ROTO-JET

High Pressure Pitot Tube Pumps

PREMATECNICA

Equipos e instalaciones para las industrias de proceso y energía

Product Line Overview

Model RD-11 Pump

Capacity: to 150 gpm (34 m^3/hr)
Heads: to 1500 ft. (457m)
Pressures: to 650 psi (45 Bar)
Temperatures: to 250° F (121° C)
Maximum Speed: 4858 RPM

Model R11 Pump

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Heads: to 1500 ft. (457 m)
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Temperatures: to 250° F (121° C)
Maximum Speed: 4858 RPM

Model VSR® Pump

(Variable Speed Roto-Jet®)

Capacity: to 535 gpm (121 m^3/hr)
Heads: to 3930 ft. (1198 m)
Pressures: to 1730psi (120 Bar)
Temperatures: to 250° F (121° C)
Maximum Speed: 5400 RPM

Model 2100 Pump

Capacity: to 465 gpm (106 m^3/hr)
Heads: to 2950 ft. (899m)
Pressures: to 1300 psi (90 Bar)
Temperatures: to 250° F (121° C)
Maximum Speed: 4709 RPM

Model 2200 Pump

Capacity: to 535 gpm (121 m^3/hr)
Heads: to 3930 ft. (1198 m)
Pressures: to 1750 psi (120 Bar)
Temperatures: to 250° F (121° C)
Maximum Speed: 5443 RPM

Model RO/ROH Pump

Capacity: to 450 gpm (102 m^3/hr)
Heads: to 5500 ft. (1676 m)
Pressures: to 2250 psi (155 Bar)
Temperatures: to 550° F (288° C)
Maximum Speed: 6321 RPM

Model RO D850 Pump

Capacity: to 750 gpm (170 m^3/hr)
Heads: to 2100 ft. (640 m)
Pressures: to 900 psi (62 Bar)
Temperatures: to 250° F (121° C)
Maximum Speed: 4380 RPM

Model RG Pump

Capacity: to 400 gpm (91 m^3/hr)
Heads: to 2600 ft. (792 m)
Pressures: to 1125 psi (77 Bar)
Temperatures: to 250° F (121° C)
Maximum Speed: 4380 RPM

ROTO-JET®

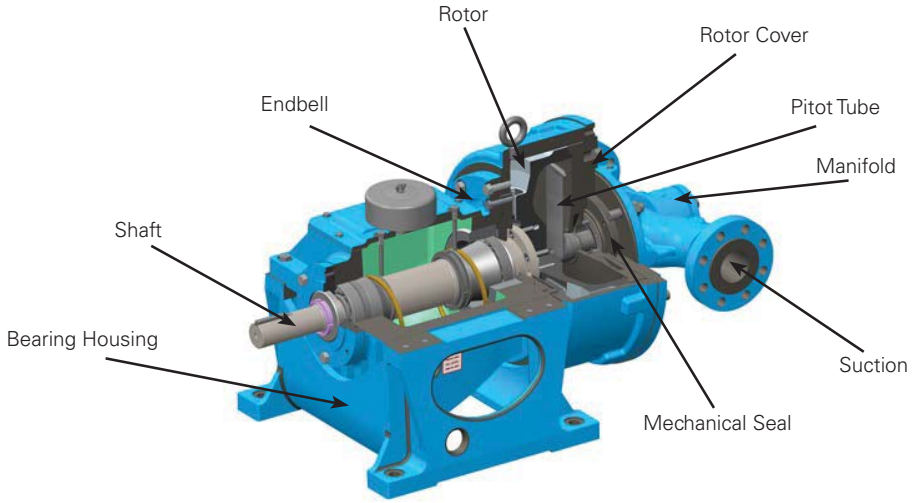
High Pressure Pitot Tube Pumps

Operation

The Roto-Jet® pump is totally, hydraulically stable and can operate with a minimal continuous bypass flow at shutoff indefinitely and at any flow point throughout the total head curve range with no wearing or damaging effect to the pump. The reason for this unique benefit is that all radial forces tend to be balanced within the rotor, and axial thrust is solely a function of suction pressure. Radial and axial forces applied to the Roto-Jet® pump are independent of flow rate. Thus, the pump can operate at design point to shut-off free of shaft deflection or added thrust load applied to the bearings.

Seize-Proof

Unlike conventional centrifugal pumps, the Roto-Jet® pump will not seize if run dry by a loss of suction or if operated with a minimal continuous bypass flow against a closed discharge valve. The mechanical seal is not mounted to the pump drive shaft, therefore, seal failure temperature rise is not transferred to the critical drive shaft/bearing area. The Roto-Jet® pump design does not incorporate wear rings or any close shaft tolerances which would be subject to heat expansion and drive shaft seizure.



Design Simplicity

The Roto-Jet® pump is a single stage pump with only two basic working parts: a rotating case and a stationary pitot tube.

The mechanical seal of the Roto-Jet® pump is subject to only suction pressure, whereas many other pump seals are exposed to elevated seal chamber pressures producing a potentially higher fail rate. The mechanical seal is isolated from the bearing pedestal, minimizing the risk of bearing contamination from mechanical seal leakage. Therefore the Roto-Jet® pump can be kept in service with a damaged seal to meet the critical demands of daily production.

Performance Flexibility

Any given model is capable of higher or lower pressure performance by simply changing the external pump speed and applying the required horsepower. No modification of the pump is required. A wide range of flow capability is achieved by simply changing the pitot tube.

Applications:

- Boiler Feed and Desuperheating
- Oil Production
- Semi-Conductor Manufacturing
- Central Cleaning Systems
- Mining
- Spraying Systems
- Hydraulic Systems
- Petroleum-Chemical
- Steel Mills
- Hydro-Blast Cleaning
- Pulp and Paper Mills
- Transfer
- Reverse Osmosis
- Water Injection
- Turbine Fuel Feed
- NO_x Suppression

WEIR Specialty Pumps

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Bulletin RJ-Overview

PREMATECNICA

Equipos e instalaciones para las industrias de proceso y energía

Weir Specialty Pumps

WSP™ Non-Clog Pump

WSP™ Non-Clog Pump

Developed using advanced technology, the WSP™ non-clog pump minimizes operating costs, simplifies maintenance, and maximizes reliability.

Rugged and Dependable

The WSP™ non-clog pumps were designed and developed using advanced technology to meet demanding market requirements. The non-clog pump was created by the same engineers and manufactured side-by-side with the dependable WSP™ and WEMCO® pumps you already have in service. The WSP™ non-clog is rugged and dependable, exactly the quality you have come to expect.

The WSP™ non-clog design is an improved, modern design over conventional non-clog pumps in the market place. The WSP™ non-clog pump is designed to maintain high hydraulic efficiencies with the ability to handle large solids, improve overall pump efficiencies, reduce maintenance, and operating costs.

Benefits

- Improved Performance
- Lower Cost
- Easy Maintenance
- Extended Operational Life
- Larger clean-out port
- Combined bearing frame and bracket to increase rigidity and reliability

Capabilities

- Flow: up to 10,000 GPM/2,270 M^3/hr
- Head: up to 340 ft/105 M
- Maximum Solid Sphere: 3 in/75 mm
- Available in horizontal, vertical, or trailer/skid mounted configuration
- Optional Weir Prime Assist available

Applications

- Sewage Lift Stations
- Return Activated Sludge
- Waste Activated Sludge
- Sewage Bypass
- Dewatering
- Digesters
- Water Booster
- Manure
- Industrial Waste
- Light Abrasives
- Agricultural Waste
- Mining

4 in/100 mm

Head to: 270 ft (118 M)
Flow to: 1325 GPM (305 M³/hr)
Solids size: 3 in (75 mm)

6 in/150 mm

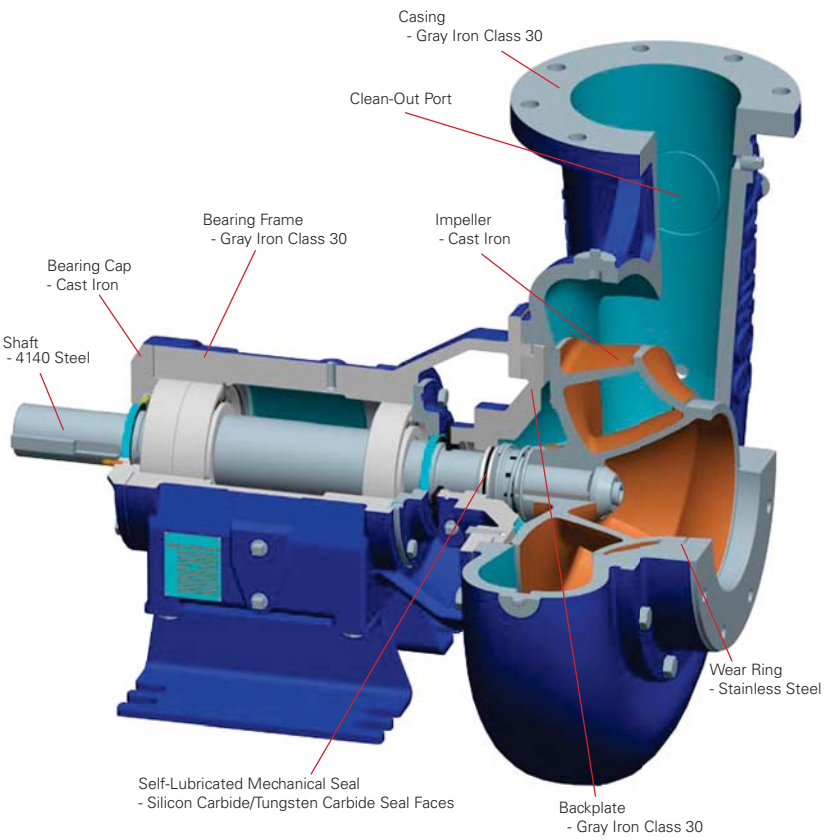
Head to: 340 ft (105 M)
Flow to: 3450 GPM (810 M³/hr)
Solids size: 3 in (75 mm)

