

## DELTA – Delfini & Cia., S.A.

*Exceeding your needs for high performance*

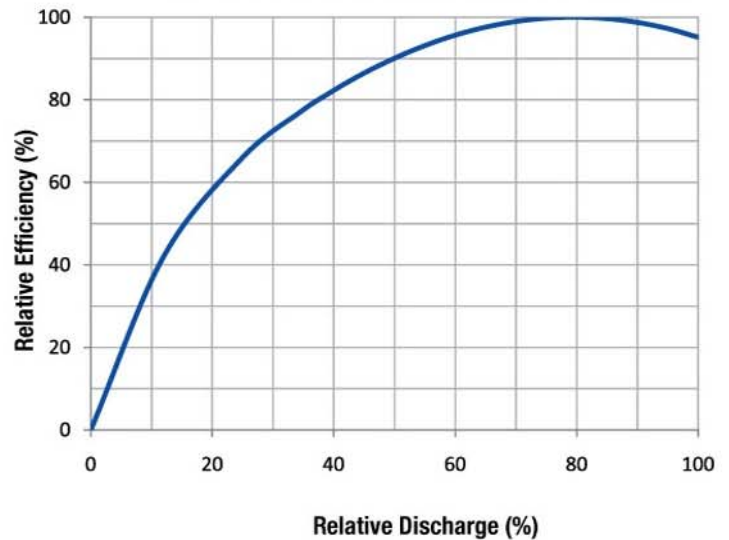
### APPLICATIONS

Head Range: 20 – 200 m  
Capacity: 20 kW – 5 MW

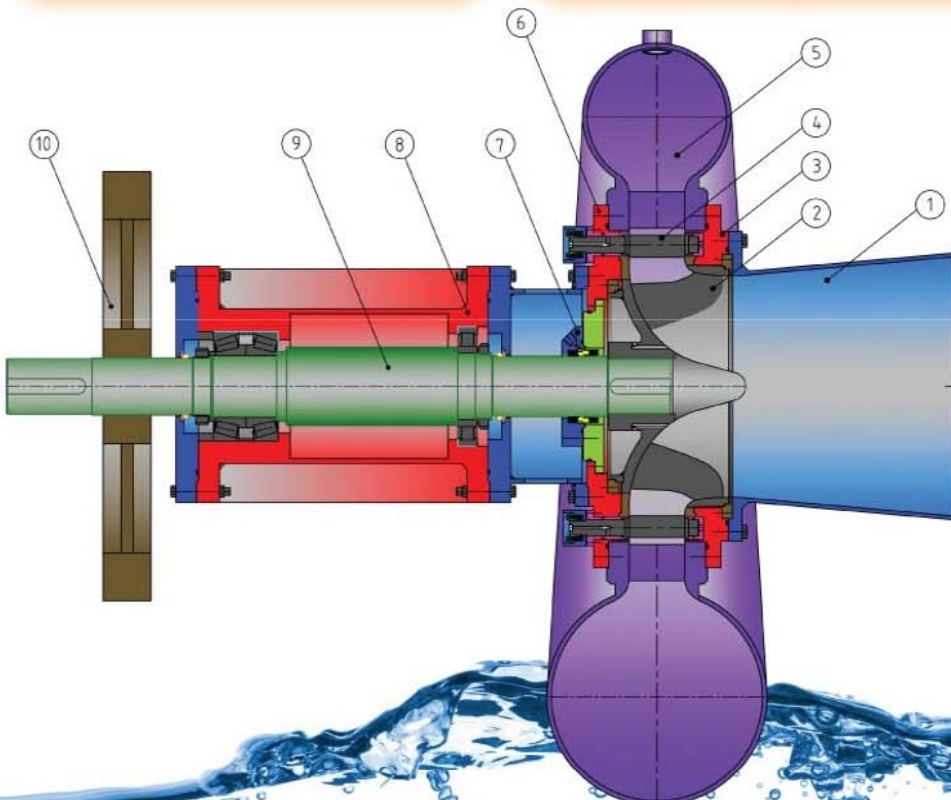
### CHARACTERISTICS

- Optimized design for each project (CFD simulation).
- Guaranteed efficiency and capacity.
- Witnessed model testing according to IEC-60193.
- Horizontal and vertical shaft arrangements.
- Runner mounted on the generator shaft or on separate turbine shaft and bearings.
- Adjustable wicket gates or fixed guide vanes depending on the application (economical alternatives for micro projects).

Typical DELTA Francis Turbine Performance (ns=160)



# Francis Turbines



Typical construction of a Delta horizontal Francis Turbine



COMONENTS AND MATERIALS

1	DRAFT TUBE	ASTM A36
2	RUNNER	ASTM A240 - 304L
3	FRONT COVER	ASTM A36
4	GUIDE VANES	ASTM A743 - CA6NM
5	SPIRAL CASING	ASTM A36
6	REAR COVER	ASTM A36
7	MECHANICAL SEAL	CARBURO DE TUNGSTENO
8	BEARING BOX	ASTM A53B/A36
9	TURBINE SHAFT	ASTM A276 - 420
10	FLYWHEEL	ASTM A36