

**DataSafe® HX Top Terminated Batteries  
6 and 12 Volt**

**data safe®**  
HX



Available exclusively from EnerSys®, the world leader in stored power solutions.



## DataSafe® HX Top Terminated Batteries.

The DataSafe® HX top terminated battery range of Valve Regulated Lead Acid (VRLA) batteries has been designed to offer superior solutions for the Information Technology and Uninterruptible Power Supply (UPS) markets.

DataSafe HX top terminated batteries are the ideal source of power to protect vital systems. DataSafe HX top terminated batteries incorporate select design features that maximize reliability while ensuring superior performance and an excellent service life.

Gas recombination technology for VRLA batteries has totally changed the concept of standby power.

The minimal level of gas evolution allows battery installation in cabinets or on stands, in offices or near main equipment, maximizing space utilization and reducing storage and maintenance costs.

DataSafe HX top terminated batteries deliver superior performance, occupying less space than conventional standby power batteries.



## Other Benefits of DataSafe® HX Top Terminal Batteries:

- Positive and negative plate grids made of lead-calcium-tin alloy for long life and efficient recharge.
- Flame retardant case (UL94) and cover to meet UL1778.
- Individual flame arresting cell vents.
- DataSafe® HX top terminated battery containers and covers are hermetically sealed to provide leak resistance over the life of the product.
- AGM separators - The electrolyte is completely absorbed into the separator.
- High performance brass threaded receptacle, bolt terminal, and faston terminals.
- Increased energy density.
- Computer optimized electrochemistry for increased power up to the 15 minute rate to 1.67 volts/cell.
- 100% initial battery capacity.

## Construction

### 1. High conductivity terminals

Brass insert with threaded receptacle (HX80-HX800), bolt terminal (HX80 - HX150), or faston tab (HX25-HX50) for maximum conductivity and ease of installation.

### 2. High integrity terminal seal

Compression grommet (HX205-HX800) or dual welded/epoxy seal (HX25-HX150) designed for long life.

### 3. Self-regulating relief valve

Low pressure non-return valve prevents ingress of atmospheric oxygen.

### 4. Rugged high performance positive plates

Grids designed to resist corrosion and prolong active life.

### 5. Balanced negative plates

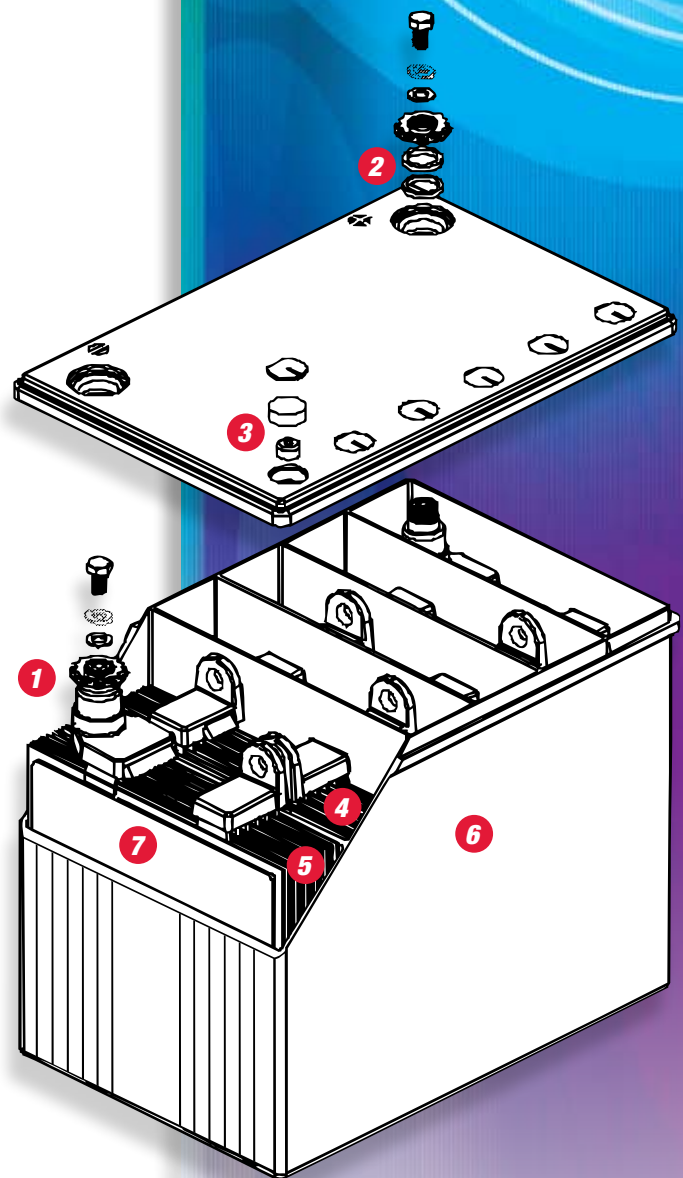
Ensure optimum recombination efficiency.

