

# The NicaCell KP Series

Low, medium and high  
rate of discharge Nickel  
Cadmium power solutions

**Crafted for critical  
applications**



# NicaCell KP



## Specification

|                             |   |
|-----------------------------|---|
| <b>Positive electrode</b>   | Horizontal pockets of double-perforated steel strips  |
| <b>Negative electrode</b>   | Horizontal pockets of double-perforated steel strips  |
| <b>Float voltage</b>        | 1.40 to 1.42 vpc $\pm$ 1% at 20°C   |
| <b>Boost charge voltage</b> | 1.55 to 1.70 vpc $\pm$ 1% at 20°C   |
| <b>Trickle charge</b>       | 0.001 - 0.002 A/Ah  |
| <b>Electrolyte</b>          | Potassium Hydroxide   |
| <b>Safety valve</b>         | Flip top flame arresting vent   |
| <b>Separators</b>           | Separating grids  |
| <b>Terminals</b>            | Female or male nut and screw connection   |
| <b>Electrical</b>           | Low rate of discharge 14Ah-1700Ah, medium rate of discharge 20Ah-1350Ah, high rate of discharge 20Ah-800Ah at C/5 to 1.00vpc @ 20°C |

## Product information

### Innovative pocket plate design

The NicaCell KP series features long, medium and high rate of discharge options allowing you to select the optimum solution for all industrial applications. The series is crafted using our well-proven pocket plate design, making it perfect for extreme applications. These Ni-Cd cells will do the job when no other product can withstand your temperature, maintenance, deep discharge, or lifespan demands.

The NicaCell KP is built to German standards using a double-perforated plate design. The KP series offers supreme capabilities across almost all temperature series while being very resistant to electrical abuse and damage due to shock or vibration.

## Product benefits

### Reduced maintenance

NicaCell KP is a hardy battery range that is engineered for extreme applications. The KP range requires very little preventative maintenance to ensure long-life and operational reliability in a broad range of applications.

### Absolute reliability under harsh conditions

The NicaCell KP range of batteries is well suited to vibrational and high temperature environments and has a wide operational temperature range from  $-50^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ . The KP suffers no ice formation at temperatures below  $0^{\circ}\text{C}$  and has an extended lifetime while stationary cycling at high temperatures  $>20^{\circ}\text{C}$ .

### Increased safety

There is no risk of thermal runaway effect as there are no exothermic reactions. Recombination without the thermal runaway effect means it can run harder and faster than other competing batteries on the market.

## Design life

|               |   |
|---------------|---|
| <b>Years</b>  | $>20$ Years design life in float service @ $20^{\circ}\text{C}$ . |
| <b>Cycles</b> | up to 1,000 cycles @ 80% DOD as per IEC                           |

## Product compliance

|     |             |
|-----|-------------|
| IEC | 62259:2001  |
| ISO | 9001: 2015  |
| ISO | 14001: 2004 |
| EN  | 50522-2     |
| EN  | 61373       |



### Outstanding total cost of ownership

With a life cycle of 20 years plus and only a basic need for maintenance, the Total Cost of Ownership (TCO) of this range is hard to beat. Use it for a guaranteed start in diesel engines, UPS applications, railway, power systems and substations. It's also ideal for renewable energy stations, marine applications and telecommunication.

The KP range was crafted for critical applications. It offers the longest lifetime in the market today and gives exceptional reliability against unexpected outages for industrial installations that demand continuity of power.

### Exceptional operating costs over time

Nickel Cadmium offers high powered performance and high cycling capability for everyday users. It's perfect for applications requiring frequent use like solar and standby. The high cycling ability gives it one of the lowest levelised costs of energy on the market.

### Extended lifetime

The perforated pocket plate gives improved electrolyte access which means this Nickel Cadmium battery will last longer. It has no electrolyte stratification or plate corrosion which is a life-limiting factor in other batteries. It has a calendar life of over 20 years in stationary applications and a long shelf life in the right conditions.

### Quick charging

The KP has extremely low internal resistance, allowing quick recharge and operation at cooler temperatures. This makes it more efficient when your application demands a quick charge/recharge turnaround.

*“When reliability and performance cannot be compromised under any circumstances, the NicaCell KP range will deliver guaranteed outputs with unfailing efficiency.”*

## **Heston Harper** **CEO, SEC Group**

---










### **Innovative design**

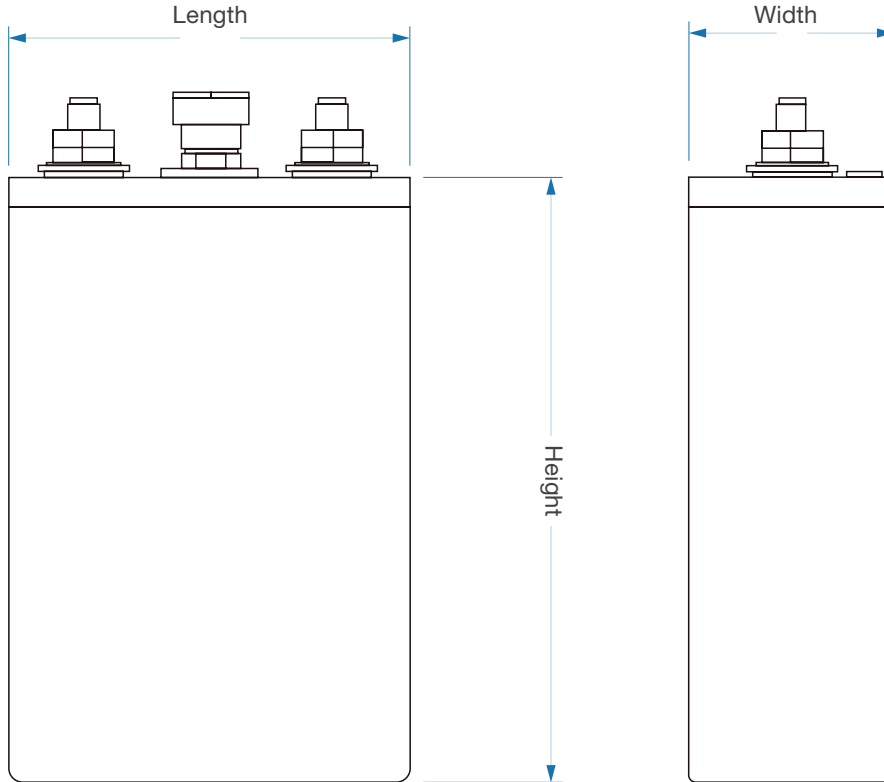
---

- ↻ **Excellent high power performance**
- ↻ **Absolute reliability under harsh conditions**
- ↻ **Superb power to weight and volume ratio**
- ↻ **Low internal resistance**
- ↻ **High cyclic capability**
- ↻ **Little to no maintenance required**
- ↻ **Exceptionally low operating costs over time**
- ↻ **No risk of thermal runaway**
- ↻ **Suited to vibrational and high temperature environments**
- ↻ **Wide operational temperature range between – 50°C to + 70°C**
- ↻ **No ice formation at temperatures below 0 °C**
- ↻ **Engineered for extreme applications**
- ↻ **Long shelf life in a discharged state with correct conditions**
- ↻ **No electrolyte stratification or plate corrosion**
- ↻ **Insensitive against misuse**
- ↻ **Extended lifetime at high temperatures in stationary cycling**

### **Applications**

---

- |  |   |   |
|--|---|---|
|  <b>UPS systems</b>                |  <b>Remote power and substations</b> |  <b>Telecommunications</b>     |
|  <b>Emergency lighting</b>         |  <b>Oil and gas refineries</b>       |  <b>Renewable applications</b> |
|  <b>Industrial process control</b> |  <b>Railroad signalling</b>          |  <b>Rail rolling stock</b>     |



## Cell dimensions-low (KL)

### Dimensions/ Weights/ Data

| SEC bloc type | Nominal capacity C/5 1.00 vpc | Battery weight (kg) |       | Overall battery dimension |       |        |              | Terminal number and size |
|---------------|-------------------------------|---------------------|-------|---------------------------|-------|--------|--------------|--------------------------|
|               |                               | Dry                 | Wet   | Length                    | Width | Height | Total Height |                          |
|               |                               |                     |       | mm                        | mm    | mm     | mm           |                          |
| 1.2-KL-14P    | 14                            | 0.75                | 1.25  | 46                        | 85    | 167    | 193          | 2 x M10                  |
| 1.2-KL-18P    | 18                            | 0.92                | 1.40  | 59                        | 113   | 213    | 235          | 2 x M10                  |
| 1.2-KL-25P    | 25                            | 1.10                | 1.50  | 59                        | 113   | 213    | 235          | 2 x M10                  |
| 1.2-KL-30P    | 30                            | 1.30                | 1.60  | 59                        | 113   | 213    | 235          | 2 x M10                  |
| 1.2-KL-40P    | 40                            | 1.80                | 2.70  | 59                        | 113   | 213    | 235          | 2 x M10                  |
| 1.2-KL-45P    | 45                            | 1.90                | 2.80  | 59                        | 113   | 213    | 235          | 2 x M10                  |
| 1.2-KL-55P    | 55                            | 2.00                | 2.80  | 59                        | 113   | 213    | 235          | 2 x M10                  |
| 1.2-KL-60P    | 60                            | 2.30                | 2.90  | 60                        | 127   | 253    | 275          | 2 x M14                  |
| 1.2-KL-80P    | 80                            | 3.30                | 5.30  | 74                        | 136   | 339    | 357          | 2 x M10                  |
| 1.2-KL-100P   | 100                           | 3.70                | 5.60  | 74                        | 136   | 339    | 357          | 2 x M10                  |
| 1.2-KL-120P   | 120                           | 3.90                | 5.70  | 74                        | 136   | 339    | 357          | 2 x M10                  |
| 1.2-KL-140P   | 140                           | 4.50                | 6.10  | 112                       | 134   | 291    | 327          | 2 x M16                  |
| 1.2-KL-150P   | 150                           | 4.90                | 7.10  | 112                       | 134   | 291    | 327          | 2 x M16                  |
| 1.2-KL-160P   | 160                           | 5.70                | 9.80  | 112                       | 134   | 291    | 327          | 2 x M16                  |
| 1.2-KL-180P   | 180                           | 6.30                | 9.90  | 118                       | 167   | 327    | 362          | 4 x M20                  |
| 1.2-KL-200P   | 200                           | 6.70                | 10.50 | 118                       | 167   | 327    | 362          | 4 x M20                  |
| 1.2-KL-230P   | 230                           | 7.50                | 10.80 | 118                       | 167   | 327    | 362          | 4 x M20                  |

