

# D400

# Wind Generator

The D400 is a direct-drive wind generator, designed for a variety of marine or terrestrial applications. It is exceptionally quiet and vibration-free in operation, qualities that are of major importance for any wind generator operating in close proximity to people.

The D400 features a powerful 3-phase alternator, and computer-designed rotor blades optimised for low speed, user-friendly operation.

This innovative machine is extremely efficient in low wind speeds, yet is capable of sustained high power outputs of over 500 watts in higher winds. Distinctive and elegant in design, the D400 is superbly engineered for long, trouble-free service.

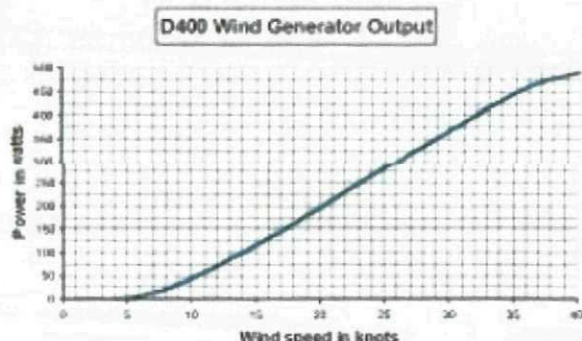


## D400

- ▶ Rated output 400 W at 32 knots (16 m/s)
- ▶ Available in 12 or 24 volt
- ▶ Rotor - 1.1 m. diameter
- ▶ Turning circle - 585 mm
- ▶ Weight 15 kilograms

### Features of the D400:

- ▶ Specifically designed for installation on boats, and on or near buildings, caravans etc.
- ▶ Almost silent in operation
- ▶ Smooth running with optional integral anti-vibration mount
- ▶ Unparalleled low wind speed performance
- ▶ Low tip speed ratio, 1.1 metre diameter rotor
- ▶ Advanced variable camber airfoil blades
- ▶ Robustly engineered for long trouble-free service
- ▶ Highly efficient, low-speed, 3-phase axial field permanent magnet alternator
- ▶ Excellent heat dissipation with heavy duty encapsulated windings for sustained high output operation
- ▶ Aesthetically attractive design
- ▶ Corrosion-resistant materials used throughout
- ▶ Mounting tower 2" O/D tubing



**D400.co.uk**

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# D400 Wind Turbine Specifications

|                   |                                 |                                       |
|-------------------|---------------------------------|---------------------------------------|
| <b>Output</b>     | Rated Power (W)                 | 400                                   |
|                   | Max. power (W)                  | 500 +                                 |
|                   | Rated Wind Speed (m/s)          | 16.5                                  |
|                   | Rated rotational speed (RPM)    | 1200                                  |
|                   | Cut-in wind speed (m/s)         | 2.6                                   |
|                   | Cut-out wind speed              | none                                  |
| <b>Turbine</b>    | Turbine type                    | Horizontal upwind                     |
|                   | Number of blades                | 5                                     |
|                   | Airfoil type                    | Low Reynolds - variable camber        |
|                   | Diameter of turbine (m.)        | 1.1                                   |
|                   | Swept area (sq. m.)             | 0.95                                  |
|                   | Tip speed ratio                 | 4                                     |
|                   | Typical noise level             | 2 - 6 dbA over background             |
|                   | Blade material                  | Glass-filled nylon                    |
| <b>Alternator</b> | Design                          | Direct Drive                          |
|                   |                                 | 12 pole PMG                           |
|                   |                                 | 3-phase AC                            |
|                   |                                 | Output DC                             |
|                   |                                 | High energy ferrite magnets           |
|                   |                                 | Encapsulated stator                   |
|                   | Voltages available              | 12, 24, 48, 150 DC                    |
|                   | Materials                       | Alloy housing, hermetically sealed    |
|                   |                                 | Alachrome and polyester powder coat   |
|                   |                                 | 316 S/S shafts                        |
|                   | EMI (electromagnetic emissions) | C.E. compliant                        |
|                   | Control system                  | Stall regulation                      |
|                   | Brake system                    | Braking Switch                        |
| <b>Yaw System</b> | Passive                         | Low resonance, formed aluminium tail  |
|                   |                                 | Slip ring assembly with saddle spring |
|                   |                                 | loaded output brushes                 |
| <b>Mounting</b>   | Stub tower                      | 50mm O/D - 42mm I/D                   |
| <b>Weight</b>     | Total                           | 15 kg.                                |
| <b>Finish</b>     | Colours available               | White with white blades               |
|                   |                                 | Black with translucent blades         |