Heating Cables

Silicone Rubber Heating Cables / PTFE Heating Cables / PVC Heating Cables / Heat Trace Cables

Argus Heating design, manufacture and stock an extensive range of Silicone Rubber, PVC, and PTFE Heating Cables. We are also able to custom design and manufacture heating cables to suit your specific needs. Our heating cables are available in 100m and 500m dispensing reels, or cut to length when required. We also provide Heating Cable Assemblies terminated with a variety of cold tail or power cord options.

Applications

Typically used to heat:

- Display units to remove condensation
- Freezers to prevent frost/ice build-up
- Cool rooms and cabinet doors for de-icing
- Underfloor heating
- Trace heating on pipe work
- Drains to prevent freezing/fat build up
- Towels on heated towel rails
- Foil Heaters

Features

Resistance range of 0.1Ω/m to 6800 Ω/m. Cables made to specific wattage, length and termination requirements. A variety of cold tails and power cord options are also available.

Heating Cables are available with up to 80W/m. PTFE used for high wattage applications; silicone for medium wattage applications up to 50 W/m; and PVC insulation for low wattage applications up to 10 W/m.

Custom heat cable design and assembly service is available.

Red Silicone Rubber Insulated Heating Cable has a minimum operating temperature of -32°C and a maximum operating temperature of 150°C. Available in convenient 100m reels from stock and custom made.

PVC Insulated Heating Cable has a minimum installation temperature of 5°C and a maximum operating temperature of 105°C. Available from stock and custom made.

PTFE cable has a minimum installation temperature of -5°C, and a maximum operating temperature of 250°C. Our custom made PTFE Insulated Heating Cable meets Standard IEC60800 Ed 3.0 2009-07 Heating cables with a rated voltage of 300/500V for comfort heating and prevention of ice formation.

Construction

Resistance wire wound in a spiral, around a flexible fibreglass core or bunched resistance wire. Silicone, PVC, or PTFE insulation with others available on request. A braid and sheath are also available.

Please contact Argus Heating to discuss your application and heating needs.

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Refrigeration Grade Silicone Heating Cables

The amount of heat (wattage) required will vary dependent on application. For example, 25-40 W/m is commonly used for walk-in freezers with an operating temperature of -30ºC. Reach-in and walk-in freezers that work at higher temperatures generally need 10-20 W/m. Note that these wattages are only general recommendations. Each application is unique and careful testing using thermocouples should be carried out by the customer, to ensure a proper and safe design.

Silicone Rubber Heating Cable / Refrigeration / 3mm OD / 150ºC / 230V																	
Stock Code	Ω/m	40 W/m		35 W/m		30 W/m		25 W/m		20 W/m		15 W/m		10 W/m		5 W/m	
		A	m	A	m	A	m	A	m	A	m	A	m	A	m	A	m
HS0002R100	2	4.47	25.715	4.18	27.490	3.87	29.693	3.54	32.527	3.16	36.366	2.74	41.992	2.24	51.430	1.58	72.731
HS0005R100	5	2.83	16.263	2.65	17.386	2.45	18.779	2.24	20.572	2.00	23.000	1.73	26.558	1.41	32.527	1.00	45.999
HS0010R100	10	2.00	11.500	1.87	12.294	1.73	13.279	1.58	14.546	1.41	16.263	1.22	18.779	1.00	23.000	0.71	32.526
HS0015R100	15	1.63	9.390	1.53	10.038	1.41	10.842	1.29	11.877	1.15	13.279	1.00	15.333	0.82	18.779	0.58	26.558
HS0025R100	25	1.26	7.273	1.18	7.775	1.10	8.398	1.00	9.200	0.89	10.286	0.77	11.877	0.63	14.546	0.45	20.571
HS0035R100	35	1.07	6.147	1.00	6.571	0.93	7.098	0.85	7.775	0.76	8.693	0.65	10.038	0.53	12.294	0.38	17.386
HS0045R100	45	0.94	5.421	0.88	5.795	0.82	6.260	0.75	6.857	0.67	7.667	0.58	8.853	0.47	10.842	0.33	15.333
HS0050R100	50	0.89	5.143	0.84	5.498	0.77	5.939	0.71	6.505	0.63	7.273	0.55	8.398	0.45	10.286	0.32	14.546
HS0060R100	60	0.82	4.695	0.76	5.019	0.71	5.421	0.65	5.939	0.58	6.640	0.50	7.667	0.41	9.390	0.29	13.279
HS0075R100	75	0.73	4.199	0.68	4.489	0.63	4.849	0.58	5.312	0.52	5.939	0.45	6.857	0.37	8.398	0.26	11.877
HS0100R100	100	0.63	3.637	0.59	3.888	0.55	4.199	0.50	4.600	0.45	5.143	0.39	5.939	0.32	7.273	0.22	10.286
HS0150R100	150	0.52	2.969	0.48	3.174	0.45	3.429	0.41	3.756	0.37	4.199	0.32	4.849	0.26	5.939	0.18	8.398
HS0200R100	200	0.45	2.571	0.42	2.749	0.39	2.969	0.35	3.253	0.32	3.637	0.27	4.199	0.22	5.143	0.16	7.273
HS0300R100	300	0.37	2.100	0.34	2.245	0.32	2.424	0.29	2.656	0.26	2.969	0.22	3.429	0.18	4.199	0.13	5.938

