  
Tensione nominale 450V  
Viteria in acciaio zincato e inserti in ottone  
Temperatura massima di utilizzo 300°C  
Grado di protezione IP00  
NORME EN60998-1 & EN60998-2-1

### TECHNICAL FEATURES

STEATITE body  
Rated Voltage 450V  
Screws made of galvanized steel and brass fittings  
Maximum working temperature 300°C  
Degree of Protection IP00  
NORME EN60998-1 & EN60998-2-1



CODICE CODE	SEZIONE CROSS SECT. [mm <sup>2</sup> ]	SPESSORE THICKNESS S [mm] ±1	LARGHEZZA WIDTH L [mm] ±1	ALTEZZA HEIGHT H [mm] ±1
MOR432C	16	32	39	20
MOR432H	16	32	39	20

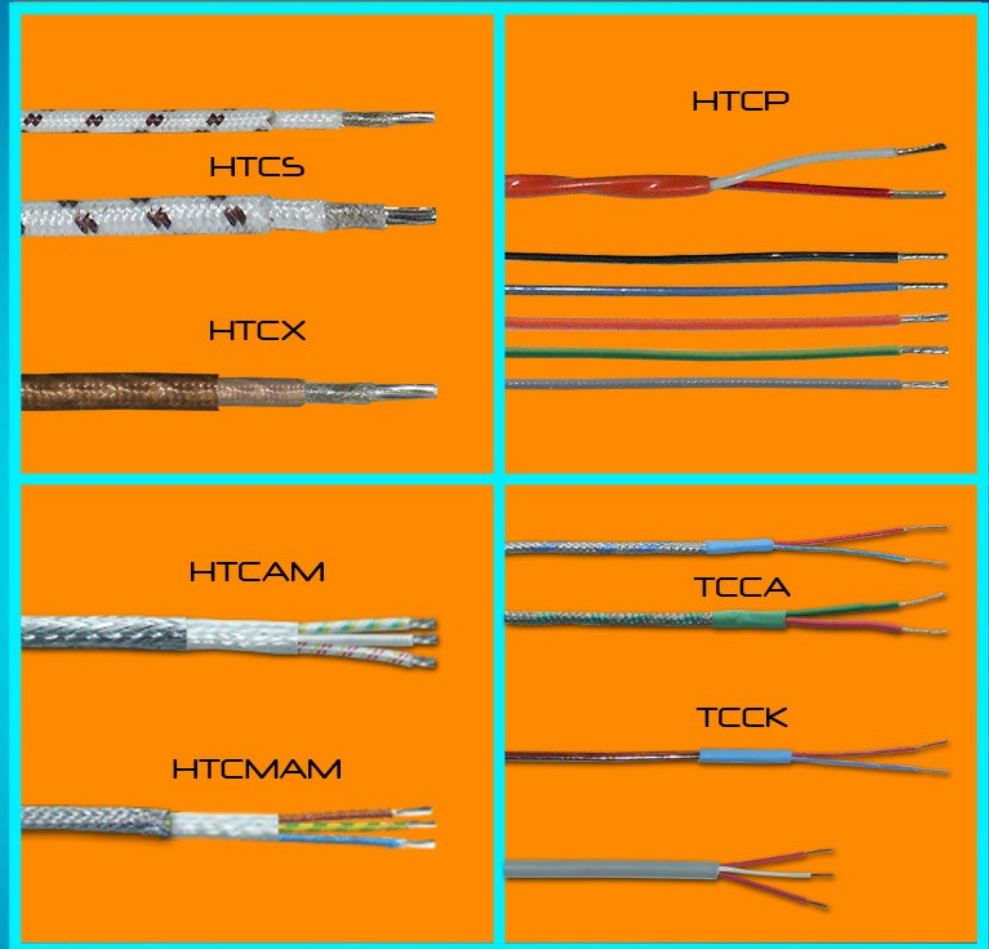
### CARATTERISTICHE TECNICHE

Corpo in STEATITE  
Tensione nominale 450V  
Viteria ed in serti in acciaio inox  
Temp. MAX di utilizzo 400°C  
Grado di protezione IP00  
NORME EN60998-1 & EN60998-2-1

