

TECTRON™ Large Diameter ME Cells

Product Data Sheet

The T3 (3 inch) or T5 (5 inch) 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.

Benefits

- Anode can be removed for inspection, then re-inserted without damaging the fragile membrane.
- There are no bolted joints that can become leak points. Competitors' c-cells or box cells can have more than 50 bolts that have to be properly tightened.
- T5 TECTRON Cell has more anode area than competitors' c-cells. [0.43 m²/m (1.45 SF/ft), compared to 0.41 m²/m (1.33 SF/ft) for the common c-cell, about 9% more.]
- The uniform anolyte flow pattern promotes enhanced cooling and faster removal of harmful oxygen bubbles.



Features

- The cylindrical anode design has no exposed edges; eliminating rapid edge wear and 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.

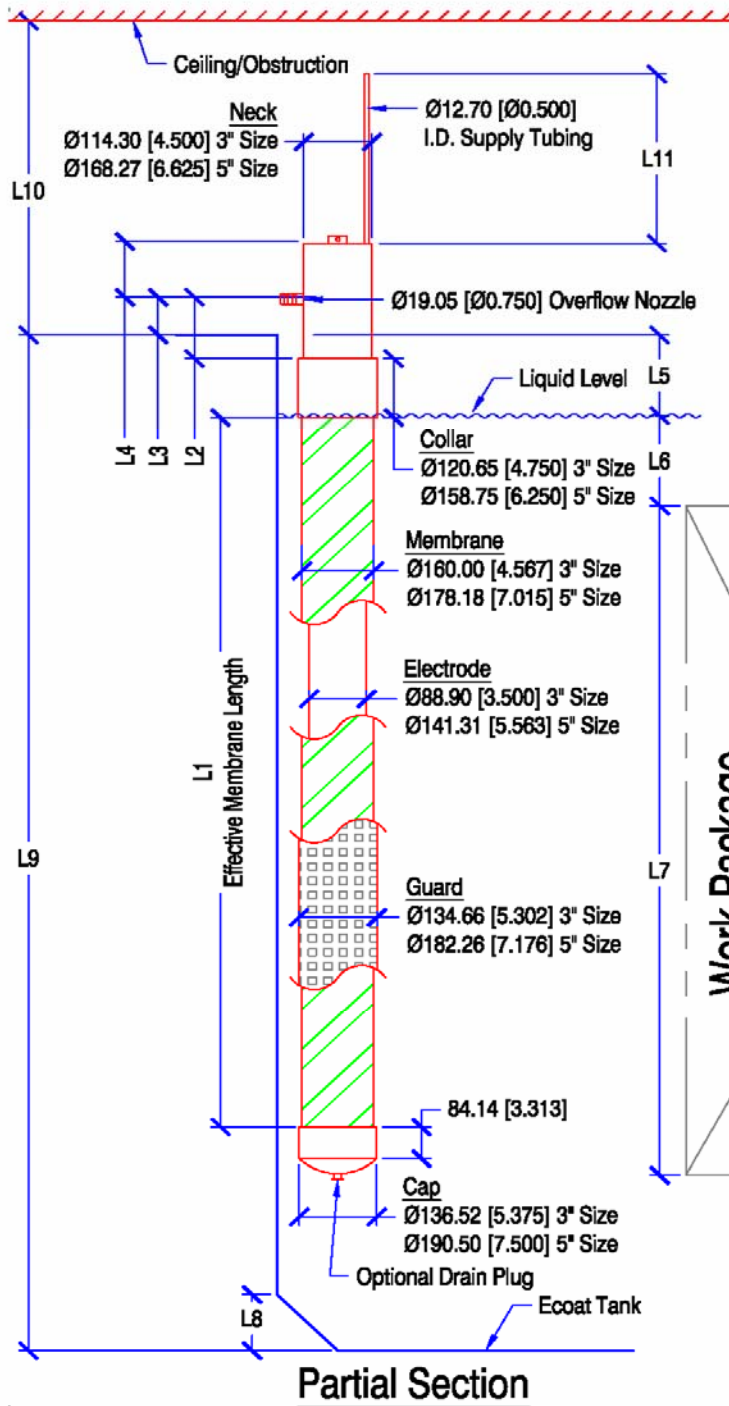


Properties (T3 or T5)

- Anode current density of 32 - 54 amp/m² (3 - 5 amps/ft²) is typical at 200 - 400 volts.
- 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.
- Recommended anolyte flow rate is 8.0 lpm/m² (2.0 gpm/10 ft²) per ME Cell at 3 - 3.5 bar (45 - 55 ft) of head at anolyte pump discharge.
- Membrane Shell weighs approximately 3.5 - 9 kg (8-22 lbs.), depending on length.
- Maximum Cell outside diameter: T3 = 137 mm (5.4 in); T5 = 191 mm (7.5 in).
- Anode is made of 316L Schedule 10 stainless steel pipe. Anode outside diameter: T3 = 88.9 mm (3.5 in); T5 = or 141.3 mm (5.56 in).
- Wall thickness of anode: T3 = 3.05 mm (0.120 in); T5 = 3.40 mm (0.134 in).
- S10 316L anode weight per lineal unit: T3 = 6.5 kg/m (4.37 lbs/ft); T5 = 11.7 kg/m (7.84 lbs/ft).
- Anode surface area: T3 = 0.280 m²/m (0.916 ft²/ft); T5 = 0.443 m²/m (1.45 ft²/ft).

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

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

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