### 6. Tough cell containers

Thick-wall plastic, highly resistant to shock and vibration. Flame retardant material is the standard offering.

### 7. Separators

Low resistance microporous Absorbant Glass Mat (AGM). The electrolyte is absorbed within this material.



data safe®  
HX

# Range Summary

## GENERAL SPECIFICATIONS

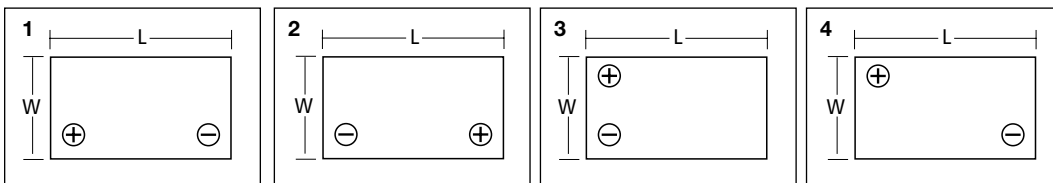
| Type     | Nominal Voltage (V) | Nominal Ah                                              | Watts/Cell                                                   | Nominal Dimensions |      |       |      |        |      | Typical Weight |       | Short Circuit Current (A) | Max Discharge Current (Amps-2 min rate) | Internal Resistance (mΩ)** | Layout | Terminals |
|----------|---------------------|---------------------------------------------------------|--------------------------------------------------------------|--------------------|------|-------|------|--------|------|----------------|-------|---------------------------|-----------------------------------------|----------------------------|--------|-----------|
|          |                     | 8 hr rate to 1.75 volts/cell end voltage at 77°F (25°C) | @ 15 min. rate to 1.67 volts/cell end voltage at 77°F (25°C) | Overall * Height   |      | Width |      | Length |      |                |       |                           |                                         |                            |        |           |
|          |                     |                                                         |                                                              | mm                 | inch | mm    | inch | mm     | inch | kg             | lbs   |                           |                                         |                            |        |           |
| 12HX25   | 12                  | 4.5                                                     | 23                                                           | 107                | 4.2  | 70    | 2.8  | 90     | 3.5  | 2.0            | 4.4   | 300                       | 41                                      | 16.5                       | 1      | A/B       |
| 12HX35   | 12                  | 7                                                       | 36                                                           | 100                | 3.9  | 65    | 2.6  | 151    | 5.9  | 2.8            | 6.1   | 500                       | 62                                      | 13.2                       | 3      | A/B       |
| 6HX50    | 6                   | 11                                                      | 53                                                           | 99                 | 3.9  | 50    | 2.0  | 151    | 5.9  | 2.1            | 4.7   | 720                       | 93                                      | 6.1                        | 1      | A/B       |
| 12HX50   | 12                  | 11                                                      | 53                                                           | 99                 | 3.9  | 99    | 3.9  | 152    | 6.0  | 4.1            | 9.1   | 720                       | 93                                      | 12.2                       | 3      | A/B       |
| 12HX80   | 12                  | 16                                                      | 80                                                           | 167                | 6.6  | 76    | 3.0  | 181    | 7.1  | 6.4            | 14.0  | 1000                      | 140                                     | 8.5                        | 2      | C/E       |
| 12HX100  | 12                  | 21                                                      | 100                                                          | 175                | 6.9  | 125   | 4.9  | 166    | 6.5  | 10.0           | 22.0  | 1500                      | 171                                     | 7.1                        | 2      | C/E       |
