COMPETENCES AND ADVANTAGES OF SIAPRO EQUIPMENT

OWN DESIGN, 3D MODELLING, PATENT
Professional approach in the investment process
Mechanical and electrical project documentation
Outline design of all structures
Outside electrical system design
Equipment constructions, building systems
Patented regulation on Cross-flow turbine

DIFFERENT HYDRO TURBINES UNITS
Custom made design and construction
Positional studies, MHE site survey
Project documentation
Advising, turbines technical designing
Turbines construction
Manufacturing and equipment supply
Reliable components for a high lifetime
Commissioning and maintenance

RUNNERS TO MEET ALL BUDGETS
Cost benefit approach
Casted CNC machined or welded runners
3D Modelling and 3D 5 Axis CNC machining
Material: Inox, bronze, other materials
Finally machined and polished runners
Runners balanced on a run of speed
Casted - Loast foam process used
Thermal threatened runners if necessary

HYDRO POWER STATIONS
UP TO 10 MW
Pelton, Francis, Kaplan, Cross-flow
Hydro Power Plants
Complete electrical and hydro machinery equipment for Hydro Power Stations

25 YEARS OF EXPERIENCE
Qualified constructors and engineering team
We design and manufacture hydro equipment in Slovenia and install it around the world.

TURN KEY PROJECTS, REFERENCES
Numerous reference projects around the world
From modelling, to commissioning of Hydro Power Plants
Supply of control system, grid access solution
Pre-assembly and tests before delivery

SIAPRO KNOW HOW

DESIGNING, MANUFACTURING, INSTALLATION
HYDRO POWER PLANTS

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### Pelton Hydro Turbines

Pelton turbines are suitable for high heads and small flows and with a wide range of configurations appropriate for a different turnkey project supplies. Siapro uses standardised manufacturing process to secure high quality of the end product. We offer consulting, engineering services, production and implementation.

<table>
<thead>
<tr>
<th>Pelton turbines are suitable for high heads and small flows</th>
<th>Special heat treated Pelton runners for a very high heads.</th>
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<tr>
<td>Quality starts already with the design. Siapro design both vertical and horizontal axis Pelton turbines with up to 10 MW.</td>
<td>We design and manufacture vertical and horizontal axis Francis turbines with rated power of up to 10 MW. With achievable turbine efficiencies of the turbine of over 93%, Francis turbines are the most widely used turbines.</td>
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### Kaplan

Kaplan turbines are suitable for low heads and high flow applications, with achievable efficiencies of over 92% and with grey flexibility. We manufacture vertical and horizontal axis Kaplan turbines. Fixed, single or double regulation for the best flexibility is available. We offer proven technology.

<table>
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<tr>
<th>Kaplan turbines are suitable for low heads and high flow applications, with achievable efficiencies of over 92% and with grey flexibility. We manufacture vertical and horizontal axis Kaplan turbines. Fixed, single or double regulation for the best flexibility is available. We offer proven technology.</th>
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<td>Reference in Slovenia, near Siapro company. Hydroelectric power plant on the river Idrija.</td>
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### Francis

Siapro has recently developed and specially designed the flow regulation of a standard Banki water turbine to increase its overall efficiency. Our patented invention takes a standard, reliable and proven technology to a new level. We offer increased efficiency up to 5% due to special designed and patented Siapro Flow Regulation System. Turbine can be manual or automatic controlled, depending on customer’s requirements.

| Siapro has recently developed and specially designed the flow regulation of a standard Banki water turbine to increase its overall efficiency. Our patented invention takes a standard, reliable and proven technology to a new level. We offer increased efficiency up to 5% due to special designed and patented Siapro Flow Regulation System. Turbine can be manual or automatic controlled, depending on customer’s requirements. |
|---------------------------------------------------------------|----------------------------------------------------------|
| With Siapro cross-flow turbine we offer you a proven, inexpensive solution with low overall investment. | We design and manufacture vertical and horizontal axis Francis turbines with rated power of up to 10 MW. With achievable turbine efficiencies of the turbine of over 93%, Francis turbines are the most widely used turbines. |

Siapro provides all hydro machinery equipment, for example coarse and fine grids in various configuration. Coarse grid is installed at the beginning of hydro power plant intake facility to remove impurities: stones, wood, etc..

Special heat treated Pelton runners for a very high heads.