

## XtremeFlex™ Cut-To-Length Silicone Rubber Heating Tapes (CTL Series)

Part Number	Ohms Per		Volts	Minimum		Maximum		Size A	
	Foot	M		Feet	M	Feet	M	inches	mm
CTL-A	0.10	0.328	120VAC	57	17.4	440	134.1	1	25
			240VAC	114	34.7	220	67.0		
CTL-B	0.90	2.953	120VAC	19	5.8	74	22.5	1	25
			240VAC	38	11.6	146	44.5		
CTL-C	10.0	32.808	120VAC	6	1.8	22	6.7	1	25
			240VAC	12	3.7	44	13.4		

Available factory finished for immediate use, consult factory for details.

XtremeFLEX™ Cut-To-Length Silicone Rubber Heating Tape (CTL Series) is particularly well suited to pipeline tracing. CTL offers ruggedness, reliability and long-term resistance to moisture and chemical exposure. CTL heating tape is available in various lengths and when used along with termination kits, can be cut to length at the job site. CTL provides efficient, low cost tracing for most pipe systems with minimum labor and maintenance cost. CTL heating tapes are ideal for longer pipelines where standard tapes will not fit.

CTL heating tape is a series heating element design; wattages and amperages vary with the tape length. To determine the actual wattage output for a given length, follow the steps in the CTL application section.

CTL Silicone Rubber Extruded Heating Tapes are moisture and chemical resistant and are suitable for use on conductive surfaces.

### Additional Items Needed



Temperature Controller



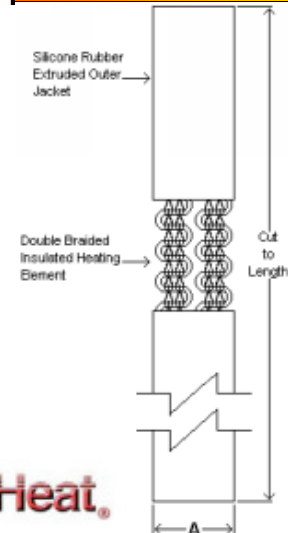
Adhesive Mounting Tape

**BriskHeat.**



450°F (232 °C)

**Moisture and Chemical Resistant**



## Cut-to-Length Termination Kits

### CTL-LK:

#### Lead Kit

- Crimp terminals
- Heavy-duty joint cover
- 8 feet of 16 AWG high temperature leads covered with insulating sleeving

Usage: Connects main power supply to heating tape.

NOTE: Requires RTV adhesive and adhesive tape.

### CTL-EK:

#### End Kit

- Crimp terminals
- Heavy-duty joint cover

Usage: Terminates the end of the heating tape.

NOTE: Requires RTV adhesive and adhesive tape.

### RTV3.0:

#### RTV Adhesive

- Room temperature vulcanizing (RTV) high temperature silicone adhesive. 3 oz. tube

Usage: Seals connection kits

### CTL-TK:

#### Tee Kit

- Crimp terminals
- Heavy-duty joint covers
- 1 end kit
- 1 foot of 16 AWG high temperature leads covered with insulating sleeving

Usage: Joins three segments of heating tape.

NOTE: Requires RTV adhesive and adhesive tape.

### CTL-JK:

#### Jumper Kit

- Heavy-duty joint cover
- 2 feet of 16 AWG high temperature leads covered with insulating sleeving

Usage: Makes a splice between segments of heating tape.

NOTE: Requires RTV adhesive and adhesive tape.

## Cut-to-Length Application

XtremeFLEX™ Cut-to-Length Heating Tape may be used on voltages other than those listed, provided the watt density does not exceed 60 watts per foot (196.8 watts per meter).

1. Determine the total wattage required for the application. Contact your local distributor or us direct for assistance.
2. Determine the total resistance required. (Voltage <sup>2</sup> ÷ Wattage = Resistance)

$$\frac{\text{(Applied voltage)}^2}{\text{(Total wattage)}} = \text{Total resistance.}$$

3. Determine the total length of CTL tape required.

$$\frac{\text{(Total resistance)}}{\text{(Resistance per foot or meter)}} = \text{Total length of tape required}$$

NOTE: If the total length required is less then the total length of pipe, select a lower resistance tape.

4. Ensure the power per unit length does not exceed 60 watts per foot (196.8 watts per meter).

$$\frac{\text{(Total wattage)}}{\text{(Total length of tape required)}} = \text{Power per unit length}$$

5. Determine the amount of tape required per unit length of pipe.

$$\frac{\text{(Total length of tape required)}}{\text{(Total length of pipe)}} = \text{Tape per unit length of pipe}$$

6. Refer to Chart 1-1 to determine the pitch factor for tape installation. Pitch factor is the distance between heat tape wraps.