## Cell dimensions-low (KL)

### Dimensions/ Weights/ Data

| SEC bloc type | Nominal capacity C/5 1.00 vpc | Battery weight (kg) |       | Overall battery dimension |       |        |              | Terminal number and size |
|---------------|-------------------------------|---------------------|-------|---------------------------|-------|--------|--------------|--------------------------|
|               |                               | Dry                 | Wet   | Length                    | Width | Height | Total Height |                          |
|               |                               |                     |       | mm                        | mm    | mm     | mm           |                          |
| 1.2-KL-275P   | 275                           | 8.40                | 11.30 | 129                       | 167   | 364    | 400          | 2 x M20                  |
| 1.2-KL-300P   | 300                           | 9.10                | 11.80 | 129                       | 167   | 364    | 400          | 2 x M20                  |
| 1.2-KL-330P   | 330                           | 11.50               | 16.50 | 129                       | 167   | 364    | 400          | 2 x M20                  |
| 1.2-KL-380P   | 380                           | 12.30               | 17.00 | 129                       | 167   | 364    | 400          | 2 x M20                  |
| 1.2-KL-400P   | 400                           | 13.00               | 17.80 | 171                       | 174   | 337    | 372          | 4 x M20                  |
| 1.2-KL-435P   | 435                           | 13.80               | 18.30 | 171                       | 174   | 337    | 372          | 4 x M20                  |
| 1.2-KL-480P   | 480                           | 14.60               | 18.80 | 171                       | 174   | 337    | 372          | 4 x M20                  |
| 1.2-KL-500P   | 500                           | 18.30               | 26.70 | 176                       | 246   | 382    | 408          | 4 x M10                  |
| 1.2-KL-560P   | 560                           | 18.80               | 27.20 | 176                       | 246   | 382    | 408          | 4 x M10                  |
| 1.2-KL-625P   | 625                           | 20.40               | 28.30 | 176                       | 246   | 382    | 408          | 4 x M10                  |
| 1.2-KL-650P   | 650                           | 23.70               | 37.00 | 176                       | 368   | 382    | 421          | 6 x M10                  |
| 1.2-KL-750P   | 750                           | 25.90               | 38.00 | 176                       | 368   | 382    | 421          | 6 x M10                  |
| 1.2-KL-800P   | 800                           | 26.50               | 38.70 | 176                       | 368   | 382    | 421          | 6 x M10                  |
| 1.2-KL-850P   | 850                           | 28.00               | 40.60 | 176                       | 368   | 382    | 421          | 6 x M10                  |
| 1.2-KL-910P   | 910                           | 30.50               | 43.90 | 176                       | 368   | 382    | 421          | 6 x M10                  |
| 1.2-KL-1000P  | 1000                          | 39.30               | 52.50 | 176                       | 448   | 382    | 421          | 8 x M10                  |
| 1.2-KL-1040P  | 1040                          | 40.50               | 55.20 | 176                       | 448   | 382    | 421          | 8 x M10                  |
| 1.2-KL-1120P  | 1120                          | 41.50               | 56.20 | 176                       | 448   | 382    | 421          | 8 x M10                  |
| 1.2-KL-1250P  | 1250                          | 42.50               | 62.00 | 176                       | 558   | 382    | 421          | 10 x M10                 |
| 1.2-KL-1350P  | 1350                          | 44.88               | 64.90 | 176                       | 558   | 382    | 421          | 10 x M10                 |
| 1.2-KL-1400P  | 1400                          | 46.50               | 67.30 | 176                       | 558   | 382    | 421          | 10 x M10                 |
| 1.2-KL-1500P  | 1500                          | 48.90               | 66.40 | 176                       | 558   | 382    | 421          | 10 x M10                 |
| 1.2-KL-1600P  | 1600                          | 52.16               | 70.80 | 176                       | 558   | 382    | 421          | 10 x M10                 |
| 1.2-KL-1700P  | 1700                          | 55.50               | 75.30 | 176                       | 558   | 382    | 421          | 10 x M10                 |

## Cell dimensions-medium (KM)

### Dimensions/ Weights/ Data

| SEC bloc type | Nominal capacity C/5 1.00 vpc | Battery weight (kg) |     | Overall battery dimension |       |        |              | Terminal number and size |
|---------------|-------------------------------|---------------------|-----|---------------------------|-------|--------|--------------|--------------------------|
|               |                               | Dry                 | Wet | Length                    | Width | Height | Total Height |                          |
|               |                               |                     |     | mm                        | mm    | mm     | mm           |                          |
| 1.2-KM-20P    | 20                            | 1.0                 | 1.5 | 59                        | 113   | 213    | 235          | 2 x M10                  |
| 1.2-KM-30P    | 30                            | 1.4                 | 1.7 | 59                        | 113   | 213    | 235          | 2 x M10                  |
| 1.2-KM-40P    | 40                            | 1.9                 | 2.8 | 59                        | 113   | 213    | 235          | 2 x M10                  |
| 1.2-KM-50P    | 50                            | 2.1                 | 2.8 | 60                        | 127   | 253    | 275          | 2 x M14                  |
| 1.2-KM-70P    | 70                            | 3.6                 | 4.9 | 60                        | 127   | 253    | 275          | 2 x M14                  |
| 1.2-KM-80P    | 80                            | 3.8                 | 5.0 | 74                        | 136   | 339    | 357          | 2 x M10                  |
| 1.2-KM-100P   | 100                           | 4.4                 | 6.2 | 74                        | 136   | 339    | 357          | 2 x M10                  |

## Cell dimensions-medium (KM)

### Dimensions/ Weights/ Data

| SEC bloc type | Nominal capacity C/5 1.00 vpc | Battery weight (kg) |      | Overall battery dimension |       |        |              | Terminal number and size |
|---------------|-------------------------------|---------------------|------|---------------------------|-------|--------|--------------|--------------------------|
|               |                               | Dry                 | Wet  | Length                    | Width | Height | Total Height |                          |
|               |                               |                     |      | mm                        | mm    | mm     | mm           |                          |
| 1.2-KM-120P   | 120                           | 5.6                 | 7.7  | 74                        | 136   | 339    | 357          | 2 x M10                  |
| 1.2-KM-140P   | 140                           | 6.0                 | 7.8  | 112                       | 134   | 291    | 327          | 2 x M16                  |
| 1.2-KM-160P   | 160                           | 6.9                 | 10.6 | 112                       | 134   | 291    | 327          | 2 x M16                  |
| 1.2-KM-180P   | 180                           | 7.5                 | 10.9 | 118                       | 167   | 327    | 362          | 4 x M20                  |
| 1.2-KM-200P   | 200                           | 8.8                 | 11.6 | 118                       | 167   | 327    | 362          | 4 x M20                  |
| 1.2-KM-240P   | 240                           | 9.6                 | 12.2 | 129                       | 167   | 364    | 400          | 2 x M20                  |
| 1.2-KM-280P   | 280                           | 11.2                | 16.3 | 129                       | 167   | 364    | 400          | 2 x M20                  |
| 1.2-KM-300P   | 300                           | 11.5                | 16.5 | 129                       | 167   | 364    | 400          | 2 x M20                  |
| 1.2-KM-320P   | 320                           | 12.2                | 17.0 | 129                       | 167   | 364    | 400          | 2 x M20                  |
| 1.2-KM-340P   | 340                           | 13.0                | 17.5 | 129                       | 167   | 364    | 400          | 2 x M20                  |
| 1.2-KM-375P   | 375                           | 32.0                | 43.1 | 171                       | 174   | 337    | 372          | 4 x M20                  |
| 1.2-KM-400P   | 400                           | 15.1                | 18.9 | 171                       | 174   | 337    | 372          | 4 x M20                  |
| 1.2-KM-420P   | 420                           | 18.7                | 25.4 | 171                       | 174   | 337    | 372          | 4 x M20                  |
| 1.2-KM-450P   | 450                           | 20.0                | 27.3 | 171                       | 174   | 337    | 372          | 4 x M20                  |
| 1.2-KM-500P   | 500                           | 21.2                | 28.3 | 176                       | 246   | 382    | 410          | 4 x M10                  |
| 1.2-KM-550P   | 550                           | 22.4                | 29.3 | 176                       | 246   | 382    | 410          | 4 x M10                  |
| 1.2-KM-580P   | 580                           | 23.2                | 30.4 | 176                       | 246   | 382    | 410          | 4 x M10                  |
| 1.2-KM-600P   | 600                           | 27.0                | 40.7 | 176                       | 368   | 382    | 420          | 6 x M10                  |
| 1.2-KM-675P   | 675                           | 30.8                | 43.7 | 176                       | 368   | 382    | 420          | 6 x M10                  |
| 1.2-KM-705P   | 705                           | 29.5                | 41.9 | 176                       | 368   | 382    | 420          | 6 x M10                  |
| 1.2-KM-750P   | 750                           | 32.0                | 43.1 | 176                       | 368   | 382    | 420          | 6 x M10                  |
| 1.2-KM-850P   | 850                           | 36.2                | 48.8 | 176                       | 448   | 382    | 420          | 8 x M10                  |
| 1.2-KM-950P   | 950                           | 40.7                | 53.2 | 176                       | 448   | 382    | 420          | 8 x M10                  |
| 1.2-KM-1000P  | 1000                          | 42.8                | 56.0 | 176                       | 448   | 382    | 420          | 8 x M10                  |
| 1.2-KM-1050P  | 1050                          | 44.9                | 58.8 | 176                       | 448   | 382    | 420          | 8 x M10                  |
| 1.2-KM-1150P  | 1150                          | 48.2                | 63.4 | 176                       | 558   | 382    | 420          | 10 x M10                 |
| 1.2-KM-1250P  | 1250                          | 52.4                | 68.9 | 176                       | 558   | 382    | 420          | 10 x M10                 |
| 1.2-KM-1350P  | 1350                          | 58.3                | 76.6 | 176                       | 558   | 382    | 420          | 10 x M10                 |

## Cell dimensions-high (KH)

### Dimensions/ Weights/ Data

| SEC bloc type | Nominal capacity C/5 1.00 vpc | Battery weight (kg) |      | Overall battery dimension |       |        |              | Terminal number and size |
|---------------|-------------------------------|---------------------|------|---------------------------|-------|--------|--------------|--------------------------|
|               |                               | Dry                 | Wet  | Length                    | Width | Height | Total Height |                          |
|               |                               |                     |      | mm                        | mm    | mm     | mm           |                          |
| 1.2-KH-20P    | 20                            | 1.57                | 1.90 | 59                        | 113   | 213    | 235          | 2 x M10                  |
| 1.2-KH-30P    | 30                            | 2.70                | 4.13 | 59                        | 113   | 213    | 235          | 2 x M10                  |
| 1.2-KH-40P    | 40                            | 3.12                | 4.37 | 60                        | 127   | 253    | 275          | 2 x M14                  |

## Cell dimensions-high (KH)

### Dimensions/ Weights/ Data

| SEC bloc type      | Nominal capacity C/5 1.00 vpc | Battery weight (kg) |       | Overall battery dimension |       |        |              | Terminal number and size |
|--------------------|-------------------------------|---------------------|-------|---------------------------|-------|--------|--------------|--------------------------|
|                    |                               | Dry                 | Wet   | Length                    | Width | Height | Total Height |                          |
|                    |                               |                     |       | mm                        | mm    | mm     | mm           |                          |
| <b>1.2-KH-60P</b>  | 60                            | 4.52                | 6.10  | 74                        | 136   | 339    | 357          | 2 x M14                  |
| <b>1.2-KH-80P</b>  | 80                            | 5.37                | 6.63  | 74                        | 136   | 339    | 357          | 2 x M14                  |
| <b>1.2-KH-100P</b> | 100                           | 6.49                | 8.82  | 112                       | 134   | 291    | 327          | 2 x M16                  |
| <b>1.2-KH-120P</b> | 120                           | 7.82                | 9.69  | 112                       | 134   | 291    | 327          | 2 x M16                  |
| <b>1.2-KH-140P</b> | 140                           | 8.87                | 11.90 | 118                       | 167   | 327    | 362          | 4 x M20                  |
| <b>1.2-KH-170P</b> | 170                           | 10.57               | 15.59 | 171                       | 174   | 337    | 372          | 4 x M20                  |
| <b>1.2-KH-190P</b> | 190                           | 11.38               | 16.18 | 171                       | 174   | 337    | 372          | 4 x M20                  |
| <b>1.2-KH-200P</b> | 200                           | 12.60               | 17.06 | 171                       | 174   | 337    | 372          | 4 x M20                  |
| <b>1.2-KH-250P</b> | 250                           | 13.00               | 17.35 | 171                       | 174   | 337    | 372          | 4 x M20                  |
| <b>1.2-KH-275P</b> | 275                           | 16.98               | 23.70 | 176                       | 246   | 330    | 360          | 4 x M10                  |
| <b>1.2-KH-300P</b> | 300                           | 17.68               | 24.18 | 176                       | 246   | 330    | 360          | 4 x M10                  |
| <b>1.2-KH-320P</b> | 320                           | 18.46               | 24.60 | 176                       | 246   | 330    | 360          | 4 x M10                  |
| <b>1.2-KH-350P</b> | 350                           | 22.68               | 33.86 | 176                       | 368   | 330    | 360          | 6 x M10                  |

