

Delivering quality

# ALCAD



## **Monolite Range Valve-Regulated Batteries**

# The MONOLITE Difference

## Recombination: The Key to MONOLITE Technology

When a conventional lead acid cell becomes fully charged, hydrogen and oxygen gases are produced by electrolysis and released into the atmosphere. This results in a loss of water from the cell which is in addition to normal evaporation. For this reason, topping up is an essential but costly maintenance requirement.

MONOLITE, with its valve-regulated "absorbed electrolyte" construction, provides the solution to this problem. In simple terms, during charging the oxygen evolved from the positive plate migrates through pores in the special separator to the surface of the negative plate where it forms lead oxide. This, by reaction with the electrolyte, forms lead sulfate and water. The reaction is complete when the charging process converts the lead sulfate back to lead and sulfuric acid.

In this way the quantity of electrolyte remains virtually constant during the life of the battery. As these reactions constitute a closed loop, the loss of water through electrolysis is virtually eliminated and topping up is no longer necessary.

## MONOLITE Benefits

MONOLITE valve-regulated lead-acid (VRLA) batteries provide an excellent combination of benefits for users:

- High energy density
- High performance
- Long life
- Easy installation

## MONOLITE Applications

Specifically designed for standby power applications, MONOLITE is well suited for:

- Telecommunications
- Uninterruptible power systems
- Switchgear
- Emergency lighting
- Fire and security alarms
- Office equipment

## Long Life

There is much confusion, and many misleading claims are made, regarding the lives of batteries in general and VRLA batteries in particular. The truth regarding MONOLITE is that it is one of the highest quality and longest lasting VRLA batteries available.

This has been verified by extensive testing, customer experience, and independent evaluation. MONOLITE batteries have been found to be in full compliance with international VRLA battery standards, including Bellcore, Eurobat, IEC and the British Standards Institute.



## Temperature Range

MONOLITE batteries may be operated over a temperature range of -10° to +40°C (+14° to +104°F), with good discharge capacity available down to -30°C (-11°F). However, as with any secondary battery, performance and life are affected by temperature extremes. See page 4 for additional information.

## Standards Compliance

MONOLITE batteries comply fully with the following standards:

- Bellcore TR-NWT-000766
- Bellcore TR-NWT-000909, Section 12.2.11
- Eurobat Guide: Group 1-high integrity
- British Standard BS 6290 Part 4
- IEC (draft) 896 Part 2
- UL 1778

MONOLITE batteries are also UL Recognized components.

## Table of Contents

|  | Page |
|--|------|
| Capacities, Weights & Dimensions . . . . . | .3   |
| Design Features . . . . .                  | .3   |
| Electrical Characteristics . . . . .       | .4   |
| Constant Current Discharge Data . . . . .  | .5   |
| Constant Power Discharge Data . . . . .    | .6   |
| Discharge Curves . . . . .                 | .7   |
| Racks and Cabinets . . . . .               | .8   |
| Cabinet Systems . . . . .                  | .9   |
| Rack Systems . . . . .                     | .10  |
| Alcad Capabilities . . . . .               | .11  |



# MONOLITE Specifications

## Capacities, Weights & Dimensions

| Module Type | Voltage | Capacity | Weight |      | Height |     | Length* |     | Width* |     |
|-------------|---------|----------|--------|------|--------|-----|---------|-----|--------|-----|
|             |         |          | 5      | Ah   | lb.    | kg  | in.     | mm  | in.    | mm  |
| 12SLA25     | 12      | 25       | 24.3   | 11.0 | 6.54   | 166 | 8.58    | 218 | 5.08   | 129 |
| 12SLA37     | 12      | 37       | 35.3   | 16.0 | 7.95   | 202 | 11.34   | 288 | 6.81   | 173 |
| 12SLA50     | 12      | 50       | 44.1   | 20.0 | 7.95   | 202 | 11.34   | 288 | 6.81   | 173 |
| 12SLA75     | 12      | 75       | 73.9   | 33.5 | 8.98   | 228 | 14.17   | 360 | 6.46   | 164 |
| 6SLA100     | 6       | 100      | 43.0   | 19.5 | 7.95   | 202 | 10.67   | 271 | 6.81   | 173 |
| 4SLA150     | 4       | 150      | 41.9   | 19.0 | 7.95   | 202 | 10.67   | 271 | 6.81   | 173 |
| 2SLA200     | 2       | 200      | 32.0   | 14.5 | 7.95   | 202 | 10.67   | 271 | 6.81   | 173 |
| 2SLA250     | 2       | 250      | 37.5   | 17.0 | 7.95   | 202 | 10.67   | 271 | 6.81   | 173 |
| 2SLA300     | 2       | 300      | 41.9   | 19.0 | 7.95   | 202 | 10.67   | 271 | 6.81   | 173 |
| 2SLA400     | 2       | 400      | 69.5   | 31.5 | 9.88   | 251 | 15.28   | 388 | 6.81   | 173 |
| 2SLA500     | 2       | 500      | 83.8   | 38.0 | 9.88   | 251 | 15.28   | 388 | 6.81   | 173 |
| 2SLA580     | 2       | 580      | 93.7   | 42.5 | 9.88   | 251 | 15.28   | 388 | 6.81   | 173 |
| 2SLA800     | 2       | 800      | 132    | 60.0 | 8.26   | 210 | 10.00   | 254 | 19.92  | 506 |
| 2SLA1000    | 2       | 1000     | 154    | 70.0 | 8.26   | 210 | 10.00   | 254 | 19.92  | 506 |

\* For standard connections arrangement, add approximately 0.7 in. space between units in length dimensions or approximately 0.2 in space in width dimension.

## Design Features

### Safety Valve

Each cell is fitted with a one-way low pressure relief valve that opens at 5 psi and closes at 3 psi.

### Flame Arrester

Each module has a flame arrester integral to the cover, to provide for maximum safety in the event of abusive overcharge.

### Post Seal

Designed to prevent leakage over a wide temperature range throughout battery life.

### Terminal Post

Threaded post with brass insert to ensure high current conductivity.

### Electrolyte

High purity dilute sulfuric acid with 1.300 specific gravity at 25°C (77°F).

### Plates

Pasted plate construction is used for both positives and negatives. The grids are made of high quality ternary lead-calcium-tin alloy, sized to ensure a long and reliable life.

### Separators

Consisting of microporous glass fibers, providing an extremely low resistance as well as optimum electrolyte absorption.

### Container and Cover

Battery containers and covers are made of thick-wall ABS plastic, flame retardant to UL 94 class V-O, BS 6334 Method FV, IEC 707 VO, and have a limited oxygen index greater than 28. They are designed for high mechanical resistance and to withstand fully the internal pressure variations during battery operation.

# MONOLITE Electrical Characteristics

## Capacity

The rated capacity (C8) of MONOLITE batteries is the capacity available at the 8-hour rate to 1.75 volts per cell at 25°C (77°F).

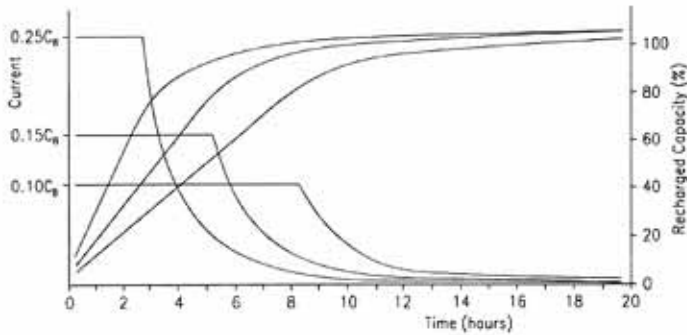
## Charging

MONOLITE batteries must be charged with a constant potential charging source. For optimum battery life, a filtered charger is recommended.

