



**General Description /Main Features**

Clean Current has developed a family of turbines ideally suited to the marine tidal environment. Leveraging the proven technology from the river in-stream turbine (proprietary generator, turbine blade and duct) and the bi-directional tidal technology, Clean Current has added a central yawing bearing to provide the turbine with the ability to orient itself directly in-line with the flood and ebb tides. The result is a passive system which

is simple, yet robust and designed to operate with minimal maintenance over a 25 year period. The product family has been developed to suit tidal depths ranging from 5.5 to 20 metres of water at LLWL. These units produce a given rated power for a given rated current speed as shown in the Table below.

Model	Min Water Depth (m)	Diameter (m)	Rated Power Output ( KW)	Rated Current Speed ( m/s)
CC035B	5.5	3.5	65	3.0
CC050B	7.0	5.0	125	3.0
CC075A	10.0	7.5	280	3.0
CC100A	13	10	500	3.0

This family of tidal in-stream turbines provides the customer with the following benefits:

- Simplified design enhances reliability
- Fault tolerant generator specifically designed for the marine environment
- Proprietary coatings and application methodologies
- Passive yawing system ensures optimal flow alignment on both flood and ebb tides
- Demonstrated superior performance (proprietary duct design)
- Totally submerged, ducted structure
- Easily deployed and retrieved, even in remote locations
- Autonomous operation and remote performance monitoring