## Operating temperature (All)

|                                    |              |
|------------------------------------|--------------|
| <b>Design operating</b>            | 20°C         |
| <b>Operating temperature range</b> | -50 to +70°C |
| <b>Limit for storage</b>           | +10 to +30°C |

## Charging in operation

### Two step charge

|                             |   |
|-----------------------------|---|
| <b>Float Voltage</b>        | 1.40 - 1.42 vpc at 20°C   |
| <b>Boost charge voltage</b> | 1.55 - 1.70 vpc at 20°C   |
| <b>Current limitation</b>   | 0.3 I <sub>A</sub> - L type<br>0.4 I <sub>A</sub> - M type<br>0.5 I <sub>A</sub> - H type |

### Buffer Operation

|  |                             |
|--|-----------------------------|
| <b>Average Value</b>                   | 1.55 - 1.60 vpc at 20°C     |
| <b>Temperature compensation factor</b> | -3mV/°C<br>baseline at 20°C |



# Current-low (KL)

Amperes at 20°C

SEC bloc type

Discharge data AMPS at 20°C

|                    | End volts/<br>Cell | Discharge time in hours |      |      |      |      |      |      |      |      |      |      |
|--------------------|--------------------|-------------------------|------|------|------|------|------|------|------|------|------|------|
|                    |                    | 0.5hr                   | 1hr  | 2hr  | 3hr  | 4hr  | 5hr  | 6hr  | 7hr  | 8hr  | 9hr  | 10hr |
| <b>1.2-KL-14P</b>  | 1.15               | 7.57                    | 6.27 | 4.39 | 3.39 | 2.91 | 2.61 | 2.27 | 1.96 | 1.73 | 1.55 | 1.40 |
|                    | 1.10               | 9.49                    | 7.92 | 5.41 | 3.95 | 3.08 | 2.74 | 2.32 | 2.04 | 1.79 | 1.59 | 1.44 |
|                    | 1.05               | 12.1                    | 9.38 | 6.16 | 4.25 | 3.33 | 2.77 | 2.34 | 2.05 | 1.81 | 1.60 | 1.45 |
|                    | 1.00               | 12.1                    | 9.38 | 6.16 | 4.25 | 3.33 | 2.77 | 2.34 | 2.05 | 1.81 | 1.60 | 1.45 |
| <b>1.2-KL-18P</b>  | 1.15               | 9.78                    | 8.07 | 5.64 | 4.35 | 3.75 | 3.36 | 2.91 | 2.57 | 2.25 | 2.00 | 1.80 |
|                    | 1.10               | 12.2                    | 10.2 | 6.96 | 5.07 | 3.96 | 3.51 | 2.97 | 2.63 | 2.30 | 2.05 | 1.84 |
|                    | 1.05               | 15.6                    | 12.1 | 7.92 | 5.46 | 4.29 | 3.57 | 3.02 | 2.66 | 2.33 | 2.06 | 1.86 |
|                    | 1.00               | 18.5                    | 14.0 | 8.52 | 5.97 | 4.48 | 3.60 | 3.04 | 2.69 | 2.35 | 2.09 | 1.88 |
| <b>1.2-KL-25P</b>  | 1.15               | 13.6                    | 11.2 | 7.83 | 6.04 | 5.21 | 4.67 | 4.04 | 3.56 | 3.13 | 2.77 | 2.50 |
|                    | 1.10               | 17.0                    | 14.1 | 9.67 | 7.04 | 5.50 | 4.88 | 4.13 | 3.66 | 3.20 | 2.84 | 2.56 |
|                    | 1.05               | 21.7                    | 16.8 | 11.4 | 7.58 | 5.96 | 4.96 | 4.19 | 3.69 | 3.24 | 2.86 | 2.58 |
|                    | 1.00               | 25.8                    | 19.5 | 11.8 | 8.29 | 6.23 | 5.00 | 4.23 | 3.73 | 3.27 | 2.91 | 2.61 |
| <b>1.2-KL-30P</b>  | 1.15               | 16.3                    | 13.5 | 9.40 | 7.25 | 6.25 | 5.60 | 4.85 | 4.28 | 3.75 | 3.33 | 3.00 |
|                    | 1.10               | 20.4                    | 17.0 | 11.6 | 8.45 | 6.60 | 5.85 | 4.95 | 4.39 | 3.84 | 3.41 | 3.07 |
|                    | 1.05               | 26.0                    | 20.1 | 13.2 | 9.10 | 7.15 | 5.95 | 5.03 | 4.43 | 3.89 | 3.44 | 3.10 |
|                    | 1.00               | 30.9                    | 23.4 | 14.2 | 10.0 | 7.47 | 6.00 | 5.07 | 4.48 | 3.92 | 3.49 | 3.14 |
| <b>1.2-KL-40P</b>  | 1.15               | 20.0                    | 17.2 | 12.9 | 9.80 | 8.40 | 7.40 | 6.30 | 5.50 | 4.80 | 4.30 | 3.90 |
|                    | 1.10               | 26.1                    | 21.5 | 15.7 | 11.7 | 9.20 | 7.70 | 6.50 | 5.60 | 4.90 | 4.40 | 3.90 |
|                    | 1.05               | 32.0                    | 25.2 | 16.9 | 12.3 | 9.50 | 7.90 | 6.60 | 5.70 | 5.00 | 4.50 | 4.10 |
|                    | 1.00               | 37.2                    | 28.3 | 17.5 | 12.6 | 9.70 | 8.00 | 6.70 | 5.80 | 5.20 | 4.60 | 4.20 |
| <b>1.2-KL-45P</b>  | 1.15               | 22.5                    | 19.4 | 14.6 | 11.0 | 9.40 | 8.30 | 7.10 | 6.10 | 5.40 | 4.80 | 4.40 |
|                    | 1.10               | 29.5                    | 24.2 | 17.7 | 13.2 | 10.3 | 8.60 | 7.30 | 6.40 | 5.60 | 4.90 | 4.40 |
|                    | 1.05               | 36.0                    | 28.4 | 19.1 | 13.8 | 10.6 | 8.80 | 7.40 | 6.50 | 5.60 | 5.10 | 4.60 |
|                    | 1.00               | 41.9                    | 31.8 | 19.7 | 14.1 | 10.9 | 9.00 | 7.50 | 6.50 | 5.80 | 5.20 | 4.70 |
| <b>1.2-KL-55P</b>  | 1.15               | 27.5                    | 23.7 | 17.8 | 13.5 | 11.5 | 10.2 | 8.70 | 7.50 | 6.60 | 5.90 | 5.30 |
|                    | 1.10               | 36.0                    | 29.6 | 21.6 | 16.1 | 12.6 | 10.6 | 8.90 | 7.80 | 6.80 | 6.00 | 5.40 |
|                    | 1.05               | 44.0                    | 34.7 | 23.3 | 16.9 | 13.0 | 10.8 | 9.10 | 7.90 | 6.90 | 6.20 | 5.60 |
|                    | 1.00               | 51.2                    | 38.9 | 24.1 | 17.3 | 13.3 | 11.0 | 9.20 | 8.00 | 7.10 | 6.30 | 5.80 |
| <b>1.2-KL-60P</b>  | 1.15               | 30.0                    | 25.9 | 19.4 | 14.7 | 12.5 | 11.1 | 9.49 | 8.18 | 7.20 | 6.44 | 5.78 |
|                    | 1.10               | 39.3                    | 32.3 | 23.6 | 17.6 | 13.7 | 11.6 | 9.71 | 8.51 | 7.42 | 6.55 | 5.89 |
|                    | 1.05               | 48.0                    | 37.9 | 25.4 | 18.4 | 14.2 | 11.8 | 9.93 | 8.62 | 7.53 | 6.76 | 6.11 |
|                    | 1.00               | 55.9                    | 42.4 | 26.3 | 18.9 | 14.5 | 12.0 | 10.0 | 8.73 | 7.75 | 6.87 | 6.33 |
| <b>1.2-KL-80P</b>  | 1.15               | 38.4                    | 33.6 | 25.8 | 20.3 | 16.8 | 14.2 | 12.0 | 10.4 | 9.40 | 8.40 | 7.50 |
|                    | 1.10               | 49.2                    | 41.6 | 31.4 | 24.4 | 19.2 | 15.6 | 13.2 | 11.3 | 9.90 | 8.80 | 8.00 |
|                    | 1.05               | 62.0                    | 50.8 | 35.6 | 25.7 | 19.5 | 15.8 | 13.3 | 11.4 | 9.90 | 9.00 | 8.10 |
|                    | 1.00               | 74.8                    | 59.2 | 37.6 | 26.0 | 19.7 | 16.0 | 13.4 | 11.6 | 10.1 | 9.10 | 8.20 |
| <b>1.2-KL-100P</b> | 1.15               | 48.0                    | 42.0 | 32.3 | 25.4 | 21.0 | 17.7 | 15.0 | 13.0 | 11.7 | 10.5 | 9.40 |
|                    | 1.10               | 61.5                    | 52.0 | 39.2 | 30.5 | 24.0 | 19.5 | 16.5 | 14.1 | 12.3 | 11.0 | 10.0 |
|                    | 1.05               | 77.5                    | 63.5 | 44.5 | 32.1 | 24.4 | 19.8 | 16.6 | 14.3 | 12.4 | 11.2 | 10.1 |
|                    | 1.00               | 93.5                    | 74.0 | 47.0 | 32.5 | 24.6 | 20.0 | 16.8 | 14.5 | 12.7 | 11.3 | 10.2 |
| <b>1.2-KL-120P</b> | 1.15               | 57.6                    | 50.4 | 38.8 | 30.5 | 25.2 | 21.2 | 18.0 | 15.6 | 14.0 | 12.6 | 11.3 |
|                    | 1.10               | 73.8                    | 62.4 | 47.0 | 36.6 | 28.8 | 23.4 | 19.4 | 17.0 | 14.8 | 13.2 | 12.0 |
|                    | 1.05               | 93.0                    | 76.2 | 53.4 | 38.5 | 29.2 | 23.8 | 19.9 | 17.1 | 14.9 | 13.4 | 12.1 |
|                    | 1.00               | 112                     | 88.8 | 56.4 | 39.0 | 29.6 | 24.0 | 20.2 | 17.4 | 15.2 | 13.6 | 12.2 |
| <b>1.2-KL-140P</b> | 1.15               | 67.2                    | 58.8 | 45.2 | 35.6 | 29.4 | 24.8 | 21.0 | 18.2 | 16.4 | 14.7 | 13.2 |
|                    | 1.10               | 86.1                    | 72.8 | 54.9 | 42.7 | 33.6 | 27.3 | 23.1 | 19.8 | 17.3 | 15.4 | 14.0 |
|                    | 1.05               | 109                     | 88.9 | 62.3 | 44.9 | 34.1 | 27.7 | 23.2 | 20.0 | 17.4 | 15.7 | 14.1 |
|                    | 1.00               | 131                     | 104  | 65.8 | 45.5 | 34.6 | 28.0 | 23.5 | 20.3 | 17.7 | 15.9 | 14.3 |
| <b>1.2-KL-150P</b> | 1.15               | 70.0                    | 61.1 | 47.5 | 37.7 | 31.4 | 26.6 | 22.7 | 19.6 | 17.5 | 15.6 | 14.1 |
|                    | 1.10               | 89.5                    | 75.7 | 57.7 | 45.4 | 35.9 | 29.1 | 24.7 | 21.3 | 18.6 | 16.6 | 15.0 |
|                    | 1.05               | 113                     | 92.3 | 65.4 | 48.0 | 36.7 | 29.7 | 24.9 | 21.5 | 18.8 | 16.9 | 15.2 |
|                    | 1.00               | 133                     | 106  | 69.3 | 48.9 | 37.1 | 30.0 | 25.3 | 21.8 | 19.1 | 17.1 | 15.4 |
| <b>1.2-KL-160P</b> | 1.15               | 72.7                    | 63.4 | 49.8 | 39.8 | 33.3 | 28.4 | 24.3 | 21.0 | 18.5 | 16.5 | 14.9 |
|                    | 1.10               | 92.9                    | 78.5 | 60.4 | 48.0 | 38.1 | 30.9 | 26.3 | 22.7 | 19.9 | 17.7 | 16.0 |
|                    | 1.05               | 117                     | 95.7 | 68.5 | 51.0 | 39.3 | 31.7 | 26.6 | 23.0 | 20.2 | 18.0 | 16.2 |
|                    | 1.00               | 135                     | 108  | 72.7 | 52.3 | 39.6 | 32.0 | 27.0 | 23.3 | 20.4 | 18.2 | 16.4 |
| <b>1.2-KL-180P</b> | 1.15               | 71.7                    | 62.6 | 51.2 | 42.4 | 36.3 | 31.7 | 27.7 | 24.3 | 21.1 | 18.3 | 16.2 |
|                    | 1.10               | 105                     | 88.3 | 68.0 | 54.0 | 42.9 | 34.8 | 29.6 | 25.5 | 22.4 | 19.9 | 18.0 |
|                    | 1.05               | 112                     | 94.0 | 70.5 | 56.1 | 44.0 | 35.4 | 29.7 | 26.0 | 22.8 | 20.1 | 18.2 |
|                    | 1.00               | 132                     | 106  | 75.6 | 58.7 | 44.8 | 36.0 | 30.0 | 26.1 | 22.9 | 20.2 | 18.3 |
| <b>1.2-KL-200P</b> | 1.15               | 79.7                    | 69.5 | 56.8 | 47.2 | 40.3 | 35.2 | 30.8 | 26.7 | 23.3 | 20.8 | 18.7 |
|                    | 1.10               | 102                     | 86.0 | 69.4 | 57.3 | 46.3 | 37.5 | 32.6 | 28.6 | 25.0 | 22.2 | 20.0 |
|                    | 1.05               | 124                     | 102  | 78.4 | 62.4 | 48.9 | 39.4 | 33.0 | 28.9 | 25.3 | 22.4 | 20.2 |
|                    | 1.00               | 146                     | 118  | 84.0 | 65.1 | 49.7 | 40.0 | 33.3 | 29.0 | 25.4 | 22.5 | 20.3 |
| <b>1.2-KL-230P</b> | 1.15               | 91.6                    | 80.0 | 65.3 | 54.3 | 46.4 | 40.5 | 35.4 | 30.7 | 26.8 | 23.9 | 21.5 |
|                    | 1.10               | 117                     | 98.9 | 79.8 | 65.9 | 53.3 | 43.1 | 37.5 | 32.9 | 28.8 | 25.6 | 23.0 |
|                    | 1.05               | 143                     | 118  | 90.2 | 71.8 | 56.2 | 45.3 | 38.0 | 33.2 | 29.1 | 25.8 | 23.2 |
|                    | 1.00               | 168                     | 135  | 96.6 | 74.9 | 57.2 | 46.0 | 38.3 | 33.4 | 29.2 | 25.9 | 23.4 |
| <b>1.2-KL-275P</b> | 1.15               | 110                     | 95.6 | 78.1 | 64.9 | 55.4 | 48.5 | 42.4 | 36.7 | 32.1 | 28.5 | 25.7 |
|                    | 1.10               | 140                     | 118  | 95.4 | 78.8 | 63.8 | 51.5 | 44.8 | 39.3 | 34.4 | 30.6 | 27.5 |
|                    | 1.05               | 171                     | 141  | 108  | 85.9 | 67.2 | 54.1 | 45.4 | 39.7 | 34.7 | 30.9 | 27.8 |
|                    | 1.00               | 201                     | 162  | 116  | 89.5 | 68.3 | 55.0 | 45.8 | 39.9 | 34.9 | 31.0 | 27.9 |



