



Instream
Energy Systems

25 kW Hydrokinetic Turbine System

Specification Sheet*

Water is a naturally occurring abundant resource and is one of the cleanest ways to produce electricity. Instream’s patented *Vertical-Axis Hydrokinetic Turbine* efficiently converts kinetic energy in moving water into cost-competitive renewable electricity. The operation produces no pollution with no excessive noise, emissions, or waste by-products. Field-tested so to confirm minimal environmental impacts, hydrokinetic energy is becoming an important resource in meeting the world’s increasing low impact energy needs.



Applications:

- Industrial/Commercial
- Agricultural
- Remote Communities
- Institutional/Utilities
- Residential

Key Benefits:

- Cost-effective and financially viable
- Minimal environmental impact
- Applicable to various conditions
- Minimal scheduled maintenance
- Low cost, high output operations

Turbine*

Rated Output	25 kW
Energy Production	219 MWh/year
Type	3 Blades @ 1.5 m long
Diameter	3 m
Swept Area	4.5 m ²

Blade Materials	Stainless Steel 316L Aluminum 6064-T16 Composites (in development)
-----------------	--

Generator	37.8HP @1850 RPM
Gearbox Ratio	38.23 : 1

Operational Data

Ideal Flow Speed (rated average)	2.0 m/s
Start-up Flow Speed	1.0 m/s
Cut-out Flow Speed	3.0 m/s
Survival Flow Speed	4.0 m/s
RPM at Rated Power	46.4 RPM
Survival Operational RPM	54.1 RPM
Turbine Mass	496 kg
Life Expectancy	25+ years

**Turbine specifications, including rotor size, rated output, generator, and gearbox ratio are tailored to the conditions of a particular site. Instream turbines operate most cost effectively in flows from 1.0 to 3.0 m/s; however, site engineering to channel flow can enable clean energy projects in lower flow conditions.*