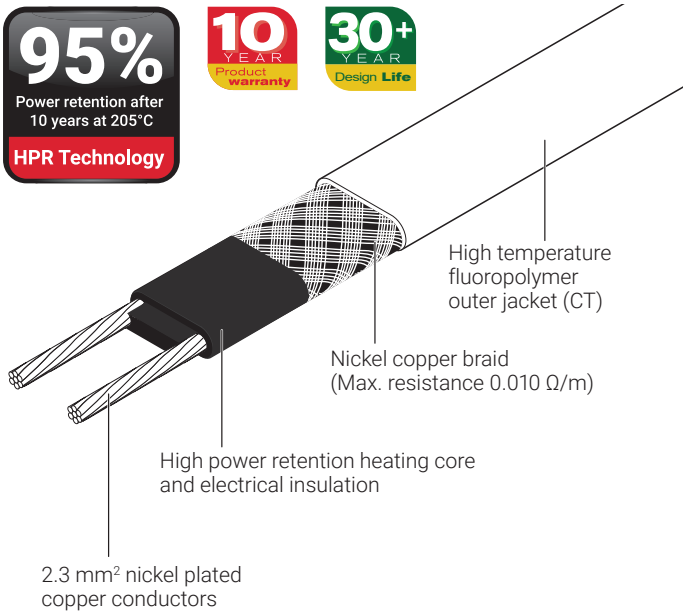
HTV

CONNECT AND PROTECT

Self-regulating heating cable

HEATING CABLE CONSTRUCTION



The nVent RAYCHEM HTV self-regulating heating cable is designed for freeze protection or process temperature maintenance of pipes and vessels with very high continuous operating temperatures (205°C).

Maximum exposure temperature is 260°C.

The HTV cable has a solid construction with a high power retention (HPR) heating core and pressure extruded electrical insulation. It is then integrated with a robust metallic braid and a chemically resistant fluoropolymer outer jacket.

The innovative heating core technology and design result in:

- Superior thermal conductivity
- Super stable power output for long operational life
- Ease of stripping, flexing and installation
- Long circuit lengths for minimized total installation cost

Power retention: At least 95% after 10 years of simulated product life at maximum continuous operating temperature (205°C).

Certified for use in hazardous and ordinary areas and comes with a 10 year product warranty programme.

Design life: 30 years or more depending on application.

APPLICATION

Area classification	Hazardous, Zone 1, Zone 2 (Gas), Zone 21, Zone 22 (Dust) Ordinary
Traced surface type	Carbon steel Stainless steel Painted or unpainted metal
Chemical resistance	Organics aqueous inorganic chemicals and corrosives

SUPPLY VOLTAGE

230 Vac (Contact nVent for data on other voltages 190-277 Vac)

APPROVALS

PTB 21 ATEX 1003 X
Ⓔx II 2 G Ex 60079-30-1 IIC T3…T2 Gb Ta = −60°C to +56°C
Ⓔx II 2 D Ex 60079-30-1 IIIC T3…T2 Db Ta = −60°C to +56°C
Temperature class and ambient temperature range of the system may vary. Refer to the installation instructions or hazardous area approval for details about the components.

IECEx PTB 21.0007X
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EAC Ex Approval for CIS region pending