# Current-low (KL)

Amperes at 20°C

SEC bloc type

Discharge data AMPS at 20°C

|                     | End volts/<br>Cell | Discharge time in hours |     |      |      |      |      |      |      |      |      |      |
|---------------------|--------------------|-------------------------|-----|------|------|------|------|------|------|------|------|------|
|                     |                    | 0.5hr                   | 1hr | 2hr  | 3hr  | 4hr  | 5hr  | 6hr  | 7hr  | 8hr  | 9hr  | 10hr |
| <b>1.2-KL-300P</b>  | 1.15               | 120                     | 104 | 85.2 | 70.8 | 60.5 | 52.9 | 46.2 | 40.0 | 34.9 | 31.1 | 28.0 |
|                     | 1.10               | 153                     | 129 | 104  | 86.0 | 69.5 | 56.2 | 48.8 | 42.8 | 37.5 | 33.3 | 30.0 |
|                     | 1.05               | 186                     | 153 | 118  | 93.6 | 73.3 | 59.0 | 49.5 | 42.9 | 37.7 | 33.6 | 30.3 |
|                     | 1.00               | 220                     | 176 | 126  | 97.7 | 74.5 | 60.0 | 50.2 | 43.2 | 38.0 | 33.8 | 30.5 |
| <b>1.2-KL-330P</b>  | 1.15               | 131                     | 115 | 93.7 | 77.9 | 66.6 | 58.2 | 50.8 | 44.0 | 38.4 | 34.2 | 30.8 |
|                     | 1.10               | 168                     | 142 | 115  | 94.6 | 76.5 | 61.8 | 53.7 | 47.1 | 41.3 | 36.6 | 33.0 |
|                     | 1.05               | 217                     | 182 | 136  | 101  | 79.6 | 65.3 | 54.7 | 47.2 | 41.5 | 37.2 | 33.7 |
|                     | 1.00               | 229                     | 191 | 134  | 93.5 | 73.2 | 60.0 | 50.3 | 43.4 | 38.2 | 34.1 | 31.0 |
| <b>1.2-KL-380P</b>  | 1.15               | 158                     | 131 | 105  | 89.4 | 77.0 | 66.8 | 56.3 | 48.6 | 42.8 | 38.3 | 34.8 |
|                     | 1.10               | 210                     | 182 | 135  | 106  | 89.4 | 73.9 | 62.3 | 53.8 | 47.3 | 42.4 | 38.3 |
|                     | 1.05               | 251                     | 211 | 157  | 116  | 92.4 | 75.0 | 63.1 | 54.3 | 47.9 | 42.8 | 38.7 |
|                     | 1.00               | 291                     | 242 | 169  | 118  | 92.9 | 76.0 | 63.7 | 54.9 | 48.4 | 43.2 | 39.2 |
| <b>1.2-KL-400P</b>  | 1.15               | 166                     | 139 | 111  | 94.0 | 81.0 | 71.0 | 59.2 | 51.1 | 45.1 | 40.3 | 36.3 |
|                     | 1.10               | 221                     | 191 | 141  | 111  | 94.0 | 78.0 | 65.6 | 56.6 | 49.9 | 44.6 | 40.3 |
|                     | 1.05               | 264                     | 221 | 165  | 123  | 97.0 | 79.0 | 66.4 | 57.2 | 50.4 | 45.1 | 40.8 |
|                     | 1.00               | 306                     | 255 | 179  | 124  | 98.0 | 80.0 | 67.1 | 57.9 | 50.9 | 45.5 | 41.3 |
| <b>1.2-KL-435P</b>  | 1.15               | 180                     | 151 | 120  | 103  | 88.0 | 77.0 | 64.4 | 55.6 | 49.1 | 43.9 | 39.8 |
|                     | 1.10               | 240                     | 208 | 154  | 121  | 102  | 85.0 | 71.4 | 61.5 | 54.2 | 48.5 | 43.9 |
|                     | 1.05               | 287                     | 241 | 180  | 133  | 106  | 86.0 | 72.2 | 62.2 | 54.8 | 49.1 | 44.3 |
|                     | 1.00               | 333                     | 278 | 194  | 135  | 106  | 87.0 | 72.9 | 62.9 | 55.3 | 49.5 | 44.9 |
| <b>1.2-KL-480P</b>  | 1.15               | 199                     | 166 | 133  | 113  | 97.0 | 84.8 | 71.1 | 61.4 | 54.1 | 48.4 | 43.9 |
|                     | 1.10               | 266                     | 230 | 170  | 134  | 112  | 94.0 | 78.7 | 67.9 | 59.8 | 53.5 | 48.4 |
|                     | 1.05               | 317                     | 266 | 198  | 147  | 116  | 95.0 | 79.7 | 68.6 | 60.5 | 54.1 | 48.9 |
|                     | 1.00               | 368                     | 306 | 214  | 149  | 117  | 96.0 | 80.5 | 69.4 | 61.1 | 54.6 | 49.5 |
| <b>1.2-KL-500P</b>  | 1.15               | 207                     | 173 | 138  | 118  | 101  | 88.3 | 74.0 | 63.9 | 56.4 | 50.4 | 45.7 |
|                     | 1.10               | 277                     | 239 | 177  | 139  | 117  | 97.9 | 82.0 | 70.7 | 62.3 | 55.7 | 50.4 |
|                     | 1.05               | 323                     | 271 | 202  | 150  | 119  | 97.0 | 81.4 | 70.1 | 61.7 | 55.3 | 50.0 |
|                     | 1.00               | 383                     | 319 | 223  | 155  | 122  | 100  | 83.8 | 72.3 | 63.6 | 56.9 | 51.6 |
| <b>1.2-KL-560P</b>  | 1.15               | 232                     | 194 | 154  | 131  | 113  | 98.0 | 82.0 | 71.0 | 62.0 | 56.0 | 51.0 |
|                     | 1.10               | 309                     | 267 | 197  | 155  | 130  | 109  | 92.0 | 79.0 | 69.0 | 61.0 | 56.0 |
|                     | 1.05               | 368                     | 309 | 230  | 171  | 136  | 110  | 93.0 | 80.0 | 70.0 | 62.0 | 57.0 |
|                     | 1.00               | 429                     | 356 | 250  | 173  | 137  | 112  | 94.0 | 81.0 | 71.0 | 64.0 | 58.0 |
| <b>1.2-KL-625P</b>  | 1.15               | 258                     | 216 | 172  | 147  | 126  | 109  | 91.0 | 79.0 | 70.0 | 63.0 | 56.0 |
|                     | 1.10               | 345                     | 298 | 220  | 173  | 145  | 121  | 102  | 88.0 | 77.0 | 69.0 | 63.0 |
|                     | 1.05               | 411                     | 345 | 257  | 191  | 151  | 123  | 103  | 89.0 | 78.0 | 70.0 | 64.0 |
|                     | 1.00               | 478                     | 398 | 279  | 194  | 153  | 125  | 105  | 90.0 | 79.0 | 71.0 | 65.0 |
| <b>1.2-KL-650P</b>  | 1.15               | 269                     | 225 | 179  | 153  | 131  | 114  | 95.0 | 83.0 | 73.0 | 65.0 | 59.0 |
|                     | 1.10               | 359                     | 310 | 229  | 180  | 151  | 126  | 106  | 91.0 | 80.0 | 71.0 | 65.0 |
|                     | 1.05               | 428                     | 359 | 268  | 199  | 158  | 128  | 108  | 93.0 | 81.0 | 73.0 | 66.0 |
|                     | 1.00               | 498                     | 414 | 290  | 201  | 159  | 130  | 109  | 94.0 | 83.0 | 74.0 | 68.0 |
| <b>1.2-KL-750P</b>  | 1.15               | 310                     | 259 | 207  | 176  | 151  | 132  | 109  | 95.3 | 84.1 | 75.0 | 67.9 |
|                     | 1.10               | 414                     | 358 | 264  | 208  | 174  | 146  | 123  | 105  | 92.2 | 82.1 | 75.0 |
|                     | 1.05               | 494                     | 414 | 309  | 229  | 181  | 147  | 124  | 106  | 94.3 | 84.1 | 76.0 |
|                     | 1.00               | 574                     | 477 | 334  | 232  | 183  | 150  | 126  | 108  | 95.3 | 85.1 | 78.0 |
| <b>1.2-KL-800P</b>  | 1.15               | 331                     | 277 | 221  | 188  | 161  | 141  | 117  | 102  | 89.7 | 80.0 | 72.4 |
|                     | 1.10               | 441                     | 382 | 281  | 222  | 186  | 156  | 131  | 112  | 98.4 | 87.6 | 80.0 |
|                     | 1.05               | 526                     | 441 | 330  | 244  | 194  | 157  | 132  | 114  | 101  | 89.7 | 81.1 |
|                     | 1.00               | 612                     | 509 | 357  | 248  | 196  | 160  | 134  | 116  | 102  | 90.8 | 83.2 |
| <b>1.2-KL-850P</b>  | 1.15               | 351                     | 294 | 234  | 199  | 172  | 149  | 124  | 108  | 95.1 | 85.0 | 76.9 |
|                     | 1.10               | 470                     | 406 | 300  | 236  | 197  | 165  | 139  | 119  | 104  | 93.1 | 85.0 |
|                     | 1.05               | 559                     | 470 | 350  | 260  | 206  | 167  | 141  | 121  | 106  | 95.1 | 87.0 |
|                     | 1.00               | 651                     | 541 | 379  | 263  | 207  | 170  | 143  | 122  | 108  | 96.1 | 88.0 |
| <b>1.2-KL-910P</b>  | 1.15               | 376                     | 315 | 250  | 213  | 184  | 159  | 133  | 116  | 102  | 91.0 | 82.3 |
|                     | 1.10               | 503                     | 434 | 321  | 252  | 211  | 177  | 148  | 128  | 112  | 99.7 | 91.0 |
|                     | 1.05               | 598                     | 503 | 375  | 278  | 221  | 179  | 151  | 130  | 114  | 102  | 93.2 |
|                     | 1.00               | 697                     | 580 | 406  | 282  | 222  | 182  | 153  | 131  | 116  | 103  | 94.3 |
| <b>1.2-KL-1000P</b> | 1.15               | 415                     | 347 | 277  | 235  | 202  | 177  | 147  | 127  | 112  | 100  | 90.0 |
|                     | 1.10               | 552                     | 477 | 352  | 277  | 235  | 195  | 162  | 140  | 122  | 110  | 100  |
|                     | 1.05               | 660                     | 552 | 412  | 307  | 242  | 197  | 165  | 142  | 125  | 112  | 102  |
|                     | 1.00               | 765                     | 637 | 447  | 310  | 245  | 200  | 167  | 144  | 127  | 114  | 103  |
| <b>1.2-KL-1040P</b> | 1.15               | 432                     | 361 | 288  | 244  | 210  | 184  | 153  | 132  | 116  | 104  | 93.6 |
|                     | 1.10               | 574                     | 496 | 366  | 288  | 244  | 203  | 168  | 146  | 127  | 114  | 104  |
|                     | 1.05               | 686                     | 574 | 428  | 319  | 252  | 205  | 172  | 148  | 130  | 116  | 106  |
|                     | 1.00               | 796                     | 662 | 465  | 322  | 255  | 208  | 174  | 150  | 132  | 119  | 107  |
| <b>1.2-KL-1120P</b> | 1.15               | 465                     | 389 | 310  | 263  | 226  | 198  | 165  | 142  | 125  | 112  | 101  |
|                     | 1.10               | 618                     | 534 | 394  | 310  | 263  | 218  | 181  | 157  | 137  | 123  | 112  |
|                     | 1.05               | 739                     | 618 | 461  | 344  | 271  | 221  | 185  | 159  | 140  | 125  | 114  |
|                     | 1.00               | 857                     | 713 | 501  | 347  | 274  | 224  | 187  | 161  | 142  | 128  | 115  |
| <b>1.2-KL-1250P</b> | 1.15               | 519                     | 434 | 346  | 294  | 253  | 221  | 184  | 159  | 140  | 125  | 113  |
|                     | 1.10               | 690                     | 596 | 440  | 346  | 294  | 244  | 203  | 175  | 153  | 138  | 125  |
|                     | 1.05               | 825                     | 690 | 515  | 384  | 303  | 246  | 206  | 178  | 156  | 140  | 128  |
|                     | 1.00               | 956                     | 796 | 559  | 388  | 306  | 250  | 209  | 180  | 159  | 143  | 129  |

