



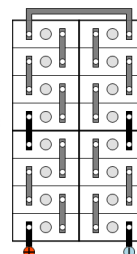
# VTX 1 M 170 - Cell data sheet

## Classification

|                          |             |
|--------------------------|-------------|
| Brand                    | Alcad       |
| Cell type                | VTX 1 M 170 |
| Cell P/N                 | 310561484   |
| Capacity at 5 hours rate | 170 Ah      |
| IEC Designation          | KGM170P     |
| According to             | IEC 62259   |



Wiring principle      Normal



## Physical data

|                        |        |                        |        |
|------------------------|--------|------------------------|--------|
| Overall height         | 421 mm |                        |        |
| Cell height            |        |                        |        |
| Width                  | 195 mm | Weight per cell        | 9,9 Kg |
| Block length - 4 cells | 304 mm | Block length - 5 cells | 377 mm |
| Block length - 6 cells | 450 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 | 2,4 liters |                   |       |

## Connection

|  |                    |                              |                    |
|--|--------------------|------------------------------|--------------------|
| Cable area of internal connection cables | 70 mm <sup>2</sup> | End-lug (and external cable) | 70 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 | 0,67 mOhm | Short circuit current | 1843 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      | 17,0 | 21,2 | 34,0 | 54,4 | 80,0 | 104  | 139  | 190  | 215 | 231 | 250 | 290 | 306 | 351 | 400 | 429 |
| 1,05   | 16,9 | 21,0 | 33,1 | 53,8 | 78,5 | 99,2 | 123  | 158  | 179 | 191 | 206 | 238 | 261 | 297 | 338 | 362 |
| 1,1    | 16,8 | 20,8 | 32,6 | 52,5 | 72,9 | 85,4 | 101  | 124  | 136 | 144 | 158 | 187 | 215 | 248 | 283 | 300 |
| 1,14   | 16,4 | 20,4 | 31,6 | 48,3 | 60,4 | 67,1 | 77,4 | 95,0 | 104 | 110 | 119 | 146 | 170 | 198 | 228 | 240 |

### 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      | 20,3 | 25,0 | 39,7 | 60,7 | 86,8 | 111  | 144  | 193 | 217 | 232 | 251 | 290 | 306 | 351 | 400 | 429 |
| 1,05   | 20,2 | 24,8 | 38,6 | 60,2 | 85,9 | 107  | 132  | 168 | 189 | 201 | 216 | 250 | 274 | 312 | 355 | 380 |
| 1,1    | 20,0 | 24,7 | 38,3 | 60,2 | 82,4 | 95,8 | 113  | 138 | 151 | 159 | 175 | 205 | 237 | 273 | 311 | 330 |
| 1,14   | 19,6 | 24,2 | 37,2 | 56,2 | 69,8 | 77,2 | 88,8 | 109 | 118 | 125 | 136 | 166 | 194 | 226 | 260 | 274 |



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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 |