| 12HX135B | 12                  | 28                                                      | 135                                                          | 180                | 7.1  | 130   | 5.1  | 198    | 7.8  | 11.8           | 26.0  | 1800                      | 238                                     | 5.6                        | 1      | F         |
| 12HX135R | 12                  | 28                                                      | 135                                                          | 169                | 6.7  | 130   | 5.1  | 196    | 7.7  | 11.8           | 26.0  | 1800                      | 238                                     | 5.6                        | 1      | C         |
| 12HX150  | 12                  | 32                                                      | 150                                                          | 170                | 6.7  | 165   | 6.5  | 197    | 7.8  | 14.5           | 32.0  | 2400                      | 277                                     | 5.0                        | 2      | D/F       |
| 12HX205  | 12                  | 44                                                      | 205                                                          | 206                | 8.1  | 140   | 5.5  | 226    | 8.9  | 19.5           | 43.0  | 2775                      | 439                                     | 4.5                        | 1      | D         |
| 12HX300  | 12                  | 70                                                      | 284                                                          | 208                | 8.2  | 175   | 6.9  | 259    | 10.2 | 27.2           | 60.0  | 3175                      | 503                                     | 3.9                        | 1      | D         |
| 12HX330  | 12                  | 82                                                      | 336                                                          | 213                | 8.4  | 173   | 6.8  | 300    | 11.8 | 32.2           | 71.0  | 3700                      | 586                                     | 3.4                        | 1      | D         |
| 12HX400  | 12                  | 94                                                      | 381                                                          | 211                | 8.3  | 173   | 6.8  | 338    | 13.3 | 36.3           | 80.0  | 4225                      | 670                                     | 3.0                        | 1      | D         |
| 12HX505  | 12                  | 119                                                     | 506                                                          | 272                | 10.7 | 173   | 6.8  | 338    | 13.3 | 46.7           | 103.0 | 4510                      | 913                                     | 2.8                        | 1      | D         |
| 12HX540  | 12                  | 123                                                     | 540                                                          | 272                | 10.7 | 173   | 6.8  | 338    | 13.3 | 48.1           | 106.0 | 4775                      | 961                                     | 2.6                        | 1      | D         |
| 6HX800   | 6                   | 200                                                     | 780                                                          | 211                | 8.3  | 173   | 6.8  | 340    | 13.4 | 36.3           | 80.0  | 6200                      | 1272                                    | 1.0                        | 4      | D         |

\* Including Terminal

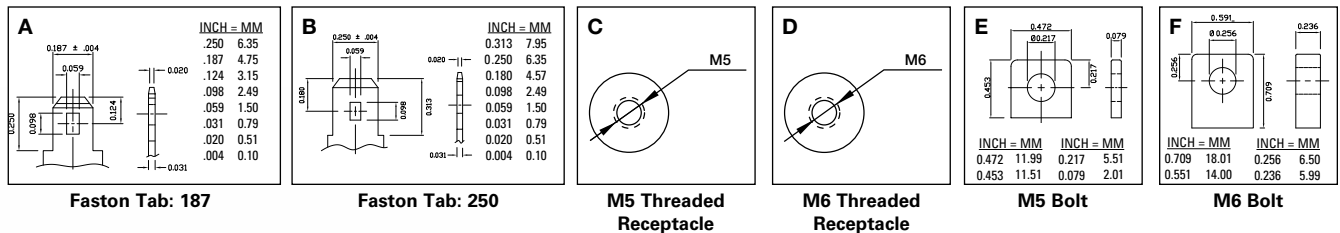
\*\* Resistance values are for reference only and not intended to represent an Ohmic Value or Baseline measurement.