Cable Selection Example:

Voltage: 230V. Heater length required: 7.3m. W/m required: 20W.

1. Calculation for approximation (from chart above)

Select 20W/m top column, scroll down to 7.27m,
and scroll left to select 50 ohm/m cable.

2. Calculation for exact requirement, using Ohms Law

Total Watts = length x W/m
= 7.3m x 20W/m
= 146W total

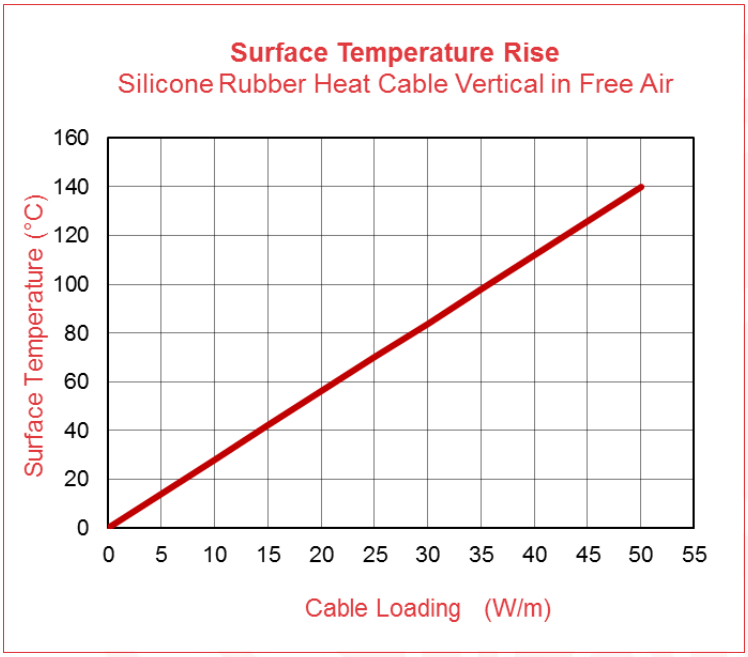
$$\text{Resistance total} = \frac{\text{voltage}^2}{\text{watts total}} = \frac{230^2}{146} = 362 \text{ ohms}$$

$$\text{Resistance per metre} = \frac{\text{Rr}}{\text{length}} = \frac{362 \text{ ohms}}{7.3\text{m}} = 49.6 \text{ ohm/m}$$

Cable required 50 ohm/m

3. Surface Temperature

This can be checked by using the chart on the right. The heat transfer medium will vary the surface temperature.
Select 20W/m; scroll up to the intersect line; then scroll left.
Find an approximate surface temperature.
Add ambient 20ºC; therefore surface temperature is about 80ºC.



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