- ☐ Recommended float voltage 2.25-2.27 V/cell
- ☐ Maximum charge current 0.25C8 amperes

## Recharge Characteristics

The following graph shows the recharge characteristics of MONOLITE batteries at 25°C (77°F). The curves are based on constant potential charging at 2.27 volts per cell, and with different values of maximum current.



## Self Discharge

The rate of self-discharge is less than 2% per month at 25°C (77°F). Under normal conditions, MONOLITE batteries may be stored for up to 6 months.

## Short Circuit Current

For all types:  $I = 30 \times C_8$

## Internal Resistance

(Approximate values in milliohms at 25°C (77°F).

For 12SLA25:  $R = 11 \text{ m}\Omega$

For other types:  $R = \frac{31 \times V}{C_8} \text{ m}\Omega$

where V is the module nominal voltage.

## Temperature Characteristics

MONOLITE batteries provide optimum operation in the range of 10-27°C (50-80°F). For installations where the battery will operate for extended periods outside this range, it is recommended that the float voltage be adjusted in accordance with the following table. This can be accomplished automatically by a charger with a temperature compensation option.

| Temperature |     | Float Voltage |
|-------------|-----|---------------|
| °C          | °F  | V/Cell        |
| -20         | -4  | 2.39          |
| -10         | 14  | 2.36          |
| 0           | 32  | 2.33          |
| 10          | 50  | 2.31          |
| 20          | 68  | 2.28          |
| 25          | 77  | 2.27          |
| 30          | 86  | 2.26          |
| 40          | 104 | 2.24          |

MONOLITE technology allows for excellent capacity availability at low temperatures. The table below shows the appropriate correction factors for discharges at various temperatures.

| Temperature |     | Correction |
|-------------|-----|------------|
| °C          | °F  | Factor     |
| -30         | -22 | 2.00       |
| -15         | 5   | 1.37       |
| -10         | 14  | 1.32       |
| -5          | 23  | 1.23       |
| 0           | 32  | 1.16       |
| 5           | 41  | 1.14       |
| 10          | 50  | 1.10       |
| 15          | 59  | 1.06       |
| 20          | 68  | 1.01       |
| 25          | 77  | 1.00       |
| 30          | 86  | 0.97       |
| 35          | 95  | 0.95       |
| 40          | 104 | 0.93       |

These correction factors are applied to the discharge current as follows:

$$I_T = \frac{I_{25}}{F_T}$$

Where:  $I_T$  = Discharge current at temperature T

$I_{25}$  = Published discharge current at 25°C (77°F)

$F_T$  = Correction factor at temperature T



# MONOLITE Constant Current Discharge Data

## Amperes on Discharge to 1.60 Volts per Cell at 25°C (77°F)

| Module Type | Minutes |      |      |      |      |      |      |      |      | Hours |      |      |      |  |
|-------------|---------|------|------|------|------|------|------|------|------|-------|------|------|------|--|
|             | 1       | 5    | 10   | 15   | 20   | 30   | 60   | 90   | 2    | 3     | 4    | 5    | 8    |  |
| 12SLA25     | 139     | 94.0 | 65.5 | 49.5 | 40.5 | 30.0 | 17.5 | 11.9 | 9.60 | 7.00  | 5.45 | 4.57 | 3.17 |  |
| 12SLA37     | 206     | 139  | 97.0 | 73.3 | 59.9 | 44.4 | 25.9 | 17.6 | 14.2 | 10.4  | 8.00 | 6.76 | 4.70 |  |
| 12SLA50     | 278     | 188  | 131  | 99.0 | 81.0 | 60.0 | 35.0 | 23.9 | 19.1 | 14.0  | 10.9 | 9.14 | 6.35 |  |
| 12SLA75     | 406     | 282  | 197  | 149  | 122  | 89.0 | 52.5 | 35.8 | 28.7 | 21.0  | 16.3 | 13.7 | 9.52 |  |
| 6SLA100     | 541     | 376  | 262  | 198  | 162  | 119  | 70.0 | 47.7 | 38.3 | 28.0  | 21.7 | 18.3 | 12.7 |  |
| 4SLA150     | 788     | 543  | 383  | 297  | 243  | 179  | 105  | 71.6 | 57.4 | 41.9  | 32.5 | 27.4 | 19.0 |  |
| 2SLA200     | 988     | 670  | 488  | 388  | 320  | 238  | 140  | 95.0 | 77.0 | 55.9  | 43.3 | 36.5 | 25.4 |  |
| 2SLA250     | 1075    | 750  | 588  | 470  | 390  | 295  | 175  | 119  | 96.0 | 69.8  | 54.2 | 45.7 | 31.7 |  |
| 2SLA300     | 1080    | 840  | 687  | 552  | 450  | 345  | 210  | 142  | 114  | 84.0  | 65.0 | 54.8 | 38.1 |  |
| 2SLA400     | 1536    | 1096 | 928  | 720  | 600  | 440  | 268  | 191  | 153  | 112   | 87.0 | 73.1 | 50.8 |  |
| 2SLA500     | 1760    | 1350 | 1140 | 895  | 745  | 550  | 335  | 239  | 191  | 140   | 109  | 91.0 | 63.5 |  |
| 2SLA580     | 1879    | 1508 | 1299 | 1032 | 858  | 638  | 389  | 277  | 222  | 162   | 126  | 106  | 73.6 |  |
| 2SLA800     | 1783    | 1683 | 1511 | 1365 | 1175 | 930  | 582  | 425  | 337  | 249   | 200  | 167  | 111  |  |
| 2SLA1000    | 2229    | 2103 | 1889 | 1707 | 1469 | 1164 | 728  | 532  | 422  | 312   | 250  | 209  | 139  |  |

## Amperes on Discharge to 1.65 Volts per Cell at 25°C (77°F)

| Module Type | Minutes |      |      |      |      |      |      |      |      | Hours |      |      |      |  |
|-------------|---------|------|------|------|------|------|------|------|------|-------|------|------|------|--|
|             | 1       | 5    | 10   | 15   | 20   | 30   | 60   | 90   | 2    | 3     | 4    | 5    | 8    |  |
| 12SLA25     | 122     | 93.0 | 64.0 | 48.5 | 40.0 | 29.5 | 17.4 | 11.7 | 9.40 | 6.90  | 5.40 | 4.55 | 3.16 |  |
| 12SLA37     | 180     | 137  | 95.0 | 71.8 | 59.2 | 43.7 | 25.7 | 17.3 | 13.9 | 10.3  | 7.99 | 6.74 | 4.68 |  |
| 12SLA50     | 243     | 185  | 128  | 97.0 | 80.0 | 59.0 | 34.8 | 23.4 | 18.9 | 13.9  | 10.8 | 9.11 | 6.33 |  |
| 12SLA75     | 364     | 278  | 191  | 146  | 119  | 89.0 | 52.2 | 35.1 | 28.4 | 20.9  | 16.2 | 13.7 | 9.49 |  |
| 6SLA100     | 485     | 370  | 255  | 194  | 159  | 118  | 69.5 | 46.8 | 37.8 | 27.9  | 21.6 | 18.2 | 12.7 |  |
| 4SLA150     | 662     | 524  | 374  | 291  | 239  | 177  | 105  | 70.2 | 56.7 | 41.8  | 32.4 | 27.3 | 19.0 |  |
| 2SLA200     | 796     | 652  | 474  | 376  | 318  | 236  | 139  | 94.0 | 76.0 | 55.7  | 43.2 | 36.4 | 25.3 |  |
| 2SLA250     | 885     | 730  | 553  | 445  | 380  | 290  | 174  | 116  | 95.0 | 69.7  | 54.0 | 45.5 | 31.6 |  |
| 2SLA300     | 912     | 795  | 642  | 522  | 444  | 339  | 209  | 140  | 113  | 84.0  | 64.8 | 54.6 | 38.0 |  |
| 2SLA400     | 1304    | 1096 | 888  | 700  | 592  | 432  | 266  | 187  | 151  | 111   | 86.0 | 72.9 | 50.6 |  |
| 2SLA500     | 1545    | 1320 | 1075 | 870  | 740  | 540  | 333  | 234  | 189  | 139   | 108  | 91.0 | 63.3 |  |
| 2SLA580     | 1688    | 1479 | 1230 | 998  | 853  | 626  | 386  | 271  | 219  | 161   | 125  | 106  | 73.4 |  |
| 2SLA800     | 1571    | 1490 | 1394 | 1272 | 1099 | 892  | 574  | 420  | 333  | 247   | 197  | 165  | 110  |  |
| 2SLA1000    | 1964    | 1863 | 1742 | 1591 | 1374 | 1116 | 718  | 526  | 417  | 309   | 247  | 207  | 138  |  |