All dimensions given are +/-0.08 in (2mm)

## LAYOUT



## TERMINAL



- Normal operating temperature range  
-4°F (-20°C) to 122°F (50°C)
- Float charging voltage  
2.25 - 2.28 Volts per cell at 77°F (25°C)
- Charging current  
DataSafe® HX top terminated batteries can be safely recharged at high current rates.
- Storage time  
DataSafe HX top terminated batteries can be stored for up to 6 months at 77°F (25°C) before a freshening charge is required.  
At higher temperatures this time interval will be reduced.

- Torque specifications  
(Fig. C) M5 Receptacle - 31 in-lbs (3.5 Nm) ± 5%  
(Fig. D) M6 Receptacle - (HX80-HX150) 44 in-lbs (5 Nm) ± 5%  
M6 Receptacle - (HX205-HX800) 60 in-lbs (6.8 Nm) ± 5%  
(Fig. E) M5 Bolt - 40 in-lbs (4.5 Nm) ± 5%  
(Fig. F) M6 Bolt - 58 in-lbs (6.5 Nm) ± 5%
- DataSafe HX top terminated batteries are designed to be installed on their base.  
Consult your local EnerSys® dealer before installing in any other orientation.

## STANDARDS

- UL listing - File No MH16464 (HX25-HX150) or MH12544 (HX205-HX800)
- Manufactured to EnerSys standards in ISO 9001 registered production facilities worldwide.
- Approved for shipping as non-hazardous, non-spillable - per IATA Special Provision A67 and 49 CFR



Constant Power Discharge (Watts per cell) to 1.75Vpc at 77°F (25°C)

| Type    | Standby Time (Minutes) |     |     |     |     |     |     |
|---------|------------------------|-----|-----|-----|-----|-----|-----|
|         | 5                      | 10  | 15  | 20  | 30  | 45  | 60  |
| 12HX25  | 41                     | 27  | 21  | 17  | 13  | 9   | 7   |
| 12HX35  | 65                     | 43  | 33  | 27  | 20  | 14  | 11  |
| 6HX50   | 101                    | 67  | 51  | 41  | 31  | 22  | 18  |
| 12HX50  | 101                    | 67  | 51  | 41  | 31  | 22  | 18  |
| 12HX80  | 144                    | 95  | 73  | 59  | 44  | 32  | 25  |
| 12HX100 | 180                    | 119 | 91  | 74  | 55  | 40  | 32  |
| 12HX135 | 244                    | 161 | 123 | 100 | 74  | 54  | 43  |
| 12HX150 | 271                    | 179 | 136 | 111 | 82  | 60  | 47  |
| 12HX205 | 373                    | 258 | 197 | 160 | 118 | 85  | 67  |
| 12HX300 | 513                    | 357 | 277 | 227 | 173 | 128 | 102 |
| 12HX330 | 590                    | 418 | 328 | 272 | 204 | 150 | 119 |
| 12HX400 | 671                    | 478 | 371 | 308 | 230 | 170 | 136 |
| 12HX505 | 782                    | 600 | 479 | 398 | 298 | 218 | 173 |
| 12HX540 | 835                    | 638 | 511 | 424 | 318 | 233 | 186 |
| 6HX800  | 1141                   | 877 | 713 | 603 | 463 | 346 | 277 |

Constant Power Discharge (Watts per cell) to 1.70Vpc at 77°F (25°C)

