

HEATING CABLE SELECTION MATRIX



HEATING CABLES - TYPICAL USAGE AND APPLICATIONS

PRODUCT FAMILY	PRODUCT REFERENCES	TYPICAL USAGE AND APPLICATIONS
WinterSafe	WSR - C, WSR - CR WSR - CT	General purpose freeze protection and temperature maintenance applications up to 150 °F. on small to medium size pipes (¼ to 10 inch dia.) that will not be steamed cleaned. <i>This cable is ideal for use on plastic and fiberglass piping.</i> WinterSafe is simple to install on complex piping systems, valves, instruments etc and can be used in both hazardous and unclassified areas
WinterSafe Plus	WSP-C, WSP-CT	Freeze protection and <i>low to medium temperature maintenance applications up to 250° F.</i> on small, medium and large metal pipes (½ to 30 inch dia.) that may require periodic steam cleaning or purging with (max.) 150 psig steam. Simple to install on complex piping systems, valves, instruments etc. and can be used in both hazardous and unclassified areas.
AutoWatt Xtra	AWX-C, AWX-CT	Freeze protection, <i>low , medium and high temperature maintenance applications up to 375° F.</i> on medium to large size metal pipes (½ to 30 inch dia). With ratings up to 30 w/ft, this product is ideal for use on applications with high levels of heat loss AutoWattXtra can be used on piping that may be steam cleaned or purged with (max.) 190 psig steam in both hazardous and unclassified areas. Simple to install on complex piping systems, valves, instruments etc.
PermaWatt	PWT-C	General purpose, <i>low cost freeze protection</i> in unclassified areas only.
	PWF-C, PWF-CT	Freeze protection and <i>medium to high temperature maintenance applications up to 350°F</i> in unclassified areas. This product is primarily used for process heating applications that may require precise control and monitoring features. Simple to install and can be used on steam cleaned and steam purged piping up to 190 psig
VersaTrace	VT 20B, VT 20BF	Temperature maintenance and process heating applications up to 400°F on medium to large size metal pipes (2 to 30 inch dia). Ideal for high voltage and/or high power applications in both hazardous and unclassified areas. Very flexible, extremely robust, simple to install and easy to control and monitor. <i>Individual circuit lengths up to 600 ft long.</i>
	VTNB, VTNBF	Temperature maintenance and process heating applications up to 400°F on medium to large size metal pipes (2 to 30 inch dia). Ideal for high voltage and/or high power applications up to 30 w/ft in both hazardous and unclassified areas. Very flexible, extremely robust, simple to install and easy to control and monitor. <i>Individual circuit lengths up to 1964 ft long.</i>
	VTCB, VTCBF	Temperature maintenance and process heating applications up to 400°F on medium to large size metal pipes (2 to 30 inch dia). Ideal for high voltage and/or long, single pipeline heating applications in both hazardous and unclassified areas. Very flexible, extremely robust, simple to install and easy to control and monitor. <i>Individual circuit lengths up to 4324 ft long.</i>



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Use the following tables to compare the characteristics and qualifications of several styles of heating cables with the specific requirements of your application. HTD Heat Trace, Inc offers free engineering design service and technical support. Please contact us if you require additional help in selecting the most suitable heating cable to meet your application requirements.