## Amperes on Discharge to 1.75 Volts per Cell at 25°C (77°F)

| Module Type | Minutes |      |      |      |      |      |      |      |      | Hours |      |      |      |  |
|-------------|---------|------|------|------|------|------|------|------|------|-------|------|------|------|--|
|             | 1       | 5    | 10   | 15   | 20   | 30   | 60   | 90   | 2    | 3     | 4    | 5    | 8    |  |
| 12SLA25     | 101     | 78.0 | 56.0 | 44.0 | 36.5 | 27.5 | 17.0 | 11.5 | 9.23 | 6.64  | 5.29 | 4.50 | 3.13 |  |
| 12SLA37     | 149     | 115  | 83.0 | 65.1 | 54.0 | 40.7 | 25.2 | 17.0 | 13.7 | 9.82  | 7.83 | 6.66 | 4.63 |  |
| 12SLA50     | 202     | 156  | 112  | 88.0 | 73.0 | 55.0 | 34.0 | 23.0 | 18.5 | 13.3  | 10.6 | 9.00 | 6.25 |  |
| 12SLA75     | 303     | 234  | 168  | 132  | 110  | 83.0 | 51.0 | 34.4 | 27.7 | 19.9  | 15.9 | 13.5 | 9.38 |  |
| 6SLA100     | 404     | 312  | 224  | 176  | 146  | 110  | 68.0 | 45.9 | 36.9 | 26.6  | 21.2 | 18.0 | 12.5 |  |
| 4SLA150     | 551     | 443  | 329  | 264  | 219  | 165  | 102  | 68.4 | 54.9 | 39.8  | 31.7 | 27.0 | 18.8 |  |
| 2SLA200     | 662     | 550  | 416  | 342  | 288  | 216  | 136  | 91.0 | 73.2 | 53.1  | 42.3 | 36.0 | 25.0 |  |
| 2SLA250     | 738     | 618  | 480  | 405  | 350  | 265  | 170  | 114  | 92.0 | 66.4  | 52.9 | 45.0 | 31.3 |  |
| 2SLA300     | 753     | 648  | 522  | 459  | 402  | 312  | 204  | 136  | 109  | 80.0  | 63.5 | 54.0 | 37.5 |  |
| 2SLA400     | 1180    | 960  | 760  | 640  | 532  | 412  | 256  | 184  | 148  | 106   | 85.0 | 72.0 | 50.0 |  |
| 2SLA500     | 1370    | 1100 | 890  | 770  | 660  | 515  | 320  | 230  | 185  | 133   | 106  | 90.0 | 62.5 |  |
| 2SLA580     | 1409    | 1195 | 998  | 870  | 760  | 592  | 371  | 266  | 214  | 154   | 123  | 104  | 72.5 |  |
| 2SLA800     | 1359    | 1308 | 1242 | 1067 | 1029 | 807  | 543  | 407  | 324  | 241   | 193  | 162  | 108  |  |
| 2SLA1000    | 1698    | 1634 | 1553 | 1334 | 1286 | 1009 | 679  | 509  | 406  | 302   | 242  | 203  | 135  |  |

## Amperes on Discharge to 1.81 Volts per Cell at 25°C (77°F)

| Module Type | Minutes |      |      |      |      |      |      |      |      | Hours |      |      |      |  |
|-------------|---------|------|------|------|------|------|------|------|------|-------|------|------|------|--|
|             | 1       | 5    | 10   | 15   | 20   | 30   | 60   | 90   | 2    | 3     | 4    | 5    | 8    |  |
| 12SLA25     | 88.8    | 68.7 | 51.0 | 40.9 | 34.2 | 26.3 | 16.7 | 11.2 | 8.96 | 6.48  | 5.16 | 4.33 | 2.91 |  |
| 12SLA37     | 131     | 101  | 75.5 | 60.5 | 50.6 | 38.9 | 24.7 | 16.6 | 13.2 | 9.59  | 7.63 | 6.41 | 4.30 |  |
| 12SLA50     | 177     | 137  | 102  | 81.8 | 68.3 | 52.6 | 33.3 | 22.4 | 17.9 | 13.0  | 10.3 | 8.66 | 5.80 |  |
| 12SLA75     | 264     | 207  | 153  | 123  | 103  | 79.4 | 50.0 | 33.7 | 26.9 | 19.5  | 15.4 | 13.0 | 8.71 |  |
| 6SLA100     | 352     | 275  | 204  | 164  | 137  | 105  | 66.6 | 44.8 | 35.8 | 25.9  | 20.6 | 17.3 | 11.6 |  |
| 4SLA150     | 482     | 391  | 300  | 245  | 205  | 158  | 100  | 67.1 | 53.6 | 38.9  | 31.0 | 26.0 | 17.5 |  |
| 2SLA200     | 579     | 485  | 381  | 318  | 273  | 210  | 133  | 89.6 | 71.5 | 51.8  | 41.2 | 34.6 | 23.2 |  |
| 2SLA250     | 644     | 544  | 441  | 375  | 329  | 263  | 167  | 111  | 89.4 | 64.8  | 51.6 | 43.3 | 29.1 |  |
| 2SLA300     | 656     | 570  | 467  | 410  | 359  | 313  | 200  | 134  | 107  | 77.8  | 61.8 | 51.9 | 34.8 |  |
| 2SLA400     | 985     | 794  | 670  | 560  | 477  | 377  | 244  | 179  | 143  | 103   | 82.6 | 69.3 | 46.5 |  |
| 2SLA500     | 1132    | 906  | 783  | 670  | 590  | 470  | 304  | 224  | 179  | 130   | 103  | 86.8 | 58.0 |  |
| 2SLA580     | 1232    | 1004 | 873  | 766  | 677  | 539  | 353  | 260  | 208  | 150   | 119  | 101  | 67.3 |  |
| 2SLA800     | 996     | 983  | 953  | 946  | 844  | 740  | 512  | 396  | 319  | 236   | 190  | 159  | 106  |  |
| 2SLA1000    | 1244    | 1229 | 1191 | 1183 | 1055 | 926  | 640  | 495  | 399  | 296   | 238  | 199  | 133  |  |