### TECHNICAL FEATURES

STEATITE body  
Rated Voltage 450V  
Screws and fittings made of st. steel  
MAX working temperature 400°C  
Degree of protection IP00  
NORME EN60998-1 & EN60998-2-1

CAVI PER ALTE TEMPERATURE  
HIGH TEMPERATURE CABLES  
CABLES POUR HAUTE TEMPERATURE





# CAVO DI POTENZA PER ALTE TEMPERATURE HTC / HTCM

*HIGH TEMPERATURE CABLE FOR HEATERS - HTC / HTCM*  
*CABLE DE PUISSANCE POUR HAUTE TEMPERATURE - HTC / HTCM*

## HTC



<b>TEMP. ESERCIZIO</b> (WORKING TEMPERATURE) (TEMP.DE TRAVAILLE)	-60 ÷ +320°C
<b>PICCO</b> (PEAK) (MAXIMALE)	+350°C
<b>COLORE STANDARD</b> (STANDARD COLOUR) (COULEUR STANDARD)	MARRONE BROWN BRUN

## HTCM



<b>TEMP. ESERCIZIO</b> (WORKING TEMPERATURE) (TEMP.DE TRAVAILLE)	-60 ÷ +250°C
<b>PICCO</b> (PEAK) (MAXIMALE)	+280°C
<b>COLORE STANDARD</b> (STANDARD COLOUR) (COULEUR STANDARD)	BIANCO-MARRONE WHITE-BROWN BLANC-BRUN

MATERIALI	MATERIALS	MATERIAUX
<b>0.35 ÷ 2.5 mm<sup>2</sup></b>	<b>0.35 ÷ 2.5 mm<sup>2</sup></b>	<b>0.35 ÷ 2.5 mm<sup>2</sup></b>
- nastro in PTFE - sp. in F.V. - sp. in F.V. + PTFE - calza F.V. + PTFE	- PTFE tape - F.G. sp. - F.G. sp. + PTFE - F.G. braid + PTFE	- ruban en PTFE - sp. s.verre - sp. s.verre + PTFE - bas s.verre + PTFE
<b>3 ÷ 25 mm<sup>2</sup></b>	<b>3 ÷ 25 mm<sup>2</sup></b>	<b>3 ÷ 25 mm<sup>2</sup></b>
- nastro in PTFE - sp. in F.V. + PTFE - sp. in F.V. + PTFE - calza F.V. + PTFE	- PTFE tape - F.G. sp. + PTFE - F.G. sp. + PTFE - F.G. braid + PTFE	- ruban en PTFE - sp. s.verre + PTFE - sp. s.verre + PTFE - bas s.verre + PTFE

MATERIALI	MATERIALS	MATERIAUX
<b>0.35 ÷ 2.5 mm<sup>2</sup></b>	<b>0.35 ÷ 2.5 mm<sup>2</sup></b>	<b>0.35 ÷ 2.5 mm<sup>2</sup></b>
- nastro in PTFE - sp. in F.V. - sp. in F.V. + PTFE - calza F.V. + PTFE	- PTFE tape - F.G. sp. - F.G. sp. + PTFE - F.G. braid + PTFE	- ruban en PTFE - sp. s.verre - sp. s.verre + PTFE - bas s.verre + PTFE
<b>3 ÷ 25 mm<sup>2</sup></b>	<b>3 ÷ 25 mm<sup>2</sup></b>	<b>3 ÷ 25 mm<sup>2</sup></b>
- nastro in PTFE - sp. in F.V. + PTFE - sp. in F.V. + PTFE - calza F.V. + PTFE	- PTFE tape - F.G. sp. + PTFE - F.G. sp. + PTFE - F.G. braid + PTFE	- ruban en PTFE - sp. s.verre + PTFE - sp. s.verre + PTFE - bas s.verre + PTFE

SEZIONE SECTION [mm <sup>2</sup> ]	DIA. TOTALE OUTER DIA. DIA. EXTERIEUR
0.35	2.0
0.50	2.2
0.75	2.4
0.82	2.5
1.00	2.6
1.30	2.7
1.50	2.8
2.00	3.1
2.50	3.3
3.00	3.5
3.30	3.5
4.00	4.3
6.00	5.0
8.00	5.7
10.00	6.5
16.00	7.8
25.00	8.9