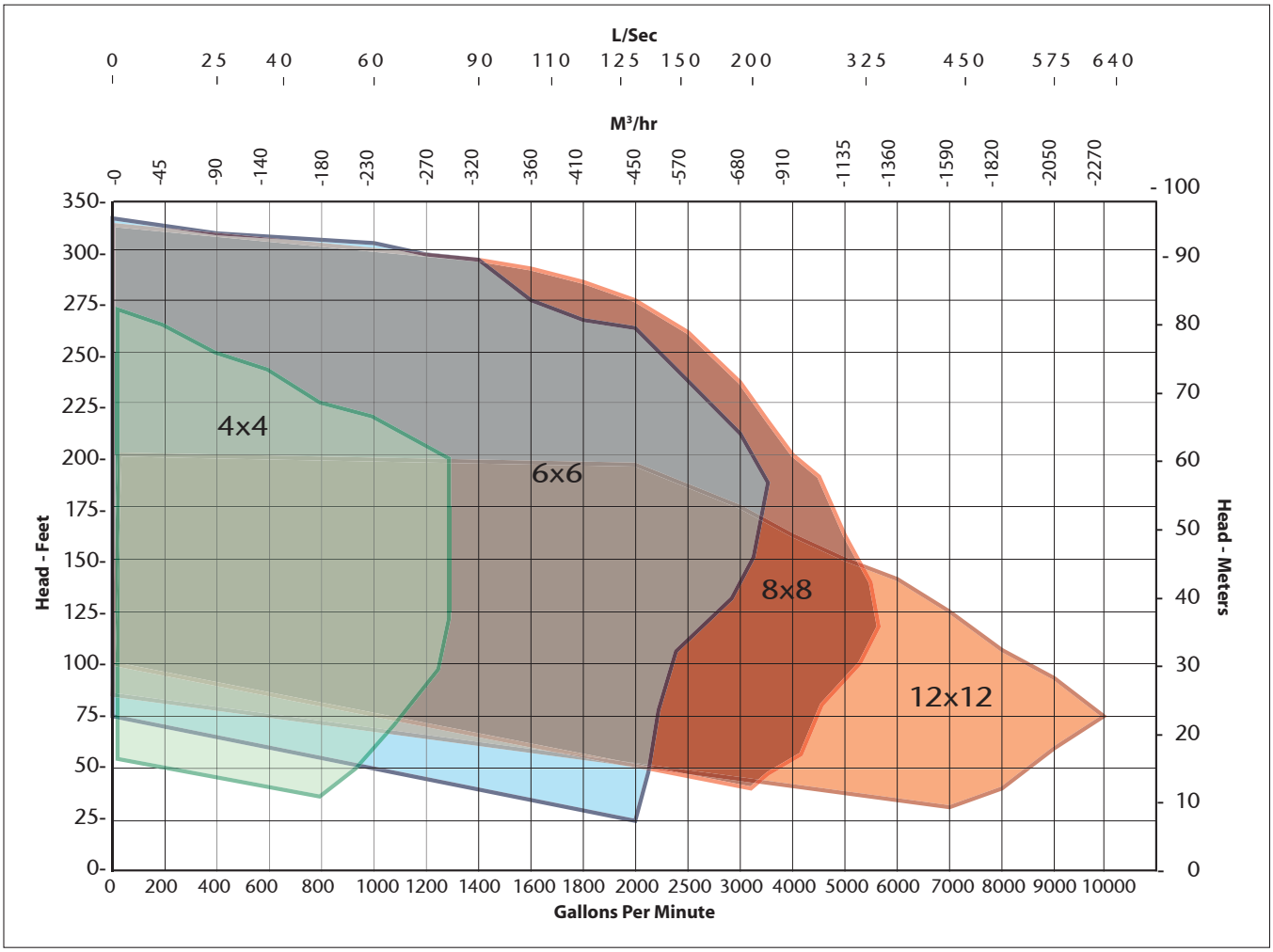
8 in/200 mm

Head to: 325 ft (98 M)
Flow to: 5750 GPM (1400 M³/hr)
Solids size: 3 in (75 mm)

12 in/305 mm

Head to: 195 ft (59 M)
Flow to: 10,000 GPM (2,270 M³/hr)
Solids size: 3 in (75 mm)


Casing
- Gray Iron Class 30
Clean-Out Port
Bearing Frame
- Gray Iron Class 30
Impeller
- Cast Iron
Bearing Cap
- Cast Iron
Shaft
- 4140 Steel
Wear Ring
- Stainless Steel
Self-Lubricated Mechanical Seal
- Silicon Carbide/Tungsten Carbide Seal Faces
Backplate
- Gray Iron Class 30


L/Sec
0 25 40 60 90 110 125 150 200 325 450 575 640
M³/hr
-0 -45 -90 -140 -180 -230 -270 -320 -360 -410 -450 -570 -680 -910 -1135 -1360 -1590 -1820 -2050 -2270
Head - Feet
350 300 275 250 225 200 175 150 125 100 75 50 25 0
Head - Meters
100 90 80 70 60 50 40 30 20 10 0
4x4
6x6
8x8
12x12
0 200 400 600 800 1000 1200 1400 1600 1800 2000 2500 3000 4000 5000 6000 7000 8000 9000 10000
Gallons Per Minute

Weir Specialty Pumps

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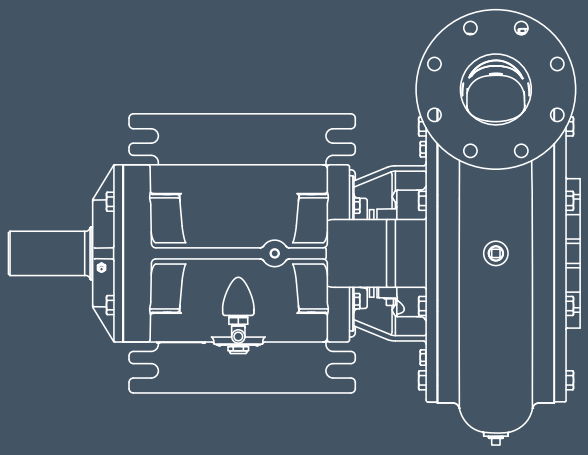
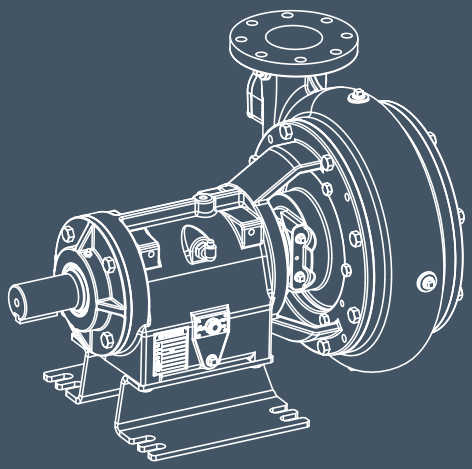
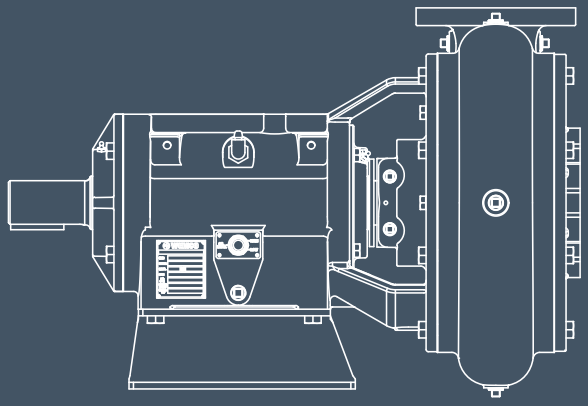
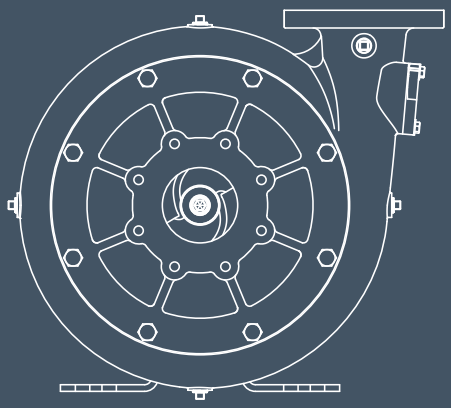
PREMATECNICA

Equipos e instalaciones para las industrias de proceso y energía









WSP™ Non-Clog Pump Brochure
Version 1, Jan 2016

WEMCO SELF PRIMER

Solids Handling Self Primer Pumps

Pump Sizes: 3”, 4”, 6”, 8”, and 10”

Rugged and Dependable Trash Pumps

Excellent
Power & Industrial
Solutions

WEIR
POWER & INDUSTRIAL

Now A
Standard Upg
On All Pump

SELF-CLEANING
BUZZ SAW™
Patent Pending
WEAR PLATE

PREMATECNICA

Equipos e instalaciones para las industrias de proceso y energía

WEMCO® Self-Primer
The Market Leader

Check the boxes of the features you want in a self-priming pump - add up the score at the bottom

Other Self-Priming Pumps	✔
• Steel Shaft	
• Ductile Iron Impeller	
• Cast Iron Casing	
• Cast Iron Bearing Housing	
• Cast Iron Cover Plate	
• Tools needed to adjust Impeller	
• Not all sizes pass stated solid size	
• Shimless impeller adjustment	
Total ✔	

✔	WEMCO Self-Primer
	• Stainless Steel 17-4PH Shaft
	• Cast Steel, High Chrome or CD4MCu Impeller
	• Ductile Iron Casing
	• Ductile Iron Fill Port Cover
	• Tool-less impeller adjustment
	• Passes stated solid size
	• Shim-less impeller adjustment
	• Higher **actual** efficiency
	• Solid Silicone Carbide Seal faces
	• More rugged & dependable
	• Lower "life cycle costs"
	• Industry leading 66 month warranty
	• Advanced saftey features
	• Higher operating pressure
	• Directly interchangeable parts
	• Pump interchangeability
	Total ✔

Add it up... You'll see why the **WEMCO Self-Primer** offers more value...