# MONOLITE Constant Power Discharge Data

## Kilowatts per Cell on Discharge to 1.60 Volts per Cell at 25°C (77°F)

| Module Type | Minutes |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|             | 1       | 5     | 10    | 15    | 20    | 25    | 30    | 35    | 40    | 45    | 50    | 55    | 60    |
| 12SLA25     | 0.228   | 0.161 | 0.115 | 0.088 | 0.074 | 0.062 | 0.055 | 0.048 | 0.044 | 0.041 | 0.038 | 0.035 | 0.033 |
| 12SLA37     | 0.337   | 0.238 | 0.169 | 0.130 | 0.109 | 0.091 | 0.081 | 0.071 | 0.066 | 0.060 | 0.055 | 0.051 | 0.048 |
| 12SLA50     | 0.455   | 0.321 | 0.229 | 0.176 | 0.147 | 0.123 | 0.109 | 0.096 | 0.089 | 0.081 | 0.075 | 0.069 | 0.065 |
| 12SLA75     | 0.663   | 0.481 | 0.346 | 0.263 | 0.219 | 0.186 | 0.164 | 0.145 | 0.133 | 0.120 | 0.112 | 0.103 | 0.098 |
| 6SLA100     | 0.884   | 0.641 | 0.461 | 0.351 | 0.292 | 0.248 | 0.218 | 0.194 | 0.177 | 0.160 | 0.149 | 0.138 | 0.131 |
| 4SLA150     | 1.286   | 0.919 | 0.672 | 0.527 | 0.441 | 0.373 | 0.326 | 0.289 | 0.265 | 0.241 | 0.223 | 0.206 | 0.196 |
| 2SLA200     | 1.581   | 1.134 | 0.851 | 0.684 | 0.580 | 0.492 | 0.434 | 0.384 | 0.353 | 0.321 | 0.297 | 0.275 | 0.261 |
| 2SLA250     | 1.755   | 1.267 | 0.997 | 0.814 | 0.699 | 0.607 | 0.535 | 0.482 | 0.443 | 0.401 | 0.370 | 0.342 | 0.325 |
| 2SLA300     | 1.763   | 1.384 | 1.142 | 0.937 | 0.795 | 0.666 | 0.619 | 0.573 | 0.526 | 0.480 | 0.445 | 0.412 | 0.390 |
| 2SLA400     | 2.548   | 1.878 | 1.589 | 1.266 | 1.067 | 0.916 | 0.815 | 0.719 | 0.657 | 0.634 | 0.580 | 0.539 | 0.510 |
| 2SLA500     | 2.885   | 2.284 | 1.933 | 1.574 | 1.326 | 1.143 | 1.033 | 0.915 | 0.837 | 0.793 | 0.729 | 0.678 | 0.636 |
| 2SLA580     | 3.044   | 2.554 | 2.195 | 1.785 | 1.524 | 1.315 | 1.166 | 1.030 | 0.942 | 0.910 | 0.834 | 0.776 | 0.728 |

2SLA800 and 2SLA1000 Consult Factory

## Kilowatts per Cell on Discharge to 1.65 Volts per Cell at 25°C (77°F)

| Module Type | Minutes |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|             | 1       | 5     | 10    | 15    | 20    | 25    | 30    | 35    | 40    | 45    | 50    | 55    | 60    |
| 12SLA25     | 0.202   | 0.159 | 0.113 | 0.087 | 0.072 | 0.060 | 0.054 | 0.047 | 0.044 | 0.040 | 0.037 | 0.034 | 0.032 |
| 12SLA37     | 0.299   | 0.235 | 0.167 | 0.128 | 0.106 | 0.089 | 0.079 | 0.070 | 0.064 | 0.059 | 0.054 | 0.050 | 0.048 |
| 12SLA50     | 0.404   | 0.318 | 0.225 | 0.173 | 0.143 | 0.120 | 0.109 | 0.094 | 0.087 | 0.079 | 0.073 | 0.068 | 0.065 |
| 12SLA75     | 0.606   | 0.477 | 0.338 | 0.260 | 0.215 | 0.182 | 0.161 | 0.143 | 0.131 | 0.119 | 0.110 | 0.102 | 0.097 |
| 6SLA100     | 0.808   | 0.636 | 0.450 | 0.347 | 0.286 | 0.243 | 0.215 | 0.191 | 0.175 | 0.158 | 0.147 | 0.136 | 0.129 |
| 4SLA150     | 1.103   | 0.902 | 0.662 | 0.520 | 0.430 | 0.363 | 0.323 | 0.287 | 0.263 | 0.238 | 0.220 | 0.203 | 0.194 |
| 2SLA200     | 1.325   | 1.120 | 0.838 | 0.673 | 0.573 | 0.487 | 0.430 | 0.381 | 0.350 | 0.317 | 0.293 | 0.271 | 0.259 |
| 2SLA250     | 1.475   | 1.256 | 0.969 | 0.798 | 0.688 | 0.597 | 0.530 | 0.477 | 0.439 | 0.396 | 0.365 | 0.338 | 0.323 |
| 2SLA300     | 1.520   | 1.350 | 1.074 | 0.905 | 0.774 | 0.648 | 0.615 | 0.570 | 0.522 | 0.476 | 0.441 | 0.409 | 0.388 |
| 2SLA400     | 2.181   | 1.884 | 1.585 | 1.251 | 1.067 | 0.916 | 0.803 | 0.708 | 0.647 | 0.631 | 0.577 | 0.537 | 0.505 |
| 2SLA500     | 2.591   | 2.258 | 1.897 | 1.561 | 1.312 | 1.129 | 1.029 | 0.912 | 0.834 | 0.790 | 0.726 | 0.675 | 0.630 |
| 2SLA580     | 2.813   | 2.525 | 2.140 | 1.786 | 1.495 | 1.290 | 1.151 | 1.017 | 0.930 | 0.899 | 0.823 | 0.767 | 0.715 |

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## Kilowatts per Cell on Discharge to 1.67 Volts per Cell at 25°C (77°F)

| Module Type | Minutes |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|             | 1       | 5     | 10    | 15    | 20    | 25    | 30    | 35    | 40    | 45    | 50    | 55    | 60    |
| 12SLA25     | 0.198   | 0.155 | 0.111 | 0.086 | 0.071 | 0.060 | 0.053 | 0.047 | 0.044 | 0.040 | 0.037 | 0.034 | 0.032 |
| 12SLA37     | 0.293   | 0.230 | 0.163 | 0.126 | 0.105 | 0.089 | 0.079 | 0.070 | 0.064 | 0.059 | 0.054 | 0.050 | 0.048 |
| 12SLA50     | 0.396   | 0.311 | 0.221 | 0.171 | 0.141 | 0.120 | 0.106 | 0.094 | 0.087 | 0.079 | 0.073 | 0.068 | 0.065 |
| 12SLA75     | 0.594   | 0.467 | 0.332 | 0.256 | 0.213 | 0.180 | 0.160 | 0.142 | 0.130 | 0.119 | 0.110 | 0.102 | 0.097 |
| 6SLA100     | 0.791   | 0.622 | 0.442 | 0.342 | 0.283 | 0.241 | 0.213 | 0.190 | 0.173 | 0.158 | 0.147 | 0.136 | 0.129 |
| 4SLA150     | 1.079   | 0.882 | 0.650 | 0.513 | 0.425 | 0.361 | 0.320 | 0.285 | 0.261 | 0.237 | 0.219 | 0.203 | 0.194 |
| 2SLA200     | 1.297   | 1.095 | 0.822 | 0.663 | 0.567 | 0.483 | 0.426 | 0.379 | 0.347 | 0.316 | 0.292 | 0.272 | 0.259 |
| 2SLA250     | 1.443   | 1.228 | 0.951 | 0.787 | 0.680 | 0.591 | 0.529 | 0.476 | 0.435 | 0.395 | 0.364 | 0.339 | 0.323 |
| 2SLA300     | 1.482   | 1.317 | 1.041 | 0.876 | 0.755 | 0.635 | 0.617 | 0.568 | 0.519 | 0.474 | 0.439 | 0.409 | 0.388 |
| 2SLA400     | 2.170   | 1.875 | 1.563 | 1.243 | 1.055 | 0.903 | 0.801 | 0.706 | 0.646 | 0.628 | 0.575 | 0.535 | 0.503 |
| 2SLA500     | 2.570   | 2.215 | 1.851 | 1.535 | 1.304 | 1.123 | 1.017 | 0.901 | 0.824 | 0.787 | 0.723 | 0.673 | 0.629 |
| 2SLA580     | 2.773   | 2.480 | 2.082 | 1.740 | 1.488 | 1.286 | 1.146 | 1.013 | 0.926 | 0.895 | 0.819 | 0.763 | 0.713 |

