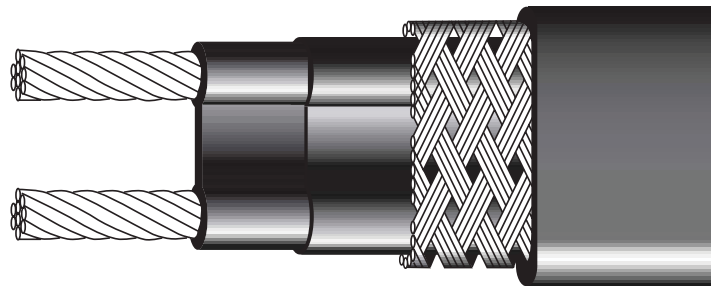


Section 19

Electric Heat Tracing



Electric Heat Tracing

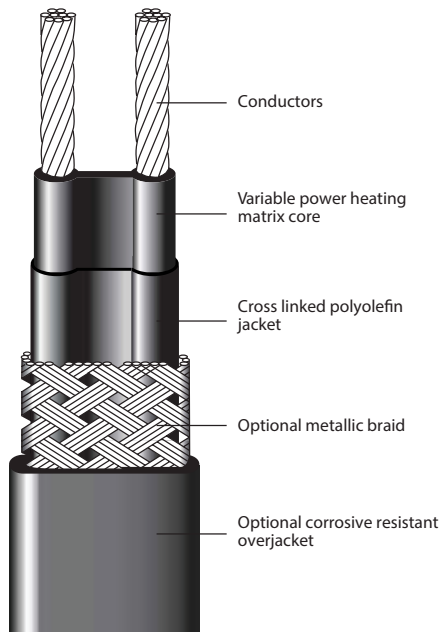
Cold Terminations for Heating Cables

Page

19.1

19.4

Electric Heat Tracing



HTSX - Self Regulating Heating Cable

Applications - HTSX cables are used primarily for process maintenance and frost protection of piping which could be subject to steam cleaning up to 12 BARG saturated steam. HTSX was the first matrix heater for process maintenance of temperatures up to 121°C. The low inrush feature of HTSX cable eliminates excessive 'start up' current. Options include braid and overjacket.

BSX - Self Regulating Heating Cable

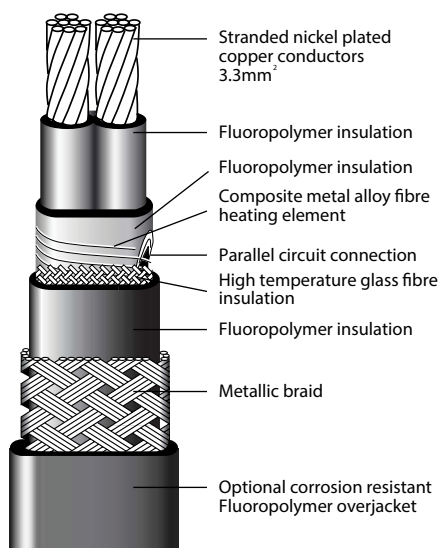
Applications - BSX cables are used primarily for process maintenance and frost protection of piping in hazardous, non-hazardous or corrosive areas. Options include braid and overjacket.

RSX - Self Regulating Heating Cable

Applications - RSX cables are used primarily for process maintenance and frost protection of piping in hazardous, non-hazardous or corrosive areas. Able to run at higher amperage than the BSX cable. Options include braid and overjacket.

FLX - Self Regulating Heating Cable

Applications - FLX cables are designed to provide freeze and temperature maintenance to metallic and non-metallic piping, tanks and equipment. Options include braid and overjacket.

