

# Multiple-Circuit Battery-Mate 80 Models

No. Battery Cell	Recommended battery ampere-hour range for 8 hour charge	DC output amps @ 2.13 v/cell	2 circuit 3 phase in 1 cabinet	3 circuit 3 phase in 1 cabinet	4 circuit 3 phase in 1 cabinet	5 circuit 3 phase in 1 cabinet	2 circuit 1 phase in 1 cabinet	3 circuit 1 phase in 1 cabinet	4 circuit 1 phase in 1 cabinet	5 circuit 1 phase in 1 cabinet	6 circuit 1 phase in 1 cabinet
6	251-380	65					380D3-6S2M 10.7/9.3/4.7, 3.9	380D3-6S3M 10.7/9.3/4.7, 3.9	380D3-S4M 16.4/14.2/7.1, 5.9	380E3-6S5M 21.5/18.6/9.3, 7.8	380E3-6S6M 21.5/18.6/9.3, 7.8
6	381-450	77					450D3-6S2M 12.8/11.1/5.6, 4.6	450D3-6S3M 12.8/11.1/5.6, 4.6	450D3-6S4M 19.6/17/8.5, 4.1	450E3-6S5M 25.6/22.2/11.1, 9.3	450E3-6S6M 25.6/22.2/11.1, 9.3
6	451-510	87					510D3-6S2M 13.7/11.9/5.9, 4.9	510D3-6S3M 13.7/11.9/5.9, 4.9	510D3-6S4M 20.9/18.1/9.1, 7.6	510E3-6S5M 27.4/23.7/11.9, 9.9	510E3-6S6M 27.4/23.7/11.9, 9.9
6	511-600	102	600E3-6T2M 10.6/9.2/4.6, 3.8	600E3-6T3M 15.9/13.8/6.9, 5.7			600D3-6S2M 17.7/15.3/7.7, 6.4	600D3-6S3M 17.7/15.3/7.7, 6.4	600D3-6S4M 27/23.4/11.7, 9.8	600E3-6S5M 35.3/30.6/15.3, 12.8	600E3-6S6M 35.3/30.6/15.3, 12.8
12	0-250	43					250D3-12S2M 13.2/11.4/5.7, 4.8	250D3-12S3M 13.2/11.4/5.7, 4.8	250D3-12S4M 20.1/17.4/8.7, 7.3	250E3-12S5M 26.3/22.8/11.4, 9.5	250E3-12S6M 26.3/22.8/11.4, 9.5
12	251-380	65					380D3-12S2M 21/18.2/9.1, 7.6	380D3-12S3M 21/18.2/9.1, 7.6	380D3-12S4M 32/27.7/13.9, 11.6	380E3-12S5M 41.9/36.3/18.2, 15.2	380E3-12S6M 41.9/36.3/18.2, 15.2
12	381-450	77					450D3-12S2M 23.9/20.7/10.4, 8.6	450D3-12S3M 23.9/20.7/10.4, 8.6	450D3-12S4M 36.5/31.6/15.8, 13.2	450E3-12S5M 47.8/41.4/20.7, 17.3	450E3-12S6M 47.8/41.4/20.7, 17.3
12	451-510	87	510E3-12T2M 17.8/15.6/7.8, 6.5	510E3-12T3M 26.7/23.4/11.7, 9.8			510D3-12S2M 27/23.4/11.7, 9.8	510D3-12S3M 27/23.4/11.7, 9.8	510D3-12S4M 41.3/35.8/17.9, 14.9	510E3-12S5M 54/46.8/23.4, 19.5	510E3-12S6M 54/46.8/23.4, 19.5
12	511-600	102	600E3-12T2M 21.8/19/9.6, 8	600E3-12T3M 32.7/28.5/14.4, 12			600D3-12S2M 32/27.8/13.9, 11.6	600D3-12S3M 32/27.8/13.9, 11.6	600D3-12S4M 48.9/42.4/21.2, 17.7	600E3-12S5M 64.1/55.5/27.8, 23.2	600E3-12S6M 64.1/55.5/27.8, 23.2
12	601-750	128	750E3-12T2M 25.4/22/11.9, 9.2	750E3-12T3M 38.1/33/16.5, 13.8			750D3-12S2M 43.6/37.8/18.9, 15.8	750D3-12S3M 43.6/37.8/18.9, 15.8	750D3-12S4M 66.7/57.8/28.9, 24.1	750E3-12S5M 87.3/75.7/37.8, 31.6	750E3-12S6M 87.3/75.7/37.8, 31.6
12	751-880	150	880E3-12T2M 30.4/26.6/13.2, 11	880E3-12T3M 45.6/39.9/19.8, 16.5			880D3-12S2M 50.6/43.8/21.9, 18.3	880D3-12S3M 50.6/43.8/21.9, 18.3	880D3-12S4M 77.3/67/33.5, 27.9	880E3-12S5M 101.1/87.7/43.8, 36.6	880E3-12S6M 101.1/87.7/43.8, 36.6
