

**AQUA ENGINEERING LTD****ESKOM MEDUPI****MECHANICAL EQUIPMENT DATA SHEET****UF SKID**

|            |         |  |  |  |
|------------|---------|--|--|--|
| Originator | F.F     |  |  |  |
| Revision   | 0       |  |  |  |
| Issue      | P.O     |  |  |  |
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|                          |                         |  |  |
|--------------------------|-------------------------|--|--|
| PROJECT                  | C048                    |  |  |
| AQUA TAG NUMBER          | UF-1401,1501,1601,11201 |  |  |
| ESKOM TAG No:            | 0 0GDB0102/03/04 AT001  |  |  |
| SERVICE                  | Filtered water          |  |  |
| INSTALLATION ENVIRONMENT | INSIDE                  |  |  |

**Skid and vessel:****Membranes:**

|                          |               |                               |                        |
|--------------------------|---------------|-------------------------------|------------------------|
| Vessel Supplier          | Norit         | Supplier                      | Norit                  |
| Model number             | 8"SXL-225FSFC | Model                         | UFC M5 LE              |
| Number of Vessels        | 160           | Configuration                 | 4X40X4                 |
| Design Code              | ANSI, NSF     | Membrane material             | PES/PVP                |
| Working Pressure         | kPa 100       | Membrane area                 | m <sup>2</sup> 40      |
| Design Pressure          | kPag 300      | Trans membrane pressure (max) | kPa 300                |
| Test Pressure            | kPag -        | Chlorine tolerance            | ppm NOTE 1             |
| Design Tempe.            | Deg C 40      | pH range                      | 1 - 12                 |
| Membranes/vessel         | off 4         | Outlet Turbidity              | NTU <0.1               |
| Number of arrays         | off N/A       | Max feed flow                 | m <sup>3</sup> /h 1445 |
| Configuration            | 40X4          | Mass dry of membrane element  | kg ca 25               |
| Mass Empty               | kg -          | Dimensions: Diam x Length     | mm 0.3x1527.5          |
| Dimensions: Diam x leng  | mm -          |                               |                        |
| Material of construction | PVC           |                               |                        |

**Process design:**

|                         |                               |   |
|-------------------------|-------------------------------|---|
| Outlet flow (ave.)      | m <sup>3</sup> /h 1445        |   |
| Backwash flow           | m <sup>3</sup> /h 1600        |   |
| Recovery                | % 85                          |   |
| Feed pressure           | kPag 300                      |   |
| Trans membrane pressure | kPag 100                      |   |
| Max pressure drop       | kPa 100                       |   |
| Feed temperature        | Deg C 23                      | ↓ |
| Flux (net)              | lmh 56                        |   |
| Flux (gross)            | lmh 70                        |   |
| Skid Dimensions         | LxWxH(m) 8453(L)x2110x4637(H) |   |

Notes:

Note 1: Sodium Hypochlorite (active chlorine) 200ppm@40 deg C, 30 min/day