



Cavotec is a leading cleantech company that designs and delivers connection and electrification solutions to enable the decarbonization of ports and industrial applications.

Cavotec pioneered ShorePower technology in the 80s. Since then, we have designed, manufactured, and delivered innovative Products & Solutions to over 100 Ports & 1000 Vessels enabling our customers to take charge of their emissions.

Overview

PowerAMPReel is a cable reeling system that is designed to be placed on board of ships and acts as the link between ship and shore electrical infrastructures.

The system on ship allows the storage, deployment, and recovery of HV or LV electrical cables for connecting the vessel to a land-based power source during the port stay. This allows the ship to switch off its generators, thereby giving significant reductions in noise and air pollution.

The system enables safe ShorePower operations thanks to

- A length of cable terminated with Cavotec PC5 push-pull connectors
- A monospiral cable drum, storing & protecting the cable
- A hydrodynamic drive unit with slipping clutch & gearbox, managing the cable tension during vessel displacement (tide, waves, change in draft)
- A cable guide with multi-rollers positioning and protecting the cable during operations
- A set of sensors as well as audible and visual alarms to alert the operators of key operating conditions
- A control interface to operate the reel: Reel In, Reel Out, Auto/manual Mode, Emergency stop.

Benefits

- Safety & Interoperability thanks to an IEC 80005 compliant design.
- Rapid connection to ShorePower thanks to Cavotec PC5 push-pull connectors.
- Black-out resistant system thanks to hydrodynamic unit.
- Ease of use & safety for operators thanks to pendant controller & local indicators.
- Long lasting equipment thanks to robust & reliable design and material selection.

Options and accessories

- Cables: number, cross Section & length.
- PC5 Connectors with fiber optics
- Special paint or colors
- Movable Version: Skid Mounted with/without roof allowing crane & forklift Handling
- Custom-made canvas hood.
- Weatherproof Enclosure.

Technical features

Operating Voltage	High Voltage: Up to 6600V, 50/60Hz; Low Voltage: Up to 1000V, 50/60Hz
Operating Temperature	-10°C~45°C
Power connectors	Cavotec PC5 Type. Compliant with PAS/IEC 80005:3, IEC 80005:1, IEC 62613-1
Drum	Type: Monospiral. (1, 2, or 3 cables)
Cables	Configurable: Number, reeling length, cross section. DNV/LR/CCS Class certification. Reeling length is provided with 2 additional dead turns on the drum. Cable grips.
Collector	Power rings + 1 earth ring+ 1 group LV sliprings for pilots
IP rating	IP56 collector, junction box and reel control panel
Control panel	Status lights, control pendant, dry contacts for connection to vessel automation. Connection point to vessel auxiliary power. AISI 304 or 316 painted
Heater systems	Anti-condensation heater system in reel control panel and in junction box
Torque Control	Hydrodynamic system. Black-out resistant.
Structure	Galvanized steel with paint. Basement for fixed or portable versions (included corner blocks). Default color Munsell No. 7.5BG 7/2
Auxiliary Power	10kW at 400V 50Hz, 380V 50Hz or 440V 60Hz
Cable Guide	Deployable cable guide
Approvals	Complies with Cable Management System (CMS) requirements of IEC 80005

Typical Configurations

Type	Standard Model	Number of Cables	Cable [mm ²]	Reeling length [m]	Weight (without cable) [kg]	Height [mm]	Length [mm]	Width [mm]	Max Power [MVA]
High Voltage Systems									
Double Monospiral	DM10265-82GP	2	185	55 m	2600	2805	2985	2090	8
Double Monospiral*	DM10245-82GP	2	185	45 m	1945	2465	2450	1565	8
Double Monospiral	DM10285-73GP	2	95	65 m	2800	3005	3135	2090	5.5
Monospiral	M10285-82GP	1	185	65 m	2700	3005	3135	1890	4

*Applicable to application such as PowerFit.
Other type of cables and reeling length may be evaluated on request

Weather Proof Enclosure

Weather Proof enclosures are designed to provide a weather protection & a safe operating room for the PowerAMPReel when the design of the ship cannot provide them (such as installation area without the protection of an upper deck).

Type	Diameter	Weight	Note
AMP-WP1/WP2 -DM/M2650	L x W x H 4500 x 3650 x 3300	2000kg	WPx: 1 or 2 is for the Left/Right configuration
AMP-WP1/WP2 -DM/M2850	L x W x H 4500 x 3650 x 3500	2000kg	



Please contact your local Cavotec Sales Office for further information at cavotec.com. Disclaimer: specifications are subject to change without notice.