# Current-low (KL)

Amperes at 20°C

SEC bloc type

Discharge data AMPS at 20°C

|                     | End volts/<br>Cell | Discharge time in hours |      |     |     |     |     |     |     |     |     |      |
|---------------------|--------------------|-------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|
|                     |                    | 0.5hr                   | 1hr  | 2hr | 3hr | 4hr | 5hr | 6hr | 7hr | 8hr | 9hr | 10hr |
| <b>1.2-KL-1350P</b> | 1.15               | 561                     | 469  | 374 | 318 | 273 | 239 | 199 | 172 | 151 | 135 | 122  |
|                     | 1.10               | 745                     | 644  | 475 | 374 | 318 | 264 | 219 | 189 | 165 | 149 | 135  |
|                     | 1.05               | 891                     | 745  | 556 | 415 | 327 | 266 | 222 | 192 | 168 | 151 | 138  |
|                     | 1.00               | 1032                    | 860  | 604 | 419 | 330 | 270 | 226 | 194 | 172 | 154 | 139  |
| <b>1.2-KL-1400P</b> | 1.15               | 581                     | 486  | 388 | 329 | 283 | 248 | 206 | 178 | 157 | 140 | 127  |
|                     | 1.10               | 773                     | 668  | 493 | 388 | 329 | 273 | 227 | 196 | 171 | 155 | 140  |
|                     | 1.05               | 924                     | 773  | 577 | 430 | 339 | 276 | 231 | 199 | 175 | 157 | 143  |
|                     | 1.00               | 1071                    | 892  | 626 | 435 | 343 | 280 | 234 | 202 | 178 | 160 | 144  |
| <b>1.2-KL-1500P</b> | 1.15               | 623                     | 521  | 416 | 353 | 303 | 266 | 221 | 191 | 168 | 150 | 135  |
|                     | 1.10               | 828                     | 716  | 528 | 416 | 353 | 293 | 243 | 210 | 183 | 165 | 150  |
|                     | 1.05               | 990                     | 828  | 618 | 461 | 363 | 296 | 248 | 213 | 188 | 168 | 153  |
|                     | 1.00               | 1148                    | 956  | 671 | 465 | 368 | 300 | 251 | 216 | 191 | 171 | 155  |
| <b>1.2-KL-1600P</b> | 1.15               | 665                     | 556  | 444 | 377 | 323 | 284 | 236 | 204 | 179 | 160 | 144  |
|                     | 1.10               | 883                     | 764  | 563 | 444 | 377 | 313 | 259 | 224 | 195 | 176 | 160  |
|                     | 1.05               | 1056                    | 883  | 659 | 492 | 387 | 316 | 265 | 227 | 201 | 179 | 163  |
|                     | 1.00               | 1225                    | 1020 | 716 | 496 | 393 | 320 | 268 | 230 | 204 | 182 | 165  |
| <b>1.2-KL-1700P</b> | 1.15               | 706                     | 590  | 471 | 400 | 343 | 301 | 250 | 216 | 190 | 170 | 153  |
|                     | 1.10               | 938                     | 811  | 598 | 471 | 400 | 332 | 275 | 238 | 207 | 187 | 170  |
|                     | 1.05               | 1122                    | 938  | 700 | 522 | 411 | 335 | 281 | 241 | 213 | 190 | 173  |
|                     | 1.00               | 1301                    | 1083 | 760 | 527 | 417 | 340 | 284 | 245 | 216 | 194 | 176  |

