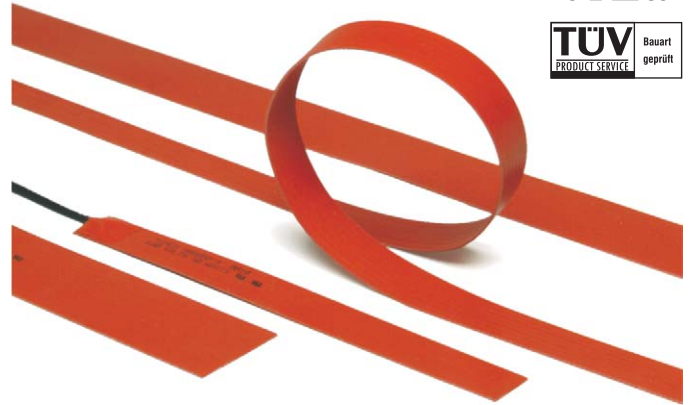


Wire-Wound Rubber Heaters

220°C

These heaters have a wire element instead of foil. They are more economical in larger sizes, but are thicker and have reduced watt densities.

- ◆ Rugged
- ◆ Easy to install
- ◆ Uniform heating to 220°C (428°F)
- ◆ Lengths to 70" (1.8 m)
- ◆ Economical in large sizes
- ◆ Withstand repeated flexing
- ◆ Mount to flat or curved surfaces
- ◆ TÜV and UL component recognition marking are standard
- ◆ 2.5, 5, 10, 15 watts/in² at 120 or 240 VAC
- ◆ Lower leakage current due to capacitive coupling (may be important for large heaters used in medical applications)



Typical applications

- ◆ Prevent condensation in motors and generators
- ◆ Protect instrument cabinets from cold, humidity
- ◆ De-icing
- ◆ Heat valves and vessels to control fluid viscosity
- ◆ Heat industrial ovens and thermal processing equipment
- ◆ Heat platens
- ◆ Heat medical devices

Specifications for catalog models

Temperature range: -45 to 220°C (-50 to 428°F).

Thickness: 0.055" ±0.005" (1.4 ±0.13 mm).
0.250" (6.4 mm) maximum over leadwires.

Maximum voltage rating: 600 VAC
(UL and TÜV recognition up to 250 VAC).

Leadwires: AWG 20 except where noted, PTFE insulated per UL 1199/CSA. Length on standard models is 12" (305 mm).
Current capacity (based on 100°C max. ambient temp.):

AWG 20	AWG 18
13.5 A	16.0 A

Approvals: All wire-wound models comply with UL Standard 499 and Canadian Standard C22.2, No. 72-M1984 and European Standard EN60335 and may bear the corresponding recognition marks.

Wattage tolerance: ±5%.

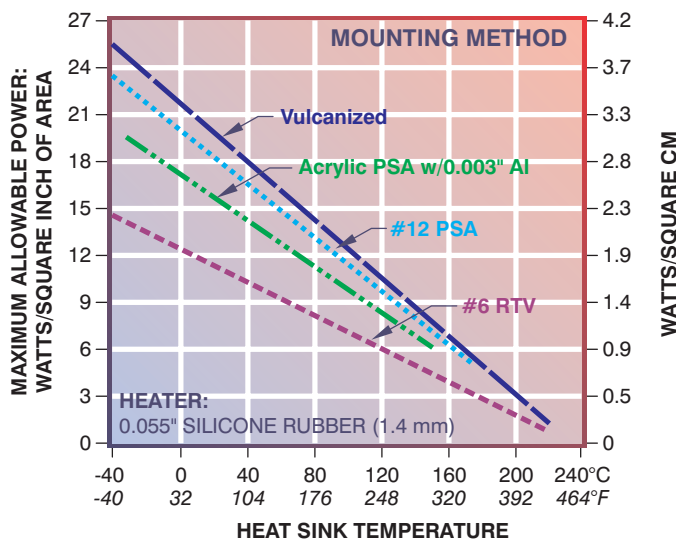
Maximum size (custom): 12 × 70" (305 × 1780 mm).

Maximum resistance density (custom): 200 Ω/in² (31 Ω/cm²).

Custom options

- ◆ Custom shapes and sizes to 12 × 70" (300 × 1780 mm)
- ◆ Custom resistance to 200 Ω/in² (31 Ω/cm²)
- ◆ Integral thermostats
- ◆ See section J for custom design assistance

Maximum watt density, rubber heaters



Example: At 100°C, the maximum power of a heater mounted with #6 RTV is 7 W/in².

