



"MAXPAK" Round Cartridge Electrical Specifications

Electrical Tolerances

Standard electrical tolerances are shown in the right hand column. High precision tolerances can be held if required. Cartridge heater electrical limits for a standard, two lead construction are listed in the tables shown below. Special units with multiple leads are available in single phase and three phase wiring systems, permitting the use of higher ratings than those shown.

- Power (Watts) - 1/8" & 3/16" diameter units +10%, -15%
- All other units +5%, -10%
- Resistance (Ohms) - 1/8" & 3/16" diameter units +15%, -10%
- All other units +10%, -5%
- Resistance increases with temperature. All cartridges are designed to a resistance value 5% lower than the calculated resistance.

| Imperial Electrical Limits | | | Minimum Watts/Heater Length @ 120 V. | | | Max. Watts @ 120V/240V/480V | | |
|----------------------------|---------------|-----------------|--------------------------------------|---------------|-----------|-----------------------------|------------------------|------------------------|
| Nominal Diameter | Maximum Volts | Maximum Amperes | 1" Length | 1 1/2" Length | 2" Length | 120 Volts Single Phase | 240 Volts Single Phase | 480 Volts Single Phase |
| 1/8 | 240 | 3.0 | - | 10 | 10 | 360 | 720 | - |
| 3/16 | 240 | 3 | - | 10 | 10 | 360 | 720 | - |
| 1/4 | 240 | 4.4 | 100 | 55 | 40 | 525 | 1050 | - |
| 5/16 | 240 | 4.4 | 100 | 55 | 40 | 525 | 1050 | - |
| 3/8 | 240 | 6.7 | 65 | 35 | 25 | 800 | 1600 | - |
| 7/16 | 240 | 6.7 | 65 | 35 | 25 | 800 | 1600 | - |
| 1/2 | 240 | 9.7 | 40 | 25 | 20 | 1160 | 2320 | - |
| 9/16 | 240 | 9.7 | 40 | 25 | 20 | 1160 | 2320 | - |
| 5/8 | 480 | 23.0 | 35 | 20 | 15 | 2760 | 5520 | 10000 |
| 11/16 | 480 | 23.0 | 35 | 20 | 15 | 2760 | 5520 | 10000 |
| 3/4 | 480 | 23.0 | 35 | 15 | 10 | 2760 | 5520 | 10000 |
| 7/8 | 480 | 23.0 | 35 | 15 | 10 | 2760 | 5520 | 10000 |
| 15/16 | 480 | 23.0 | 35 | 15 | 10 | 2760 | 5520 | 10000 |
| 1 | 480 | 23.0 | 35 | 15 | 10 | 2760 | 5520 | 10000 |
| 1 1/8 | 480 | 23.0 | 35 | 15 | 10 | 2760 | 5520 | 10000 |
| 1 3/16 | 480 | 23.0 | 35 | 15 | 10 | 2760 | 5520 | 10000 |
| 1 1/4 | 480 | 23.0 | 35 | 15 | 10 | 2760 | 5520 | 10000 |

| Metric Electrical Limits | | | Minimum Watts/Heater Length @ 120 V. | | | Max. Watts @ 120V/240V/480V | | |
|--------------------------|---------------|-----------------|--------------------------------------|---------------|-----------|-----------------------------|------------------------|------------------------|
| Nominal Diameter | Maximum Volts | Maximum Amperes | 1" Length | 1 1/2" Length | 2" Length | 120 Volts Single Phase | 240 Volts Single Phase | 480 Volts Single Phase |
| 6 | 240 | 4.4 | 100 | 55 | 40 | 525 | 1050 | - |
| 6.5 | 240 | 4.4 | 100 | 55 | 40 | 525 | 1050 | - |
| 7 | 240 | 4.4 | 100 | 55 | 40 | 525 | 1050 | - |
| 8 | 240 | 4.4 | 65 | 35 | 25 | 800 | 1600 | - |
| 8.5 | 240 | 4.4 | 65 | 35 | 25 | 800 | 1600 | - |
| 10 | 240 | 6.7 | 65 | 35 | 25 | 800 | 1600 | - |
| 11 | 240 | 4.4 | 65 | 35 | 25 | 800 | 1600 | - |
| 12 | 240 | 9.7 | 40 | 25 | 20 | 1160 | 2320 | - |
| 12.5 | 240 | 9.7 | 40 | 25 | 20 | 1160 | 2320 | - |
| 14 | 480 | 23.0 | 35 | 20 | 15 | 2760 | 5520 | 10000 |
| 15 | 480 | 23.0 | 35 | 20 | 15 | 2760 | 5520 | 10000 |
| 16 | 480 | 23.0 | 30 | 15 | 10 | 2760 | 5520 | 10000 |
| 17 | 480 | 23.0 | 30 | 15 | 10 | 2760 | 5520 | 10000 |
| 19 | 480 | 23.0 | 30 | 15 | 10 | 2760 | 5520 | 10000 |
| 20 | 480 | 23.0 | 30 | 10 | 10 | 2760 | 5520 | 10000 |