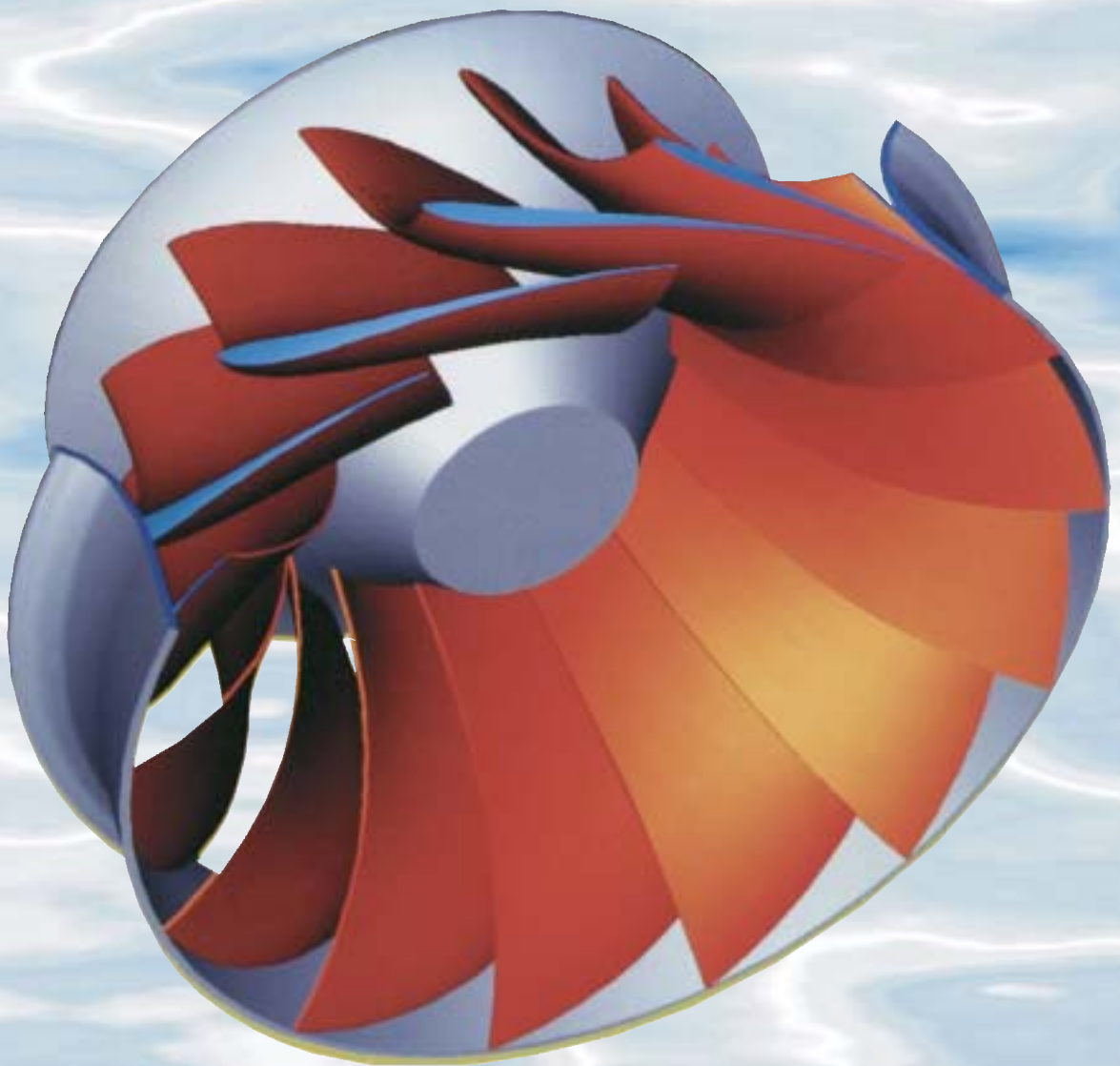


VA TECH HYDRO

COMPACT FRANCIS



A Compact Turbine System for medium head applications

Head up to 250 m
Output up to 15 MW

COMPACT FRANCIS

The Compact Francis turbines have been developed for discriminating users of small hydro.

Compact Francis turbines incorporate all know-how gained in large hydro applications. As a result, they ideally combine maximum efficiencies with unusual compact design.

Runner development for these new Compact Francis turbines was based on standard sizes still allowing customized solutions.

