



## VTX 1 M 150 - Cell data sheet

### Classification

|                          |             |
|--------------------------|-------------|
| Brand                    | Alcad       |
| Cell type                | VTX 1 M 150 |
| Cell P/N                 | 310561384   |
| Capacity at 5 hours rate | 150 Ah      |
| IEC Designation          | KGM150P     |
| According to IEC 62259   |             |



Wiring principle

Normal

### Physical data

|                        |        |                        |        |
|------------------------|--------|------------------------|--------|
| Overall height         | 421 mm |                        |        |
| Cell height            |        |                        |        |
| Width                  | 195 mm | Weight per cell        | 8,4 Kg |
| Block length - 4 cells | 252 mm | Block length - 5 cells | 312 mm |
| Block length - 6 cells | 372 mm |                        |        |

### Construction

|                    |                 |                           |                                           |
|--------------------|-----------------|---------------------------|-------------------------------------------|
| Container material | Polypropylene   | No. of terminals/polarity | 1                                         |
| Separator type     | Felt            | Terminal material         | Steel                                     |
| Connection torque  | 30,0 +/- 3,0 Nm | Vent type                 | Low pressure flame arresting vent (large) |
| Terminal size      | M10 SW 16 mm    | Handle                    | Yes                                       |

### Plates

| Positive       |                         | Negative       |                         |
|----------------|-------------------------|----------------|-------------------------|
| Type of plates | Maintenance Free Pocket | Type of plates | Maintenance Free Pocket |

### Electrolyte

|                              |            |                   |       |
|------------------------------|------------|-------------------|-------|
| Electrolyte type: Renewal    | E13        | Max/Min           | 50 mm |
| Electrolyte type: Initial    | E22        | Vent oil quantity |       |
| Electrolyte per cell: Liquid | 1,9 liters |                   |       |

### Connection

|                                          |                    |                              |                    |
|------------------------------------------|--------------------|------------------------------|--------------------|
| Cable area of internal connection cables | 70 mm <sup>2</sup> | End-lug (and external cable) | 50 mm <sup>2</sup> |
|------------------------------------------|--------------------|------------------------------|--------------------|



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### Charging

|                      |             |                         |             |
|----------------------|-------------|-------------------------|-------------|
| Float voltage        | 1,42 V/Cell | High rate voltage (min) | 1,45 V/Cell |
| Single-level voltage | 1,42 V/Cell |                         |             |

### Resistance/Short circuit

|                     |           |                       |        |
|---------------------|-----------|-----------------------|--------|
| Internal resistance | 0,76 mOhm | Short circuit current | 1626 A |
|---------------------|-----------|-----------------------|--------|

### Performance data

#### Current discharge

After prolonged float charge of fully charged cells. Available amperes at +20°C +/- 5°C (+68°F +/- 9°F)

| V/Cell | 10h  | 8h   | 5h   | 3h   | 2h   | 1,5h | 1h   | 30m  | 20m  | 15m  | 10m | 5m  | 1m  | 30s | 5s  | 1s  |
|--------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| 1      | 15,0 | 18,7 | 30,0 | 48,0 | 70,6 | 92,1 | 123  | 168  | 190  | 204  | 221 | 256 | 270 | 310 | 353 | 378 |
| 1,05   | 15,0 | 18,6 | 29,2 | 47,5 | 69,2 | 87,6 | 109  | 140  | 158  | 168  | 181 | 210 | 230 | 262 | 298 | 319 |
| 1,1    | 14,8 | 18,3 | 28,7 | 46,4 | 64,4 | 75,4 | 89,1 | 110  | 120  | 127  | 140 | 165 | 190 | 219 | 249 | 265 |
| 1,14   | 14,5 | 18,0 | 27,9 | 42,6 | 53,3 | 59,2 | 68,3 | 83,8 | 91,4 | 96,8 | 105 | 129 | 150 | 175 | 201 | 212 |

