

**MULTIFLO®**

Barges

Excellent  
Minerals  
Solutions

**WEHR**  
MINERALS



# Meeting the needs of the mining & minerals sector worldwide

Weir Minerals is committed to delivering market-leading products and services across a full spectrum of mining and minerals processing activities.



## Mine Dewatering and Process Water Applications

Most mining and quarrying operations the world over require some form of dewatering system to keep their operations moving. As water becomes even scarcer, this precious resource is being reclaimed, used, cleaned, re-used and recycled throughout the process.

## Tailings Management Operations

Establishing a stable water balance is one of the most important considerations in preventing water management problems in tailings management operations. One traditional approach to tailings management has been the use of vertical gravity operated towers that are connected via concrete drainage tunnels beneath tailings impoundments. These towers are fixed in place, require more capital and extensive on-site labor to construct, and entail intricate methods of ongoing inspection.

## Benefits of Barges Over Traditional Tailings Management Methods

**Portability and flexibility** — Barges can be placed and relocated anywhere in the tailings pond

**More economical** — Barges are less costly to build and easier to maintain

**Modularity** — Barges can be manufactured off-site and shipped to the final destination as components, thereby reducing site assembly and saving time and money

**Safety and quality** — Barges are manufactured in a quality controlled environment. Our fabrication facilities and installation teams have one of the best safety records in the industry, which highlights the commitment to quality and safety that Weir Minerals has







**WEIR**  
MINERALS  
MULTIFLO® Barges

# Multiflo® Barges

The total solution for your tailings and water management applications

## Engineering capabilities

Weir Minerals Multiflo has the ability to custom engineer a pump flotation system (barge) to meet your specific requirement. Whether you need diesel or electric drive, a simple float for a single pump or a barge to house multiple pumps, our in-house design group can provide the optimal solution.

At Weir Minerals, we bring the complete barge and pumpset under a single company; no dealing with separate suppliers. Using state-of-the-art 3D-CAD modeling, our engineers ensure the pumpset and barge are matched and go together properly; lead times are reduced, assembly and installation problems are eliminated.

## Single source advantage

Weir Minerals has a complete portfolio of products including submersible, self priming, end suction, split case, multistage ring section, vertical turbine and both crankshaft and hydraulic driven piston and diaphragm pumps. This advantage makes Weir Minerals a single source for all your mine dewatering and process water handling equipment.

Weir Minerals are specialists in supporting slurry and mine dewatering equipment. It is this expertise in equipment design and manufacture which makes Weir Minerals Multiflo the supplier of choice for your barge projects. The team we have assembled brings together an exceptional capability from superior design and leading edge technology and operational excellence, to fabrication and installation of the final product.

*Focusing on what we do best, Weir Minerals delivers on what matters to you the most.*

## Optimum availability of plant:

Superior reliability of product through engineering, solution design and proprietary materials

Operating efficiency: Value engineering and continual product enhancements to deliver lowest total cost of ownership

## Whole project and process solutions:

Integrated group-wide offerings include engineered-to-order pumps, valves, hydrocyclones, wear resistant lining, and technical support

Total supply and support: Local, regional and global technical, field service and customer support



1



2



3

1: WARMAN® pump mounted on a steel hull pontoon

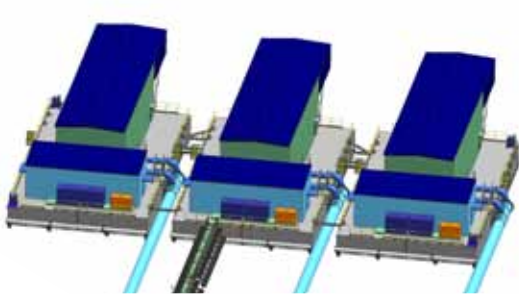
2: MULTIFLO® auto-primed pump on a steel hull pontoon complete with walkway

3: HAZLETON® vertical pump mounted inside a MULTIFLO® mega barge

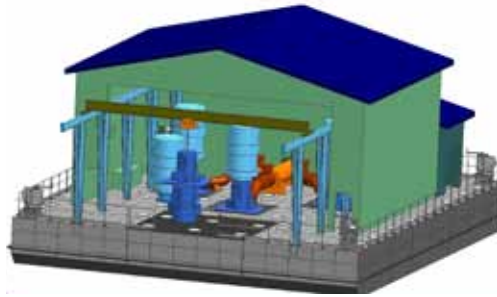
Weir Minerals are specialists in delivering and supporting slurry and mine dewatering equipment solutions including barges, pumps, hydrocyclones, valves and wear resistant linings for global mining and mineral processing, the power sector, and general industry.

