



FAIRBANKS NIJHUIS™
VERTICAL TURBINE
SOLIDS-HANDLING
(VTSH®) PUMPS



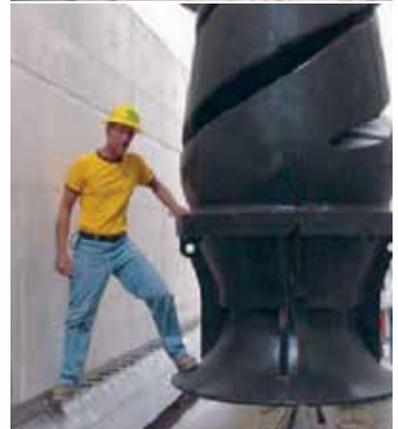


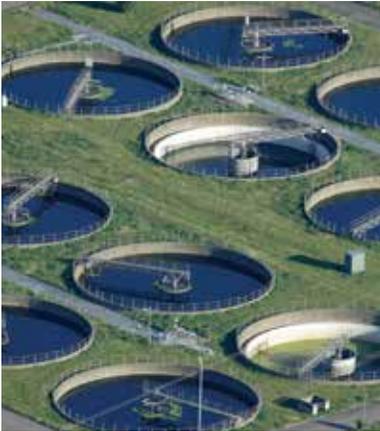
FAIRBANKS NIJHUIS™

Introduction

Unattended pump stations require pumps that you know are reliable and will keep working, no matter what. Downtime is not an option: you demand sustained high performance, the best possible design to resist clogging, and minimum-size driving motors and controls to reduce construction and operating costs.

Fairbanks Nijhuis Vertical Turbine Solids-Handling pumps (VTSH) meet such municipal demands, and then some.





Applications

- Sewage Lift Stations
- Water Treatment Plants
- Fibrous Sludge and Slurry Handling
- Pulp Handling
- General Industrial Solids Handling
- Flood and Storm Water Control
- Waste Water Collection and Treatment

VTSH Pumps	
Discharge Sizes – inches	Up to 48"
Discharge Sizes – mm	Up to 1220 mm
Capacity Ranges – GPM	5,000-80,000 GPM
Capacity Ranges – m ³ /h	1,135-18,160 m ³ /h
Head Ranges – feet	10' to 110'
Head Ranges – meters	3.05 to 33.5 m
Nominal Bowl Diameters – inches	10", 14", 16", 20", 24", 30", 36", 42", 48"
Nominal Bowl Diameters – mm	254mm, 356mm, 406mm, 508mm, 610mm, 762mm, 914mm, 1070mm, 1220mm
Solids Passing Capability- inches	3" to 8"
Solids Passing Capability- mm	76 to 203mm



Better By Design

Reduced Construction Costs

The VTSH pump design puts the entire drive system and controls above the flood plane and is compatible with virtually any drive system. This design means your personnel don't have to enter wet wells for routine maintenance, because drive motors are above grade as well (thus eliminating the need for submersible drives).

This single-sump design also eliminates the need for an additional or dry sump, suction piping, dehumidification or sump pumps which can save up to 70% on total construction costs compared to conventional wet-pit/dry-pit designs.

In addition, their superior design makes VTSH pumps substantially more efficient over a broad capacity range than conventional solids-handling pumps.

Versatile, compact and streamlined, the VTSH is a natural fit for space saving pump applications such as conventional wet wells, self-cleaning and confined wet wells.

Self Cleaning

Whether domestic or international, your wastewater treatment municipality and engineer can work together to write the specs for the entire system based on this centerpiece. In fact, this performer is self cleaning: Two working in tandem allow you to clean them without going into the wet pit. Shut them down in succession and you can clean the pit without a wet suit going in.



Features

Standard Features



1. Suction Bell

Straightening vanes to improve intake flow
Sized to limit intake velocity at the bell lip
No tail bearing to prevent media from collecting on support vanes

2. Impeller

2 vane design that can handle solids ranging from 3" on our smallest size to 8" on our largest
Overhung design typical of solids handling pumps
Optional helical screw available on certain sizes

3. Diffuser Bowl

3 vane design that gradually transfers from a radial flow to axial flow
Bronze-backed rubber bowl bearings
Impeller throttle ring to reduce lower shaft deflection

