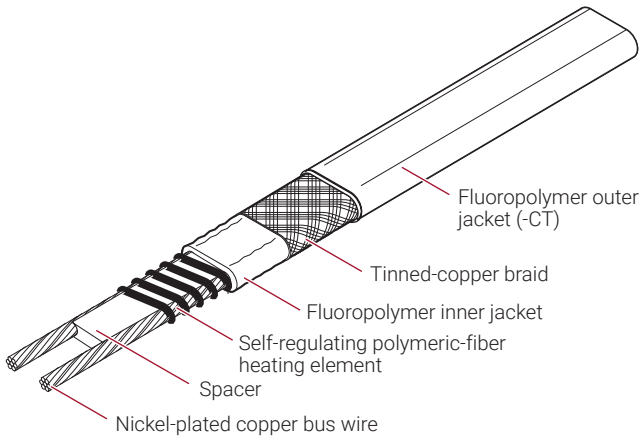
XTV

HIGH-TEMPERATURE SELF-REGULATING HEATING CABLES ELECTRICAL FREEZE PROTECTION AND PROCESS-TEMPERATURE MAINTENANCE FOR BOTH NONHAZARDOUS AND HAZARDOUS LOCATIONS



Heating cable construction

PRODUCT OVERVIEW

The nVent RAYCHEM XTV family of self-regulating heating cables provides solutions for industrial freeze protection and process-temperature maintenance applications requiring high power output. XTV heating cables can withstand temperatures up to 482°F (250°C) and provide process temperature maintenance to 250°F (121°C).

The heating cables are configured for use in nonhazardous and hazardous locations, including areas where corrosives may be present.

The power output of self-regulating heating cable depends on the heating cable temperature, and can provide up to 20 W/ft at 50°F (10°C).

XTV cables meet the requirements of the U.S. National Electrical Code and the Canadian Electrical Code. For additional information, contact your nVent representative or call (800) 545-6258.

10 YEAR Product warranty

APPLICATION

Area classification	Nonhazardous and hazardous locations
Traced surface type	Metal
Chemical resistance	Organic and aqueous inorganic chemicals and corrosives

SUPPLY VOLTAGE

XTV1	100–130 Vac
XTV2	200–277 Vac

TEMPERATURE RATING

Maximum maintain or continuous exposure temperature (power on)	250°F (121°C)
Maximum intermittent exposure temperature, 1000 hours (power on or off)	482°F (250°C)*
Minimum installation temperature	–40°F (–40°C)

*The 250°C rating applies to all products printed "MAX INTERMITTENT EXPOSURE 250C"

TEMPERATURE ID NUMBER (T-RATING)

T2C: 446°F (230°C) **T2D:** 419°F (215°C) **T3:** 392°F (200°C)

Temperature ID numbers are consistent with North America National Electrical Codes.

20XTV1-CT-T2, 20XTV2-CT-T2	15XTV1-CT-T2	5XTV1-CT-T3, 5XTV2-CT-T3, 10XTV1-CT-T3, 10XTV2-CT-T3 15XTV2-CT-T3
Based on systems approach*	T3-T6	

* XTV heating cables are approved for T3 – T6 temperature classes when stabilized or controlled designs are used according to the requirements of applicable national and international approvals standards. Use TraceCalc Pro design software or contact nVent.

APPROVALS

IECEx

IECEx BAS 06.0044X
Ex e IIC T* Gb
Ex tD A21 IP66 T**°C

(1) Applications must be reviewed by the manufacturer.
(*, **) For maximum surface temperature, see heating cable, design documentation or schedule

Hazardous Locations

FM APPROVED
Class I, Div. 2, Groups A, B, C, D
Class II(1), Div. 2, Groups F, G
Class III(1)

CSA -W
Class I, Div. 1 and 2, Groups A, B, C, D
Class II, Div. 1 and 2, Groups E, F, G
Class III

XTV heating cables also have many other approvals, including Baseefa, PTB, DNV, and ABS.