Focusing upon what we do best, Weir Minerals delivers on what matters to you most. This simple philosophy, combined with being part of the global Weir Group, provides you with added benefits over alternative suppliers.

Weir Minerals brings together an extensive global service and manufacturing presence combined with an investment capability able to develop, support, and sustain market leading technologies that deliver enhanced performance in your process critical applications.



*Multiple mega barges*

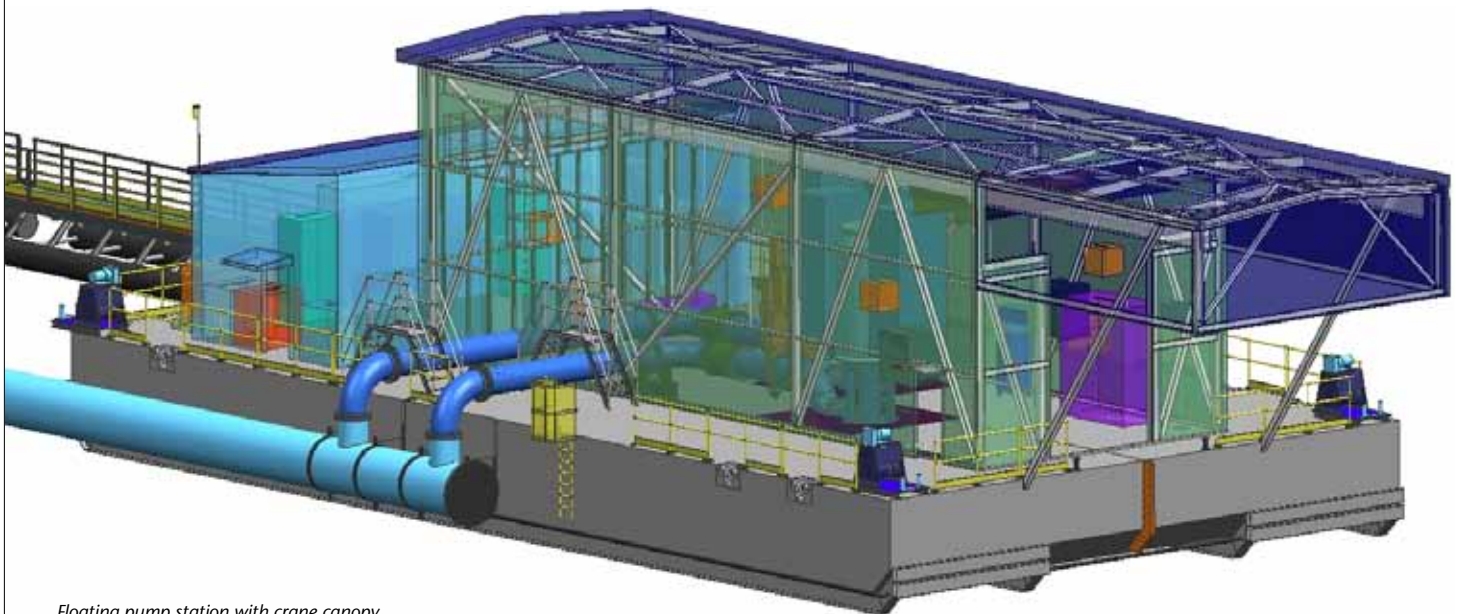


*Floating pump station (mega barge)*



## Mega barges

**Steel-hulled, fully equipped, customized floating pump station**



*Floating pump station with crane canopy*



Through a customer focused strategy Weir Minerals has used its unique technologies to develop an unrivalled range of mine dewatering, process water, and specialist slurry processing equipment for some of your most critical processes. This means that today's Weir Minerals is much more than a pump company.

*"Understanding the critical role our products play in the customer's process, we ensure that Weir Minerals consistently outperforms our competitors and exceeds customer expectations."*



**Scot Smith**  
Divisional Managing  
Director



### **Multiflo® mega barge applications**

- Reclaim water from tailings ponds
- Fresh water supply
- Slurry transfer
- Custom configured for your needs, with buildings, cranes, e-house modules
- TFT and MFT barges

### **Multiflo® mega barge features and benefits**

- Used in very unique applications
- Weir Minerals offers a large array of pump options to adapt to varying applications (clean water, slurry/tailings, vertical, horizontal, submersible)
- Modular design and assembly for ease of construction, reduce stick build at site
- Ability to add access walkway and link or moor barges individually
- Advanced marine engineering review for stability, buoyancy, and environmental conditions
- Full maintenance shop facilities and lay down area
- Building code compliance assessments; four season climate control
- Remote operation capable



Weir Minerals offers the convenience of one of the most extensive mine dewatering and process water pump range available today.