✔ Materials/Design ✔ Ease of Maintenance
✔ Pump Features ✔ Safety Features
✔ More Dependable ✔ Lower Operating Cost

3"/75 mm
Head to: 112' • 34 M
Flow to: 450 GPM • 102 M³/hr
Solids size: 2.5 inch • 63.5 mm

4"/100 mm
Head to: 115' • 35 M
Flow to: 730 GPM • 165 M³/hr
Solids size: 3 inch • 75 mm

6"/150 mm
Head to: 109' • 33 M
Flow to: 1,480 GPM • 335 M³hr
Solids size: 3 inch • 75 mm

8 "/200 mm
Head to: 109' • 33 M
Flow to: 2,600 GPM • 600 M³/hr
Solids size: 3 inch • 75 mm

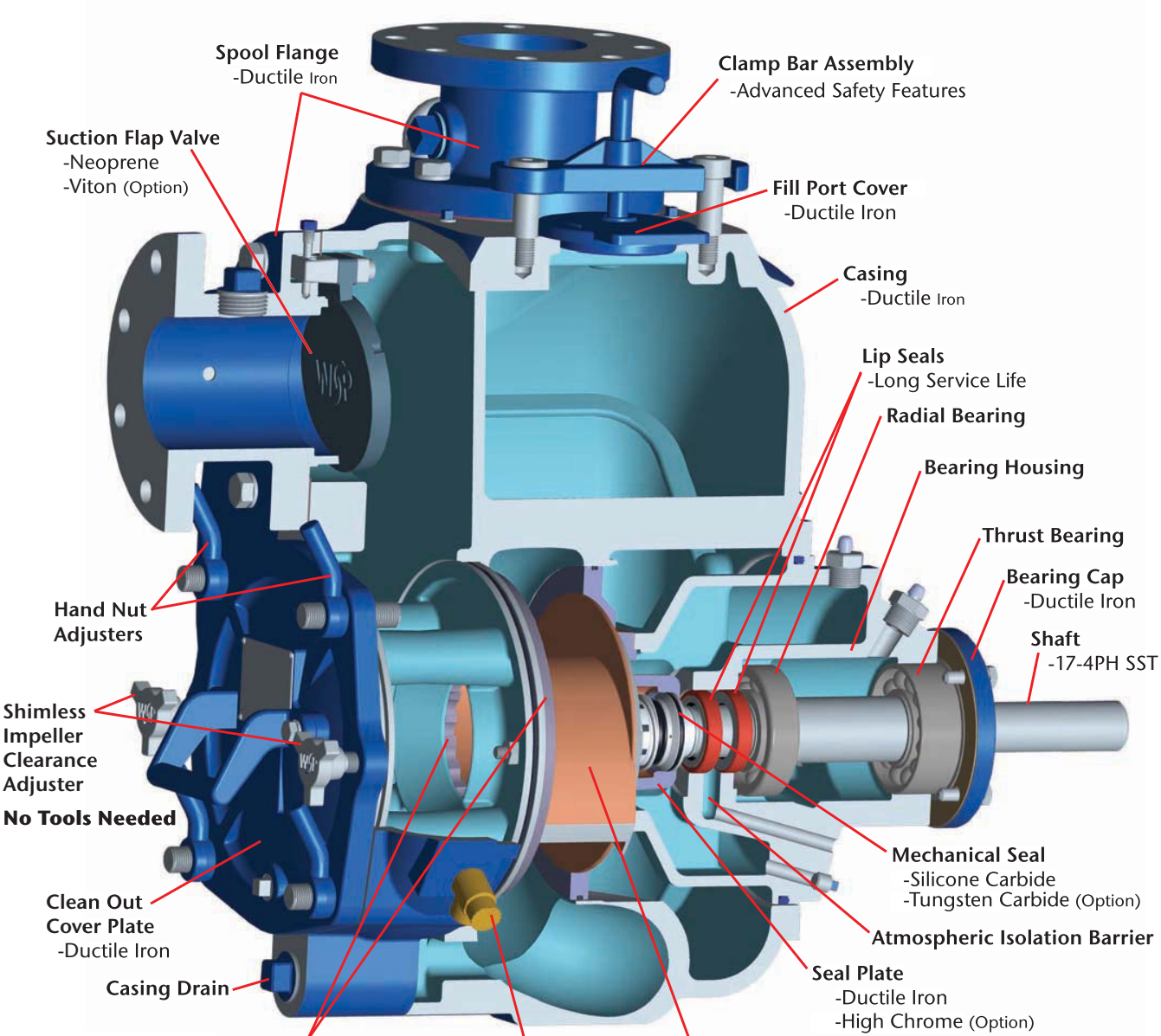
10"/250 mm
Head to: 129' • 39 M
Flow to: 3,200 GPM • 725M³/hr
Solids size: 3 inch • 75 mm

Pump & Parts directly interchangeable with many GRESCO®, Pioneer® and Gorman-Rupp® pumps.

WEMCO® Self-Primer

True Solids Handling Pumps From The Start!

You were born with the only tools you need to adjust the clearances of WSP pumps.
<u>Your hands!</u> NO tools are required for clean-out or impeller clearance adjustment!

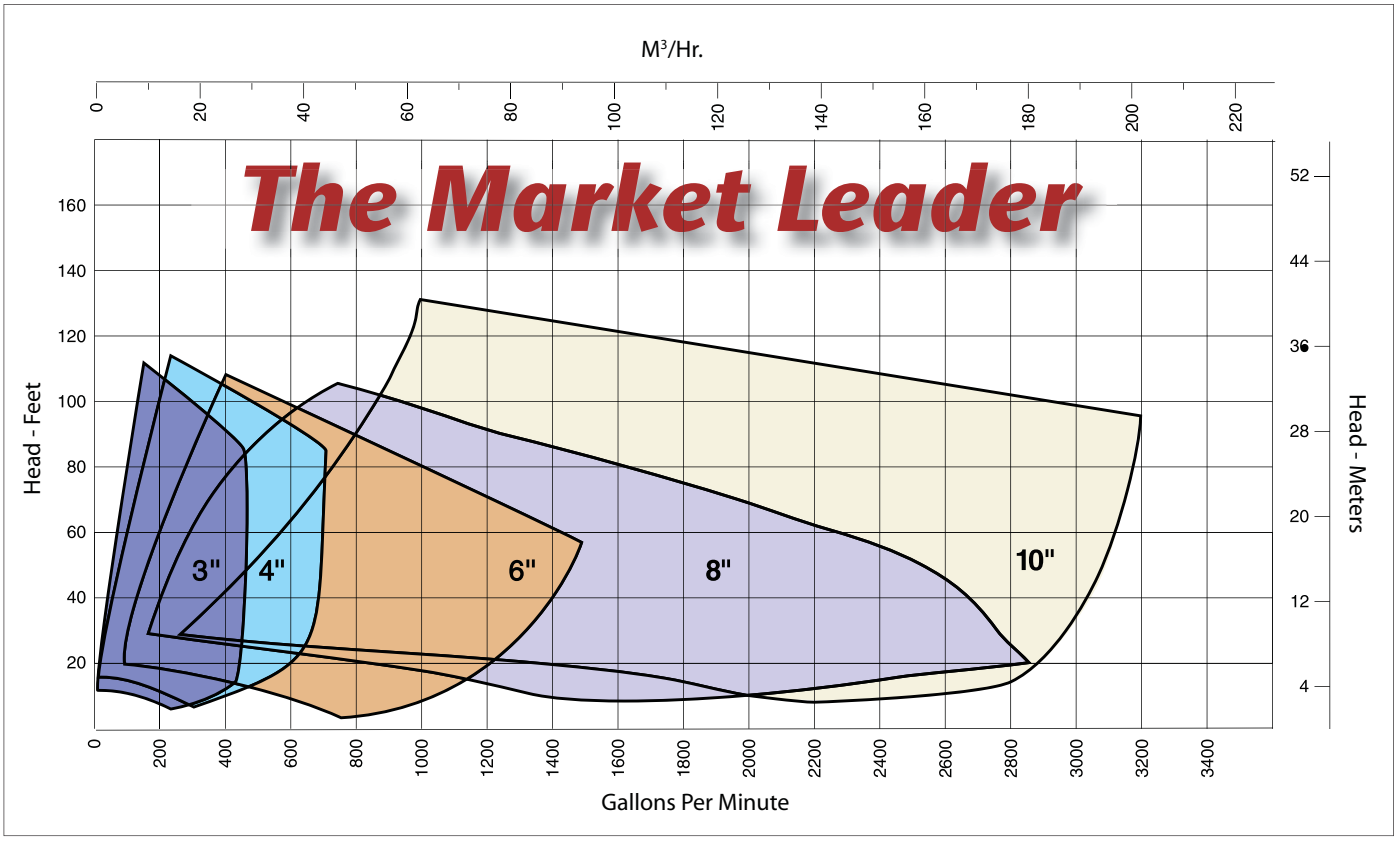


SELF-CLEANING BUZZ SAW WEAR PLATE

WSP WARRANTY 66 MONTHS
Industry Leading Warranty!