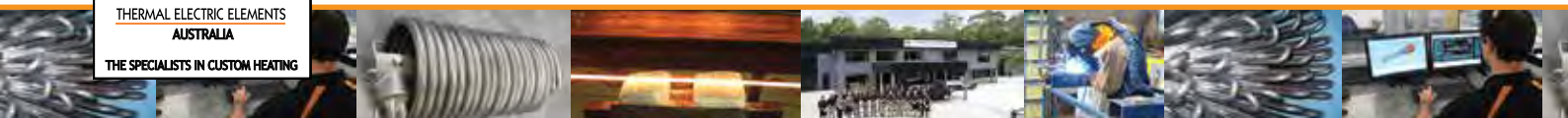


HPT - Power Limiting Heating Cable

Applications - HPT parallel resistance cables are designed for heating applications ranging from water freeze protection to process maintenance temperatures as high as 149°C. HPT is ideal for applications where steam purging or upset conditions preclude the use of lower temperature rated heat tracing cables. HPT is rated for a maximum continuous exposure temperature of 260°C (cable de-energised). Options include braid and overjacket.

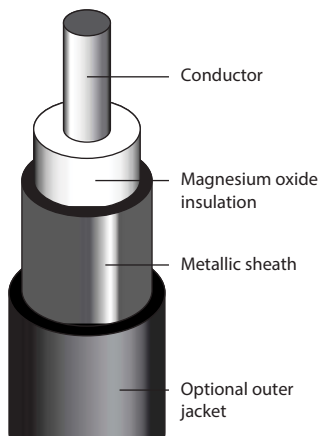
EconoTrace - Constant Wattage Heating Cable (Type FP)

Applications - EconoTrace Type FP parallel resistance, constant wattage heating cables are for water freeze protection and process temperature maintenance up to 65°C. Options include braid and overjacket.



Electric Heat Tracing - continued

Part #	Heater Type	Watt Density (w/m)	Standard Voltage VAC	Electrical Insulation	Max Maint. Temp °C	Max Cont. Exposure Temp °C
HTSX 3	Self Regulating	10	120/240	Teflon FEP	121	191
HTSX 6	Self Regulating	20	120/240	Teflon FEP	121	191
HTSX 9	Self Regulating	30	120/240	Teflon FEP	121	191
HTSX 12	Self Regulating	39	120/240	Teflon FEP	121	191
BSX 3-2	Self Regulating	10	240	Cross-Linked Polyolefin	65	85
BSX 5-2	Self Regulating	16	240	Cross-Linked Polyolefin	65	85
BSX 8-2	Self Regulating	26	240	Cross-Linked Polyolefin	65	85
BSX 10-2	Self Regulating	33	240	Cross-Linked Polyolefin	65	85
RSX 10	Self Regulating	33	120/240	Cross-Linked Polyolefin	65	85
RSX 15	Self Regulating	48	120/240	Cross-Linked Polyolefin	65	85
FLX 5-2	Self Regulating	16	240	Cross-Linked Polyolefin	65	85
FLX 10-2	Self Regulating	33	240	Cross-Linked Polyolefin	65	85
FLX 15-2	Self Regulating	49	240	Cross-Linked Polyolefin	65	85
HPT 5	Power Limiting	16	120/240	Teflon PFA	149	260
HPT 10	Power Limiting	33	120/240	Teflon PFA	149	260
HPT 15	Power Limiting	49	120/240	Teflon PFA	149	260
HPT 20	Power Limiting	66	120/240	Teflon PFA	149	260
FP 2.5	Constant Watt Parallel	8	120/240	Teflon FEP	65	204
FP 5	Constant Watt Parallel	16	120/240	Teflon FEP	65	204
FP 10	Constant Watt Parallel	33	120/240	Teflon FEP	65	204
FP10-4	Constant Watt Parallel	33	480	Teflon FEP	65	204
FP10-5	Constant Watt Parallel	33	480	Teflon FEP	65	204
MIQ	Constant Series Resistance		300/600	Magnesium Oxide (with alloy 825 sheath)	427	593