**Geoff Moore**, Divisional Marketing Director

*"We view our products in the same way as our customers, seeing them not in isolation but as part of a chain. In doing this, we recognise that a chain - the customers' process - is only as strong as its weakest link. This philosophy ensures we address the areas that cost the customer time and money. Our specialist approach to these critical applications means that all our development time and effort ensures we deliver"*

# Steel hulled barges

**Steel plate construction - reinforced for added durability**

**Multiflo® steel hulled barges features and benefits**

- Very rugged construction and easily relocatable between various locations around the site using a bulldozer
- Many pump options available to adapt to varying applications (clean water, slurry, vertical, horizontal, submersible, etc.)
- Ability to readily inspect/clean suction bell for debris with electric motor winch system on suction inlet
- Modular construction for quick assembly upon delivery
- Ability to add access walkways or moor barges individually
- Marine engineering review available for unique applications
- Single point responsibility for pumping system - pump, motor, control, drives, instrumentation and valves, barges, walkways, buildings, cranes, etc.



4



1



2



3

- 1: Self-priming pump barge
- 2: Vertical pump barges
- 3: Relocate and launch via earth moving equipment
- 4: Self-priming pump barges with walkway

maximum performance where it counts most. This is something that a turnkey provider just cannot deliver. With their focus and resource diluted across a plant's entire process it inevitably limits their ability to target key areas. This is why today so many of the world's major operators specify our high performance equipment in their project briefs to provide them with the competitive edge."

# Fiberglass barges

## Fiberglass-skinned, foam-filled composite construction for use in a variety of applications

### Multiflo® fiberglass barges features and benefits

- Lower cost option compared to steel hulled and steel fabricated barge solutions
- Good in corrosive applications
- Handrail systems OSHA compliant
- Polyurethane foam filled for added protection against hull breach
- Modular construction for quick on-site set up and commissioning



1: Typical floating walkway section

2: Typical floating barge with stabilizer legs and pump bottom protector

3: Side entry wells with removable screens for easy maintenance





## WARMAN® Centrifugal Slurry Pumps

The Warman® slurry pump range is among the worlds' most comprehensive range of centrifugal slurry pumps for use in mining, power and industrial sectors.

The horizontal, vertical and submersible slurry pumps are designed for heavy duty applications from mill circuit applications to process plant and tailings, as well as mine dewatering.

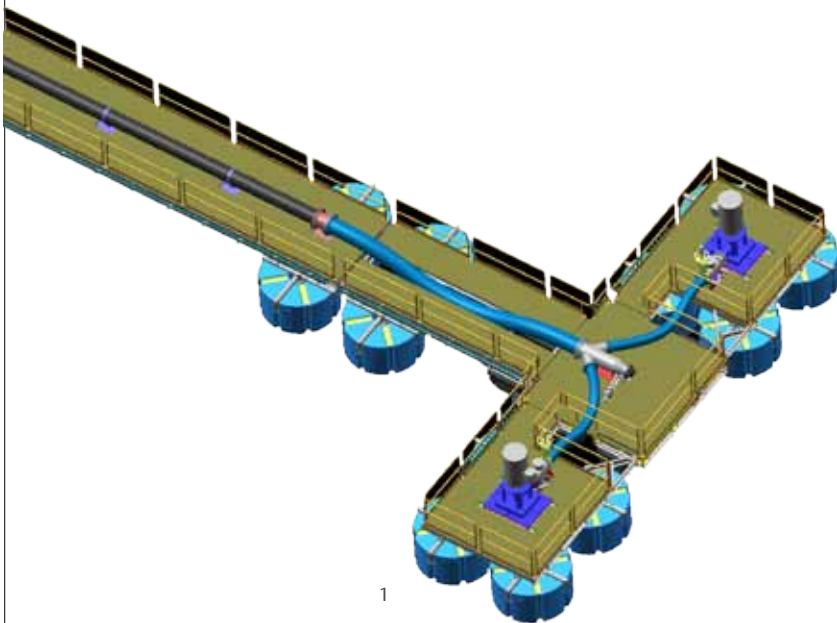
## FLOWAY® PUMPS Vertical Turbine Pumps

Floway® pumps are among the most versatile, reliable and long lasting vertical turbine pumps on the market.

The Floway® vertical turbine pump is specially designed to reduce vibration levels and improve corrosive and abrasive resistance.

