

Electrical heating cable for temperature maintenance of hot water services in domestic and commercial buildings.

- Maintains hot water at desired temperature.
- Eliminates the need for return pipework and re-circulating pumps.
- Hot water instantly available at each outlet.

- Highly economical.
- Full range of controls and accessories.
- Available up to 277VAC.

## FEATURES

When hot water taps are infrequently used, the water stays in the distribution pipework cools and is usually run to waste before hot water from the storage cylinder arrives at the tap. The use of re-circulating systems usually only maintains the water temperature in the main pipes and doubles the amount of pipework from which heat, and therefore energy, is lost.

HOTWAT is a parallel resistance, self-regulating heating cable designed to compensate for heat losses from hot water distribution systems.

The heater comprises a semi-conductive self-regulating heating element which automatically reduces its power output as the pipe temperature increases. Thus, the heater cannot overheat or burn out.

By applying HOTWAT to the pipework (beneath the thermal insulation) heat losses are eliminated and the water is maintained at the required temperature. Further savings are achieved by removing the need for recirculating pipework together with pumps and valves etc.

There are two HOTWAT systems available. HW-R is simply used to maintain the pipework at approximately 50-60°C, whilst HW-P is used to maintain 45-70°C during normal operation with an extra disinfection feature at timed intervals to reduce the risks of legionella.

The application of HOTWAT to insulated hot water pipework enables hot water to be available at each tap and dramatically improves the system efficiency compared with un-insulated re-circulated systems.

## INHERENTLY TEMPERATURE-SAFE

"The inherent ability to self-regulate at a temperature level below the maximum product rating and withstand temperature of the insulating materials, without the need for temperature control."

Similar competitor self-regulating products are typically limited to a maximum energised temperature, typically 65°C at which point, their retained power output prevent the cable from self-regulating at its own limiting temperatures. All such products require temperature control to ensure their own temperature safety.

Buswires.

Inherently temperature-safe self-regulating matrix.

Thermoplastic electrical insulation.

Continuous conductive covering of metal braid. (-C)

Thermoplastic outer jacket.



## SPECIFICATION

<b>MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE (Power ON):</b>				
80°C (176°F)				
<b>MAXIMUM PERMISSABLE EXPOSURE TEMPERATURE (Power OFF):</b>				
100°C (212°F)				
<b>MINIMUM INSTALLATION TEMPERATURE:</b>				
-40°C (-40°F)				
<b>POWER SUPPLY:</b>				
12 - 277V AC				
<b>MAXIMUM RESISTANCE OF PROTECTIVE BRAIDING:</b>				
18.2 Ohm/km				
<b>WEIGHTS &amp; DIMENSIONS:</b>				
Type Ref	Dimensions (mm) +/- 0.5	Weight kg/100m	Min Bend radius	Gland Size
HWR	11.5 x 4.75	9.5	30mm	M20
HWP	11.5 x 4.75	9.5	30mm	M20
HWR-T	12.7 x 5.95	11.8	35mm	M20
HWP-T	12.7 x 5.95	11.8	35mm	M20

### APPROVAL DETAILS:

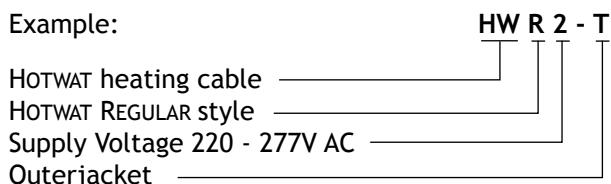
FM	- 3009080
VDE	- 114665

### ORDERING INFORMATION:

#### Options

- HWR ..T** HOTWAT REGULAR heating cable with a thermoplastic overjacket for maintaining the pipework at approximately 50-60°C.
- HWP ..T** HOTWAT PLUS is a higher power output heating cable with a thermoplastic overjacket for maintaining the pipework at between 45-70°C with the added benefit of thermal disinfection.

Example:



### ACCESSORIES:

Heat Trace supply a complete range of accessories including termination/splice kits, end seals, junction boxes and controls. These items are recommended for the correct operation of HOTWAT products.

### MAXIMUM LENGTH (m) vs. CIRCUIT BREAKER SIZE:

Cat Reference	Start-up Temperature	230V			
		6A	10A	16A	20A
HWR	18°C	56	92	128	-
	0°C	38	64	102	128
HWP	18°C	34	56	90	94
	0°C	24	40	64	80

For use with Type C circuit breakers to IEC 60898

### RECOMMENDED INSULATION THICKNESS (MM)

Cat Ref.	Maintain Temperature	Pipe Size (mm)					
		15	22	28	35	42	54
HWR	60°C	25	30	40	50	60	75
	55°C	20	25	30	40	50	60
	50°C	15	20	25	30	40	50
HWP	45-70°C	30	40	50	60	75	75

The above figures are based on the thermal insulation having a K-value of 0.038W/mK at 36°C mid-point temperature.

### SYSTEM FEATURES:

	HWR	HWP
Hot Water Supply System	Localised or Centralised	Centralised
Temperature Control System	Fixed Temperature	Variable temperature setting by POWERTRIM
Thermal Pasteurisation	Not available	D-BUG timer unit or BMS (Building Management System)
Circuit Temp. Scanning	Not available	Contact Heat Trace
Electrical Supply	230V	230V
Typical Maintain Temperature	50, 55 or 60°C	45°C - 70°C
Nominal Output	9W/m at 55°C	9.5W/m at 70°C

### FURTHER INFORMATION:

Please consult the appropriate termination instructions, the Hot Water Heating Design Application Guide (APDG0702) and the Heat Trace Design, Installation and Maintenance Manual (HTDMM 010) for further details.