Zone Approvals

FM APPROVED
CLI, ZN1, AEx e II T3 (T2)

CSA -W
Ex e II T3 (T2)

IEx
09-IEx-0005X
Ex e IIC T* Gb

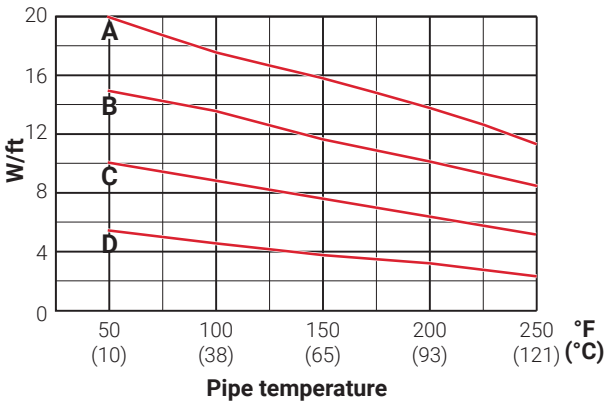
DESIGN AND INSTALLATION

For proper design and installation, use TraceCalc Pro design software or the design section of the Industrial Heat Tracing Products & Services Catalog (H56550). Also, refer to the nVent (H57274). Literature is available via the nVent web site, nVent.com.

NOMINAL POWER OUTPUT RATING ON METAL PIPES AT 120 V / 240 V

	Adjustment factors	
	Power output	Circuit length
208 V		
5XTV2	0.87	0.93
10XTV2	0.88	0.92
15XTV2	0.88	0.92
20XTV2	0.89	0.94
277 V		
5XTV2	1.07	1.12
10XTV2	1.08	1.09
15XTV2	1.08	1.12
20XTV2	1.07	1.12

A 20XTV-CT
B 15XTV-CT
C 10XTV-CT
D 5XTV-CT



Note: To choose the correct heating cable for your application, use the Design section of the Industrial Heat Tracing Products & Services Catalog (H56550). For more detailed information, use TraceCalc Pro design software.

MAXIMUM CIRCUIT LENGTHS BASED ON CIRCUIT BREAKER SIZES

	Ambient temperature at start-up		Maximum circuit length (in feet) per circuit breaker									
			120 V					240 V				
			15 A	20 A	30 A	40 A	50 A	15 A	20 A	30 A	40 A	50 A
5XTV-CT	50°F	(10°C)	180	240	360	385	385	360	480	720	765	765
	0°F	(−18°C)	160	210	320	385	385	315	420	625	765	765
	−20°F	(−29°C)	150	200	305	385	385	295	395	595	765	765
	−40°F	(−40°C)	145	195	290	385	385	285	380	570	760	765
10XTV-CT	50°F	(10°C)	110	145	220	270	270	220	295	440	540	540
	0°F	(−18°C)	95	130	195	260	270	195	260	385	515	540
	−20°F	(−29°C)	95	125	190	250	270	185	245	370	495	540
	−40°F	(−40°C)	90	120	180	240	270	175	235	355	470	540
15XTV-CT	50°F	(10°C)	75	100	150	200	220	150	200	300	400	445
	0°F	(−18°C)	65	90	135	180	220	130	175	265	355	440
	−20°F	(−29°C)	65	85	130	170	215	125	165	250	335	420
	−40°F	(−40°C)	60	80	125	165	205	120	160	240	320	405
20XTV-CT	50°F	(10°C)	60	80	120	160	190	115	150	230	305	380
	0°F	(−18°C)	50	70	105	140	180	100	135	205	275	345
	−20°F	(−29°C)	50	65	100	135	170	100	130	200	265	330
	−40°F	(−40°C)	50	65	100	130	165	95	125	190	255	320

PRODUCT CHARACTERISTICS

Minimum bend radius	@68°F (20°C): 0.5 in (12.7 mm)
Weight (lb per 10 ft, nominal)	1.1
Bus wire size	14 AWG
Outer jacket color	Red
Heating cable dimensions	0.46 in x 0.3 in (11.7 mm x 7.6 mm)

ORDERING DETAILS

Description	Part Number
5XTV1-CT-T3	P000001668
5XTV2-CT-T3	P000001669
10XTV1-CT-T3	P000001671
10XTV2-CT-T3	P000001672
15XTV1-CT-T2	P000001674
15XTV2-CT-T3	P000001675
20XTV1-CT-T2	P000001676
20XTV2-CT-T2	P000001677

CONNECTION KITS

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

GROUND-FAULT PROTECTION

To minimize the danger of fire from sustained electrical arcing if the heating cable is damaged or improperly installed, and to comply with the requirements of nVent, agency certifications, and national electrical codes, ground-fault equipment protection must be used on each heating cable branch circuit. Arcing may not be stopped by conventional circuit protection. Many nVent RAYCHEM control and monitoring systems meet the ground-fault protection requirement.

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