

CERANODE EMMO™ TUBULAR ANODES

All CPR™ and CPR-S™ anodes feature our unique CerAnode Arc Plasma Spray Processing. This superior abrasion-resistant EMMO™ (enhanced mixed metal oxide) coating is more resilient than most MMO technologies in the marketplace today.

Features:

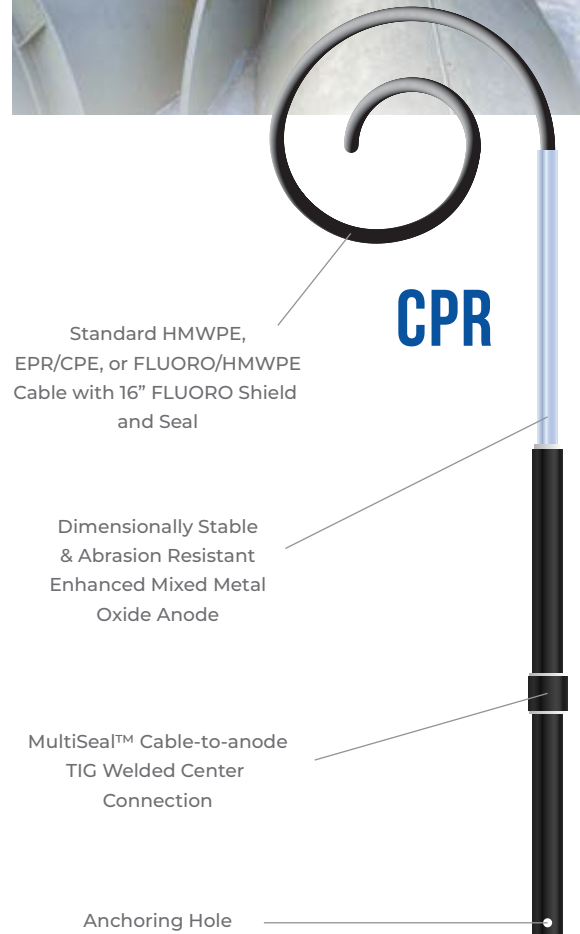
- Arc Plasma Spray Processed MMO Coating
- High powered activated titanium anode
- Anode string burnout protection
- Single center connect, end connect, and string configurations available.

Benefits:

- Specially designed for deep anode beds
- Dimensionally stable, tightly bound, and abrasion-resistant EMMO
- Moisture-proof and corrosion-resistant with ultra-low electrical connection resistance
- Strong enough to withstand the most demanding field installation environments

Applications:

Jetties, piers, offshore, deep anode beds and more



emmo™



STANDARD CERANODE TYPICAL ANODE SIZES

Consult CerAnode for other size and amp rating options

Anode Type	Anode Length in. (cm)	Anode Dia. in. (cm)	Anode Weight lbs/kg	Amps Per Tube
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COKE¹ - SOIL & FRESH WATER (20 Yr. design life)

2.5C/FW20YR	20 (51)	3/4 (1.9)	2 (0.9)	2.5
4C/FW20YR	24 (61)	3/4 (1.9)	2 (0.9)	4
5C/FW20YR	40 (101)	3/4 (1.9)	3 (1.3)	5
8C/FW20YR	48 (122)	3/4 (1.9)	3 (1.3)	8
4C/FW20YR	20 (51)	1 (2.5)	2 (0.9)	4
5C/FW20YR	60 (152)	1 (2.5)	5 (2.3)	5
8C/FW20YR	90 (228)	1 (2.5)	6 (2.7)	8
8C/FW20YR	40 (101)	1 (2.5)	4 (1.8)	8
10C/FW20YR	120 (304)	1 (2.5)	8 (3.6)	10
13C/FW20YR	40 (101)	1 (2.5)	4 (1.8)	13
8C/FW20YR	60 (152)	1.25 (3.2)	8 (3.6)	8

SEA WATER² with 20 Yr. Design Life

8SW20YR	20 (51)	3/4 (1.9)	2 (0.9)	8**
15SW20YR	40 (101)	3/4 (1.9)	3 (1.3)	15**
10SW20YR	20 (51)	1 (2.5)	2 (0.9)	10**
20SW20YR	40 (101)	1 (2.5)	4 (1.8)	20**
33SW20YR	40 (101)	1 (2.5)	4 (1.8)	33**
50SW20YR	48 (122)	1.25 (3.2)	6 (2.7)	50**

MUD with 20 Yr. Design Life

2M/20YR	24 (61)	3/4 (1.9)	2 (0.9)	2
4M/20YR	48 (122)	3/4 (1.9)	3 (1.3)	4
2M/20YR	20 (51)	1 (2.5)	2 (0.9)	2
7M/20YR	40 (101)	1 (2.5)	4 (1.8)	7
10M/20YR	48 (122)	1.25 (3.2)	6 (2.7)	10

Contact CerAnode for additional Tubular Anode sides

Notes:

* Reduce current 50% for operation below 5 degrees C. Impurities may also affect rating.

** Reduce current 50% for operation below 10 degrees C. Impurities may also affect rating.

CABLE FOR CERANODE TUBULAR

HMWPE INSULATION

8 AWG (8.4 mm ²)	HMWPE	0.087 lb/ft (0.130kg/m)
6 AWG (13.3 mm ²)	HMWPE	0.122 lb/ft (0.182kg/m)
4 AWG (21.2 mm ²)	HMWPE	0.175 lb/ft (0.260kg/m)
2 AWG (33.6 mm ²)	HMWPE	0.260 lb/ft (0.387kg/m)
1/0 AWG (53.5 mm ²)	HMWPE	0.405 lb/ft (0.603kg/m)

FLUOROPOLYMER INSULATION

(Choose Kynar®, Halar® or "Fluoro". "Fluoro" = either Halar or Kynar)

8 AWG (8.4 mm ²)	Fluoro/HMWPE	0.083 lb/ft (0.130kg/m)
6 AWG (13.3 mm ²)	Fluoro/HMWPE	0.120 lb/ft (0.130kg/m)
4 AWG (21.2 mm ²)	Fluoro/HMWPE	0.177 lb/ft (0.130kg/m)
2 AWG (33.6 mm ²)	Fluoro/HMWPE	0.260 lb/ft (0.130kg/m)
1/0 AWG (53.5 mm ²)	Fluoro/HMWPE	0.395 lb/ft (0.130kg/m)

EPR/CPE INSULATION

6 AWG (8.4 mm ²)	EPR/CPE	0.150 lb/ft (0.130kg/m)
4 AWG (8.4 mm ²)	EPR/CPE	0.220 lb/ft (0.130kg/m)
2 AWG (8.4 mm ²)	EPR/CPE	0.265 lb/ft (0.130kg/m)
1/0 AWG (8.4 mm ²)	EPR/CPE	0.510 lb/ft (0.130kg/m)

Consult CerAnode for many other Cable options

Notes:

- The backfill chosen must be high grade of fluid calcined petroleum coke with low electronic resistivity and a low contact resistance from particle to particle as well as between the anode and the coke particles (LorescoR SC-3 or equal). A vent pipe (LorescoR AllVent or equal) and centralizers must be used.
- This current rating applies when the anode is totally immersed in water.