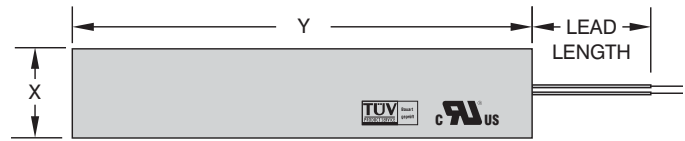
Stock Wire-Wound Rubber Heaters

Stock heaters

Normally available from stock for immediate shipment. Order by complete model number (e.g. HR6870A).

How to order stock models (below)

HR6850	Model number
A	Heater backing A = No backing
HR6850A ← Sample part number	



Watt density: 5 W/in² (0.8 W/cm²) at rated voltage.
Lead length: 24" (610 mm).



120 volt

Size (inches)		Size (mm)		Volts	Watts	Model number
X	Y	X	Y			
1	6	25.4	152.4	120	30	HR6870A
1	10	25.4	254.0	120	50	HR6850A
1	12	25.4	304.8	120	60	HR6871A
1	20	25.4	508.0	120	100	HR6852A
1	24	25.4	609.6	120	120	HR6873A
1	30	25.4	762.0	120	150	HR6854A
1	40	25.4	1016.0	120	200	HR6856A
1	60	25.4	1524.0	120	300	HR6858A
2	10	50.8	254.0	120	100	HR6860A
2	20	50.8	508.0	120	200	HR6862A
2	24	50.8	609.6	120	240	HR6875A
2	30	50.8	762.0	120	300	HR6864A
2	40	50.8	1016.0	120	400	HR6866A
2	60	50.8	1524.0	120	600	HR6868A

240 volt

Size (inches)		Size (mm)		Volts	Watts	Model number
X	Y	X	Y			
1	10	25.4	254.0	240	50	HR6851A
1	12	25.4	304.8	240	60	HR6872A
1	20	25.4	508.0	240	100	HR6853A
1	24	25.4	609.6	240	120	HR6874A
1	30	25.4	762.0	240	150	HR6855A
1	40	25.4	1016.0	240	200	HR6857A
1	60	25.4	1524.0	240	300	HR6859A
2	10	50.8	254.0	240	100	HR6861A
2	20	50.8	508.0	240	200	HR6863A
2	24	50.8	609.6	240	240	HR6876A
2	30	50.8	762.0	240	300	HR6865A
2	40	50.8	1016.0	240	400	HR6867A
2	60	50.8	1524.0	240	600	HR6869A

How to order standard models (next 2 pages)

HR6600	Model number
R576	Heater resistance in ohms
L12	Lead length in inches 12" (305 mm) is standard
A	Heater backing
	A = No backing -45 to 220°C
	B = #12 PSA backing -45 to 177°C
	D = Aluminum foil backing -45 to 220°C
	E = Aluminum foil with Acrylic PSA -32 to 150°C
	F = Aluminum foil with #12 PSA -45 to 204°C
HR6600R576L12A ← Sample part number	