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## Kilowatts per Cell on Discharge to 1.75 Volts per Cell at 25°C (77°F)

| Module Type | Minutes |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|             | 1       | 5     | 10    | 15    | 20    | 25    | 30    | 35    | 40    | 45    | 50    | 55    | 60    |
| 12SLA25     | 0.178   | 0.141 | 0.102 | 0.081 | 0.068 | 0.057 | 0.052 | 0.046 | 0.042 | 0.039 | 0.036 | 0.034 | 0.032 |
| 12SLA37     | 0.263   | 0.209 | 0.151 | 0.120 | 0.100 | 0.085 | 0.076 | 0.069 | 0.062 | 0.058 | 0.053 | 0.050 | 0.048 |
| 12SLA50     | 0.355   | 0.282 | 0.204 | 0.162 | 0.135 | 0.115 | 0.103 | 0.093 | 0.084 | 0.078 | 0.072 | 0.068 | 0.065 |
| 12SLA75     | 0.533   | 0.423 | 0.307 | 0.244 | 0.203 | 0.174 | 0.155 | 0.139 | 0.126 | 0.116 | 0.108 | 0.101 | 0.097 |
| 6SLA100     | 0.710   | 0.564 | 0.409 | 0.325 | 0.271 | 0.232 | 0.206 | 0.185 | 0.169 | 0.155 | 0.144 | 0.134 | 0.129 |
| 4SLA150     | 0.969   | 0.799 | 0.601 | 0.487 | 0.407 | 0.348 | 0.309 | 0.277 | 0.253 | 0.233 | 0.214 | 0.201 | 0.194 |
| 2SLA200     | 1.165   | 0.992 | 0.761 | 0.630 | 0.543 | 0.471 | 0.407 | 0.371 | 0.339 | 0.311 | 0.287 | 0.270 | 0.259 |
| 2SLA250     | 1.296   | 1.114 | 0.880 | 0.747 | 0.652 | 0.570 | 0.502 | 0.466 | 0.426 | 0.389 | 0.357 | 0.337 | 0.323 |
| 2SLA300     | 1.325   | 1.167 | 0.943 | 0.832 | 0.729 | 0.626 | 0.587 | 0.557 | 0.508 | 0.466 | 0.430 | 0.404 | 0.388 |
| 2SLA400     | 2.084   | 1.749 | 1.414 | 1.181 | 0.989 | 0.855 | 0.789 | 0.695 | 0.636 | 0.604 | 0.551 | 0.513 | 0.489 |
| 2SLA500     | 2.422   | 1.988 | 1.648 | 1.399 | 1.234 | 1.074 | 0.977 | 0.866 | 0.792 | 0.759 | 0.697 | 0.649 | 0.611 |
| 2SLA580     | 2.487   | 2.171 | 1.858 | 1.578 | 1.406 | 1.223 | 1.112 | 0.992 | 0.905 | 0.866 | 0.793 | 0.739 | 0.703 |

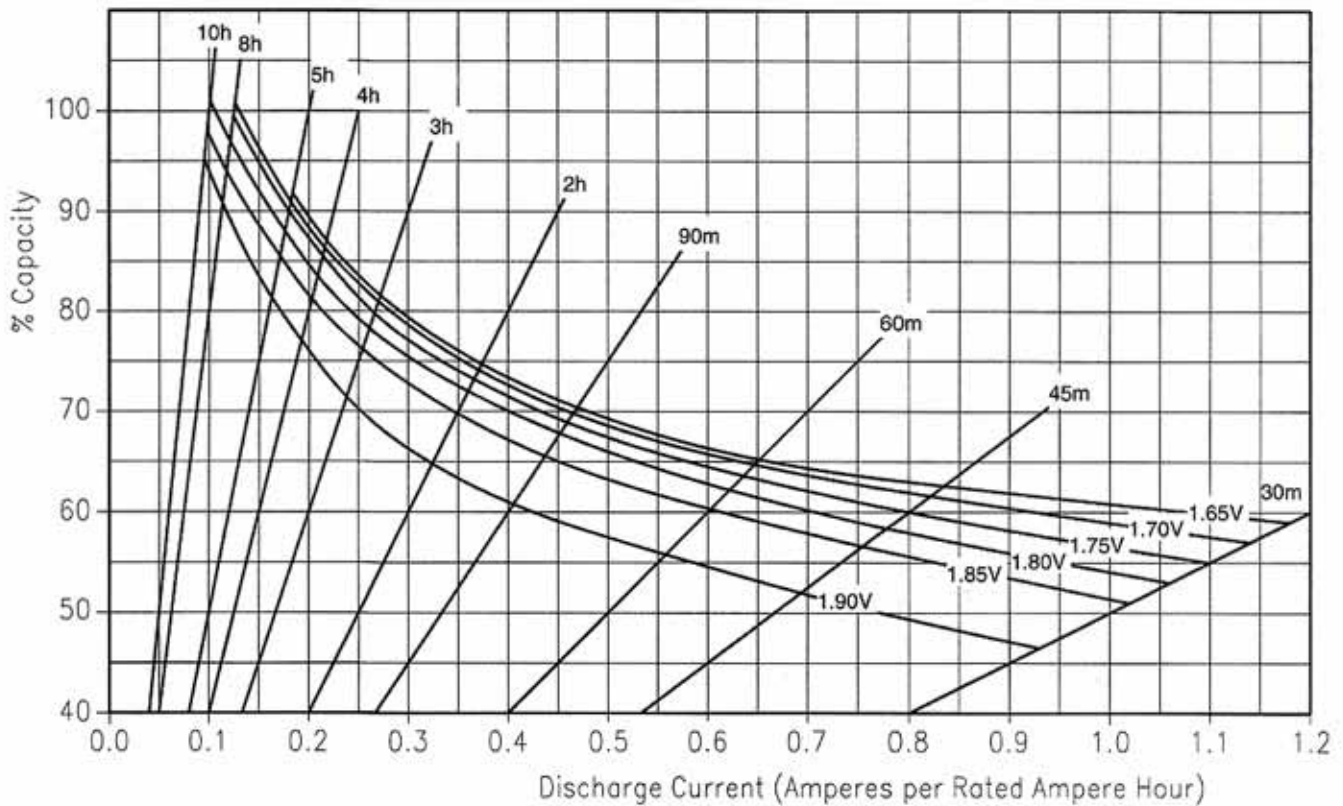
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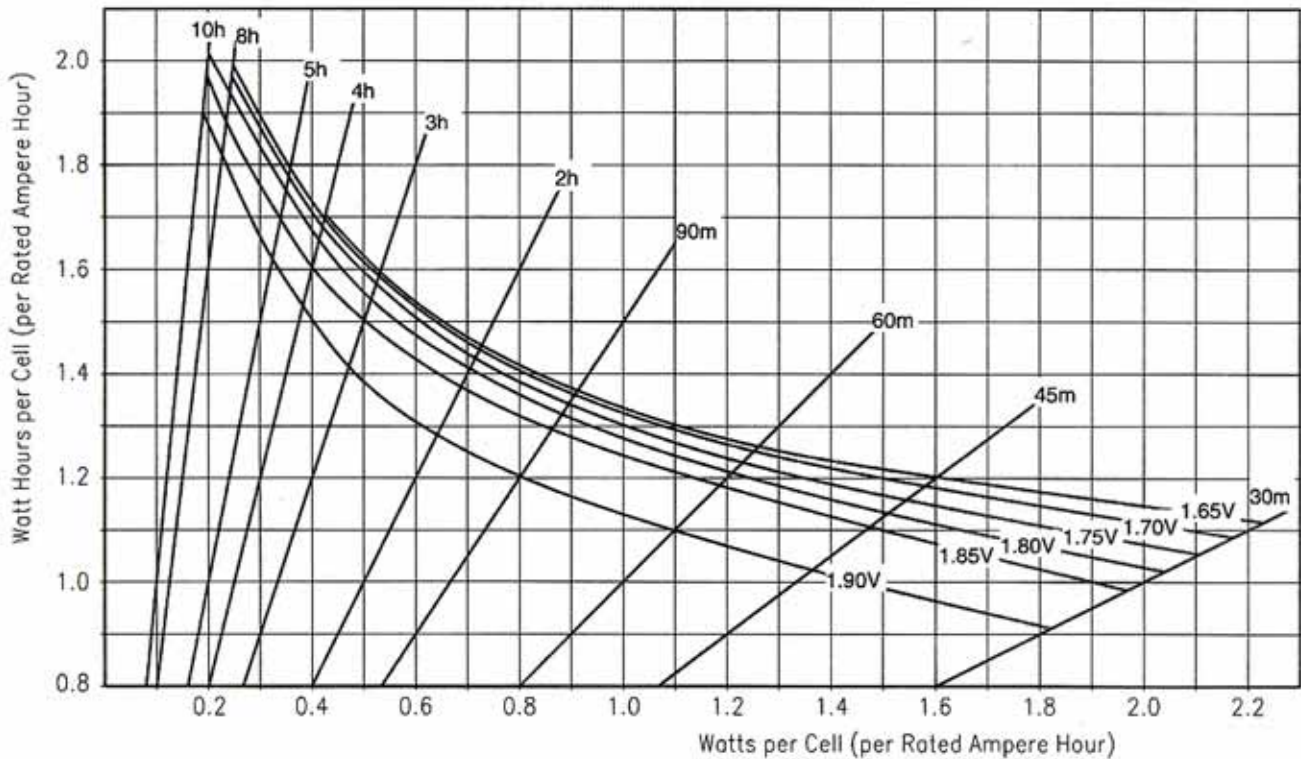
# MONOLITE Discharge Curves

