

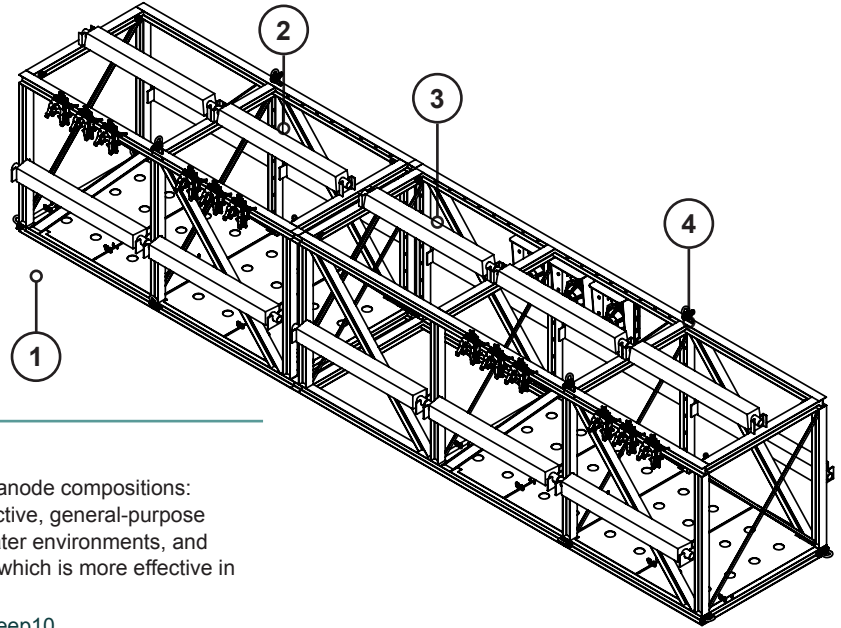
DEEPWATER

RETROPOD™ XL

General

RetroPod LP is a retrofit sacrificial anode system designed to maximize current output with reduced installation time. The optimized shape increases stability, reduces mutual interference between anodes and increases ease of handling offshore.

Note: This configuration is not recommended for use in water depths less than 35 ft [10.7 m].



Anode composition / electrical properties

Description

RetroPod LP 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 | 3.00 - 6.00 |
| Indium (In) | 0.015 - 0.025 | 0.010 - 0.020 |
| Titanium (Ti) | 0.025 max. | 0.025 max. |
| Cadmium (Cd) | Part of others | Part of others |
| 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) |

1. Recommended number to use when designing CP systems.
2. Recommended number to use when designing CP systems for offshore pipelines using bracelet or sub-bottom anode systems.
3. Activation can be a problem with chemistries at extremes of specification in cold water.

Overall weights and dimensions*

| | (When using 325 lb anodes) |
|------------------------|---|
| Dimensions (W x D x H) | 282" x 50" x 78" [7163 x 1270 x 1982 mm] |
| Weight (Air) | 4225 lb [1920 kg] |
| Weight (Water) | 3347 lb [1518 kg] |

*Excluding RetroClamp and connection cable

Anodes (Item 4)

Deepwater currently offers 325 lb anodes on the RetroPod LP.

| | |
|------------------------|--|
| Net weight | 325 lb [148 kg] |
| Gross weight | 410 lb [186 kg] |
| Dimensions (L x W x H) | 96" x 5.5" x 5.9" [2438 x 140 x 150 mm] |
| Core | 2" Sch 80 pipe |
| Quantity | 4 |



Frame (Item 1)

Steel grade ASTM A53 [ASTM A106]
ASTM A36 [EN 10025 S355]

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

Lifting (Item 2) 1.125" [28.5 mm] Padeye

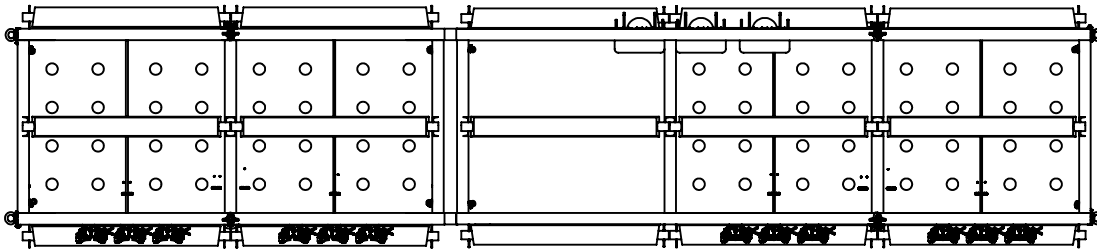
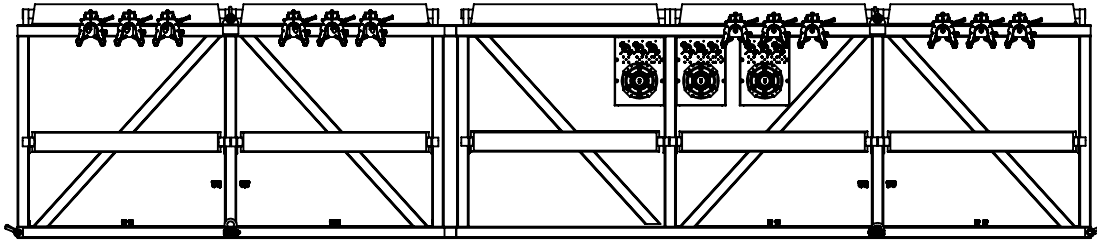
Connection details

RetroPod LP (Item 3) 2 x Ø 1/2" [M12] Stud-welded to frame

Structure RetroClamp (See RetroClamp technical datasheet). Quantity as per requirements, typically 1 per RetroPod.

Cable 4/0 AWG [~107 mm²], EPDM insulated, heavy-duty flexible cable
2 per RetroClamp
5/8" wire rope clips

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