Standard Wire-Wound Rubber Heaters

Size (in)	Size (mm)		120 volt heaters								Model number			
			2.5 W/in ²		5 W/in ²		10 W/in ²		15 W/in ²					
X	Y	X	Y	Watts	Resistance	Watts	Resistance	Watts	Resistance	Watts	Resistance			
1	5	25	127			25 W	576 Ω	50 W	288 Ω	100 W	144 Ω	150 W	96.0 Ω	HR6600
1	6	25	152					30 W	480 Ω	60 W	240 Ω	90 W	160 Ω	HR6693
1	10	25	254	25 W	576 Ω	50 W	288 Ω	100 W	144 Ω	150 W	96.0 Ω	150 W	96.0 Ω	HR6602
1	12	25	305	30 W	480 Ω	60 W	240 Ω	120 W	120 Ω	180 W	120 Ω	180 W	80.0 Ω	HR6694
1	15	25	381	38 W	384 Ω	75 W	192 Ω	150 W	96.0 Ω	225 W	96.0 Ω	225 W	64.0 Ω	HR6604
1	20	25	508	50 W	288 Ω	100 W	144 Ω	200 W	72.0 Ω	300 W	72.0 Ω	300 W	48.0 Ω	HR6606
1	24	25	610	60 W	240 Ω	120 W	120 Ω	240 W	60.0 Ω	360 W	60.0 Ω	360 W	40.0 Ω	HR6696
1	25	25	635	63 W	230 Ω	125 W	115 Ω	250 W	57.6 Ω	375 W	57.6 Ω	375 W	38.4 Ω	HR6608
1	30	25	762	75 W	192 Ω	150 W	96.0 Ω	300 W	48.0 Ω	450 W	48.0 Ω	450 W	32.0 Ω	HR6610
1	35	25	889	88 W	165 Ω	175 W	82.3 Ω	350 W	41.1 Ω	525 W	41.1 Ω	525 W	27.4 Ω	HR6612
1	40	25	1016	100 W	144 Ω	200 W	72.0 Ω	400 W	36.0 Ω	600 W	36.0 Ω	600 W	24.0 Ω	HR6614
1	60	25	1524	150 W	96.0 Ω	300 W	48.0 Ω	600 W	24.0 Ω	900 W	24.0 Ω	900 W	16.0 Ω	HR6616
1	70	25	1778	175 W	82.3 Ω	350 W	41.1 Ω	700 W	20.6 Ω					HR6618
2	5	51	127	25 W	576 Ω	50 W	288 Ω	100 W	144 Ω	150 W	96.0 Ω	150 W	96.0 Ω	HR6619
2	10	51	254	50 W	288 Ω	100 W	144 Ω	200 W	72.0 Ω	300 W	72.0 Ω	300 W	48.0 Ω	HR6621
2	15	51	381	75 W	192 Ω	150 W	96.0 Ω	300 W	48.0 Ω	450 W	48.0 Ω	450 W	32.0 Ω	HR6623
2	20	51	508	100 W	144 Ω	200 W	72.0 Ω	400 W	36.0 Ω	600 W	36.0 Ω	600 W	24.0 Ω	HR6625
2	24	51	610	120 W	120 Ω	240 W	60.0 Ω	480 W	30.0 Ω	720 W	30.0 Ω	720 W	20.0 Ω	HR6698
2	25	51	635	125 W	115 Ω	250 W	57.6 Ω	500 W	28.8 Ω	750 W	28.8 Ω	750 W	19.2 Ω	HR6627
2	30	51	762	150 W	96.0 Ω	300 W	48.0 Ω	600 W	24.0 Ω	900 W	24.0 Ω	900 W	16.0 Ω	HR6629
2	35	51	889	175 W	82.3 Ω	350 W	41.1 Ω	700 W	20.6 Ω	1050 W	20.6 Ω	1050 W	13.7 Ω	HR6631
2	40	51	1016	200 W	72.0 Ω	400 W	36.0 Ω	800 W	18.0 Ω	1200 W	18.0 Ω	1200 W	12.0 Ω	HR6633
2	60	51	1524	300 W	48.0 Ω	600 W	24.0 Ω	1200 W	12.0 Ω					HR6635
2	70	51	1778	350 W	41.1 Ω	700 W	20.6 Ω	1400 W	10.3 Ω					HR6637
