

Oil-free hubs Reducing the risk of pollution

Adjustable blade Kaplan runner hubs are typically filled with pressurized oil. This oil lubricates runner blade trunnion bearings and sliding parts of the operating mechanism in the hub. However, the hub oil presents a risk of water pollution by way of unintended oil leaking from the runner. Since 1985 oil-free runners designed and installed by Voith Hydro have been eliminating the risk of these pollutants.

Lubrication oil has been replaced by self-lubricating materials and assures not only the prevention of accidental releases of grease substances into the environment but also allows for easy maintenance, lower friction and excellent bearing performance, often without the need to increase the servo size. Corrosion-resistant materials ensure long operational life of the linkage and make up for the corrosion protection formerly provided by the oil.

Oil-free hubs at a glance:

- No risk of oil or grease substances flowing into the tailrace and polluting the environment
- · No need to pressurize the hub
- Easy maintenance
- · Excellent bearing performance
- · Oil-filled runners can be retrofitted to oil-free
- Proven technology with more than 100 project installations

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