4. Column and Shaft Connection (Not Shown)

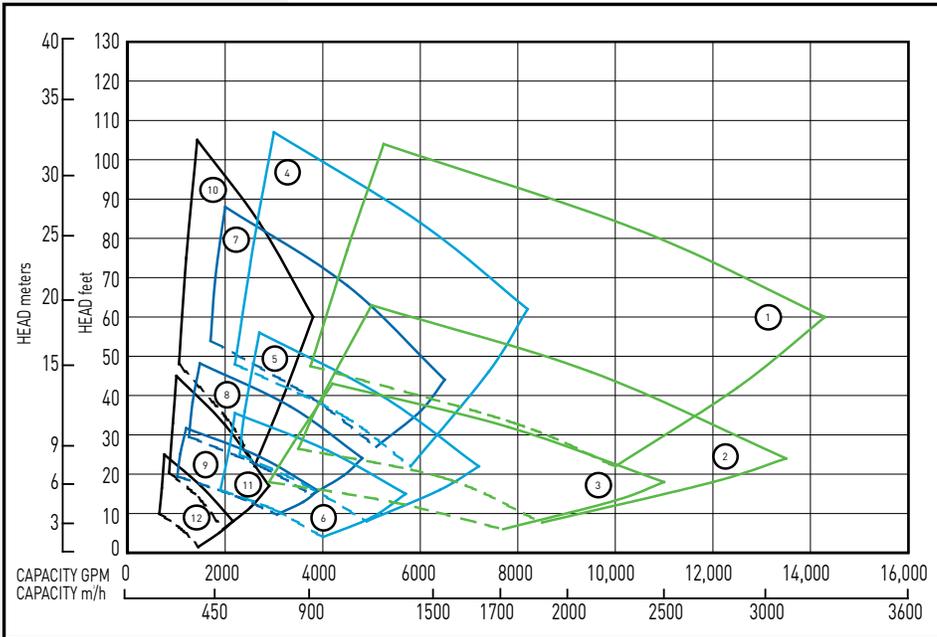
Enclosed lineshaft with intermittent to continuous water flushing required
Column fitted with splitter vane to minimize debris from wrapping around enclosed shaft

5. Discharge Head (Not Shown)

Custom-Engineered fabricated steel design
Head fitted with splitter vane to minimize debris from wrapping around enclosed shaft
Quad-designed supports added if variable speed application

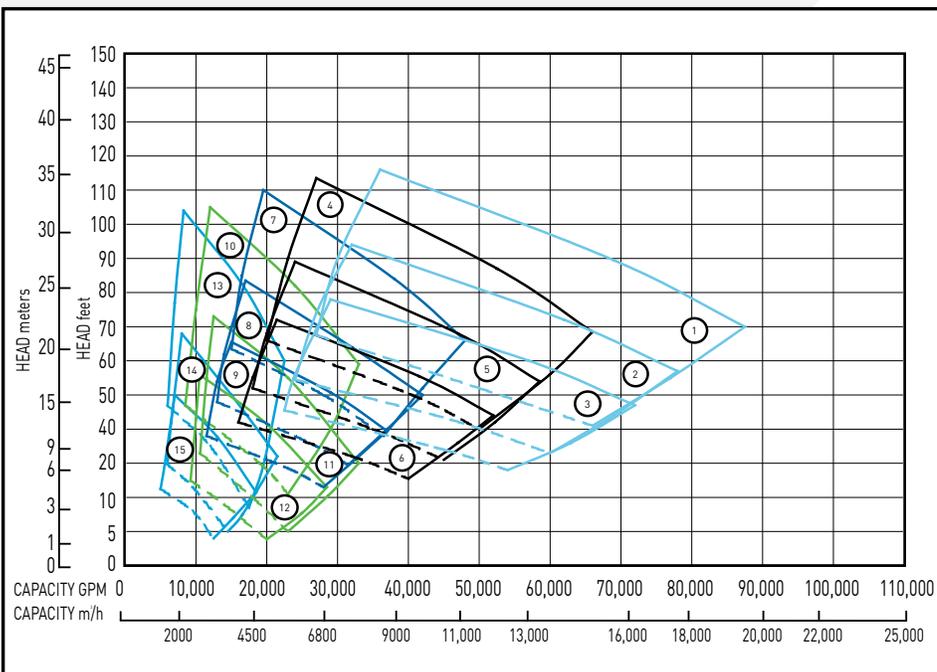
Efficient Performance Sets Us Apart

1. VTSH Pumps



1. VTSH Pumps – 10 to 20 in, 25 to 51 cm			
Number	Inches	Meters	Speed
1.	20"	510 mm	880 RPM
2.	20"	510 mm	705 RPM
3.	20"	510 mm	585 RPM
4.	16"	400 mm	1180 RPM
5.	16"	400 mm	880 RPM
6.	16"	400 mm	705 RPM
7.	14"	360 mm	1180 RPM
8.	14"	360 mm	880 RPM
9.	14"	360 mm	705 RPM
10.	10"	250 mm	1770 RPM
11.	10"	250 mm	1170 RPM
12.	10"	250 mm	880 RPM