Applications: ***• Sewage • Animal Waste • Industrial Waste • Dewatering • Mining • Winery • Automotive • Beef/Pork/Poultry Processing • Pulp & Paper • Other Industrial Applications***

WEMCO® Self-Primer
Operating Range



Weir Specialty Pumps

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Equipos e instalaciones para las industrias de proceso y energía

Excellent
Power & Industrial
Solutions

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Weir Specialty Pumps

WSP™ Chop-Flow™ Pump

PREMATECNICA

Equipos e instalaciones para las industrias de proceso y energía

WSP™ Chop-Flow™ Pump

The WSP™ Chop-Flow™ Pump is a powerful, cost-efficient way to chop and pump at the same time. Solids, fibers, and other hard to pump materials are pulled into the pump suction. Before these materials enter the pump impeller vanes, they are cut by the action of the rotating impeller against the stationary cutter plate, so they easily pass through the pump after being chopped several hundred times per minute.

The WSP™ Chop-Flow™ pump exhibits the same quality you've come to expect from Weir for over 100 years. Rugged, reliable, dependable, and maintenance-free.

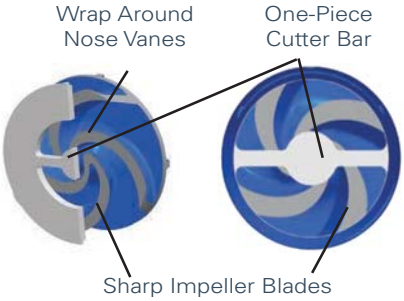
- Wrap around nose vanes ensure effective chopping at the center of the impeller, without the need for an impeller nut.
- A one or two-piece, easily replaceable, rigid cutter bar spans the entire suction opening. Versatility for toughest chopping applications.
- Rear pump out vanes with cutting slots repel and chop any material that gets behind the impeller.
- The wearing parts -cutting bar, impeller and rear cutting teeth are easily and inexpensively replaceable.
- All clearances are easily and externally adjustable, by one person without the hassle to unbolt and move the pump and/or the motor.
- Top quality materials and castings throughout - no flimsy fabricated parts to corrode.
- Available with packing and all conventional mechanical seals, flushed or flushless.

WSP™ Chop-Flow™ Impeller

- Chops stringy and solid materials, and moves it through the pump casing as the impeller runs against the stationary cutter plate
- Has nose vanes that completely wrap around the center of rotation, pulling material into the cutting area and assuring positive and complete chopping action
- Has ultra sharp blade face that maintains a cutting edge as it wears, coupled with a generous and easily adjustable wear allowance to maintain optimum chopping over the life of the impeller
- Made of tough and hard ASTM A148 steel, hardened to RC60

Stationary Cutter Bar

- Single piece – easily removable, replaceable, and economical
- Made of AISI T1 Tool Steel, hardened to RC60



Impeller Reverse Side and Back Plate

- The back side of the impeller is equipped with machined cutting teeth on the pump-out vanes and a labyrinth to protect and prevent any material from reaching the seal area, whether the pump is running or not.
- When running, the back pump-out vanes on the rear shroud of the impeller pump out any material which enters the area between the rear of the impeller and the backplate. These back vanes also incorporate two cutting slots which mesh with replaceable cutting teeth on the backplate to chop stringy materials as they are removed.
- The pumping action/agitation of the vanes in combination with the chopping actions of the cutting slots ensure that any material in this area will be positively ejected and won't reach the seal area.
- The exclusive cutting teeth on the back plate are easily and inexpensively replaced when necessary, eliminating the need to buy the more expensive complete backplate assembly.

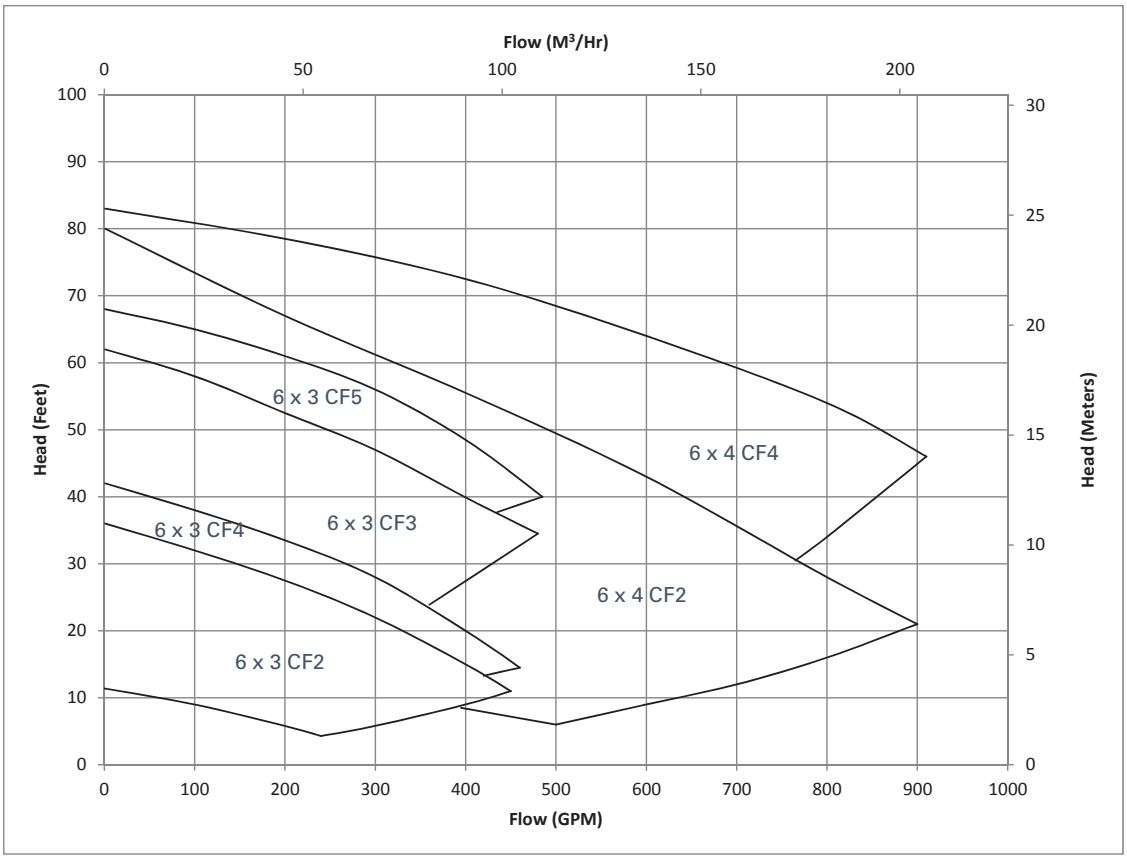
Simple 2-step Clearance Adjustment with External Adjusting Screws

Step 1 Adjust bearing assembly and impeller forward to set clearance with cutter bar

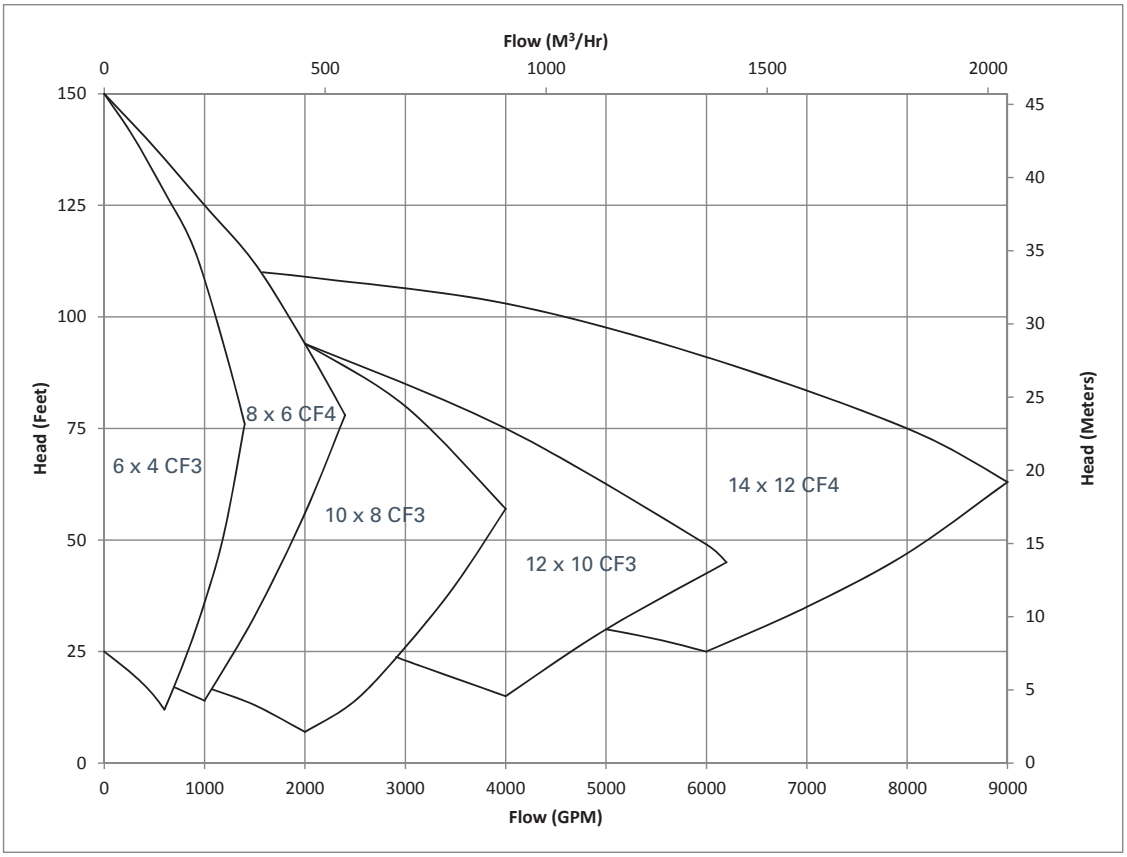
Step 2 Adjust backplate to the impeller

WSP™ Chop-Flow™ Pump

Low Flow



High Flow



Weir Specialty Pumps

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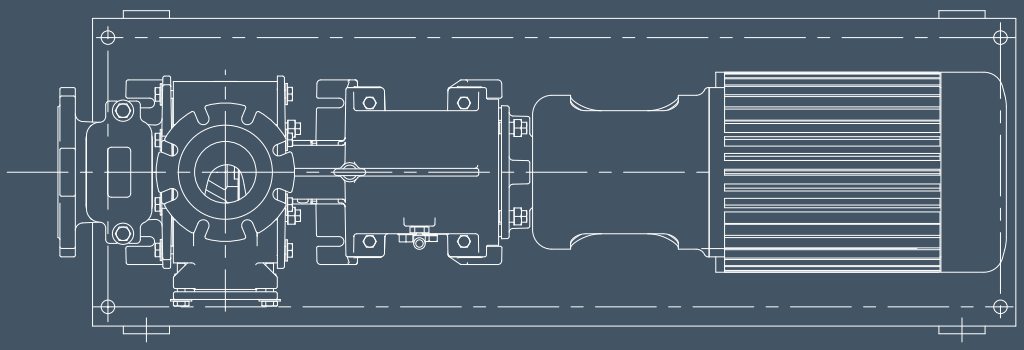