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Chart 1-1: Pitch Factor (Feet of Cable per Foot of Pipe)

Pitch inches	NPS Pipe Size																	
	0.5	0.75	1	1.5	2	2.5	3	4	6	8	10	12	14	16	18	20	24	30
2	1.98	2.27	2.66	3.52	4.25	5.01	5.97	7.52	10.85	13.98	17.30	20.43	22.39	25.53	28.67	31.81	38.09	47.50
3	1.52	1.69	1.92	2.46	2.93	3.43	4.05	5.07	7.27	9.35	11.56	13.64	14.95	17.04	19.13	21.22	25.40	31.68
4	1.32	1.43	1.59	1.96	2.29	2.65	3.11	3.86	5.49	7.04	8.69	10.25	11.23	12.80	14.36	15.93	19.06	23.77
5	1.21	1.29	1.40	1.68	1.93	2.21	2.56	3.15	4.43	5.67	6.98	8.23	9.00	10.25	11.50	12.76	15.26	19.02
6	1.15	1.21	1.29	1.51	1.70	1.92	2.20	2.68	3.74	4.75	5.84	6.88	7.52	8.56	9.60	10.64	12.73	15.86
7	1.11	1.16	1.22	1.39	1.55	1.72	1.96	2.35	3.24	4.11	5.03	5.92	6.47	7.36	8.25	9.14	10.92	13.61
8	1.09	1.12	1.17	1.31	1.44	1.58	1.78	2.12	2.88	3.63	4.43	5.20	5.68	6.46	7.23	8.01	9.57	11.92
9	1.07	1.10	1.14	1.25	1.36	1.48	1.65	1.94	2.60	3.26	3.97	4.64	5.07	5.76	6.45	7.14	8.52	10.60
10	1.06	1.08	1.11	1.21	1.30	1.40	1.54	1.80	2.38	2.96	3.60	4.20	4.58	5.20	5.82	6.44	7.68	9.55
11	1.05	1.07	1.10	1.17	1.25	1.34	1.46	1.68	2.20	2.72	3.30	3.84	4.19	4.75	5.30	5.87	6.99	8.69
12	SR	1.06	1.08	1.15	1.21	1.29	1.40	1.60	2.06	2.53	3.05	3.55	3.86	4.37	4.88	5.39	6.42	7.98
14	SR	SR	1.06	1.11	1.16	1.22	1.31	1.46	1.84	2.23	2.66	3.08	3.35	3.78	4.21	4.65	5.53	6.86
16	SR	SR	1.05	1.09	1.13	1.17	1.24	1.37	1.68	2.01	2.38	2.74	2.97	3.34	3.72	4.10	4.86	6.02
18	SR	SR	SR	1.07	1.10	1.14	1.19	1.30	1.56	1.84	2.16	2.48	2.68	3.01	3.34	3.67	4.35	5.37
24	SR	SR	SR	SR	1.06	1.08	1.11	1.18	1.35	1.53	1.75	1.97	2.12	2.35	2.59	2.83	3.33	4.08
30	SR	SR	SR	SR	SR	1.05	1.07	1.12	1.23	1.37	1.52	1.69	1.80	1.97	2.16	2.34	2.73	3.32
36	SR	SR	SR	SR	SR	SR	1.05	1.08	1.17	1.26	1.39	1.51	1.60	1.73	1.88	2.03	2.34	2.82
42	SR	SR	SR	SR	SR	SR	SR	1.06	1.12	1.20	1.29	1.39	1.46	1.57	1.69	1.81	2.07	2.47
48	SR	SR	SR	SR	SR	SR	SR	1.05	1.10	1.16	1.23	1.31	1.37	1.46	1.56	1.66	1.88	2.22
60	SR	SR	SR	SR	SR	SR	SR	1.05	1.10	1.15	1.21	1.25	1.31	1.38	1.46	1.62	1.87	
72	SR	SR	SR	SR	SR	SR	SR	SR	1.07	1.11	1.15	1.18	1.23	1.28	1.33	1.46	1.66	

SR = Straight Run

To determine the pitch factor:

1. Find the specific pipe size at the top.
2. Follow that column down to the specific length of tape per foot of pipe, or the next highest.
3. Follow that row to the left most column, this is the required pitch (required space between wraps).