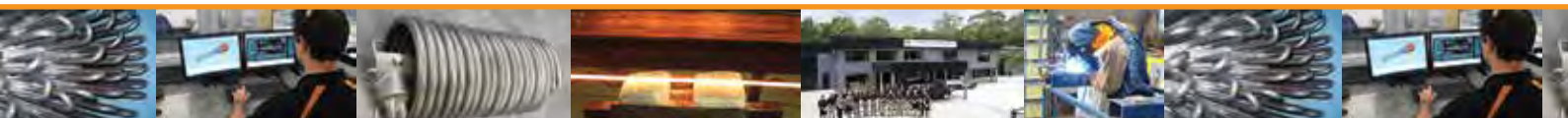


MIQ - Mineral Insulated Heating Cables

Applications - MIQ high temperature mineral insulated heating cables are used extensively for high temperature maintenance, high temperature exposure and/or high watt density applications which exceed the limitations of thermoplastic insulated cables.

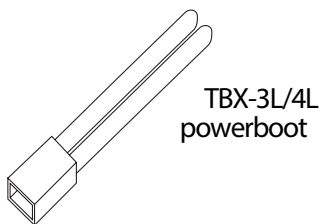
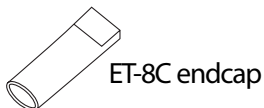
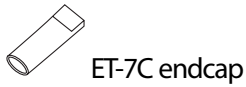
Features - The MIQ range are manufactured using Alloy 825. Alloy 825 is a high nickel chromium alloy which is ideally suited for high temperature service and offers exceptional resistance to stress conditions in chloride, acid, salt and alkaline environments.

600V Rated Cable					300V Rated Cable			Resistance/ Conductor		
1 Conductor	Diameter in mm		2 Conductor	Diameter in mm		1 Conductor	Diameter in mm		Ohms/ft	Ohms/m
			MIQ-R29S2	0.215	5.5	MIQ-28S2	0.13	3.3	5.5	18.04
			MIQ-R27S2	0.215	5.5				4.5	14.76
			MIQ-R25S2	0.215	5.5	MIQ-25S2	0.135	3.4	3	9.84
MIQ-R24S	0.146	3.7	MIQ-R24S2	0.245	6.2	MIQ-24S2	0.146	3.7	2	6.56
MIQ-R23S	0.17	4.3							1.6	5.248
						MIQ-23S2	0.173	4.4	1.375	4.51
MIQ-R22S	0.16	4.1	MIQ-R22S2	0.245	6.2	MIQ-22S2	0.18	4.6	1	3.28
MIQ-R21S	0.16	4.1							0.7	2.296
MIQ-R19S	0.18	4.6	MIQ-R19S2	0.265	6.7	MIQ-19S2	0.196	5	0.5	1.64
MIQ-R18S	0.2	5.1							0.38	1.246
			MIQ-R18S2	0.265	6.7	MIQ-18S2	0.16	4.1	0.35	1.148
MIQ-R17S	0.18	4.6							0.3	0.984
			MIQ-R17S2	0.265	6.7	MIQ-17S2	0.196	5	0.25	0.82
MIQ-R16S	0.18	4.6							0.2	0.656
MIQ-R15S	0.18	4.5	MIQ-R16S2	0.29	7.4	MIQ-16S2	0.215	5.5	0.15	0.492
MIQ-R14S	0.196	5	MIQ-R15S2	0.245	6.2	MIQ-15S2	0.146	3.7	0.1	0.328
MIQ-R13S	0.215	5.5							0.08	0.262
			MIQ-R14S2	0.29	6.2	MIQ-14S2	0.16	4.1	0.075	0.246
MIQ-R12S	0.196	5							0.07	0.23
MIQ-R9S	0.215	5.5							0.06	0.197
			MIQ-R13S2	0.265	6.2	MIQ-13S2	0.18	4.5	0.05	0.164
MIQ-R11S	0.245	6.2							0.04	0.131
			MIQ-R11S2	0.29	7.4	MIQ-11S2	0.196	5	0.035	0.115
MIQ-R10S	0.245	6.2							0.03	0.098
			MIQ-R10S2	0.315	8	MIQ-10S2	0.215	5.5	0.025	0.082
MIQ-R8S	0.196	5	MIQ-R9S2	0.315	8				0.02	0.066
			MIQ-R8S2	0.346	8.8				0.015	0.049
MIQ-R20NC	0.198	4.8	MIQ-R20NC2	0.299	7.6				0.1	0.0328
MIQ-R18NC	0.199	5.1	MIQ-R18NC2	0.309	7.9				0.0065	0.0214
MIQ-R16NC	0.212	5.4	MIQ-R16NC2	0.34	8.7				0.0041	0.0134
MIQ-R14NC	0.24	6.1	MIQ-R14NC2	0.387	9.9				0.0026	0.001
MIQ-R12NC	0.253	6.4	MIQ-R12NC2	0.434	11.1				0.0016	0.0053
MIQ-R10NC	0.286	7.3							0.001	0.0033
MIQ-R8NC	0.319	8.1							0.00064	0.0021



