

RetroBuoy Jr.

General

RetroBuoy Jr. is a modular impressed current anode array rated at 150 Amperes for 20 years in its standard configuration. Anodes (3) are held within a buoyant module stabilised on the sea floor by a SeaMat gravity base.

Buoyancy module (Item 2)

Material	PE injection-molded shell/ vacuum-filled syntactic foam
Buoyancy	36 lb/ft³ [576 kg/m³]
Depth rating	1000 ft [304 m]
Dimensions	Ø 12.75" x 60" long [Ø 324 x 1525 mm long]

Tether system (Item 3)

Primary tether	1" Plasma 12 strand synthetic rope
Tensile strength	110,000 lb [500 kN]
Water absorption	0% Hygroscopic
Quantity	1 per buoyancy module
Tether fitting	Ø 4" [100 mm] Delrin

Standard Feeder Cable (Item 4)

Type	HDPE/DGSWA/Polyethylene 3-core cable
Each core	2 AWG [33 mm²] XLPE/XLPE
Filler	HDPE
Cable securing (Item 5)	Provided by strain relief cable grip

MMO Anode / cable connection

Method	Tin alloy expanding compression fitting (internal)
Sealing	Flexible resins (2 stage)
Testing	Helium leak test at 20 PSI [138 kPa]
Cable OD per core	0.423" [10.7 mm]

Overall weights & dimensions*

Dimensions (W x D x H)	103" x 103" x 125" [2630 x 2630 x 3180 mm]
Weight (Air)	3530 lb [1600 kg]
Weight (Water)	1700 lb [770 kg]

*Excluding feeder cable

MMO Anode elements (Item 1)

Base material	Titanium tube – Grade ASTM B338 Grade 1 or 2
Outside diameter	1.25" [31.75 mm]
Wall thickness	0.035" [0.9 mm]
Length	48" [1220 mm]
Coating	Mixed metal oxide activation coating comprising Iridium Dioxide / Tantalum Pentoxide, proprietary application method.
Current density	265 mA/in² [40 mA/cm²] – Deepwater derating

Gravity base (Item 6)

Type	Gravity base and stabilization provided by RetroMat (see RetroMat Technical Datasheet). Blocks held together by 5/8" [16 mm] polypropylene rope
Mat Size	Subject to location, typically 13 blocks (shown below) Block size - 20" x 20" x 12" [500 x 500 x 300 mm] Block volume - 1.5 ft³ [0.042 m³]
Steel grade	ASTM A36 [EN 10025 S355]
Welding	All welding conducted in accordance with Steel Structural Welding Code – AWS D1./D1.1M:2006 [EEMUA 158]
Cathodic protection (Item 7)	Anode type Aluminium (sacrificial) Dimensions Ø 7" x 4.5" [Ø 180 x 114 mm] Core Ø 1/2" x 4-5/8" [Ø 12.7 x 118 mm] Steel insert Net weight 17 lb [7.7 kg] Quantity 4

Continuity

Lifting (Item 8)