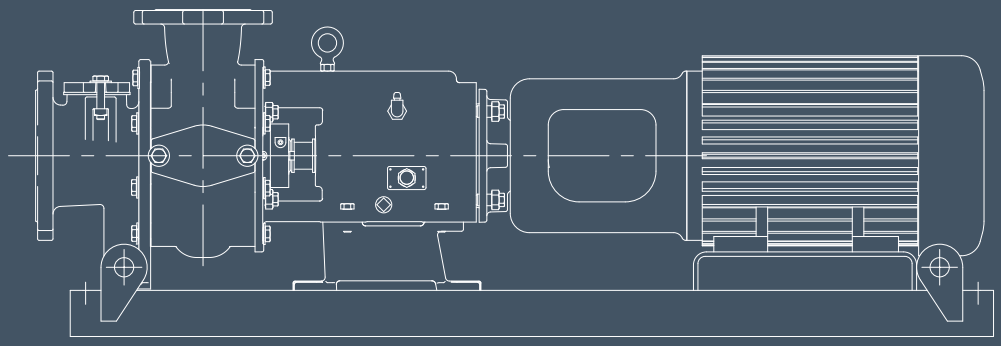

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PREMATECNICA

Equipos e instalaciones para las industrias de proceso y energía

WSP™ Chop-Flow™ Pump Brochure
Version 1, Jan 2016

PREMATECNICA

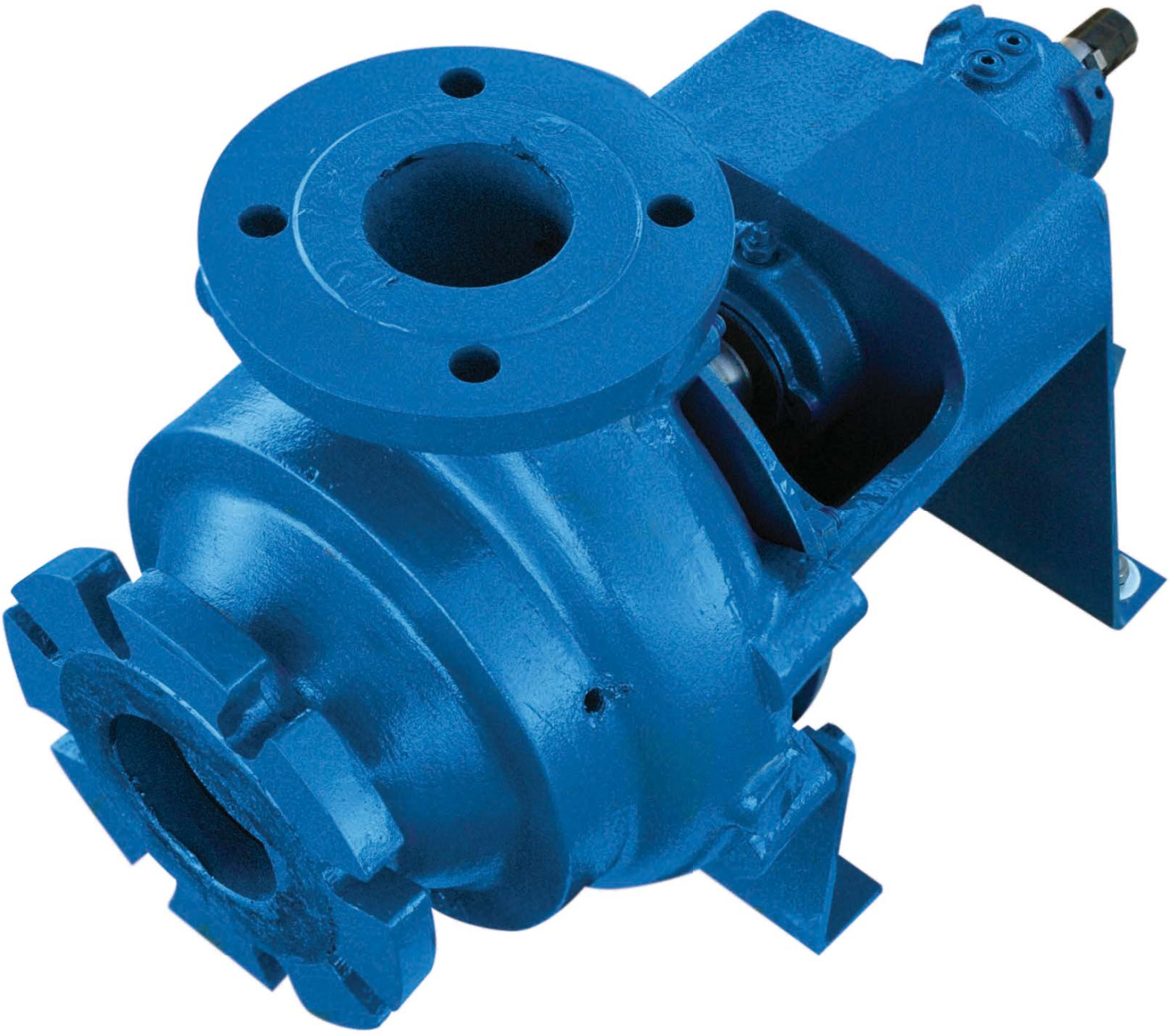
Equipos e instalaciones para las industrias de proceso y energía

WEIR

Minerals

WARMAN® Screw Flow Pump

WSF® Pump

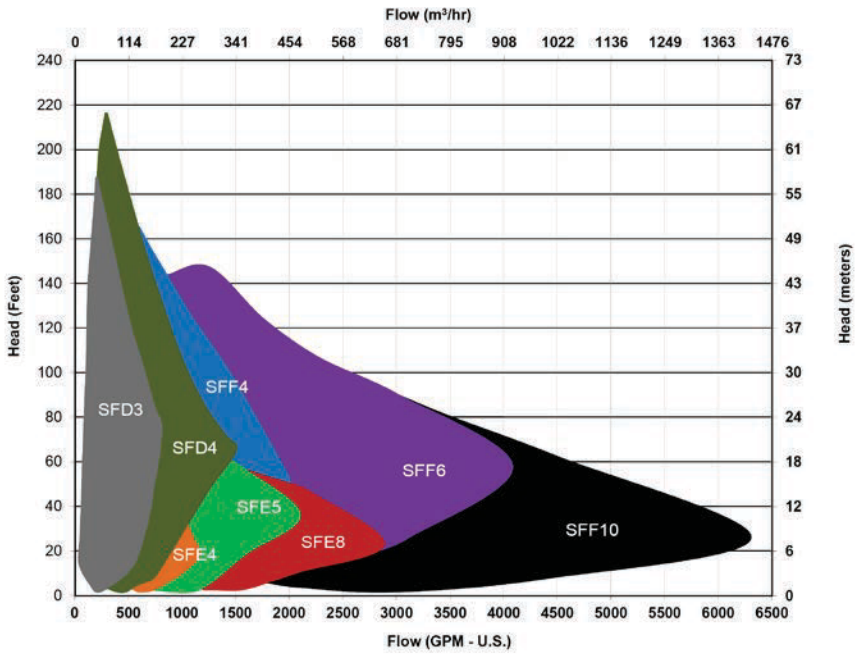


Weir Minerals are specialists in delivering and supporting sludge and slurry equipment solutions including pumps, hydrocyclones, valves and wear resistant linings for the global power, mining, petrochemical and general industrial markets, including pharmaceuticals & food processing.

The Warman® screw flow pump is equipped with a classic single vane screw centrifugal impeller. The long-established screw centrifugal design provides clog-resistant pumping for trouble free movement of solids, and fibrous and stringy materials. The steep head-capacity curve produced by the impeller provides additional head to help push through any partial blockages.

Low specific speed impeller

Performance Curves



Low NPSH:

The screw portion of the Warman® screw flow pump impeller performs as an inducer, pulling liquid into the impeller, resulting in low NPSH requirements.

Solids Handling:

The single vane impeller of the Warman® screw flow pump creates a single channel flow, allowing for larger solids passage. The large solids passage provides better solids handling capabilities than any other pump type. The steep head-capacity curve provides ample reserve pressure to clear temporary clogs.

Sludge Handling | Positive Suction:

The combination of a low NPSH requirement and large solids channels provides a powerful pump for handling thick sludges. The steep head-capacity curve of the Warman® screw flow pump also allows for pumping of varying sludge consistencies without the need to change speed. An additional benefit is the reserved head for clearing temporary line blockages.

