emrgy Turbine Specifications

Our Technology

Emrgy empowers customers to monetize on existing, untapped assets to provide **clean, cost-effective, and continuous power**. Thanks to our proprietary design of turbines and drive train, Emrgy's technology compares favorably to solar or wind kilowatt hour pricing due to inherently higher capacity factors associated with water conveyance project sites. Our turbines range from 10kW to 40kW ratings, allowing for dynamic project planning.

RELIABLE, PREDICTABLE POWER OUTPUT

Unlike intermittent resources, Emrgy's technology harnesses energy around the clock – providing you predictable power output with no need for ancillary technologies such as energy storage.

SUSTAINABLE, RENEWABLE ENERGY

Unlike intermittent resources, Emrgy's technology harnesses energy around the clock – providing you predictable power output with no need for ancillary technologies such as energy storage.

COST-EFFECTIVE, SUPERIOR ROI PERIOD

Unlike intermittent resources, Emrgy's technology harnesses energy around the clock – providing you predictable power output with no need for ancillary technologies such as energy storage.

1 EMRGYFLUME™

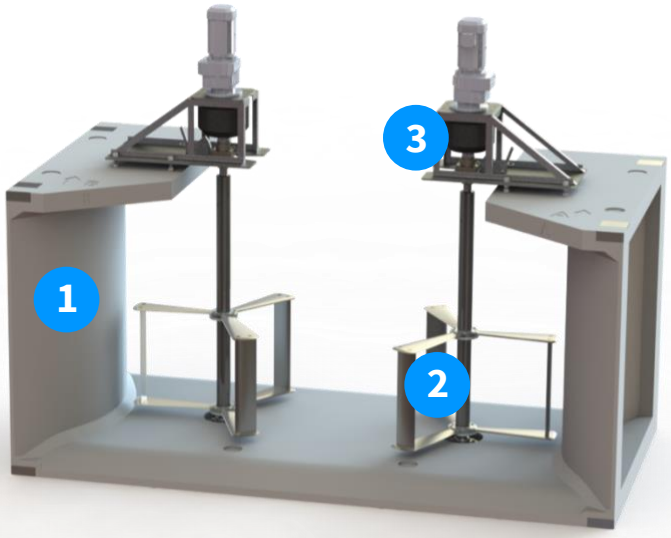
- → Anchor-free ballast
- → Simple installation and removal
- → Maximizes power output

2 HYDROKINETIC TURBINES

- → High performance with minimal hydraulic impact
- → Up to 70% water-to-wire efficiency
- → Flexible sizing for different flows

3 POWER SYSTEM

- → Permanent Magnet Generator (PMG) and innovative turbine & array controls
- → Grid-ready, 3-phase AC power output
- → Low-maintenance, protected from weather



emrgy

Emrgy.com
info@emrgy.com

Technical Specifications and Requirements

Turbine Specifications

Figure 1. Twin Flume

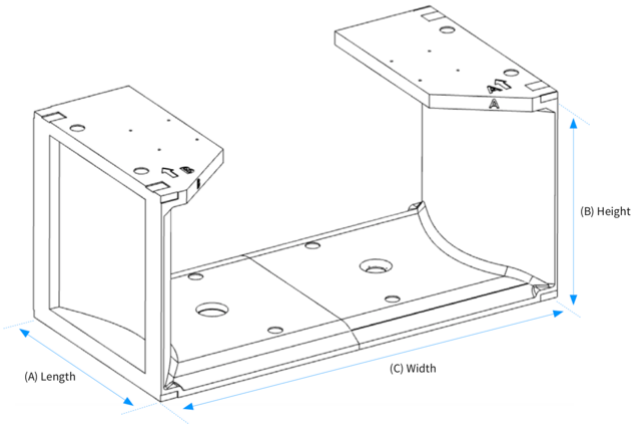


Figure 2. Rotor

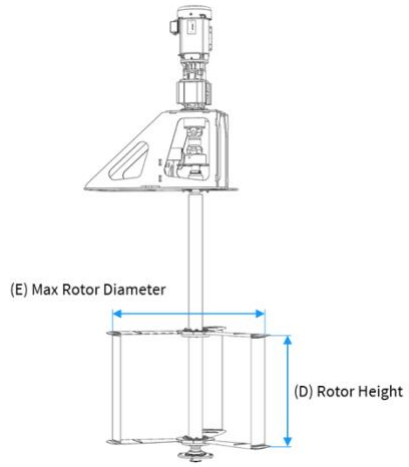
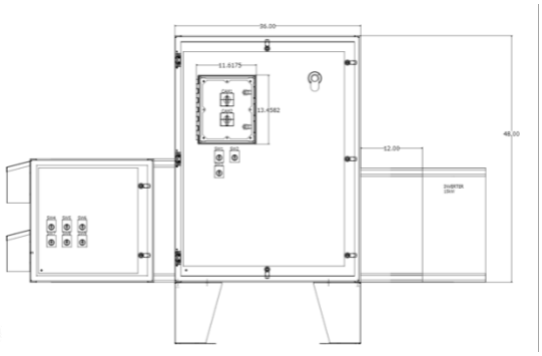


Figure 3. Power Control Unit



Product Platform (fig.1)	A - Length (m)	B – Height (m)	C - Width (m)	Weight (1,000kg)	D - Rotor Height (m) (fig.2)	E – Blade Diameter (m)
EM2.0	2.4	2.3	4.8	14.0	0.6-1.8	1.36
EM2.1	2.4	2.3	3.6	12.0	0.6-1.8	1.00
EM2.2	2.4	4.2	4.8	18.5	0.6-4.0	1.36

Power Takeoff (fig.3)	**Base Gear Ratio**	12:1 – 17:1
	Generator Type	Permanent Magnet Generator (PMG)
	Generator Rating	5-22kW
Control System	**Communications**	Radio/ Cellular/ Wifi
	Inverter	Solis PV Inverter
	Inverter Rating	10-45kW
	Grid Frequency	50/60 Hz
	Grid Voltage/ Phase	480V/ 3-phase (dependent on location)
Operational Data	**Cut-In Water Speed**	1 m/s
	Survival Water Speed	4 m/s

Canal Site Requirements and Ideal Conditions

	Infrastructure			Water Flow			Environmental		
	Bottom Width	**Form**	**Slope**	**Water Depth**	**Debris**	**Flow**	**Access road**	**Wildlife**	**Human Activity**
Minimum Requirements	≥1.8m	Smooth/non-rocky channel with defined geometry	0.0003-0.005m/m	0.5-3.85m	Minimal	Velocity: 1.0m/s-4.0m/s	Yes	Minimal	Minimal
Ideal Conditions	≥3.6m	Concrete-lined channel with defined geometry	0.00075-0.0015m/m	1.0-3.85m	None	Velocity: >1.5m/s Laminar flow	Yes	None	None