# Current-medium (KM)

Amperes at 20°C

SEC bloc type

Discharge data AMPS at 20°C

|                    | End volts/<br>Cell | Discharge time |       |       |       |       |       |      |      |      |
|--------------------|--------------------|----------------|-------|-------|-------|-------|-------|------|------|------|
|                    |                    | 5min           | 10min | 20min | 30min | 60min | 90min | 2hr  | 3hr  | 5hr  |
| <b>1.2-KM-20P</b>  | 1.14               | 19.5           | 15.6  | 13.2  | 11.2  | 8.90  | 7.60  | 6.30 | 5.00 | 3.50 |
|                    | 1.10               | 24.2           | 20.0  | 16.8  | 14.4  | 11.1  | 8.80  | 7.40 | 5.70 | 3.80 |
|                    | 1.05               | 29.6           | 25.0  | 19.9  | 17.6  | 13.2  | 9.90  | 8.30 | 6.40 | 3.90 |
|                    | 1.00               | 29.6           | 25.0  | 19.9  | 17.6  | 13.2  | 9.90  | 8.30 | 6.40 | 4.00 |
| <b>1.2-KM-30P</b>  | 1.14               | 29.2           | 23.4  | 19.8  | 16.8  | 13.3  | 11.4  | 9.45 | 7.50 | 5.25 |
|                    | 1.10               | 36.4           | 30.0  | 25.2  | 21.6  | 16.6  | 13.2  | 11.1 | 8.50 | 5.80 |
|                    | 1.05               | 44.4           | 37.5  | 29.9  | 26.4  | 19.8  | 14.8  | 12.4 | 9.60 | 5.90 |
|                    | 1.00               | 54.9           | 45.2  | 36.9  | 33.0  | 22.5  | 17.2  | 14.2 | 9.90 | 6.00 |
| <b>1.2-KM-40P</b>  | 1.14               | 39.0           | 31.3  | 26.4  | 22.4  | 17.8  | 15.2  | 12.6 | 10.0 | 7.00 |
|                    | 1.10               | 48.6           | 40.0  | 33.6  | 28.2  | 22.2  | 17.6  | 14.8 | 11.4 | 7.70 |
|                    | 1.05               | 59.3           | 50.0  | 39.9  | 35.2  | 26.4  | 19.9  | 16.6 | 12.8 | 7.80 |
|                    | 1.00               | 73.2           | 60.2  | 49.2  | 44.0  | 30.0  | 22.9  | 19.0 | 13.2 | 8.00 |
| <b>1.2-KM-50P</b>  | 1.14               | 48.7           | 39.1  | 33.0  | 28.0  | 22.2  | 19.0  | 15.8 | 12.5 | 8.75 |
|                    | 1.10               | 60.8           | 50.0  | 42.0  | 36.0  | 27.7  | 22.0  | 18.5 | 14.3 | 9.70 |
|                    | 1.05               | 74.1           | 62.5  | 49.8  | 44.0  | 33.0  | 24.8  | 20.7 | 16.0 | 9.80 |
|                    | 1.00               | 91.5           | 75.3  | 61.6  | 55.0  | 37.5  | 28.6  | 23.7 | 16.5 | 10.0 |
| <b>1.2-KM-70P</b>  | 1.14               | 68.3           | 54.8  | 46.2  | 39.2  | 31.1  | 26.6  | 22.1 | 17.5 | 12.3 |
|                    | 1.10               | 85.1           | 70.0  | 58.8  | 50.4  | 38.8  | 30.8  | 25.9 | 20.0 | 13.5 |
|                    | 1.05               | 104            | 87.5  | 69.8  | 61.6  | 46.2  | 34.8  | 29.0 | 22.4 | 13.8 |
|                    | 1.00               | 128            | 105   | 86.1  | 77.0  | 52.5  | 40.1  | 33.2 | 23.1 | 14.0 |
| <b>1.2-KM-80P</b>  | 1.14               | 78.0           | 62.6  | 52.8  | 44.8  | 35.6  | 30.4  | 25.2 | 20.0 | 14.2 |
|                    | 1.10               | 97.2           | 80.0  | 67.2  | 57.6  | 44.4  | 35.2  | 29.6 | 22.8 | 15.5 |
|                    | 1.05               | 119            | 100   | 79.8  | 70.4  | 52.8  | 39.8  | 33.2 | 25.6 | 15.7 |
|                    | 1.00               | 146            | 102   | 98.5  | 88.0  | 60.0  | 45.8  | 38.0 | 26.4 | 16.0 |
| <b>1.2-KM-100P</b> | 1.14               | 97.5           | 78.3  | 66.0  | 56.0  | 44.5  | 38.0  | 31.5 | 25.0 | 17.6 |
|                    | 1.10               | 122            | 100   | 84.0  | 72.0  | 55.5  | 44.0  | 37.0 | 28.6 | 19.4 |
|                    | 1.05               | 148            | 125   | 100   | 88.0  | 66.0  | 49.8  | 41.5 | 32.0 | 19.7 |
|                    | 1.00               | 183            | 151   | 123   | 110   | 75.0  | 57.3  | 47.5 | 33.0 | 20.0 |
| <b>1.2-KM-120P</b> | 1.14               | 117            | 93.7  | 79.2  | 67.2  | 53.4  | 45.6  | 37.8 | 30.0 | 21.1 |
|                    | 1.10               | 146            | 120   | 101   | 86.4  | 66.6  | 52.8  | 44.4 | 34.3 | 23.2 |
|                    | 1.05               | 178            | 150   | 120   | 106   | 79.2  | 59.7  | 49.8 | 38.4 | 23.6 |
|                    | 1.00               | 220            | 181   | 148   | 132   | 90.0  | 68.8  | 57.0 | 39.6 | 24.0 |
| <b>1.2-KM-140P</b> | 1.14               | 137            | 110   | 92.4  | 78.4  | 62.3  | 53.2  | 44.1 | 35.0 | 24.6 |
|                    | 1.10               | 170            | 140   | 118   | 101   | 77.7  | 61.6  | 51.8 | 40.0 | 27.1 |
|                    | 1.05               | 208            | 175   | 140   | 123   | 92.4  | 69.7  | 58.1 | 44.8 | 27.5 |
|                    | 1.00               | 256            | 211   | 172   | 154   | 105   | 80.3  | 66.5 | 46.2 | 28.0 |
| <b>1.2-KM-160P</b> | 1.14               | 156            | 125   | 106   | 89.6  | 71.2  | 60.8  | 50.4 | 40.0 | 28.0 |
|                    | 1.10               | 195            | 160   | 134   | 115   | 88.8  | 70.4  | 59.2 | 45.8 | 31.0 |
|                    | 1.05               | 237            | 200   | 160   | 141   | 106   | 79.6  | 66.4 | 51.2 | 31.5 |
|                    | 1.00               | 293            | 241   | 197   | 176   | 120   | 91.8  | 76.0 | 52.8 | 32.0 |
| <b>1.2-KM-180P</b> | 1.14               | 176            | 141   | 119   | 101   | 80.1  | 68.4  | 56.7 | 45.0 | 31.5 |
|                    | 1.10               | 219            | 180   | 151   | 130   | 99.9  | 79.2  | 66.6 | 51.4 | 34.9 |
|                    | 1.05               | 267            | 225   | 180   | 158   | 119   | 89.6  | 74.7 | 57.6 | 35.4 |
|                    | 1.00               | 330            | 271   | 222   | 198   | 135   | 103   | 85.5 | 59.4 | 36.0 |

# Current-medium (KM)

Amperes at 20°C

SEC bloc type

Discharge data AMPS at 20°C

|                    | End volts/<br>Cell | Discharge time |       |       |       |       |       |      |      |      |
|--------------------|--------------------|----------------|-------|-------|-------|-------|-------|------|------|------|
|                    |                    | 5min           | 10min | 20min | 30min | 60min | 90min | 2hr  | 3hr  | 5hr  |
| <b>1.2-KM-200P</b> | 1.14               | 195            | 157   | 132   | 112   | 89.0  | 76.0  | 63.0 | 50.0 | 35.0 |
|                    | 1.10               | 243            | 200   | 168   | 144   | 111   | 88.0  | 74.0 | 57.2 | 38.8 |
|                    | 1.05               | 297            | 250   | 200   | 176   | 132   | 99.6  | 83.0 | 64.0 | 39.4 |
|                    | 1.00               | 366            | 301   | 246   | 220   | 150   | 115   | 95.0 | 66.0 | 40.0 |
| <b>1.2-KM-240P</b> | 1.14               | 234            | 188   | 159   | 134   | 107   | 91.2  | 75.6 | 60.0 | 42.6 |
|                    | 1.10               | 292            | 240   | 202   | 173   | 133   | 106   | 88.8 | 68.6 | 46.5 |
|                    | 1.05               | 356            | 300   | 240   | 211   | 158   | 120   | 99.6 | 76.8 | 47.2 |
|                    | 1.00               | 439            | 361   | 296   | 264   | 180   | 138   | 114  | 79.2 | 48.0 |
| <b>1.2-KM-280P</b> | 1.14               | 273            | 219   | 185   | 157   | 125   | 106   | 88.2 | 70.0 | 49.0 |
|                    | 1.10               | 340            | 280   | 235   | 202   | 155   | 123   | 104  | 80.0 | 54.3 |
|                    | 1.05               | 415            | 350   | 279   | 246   | 185   | 139   | 116  | 89.5 | 55.1 |
|                    | 1.00               | 513            | 422   | 345   | 308   | 210   | 161   | 133  | 92.4 | 56.0 |
| <b>1.2-KM-300P</b> | 1.14               | 293            | 235   | 198   | 168   | 134   | 114   | 94.5 | 75.0 | 52.9 |
|                    | 1.10               | 365            | 300   | 252   | 216   | 167   | 132   | 111  | 85.8 | 58.2 |
|                    | 1.05               | 445            | 375   | 299   | 264   | 198   | 149   | 125  | 96.0 | 59.1 |
|                    | 1.00               | 549            | 452   | 369   | 330   | 225   | 172   | 143  | 99.0 | 60.0 |
| <b>1.2-KM-320P</b> | 1.14               | 312            | 251   | 211   | 179   | 142   | 122   | 101  | 80.0 | 56.0 |
|                    | 1.10               | 389            | 320   | 269   | 230   | 178   | 141   | 118  | 91.5 | 62.0 |
|                    | 1.05               | 474            | 400   | 319   | 281   | 211   | 159   | 133  | 102  | 63.0 |
|                    | 1.00               | 586            | 482   | 394   | 352   | 240   | 184   | 152  | 106  | 64.0 |
| <b>1.2-KM-340P</b> | 1.14               | 332            | 266   | 225   | 190   | 151   | 129   | 107  | 85.0 | 59.5 |
|                    | 1.10               | 413            | 340   | 286   | 245   | 189   | 150   | 126  | 97.2 | 65.9 |
|                    | 1.05               | 504            | 425   | 339   | 299   | 224   | 169   | 141  | 109  | 66.9 |
|                    | 1.00               | 623            | 512   | 419   | 374   | 255   | 195   | 162  | 112  | 68.0 |
| <b>1.2-KM-375P</b> | 1.14               | 365            | 294   | 248   | 210   | 167   | 143   | 118  | 93.8 | 64.9 |
|                    | 1.10               | 456            | 375   | 315   | 270   | 208   | 165   | 139  | 107  | 72.7 |
|                    | 1.05               | 556            | 469   | 374   | 330   | 248   | 187   | 156  | 120  | 73.8 |
|                    | 1.00               | 687            | 565   | 462   | 413   | 281   | 215   | 178  | 124  | 75.0 |
| <b>1.2-KM-400P</b> | 1.14               | 390            | 313   | 262   | 224   | 178   | 152   | 126  | 100  | 70.7 |
|                    | 1.10               | 486            | 400   | 336   | 288   | 222   | 176   | 148  | 114  | 77.6 |
|                    | 1.05               | 593            | 500   | 399   | 352   | 264   | 199   | 166  | 128  | 78.8 |
|                    | 1.00               | 732            | 602   | 493   | 440   | 300   | 229   | 190  | 132  | 80.0 |
| <b>1.2-KM-420P</b> | 1.14               | 410            | 329   | 275   | 235   | 187   | 160   | 132  | 105  | 74.2 |
|                    | 1.10               | 511            | 420   | 353   | 302   | 233   | 185   | 155  | 120  | 81.5 |
|                    | 1.05               | 623            | 525   | 419   | 370   | 277   | 209   | 174  | 134  | 82.7 |
|                    | 1.00               | 769            | 633   | 517   | 462   | 315   | 241   | 200  | 139  | 84.0 |
| <b>1.2-KM-450P</b> | 1.14               | 439            | 352   | 297   | 252   | 200   | 171   | 142  | 113  | 78.8 |
|                    | 1.10               | 547            | 450   | 378   | 324   | 250   | 198   | 167  | 129  | 87.3 |
|                    | 1.05               | 667            | 563   | 449   | 396   | 297   | 224   | 187  | 144  | 88.6 |
|                    | 1.00               | 824            | 678   | 554   | 495   | 338   | 258   | 214  | 149  | 90.0 |
| <b>1.2-KM-500P</b> | 1.14               | 488            | 392   | 330   | 280   | 222   | 190   | 157  | 125  | 87.5 |
|                    | 1.10               | 608            | 500   | 420   | 360   | 277   | 220   | 185  | 143  | 97.0 |
|                    | 1.05               | 741            | 625   | 499   | 440   | 330   | 249   | 207  | 160  | 98.4 |
|                    | 1.00               | 915            | 753   | 616   | 550   | 375   | 287   | 237  | 165  | 100  |
| <b>1.2-KM-550P</b> | 1.14               | 537            | 431   | 363   | 308   | 245   | 209   | 173  | 138  | 96.3 |
|                    | 1.10               | 669            | 550   | 462   | 396   | 305   | 242   | 204  | 157  | 107  |
|                    | 1.05               | 815            | 688   | 549   | 484   | 363   | 274   | 228  | 176  | 108  |
|                    | 1.00               | 1016           | 836   | 683   | 611   | 416   | 318   | 264  | 183  | 111  |
| <b>1.2-KM-580P</b> | 1.14               | 566            | 454   | 383   | 325   | 258   | 220   | 183  | 145  | 102  |
|                    | 1.10               | 705            | 580   | 487   | 418   | 322   | 232   | 215  | 166  | 113  |
|                    | 1.05               | 860            | 725   | 579   | 510   | 383   | 289   | 241  | 186  | 114  |
|                    | 1.00               | 1062           | 873   | 714   | 638   | 435   | 333   | 276  | 191  | 116  |
| <b>1.2-KM-600P</b> | 1.14               | 585            | 470   | 396   | 336   | 267   | 228   | 189  | 150  | 105  |
|                    | 1.10               | 730            | 600   | 504   | 432   | 333   | 240   | 222  | 172  | 116  |
|                    | 1.05               | 890            | 750   | 599   | 528   | 396   | 299   | 249  | 192  | 118  |
|                    | 1.00               | 1099           | 904   | 739   | 660   | 450   | 344   | 285  | 198  | 120  |
| <b>1.2-KM-675P</b> | 1.14               | 658            | 529   | 446   | 378   | 300   | 257   | 213  | 169  | 118  |
|                    | 1.10               | 821            | 675   | 567   | 486   | 375   | 270   | 250  | 193  | 131  |
|                    | 1.05               | 1001           | 844   | 674   | 594   | 446   | 336   | 280  | 216  | 133  |
|                    | 1.00               | 1236           | 1017  | 831   | 743   | 506   | 387   | 321  | 223  | 135  |
| <b>1.2-KM-705P</b> | 1.14               | 687            | 552   | 466   | 395   | 314   | 268   | 222  | 176  | 123  |
|                    | 1.10               | 857            | 705   | 592   | 508   | 391   | 282   | 261  | 202  | 137  |
|                    | 1.05               | 1045           | 881   | 703   | 620   | 465   | 351   | 293  | 226  | 139  |
|                    | 1.00               | 1291           | 1062  | 868   | 776   | 529   | 404   | 335  | 233  | 141  |
| <b>1.2-KM-750P</b> | 1.14               | 731            | 587   | 495   | 420   | 334   | 285   | 236  | 188  | 131  |
|                    | 1.10               | 912            | 750   | 630   | 540   | 416   | 300   | 278  | 215  | 146  |
|                    | 1.05               | 1112           | 938   | 748   | 660   | 495   | 374   | 311  | 240  | 148  |
|                    | 1.00               | 1373           | 1130  | 923   | 825   | 563   | 430   | 356  | 248  | 150  |
| <b>1.2-KM-850P</b> | 1.14               | 829            | 666   | 561   | 476   | 378   | 323   | 268  | 213  | 149  |
|                    | 1.10               | 1034           | 850   | 714   | 612   | 472   | 340   | 315  | 243  | 165  |
|                    | 1.05               | 1260           | 1063  | 848   | 748   | 561   | 423   | 353  | 272  | 167  |
|                    | 1.00               | 1556           | 1280  | 1046  | 935   | 638   | 487   | 404  | 281  | 170  |