Adjustable Liner:

Consistent impeller to liner clearance is imperative to the performance of the pump. As the pump components wear, clearance between the impeller and liner can be adjusted to ensure optimal performance.

Configurations

- Horizontal
- Vertical
- Submersible
- Prerotation

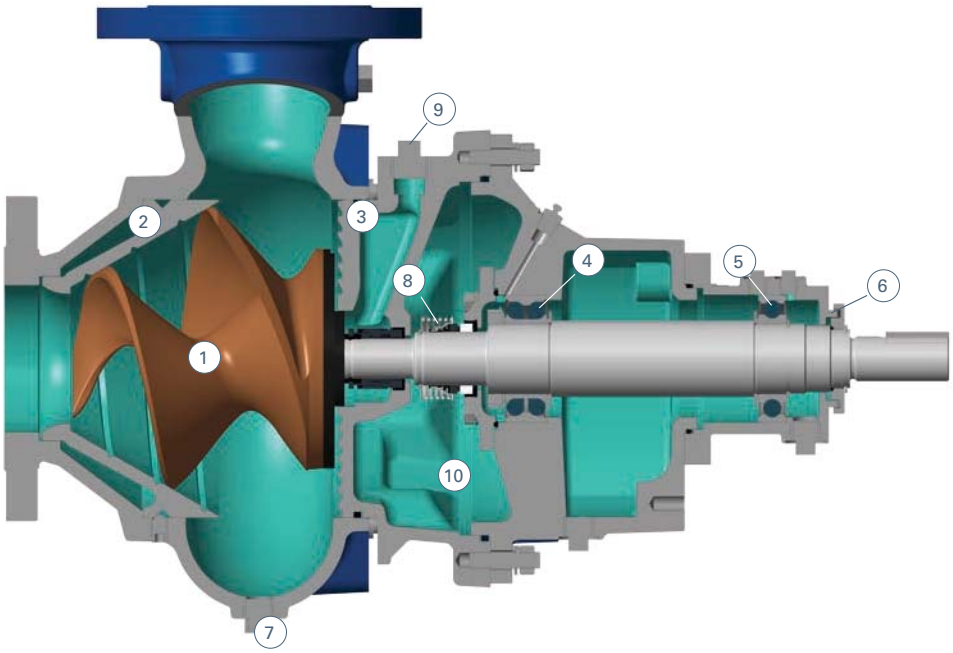
Features:

- High efficiency
- Low NPSH requirements
- Steep head-capacity curve
- Flushless tandem mechanical seals
- Adjustable liners
- Large solids passage
- Solids passage: 2.5 - 4.75 in 63mm - 120mm
- High Chrome Iron impeller & liner ASTM A532 Class III Type A

Applications:

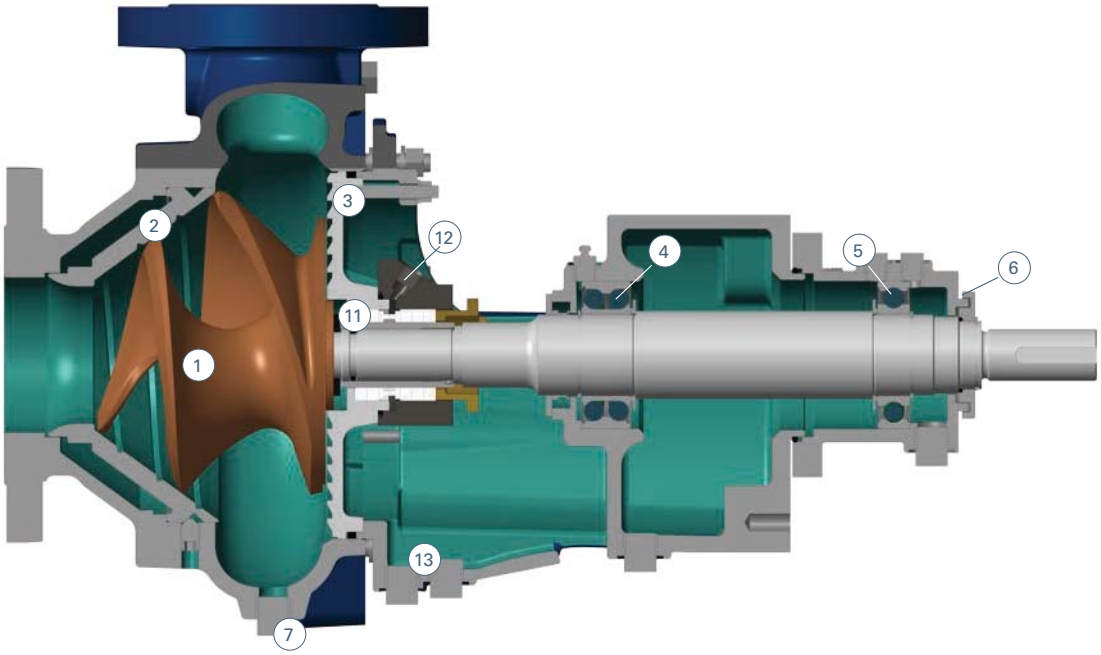
- Sludges
- Raw & unscreened sewage
- Paper stock & wood chips
- Wet well cleanup
- Crystalline compounds
- Bacterial Floc
- Easily damaged fruits & vegetables
- Coal

Warman® WFS Pump with tandem seal arrangement (BFDOW)



1. HCI screw centrifugal impeller
2. Adjustable, hci, grooved liner
3. Pump-out grooves
4. Thrust bearings
5. Radial bearings
6. Labyrinth bearing seal
7. Case vent & drain
8. Flushless tandem mechanical seals
9. Optional impeller flush port
10. Oil bath
11. Packing (mechanical seals optional)
12. Flush port
13. Scupper drain

Warman® WSF Pump with stuffing box arrangement (BFDOS)



Minerals

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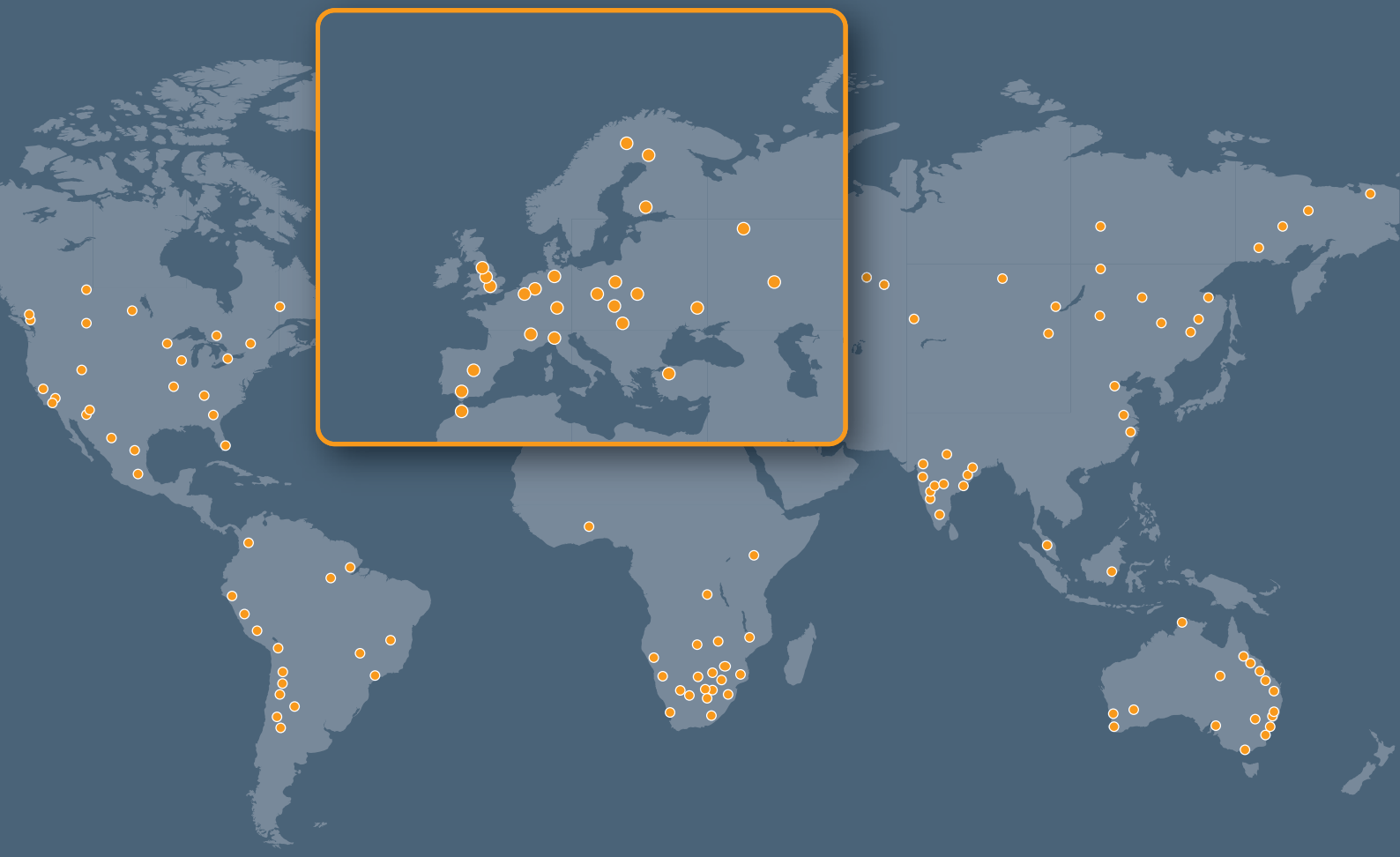
PREMATECNICA

Equipos e instalaciones para las industrias de proceso y energía



FLOWAY® PUMPS

Vertical Turbine Pumps

Water Industry

PREMATECNICA

Equipos e instalaciones para las industrias de proceso y energía

Excellent
Minerals
Solutions

WEIR MINERALS

Floway® vertical turbine pumps

- **Whole life cycle solutions for any application**
- **Industry leading low vibration levels**
- **Engineering support**
- **Total care, from upfront project design support to aftermarket sales and service**

Weir Minerals Floway Pumps has a more than 80 year history providing customers around the world with high quality products for their specific process needs.