CCC Approval for China pending

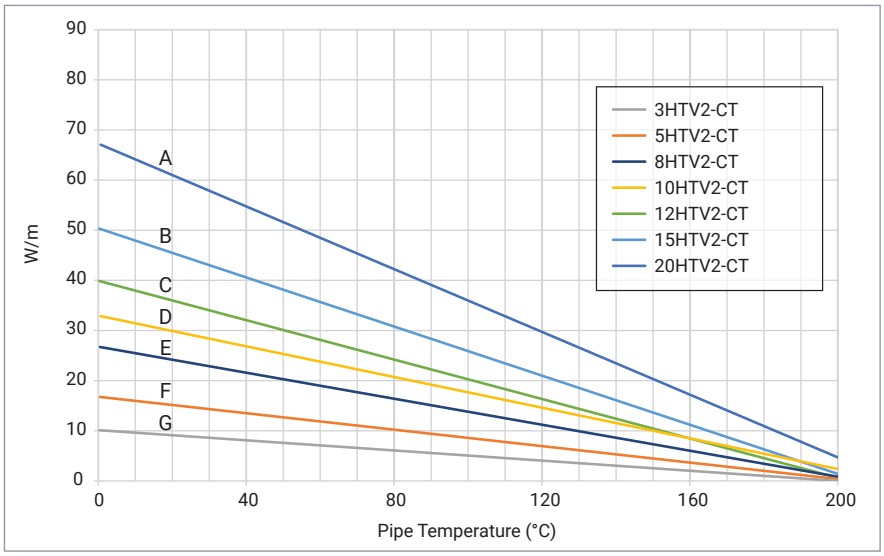
SPECIFICATIONS

Maximum continuous operating temperature (energized)	205°C
Maximum continuous exposure temperature (de-energized)	205°C
Maximum intermittent exposure temperature (energized/de-energized)	260°C Maximum cumulative exposure 2000 hours (*) (*) Longer periods allowed between 205-260°C. Contact nVent.
Temperature classification	215°C (T2): 20HTV2-CT T3: 3HTV2-CT, 5HTV2-CT, 8HTV2-CT, 10HTV2-CT, 12HTV2-CT, 15HTV2-CT
Based on systems approach*	T3-T6 * Approved for the listed temperature classifications by using the principles of stabilized design (as per system classification approach) or the use of a temperature limiting device. Use TraceCalc design software or contact nVent.
Minimum installation temperature	−60°C
Bus wire size	2.3 mm²
Heating cable dimensions (nominal)	11.5 mm x 6.9 mm
Weight (nominal)	170 g/m
Minimum bend radius	25 mm at −60°C ≤ T < −20°C 20 mm at −20°C ≤ T < −10°C 15 mm at −10°C ≤ T < +10°C 13 mm at T ≥ +10°C
Design life	30 years or more depending on application
Power retention	At least 95% after 10 years of simulated product life at maximum continuous operating temperature (205°C).

THERMAL OUTPUT RATING

Nominal power output at 230 Vac on insulated steel pipes

Part description	Nominal power output (W/m at 10°C)	See chart
20HTV2-CT	64	A
15HTV2-CT	48	B
12HTV2-CT	38	C
10HTV2-CT	32	D
8HTV2-CT	25	E
5HTV2-CT	16	F
3HTV2-CT	9	G



MAXIMUM CIRCUIT LENGTH BASED ON TYPE 'C' CIRCUIT BREAKERS ACCORDING TO EN 60898

		Electrical protection sizing / Maximum heating cable length per circuit (m)				
	Start-up Temp.	16 A	20 A	25 A	32 A	40 A
3HTV2-CT	10°C	197	246	293	293	293
	0°C	189	237	293	293	293
	−20°C	168	210	262	293	293
	−40°C	155	193	241	293	293
5HTV2-CT	10°C	146	183	224	224	224
	0°C	138	172	215	224	224
	−20°C	126	158	197	224	224
	−40°C	116	145	181	224	224
8HTV2-CT	10°C	106	132	165	173	173
	0°C	100	125	157	173	173
	−20°C	92	115	143	173	173
	−40°C	84	105	132	169	173
10HTV2-CT	10°C	90	112	140	152	152
	0°C	86	108	135	152	152
	−20°C	79	99	123	152	152
	−40°C	72	91	113	145	152
12HTV2-CT	10°C	78	97	121	138	138
	0°C	74	93	116	138	138
	−20°C	67	84	105	134	138
	−40°C	62	77	97	124	138
15HTV2-CT	10°C	61	76	95	119	119
	0°C	58	72	90	115	119
	−20°C	53	66	82	105	119
	−40°C	48	60	75	96	113
20HTV2-CT	10°C	46	58	72	92	99
	0°C	44	55	69	88	95
	−20°C	40	50	63	81	88
	−40°C	37	46	58	74	82

The above numbers are for circuit length estimation only. The maximum circuit length is for one continuous length of cable, not the sum of segments of cable. For more detailed information please use the nVent TraceCalc design software or contact your local nVent representative. nVent requires the use of a 30 mA residual current device to provide maximum safety and protection from fire. Where design results in higher leakage current, the preferred trip level for adjustable devices is 30 mA above any inherent capacitive leakage characteristic of the heater as specified by the trace heater supplier or alternatively, the next common available trip level for non adjustable devices, with a maximum of 300 mA. All safety aspects need to be proven.

ORDERING DETAILS

Part description	Part number
3HTV2-CT	P000004319
5HTV2-CT	P000004320
8HTV2-CT	P000004321
10HTV2-CT	P000004322
12HTV2-CT	P000004323
15HTV2-CT	P000004324
20HTV2-CT	P000004325

COMPONENTS

nVent offers a full range of components for power connections, splices and end seals.
These components must be used to ensure proper functioning of the product and compliance with electrical requirements.

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