NOTE: For discharge times less than 30 minutes (90 minutes for 2SLA400 – 2SLA580), refer to tabular data

## Constant Current Discharges at 25°C (77°F)



## Constant Power Discharges at 25°C (77°F)

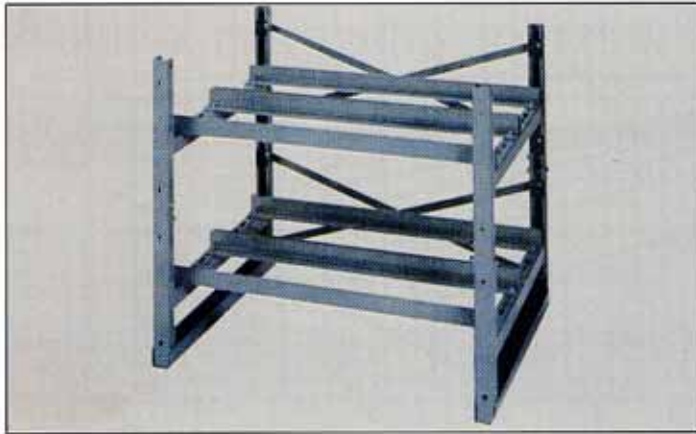


# MONOLITE Racks & Cabinets

Alcad offers an extremely wide variety of racks, cabinets and shelves to house MONOLITE batteries. Broadly, these fall into the following categories:

## Cabinet Systems

Detailed on page 9 of this brochure, MONOLITE cabinets offer considerable flexibility of layout, with four standard widths, three standard heights, and two depth options.



## Rack Systems

MONOLITE battery racks use modular construction, with four lengths and two standard widths available. Up to five tiers may be bolted together for a very compact battery arrangement. Seismic racks are fitted with insulated hold-downs and are qualified for UBC zone 4.

Details of MONOLITE rack systems are shown on Page 10,

MONOLITE battery installations are typically supplied in two formats:

- ❑ **Free-standing** - Occupying the same space as rack-mounted equipment, these systems allow for optimal use of available space. For those units which do not use the full height available, optional top-mounted relay racks accommodate additional electronic equipment.
- ❑ **Rack-mounted** - Available in a wide variety of configurations, these systems offer fixed or sliding shelves for mounting directly into equipment racks.



## Special Designs

Alcad personnel are constantly working with customers to solve their unique battery problems. Our battery solutions may meet a particular space constraint, or may address concerns with the ambient environment.

Whatever your needs, our engineers will be pleased to work with you on any non-standard battery arrangement.



# MONOLITE Cabinet Systems

## Standard Features

MONOLITE cabinets provide an excellent balance between high energy density and user access for servicing. Standard features include the following:

- Rugged 14 gauge construction
- Easy-to-remove hinged front access door
- Insulated battery hold-downs

## Optional Features

MONOLITE cabinet systems can be custom-designed to suit your exact requirements. Some of the more commonly-specified options are:

- Weatherproofing for outdoor use
- Circuit breakers for overload protection
- Special finishes

Our engineers will be pleased to work with you on your specific cabinet needs.

## Shallow Cabinets

| Module Type   | Rows/<br>Tier | Cabinet Width |      | Cabinet Height |      | Cabinet Length<br>24.9 in.<br>(633 mm) |           | Cabinet Length<br>38.6 in.<br>(979 mm) |           | Cabinet Length<br>46.8 in.<br>(1189 mm) |           | Cabinet Length<br>59.1 in.<br>(1500 mm) |           |    |
|---|---------------|---------------|------|----------------|------|--|-----------|--|-----------|---|-----------|---|-----------|----|
|   |               | (in)          | (mm) | (in)           | (mm) | P/N                                    | Qty       | P/N                                    | Qty       | P/N                                     | Qty       | P/N                                     | Qty       |    |
| 12SLA25   | 2             | 15.0          | 381  | 2              | 40   | 1016                                   | A402415-4 | 8                                      | A403715-4 | 16                                      | A404515-4 | 20                                      | A405815-4 | 24 |
|   |               |               |      | 3              | 56   | 1422                                   | A562415-6 | 12                                     | A563715-6 | 24                                      | A564515-6 | 30                                      | A565815-6 | 36 |
|   |               |               |      | 4              | 72   | 1829                                   | A722415-8 | 16                                     | A723715-8 | 32                                      | A724515-8 | 40                                      | A725815-8 | 48 |
| 12SLA37/50<br>6SLA100<br>4SLA150<br>2SLA200/250/300 | 1             | 15.0          | 381  | 2              | 40   | 1016                                   | A402415-2 | 6                                      | A403715-2 | 10                                      | A404515-2 | 12                                      | A405815-2 | 16 |
|   |               |               |      | 3              | 56   | 1422                                   | A562415-3 | 9                                      | A563715-3 | 15                                      | A564515-3 | 18                                      | A565815-3 | 24 |
|   |               |               |      | 4              | 72   | 1829                                   | A722415-4 | 12                                     | A723715-4 | 20                                      | A724515-4 | 24                                      | A725815-4 | 32 |
| 2SLA400/500/580                                     | 1             | 19.0          | 483  | 2              | 40   | 1016                                   | A402419-2 | 6                                      | A403719-2 | 10                                      | A404519-2 | 12                                      | A405819-2 | 16 |
|   |               |               |      | 3              | 56   | 1422                                   | A562419-3 | 9                                      | A563719-3 | 15                                      | A564519-3 | 18                                      | A565819-3 | 24 |
|   |               |               |      | 4              | 72   | 1829                                   | A722419-4 | 12                                     | A723719-4 | 20                                      | A724519-4 | 24                                      | A725819-4 | 32 |