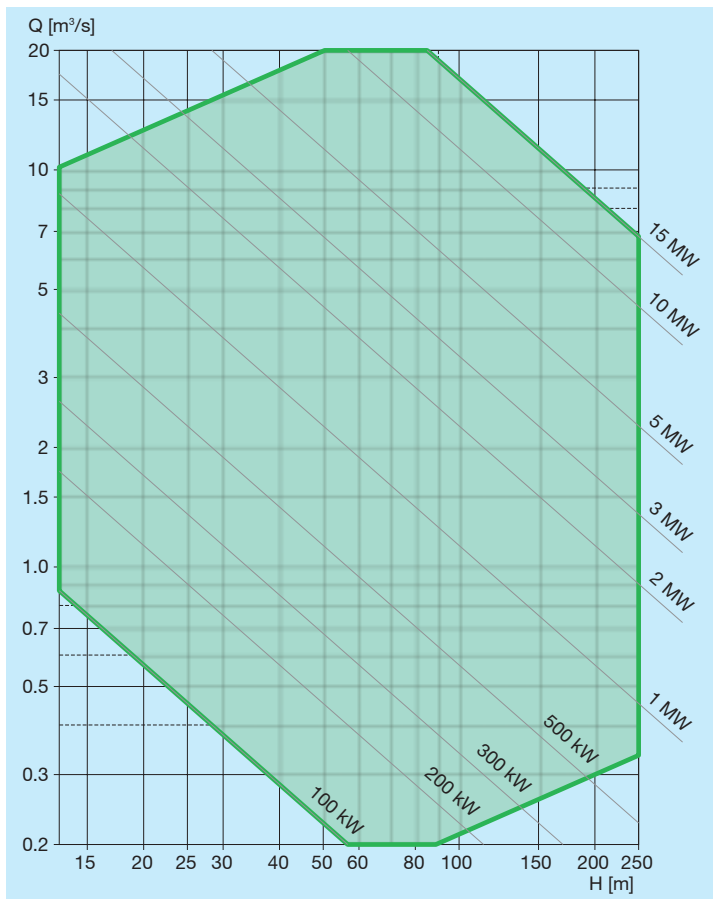
Dependable guarantees, concerning efficiency, output and resistance to cavitation, are based on flow dynamic analyses or on model tests from the VA TECH HYDRO laboratories.

For smaller units the turbine-generator aggregate is delivered as a complete assembly with control oil system ready for immediate installation.

This concept greatly simplifies foundation preparations, thus reducing construction costs and drastically cutting erection times. The unit is delivered as a turbine-generator aggregate complete with control oil system ready for immediate installation.

This new concept greatly simplifies foundation preparations, thus reducing construction costs and drastically cutting erection times.

Application range



Computer generated streamlines through a Compact Francis Turbine runner

Technical Data

- Head H up to 250 m
- Flow Q up to 20 m^3/s
- Output P up to 15 MW

System features

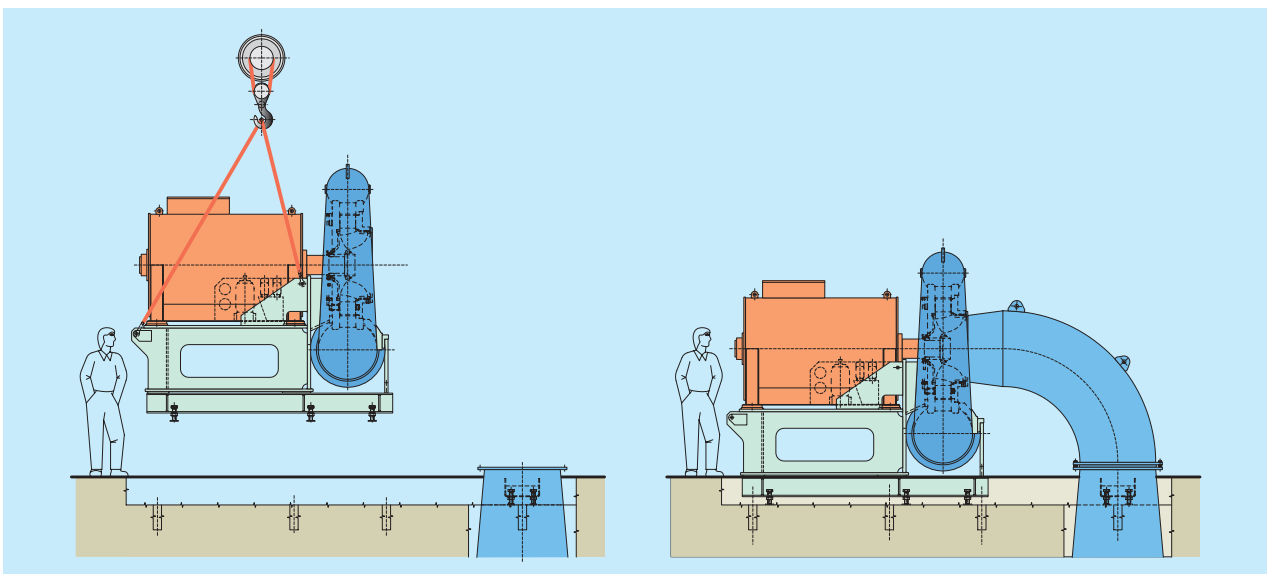
- Aggregate concept:
Turbine and generator on common baseframe for smaller units
- Unit delivered complete with control oil system, wired and shop-tested ready for immediate installation
- Customized solutions due to a comprehensive line of standardized models for all combinations of discharge flow and output
- Innovative aeration system for smooth running at part-load
- Smaller structures and simpler foundation preparation

- Single-source engineering minimizes interfaces. Well-proven turnkey solutions with optimally matched components for maximum customer benefit



Compact Francis Turbine

Erection procedure





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