

Engineering office **Kragten Design**

For the development of small wind turbines, consultancy and wind energy reports
May 2017



Windmill type VIRYA-1.8

Kragten Design is a one man engineering office founded in 1989 and directed by ing. (B.Sc.) Adriaan Kragten. A C.V. is available on request. The main activities of this business are the development of small electricity generating windmills with PM-generators and the writing of technical reports. Building plans of more than twenty wind turbines with rotor diameters between 0.98 and 4.6 metre are developed. Licences of the biggest wind turbines are available for professional manufacturers. The manuals and drawings of seven small wind turbines are available for free. 632 KD-reports were written. 61 reports can be copied for free from the website.

Adriaan Kragten worked from 1975 until 1990 as a mechanical designer in the Wind Energy Group of the Faculty of Physics of the University of Technology Eindhoven, member of CWD, Consultancy services Wind energy Developing countries.

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Activities to be executed by Kragten Design in commission

- 1 Performing mechanical engineering and work in the field of wind energy, particularly design of rotors and PM-generators. In March 2017 I became 70 years old and I no longer accept engineering work which requires making of large drawings.
- 2 Analysing of the performance of safety systems for windmills to limit the rotor speed and thrust. Writing of project proposals and technical reports (in Dutch or English).
- 3 Teaching wind energy courses on technical aspects of windmills. Report KD 35, "Rotor design and matching for horizontal axis wind turbines", will be used for these courses. Supporting projects in which the VIRYA wind turbines, developed by Kragten Design, are used. Most of the VIRYA wind turbines are specially meant for manufacture in developing countries. In 2010 I became a PUM-expert for wind energy projects in certain developing countries. PUM pays for the flight ticket of a visit. Contact PUM for more information.

An extended specification and folders of the VIRYA windmills are given on the website at the menu VIRYA-folders. A folder with all public KD-reports, a folder "Sequence KD-reports for self study", the free KD-reports and the free manuals are given at the menu KD-reports.

Tariff within The Netherlands and for individuals within the EU (European Union): € 35 / hour excluding 21 % VAT (value added tax). Tariff outside the EU and for companies within the EU: € 35 / hour.