

TECTRON™ Large Diameter ME Cells

Product Data Sheet

The **T3** (3 in.) or **T5** (5 in.) large diameter TECTRON Membrane Electrode (ME) Cells are ready to meet the needs of automotive industry E-coat paint systems. They are designed to retrofit easily into existing e-coat paint systems. Mounting brackets, anolyte supply & return manifold connections, and electrical connections are backwards compatible with existing C-cells or box anode cells. The **T5** ME Cell has 9% more anode surface area than competitor's common C cell and the wall thickness is the same.

Benefits

- Electrode can be removed for inspection and re-inserted without damaging the fragile membrane.
- There are no bolted joints that can become leak points. C Cells and box cells can have more than 50 bolts that have to be properly tightened.
- T5 TECTRON Cell has 0.43 m²/m (1.45 SF/ft), or about 9% more Electrode area compared with 0.41 m²/m (1.33 SF/ft) for the common C-Cell.
- Uniform anolyte flow pattern to promote enhanced cooling and faster removal of harmful oxygen bubbles.



Features

- The cylindrical Electrode design has no exposed edges; therefore no rapid edge wear, or hot spots.
- Protective Membrane Guard is standard.
- Open top version is suitable for most monorail type conveyor systems. Splash Guard is available.
- Closed Top version is available for use in hoist or Roll Dip e-coat machines.

