



Marathon
TEMPESENS

ENGINEERED SOLUTIONS
FOR HEATING CABLES

ISO 9001-2008



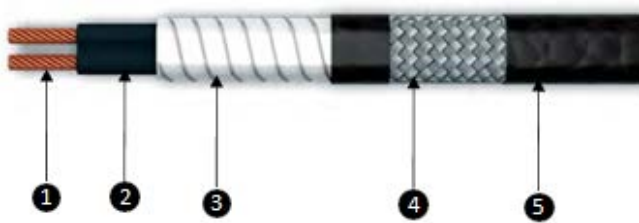
CONSTANT WATTAGE SERIES HEAT TRACE

- CONSTANT WATTAGE PARALLEL HEAT TRACE (CWPHT)
- CONSTANT WATTAGE SERIES HEAT TRACE (CWSHT)

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CONSTANT WATTAGE PARALLEL HEAT TRACE (CWPHT)



- 1 Bus wires
- 2 Bus Wire Insulation
- 3 Heating wire
- 4 Braiding
- 5 Outer Jacket

Introduction

Parallel circuit Heating cables are constant watt arrangement designed to put out a certain amount of wattage per linear foot of cable. These are generally constructed of two #12AWG polymer insulated parallel bus wires with a nickel alloy heating element wire wrapped alternatively along the insulated bus wires. These connections are made at the 'NODE' point where the nickel-alloy heating element is either welded or connected by rivets. The entire element assembly is then dielectrically insulated with an additional polymer jacket. The power output per unit length is constant, regardless of the overall length of the heating unit. The parallel arrangement preserves systems integrity i.e. if any section of cable should fail, the rest of the heater will continue to operate. Ideally suited for applications where a particular watt density is required at all times such as freeze protection and many other low temperature process control applications

Construction

Buswire size	2X AWG 18 to AWG 15 Stranded Nickel Plated Copper
Buss Wires Insulation	PTFE
Heating elements	Nichrome
Insulation	Fluoropolymer/FEP
Braiding	Nickel Plated copper Braided
Out jacket	PTFE

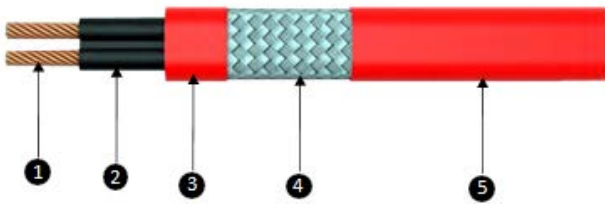
Cable Specifications

Output wattage at 10°C	20, 30, 40, 50, 60 W/M
Braiding covering area	Over 85%
Max. maintain temp @ 10°C	200°C
Max. exposure temp.	230°C
Cut to Length	Yes
Min Bending radius	25 mm
Voltage	230 V / Customise
Insulation	Dark Brown

Maximum Circuit Length(M)

Voltage - 230 VAC			
Model	Nominal output W/m	Circuit Load	Max. Circuit Length (Meter)
CWPHT	20	0.086956522	184
	30	0.130434783	123
	40	0.173913043	115
	50	0.217391304	92
	60	0.260869565	77

CONSTANT WATTAGE SERIES HEAT TRACE (CWSHT)



- 1 Heating element
- 2 Heating element Insulation
- 3 Inner Jacket
- 4 Braiding
- 5 Outer Jacket

Introduction

Series resistance-type heater cables use single or multiple resistive conductors to create a heating circuit. Power output of these cables is relatively constant and as voltage is applied, the power output is determined by a combination of the length of the cable and the overall resistance of the conductor. heating cable's current and resistance is equal to all length heating cable, so the heating value of each unit is equally, not result in the power of terminal end is lower than beginning end with the increasing length of heating cable, so it is suit for long line pipes and large diameter pipe's heat tracing or temp. maintenance, the cable can NOT cut to be length.

Construction

Heating element	Nichrome / Copper Nickel
Heating element Insulation	PTFE
Inner Jacket	PTFE
Braiding	Tinne Copper Braid
Outer Jacket	PTFE

Cable Specifications

Output wattage at 10°C	Customize W/M
Braiding covering area	Over 85%
Surface Temperature	200°C
Max. exposure temperature	230°C
Maximum Circuit Length	3 KM
Min Bending radius	45 mm
Voltage	230 V / Customise
Insulation	Red

Maximum Circuit Length(M)

Voltage - 230 VAC			
Model	Wattage	Conductor Size (mm) ²	Resistance 20°C Ohms/m
CWPHT	40	1.3	0.01492
	50	2.1	0.009449
	60	3.3	0.005945
	70	5.3	0.003478