12	881-965	164	965E3-12T2M 33.2/29/14.4, 12	965E3-12T3M 49.8/43.5/21.6, 18			965D3-12S2M 53.3/46.2/23.1, 19.3	965D3-12S3M 53.3/46.2/23.1, 19.3	965D3-12S4M 81.5/70.6/35.3, 29.5	965E3-12S5M 106.7/92.5/46.2, 38.6	965E3-12S6M 106.7/92.5/46.2, 38.6
12	881-1050	179	1050E3-12T2M 35/30.4/15.2, 12.7	1050E3-12T3M 52.5/45.5/22.8, 19							
12	1051-1260	214	1260E3-12T2M 42.6/37.2/18.6, 15.5	1260E3-12T3M 63.9/55.4/27.7, 23.3							
18	451-510	87	510E3-18T2M 26/22.6/11.4, 9.4	510E3-18T3M 39/33.8/16.9, 14.1			510D3-18S2M 38.3/33.2/16.6, 13.8	510D3-18S3M 38.3/33.2/16.6, 13.8	510D3-18S4M 58.5/50.7/25.3, 21.2	510E3-18S5M 76.6/66.3/33.2, 27.7	510E3-18S6M 76.6/66.3/33.2, 27.7
18	511-600	102	600E3-18T2M 29.4/25.6/12.8, 10.7	600E3-18T3M 44.1/38.2/19.1, 16			600D3-18S2M 48.5/42/21, 17.5	600D3-18S3M 48.5/42/21, 17.5	600D3-18S4M 74.1/64.2/32.1, 26.8	600E3-18S5M 97/84.1/42, 35.1	600E3-18S6M 97/84.1/42, 35.1
18	601-750	128	750E3-18T2M 36.4/31.6/15.8, 13.2	750E3-18T3M 54.6/47.3/23.7, 19.8			750D3-18S2M 61.7/53.4/26.7, 22.3	750D3-18S3M 61.7/53.4/26.7, 22.3	750E3-18S4M 94.2/81.6/40.8, 34.1	750E3-18S5M 117.2/101.6/50.8, 42.4	750E3-18S6M 117.2/101.6/50.8, 42.4
18	751-880	150	880E3-18T2M 43.8/38/19, 15.9	880E3-18T3M 65.7/57/28.5, 23.8			880D3-18S2M 76.7/66.5/33.2, 27.8	880D3-18S3M 76.7/66.5/33.2, 27.8	880E3-18S4M		
18	881-965	164	965E3-18T2M 47/40.7/20.4, 17	965E3-18T3M 70.5/61.1/30.6, 25.5							
18	966-1050	179	1050E3-18T2M 51.6/44.7/22.4, 18.7	1050E3-18T3M 77.4/67.1/33.5, 28							
18	1051-1260	214	1260E3-18T2M 63.6/55.1/27.6, 23	1260E3-18T3M 95.4/82.7/41.3, 34.5							
24	251-380	65	380E3-24T2M 26.6/23.1/11.5, 9.6	380E3-24T3M 39.9/34.6/17.3, 14.4							
24	510-600	102	600E3-24T2M 37.6/32.6/16.3, 13.6	600E3-24T3M 56.4/48.9/24.4, 20.4							
24	601-750	128	750E3-24T2M 48/41.6/20.8, 17.4	750E3-24T3M 72/62.4/31.2, 26							
24	751-880	150	880E3-24T2M 54/46.8/23.4, 19.5	880E3-24T3MF 81/70.2/35.1, 29.3							
24	881-965	164	965E3-24T2M 62.2/53.9/27, 22.5	965E3-24T3MF 93.3/80.9/40.4, 33.8							
24	966-1050	179	1050E3-24T2M 70/60.7/30.3, 25.3	1050E3-24T3MF 105/91/45.5, 38							

NOTE: "F" Suffix at end of model number indicates charger is equipped with a cooling fan and hood

### Cabinet dimensions

See 4th or 5th digit of model number

"D" case -----25" -----60" -----25"

"E" case -----35" -----60" -----25"

### Options

**001:** Standard and non-standard charging connectors and extra length output cable in 5 ft. increments – not to exceed 20 ft. total. See data sheet 1311.