#### Power discharge

Available power (W), after prolonged float charged of fully charged cells at +20°C +/- 5°C (+68°F +/- 9°F)

| V/Cell | 10h  | 8h   | 5h   | 3h   | 2h   | 1,5h | 1h   | 30m  | 20m | 15m | 10m | 5m  | 1m  | 30s | 5s  | 1s  |
|--------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| 1      | 17,9 | 22,1 | 35,0 | 53,6 | 76,6 | 98,1 | 127  | 170  | 191 | 205 | 222 | 256 | 270 | 310 | 353 | 378 |
| 1,05   | 17,8 | 21,9 | 34,1 | 53,2 | 75,8 | 94,6 | 117  | 148  | 166 | 177 | 191 | 220 | 242 | 275 | 313 | 335 |
| 1,1    | 17,6 | 21,8 | 33,8 | 53,1 | 72,7 | 84,6 | 99,3 | 121  | 133 | 140 | 154 | 181 | 209 | 241 | 274 | 292 |
| 1,14   | 17,3 | 21,4 | 32,9 | 49,6 | 61,6 | 68,1 | 78,4 | 95,8 | 104 | 111 | 120 | 147 | 171 | 199 | 229 | 242 |



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### Kt Factor

#### Current discharge

After prolonged float charge of fully charged cells. Kt factor at +20°C +/- 5°C (+68°F +/- 9°F)

| V/Cell | 10h  | 8h   | 5h   | 3h   | 2h   | 1,5h | 1h   | 30m  | 20m  | 15m  | 10m  | 5m   | 1m   | 30s  | 5s   | 1s   |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1      | 10,0 | 8,04 | 5,00 | 3,12 | 2,13 | 1,63 | 1,22 | 0,89 | 0,79 | 0,74 | 0,68 | 0,59 | 0,56 | 0,48 | 0,43 | 0,40 |
| 1,05   | 10,0 | 8,09 | 5,14 | 3,16 | 2,17 | 1,71 | 1,38 | 1,07 | 0,95 | 0,89 | 0,83 | 0,71 | 0,65 | 0,57 | 0,50 | 0,47 |
| 1,1    | 10,1 | 8,18 | 5,22 | 3,24 | 2,33 | 1,99 | 1,68 | 1,37 | 1,25 | 1,18 | 1,07 | 0,91 | 0,79 | 0,69 | 0,60 | 0,57 |
| 1,14   | 10,3 | 8,35 | 5,38 | 3,52 | 2,82 | 2,53 | 2,20 | 1,79 | 1,64 | 1,55 | 1,42 | 1,16 | 1,00 | 0,86 | 0,75 | 0,71 |

#### Power discharge

Kt factor power, after prolonged float charged of fully charged cells at +20°C +/- 5°C (+68°F +/- 9°F)

| V/Cell | 10h  | 8h   | 5h   | 3h   | 2h   | 1,5h | 1h   | 30m  | 20m  | 15m  | 10m  | 5m   | 1m   | 30s  | 5s   | 1s   |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1      | 8,37 | 6,80 | 4,28 | 2,80 | 1,96 | 1,53 | 1,18 | 0,88 | 0,78 | 0,73 | 0,68 | 0,59 | 0,56 | 0,48 | 0,43 | 0,40 |
| 1,05   | 8,41 | 6,84 | 4,40 | 2,82 | 1,98 | 1,59 | 1,28 | 1,01 | 0,90 | 0,85 | 0,79 | 0,68 | 0,62 | 0,54 | 0,48 | 0,45 |
| 1,1    | 8,50 | 6,89 | 4,44 | 2,83 | 2,06 | 1,77 | 1,51 | 1,24 | 1,13 | 1,07 | 0,97 | 0,83 | 0,72 | 0,62 | 0,55 | 0,51 |
| 1,14   | 8,65 | 7,02 | 4,57 | 3,02 | 2,44 | 2,20 | 1,91 | 1,57 | 1,44 | 1,36 | 1,25 | 1,02 | 0,88 | 0,75 | 0,66 | 0,62 |