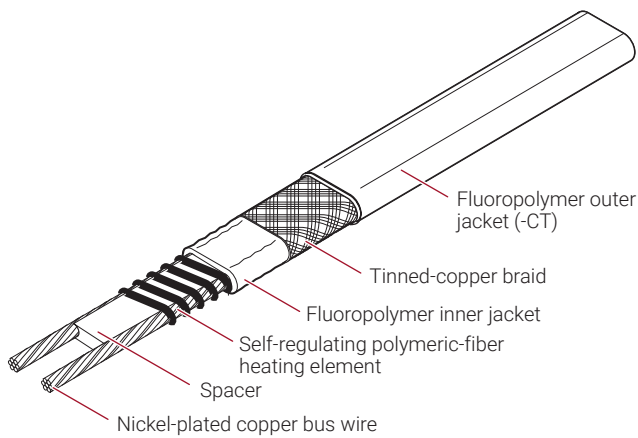


HIGH-TEMPERATURE SELF-REGULATING HEATING CABLES ELECTRICAL FREEZE PROTECTION AND PROCESS- TEMPERATURE MAINTENANCE FOR BOTH NONHAZARDOUS AND HAZARDOUS LOCATIONS



Heating cable construction

PRODUCT OVERVIEW

The nVent RAYCHEM KTV family of self-regulating heating cables provides high-temperature electrical heat-tracing for industrial freeze protection and process temperature maintenance applications requiring high power output. KTV heating cables can withstand temperatures up to 482°F (250°C) and provide process temperature maintenance to 300°F (150°C).

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

KTV 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.



APPLICATION

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

SUPPLY VOLTAGE

KTV1	100–130 Vac
KTV2	200–277 Vac

TEMPERATURE RATING

Maximum maintain or continuous exposure temperature (power on)	300°F (150°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)
 Temperature ID numbers are consistent with North America National Electrical Codes.

Based on systems approach* T3 -T6

* KTV 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 Industrial.

APPROVALS

IECEX IECEx BAS 06.0046X
 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



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



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

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

Zone Approvals



CLI, ZN1, AEx e II T3 (T2)



Ex e II T3 (T2)

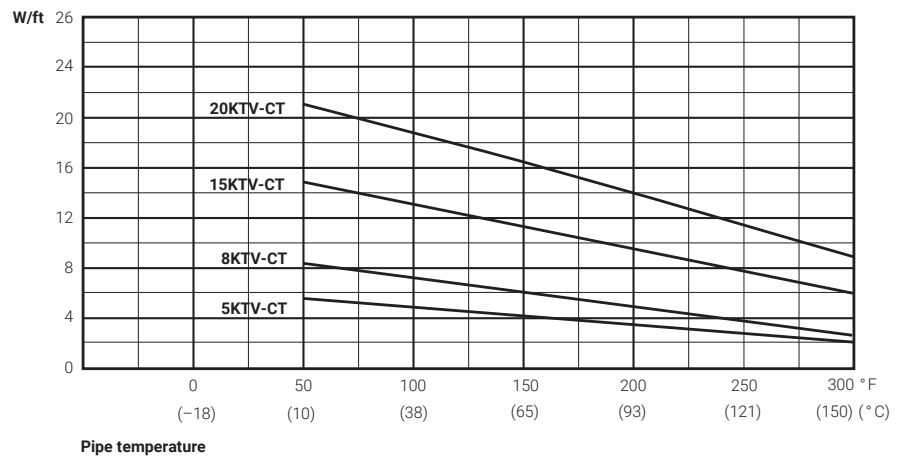
DESIGN AND INSTALLATION

For proper design and installation, use nVent RAYCHEM TraceCalc Pro design software or the design section of the Industrial Heat Tracing Products & Services Catalog (H56550). Also, refer to the and Maintenance Manual (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	0.78	0.94
277 V	1.19	1.06

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
5KTV	50°F (10°C)	180	240	360	385	385	360	480	720	765	765
	0°F (-18°C)	160	215	320	385	385	320	430	640	765	765
	-20°F (-29°C)	155	205	305	385	385	310	415	620	765	765
	-40°F (-40°C)	145	195	290	385	385	300	400	600	765	765
8KTV	50°F (10°C)	130	170	260	300	300	260	345	515	600	600
	0°F (-18°C)	115	150	225	300	300	230	310	465	600	600
	-20°F (-29°C)	110	145	215	290	300	225	295	445	595	600
	-40°F (-40°C)	105	140	205	275	300	215	285	430	570	600
15KTV	50°F (10°C)	80	105	160	215	220	160	215	320	425	440
	0°F (-18°C)	75	95	145	195	220	145	190	285	385	440
	-20°F (-29°C)	70	95	140	185	220	140	185	275	370	440
	-40°F (-40°C)	65	90	135	180	220	135	180	265	355	440
20KTV	50°F (10°C)	55	75	115	155	185	115	155	230	305	375
	0°F (-18°C)	50	70	105	140	175	105	140	210	280	350
	-20°F (-29°C)	50	65	100	135	165	100	135	200	270	335
	-40°F (-40°C)	50	65	95	130	160	95	130	195	260	325

PRODUCT CHARACTERISTICS

Minimum bend radius	@68°F (20°C): 0.5 in (12.7 mm)
Weight (lb per 10 ft, nominal)	1.35
Bus wire size	14 AWG
Outer jacket color	Red
Heating cable dimensions	0.61 in x 0.36 in (13.3 mm x 7.6 mm)

ORDERING DETAILS

Description	Part Number
5KTV1-CT	P000001678
5KTV2-CT	P000001679
8KTV1-CT	P000001680
8KTV2-CT	P000001681
15KTV1-CT	P000001682
15KTV2-CT	P000001683
20KTV1-CT	P000001684
20KTV2-CT	P000001685

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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