**002:** Parallel charging cables for charging two batteries of same cell and A-H capacity in parallel. See data sheet 1311.

**003:** Series charging cable for charging two batteries of same cell and A-H capacity in series. See data sheet 1311.

**500:** Flange mounted fusible disconnect switch. To accommodate this option, a full-length hinged front door is furnished. (Only available for 480 volt operation and 2 thru 4 circuits.) (One required per enclosure.)

### DISTRIBUTED BY:

Because we continually improve our products, specifications are subject to change without notice.  
©2002, AMETEK, Inc. Prestolite Power, Troy, Ohio  
Data Sheet: 1310 11/02 5M Printed in U.S.A.  
Replaces: 11/00



2220 Corporate Drive # Troy, Ohio # 45373-1099 # 800 367 2002

# MULTIPLE-CIRCUIT ACCU-CHARGER®

## Ferroresonant Industrial Battery Chargers



The Quality Leader in Ferroresonant Industrial Chargers

- ⚡ Utilizes space efficiently – saves valuable floor space
- ⚡ Up to 6 independent charging circuits in one cabinet
- ⚡ One input line reduces installation costs
- ⚡ Fail-safe design protects batteries
- ⚡ A choice of interchangeable controls for added flexibility
- ⚡ Quality-built for years of trouble-free service
- ⚡ 100% rated to recharge fully discharged batteries in 8 hours or less
- ⚡ UL listed, CSA certified





# Multiple-Circuit Accu-Charger: Compact and powerful



Prominently displayed labels

- Voltage change-over
- Fuse sizes
- Charging rate adjustment

Ferroresonant power transformer(s) with 10-year warranty

Modular designed controls for increased flexibility

Wide, hinged door for easy access

Quick connect primary voltage change-over  
120/208/240 or 208/240/480, 575

Quick connect output voltage tap adjustments

Color coded charging cables

Baked powdered polyester finish

## ⚡ Designed for total efficiency

The Multiple-Circuit Accu-Charger ("Multi-Circuit") is uniquely designed to allow efficient charging of up to six batteries simultaneously with only one compact unit. The Multi-Circuit holds up to six full-featured Accu-Chargers and saves on floor space and installation costs without forfeiting any of the outstanding capabilities of a self-contained Accu-Charger. Requiring only 30 cubic feet of space and one electrical input line, the Multi-Circuit facilitates the independent operation of multiple Accu-Chargers, protecting each from other circuits housed in the same cabinet.

## ⚡ Rating

The Multi-Circuit is rated to recharge a 100% discharged battery in its ampere-hour rating within eight hours.

## ⚡ Interchangeable control design

The Multiple-Circuit Accu-Charger allows for the quick and easy installation or removal of up to three different types of Prestolite controls. Unmatched in the industry, this design allows controls to be interchanged in minutes for greater control, flexibility and automation of any battery charging operation.

## ⚡ Control options

Depending on your charging requirements, Multi-Circuit charging operations can be initiated and controlled by any of the following controls: AC500, AC1000 and AC2000.

## ⚡ Automatic operation

After the battery is connected and the control is initiated, the Multi-Circuit will automatically start the charging operation. It will continue to charge the battery until the battery is fully charged at which time the Multi-Circuit will automatically terminate the operation.

## ⚡ Efficient, low-cost operation

The Multi-Circuit's copper-wound, ferroresonant transformer is extremely efficient in converting AC input power to usable DC output power for low-cost operation.

## ⚡ Easy AC voltage input changes

Conveniently located taps and quick-connect jumper permit AC input voltage changeovers to be completed in just minutes.

## ⚡ Adjustable DC output

In rare instances where changes to the DC output might be required, the necessary adjustments are simple. Quick-connect jumpers are conveniently located for changing.

## ⚡ Regulation

The Multi-Circuit will hold the finish rate of the charge within  $\pm 1\%$ , even with line voltage variations as high as  $\pm 10\%$ . This protects, and properly charges the battery, even when severe input voltage variations exist.