SEZIONE SECTION [mm <sup>2</sup> ]	DIA. TOTALE OUTER DIA. DIA. EXTERIEUR
1.50	2.8
1.75	3.0
2.00	3.1
2.50	3.2
3.00	3.9
4.00	4.4
6.00	5.0
8.00	6.0
10.00	6.5
16.00	8.1
25.00	9.0

### CARATTERISTICHE TECNICHE - TECHNICAL FEATURES - SPECIFICATIONS ET TOLERANCES

<b>TENSIONE NOMINALE</b> (RATED VOLTAGE) (TENSION NOMINAL)	300/500 V
<b>TENSIONE DI COLLAUDO</b> (TEST VOLTAGE) (TENSION DE TEST)	2000 V
<b>TEMP. MAX RAME NICHELATO (130 μ)</b> (MAX WORKING TEMP. NICKEL PLATED COPPER) (TEMP. DE TRAVAILLE MAXIMALE CUIVRE NICHELE')	+350°C
<b>TEMP. MAX NICHEL (99.2 %)</b> (MAX WORKING TEMPERATURE NICKEL) (TEMPERATURE DE TRAVAILLE MAXIMALE NICKEL)	+600°C
<b>RESISTENZA ALLA FIAMMA</b> (FLAME RESISTANCE) (RESISTANCE A LA FLAMME)	OTTIMA
<b>IMPERMEABILITA'</b> (WATERPROOFING) (IMPERMEABILISATION)	OTTIMA

# CAVO DI POTENZA PER ALTE TEMPERATURE HTCS / HTCX

*HIGH TEMPERATURE CABLE FOR HEATERS - HTCS / HTCX*  
*CABLE DE PUISSANCE POUR HAUTE TEMPERATURE - HTCS / HTCX*

## HTCS



<b>TEMP. ESERCIZIO</b> <i>(WORKING TEMPERATURE)</i> <i>(TEMP.DE TRAVAILLE)</i>	-60 ÷ +450°C
<b>PICCO</b> <i>(PEAK)</i> <i>(MAXIMALE)</i>	<b>+600°C</b>
<b>COLORE STANDARD</b> <i>(STANDARD COLOUR)</i> <i>(COULEUR STANDARD)</i>	BIANCO-MARRONE WHITE-BROWN BLANC-BRUN

## HTCX



<b>TEMP. ESERCIZIO</b> <i>(WORKING TEMPERATURE)</i> <i>(TEMP.DE TRAVAILLE)</i>	-60 ÷ +550°C
<b>PICCO</b> <i>(PEAK)</i> <i>(MAXIMALE)</i>	<b>+700°C</b>
<b>COLORE STANDARD</b> <i>(STANDARD COLOUR)</i> <i>(COULEUR STANDARD)</i>	MARRONE BROWN BRUN

MATERIALI	MATERIALS	MATERIAUX
1.0 ÷ 25 mm2	1.0 ÷ 25 mm2	1.0 ÷ 25 mm2
- nastro MICA - sp. In V-SIL - calza f.v. + quarzo + Sil.	- MICA tape - F.G.+ silicon spiral - F.G. quartz braid + silicon	- ruban en MICA - sp. s.verre + sil. - bas s.verre + quartz + silicone

MATERIALI	MATERIALS	MATERIAUX
1.0 ÷ 25 mm2	1.0 ÷ 25 mm2	1.0 ÷ 25 mm2
- nastro MICA - sp. In V-SIL - calza f.v. + quarzo + Sil.	- MICA tape - F.G.+ silicon spiral - F.G. quartz braid + silicon	- ruban en MICA - sp. s.verre + sil. - bas s.verre + quartz + silicone

SEZIONE SECTION [mm2]	TREFOLI NICHEL NICKEL STRANDS BRINS NICKEL	DIA. TOTALE OUTER DIA. DIA. EXTERIEUR
1.00	32 x 0.20	3.5
1.50	21 x 0.30	4.0
2.00	28 x 0.30	4.3
2.50	20 x 0.40	4.5
3.00	24 x 0.40	4.7
4.00	32 x 0.40	5.5
6.00	48 x 0.40	6.2
8.00	64 x 0.40	6.9
10.00	80 x 0.40	7.7
16.00	128 x 0.40	8.0
25.00	200 x 0.40	8.6