SELF REGULATING CABLES

PRODUCT FAMILY	WinterSafe				WinterSafe Plus			AutoWatt Xtra		
PRODUCT REFERENCES	WSR	WSR C	WSR CR	WSR CT	WSP	WSP C	WSP CT	AWX	AWX C	AWX CT
CONSTRUCTION STYLE	1	2	3	4	1	2	4	1	2	4
MAX MAINTAIN TEMP	150° F (65° C)				250° F (120° C)			375° F (190° C)		
MAX EXPOSURE TEMP	185° F (85° C)				366° F (185° C)			450° F (232° C)		
POWER RATINGS	3 , 5, 8 & 10 w/ft				5, 10 & 15 w/ft			5,10,15,20,25 & 30w/ft		
VOLTAGE RATINGS	110, 115 & 120				208, 220, 240 & 277					
MAX CIRCUIT LENGTHS	120 VAC 240 VAC 480 VAC 600 VAC	from 180 to 330 ft from 360 to 660 ft N/A N/A			from 135 to 240 ft from 200 to 480 ft N/A N/A			from 70 to 335 ft from 140 to 540 ft N/A N/A		
T RATINGS	N/A	T5			N/A	T3		N/A	T2C	
FM APPROVALS	N/A	Unclassified Areas CI, D 1, B,C,D CI,D 2, ,B,C,D CII, D 2, F,G CIII, D 1 CIII, D 2			N/A	Unclassified Areas CI, D 1, B,C,D CI, D 2, B,C,D CII, D 2, F,G CIII, D 2		N/A	Unclassified Areas CI, D 1, B,C,D CI, D 2, A, B,C,D CII, D 1, E,F,G CI, D 2, F,G CIII, D 1, E,F,G CIII, D 2, E,F,G	
CSA APPROVALS	N/A	Unclassified Areas 2E,3A,3B,3C,5A,5B CI, D 1, A,B,C,D CI,D 2, ,A,B,C,D CII, D 1, E,F,G CII, D 2, E,F,G CIII, D 1 CIII, D 2			N/A	Unclassified Areas 3A,3B,3C,5A,5B CI, D 1, A,B,C,D CI,D 2, ,A,B,C,D CII, D 1, E,F,G CII, D 2, E,F,G CIII, D 1 CIII, D 2		N/A	Unclassified Areas 3A,3B,3C,5A,5B CI, D 1, A,B,C,D CI,D 2, ,A,B,C,D CII, D 1, E,F,G CII, D 2, E,F,G CIII, D 1 CIII, D 2	

NOTES

CONSTRUCTION STYLE 1 Plain (base) heating cable

Does not meet the requirements of NEC Sections 426 and 427 for usage and installation in the USA. Strictly for use in unclassified areas only and well protected applications where potential damage to the heating cable is minimal. Not recommended for installations involving excessive moisture. Cannot be used on plastic, stainless steel, painted pipes or any surface that does not provide an effective ground path.

CONSTRUCTION STYLE 2 Base cable + Tinned Copper overbraid

For use in general industrial applications in both hazardous and unclassified areas (see specific details above). Not recommended for installations involving excessive moisture, corrosive chemicals or corrosive atmospheres.

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	CONSTANT WATTAGE					SERIES RESISTANCE CABLES											
PRODUCT FAMILY	PermaWatt					VersaTrace											
PRODUCT REFERENCES	PWT	PWT C	PWF	PWF C	PWF CT	VT 20	VT 20 B	VT 20 BF	VTN	VTN B	VTN BF	VTC	VTC B	VTC BF			
CONSTRUCTION STYLE	1	2	1	2	4	1	2	4	1	2	4	1	2	4			
MAX MAINTAIN TEMP	200°F (93°C) 350°F (177°C)					400° F (204° C)											
MAX EXPOSURE TEMP	257°F (125°C) 400°F (204°C)					500° F (260° C)											
POWER RATINGS	2 & 4 w/ft 4, 8 & 10 w/ft					Up to 30 w/ft											
VOLTAGE RATINGS	110, 115 & 120 208, 220, 240 & 277					Up to 600 VAC											
MAX CIRCUIT LENGTHS	120 VAC	240 VAC	480 VAC	600 VAC		260 to 365 ft	515 to 730 ft	N/A	N/A	N/A	254 to 402 ft	508 to 803 ft	N/A	N/A			
						60 to 120 ft	120 to 240 ft	240 to 481 ft	300 to 601 ft	93 to 196 ft	393 to 786 ft	786 to 1571 ft	982 to 1964 ft	612 to 865 ft	1223 to 1730 ft	2446 to 3460 ft	3058 to 4324 ft
RATINGS	N/A					Consult HTD											
FM APPROVALS	CONSULT HTD FOR SPECIFIC INFORMATION ON ALL DIVISION 1 (D1) HAZARDOUS LOCATION SYSTEMS					N/A											
CSA APPROVALS	CONSULT HTD FOR SPECIFIC INFORMATION ON ALL DIVISION 1 (D1) HAZARDOUS LOCATION SYSTEMS					N/A											

CONSTRUCTION STYLE 3 **Base cable + Tinned Copper overbraid and Thermoplastic outer jacket**

For use in general industrial applications in both hazardous and unclassified areas (see specific details above). Recommended for use in wet installations and installations that may involve rough handling or mechanical abuse during installation and/or operation. Intended for use in applications involving aqueous inorganic chemicals.

CONSTRUCTION STYLE 4 **Base cable + Tinned Copper overbraid and Fluoropolymer outer jacket**

For use in general industrial applications in both hazardous and unclassified areas (see specific details above). Recommended for use in wet installations and installations that may involve rough handling or mechanical abuse during installation and/or operation. Intended for use in applications involving organic chemicals, solvents, hydrocarbons etc