## ⚡ Battery/charger safeguards

The Multi-Circuit is internally protected against overload, short circuit, reverse polarity connection, voltage transients and other unsafe failure modes. These safeguards protect the charger and battery, assuring longer life for both.

## ⚡ Convection cooled and quiet

The Multi-Circuit operates quietly without fans, no dirty air is drawn in and sound levels are low.

## ⚡ Functional cabinet design

In addition to its space-saving size, the Multi-Circuit cabinet is constructed of heavy-gauge sheet metal and finished with a durable, powdered-polyester, baked finish. Its design provides direct access to the AC power connection points, conveniently facilitating any required service.

## ⚡ Warranty

Minimize repair costs with ten-year original purchaser warranty on power transformers and silicon diodes, plus one-year warranty on other components.

## ⚡ Multiple independent charging circuits

The Multiple-Circuit Accu-Charger is available with a minimum of two circuits and up to a maximum of six circuits. These circuits operate totally independent

of each other while charging up to six batteries. When equipped with automatic start/stop controls, each battery is charged according to its own depth of discharge allowing batteries with varying depths of discharge to all be charged simultaneously with one charger.

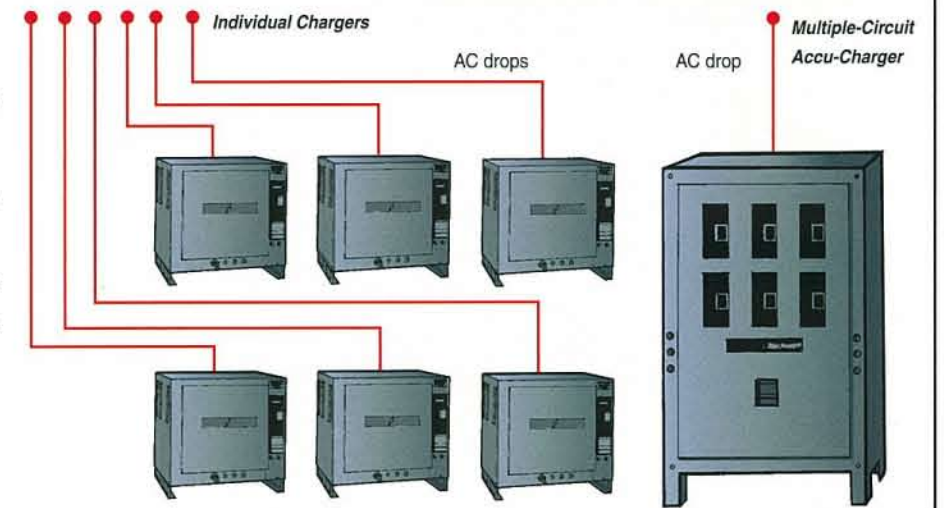
Each circuit is protected by its own set of AC input fuses so that the loss of a fuse in one circuit does not disrupt service in the remaining circuits.

## ⚡ More power per cubic foot

The Multi-Circuit packs more power into each cubic foot than individual chargers. One 6-circuit charger provides nearly 28 kW of peak output power while taking up only 30 cubic feet of warehouse space, 11 cubic feet less than that required for six comparable individual chargers.

## ⚡ Save on installation

Normally, six chargers would require an electrician to install six different AC drops or one for each charger. With the Multi-Circuit, only one AC drop is required – resulting in significant savings in installation costs.



Control Features	Model		
	AC500	AC1000	AC2000
Automatic start/stop	✓	✓	✓
Timed delay start		✓	✓
PT/DV/DT termination	✓	✓	✓
VT termination	✓	✓	✓
Universal control for 6,12,18, 24,36 cell	✓	✓	✓
Back-up timers	✓	✓	✓
AC fail recovery	✓	✓	✓
Battery/charger mismatch protection	✓	✓	✓
Refresh charge	✓	✓	✓
Automatic equalize	✓	✓	✓
Full battery reject			✓
Modular design	✓	✓	✓
Optional start modes		✓	✓
Forming cycles	✓	✓	✓
Extended run time		✓	✓
Optional equalize modes			✓
CDAC compatible			✓
Data-Mate compatible			✓
30 cycle archive			✓
Cool down		✓	✓
Thermal runaway protection			✓



A typical installation showing Multiple-Circuit Accu-Charger battery chargers.

For more charger control information, see the following:  
AC500 – data sheet 1323  
AC1000 – data sheet 1322  
AC2000 – data sheet 1320

