AXIAL AND MIXED FLOW PUMPS
FOR HIGH VOLUME WATER HANDLING
POWERFUL PUMPING; EFFICIENT OPERATION

The range of KPL submersible axial flow propeller pumps and KWM submersible mixed flow pumps represents strength and durability and is ideal for flood control and other heavy-duty pumping applications. These pumps include innovative features such as the Turbulence Optimiser™ (Patent Pending) that increases efficiency by up to two percentage points.

The market-leading high-efficient and compact design, makes it possible to reduce the physical size of the pumping station, and hereby cost for civil construction work. Built from cast iron or stainless steel, a wide range of variants using different materials, sensors, surface coatings and shaft seal materials are available, ensuring excellent reliability in demanding applications.

The range of KPL and KWM pumps offer:

- **Best-in-class hydraulic efficiency up to 86%**
- **Market-leading compact and lightweight design**
- **Backswept self-cleaning hydraulic design that provides great non-clogging performance**

Turbulence Optimiser TM (Patent Pending) is an innovative solution for reducing turbulence in the gap between the pump volute and the column pipe. A further positive effect is that misalignment and production tolerances of the column no longer affect efficiency.

**HARD WORKING AND EFFECTIVE**

These axial and mixed flow pumps are designed for high flow - up to 9000 l/s - and head up to 23m as standard. Higher flow and head is available on request. Built to handle large quantities of water, the pumps are ideal for a wide range of applications such as:

- **flood and storm water control**
- **large volume drainage and irrigation**
- **raw water intake**
- **transfer of liquids in large-scale municipal sewage treatment plants**
- **circulation of large quantities of water**
- **water level control in coastal and low-lying areas**
- **filling and emptying of dry docks and harbour installations**
- **filling or emptying of reservoirs**

KPL submersible axial flow propeller pumps and KWM submersible mixed flow pumps range from 11kW to 700kW, and are available in 11 column sizes with 4-, 6-, 8-, 10-, 12-, 14-, or 16-pole motor (16-pole for KPL only).

**BENEFITS FOR YOUR WATER TRANSFER REQUIREMENTS**

- **Reduced footprint of building and civil construction cost by up to 20%**
- **Reduced pump size and therefore reduced building size and cost**
- **Balanced lifting handle with built-in cable support**
- **Cable compartment inspection hole**
- **Sealed cable entry**
- **KPL: Backswept self-cleaning stainless steel propellers in one piece**
  - High pressure one piece propeller reduces the potential malfunctions from blade adjustment, and the smooth design means rags and solids slide off the propeller, resulting in less clogging.
- **KWM: Hydrodynamically optimised multi-vane impeller having large free-passage and smooth design, to ensure high operational efficiency**
- **Turbulence Optimiser™ (Patent Pending)**
  - This innovative solution is an expandable rubber ring mounted on the perimeter of the pump and acts as expansion and adapt to the column pipe as water flow and pressures increase, reducing turbulence and efficiency losses.
- **Cartridge seal**
  - The double mechanical cartridge shaft seal has a long-life and is easily replaced during maintenance.

**PERFORMANCE OVERVIEW**

KPL/KWM 50Hz performance curve

**DESIGNING FLOOD PUMPING STATIONS**

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Grundfos Water Utility – optimised water solutions

Grundfos Water Utility is a full-range supplier of intelligent pumps and systems for all water supply and wastewater applications. We optimise pumping solutions to provide maximum reliability and resource efficiency for our customers. Our solutions are made with tried and tested technology and our expertise is part of any delivery.

We offer solutions and expertise within the following applications:

• Raw Water Intake
• Drinking Water Treatment
• Water Distribution
• Wastewater Transport and Flood Control
• Wastewater Treatment

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