Our products are recognized worldwide for superior quality, top hydraulic performance and long service life.

Examples of cities and states across the US relying on Floway® pumps:

Las Vegas, NV	Los Angeles, CA
Phoenix, AZ	Santa Rosa, CA
Niagara Falls, NY	Riverside, CA
Atlanta, GA	San Antonio, TX
Orlando, FL	Houston, TX
Seattle, WA	Kansas City, MO
Bloomington, MN	Albuquerque, NM
Orange County, CA	State of California

First choice for water industry pumping solutions

By concentrating solely on the vertical pump product line, Weir Minerals Floway Pumps has become a specialist in today's highly diversified market. Our products are recognized worldwide for superior quality, top hydraulic performance and long service life.

In applications where the cost of ownership often outweighs capital cost, we help our customers address such issues as longevity, efficiency of operation and ease of maintenance.

- Through continuous improvements to materials, product design, engineering and manufacturing techniques, we minimize downtime and disruption to our customers' operations.
- Working in close partnership with our customers allows us to develop end-to-end engineering solutions to the technical challenges they face, delivering a genuine competitive advantage.

Recycled water pumps

Finished water pumps

Raw water pumps

Booster pumps

More than 80 years of experience has provided us wth the expertise to manufacture a versatile line of vertical turbine pumps for a wide range of applications.

Typical services

- High service
- Treated water
- Finished water
- Booster
- Effluent disposal
- Lake or river raw water intake
- Secondary recovery
- Service water
- Aquifer Storage and Recovery (ASR)
- Backwash
- Well water
- Screen wash
- Reverse osmosis
- Corrosive water services, sea water/brackish water

Floway® pumps are built around the versatility of the vertical pump design. Depending upon exact job specifications, our engineers select the best combination of pump components and materials of constructions to meet virtually any water application.

Industry leading low vibration levels

Weir Minerals Floway Pumps is dedicated to manufacturing pumps with industry leading low vibration levels.

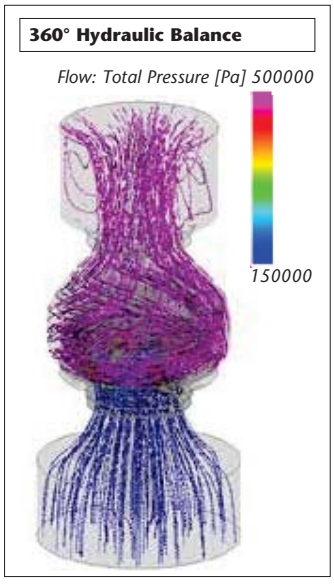
Optional features:

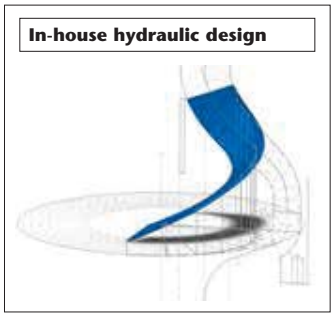
- Premium machined and balanced motor
- Specially toleranced motor coupling machined by Weir Minerals Floway Pumps
- Jacking posts for precise motor/pump shaft alignment
- Impellers balanced per API 610
- Reduced run-out on motor base

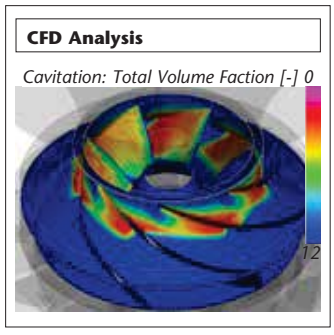
Excellent engineering solutions

Weir Minerals Floway Pumps utilizes an in-house staff of licensed professional engineers to ensure maximum control over design specifications. Engineering capabilities include:

- 3D solid modeling
- In-house hydraulic design
- Products engineered to customer specifications
- Special material selection
- Computational Fluid Dynamics (CFD) analysis
- Stress and deflection analysis using Finite Element Analysis (FEA)
- Lateral and torsional rotor dynamic analysis
- Structural natural frequency analysis (using FEA) and design for Variable Frequency Drive operation
- Design for low vibration







Performance testing

A major engineering function of any pump manufacturer is hydraulic performance testing under a variety of operational conditions. Testing ensures that pump performance matches specifications and that all components are operating properly.

Testing and analysis capabilities include:

- Three test pits for flows ranging from 50 GPM to 45,000 GPM (10,220 m^3/hr)
- Hydrostatic testing equipment for pressures to 5,000 PSI (345 Bars)
- NPSH testing equipment available for flows to 30,000 GPM (6,814 m^3/hr)
- Pressures to 2,500 PSI (172 Bars)
- Electrical power through 3,000 HP (2,235 KW)
- All measuring equipment calibrated on a scheduled basis with traceability to National Institute of Standards and Technology (NIST)
- Vibration testing available including spectrum analysis (FFT) with multiple simultaneous channels. Proximity probes available for measuring dynamic shaft vibration
- Impact testing available to determine the structural natural frequencies (Reed Critical Frequency) of the pump/motor structure
- Capable of testing a complete engine driven pump
- Both 50 Hz and 60 Hz power available
- Pump testing using a Variable Frequency Drive (VFD) available upon request
- Coating spark test (low voltage/high voltage)
- Pump thrust testing
- Noise testing

Non-destructive Testing (NDT)

- Dye Penetrant (LP)
- Magnetic Particle Inspection (MP)
- Radiography Exam (RT)
- Ultrasonic Testing (UT)
- Positive Material Identification (PMI)
- Hardness Testing (Rockwell and Brinell)
- CMTR upon request
- AWS Certified Welding Inspection (CWI)

Coating

- NSF certified coating available when requested
- Two-part epoxy
- Fusion bonded epoxy
- Most any coating available for potable or non-potable service

Up-front project design solutions

As a service to our customers, Weir Minerals Floway Pumps provides two specification assistance programs to help customers accurately specify the vertical turbine product.

SCORE Selector Program

SCORE is a web based program which allows customers to search pump selection by flow and head specifics. Scan the QR code to the right and create an account if you already do not have one.
select.floway.com/selector

Build-A-Spec™

Build-A-Spec™ is a specification writing program that provides a detailed specification in MS Word format based on a series of inputs by the user. Detailed specifications are available for sump, barrel, and well pump services.

Interested in building a specification for a Floway® pump? Build-A-Spec™ is the tool that will help you create a detailed specification for Floway® pumps. Scan the QR Code to the right to access.
www.weirminerals.com/buildaspec

Weir Minerals Floway Pumps takes pride in the fact that all of our products are manufactured in-house, giving total control and maximum capabilities.

Unlike some competitors, Floway® pumps are manufactured all under one roof. That means that every step from designing to fabrication to assembly and the finished product is controlled in our state-of-the-art facility in Fresno, California, USA.

Meeting global standards through excellent manufacturing processes

Manufactured to meet global certification standards

Electrical standards

- NEMA
- IEEE
- IEC

Construction standards

- Hydraulic Institute
- ANSI B16.5 Class 150 through 1500 flange ratings
- Welding to ASME Section IX on all listed materials
- ASTM standards met for all materials supplied — castings, forgings, and wrought materials
- Stress relief carbon steel to ASME Section VIII
- DIN
- BS
- CE Marking
- API 610
- NSF61 coating

Quality assurance

Quality control never ends at Weir Minerals Floway Pumps. It begins with the quotation phase and continues throughout the order process, manufacturing phase, warranty period, customer follow-up and servicing. This dedication to quality has given us the reputation for having one of the finest products in the vertical turbine pump industry. Certifications include:

- ISO 9001:2008 Quality Management Systems
- ISO 14001:2004 Environmental Management Systems
- OHSAS: 18001:2007 Occupational Health and Safety Management Systems

In-house manufacturing capabilities

Fabrication — The Weir Minerals Floway Pumps fabrication facility is staffed by ASME Boiler Code Section IX certified welders.

Machining — Computer controlled lathes, large boring mills, and individual production equipment ensure an efficient and flexible manufacturing process.

Balancing — Dynamic and static balancing of rotating elements ensure low vibration performance.

Inspection — Products are inspected at multiple stages throughout the manufacturing process to ensure quality. Capabilities include a Coordinate Measuring Machine (CMM) that can measure complex curvatures for comparison to 3D solid models. The CMM is also used to measure large parts where conventional measurement techniques are limited.

Final Assembly — All pump components are assembled to customer specifications, ensuring top efficiency, long service life and a high quality product.

Final assembly

NSF certified epoxy coating being applied to pump

Vertical Can/Barrel

Submersible **Model VF and VFR** **Model VC**

Submersible

The submersible pump utilizes a submersible motor coupled directly to the bowl assembly and is designed to operate completely submerged in the fluid being pumped.