# Current-medium (KM)

Amperes at 20°C

SEC bloc type

Discharge data AMPS at 20°C

|                     | End volts/<br>Cell | Discharge time |       |       |       |       |       |     |     |     |
|---------------------|--------------------|----------------|-------|-------|-------|-------|-------|-----|-----|-----|
|                     |                    | 5min           | 10min | 20min | 30min | 60min | 90min | 2hr | 3hr | 5hr |
| <b>1.2-KM-950P</b>  | 1.14               | 926            | 744   | 627   | 532   | 423   | 361   | 299 | 238 | 166 |
|                     | 1.10               | 1155           | 950   | 798   | 684   | 527   | 380   | 352 | 272 | 184 |
|                     | 1.05               | 1408           | 1188  | 948   | 836   | 627   | 473   | 394 | 304 | 187 |
|                     | 1.00               | 1739           | 1431  | 1170  | 1045  | 713   | 545   | 451 | 314 | 190 |
| <b>1.2-KM-1000P</b> | 1.14               | 975            | 783   | 661   | 560   | 445   | 380   | 315 | 250 | 175 |
|                     | 1.10               | 1216           | 1000  | 840   | 720   | 555   | 400   | 370 | 286 | 194 |
|                     | 1.05               | 1483           | 1250  | 998   | 880   | 660   | 498   | 415 | 320 | 197 |
|                     | 1.00               | 1831           | 1506  | 1231  | 1100  | 750   | 573   | 475 | 330 | 200 |
| <b>1.2-KM-1050P</b> | 1.14               | 1024           | 822   | 694   | 588   | 467   | 399   | 331 | 263 | 184 |
|                     | 1.10               | 1277           | 1050  | 882   | 756   | 583   | 420   | 389 | 300 | 204 |
|                     | 1.05               | 1557           | 1313  | 1048  | 924   | 693   | 523   | 436 | 336 | 207 |
|                     | 1.00               | 1923           | 1581  | 1293  | 1155  | 788   | 602   | 499 | 347 | 210 |
| <b>1.2-KM-1150P</b> | 1.14               | 1121           | 900   | 760   | 644   | 512   | 437   | 362 | 288 | 201 |
|                     | 1.10               | 1398           | 1150  | 966   | 828   | 638   | 460   | 426 | 329 | 223 |
|                     | 1.05               | 1705           | 1438  | 1148  | 1012  | 759   | 573   | 477 | 368 | 227 |
|                     | 1.00               | 2106           | 1732  | 1416  | 1265  | 863   | 659   | 546 | 380 | 230 |
| <b>1.2-KM-1250P</b> | 1.14               | 1219           | 979   | 826   | 700   | 556   | 475   | 394 | 313 | 219 |
|                     | 1.10               | 1520           | 1250  | 1050  | 900   | 694   | 500   | 463 | 358 | 243 |
|                     | 1.05               | 1853           | 1563  | 1247  | 1100  | 825   | 623   | 519 | 400 | 246 |
|                     | 1.00               | 2289           | 1883  | 1539  | 1375  | 938   | 717   | 594 | 413 | 250 |
| <b>1.2-KM-1350P</b> | 1.14               | 1316           | 1057  | 892   | 756   | 601   | 513   | 425 | 338 | 236 |
|                     | 1.10               | 1642           | 1350  | 1134  | 972   | 749   | 540   | 500 | 386 | 262 |
|                     | 1.05               | 2001           | 1688  | 1347  | 1188  | 891   | 672   | 560 | 432 | 266 |
|                     | 1.00               | 2472           | 2033  | 1662  | 1485  | 1013  | 774   | 641 | 446 | 270 |

# Current-high (KH)

Amperes at 20°C

SEC bloc type

Discharge data AMPS at 20°C

|                    | End volts/<br>Cell | Discharge time |      |      |      |      |      |       |       |       |       |       |       |
|--------------------|--------------------|----------------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
|                    |                    | 1s             | 10s  | 30s  | 60s  | 90s  | 5min | 10min | 15min | 20min | 30min | 45min | 60min |
| <b>1.2-KH-20P</b>  | 1.15               |                |      |      | 62   |      | 42   | 37    | 31.6  | 28    | 23    | 20    | 16    |
|                    | 1.08               |                |      |      | 77   |      | 55   | 49    | 44.5  | 39    | 29    | 21    | 17.4  |
|                    | 1.05               | 146            | 130  | 119  | 112  | 103  |      |       |       |       |       |       |       |
|                    | 0.85               | 209            | 188  | 174  | 161  | 149  |      |       |       |       |       |       |       |
|                    | 0.65               | 310            | 270  | 257  | 232  | 213  |      |       |       |       |       |       |       |
| <b>1.2-KH-30P</b>  | 1.15               |                |      |      | 93   |      | 64   | 57    | 50    | 44.2  | 36.3  | 30    | 23    |
|                    | 1.08               |                |      |      | 110  |      | 79   | 72    | 66    | 58    | 43.5  | 31.2  | 26    |
|                    | 1.05               | 217            | 194  | 178  | 168  | 153  |      |       |       |       |       |       |       |
|                    | 0.85               | 307            | 277  | 257  | 238  | 221  |      |       |       |       |       |       |       |
|                    | 0.65               | 411            | 358  | 341  | 307  | 282  |      |       |       |       |       |       |       |
| <b>1.2-KH-40P</b>  | 1.15               |                |      |      | 124  |      | 84   | 74.5  | 63.7  | 56.4  | 46.3  | 39    | 31    |
|                    | 1.08               |                |      |      | 152  |      | 109  | 98    | 89    | 78    | 58    | 48    | 34.4  |
|                    | 1.05               | 290            | 259  | 238  | 224  | 204  |      |       |       |       |       |       |       |
|                    | 0.85               | 413            | 372  | 345  | 320  | 296  |      |       |       |       |       |       |       |
|                    | 0.65               | 553            | 481  | 458  | 413  | 379  |      |       |       |       |       |       |       |
| <b>1.2-KH-60P</b>  | 1.15               |                |      |      | 182  |      | 129  | 114   | 98    | 86.5  | 71    | 59    | 47    |
|                    | 1.08               |                |      |      | 225  |      | 161  | 146   | 133   | 117   | 87    | 64.4  | 52    |
|                    | 1.05               | 420            | 375  | 344  | 324  | 295  |      |       |       |       |       |       |       |
|                    | 0.85               | 597            | 538  | 499  | 462  | 428  |      |       |       |       |       |       |       |
|                    | 0.65               | 890            | 774  | 737  | 664  | 609  |      |       |       |       |       |       |       |
| <b>1.2-KH-80P</b>  | 1.15               |                |      |      | 239  |      | 173  | 153   | 132   | 117   | 96    | 80    | 64    |
|                    | 1.08               |                |      |      | 306  |      | 219  | 197   | 179   | 157   | 116   | 83    | 69    |
|                    | 1.05               | 560            | 500  | 459  | 432  | 393  |      |       |       |       |       |       |       |
|                    | 0.85               | 797            | 718  | 665  | 616  | 571  |      |       |       |       |       |       |       |
|                    | 0.65               | 1187           | 1032 | 983  | 886  | 813  |      |       |       |       |       |       |       |
| <b>1.2-KH-100P</b> | 1.15               |                |      |      | 298  |      | 213  | 189   | 163   | 144   | 118.4 | 100   | 79    |
|                    | 1.08               |                |      |      | 380  |      | 272  | 245   | 223   | 196   | 145   | 103   | 86    |
|                    | 1.05               | 673            | 601  | 552  | 520  | 473  |      |       |       |       |       |       |       |
|                    | 0.85               | 959            | 884  | 800  | 741  | 686  |      |       |       |       |       |       |       |
|                    | 0.65               | 1428           | 1242 | 1183 | 1066 | 978  |      |       |       |       |       |       |       |
| <b>1.2-KH-120P</b> | 1.15               |                |      |      | 351  |      | 254  | 225   | 136   | 168   | 138   | 118   | 79    |
|                    | 1.08               |                |      |      | 457  |      | 327  | 295   | 268   | 235   | 174   | 124   | 103   |
|                    | 1.05               | 810            | 723  | 663  | 624  | 568  |      |       |       |       |       |       |       |
|                    | 0.85               | 1154           | 1040 | 963  | 892  | 826  |      |       |       |       |       |       |       |
|                    | 0.65               | 1719           | 1495 | 1424 | 1283 | 1177 |      |       |       |       |       |       |       |