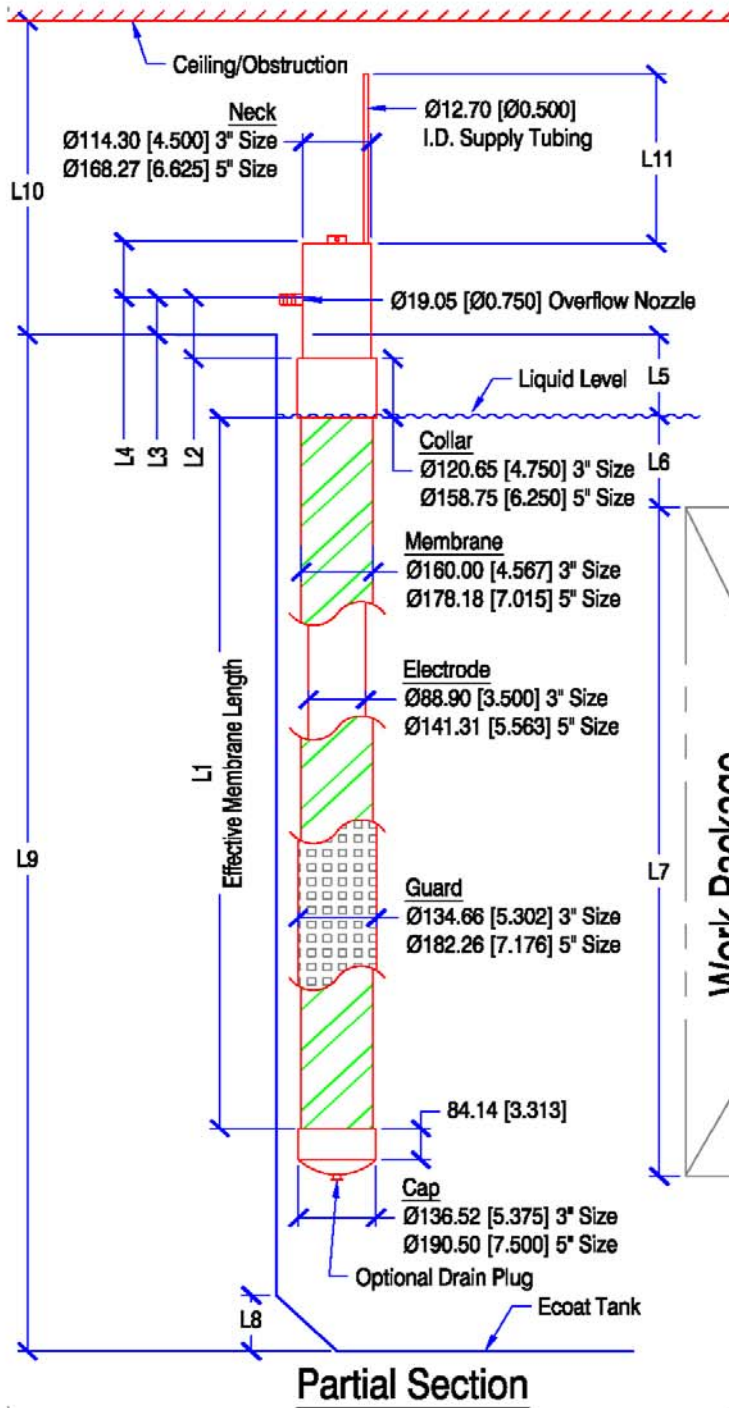


Properties (T3 or T5)

- Maximum outside diameter is 137 mm (5.4 in) or 191 mm (7.5 in).
- Membrane Shell is sized to work package height, and is offered in standard effective lengths of 1400 mm, 1900 mm, 2300 mm and 2900 mm; with custom lengths available. The PVC Neck is sized according to tank depth.
- Membrane Shell weighs approximately 3.5 - 9 kg (8-22 lbs.), depending on length.
- The Electrode has a 88.9 mm (3.5 in) or 143.0 mm (5.63 in) outside diameter and is made of 316L Schedule 10 stainless steel pipe.
- Wall thickness of Electrode is 3.05 mm (0.120 in) or 3.40 mm (0.134 in).
- 316L Electrode weight is 6.5 kg/m (4.37 lbs/ft per lineal foot) or 11.7 kg/m (7.84 lbs/ft) of Electrode length.
- The Electrode has 0.280 m²/m (0.916 ft²/ft) or 0.443 m²/m (1.45 ft²/ft) of Electrode surface area.
- Current density of 32 - 54 amp/m² (3 - 5 amps/ft²) is typical at 200 - 400 volts.
- Recommended electrolyte flow rate is 0.8 lpm/m² (2.0 gpm/10 ft²) per ME Cell at 3 - 3.5 bar (45 - 55 ft) of head at anolyte pump discharge.

UFS Corporation . 330 North 400 East . Valparaiso, Indiana 46383 USA
+219-464-2027 . +219-464-8646 (Fax) . www.ufsc.com . info@ufsc.com

TECTRON Large Diameter ME Cell Proposal



Date:

Quote #:

Ref #:

ME Cell Options List

Ion Exchange Membrane

- | | |
|---------------------------------|---------------------------------------|
| Type | Form |
| <input type="checkbox"/> Anion | <input type="checkbox"/> Roll (PTAR) |
| <input type="checkbox"/> Cation | <input type="checkbox"/> Sheet (PTAN) |
| | <input type="checkbox"/> Sheet (PTAN) |

Electrode Size

- 3" 5"

Electrode Type

- 316L Stainless Steel Schedule 10
- 316L Stainless Steel Schedule 40
- 316L Stainless Steel Schedule 80
- Precious Metal (PM_)

Membrane Guard

- None Premium

Effective Length Large Ø ME Electrodes					
Length		3"		5"	
mm	in	SM	SF	SM	SF
910	35.83	0.254	2.74	0.404	4.35
1400	55.12	0.391	4.21	0.621	6.69
1900	74.80	0.531	5.71	0.843	9.08
2300	90.55	0.642	6.91	1.021	10.99
2900	114.17	0.810	8.72	1.287	13.86

Work Package

Dimensional Values	
L1	
L2	
L3	
L4	150.00
L5	
L6	
L7	
L8	
L9	
L10	
L11	1500.00

- mm inches

Recommended Accessories

- Flow Meter Splash Guard
- Cable Lead Clamps (2per Cell)
- Connector Lug Set (1 per every 5 Cells)
- PVC Return Tubing - 1.5 M (5 Ft) per Cell

UFS Corporation . 330 North 400 East . Valparaiso, Indiana 46383 USA
 +219-464-2027 . +219-464-8646 (Fax) . www.ufsc.com . info@ufsc.com