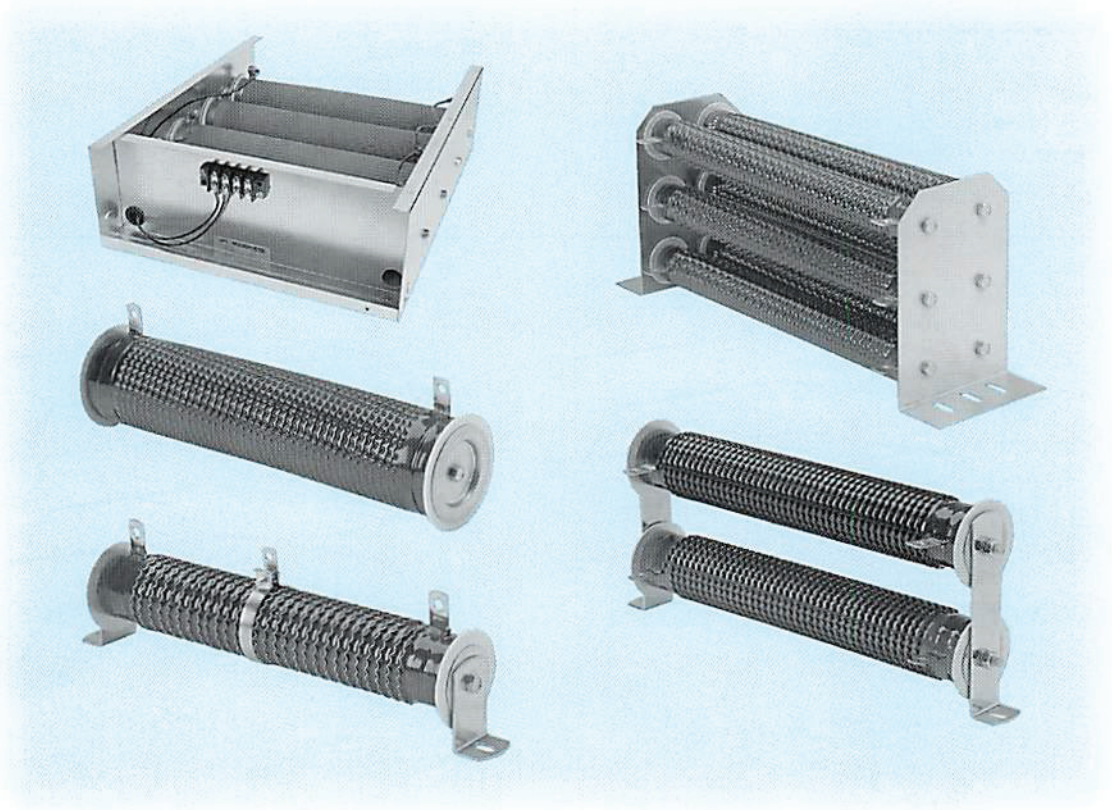
Ribwound

SECTION #2

FIXED/ADJUSTABLE



RIBWOUND RESISTORS - FIXED AND ADJUSTABLE 40 WATTS TO 2000 WATTS

Ribwound resistors have been a main product line at Milwaukee Resistor Corporation for years. Ribwound resistors are particularly useful where high energy is to be dissipated in the lower ohmic ranges. Precision winding machines, designed and manufactured by MRC, allow uniform windings to be applied extremely close to each other resulting in significantly higher resistance values (three or more times higher than normally available). Replacements for many standard roundwire resistors are available resulting in significant savings in space and cost.

Benefits/Features

Features of the Milwaukee Resistor Corporation Ribwound resistor include:

- Terminal bands are spotwelded after installation on the core and then a resistance-alloy ribbon wire is crimped and edgewound onto the core.
- Resistance wire is spotwelded to the terminal bands and then "locked" onto the core with a vitreous enamel, cement, or silicone coating.
- Design allows for efficient heat dissipation at higher temperature ranges so the resistor is half the physical size of an equivalent rated roundwire resistor.
- Fixed, adjustable, or tapped styles with single or double quick connect terminals, special temperature coefficients, and special tolerances are available.

Ribwound

Benefits/Features continued...

- Mounting available with spring clips (through 1-1/8" diameter); through-bolt mounting hardware, horizontal "L" mounting brackets, and individual or multiple stacked bracket assemblies.
- Hardware can be supplied mounted, as loose assemblies, or as individual parts.
- 300 watt stock ribs available for immediate delivery.
- Ratings are based on a temperature rise of 375°C. above an ambient of 40°C.
- Standard resistance tolerance is ±10%. Closer tolerances available upon request.

