

# DEEPWATER

## RETROSLED™ STREAMLINE

### General

Streamline RetroSled is a retrofit sacrificial anode system designed for pipelines where anode burial below the natural seabed is required or anticipated. The sled can be rapidly and safely deployed offshore with little-or-no seabed movement. For situations where seabed movement is anticipated, Deepwater recommends the RetroMat (See RetroMat technical datasheet).

### Frame (Item 2)

Steel grade ASTM A500 [ GR B ]

**Welding** All welding conducted in accordance with Steel Structural Welding Code – AWS D1/D1.1M:2006 [ EEMUA 158 ]

**Lifting (Item 3)** 3/4" [19mm] Padeye  
6 points

### Connection details (Item 4)

**RetroSled Streamline** 3/4" Contact screw, pointed tip w/ floating plate

**Structure** RetroClamp (See RetroClamp technical datasheet). Quantity as per requirements, typically 1 per Streamline RetroSled

**Cable** 4/0 AWG [~107 mm], EPDM insulated, heavy duty flexible cable  
2 per RetroClamp

### Overall weights and dimensions\*

#### 15 Year

**Dimensions** 78" x 265" x 17"  
(W x L x H) [1980 x 6730 x 430mm]

**Wt (Air)** 1775 lb [805 kg]  
**Wt (Water)** 1339 lb [607 kg]

#### 20 year

**Dimensions** 78" x 265" x 17"  
(W x L x H) [1980 x 6730 x 430mm]

**Wt (Air)** 1935 lb [877 kg]  
**Wt (Water)** 1355 lb [614 kg]

### Anodes (Item 1)



Deepwater offers two standard dimensions of anode for the Streamline RetroSled. The anode size is selected based on design

#### 15 year

Net weight 285 lb [129 kg]

Gross weight 382 lb [173 kg]

Dimensions 120" x 5.3" x 6.3"  
(L x W x H) [3048 x 140 x 150 mm]

Core 3" x 3" x 1/4" Sq. Tube

#### 20 year

Net weight 325 lb [148 kg]

Gross weight 422 lb [192 kg]

Dimensions 120" x 5.3" x 6.6"  
(L x W x H) [3048 x 140 x 150 mm]

Core 3" x 3" x 1/4" Sq. Tube

### Anode composition / electrical properties

#### Description

Streamline RetroSled is available with two anode compositions: Deep10 alloy, designed as an effective, general-purpose offshore alloy for use in tropical water environments, and Deep7 alloy with low iron content, which is more effective in cold, deep water.

#### Composition (%)

	Deep7	Deep10
Iron (Fe)	0.07 max.	0.10 max.
Silicon (Si)	0.10 max.	0.10 max.
Copper (Cu)	0.003 max.	0.006 max.
Zinc (Zn)	4.75 - 5.25	4.75 - 5.75
Indium (In)	0.015 - 0.025	0.010 - 0.020
Titanium (Ti)	0.025 max.	0.025 max.
Others (each)	0.02 max.	0.02 max.
Aluminium (Al)	Remainder	Remainder
Open circuit potential (sw)	(-) 1.08 V vs Ag/AgCl	(-) 1.08 V vs Ag/AgCl
Closed circuit potential (sw)(1)	(-) 1.05 V vs Ag/AgCl	(-) 1.05 V vs Ag/AgCl
Seawater capacity @ 25°C (2)	1100 AHr/lb [ 2420 AHR/kg ]	1100 AHr/lb [ 2420 AHR/kg ]
Seawater capacity @ 5°C	1100 AHr/lb [ 2420 AHR/kg ]	Variable
Seabed Mud Capacity @ 25°C	950 AHr/lb [ 2090 AHR/kg ]	950 AHr/lb [ 2090 AHR/kg ]
Seabed Mud Capacity @ 5°C	950 AHr/lb [ 2090 AHR/kg ]	Variable (3)