SEZIONE SECTION [mm2]	TREFOLI NICHEL NICKEL STRANDS BRINS NICKEL	DIA. TOTALE OUTER DIA. DIA. EXTERIEUR
1.00	32 x 0.20	3.5
1.50	21 x 0.30	4.0
2.00	28 x 0.30	4.3
2.50	20 x 0.40	4.5
3.00	24 x 0.40	4.7
4.00	32 x 0.40	5.5
6.00	48 x 0.40	6.2
8.00	64 x 0.40	6.9
10.00	80 x 0.40	7.7
16.00	128 x 0.40	8.0
25.00	200 x 0.40	8.6

<b>CARATTERISTICHE TECNICHE - TECHNICAL FEATURES - SPECIFICATIONS ET TOLERANCES</b>		
<b>TENSIONE NOMINALE</b> <i>(RATED VOLTAGE)</i> <i>(TENSION NOMINAL)</i>		300/500 V
<b>TENSIONE DI COLLAUDO</b> <i>(TEST VOLTAGE)</i> <i>(TENSION DE TEST)</i>		2500 V
<b>TEMP. MAX NICHEL (99.2 %)</b> <i>(MAX WORKING TEMPERATURE NICKEL)</i> <i>(TEMPERATURE DE TRAVAILLE MAXIMALE NICKEL)</i>		+600°C
<b>RESISTENZA ALLA FIAMMA</b> <i>(FLAME RESISTANCE)</i> <i>(RESISTANCE A LA FLAMME)</i>		OTTIMA
<b>IMPERMEABILITA'</b> <i>(WATERPROOFING)</i> <i>(IMPERMEABILISATION)</i>		OTTIMA

**CAVO TC PER ALTE TEMPERATURE TCCA / TCCK**  
**HIGH TEMPERATURE THERMOCOUPLE CABLE - TCCA / TCCK**  
**CABLE POUR SONDES POUR HAUTE TEMPERATURE - TCCA / TCCK**

**TCCA**



**TCCK**



**TEMP. ESERCIZIO** -25 ÷ +250°C  
*(WORKING TEMPERATURE)*  
*(TEMP.DE TRAVAILLE)*  
**PICCO (PEAK) (MAXIMALE)** +280°C  
**TIPO** J, K  
**PROTEZIONE** GUAINA METALLICA  
*(PROTECTION)* METAL BRAID  
*(PROTECTION)* GAINÉ METALLIQUE

**TEMP. ESERCIZIO** -100 ÷ +350°C  
*(WORKING TEMPERATURE)*  
*(TEMP.DE TRAVAILLE)*  
**PICCO (PEAK) (MAXIMALE)** +350°C  
**TIPO** J, K  
**PROTEZIONE** NASTRO KAPTON  
*(PROTECTION)* KAPTON TAPE  
*(PROTECTION)* RUBAN EN KAPTON

MATERIALI	MATERIALS	MATERIAUX
0.22 ÷ 1.0 mm2	0.22 ÷ 1.0 mm2	0.22 ÷ 1.0 mm2
- calza F.V. - calza F.V. - calza in rame stagnato	- F.G. braid - F.G. braid - tinned copper braid	- bas s.verre - bas s.verre - bas en cuivre étainé

MATERIALI	MATERIALS	MATERIAUX
0.22 ÷ 1.0 mm2	0.22 ÷ 1.0 mm2	0.22 ÷ 1.0 mm2
- nastro in KPT - nastro in PTFE - nastro in KPT	- KPT tape - PTFE tape - KPT tape	- ruban en KPT - ruban en PTFE - ruban en KPT

SEZIONE SECTION [mm2]	DIA. TOTALE TONDO ROUND OUTER DIA. DIA. EXT. RONDE	DIA. TOTALE OVALE OVAL OUTER DIA. DIA. EXT. OVAL
2 x 0.22	3.0	2.90 x 2.05
2 x 0.35	3.8	3.60 x 2.45
2 x 0.50	4	3.80 x 2.55
2 x 0.80	4.3	4.35 x 3.00
2 x 1.00	4.4	4.40 x 3.10