3	5	76	127	38 W	384 Ω	75 W	192 Ω	150 W	96.0 Ω	225 W	96.0 Ω	225 W	64.0 Ω	HR6638
3	10	76	254	75 W	192 Ω	150 W	96.0 Ω	300 W	48.0 Ω	450 W	48.0 Ω	450 W	32.0 Ω	HR6640
3	15	76	381	113 W	128 Ω	225 W	64.0 Ω	450 W	32.0 Ω	675 W	32.0 Ω	675 W	21.3 Ω	HR6642
3	20	76	508	150 W	96.0 Ω	300 W	48.0 Ω	600 W	24.0 Ω	900 W	24.0 Ω	900 W	16.0 Ω	HR6644
3	25	76	635	188 W	76.8 Ω	375 W	38.4 Ω	750 W	19.2 Ω	1125 W	19.2 Ω	1125 W	12.8 Ω	HR6646
3	30	76	762	225 W	64.0 Ω	450 W	32.0 Ω	900 W	16.0 Ω	1350 W	16.0 Ω	1350 W	10.7 Ω	HR6648
3	35	76	889	263 W	54.9 Ω	525 W	27.4 Ω	1050 W	13.7 Ω	1575 W	13.7 Ω	1575 W	9.1 Ω	HR6650*
3	40	76	1016	300 W	48.0 Ω	600 W	24.0 Ω	1200 W	12.0 Ω					HR6652
3	60	76	1524	450 W	32.0 Ω	900 W	16.0 Ω							HR6654
3	70	76	1778	525 W	27.4 Ω	1050 W	13.7 Ω							HR6655
4	5	102	127	50 W	288 Ω	100 W	144 Ω	200 W	72.0 Ω	300 W	72.0 Ω	300 W	48.0 Ω	HR6656
4	10	102	254	100 W	144 Ω	200 W	72.0 Ω	400 W	36.0 Ω	600 W	36.0 Ω	600 W	24.0 Ω	HR6658
4	15	102	381	150 W	96.0 Ω	300 W	48.0 Ω	600 W	24.0 Ω	900 W	24.0 Ω	900 W	16.0 Ω	HR6660
4	20	102	508	200 W	72.0 Ω	400 W	36.0 Ω	800 W	18.0 Ω	1200 W	18.0 Ω	1200 W	12.0 Ω	HR6662
4	25	102	635	250 W	57.6 Ω	500 W	28.8 Ω	1000 W	14.4 Ω	1500 W	14.4 Ω	1500 W	9.6 Ω	HR6664*
4	30	102	762	300 W	48.0 Ω	600 W	24.0 Ω	1200 W	12.0 Ω					HR6666
4	35	102	889	350 W	41.1 Ω	700 W	20.6 Ω	1400 W	10.3 Ω					HR6668
4	40	102	1016	400 W	36.0 Ω	800 W	18.0 Ω	1600 W	9.0 Ω					HR6670*
4	60	102	1524	600 W	24.0 Ω	1200 W	12.0 Ω							HR6672
4	70	102	1778	700 W	20.6 Ω	1400 W	10.3 Ω							HR6673
5	5	127	127	63 W	230 Ω	125 W	115 Ω	250 W	57.6 Ω	375 W	57.6 Ω	375 W	38.4 Ω	HR6674
5	10	127	254	125 W	115 Ω	250 W	57.6 Ω	500 W	28.8 Ω	750 W	28.8 Ω	750 W	19.2 Ω	HR6676
5	15	127	381	188 W	76.8 Ω	375 W	38.4 Ω	750 W	19.2 Ω	1125 W	19.2 Ω	1125 W	12.8 Ω	HR6678
5	20	127	508	250 W	57.6 Ω	500 W	28.8 Ω	1000 W	14.4 Ω	1500 W	14.4 Ω	1500 W	9.6 Ω	HR6680*
5	25	127	635	313 W	46.1 Ω	625 W	23.0 Ω	1250 W	11.5 Ω					HR6682
5	30	127	762	375 W	38.4 Ω	750 W	19.2 Ω	1500 W	9.6 Ω					HR6684*
5	35	127	889	438 W	32.9 Ω	875 W	16.5 Ω							HR6686
5	40	127	1016	500 W	28.8 Ω	1000 W	14.4 Ω							HR6688
5	60	127	1524	750 W	19.2 Ω	1500 W	9.6 Ω							HR6690*
5	70	127	1778	875 W	16.5 Ω	1750 W	8.2 Ω							HR6691*