Typical service: well pump

Capacity to 7,000 GPM (1,590 m3/hr)
Setting to 1,500 ft (457 m)
Pressure to 750 psi (52 Bars)

Model VF and VFR

VF — Vertical close coupled, single or multi-stage turbine with fabricated head discharging above ground, with a below ground suction mounted in a fabricated barrel or can (not shown)

VFR — Vertical close coupled, single or multistage turbine with fabricated head discharging above ground with radius elbow, with below ground suction mounted in a fabricated barrel or can (shown)

Typical service: booster applications for various water process services
Capacity to 35,000 GPM (7,950 m3/hr)
Pressure to 1,500 PSI (103 Bars)

Model VC

Vertical close coupled, single or multistage turbine, with fabricated head configured for an above ground suction and discharge mounted in a fabricated barrel or can

Typical service: in-line, above ground, closed suction booster applications for various water process services

Capacity to 35,000 GPM (7,950 m3/hr)
Pressure to 3,000 PSI (207 Bars)

Typical construction options

- Semi-open or enclosed impellers
- Bowl and impeller wear rings
- Thrust balanced impellers (reduced down-thrust on motor bearings)
- Flanged or threaded column pipe
- Product lubricated, water flush or oil lubricated shafting
- Hard chrome bearing journals
- Special materials of construction (stainless steel, bronze, duplex, super duplex)
- Electrical motors available in Vertical Solid Shaft (VSS) or Vertical Hollow Shaft (VHS) construction
- Abrasive service — special materials and construction to increase pump life
- Shaft sealing options include mechanical seals, packing boxes, water flush, oil lubricated or grease packed configurations

Sump/Wet Pit/Dry Pit

Model F and FR **Model VU** **Model A and AF**

Model F and FR

F — Vertical close coupled single or multistage turbine with fabricated head discharging above ground (shown)

FR — Vertical close coupled single or multistage turbine with fabricated head discharging above ground with radius elbow (not shown)

Typical service: large wet pits, well pumps, water treatment plants, lake and river intake, and various water process applications

Capacity to 35,000 GPM (7,950 m3/hr)
Setting to 600 ft (183 m)
Pressure to 1,500 PSI (103 Bars)

Model VU

Vertical close coupled, single or multistage turbine, with a fabricated head discharging below ground

Typical service: large wet pit for flood control, water treatment plants and any surface water source

Capacity to 35,000 GPM (7,950 m3/hr)
Setting to 600 ft (183 m)
Pressure to 1500 PSI (103 Bars)

Model A and AF

A — Vertical close coupled, single or multistage turbine with a radius cast iron head with an above ground discharge (shown)

AF — Vertical close coupled, single or multistage turbine with cast iron head discharging above ground, in a fabricated barrel or can (not shown)

Typical services: wet pit, well pumps, and booster applications for water treatment plants, various water process applications

Capacity to 5,000 GPM (1,140 m3/hr)
Setting to 600 ft (183 m)
Pressure to 300 PSI (20.7 Bars)

Column assembly and impeller configurations

Column assemblies

Flanged column pipe (open lineshaft for product lubrication shown)

Standard construction 16″ (41cm) diameter and larger column pipe recommended when ease of assembly is required. Flanged column pipe can be furnished in either oil, water flush or product lubricated construction.

Flanged column pipe (enclosed lineshaft for oil lubrication or fresh water flush shown)

Applications include pumpages with suspended particles which require bearing protection and deep settings.

Threaded column pipe (open lineshaft for product lubrication shown)

Pump setting with water levels over 30′ (9m) require driver non-reverse ratchet and lineshaft pre-lubrication. Available for 3″ (8cm) through 14″ (34cm) threaded pipe size. Threaded column generally preferred for well pumps where clearance is minimal.

Impellers

Enclosed type impeller with tapered collet shaft mounting

Standard construction features tapered friction drive collet furnished on pump bowls through size 22″ (56cm).

Features — Easy installation, lateral adjustment and low hydraulic thrust

Semi-open type impeller with tapered collet shaft mounting

Standard construction features tapered friction drive collet. Semi-open impeller construction is available on pump bowls through size 27″ (69cm) and on larger sizes when required.

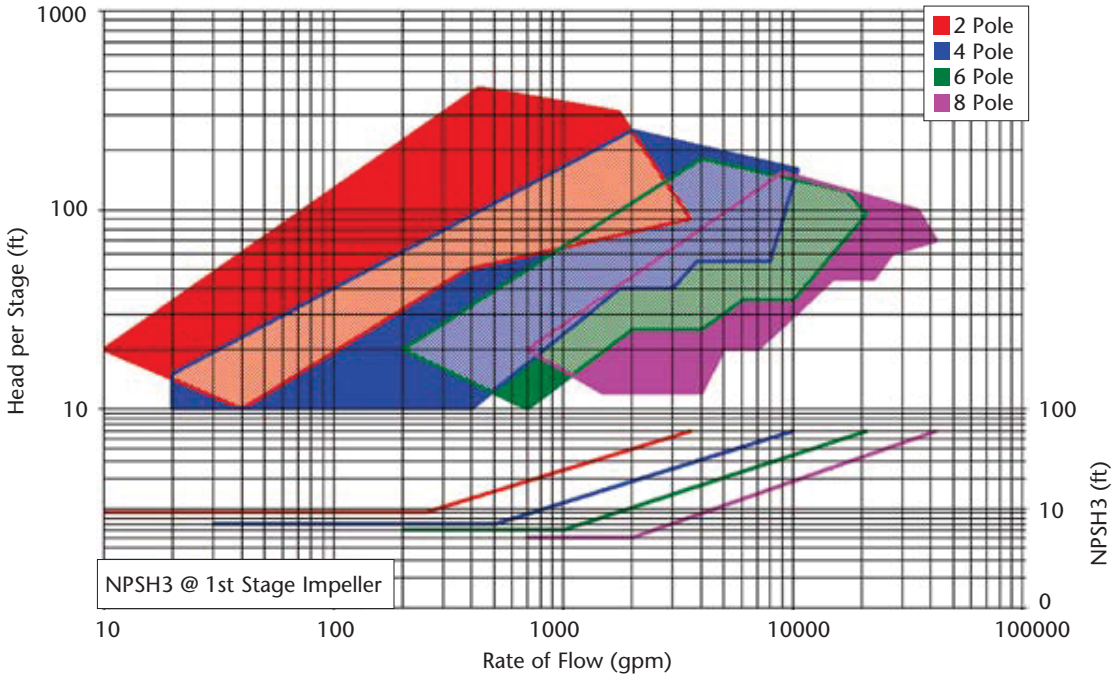
Features — Designed to improve impeller life when handling suspended solids

Enclosed type impeller with double keyed shaft mounting

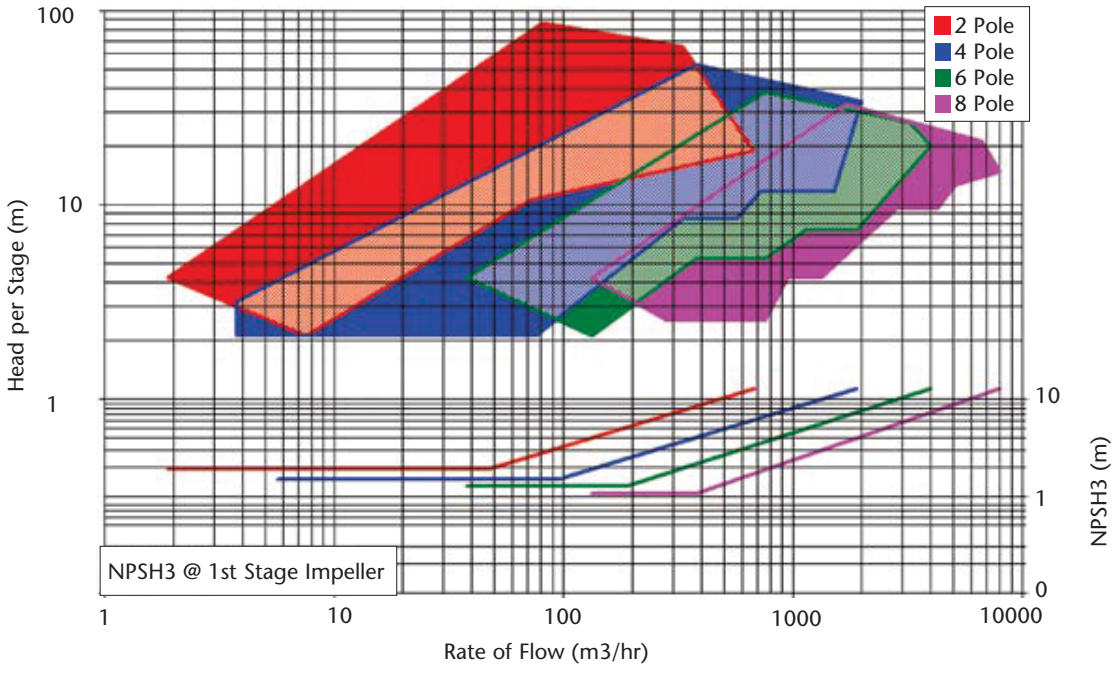
The double keyed impeller shaft mounting features both axial and radial keys. This construction is standard on bowl sizes 23″ (58cm) and larger. Smaller enclosed and semi-open type impellers are also available.

Features — Allows for ease of removal and replacement of impeller wear parts

Floway® Pump Coverage Chart 60Hz



Floway® Pump Coverage Chart 50Hz



Performance data shown is approximate. For actual pump performance contact your local Weir Minerals Floway Pumps representative or visit our online pump selector website at **select.floway.com/selector**

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PREMATECNICA

Equipos e instalaciones para las industrias de proceso y energía

Contact details:

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Geographical footprint

Weir Minerals has the geographical presence to service all the major markets around the world. This global supply capability provides a competitive advantage in this relatively fragmented market.

Weir Minerals has operations across:

- North America
- Latin America
- Africa
- Former Soviet Union
- Europe
- Australia
- Asia

Aftermarket service and support

For more than 80 years, Weir Minerals Floway Pumps aftermarket sales and service department has provided customers across the globe with quality parts and service. If you need replacement parts and service, please contact us today by email,

flowayparts@weirminerals.com

Floway® pumps genuine replacement parts — make the right choice for your pumping system.

For additional information please contact your local Weir Minerals Floway Pumps representative or visit,

www.weirminerals.com/Floway

Looking for a Representative in your area to discuss a project? Check out our representative locator website by scanning the QR code at right.

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Excellent
Minerals
Solutions

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