| Type    | Standby Time (Minutes) |     |     |     |     |     |     |
|---------|------------------------|-----|-----|-----|-----|-----|-----|
|         | 5                      | 10  | 15  | 20  | 30  | 45  | 60  |
| 12HX25  | 44                     | 29  | 22  | 18  | 13  | 9   | 7   |
| 12HX35  | 69                     | 45  | 34  | 28  | 20  | 15  | 12  |
| 6HX50   | 107                    | 70  | 53  | 43  | 31  | 23  | 18  |
| 12HX50  | 107                    | 70  | 53  | 43  | 31  | 23  | 18  |
| 12HX80  | 153                    | 100 | 76  | 61  | 45  | 33  | 26  |
| 12HX100 | 191                    | 125 | 94  | 77  | 56  | 41  | 32  |
| 12HX135 | 258                    | 168 | 127 | 103 | 76  | 55  | 44  |
| 12HX150 | 287                    | 187 | 142 | 115 | 84  | 62  | 48  |
| 12HX205 | 399                    | 269 | 203 | 164 | 119 | 85  | 67  |
| 12HX300 | 545                    | 369 | 283 | 231 | 174 | 128 | 102 |
| 12HX330 | 624                    | 431 | 335 | 276 | 206 | 150 | 119 |
| 12HX400 | 708                    | 493 | 380 | 313 | 232 | 170 | 136 |
| 12HX505 | 844                    | 637 | 499 | 410 | 301 | 218 | 173 |
| 12HX540 | 897                    | 675 | 532 | 438 | 326 | 236 | 186 |
| 6HX800  | 1259                   | 944 | 758 | 636 | 484 | 359 | 287 |

Constant Power Discharge (Watts per cell) to 1.67Vpc at 77°F (25°C)

| Type    | Standby Time (Minutes) |     |     |     |     |     |     |
|---------|------------------------|-----|-----|-----|-----|-----|-----|
|         | 5                      | 10  | 15  | 20  | 30  | 45  | 60  |
| 12HX25  | 45                     | 29  | 23  | 18  | 13  | 10  | 8   |
| 12HX35  | 71                     | 46  | 36  | 28  | 20  | 15  | 12  |
| 6HX50   | 110                    | 71  | 53  | 44  | 32  | 23  | 18  |
| 12HX50  | 110                    | 71  | 53  | 44  | 32  | 23  | 18  |
| 12HX80  | 157                    | 102 | 80  | 62  | 46  | 33  | 26  |
| 12HX100 | 197                    | 127 | 100 | 78  | 57  | 41  | 33  |
| 12HX135 | 265                    | 172 | 135 | 105 | 77  | 56  | 44  |
| 12HX150 | 295                    | 191 | 150 | 117 | 85  | 62  | 49  |
| 12HX205 | 412                    | 274 | 205 | 164 | 119 | 85  | 67  |
| 12HX300 | 558                    | 373 | 284 | 231 | 174 | 128 | 102 |
| 12HX330 | 637                    | 435 | 336 | 276 | 206 | 150 | 119 |
| 12HX400 | 722                    | 498 | 381 | 313 | 232 | 170 | 136 |
| 12HX505 | 877                    | 653 | 506 | 412 | 301 | 218 | 173 |
| 12HX540 | 930                    | 691 | 540 | 444 | 326 | 236 | 186 |
| 6HX800  | 1320                   | 977 | 780 | 652 | 494 | 365 | 291 |

Constant Power Discharge (Watts per cell) to 1.65Vpc at 77°F (25°C)

| Type    | Standby Time (Minutes) |     |     |     |     |     |     |
|---------|------------------------|-----|-----|-----|-----|-----|-----|
|         | 5                      | 10  | 15  | 20  | 30  | 45  | 60  |
| 12HX25  | 46                     | 30  | 23  | 18  | 13  | 10  | 8   |
| 12HX35  | 72                     | 46  | 36  | 28  | 21  | 15  | 12  |
| 6HX50   | 112                    | 72  | 53  | 44  | 32  | 23  | 18  |
| 12HX50  | 112                    | 72  | 53  | 44  | 32  | 23  | 26  |
| 12HX80  | 160                    | 103 | 80  | 63  | 46  | 33  | 26  |
| 12HX100 | 200                    | 129 | 100 | 78  | 57  | 42  | 33  |
| 12HX135 | 270                    | 174 | 135 | 106 | 77  | 56  | 44  |
| 12HX150 | 300                    | 193 | 150 | 117 | 86  | 63  | 49  |
| 12HX205 | 419                    | 276 | 205 | 164 | 119 | 85  | 67  |
| 12HX300 | 563                    | 375 | 284 | 231 | 174 | 128 | 102 |
| 12HX330 | 643                    | 437 | 336 | 276 | 206 | 150 | 119 |
| 12HX400 | 729                    | 500 | 381 | 313 | 232 | 170 | 136 |
| 12HX505 | 897                    | 661 | 510 | 412 | 301 | 218 | 173 |
| 12HX540 | 951                    | 699 | 545 | 445 | 326 | 236 | 186 |
| 6HX800  | 1356                   | 995 | 780 | 660 | 499 | 368 | 293 |