*AWG 18 leads (AWG 20 is standard)

Standard Wire-Wound Rubber Heaters

Size (in)		Size (mm)		240 volt heaters								Model number
X	Y	X	Y	2.5 W/in ²		5 W/in ²		10 W/in ²		15 W/in ²		
				Watts	Resistance	Watts	Resistance	Watts	Resistance	Watts	Resistance	
1	10	25	254			50 W	1152 Ω	100 W	576 Ω	150 W	384 Ω	HR6603
1	12	25	305			60 W	960 Ω	120 W	480 Ω	180 W	320 Ω	HR6695
1	15	25	381	38 W	1536 Ω	75 W	768 Ω	150 W	384 Ω	225 W	256 Ω	HR6605
1	20	25	508	50 W	1152 Ω	100 W	576 Ω	200 W	288 Ω	300 W	192 Ω	HR6607
1	24	25	610	60 W	960 Ω	120 W	480 Ω	240 W	240 Ω	360 W	160 Ω	HR6697
1	25	25	635	63 W	922 Ω	125 W	461 Ω	250 W	230 Ω	375 W	154 Ω	HR6609
1	30	25	762	75 W	768 Ω	150 W	384 Ω	300 W	192 Ω	450 W	128 Ω	HR6611
1	35	25	889	88 W	658 Ω	175 W	329 Ω	350 W	165 Ω	525 W	110 Ω	HR6613
1	40	25	1016	100 W	576 Ω	200 W	288 Ω	400 W	144 Ω	600 W	96.0 Ω	HR6615
1	60	25	1524	150 W	384 Ω	300 W	192 Ω	600 W	96.0 Ω	900 W	64.0 Ω	HR6617
2	5	51	127			50 W	1152 Ω	100 W	576 Ω	150 W	384 Ω	HR6620
2	10	51	254	50 W	1152 Ω	100 W	576 Ω	200 W	288 Ω	300 W	192 Ω	HR6622
2	15	51	381	75 W	768 Ω	150 W	384 Ω	300 W	192 Ω	450 W	128 Ω	HR6624
2	20	51	508	100 W	576 Ω	200 W	288 Ω	400 W	144 Ω	600 W	96.0 Ω	HR6626
2	24	51	610	120 W	480 Ω	240 W	240 Ω	480 W	120 Ω	720 W	80.0 Ω	HR6699
2	25	51	635	125 W	461 Ω	250 W	230 Ω	500 W	115 Ω	750 W	76.8 Ω	HR6628
2	30	51	762	150 W	384 Ω	300 W	192 Ω	600 W	96.0 Ω	900 W	64.0 Ω	HR6630
2	35	51	889	175 W	329 Ω	350 W	165 Ω	700 W	82.3 Ω	1050 W	54.9 Ω	HR6632
2	40	51	1016	200 W	288 Ω	400 W	144 Ω	800 W	72.0 Ω	1200 W	48.0 Ω	HR6634
2	60	51	1524	300 W	192 Ω	600 W	96.0 Ω	1200 W	48.0 Ω	1800 W	32.0 Ω	HR6636
3	5	76	127	38 W	1536 Ω	75 W	768 Ω	150 W	384 Ω	225 W	256 Ω	HR6639
3	10	76	254	75 W	768 Ω	150 W	384 Ω	300 W	192 Ω	450 W	128 Ω	HR6641
3	15	76	381	113 W	512 Ω	225 W	256 Ω	450 W	128 Ω	675 W	85.3 Ω	HR6643
3	20	76	508	150 W	384 Ω	300 W	192 Ω	600 W	96.0 Ω	900 W	64.0 Ω	HR6645
3	25	76	635	188 W	307 Ω	375 W	154 Ω	750 W	76.8 Ω	1125 W	51.2 Ω	HR6647
3	30	76	762	225 W	256 Ω	450 W	128 Ω	900 W	64.0 Ω	1350 W	42.7 Ω	HR6649
3	35	76	889	263 W	219 Ω	525 W	110 Ω	1050 W	54.9 Ω	1575 W	36.6 Ω	HR6651
3	40	76	1016	300 W	192 Ω	600 W	96.0 Ω	1200 W	48.0 Ω	1800 W	32.0 Ω	HR6653
4	5	102	127	50 W	1152 Ω	100 W	576 Ω	200 W	288 Ω	300 W	192 Ω	HR6657
4	10	102	254	100 W	576 Ω	200 W	288 Ω	400 W	144 Ω	600 W	96.0 Ω	HR6659
4	15	102	381	150 W	384 Ω	300 W	192 Ω	600 W	96.0 Ω	900 W	64.0 Ω	HR6661
4	20	102	508	200 W	288 Ω	400 W	144 Ω	800 W	72.0 Ω	1200 W	48.0 Ω	HR6663
4	25	102	635	250 W	230 Ω	500 W	115 Ω	1000 W	57.6 Ω	1500 W	38.4 Ω	HR6665
4	30	102	762	300 W	192 Ω	600 W	96.0 Ω	1200 W	48.0 Ω	1800 W	32.0 Ω	HR6667
4	35	102	889	350 W	165 Ω	700 W	82.3 Ω	1400 W	41.1 Ω	2100 W	27.4 Ω	HR6669
4	40	102	1016	400 W	144 Ω	800 W	72.0 Ω	1600 W	36.0 Ω	2400 W	24.0 Ω	HR6671
5	5	127	127	63 W	922 Ω	125 W	461 Ω	250 W	230 Ω	375 W	154 Ω	HR6675
5	10	127	254	125 W	461 Ω	250 W	230 Ω	500 W	115 Ω	750 W	76.8 Ω	HR6677
5	15	127	381	188 W	307 Ω	375 W	154 Ω	750 W	76.8 Ω	1125 W	51.2 Ω	HR6679
5	20	127	508	250 W	230 Ω	500 W	115 Ω	1000 W	57.6 Ω	1500 W	38.4 Ω	HR6681
5	25	127	635	313 W	184 Ω	625 W	92.2 Ω	1250 W	46.1 Ω	1875 W	30.7 Ω	HR6683
5	30	127	762	375 W	154 Ω	750 W	76.8 Ω	1500 W	38.4 Ω	2250 W	25.6 Ω	HR6685
5	35	127	889	438 W	132 Ω	875 W	65.8 Ω	1750 W	32.9 Ω	2625 W	21.9 Ω	HR6687
5	40	127	1016	500 W	115 Ω	1000 W	57.6 Ω	2000 W	28.8 Ω	3000 W	19.2 Ω	HR6689*

*AWG 18 leads (AWG 20 is standard)