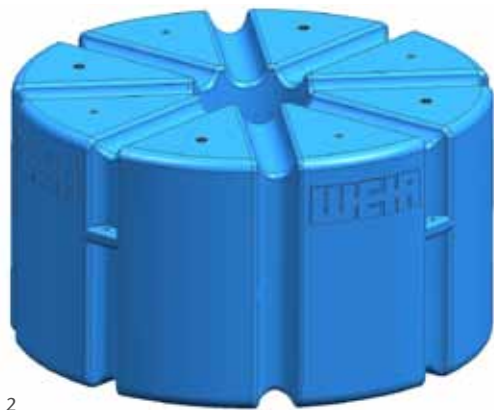
# Polyethylene pontoon barges

**Multiflo® polyethylene pontoon barges have a foam-filled composite construction coupled with structural framed platforms for added modularity and flexibility.**



### Polyethylene barges features and benefits

- Walkways can be designed to support the weight of the discharge piping to improve overall maintenance and design for service
- Many pump options are available to adapt to varying applications (clean water, slurry, vertical, submersible, etc.)
- Individual pump platforms can be detached and towed for service
- Modular construction for quick assembly upon delivery and addition of other future pump considerations
- Marine engineering review available for unique applications/conditions such as wind loading, stability and ice loading
- pontoons can be positioned to protect the pump and to sit on various bottom pond surfaces



1: Polyethylene pontoon barge unit

2: Multiflo® custom one-piece construction

3: Cross section view of polyethylene pontoon



## HAZLETON® Specialty Slurry Pumps

Weir Minerals Hazleton is a leading supplier of specialty Engineered-to-Order slurry pumps.

An extensive line of submersible, cantilever and horizontal slurry pumps are designed for the wide variety of specialized and demanding applications encountered in the mining, dewatering, power, oil & gas, nuclear, and general industries.

## MULTIFLO® Mine Dewatering Solutions

Weir Minerals Multiflo offers multistage horizontal pumps designed for high lift shaft dewatering along with one of the industry's most complete range of self priming trailer, skid, pontoon and barge mounted units. Multiflo® units are specifically designed and customized for the harsh and arduous conditions encountered in the mining industry to provide maximum reliability and performance.

# Water spider barges

**Interlinked individual flotation devices - composite construction.**

### Water spider barges features and benefits

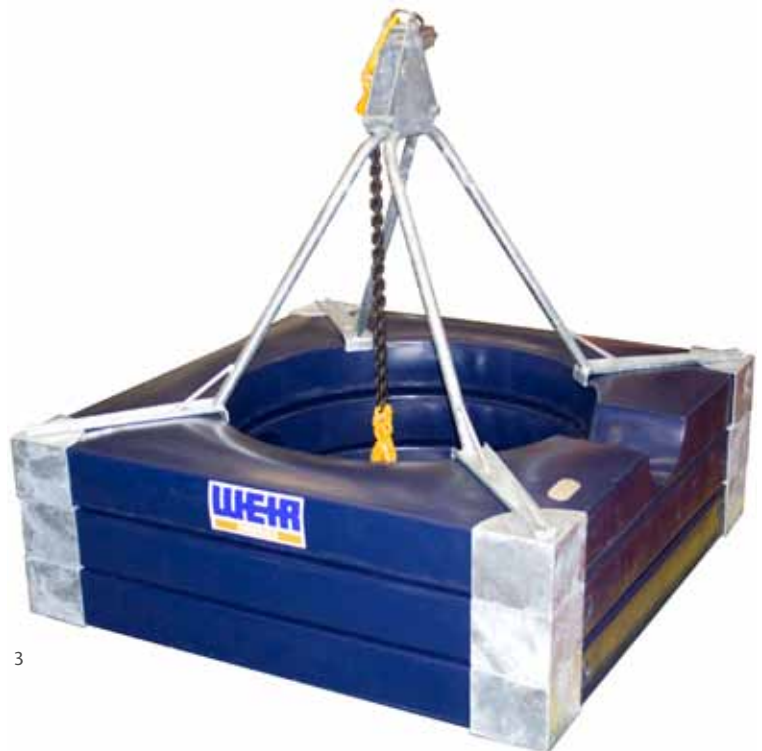
- Easily linked together allowing expansion or reduction
- Provides stable platform
- Low cost alternative



1: Maximizing flexibility — multiple water spider barges used in tandem

2: Performing maintenance on a water spider barge

3: Submersible pump float



3

### Geographical footprint

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

Weir Minerals has operations across:

- North America
- South America
- Africa
- Russia
- Europe
- Australia
- Asia

### Customer profile

Our customers range from the world's largest minerals and mining multinationals to single pumpset operators.