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## Deep Cabinets

| Module Type   | Rows/<br>Tier | Cabinet Width |      | Cabinet Height |      | Cabinet Length<br>24.9 in.<br>(633 mm) |            | Cabinet Length<br>38.6 in.<br>(979 mm) |            | Cabinet Length<br>46.8 in.<br>(1189 mm) |            | Cabinet Length<br>59.1 in.<br>(1500 mm) |            |    |
|---|---------------|---------------|------|----------------|------|--|------------|--|------------|---|------------|---|------------|----|
|   |               | (in)          | (mm) | (in)           | (mm) | P/N                                    | Qty        | P/N                                    | Qty        | P/N                                     | Qty        | P/N                                     | Qty        |    |
| 12SLA25   | 4             | 27.0          | 686  | 2              | 40   | 1016                                   | A402427-8  | 16                                     | A403727-8  | 32                                      | A404527-8  | 40                                      | A405827-8  | 48 |
|   |               |               |      | 3              | 56   | 1422                                   | A562427-12 | 24                                     | A563727-12 | 48                                      | A564527-12 | 60                                      | A565827-12 | 72 |
|   |               |               |      | 4              | 72   | 1829                                   | A722427-16 | 32                                     | A723727-16 | 64                                      | A724527-16 | 80                                      | A725827-16 | 96 |
| 12SLA75   | 3             | 27.0          | 686  | 2              | 40   | 1016                                   | A402427-6  | 6                                      | A403727-6  | 12                                      | A404527-6  | 12                                      | A405827-6  | 18 |
|   |               |               |      | 3              | 56   | 1422                                   | A562427-9  | 9                                      | A563727-9  | 18                                      | A564527-9  | 18                                      | A565827-9  | 27 |
|   |               |               |      | 4              | 72   | 1829                                   | A722427-12 | 12                                     | A723727-12 | 24                                      | A724527-12 | 24                                      | A725827-12 | 36 |
| 12SLA37/50<br>6SLA100<br>4SLA150<br>2SLA200/250/300 | 2             | 27.0          | 686  | 2              | 40   | 1016                                   | A402427-4  | 12                                     | A403727-4  | 20                                      | A404527-4  | 24                                      | A405827-4  | 32 |
|   |               |               |      | 3              | 56   | 1422                                   | A562427-6  | 18                                     | A563727-6  | 30                                      | A564527-6  | 36                                      | A565827-6  | 48 |
|   |               |               |      | 4              | 72   | 1829                                   | A722427-8  | 24                                     | A723727-8  | 40                                      | A724527-8  | 48                                      | A725827-8  | 64 |
| 2SLA400/500/580                                     | 2             | 35.0          | 889  | 2              | 40   | 1016                                   | A402435-4  | 12                                     | A403735-4  | 20                                      | A404535-4  | 24                                      | A405835-4  | 32 |
|   |               |               |      | 3              | 56   | 1422                                   | A562435-6  | 18                                     | A563735-6  | 30                                      | A564535-6  | 36                                      | A565835-6  | 48 |
|   |               |               |      | 4              | 72   | 1829                                   | A722435-8  | 24                                     | A723735-8  | 40                                      | A724535-8  | 48                                      | A725835-8  | 64 |

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# MONOLITE Rack Systems

## Specifications

MONOLITE rack systems are built to the following specifications:

**Support Frames:** RSL racks—1.63 x 1.63 x .139 in. channel  
41 x 41 x 3.5 mm

RSE racks—2.50 x 2.50 x .139 in. channel  
64 x 64 x 3.5 mm

**Rack Rails:** 2.00 x 2.00 x .188 in. angle  
51 x 51 x 4.8 mm

**Finish:** Phosphate surface treatment with  
ASA 61 gray epoxy powder coat

## Narrow Frame Racks

| Module Type   | Rows/<br>Tier | Rack<br>Width |      | No. of<br>Tiers | Rack<br>Height |      | Rack Length<br>24 in.<br>(610 mm) |     | Rack Length<br>37 in.<br>(940 mm) |     | Rack Length<br>45 in.<br>(1143 mm) |     | Rack Length<br>58 in.<br>(1473 mm) |     |
|---|---------------|---------------|------|-----------------|----------------|------|-----------------------------------|-----|-----------------------------------|-----|------------------------------------|-----|------------------------------------|-----|
|   |               | (in)          | (mm) |                 | (in)           | (mm) | P/N                               | Qty | P/N                               | Qty | P/N                                | Qty | P/N                                | Qty |
| 12SLA25   | 2             | 15.75         | 400  | 1               | 16             | 406  | RSL24N2-1                         | 4   | RSL37N2-1                         | 8   | RSL45N2-1                          | 10  | RSL58N2-1                          | 12  |
|   |               |               |      | 2               | 32             | 813  | RSL24N2-2                         | 8   | RSL37N2-2                         | 16  | RSL45N2-2                          | 20  | RSL58N2-2                          | 24  |
|   |               |               |      | 3               | 48             | 1219 | RSL24N2-3                         | 12  | RSL37N2-3                         | 24  | RSL45N2-3                          | 30  | RSL58N2-3                          | 36  |
|   |               |               |      | 4               | 64             | 1626 | RSL24N2-4                         | 16  | RSL37N2-4                         | 32  | RSL45N2-4                          | 40  | RSL58N2-4                          | 48  |
|   |               |               |      | 5               | 80             | 2032 | RSL24N2-5                         | 20  | RSL37N2-5                         | 40  | RSL45N2-5                          | 50  | RSL58N2-5                          | 60  |
| 12SLA37/50<br>6SLA100<br>4SLA150<br>2SLA200/250/300 | 1             | 15.75         | 400  | 1               | 16             | 406  | RSL24N1-1                         | 3   | RSL37N1-1                         | 5   | RSL45N1-1                          | 6   | RSL58N1-1                          | 8   |
|   |               |               |      | 2               | 32             | 813  | RSL24N1-2                         | 6   | RSL37N1-2                         | 10  | RSL45N1-2                          | 12  | RSL58N1-2                          | 16  |
|   |               |               |      | 3               | 48             | 1219 | RSL24N1-3                         | 9   | RSL37N1-3                         | 15  | RSL45N1-3                          | 18  | RSL58N1-3                          | 24  |
|   |               |               |      | 4               | 64             | 1626 | RSL24N1-4                         | 12  | RSL37N1-4                         | 20  | RSL45N1-4                          | 24  | RSL58N1-4                          | 32  |
|   |               |               |      | 5               | 80             | 2032 | RSL24N1-5                         | 15  | RSL37N1-5                         | 25  | RSL45N1-5                          | 30  | RSL58N1-5                          | 40  |
| 2SLA400/500/580                                     | 1             | 21.50         | 546  | 1               | 16             | 406  | RSE24N1-1                         | 3   | RSE37N1-1                         | 5   | RSE45N1-1                          | 6   | RSE58N1-1                          | 8   |
|   |               |               |      | 2               | 32             | 813  | RSE24N1-2                         | 6   | RSE37N1-2                         | 10  | RSE45N1-2                          | 12  | RSE58N1-2                          | 16  |
|   |               |               |      | 3               | 48             | 1219 | RSE24N1-3                         | 9   | RSE37N1-3                         | 15  | RSE45N1-3                          | 18  | RSE58N1-3                          | 24  |
|   |               |               |      | 4               | 64             | 1626 | RSE24N1-4                         | 12  | RSE37N1-4                         | 20  | RSE45N1-4                          | 24  | RSE58N1-4                          | 32  |
|   |               |               |      | 5               | 80             | 2032 | RSE24N1-5                         | 15  | RSE37N1-5                         | 25  | RSE45N1-5                          | 30  | RSE58N1-5                          | 40  |