# Current-high (KH)

## Amperes at 20°C

### SEC bloc type

### Discharge data AMPS at 20°C

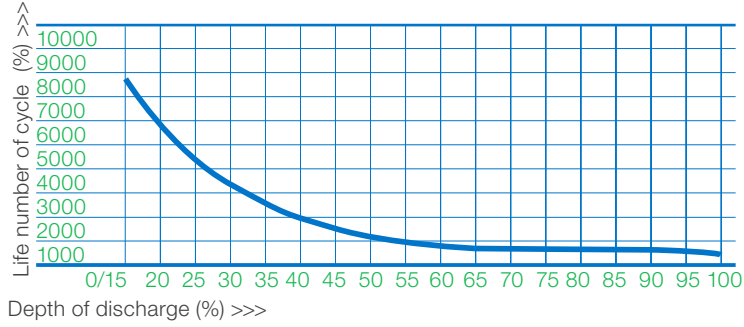
|                    | End volts/<br>Cell | Discharge time |      |      |      |      |      |       |       |       |       |       |       |
|--------------------|--------------------|----------------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
|                    |                    | 1s             | 10s  | 30s  | 60s  | 90s  | 5min | 10min | 15min | 20min | 30min | 45min | 60min |
| <b>1.2-KH-140P</b> | 1.15               |                |      |      | 402  |      | 300  | 266   | 231   | 204   | 167.5 | 137   | 92    |
|                    | 1.08               |                |      |      | 533  |      | 381  | 343   | 312   | 274   | 203   | 144   | 120   |
|                    | 1.05               | 853            | 762  | 699  | 658  | 599  |      |       |       |       |       |       |       |
|                    | 0.85               | 1215           | 1095 | 1014 | 939  | 870  |      |       |       |       |       |       |       |
|                    | 0.65               | 1808           | 1572 | 1498 | 1350 | 1239 |      |       |       |       |       |       |       |
| <b>1.2-KH-170P</b> | 1.15               |                |      |      | 493  |      | 357  | 316   | 273   | 242   | 199   | 168   | 133   |
|                    | 1.08               |                |      |      | 649  |      | 464  | 418   | 380   | 333   | 247   | 175   | 146   |
|                    | 1.05               | 1057           | 944  | 866  | 816  | 742  |      |       |       |       |       |       |       |
|                    | 0.85               | 1506           | 1357 | 1257 | 1164 | 1078 |      |       |       |       |       |       |       |
|                    | 0.65               | 2242           | 1950 | 1858 | 1674 | 1536 |      |       |       |       |       |       |       |
| <b>1.2-KH-190P</b> | 1.15               |                |      |      | 532  |      | 397  | 352   | 304   | 269   | 220.6 | 187   | 148   |
|                    | 1.08               |                |      |      | 725  |      | 518  | 467   | 425   | 373   | 276   | 196   | 163   |
|                    | 1.05               | 1181           | 1055 | 968  | 912  | 830  |      |       |       |       |       |       |       |
|                    | 0.85               | 1684           | 1517 | 1405 | 1301 | 1205 |      |       |       |       |       |       |       |
|                    | 0.65               | 2507           | 2180 | 2077 | 1871 | 1717 |      |       |       |       |       |       |       |
| <b>1.2-KH-200P</b> | 1.15               |                |      |      | 542  |      | 415  | 368   | 318   | 281   | 231   | 198   | 156   |
|                    | 1.08               |                |      |      | 760  |      | 543  | 489   | 445   | 391.5 | 290   | 206   | 172   |
|                    | 1.05               | 1243           | 1110 | 1019 | 960  | 874  |      |       |       |       |       |       |       |
|                    | 0.85               | 1771           | 1596 | 1478 | 1369 | 1268 |      |       |       |       |       |       |       |
|                    | 0.65               | 2637           | 2293 | 2184 | 1968 | 1806 |      |       |       |       |       |       |       |
| <b>1.2-KH-250P</b> | 1.15               |                |      |      | 650  |      | 520  | 460   | 399   | 353   | 290   | 244   | 195   |
|                    | 1.08               |                |      |      | 950  |      | 679  | 612   | 557   | 489   | 362   | 258   | 215   |
|                    | 1.05               | 1554           | 1388 | 1274 | 1200 | 1092 |      |       |       |       |       |       |       |
|                    | 0.85               | 2213           | 1994 | 1847 | 1711 | 1585 |      |       |       |       |       |       |       |
|                    | 0.65               | 3296           | 2866 | 2730 | 2460 | 2257 |      |       |       |       |       |       |       |
| <b>1.2-KH-275P</b> | 1.15               |                |      |      | 720  |      | 578  | 512   | 442   | 391   | 321   | 269   | 215   |
|                    | 1.08               |                |      |      | 1050 |      | 750  | 676   | 615   | 539   | 399   | 284   | 237   |
|                    | 1.05               | 1711           | 1528 | 1402 | 1320 | 1201 |      |       |       |       |       |       |       |
|                    | 0.85               | 2437           | 2196 | 2034 | 1884 | 1745 |      |       |       |       |       |       |       |
|                    | 0.65               | 3628           | 3155 | 3005 | 2708 | 2485 |      |       |       |       |       |       |       |
| <b>1.2-KH-300P</b> | 1.15               |                |      |      | 778  |      | 623  | 552   | 480   | 425   | 349   | 293   | 234   |
|                    | 1.08               |                |      |      | 1142 |      | 816  | 735   | 669   | 587   | 435   | 310   | 258   |
|                    | 1.05               | 1866           | 1666 | 1529 | 1440 | 1310 |      |       |       |       |       |       |       |
|                    | 0.85               | 2659           | 2396 | 2219 | 2055 | 1903 |      |       |       |       |       |       |       |
|                    | 0.65               | 3961           | 3445 | 3281 | 2956 | 2712 |      |       |       |       |       |       |       |
| <b>1.2-KH-320P</b> | 1.15               |                |      |      | 805  |      | 644  | 570   | 496   | 439   | 360   | 305   | 242   |
|                    | 1.08               |                |      |      | 1183 |      | 845  | 761   | 692   | 607   | 450   | 320   | 267   |
|                    | 1.05               | 1928           | 1722 | 1580 | 1488 | 1354 |      |       |       |       |       |       |       |
|                    | 0.85               | 2760           | 2487 | 2303 | 2123 | 1966 |      |       |       |       |       |       |       |

Not Applicable/ No available data

# Cycle life (all)

## Relationship between depth of discharge and life

Ambient temperature 20°C

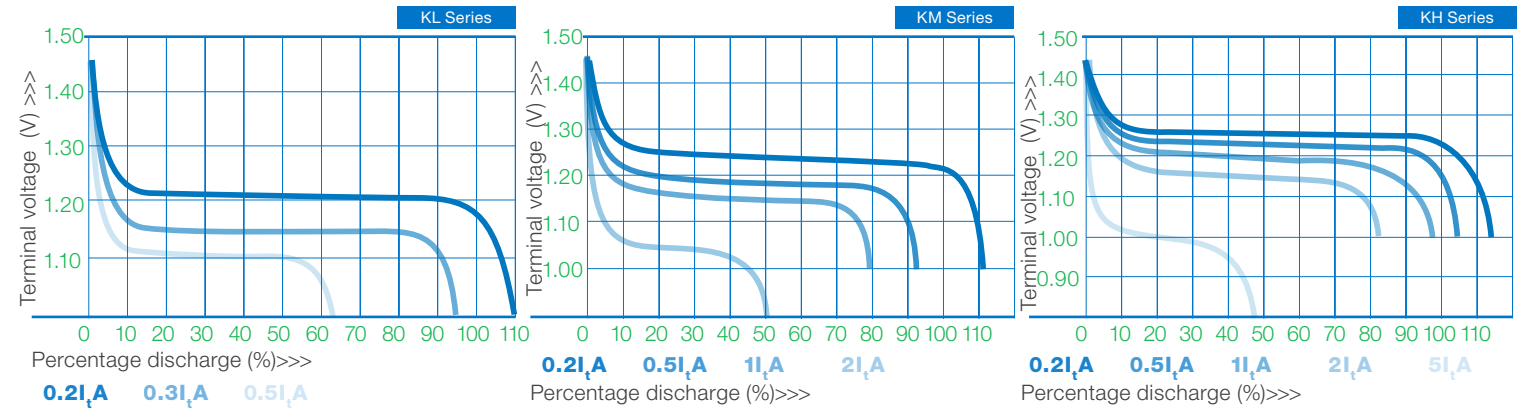


The depth of discharge critically affects the number of cycles which a battery will complete during its life time.

# Discharge characteristics

## Discharge current VS discharge time curve

Ambient temperature 20°C



Effect of discharge rate on battery capacity for Ni-Cd battery.

# Join the SEC partner grid programme for increased profits

The energy storage market is booming. From 2012 to 2016, the market has tripled from 6 billion to 18 billion US dollars, driven in large part by renewable energy needs. With more than half of the world's energy supply destined to come from renewable energy sources in the near future, continued rapid growth is a certainty. The opportunities are immense.

Let us help you expand your share of this expanding market and maximise your profits with the SEC Partner Grid Programme. We provide our partners with quality leads generated by our global marketing efforts.

Partners also receive free technical and sales marketing training, discounts, software, rewards for developing new sources of repeat business, and even subsidies for marketing efforts.



## Benefits

**Lead generation**

**Technical training**

**Product discounts**

**Market growth incentives**

**Sales and marketing training**

**Partner performance awards**

**Customer recruitment rewards**

**On demand technical and sales support**

**On-line tools for easy direct access to SEC**



Contact us today to learn more about how you can grow your profits in the booming market for energy storage with the SEC Partner Grid Programme.



**+852 2304 4382**



**info@secbattery.com**



**www.secbattery.com**



# The SEC global network



## UK SEC Headquarters

SEC Industrial Battery Co. Ltd  
Thorney Weir House / Thorney Mill Road  
Iver / Bucks / SL0 9AQ / United Kingdom  
Tel +44 1895 431543

## South East Asia SEC Headquarters

Pt. SEC Battery Indonesia  
Jalan Siligita Blok 1 / No 1 / Nusa Dua  
Bali / Indonesia  
Tel +62 81246401882

## Asia SEC Headquarters

SEC Industrial Battery Co. Ltd  
Unit 6, 6f / Hewlett Centre  
54 Hoi Yuen Road  
Kwun Tong Kowloon / Hong Kong  
Tel +852 2304 4382

## China SEC Headquarters

深圳市英能电池技术有限公司

Room 1706 Dongfeng Tower /  
2010 Shennan Middle Road /  
Huaqiang North Street / Futian / Shenzhen/ China  
深圳福田区华强北街道深南中路 2010 号东风大厦1706 室

## Middle East SEC Headquarters

SEC Industrial Battery B.S.C.  
Office 1304, 10th floor / Bldg 614  
Rd 1011 / Sanabis 410 / Kingdom of Bahrain  
Tel +973 1772 1322