## ADVANTAGES OF THE DIVE-TURBINE

Characteristics	Technical benefits	Benefits for operator and owner
Turbine and generator unit completely submerged	<ul> <li>+ No turbine house required</li> <li>+ Minimum cost of civil works</li> <li>+ Save operation in flood-areas</li> </ul>	Reduced investment
Direct-drive, free of mechanical transmission	<ul> <li>+ Minimum noise and vibration</li> <li>+ Free from maintenance and free from wear and tear</li> <li>+ No gearbox or belt-drive losses</li> </ul>	Hydropower in residental areas
Patented, single DIVE-bearing unit for turbine and generator	<ul> <li>+ Permanent lubrication of bearing unit in oil bath</li> <li>+ Leakage of lubricants (oil) impossible</li> <li>+ No danger in cases of runaway speed and grid interruption</li> </ul>	Minimum operational cost and risk
Patented, wear and tear free sealing system	<ul> <li>+ No necessity of a costly sealing system</li> <li>+ Free from maintenance and free from wear and tear</li> <li>+ Safe operation in saline and dirty water and high load of sediments</li> </ul>	Maximum technical availability and no risk at flood situations
Fixed runner blades	<ul> <li>+ No maintenance and wear-intense pitching of the runner</li> <li>+ Runner design optimized for max. efficiency</li> <li>+ Zero-gap and fish friendly runner</li> </ul>	Minimum operation cost and risk Maximum technical availability
Double regulation by variation of speed and pitching of the guide vanes	<ul> <li>+ High efficiency at part-load (reduced flow and changed head)</li> <li>+ Single machine solution for medium head</li> <li>+ Discharge from 5% to 100%</li> </ul>	Maximum annual revenue with a single machine solution
Critical components made of stainless steel	+ High resistance against wear and corrosion	High durability of the main components (e.g. runner and guide vanes)



DIVE-Turbine für Low Head Applications

Amorbach

GERMANY

Head 2m - 20m



DIVE-HAX-Turbine for Medium Head Applications

Head 20m - 120m



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