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## Wide Frame Racks

| Module Type   | Rows/<br>Tier | Rack<br>Width |      | No. of<br>Tiers | Rack<br>Height |      | Rack Length<br>24 in.<br>(610 mm) |     | Rack Length<br>37 in.<br>(940 mm) |     | Rack Length<br>45 in.<br>(1143 mm) |     | Rack Length<br>58 in.<br>(1473 mm) |     |
|---|---------------|---------------|------|-----------------|----------------|------|-----------------------------------|-----|-----------------------------------|-----|------------------------------------|-----|------------------------------------|-----|
|   |               | (in)          | (mm) |                 | (in)           | (mm) | P/N                               | Qty | P/N                               | Qty | P/N                                | Qty | P/N                                | Qty |
| 12SLA25   | 4             | 28.25         | 718  | 1               | 16             | 406  | RSL24W4-1                         | 8   | RSL37W4-1                         | 16  | RSL45W4-1                          | 20  | RSL58W4-1                          | 24  |
|   |               |               |      | 2               | 32             | 813  | RSL24W4-2                         | 16  | RSL37W4-2                         | 32  | RSL45W4-2                          | 40  | RSL58W4-2                          | 48  |
|   |               |               |      | 3               | 48             | 1219 | RSL24W4-3                         | 24  | RSL37W4-3                         | 48  | RSL45W4-3                          | 60  | RSL58W4-3                          | 72  |
|   |               |               |      | 4               | 64             | 1626 | RSL24W4-4                         | 32  | RSL37W4-4                         | 64  | RSL45W4-4                          | 80  | RSL58W4-4                          | 96  |
|   |               |               |      | 5               | 80             | 2032 | RSL24W4-5                         | 40  | RSL37W4-5                         | 80  | RSL45W4-5                          | 100 | RSL58W4-5                          | 120 |
| 12SLA75   | 3             | 28.25         | 718  | 1               | 16             | 406  | RSL24W3-1                         | 3   | RSL37W3-1                         | 6   | RSL45W3-1                          | 6   | RSL58W3-1                          | 9   |
|   |               |               |      | 2               | 32             | 813  | RSL24W3-2                         | 6   | RSL37W3-2                         | 12  | RSL45W3-2                          | 12  | RSL58W3-2                          | 18  |
|   |               |               |      | 3               | 48             | 1219 | RSL24W3-3                         | 9   | RSL37W3-3                         | 18  | RSL45W3-3                          | 18  | RSL58W3-3                          | 27  |
|   |               |               |      | 4               | 64             | 1626 | RSL24W3-4                         | 12  | RSL37W3-4                         | 24  | RSL45W3-4                          | 24  | RSL58W3-4                          | 36  |
|   |               |               |      | 5               | 80             | 2032 | RSL24W3-5                         | 15  | RSL37W3-5                         | 30  | RSL45W3-5                          | 30  | RSL58W3-5                          | 45  |
| 12SLA37/50<br>6SLA100<br>4SLA150<br>2SLA200/250/300 | 2             | 28.25         | 718  | 1               | 16             | 406  | RSL24W2-1                         | 6   | RSL37W2-1                         | 10  | RSL45W2-1                          | 12  | RSL58W2-1                          | 16  |
|   |               |               |      | 2               | 32             | 813  | RSL24W2-2                         | 12  | RSL37W2-2                         | 20  | RSL45W2-2                          | 24  | RSL58W2-2                          | 32  |
|   |               |               |      | 3               | 48             | 1219 | RSL24W2-3                         | 18  | RSL37W2-3                         | 30  | RSL45W2-3                          | 36  | RSL58W2-3                          | 48  |
|   |               |               |      | 4               | 64             | 1626 | RSL24W2-4                         | 24  | RSL37W2-4                         | 40  | RSL45W2-4                          | 48  | RSL58W2-4                          | 64  |
|   |               |               |      | 5               | 80             | 2032 | RSL24W2-5                         | 30  | RSL37W2-5                         | 50  | RSL45W2-5                          | 60  | RSL58W2-5                          | 80  |
| 2SLA400/500/580                                     | 2             | 38.00         | 965  | 1               | 16             | 406  | RSE24W2-1                         | 6   | RSE37W2-1                         | 10  | RSE45W2-1                          | 12  | RSE58W2-1                          | 16  |
|   |               |               |      | 2               | 32             | 813  | RSE24W2-2                         | 12  | RSE37W2-2                         | 20  | RSE45W2-2                          | 24  | RSE58W2-2                          | 32  |
|   |               |               |      | 3               | 48             | 1219 | RSE24W2-3                         | 18  | RSE37W2-3                         | 30  | RSE45W2-3                          | 36  | RSE58W2-3                          | 48  |
|   |               |               |      | 4               | 64             | 1626 | RSE24W2-4                         | 24  | RSE37W2-4                         | 40  | RSE45W2-4                          | 48  | RSE58W2-4                          | 64  |
|   |               |               |      | 5               | 80             | 2032 | RSE24W2-5                         | 30  | RSE37W2-5                         | 50  | RSE45W2-5                          | 60  | RSE58W2-5                          | 80  |

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**Full Nickel Cadmium  
Range (H, M, L)**  
5 - 1,540 Ah



**Single- and  
Three-Phase  
Chargers**



**MONOLITE Valve-Regulated  
Lead Acid**  
25 - 1,000 Ah



**Vantage  
Valve-Regulated  
Nickel Cadmium**  
8 - 476 Ah

### The Alcad Difference

Alcad Standby Batteries enjoys a unique position in the standby battery power industry. No other supplier in North America can even come close to matching the versatility of the Alcad range.

Unlike other manufacturers, Alcad offers an extremely comprehensive range of both nickel cadmium *and* lead acid batteries.

This unparalleled product range enables Alcad to justify its claim to be able to offer completely unbiased battery advice. It is impossible to be truly objective without the ability to be able to offer *all* available technologies.

It is with this background that Alcad's engineering staff are the best qualified to advise you on the most suitable battery for your specific application.

We at Alcad Standby Batteries are committed to the principle that:

*"Every Application Deserves  
the Right Battery"*



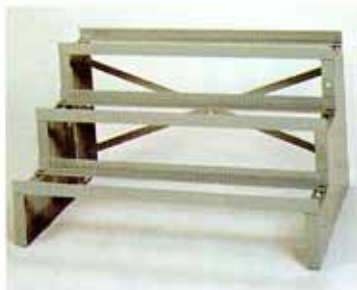
**Lead Selenium  
Pasted Plate**  
80 - 2,400 Ah



**Planté Lead Acid**  
84 - 2,537 Ah



**Battery Cabinets and  
Battery/Charger Cabinets**



**Stepped and Tiered  
Battery Racks**



**Qualified/Certified Seismic  
Battery Racks**



**Lead Selenium  
Tubular Plate**  
50 - 3,400 Ah



Represented in your area by:

Delivering quality

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**ALCAD**

**Alcad Standby Batteries**

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