

FAIRBANKS NIJHUIS™
SOLIDS HANDLING
PUMPS



History and Development

Since the early part of this century, Fairbanks Nijhuis Pump has set industry standards in innovative engineering, manufacturing and successful operating experience of solids handling pumps. Fairbanks Nijhuis designed the first solids handling impeller. The first bladeless impeller was designed and patented by Fairbanks Nijhuis and became commercially available in 1935. In the early 1950's, Fairbanks Nijhuis pioneered the first "submersible" solids handling pumps for both dry and wet pit applications in solids, slurry, pulp and sludge handling pumping equipment, and more recently Vertical Turbine Solids Handling (VTSH®) pumps have been developed and marketed.

From just a few gallons per minute to over 100,000 GPM, Fairbanks Nijhuis solids handling pumps cover a broad range of hydraulics with outstanding dependability. All dry pit pumps, available in vertical or horizontal configurations, are designed and built in a facility dedicated to the research, development and manufacturing of pumping equipment. Integrated machining, assembly, testing and inspection assures unparalleled quality and reliability. The careful design of pumps allows for ease of disassembly and servicing. Parts and service are available throughout the world from the Fairbanks Nijhuis factory, authorized distributors and repair centers.

All this is why hundreds of thousands of successful Fairbanks Nijhuis pumps are in operation around the world.

Applications and Installations

Fairbanks Nijhuis offers dry pit pumps in four basic configurations: horizontal, vertical-coupled via intermediate shafting, vertical close-coupled and vertical bittogether. The liquid end hydraulics are identical and provide numerous driver mounting and coupling designs. With the exception of the bittogether, in which the motor bearings carry the thrust and radial loads, the bearing frames are standardized among the various configurations.

This permits wide interchangeability of spare parts and maximum flexibility to satisfy changing customer demands. Pumps can be modified to large or smaller sizes, or changed from horizontal to vertical and vice versa. The pumps can be revised by a simple service order, saving the user from having to purchase complete new equipment.

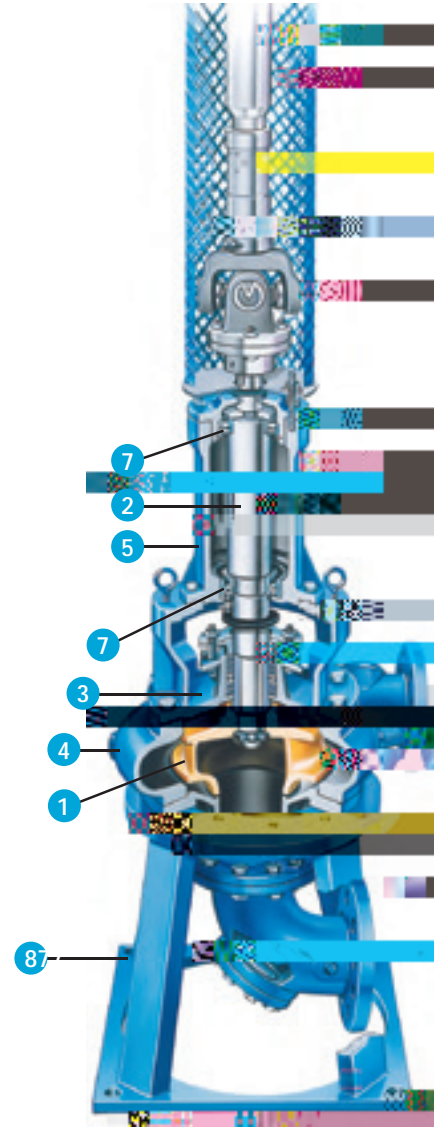
Solids handling pumps often operate in unattended pump stations and other installations which require utmost reliability and freedom from clogging or other downtime maintenance. Plants today demand pumps to provide sustained high performance, the best possible design to resist clogging, and minimum size driving motors and controls to reduce construction and operation costs. Fairbanks Nijhuis™ dry pit solids

handling pumps can be found in a variety of installations, including sewage lift stations and treatment plants, fibrous sludge and slurry handling, pulp and general industrial solids handling service.

With over 100 years of proven experience in the pumping of solids, slurries, sludge, pulp, trash, sewage and grit, Fairbanks Nijhuis Pump has the product and engineering knowledge to meet your pumping needs. A number of precision cast impellers are offered in two-vane, bladeless and recessed designs.

Large passageways, blunt well-rounded leading vanes, and thick hydrofoil shape prevent long stringy material from wrapping around the leading edge. Impellers are matched with thick-wall equalizing-pressure, constant-velocity volutes. This design channels the flow away from the impeller vanes into the circular flow area of the impeller passageways and casing, to assure passage of large solids and long stringy materials, reduce turbulence and radial and bending shaft forces. Abrasive wear is minimized, bearing, mechanical seal (when used) and shaft life is lengthened, and most important, maintenance and downtime costs are greatly reduced, resulting in true savings. An added advantage is a smooth, quiet and trouble-free installation.

Used primarily in sewage lift stations and treatment plants where sewage flows are relatively low, the bladeless impeller will handle 10-25 percent more solids, long stringy material and trash than a conventional two-vane impeller. Interchangeability of the two-vane and bladeless



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