SEZIONE SECTION [mm2]	DIA. TOTALE OVALE OVAL OUTER DIA. DIA. EXT. OVAL
2 x 0.22	1.25 x 2.16
2 x 0.35	1.50 x 2.60
2 x 0.50	1.65 x 2.90
2 x 0.80	1.95 x 3.50
2 x 1.00	2.00 x 3.70

**CARATTERISTICHE TECNICHE - TECHNICAL FEATURES - SPECIFICATIONS ET TOLERANCES**

**TENSIONE NOMINALE** (RATED VOLTAGE) (TENSION NOMINAL) 300/500 V  
**TENSIONE DI COLLAUDO** (TEST VOLTAGE) (TENSION DE TEST) 2000 V  
**RESISTENZA ALLA FIAMMA** (FLAME RESISTANCE) (RESISTANCE A LA FLAMME) OTTIMA  
**IMPERMEABILITA'** (WATERPROOFING) (IMPERMEABILISATION) OTTIMA  
**RAGGIO CURVATURA** (BENDING RADIUS) (RAYON DE COURBURE) 5x DIA.  
**NORME** DIN43714  
 ANSI MC96.1  
 IEC 584.3

# GUAINE ISOLANTI per ALTE TEMPERATURE NASTRO ADESIVO per ALTE TEMPERATURE

*HIGH TEMPERATURE INSULATING SLEEVES  
HIGH TEMPERATURE ADHESIVE TAPE*



<b>GUAINE ISOLANTI – INSULATING SLEEVES</b>	
CODICE - CODE	CARATTERISTICHE – FEATURES
<b>GUVS025</b>	DIA.: 2.5 mm LUNGHEZZA MATASSA - HANK LENGTH: 200 M
<b>GUVS04</b>	DIA.: 4 mm LUNGHEZZA MATASSA - HANK LENGTH: 200 M
<b>GUVS05</b>	DIA.: 5 mm LUNGHEZZA MATASSA - HANK LENGTH: 200 M
<b>GUVS06</b>	DIA.: 6 mm LUNGHEZZA MATASSA - HANK LENGTH: 200 M
<b>GUVS08</b>	DIA.: 8 mm LUNGHEZZA MATASSA - HANK LENGTH: 200 M
<b>GUVS010</b>	DIA.: 10 mm LUNGHEZZA MATASSA - HANK LENGTH: 200 M
<b>GUVS012</b>	DIA.: 12 mm LUNGHEZZA MATASSA - HANK LENGTH: 200 M
<b>GUVS016</b>	DIA.: 16 mm LUNGHEZZA MATASSA - HANK LENGTH: 200 M

<b>CARATTERISTICHE TECNICHE - TECHNICAL FEATURES</b>	
<b>MATERIALE – MATERIAL</b>	FIBRA DI VETRO IMPREGNATA DI SILICONE SILICON COVERED GLASS FIBER
<b>TENSIONE DI PERFORAZIONE BREAKDOWN TENSION</b>	1500V
<b>TEMPERATURA DI ESERCIZIO WORKING TEMPERATURE</b>	180 – 200°C
<b>COLORE – COLOR</b>	ROSSO - RED
<b>PROPAGAZIONE FIAMMA FLAME SPREAD</b>	AUTOESTINGUENTE SELF-EXTINGUISHING

<b>NASTRO ADESIVO F.V. – G.F. ADHESIVE TAPE</b>	
CODICE - CODE	CARATTERISTICHE – FEATURES
<b>FGT1850</b>	ALTEZZA ROTOLO - ROLL HEIGHT : 50 mm LUNGHEZZA ROTOLO - ROLL LENGTH : 50 M

<b>CARATTERISTICHE TECNICHE - TECHNICAL FEATURES</b>	
<b>MATERIALE – MATERIAL</b>	FIBRA VETRO CON ALTO POTERE ADESIVO GLASS FIBER WITH HIGH ADHESIVE GLUE
<b>TENSIONE DI PERFORAZIONE BREAKDOWN TENSION</b>	2500V
<b>TEMPERATURA DI ESERCIZIO WORKING TEMPERATURE</b>	180 – 200°C
<b>COLORE – COLOR</b>	BIANCO – WHITE
<b>PROPAGAZIONE FIAMMA FLAME SPREAD</b>	AUTOESTINGUENTE SELF-EXTINGUISHING