Applications

Typical applications for ribwound resistors in motor/motion control include areas such as dynamic braking, motor starting, speed/torque control, and plugging. Other applications include load dumping, current limiting, and voltage dropping. Ribwound resistors are commonly found in:

- Overhead Cranes
- Lift Trucks
- Arc and Spot Welders
- Industrial Controls
- Processing Equipment
- Elevators
- Machine Tools
- Battery Chargers
- Conveyors
- UPS Systems

FIXED AND ADJUSTABLE RIBWOUND RESISTORS

WATTS	CORE SIZE O.D. x I.D. x L.	STANDARD TERMINAL*	RESISTANCE RANGE FIXED	RESISTANCE RANGE ADJUSTABLE	PART NUMBER FIXED
40	9/16 x 5/16 x 2	1/4	.010 – 10.6	N/A	9 – 32 - Ω R
50	3/4 x 1/2 x 2	3/8	.020 – 8.2	N/A	12 – 32 - Ω R
75	3/4 x 1/2 x 3	3/8	.010 – 19.3	N/A	12 – 48 - Ω R
90	9/16 x 5/16 x 4	1/4	.015 – 28.3	.014 – 25.3	9 – 64 - Ω R
100	3/4 x 1/2 x 3 1/2	3/8	.012 – 24.5	.011 – 20.7	12 – 56 - Ω R
110	3/4 x 1/2 x 4	3/8	.015 – 30.6	.014 – 26.8	12 – 64 - Ω R
120 (110)	3/4 x 1/2 x 4 1/2	3/8	.018 – 36.8	.017 – 32.9	12 – 72 - Ω R
135	3/4 x 1/2 x 5	3/8	.021 – 42.9	.020 – 39.0	12 – 80 - Ω R
150	1 1/8 x 3/4 x 4	3/8	.019 – 44.8	.018 – 39.0	18 – 64 - Ω R
160	3/4 x 1/2 x 6	3/8	.027 – 55.0	.027 – 51.3	12 – 96 - Ω R
175	1 1/8 x 3/4 x 4 1/2	3/8	.023 – 53.7	.022 – 48.1	18 – 72 - Ω R
180	3/4 x 1/2 x 6 1/2	3/8	.030 – 61.3	.030 – 57.4	12 –104- Ω R
220	1 1/8 x 3/4 x 6	3/8	.035 – 80.6	.035 – 75.0	18 – 96 - Ω R
225 (220)	1 1/8 x 3/4 x 6 1/8	3/8	.036 – 82.8	.036 – 77.2	18 – 98 - Ω R
240 (240)	1 1/8 x 3/4 x 6 1/2	3/8	.038 – 89.5	.039 – 83.9	18 –104- Ω R
300 (300)†	1 1/8 x 3/4 x 8 1/2	3/8	.054 – 125	.055 – 120	18 –136- Ω R
375	1 1/8 x 3/4 x 10 1/2	3/8	.069 – 161	.072 – 156	18 –168- Ω R
400	1 1/8 x 3/4 x 11 1/4	3/8	.075 – 175	.078 – 169	18 –180- Ω R
400 (400)	1 1/8 x 1 1/8 x 8 1/2	1/2	.061 – 159	.062 – 149	26 –136- Ω R
420	1 1/8 x 3/4 x 11 3/4	3/8	.079 – 184	.082 – 178	18 –188- Ω R
500 (500)	1 1/8 x 1 1/8 x 10 1/2	1/2	.081 – 210	.083 – 200	26 –168- Ω R
550 (550)	1 1/8 x 1 1/8 x 11 3/4	1/2	.093 – 242	.097 – 232	26 –188- Ω R
750‡	2 1/2 x 1 3/4 x 12	1/2	.128 – 166	.130 – 158	40 –192- Ω RC
1000‡	2 1/2 x 1 3/4 x 15	1/2	.168 – 217	.176 – 209	40 –240- Ω RC
1500‡	2 1/2 x 1 3/4 x 20	1/2	.234 – 303	.248 – 294	40 –320- Ω RC
2000‡	3 1/4 x 1 3/4 x 20	1/2	.281 – 391	.300 – 380	52 –320- Ω RC

(All dimensions in inches)
For ADJUSTABLE Resistors, use same part number but substitute "AR" for "R".
Wattages in parentheses are Navy ratings per Mil-R-15109, Form EW.
Ratings are based on a temperature rise of 375° above an ambient of 40°C.
† Stock Wattage – see Stock List on next page.
‡ Cement coating is standard rather than Vitreous Enamel.
* For additional terminal information, see page 26.

STOCK

Many 300 watt resistors are in stock in both fixed and adjustable styles. Listed below are the more popular 300 watt values. All other wattage ratings and styles are made to order.

OHMS	OHMS	OHMS	OHMS	OHMS	OHMS
0.1	0.5	1.5	5.0	15.0	40.0
0.15	0.6	2.0	6.0	16.0	50.0
0.2	0.75	2.5	8.0	20.0	60.0
0.25	1.0	3.0	10.0	25.0	80.0
0.375	1.25	4.0	12.0	33.0	100.0

NOTES:

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18-136-10R 18-136-12R 18-136-16R 18-136-1R 18-136-1.2R 18-136-1.6R 18-136-20R 18-136-2R 18-136-2.5R 18-136-3.1R 18-136-4R 18-136-5R 18-136-6.3R 18-136-8R 18-136-0.1R 18-136-0.12R 18-136-0.2R 18-136-0.25R 18-136-0.31R 18-136-0.41R 18-136-0.5R 18-136-0.63R 18-136-0.8R 18-136-10AR 18-136-12AR 18-136-16AR 18-136-1AR 18-136-1.2AR 18-136-1.6AR 18-136-20AR 18-136-2AR 18-136-2.5AR 18-136-3.1AR 18-136-4AR 18-136-5AR 18-136-6.3AR 18-136-8AR 18-136-0.1AR 18-136-0.12AR 18-136-0.16AR 18-136-0.2AR 18-136-0.25AR 18-136-0.31AR 18-136-0.4AR 18-136-0.5AR 18-136-0.63AR 18-136-0.8AR