Constant Power Discharge (Watts per cell) to 1.63Vpc at 77°F (25°C)

| Type    | Standby Time (Minutes) |      |     |     |     |     |     |
|---------|------------------------|------|-----|-----|-----|-----|-----|
|         | 5                      | 10   | 15  | 20  | 30  | 45  | 60  |
| 12HX25  | 47                     | 30   | 23  | 18  | 13  | 10  | 8   |
| 12HX35  | 74                     | 47   | 36  | 29  | 21  | 15  | 12  |
| 6HX50   | 115                    | 73   | 55  | 44  | 32  | 24  | 19  |
| 12HX50  | 115                    | 73   | 55  | 44  | 32  | 24  | 19  |
| 12HX80  | 165                    | 105  | 80  | 66  | 46  | 34  | 26  |
| 12HX100 | 206                    | 131  | 100 | 81  | 58  | 42  | 33  |
| 12HX135 | 278                    | 177  | 137 | 109 | 78  | 57  | 45  |
| 12HX150 | 309                    | 196  | 150 | 120 | 86  | 63  | 49  |
| 12HX205 | 426                    | 278  | 205 | 164 | 119 | 85  | 67  |
| 12HX300 | 567                    | 375  | 284 | 231 | 174 | 128 | 102 |
| 12HX330 | 648                    | 437  | 336 | 276 | 206 | 150 | 119 |
| 12HX400 | 734                    | 500  | 381 | 313 | 232 | 170 | 136 |
| 12HX505 | 915                    | 667  | 511 | 412 | 301 | 218 | 173 |
| 12HX540 | 970                    | 706  | 549 | 445 | 326 | 236 | 186 |
| 6HX800  | 1388                   | 1011 | 780 | 667 | 503 | 370 | 294 |

Constant Power Discharge (Watts per cell) to 1.60Vpc at 77°F (25°C)

| Type    | Standby Time (Minutes) |      |     |     |     |     |     |
|---------|------------------------|------|-----|-----|-----|-----|-----|
|         | 5                      | 10   | 15  | 20  | 30  | 45  | 60  |
| 12HX25  | 47                     | 30   | 23  | 18  | 13  | 10  | 8   |
| 12HX35  | 74                     | 47   | 36  | 28  | 21  | 15  | 12  |
| 6HX50   | 115                    | 73   | 53  | 44  | 32  | 23  | 18  |
| 12HX50  | 115                    | 73   | 53  | 44  | 32  | 23  | 18  |
| 12HX80  | 165                    | 105  | 80  | 63  | 46  | 34  | 26  |
| 12HX100 | 206                    | 131  | 100 | 79  | 58  | 42  | 33  |
| 12HX135 | 278                    | 177  | 135 | 107 | 78  | 57  | 45  |
| 12HX150 | 309                    | 196  | 150 | 119 | 86  | 63  | 49  |
| 12HX205 | 433                    | 279  | 205 | 164 | 119 | 85  | 67  |
| 12HX300 | 571                    | 375  | 284 | 231 | 174 | 128 | 102 |
| 12HX330 | 652                    | 437  | 336 | 276 | 206 | 150 | 119 |
| 12HX400 | 739                    | 500  | 381 | 313 | 232 | 170 | 136 |
| 12HX505 | 940                    | 675  | 511 | 412 | 301 | 218 | 173 |
| 12HX540 | 995                    | 714  | 550 | 445 | 326 | 236 | 186 |
| 6HX800  | 1428                   | 1029 | 780 | 674 | 507 | 372 | 296 |

Rates subject to change without notice.