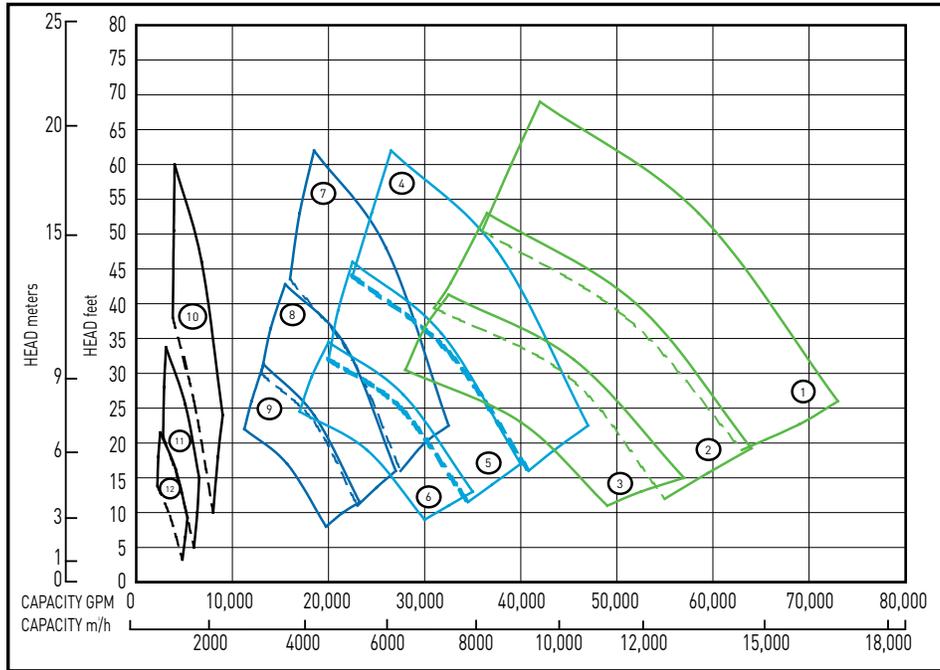
2. VTSH Pumps



2. VTSH Pumps – 24 to 48 in, 61 to 122 cm			
Number	Inches	Meters	Speed
1.	48"	1220 mm	390 RPM
2.	48"	1220 mm	350 RPM
3.	48"	1220 mm	320 RPM
4.	42"	1070 mm	440 RPM
5.	42"	1070 mm	390 RPM
6.	42"	1070 mm	350 RPM
7.	36"	920 mm	505 RPM
8.	36"	920 mm	440 RPM
9.	36"	920 mm	390 RPM
10.	30"	760 mm	585 RPM
11.	30"	760 mm	505 RPM
12.	30"	760 mm	440 RPM
13.	24"	610 mm	705 RPM
14.	24"	610 mm	585 RPM
15.	24"	610 mm	505 RPM

Performance Data

3. VTSH-LH Pumps



3. VTSH-LH Pumps – 20 to 42 in, 51 to 107 cm

Number	Inches	Meters	Speed
1.	42"	1070 mm	505 RPM
2.	42"	1070 mm	440 RPM
3.	42"	1070 mm	390 RPM
4.	36"	920 mm	585 RPM
5.	36"	920 mm	505 RPM
6.	36"	920 mm	440 RPM
7.	30"	760 mm	705 RPM
8.	30"	760 mm	585 RPM
9.	30"	760 mm	505 RPM
10.	20"	510 mm	1180 RPM
11.	20"	510 mm	880 RPM
12.	20"	510 mm	705 RPM

THE COMMITMENT OF FAIRBANKS NIJHUIS™

Our distinctive products, market leadership, excellent customer service, and longevity in the industry are all a result of the quality and dedication of our personnel. Our pumps are machined, built, and tested by highly skilled shop personnel. Working as a team, our people continually explore new ways to better serve our customers. Product quality, dependability, and innovation are all part of the Fairbanks Nijhuis commitment to excellence.

PENTAIR'S

Global Market Segments

TECHNICAL SOLUTIONS

Designs, manufactures, and markets products that guard and protect some of the world's most sensitive electronics and electronic equipment, as well as heat management solutions designed to provide thermal protection to temperature sensitive fluid applications.

WATER & FLUID SOLUTIONS

Designs, manufactures, markets, and services innovative water management and fluid processing products and solutions. In select geographies, Water & Fluid Solutions offers a wide variety of pumps, valves, and pipes for water transmission applications.

VALVES & CONTROLS

Designs, manufactures, markets, and services valves, fittings, automation and controls, and actuators for the industrial, food & beverage, infrastructure, and energy verticals.



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Because we are continuously improving our products and services, Pentair reserves the right to change specifications without prior notice.
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