Cold Terminations for Heating Cables

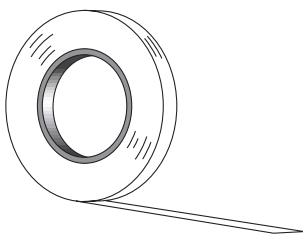
Applications: Silicone Cold End Terminations allow for simple on-site termination in both hazardous and non hazardous areas. Cold terminations are available for all parallel heating cables type BSX, HTSX, HPT and FP.



Cable Type	Power Term.		Max Temp Rating
	Endcap Type	Type Silicone Rubber	
BSX-BC	ET-8C	TBX-3L	200°C
BSX-OJ	ET-8C	TBX-3L	200°C
BSX-FOJ	ET-8C	TBX-3L	200°C
HTSX-BN	ET-8C	TBX-3L	200°C
HTSX-FOJ	ET-6C	TBX-3L	200°C
HPT-BN (exp temp <200°C)	ET-7C	TBX-4L	200°C
HPT-FOJ (exp temp <200°C)	ET-8C	TBX-4L	200°C
FP-BN	ET-7C	TBX-4L	200°C
FP-FOJ	ET-8C	TBX-4L	200°C

*RTV silicone sealant rated at 265°C

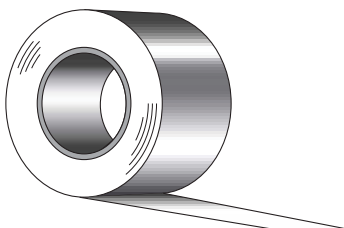
Approvals: When used in conjunction with heated cables type HTSX, BSX or HPT, the end terminations are approved by SAA for use in hazardous areas Zone 1 and 2.



FT Tape

Adhesive tapes for attachment of heated cables to piping.

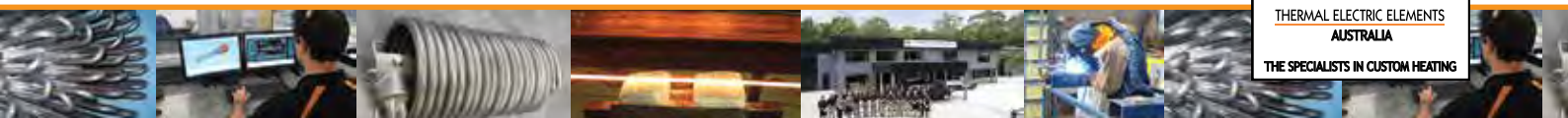
Type	Size (L&W) (M x mm)	Max Exposure Temp
FT-1H	33 x 12	260°C



Aluminium Tape

Aluminium adhesive tape for parallel coverage of heating cable attachment of thermostat capillaries to piping and for attachment of heating cable to vessel walls.

Type	Size (L&W) (M x mm)	Max Exposure Temp
AL-20L	45 x 50	65°C
AL-30L	45 x 75	65°C
AL-20H	45 x 50	150°C
AL-30H	45 x 75	150°C



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