Weir Minerals capability supports an array of customer specifications with products easily adaptable to meet specific process requirements.

We build close, long term relationships through which we are able to help customer achieve process efficiencies.

# Service and support



### Total Customer Support

Total Customer Support is about delivering on promises. It is about delivering units and spare parts on-time. It is about having commissioning and service personnel locally available to start-up and train customer staff. It is also about having parts available where they are needed. For instance, our facility in Balikpapan, Indonesia supports the extensive open-pit coal mines in East Kalimantan province.

Weir Minerals Multiflo staff are part of the more than 3000 employees in the Weir Minerals Division. The division has a broad global footprint with Total Care Service Centers and operations to support the mining industry around the world.

Our culture is one of commitment and our customer relationships are based on trust and integrity. We aim to deliver what we promise.

### On-site Assembly

Units are designed with maximum modularity to simplify on-site assembly. Weir Minerals can provide installation services ranging from supervision to actual installation.





We support customer operations worldwide with consistent products and local engineering expertise. As part of The Weir Group, we have the reach and resources to build close, long term relationships with all our customers, helping them to achieve ...

### **The Lowest Cost of Ownership**

#### **Service and Support**

Our services range from on-request service through to full service agreements. Our on-request services include commissioning, pump rebuilds and emergency repairs. Weir Minerals Services offers an innovative approach to equipment servicing that ensures your plant achieves optimal 'health' and marks a step change from costly reactive to preventative plant maintenance.

#### **Health Check**

We diagnose the condition of your plant much in the same way your general physician would diagnose your health — from temperature checks through to basic maintenance.

#### **Fitness Program**

This includes bearing tolerance check, strip and rebuild and part condition report. This first stage also includes the necessary safety assessments to ensure we comply with all the required health and safety regulations.

#### **Peak Performance**

This involves a visit by our expert engineers to survey your plant design and provide a written report with recommendations. This value added service ensures you know exactly how to arrange your system to achieve optimal operating performance from your installed pumps, hydrocyclones, valves and mill lining systems. Additionally, we will provide full training so that you understand exactly how our product works.



**WARMAN®** Centrifugal Slurry Pumps  
**GEHO®** PD Slurry Pumps  
**LINATEX®** Rubber Products  
**VULCO®** Wear Resistant Linings  
**CAVEX®** Hydrocyclones  
**FLOWAY® PUMPS** Vertical Turbine Pumps  
**ISOGATE®** Slurry Valves  
**MULTIFLO®** Mine Dewatering Solutions  
**HAZLETON®** Specialty Slurry Pumps  
**LEWIS® PUMPS** Vertical Chemical Pumps  
**ENVIROTECH®** Peristaltic Pumps  
**WEIR MINERALS SERVICES™**



For further information on any of these products or our support services contact your nearest sales office or visit:

[www.weirminerals.com](http://www.weirminerals.com)

## Contact us today

Vancouver  
 27 - 91 Golden Drive  
 Coquitlam, BC V3K 6R2  
 T 604 552 3057  
 F 778 284 6999

Fort McMurray  
 #1-390 MacAlpine Crescent  
 Fort McMurray, AB T9H 4B1  
 T 780 792 5300  
 F 780 792 5307

Toronto  
 2360 Millrace Court  
 Mississauga, ON L5N 1W2  
 T 905 812 7100  
 F 905 812 0069

Wabush  
 13A Second Avenue  
 Wabush, NL A0R 1B0  
 T 709 282 5055  
 F 709 282 5058

Calgary  
 2715, 18th Street N.E.  
 Calgary, AB T2E 7E6  
 T 403 250 7000  
 F 403 250 2032

Saskatoon  
 3069A Faithfull Avenue  
 Saskatoon, SK S7K 8B3  
 T 306 955 1797  
 F 306 955 1798

Montreal  
 8600 St. Patrick Street  
 LaSalle, QB H8N 1V1  
 T 514 366 5907  
 F 514 366 2067

Halifax  
 201 Brownlow Avenue, Suite 44  
 Dartmouth, NS B3B 1W2  
 T 902 468 6103  
 F 902 468 6108

### Weir Minerals Canada

2360 Millrace Court  
 Mississauga, Ontario  
 L5N 1W2  
 Canada

Tel: +1 905 812 0881  
 Fax: +1 905 813 8170  
  
[www.weirminerals.com](http://www.weirminerals.com)

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