

Aquair[®] 100 water/wind turbine. 12 or 24 or 48 V battery charging power.

Towed Turbine Generator when sailing. Wind Driven Generator when at anchor.

Hybrid wind and water drive.

Sailing downwind at 6 knots, the Aquair 100 water drive generates approximately 5 amps continuous charge. To obtain 5 amps at 12 Volts of generation from the wind driven version while underway, the wind speed required is typically 30 knots (24 knots plus 6 knots boat speed).

Water mode.

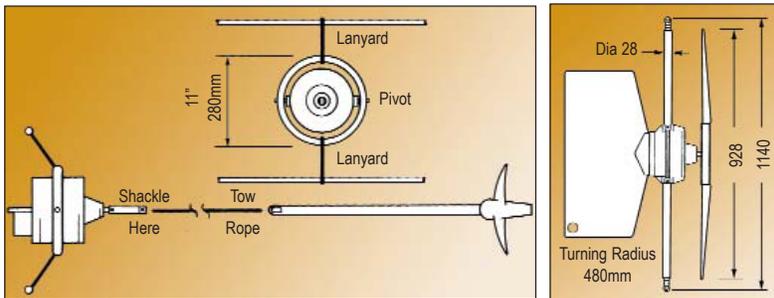
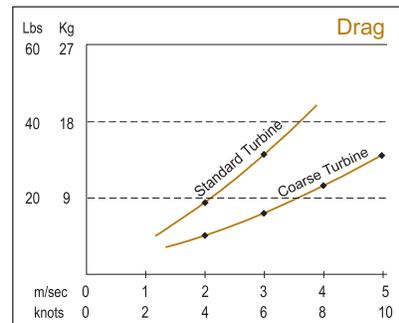
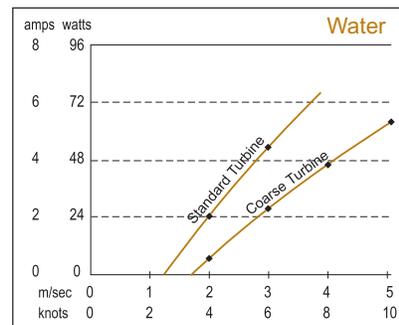
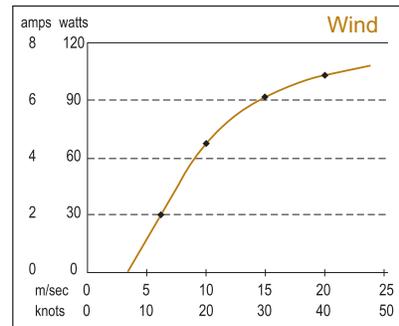
The Aquair 100 is designed for yachts cruising at 4-7 kts. The standard pitch turbine surfaces at 7-8 kts and skips at higher speeds. The coarse pitch turbine suits yachts which sail at 8-12 kts. The shaft connector is designed to break to save the generator and rail if the turbine becomes trapped. At normal cruising speeds the turbine will not noticeably slow the yacht.

Wind mode.

Uses a "rope only", hoist-in-the-rigging system. A halyard lifts the Aquair 100 away from busy cockpit into clear air. No noise or vibration to worry about! A pole mount option is available for yachts with stern gantry or similar. A short pole is welded, clamped etc. to an existing structure. A single electrical connection then serves wind and water modes.

Advantages.

Use of an Aquair 100 greatly reduces the frequency of engine running to recharge service batteries. The turbine generates sufficient power to run an autopilot, maintain navigation equipment or support a fridge. It produces a continuous output of up to 6 Amps at 12 volts. Its permanent magnet alternator with built-in rectifiers has no commutator brushes and the windings cannot overheat so it requires no thermal cut-outs or protection choke.



Technical Specifications- water mode:

Power Rating	5 Amps 12V at 3 m/s (6 knots) waterspeed
Voltage Options	12 or 24 or 48 V DC
Output	Rectified DC
Start-up Waterspeed	3 knots
Weight	10kg Generator - 3kg Turbine
Propeller	Standard 7-8 knots or High speed 8-12 knots
Housing	Die cast aluminium (powder coated)
Wind Mode	See Ampair 100

Aquair® 100 Accessories.

	Model		Name	Description
generators	Q01 1012		Aquair 100	12 Volt, standard pitch turbine
	Q01 1024		Aquair 100	24 Volt, standard pitch turbine
	Q01 1048		Aquair 100	48 Volt, standard pitch turbine
<i>For coarse pitch unit (high speed use), buy a spare coarse pitch turbine (Q01 SP 12) and keep the standard propeller for reserve.</i>				
regulators	Various		Regulators	regulators are available for use in wind mode as per Ampair 100
wind conversion kits	Q01 WI 46		Hoist in rigging kit	kit consists of 6-blade wind turbine, direction fin and 2 swivel poles
	Q01 WI 48		Pole mounting kit	kit consists of 6-blade wind turbine, direction fin, and 44mm OD x 800mm long mounting pole
mounting accessories	Q01 WI 50		Pole mount	44mm OD x 800mm long pole with pivot sleeve, pivot shaft and pole clamp ring
	Q01 WI 51		Pole mount adaptor	pivot sleeve, pivot shaft and pole clamp, but no pole or wind turbine
	Q01 MO 40		Stern deck mount	stainless steel fabrication - enables use of Aquair 100 on vessels without a push-pit
	A00 SP 32		Deck plug & socket	in-line plug & bulkhead socket
	A00 SP 33		Deck gland	provides a waterproof seal around cables that pass through decks and bulkheads
short term spares	Q01 SP 11		Standard towed turbine	suits yachts of cruising speed between 4-8 knots.
	Q01 SP 12		Coarse towed turbine	suits yachts of cruising speed between 8-12 knots.
	Q01 SP 13		Turbine blades	matched pair to maintain the overall balance of the turbine.
	Q01 SP 14		Pivot set	set consists of 2 acetal plastic (delrin) bushes & one stainless steel pin
	Q01 SP 15		Shaft connector	breaks if turbine becomes trapped in rocks or coral to protect generator and mounting
	Q01 SP 16		Shaft seal	rubber covered, single lip seal protects front bearing
long term spares	Q01 SP 21		Tow rope	30 metres of 12mm, braid-on-braid, polyester
	Q01 SP 22		Shaft bearings	(set of 2) 35mm OD bearings for 15mm shaft dia
	Q01 SP 23		Rectifier assembly	complete, pre-wired rectifier assembly, consists of 2 bridge rectifiers