## DataSafe® 12V HX Top Terminal Battery Cabinets

DataSafe® HX Top Terminal 12V Series Battery Cabinets\* (See Figure 1) are available in UBC at or Below Grade Rated Zone 4. Visit our web site [www.enersys.com](http://www.enersys.com) to view the below specific size 12V Cabinet Data Sheets.

| 12 Volt Battery        | Zone 0 Data Sheet | Zone 4 Data Sheet |
|------------------------|-------------------|-------------------|
| HX Top Terminal Series | N/A               | US-HXCAB-RS       |

\* Battery Cabinet Accessories, inter-unit & inter-tier connections etc., for 120VDC to 480 VDC Cabinets are included in the cabinet price as they are all sized at the 15 minute discharge rate to 1.67 v/c end voltage.

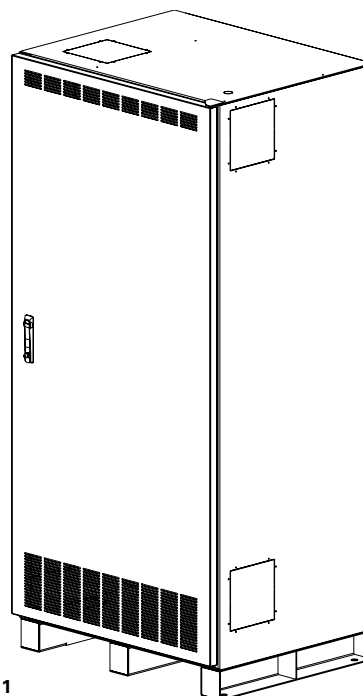


Figure 1  
Example of a 12 Volt  
HX Series Battery Cabinet

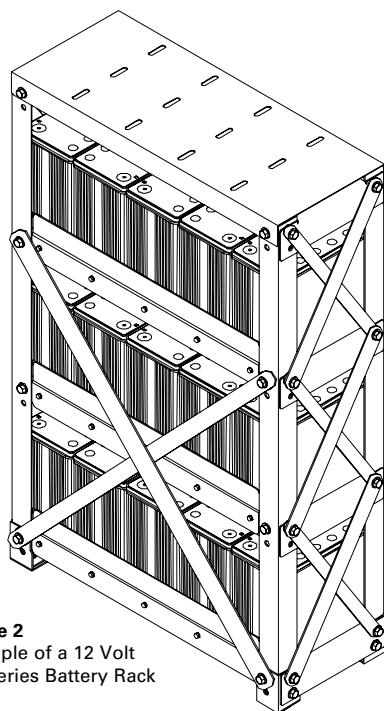


Figure 2  
Example of a 12 Volt  
HX Series Battery Rack

## DataSafe® 12V HX Top Terminal Battery Racks

DataSafe® HX Top Terminal 12V Series Battery Racks\*\* (See Figure 2) are available in UBC Zone 0 as well as at or Below Grade Rated Zone 4. Visit our web site [www.enersys.com](http://www.enersys.com) to view the below specific size 12V Rack Data Sheets.

| 12 Volt Battery | Zone 0 Data Sheet | Zone 4 Data Sheet |
|-----------------|-------------------|-------------------|
| 12HX205         | US-UAAx-RK        | US-UJAx-RK        |
| 12HX300         | US-UABx-RK        | US-UJBx-RK        |
| 12HX330         | US-UACx-RK        | US-UJCx-RK        |
| 12HX400         | US-UADx-RK        | US-UJDx-RK        |
| 12HX505         | US-UAEx-RK        | US-UJEx-RK        |
| 12HX540         | US-UAFx-RK        | US-UJFx-RK        |
| 6HX800          | US-UAFx-RK        | US-UJFx-RK        |

\*\* Battery Rack Accessories, inter-unit & inter-tier connectors etc., are not included in Rack or Battery prices as their size varies based on the specific site application or rates. Once properly sized and quoted by EnerSys, Battery Rack Accessories are available and sold as separate line items.

