



**WEIR**

**Minerals**

**Multiflo<sup>®</sup>**

**Pontoon Barge Solutions**







**Our global team of in-house dewatering specialists are positioned close to our customers to ensure rapid response where it counts.**

With decades of collective dewatering experience across the globe, our engineers are well equipped to provide tailored fluid management solutions to help our customers take back control of their water.

### **Over 40 years of dewatering expertise is just the beginning**

Weir Minerals is an original equipment manufacturer in the truest sense – we develop, design and manufacture the end-product in our ISO accredited facilities. Together with our innovative engineering and leading-edge materials technology, our team of passionate dewatering specialists ensure that you not only receive the best-in-class equipment, but expert configuration and support to optimise even the most challenging applications.

### **Engineered-To-Order is second nature**

Water can be unpredictable and so can site requirements - that's why we regularly put our engineering skills to the test in the development of engineered-to-order solutions. Simulation techniques such as Discrete Element Modelling (DEM) and ProteusDS marine software allows us to simulate our barges on a virtual environment of the client's pond and how it interacts with different environmental loading scenarios. Our team of specialists study the ins and outs of each operation to deliver integrated turnkey solutions featuring our extensive range of equipment ideal for sand and aggregates, mining, and industrial applications.

### **World class service and support wherever you are**

Across the globe, Weir Minerals provides unsurpassed service and support for your equipment. Whether you order a complete system, single piece of equipment or wear parts, our skilled after-market service teams make us a valued partner in both the mining and aggregates industries.

We also provide professional on-site training for your personnel to ensure smooth, safe and efficient plant operations and maintenance, creating value for you from day one.

## Multiflo® AC Steel Hull Pontoon Barge

The Multiflo® AC steel hull pontoon barge is a modular and durable barge solution manufactured from mild steel plate. This design features individually sealed and pressure tested flotation cells to ensure optimal buoyancy protection and the flexibility to add access walkways or a mooring pontoon as required.

The rugged materials of construction are complemented by the three-piece (3) modular design that facilitates quick assembly upon delivery, and skid runners and a dozer bar that ensure easy maneuverability around site. The combination of the Rectangular Hollow Section (RHS) steel skid runners and the heavy-duty push bar make it easy to move the Multiflo® pontoon barge between various locations around site to where it's needed with standard earth moving equipment.

The Multiflo® AC steel hull pontoon barge can be adapted to suit installation of a wide variety of pumps including Multiflo® diesel driven pump units and both diesel and electric horizontal mounted pumps. This innovative barge design also ensures safe and efficient operation and maintenance through the use of optional checker-plate style non-slip decking and inspection covers especially engineered to lie flush with the deck and remove trip hazards.

### Design Features

- Four variants available to support loading up to 24 tonnes
- Three-piece (3) modular design for easy transportation and installation
- Individually sealed flotation cells for optimal buoyancy protection
- RHS steel skid runners complete with 16mm hard-metal wear plates
- Mild steel plate at 6mm thickness
- Four mooring line cleats installed on each corner of the pontoon barge for optimal security





## Multiflo® APNH Pontoon Barge System

The Multiflo® APNH pontoon barge is a floated, steel frame, system designed with the capability to mount up to 20 floats based on required buoyant capacity. Each float is made from polyethylene (PE) and is rotation moulded for seamless construction for superior durability and strength.

The Multiflo® APNH system is fully scalable and allows for expansion with the option of adding more pontoons in the future. The system also allows for flexibility, with pump mounting options for a variety of pumps including slant mounted pumps.

The Multiflo® APNH pontoon barge is designed to operate with a submergence range of 45%-65%, and maximises loading capacity through features such as low weight fibreglass-reinforced floor grating to support weights of up to 6,000kg.

### Design Features

- Weir Minerals proprietary pontoon barge design
- Available in a variety of configurations from 4 floats to 20 floats
- Foam filled, rotation moulded, seamless float construction
- UV resistant, corrosion free, polyethylene
- Structural steel components in mild or stainless steel
- Incline mounted pumps adjustable via a manual screwed-rod system or hydraulically-actuated lifter mechanism
- Mounting options for horizontal (vacuum, prime system) vertical, or submersible

The Weir Minerals team needed to account for more than just water for one customer in South Africa. One of the design requirements for this particular installation was for the handrails and other structures to be engineered to prevent crocodiles from gaining access to the deck space.

No challenge is too obscure or tough for Weir Minerals.



## Multiflo® CC Pontoon Barge System

The Multiflo® CC scalable polyethylene (PE) pontoon barge system is a floated, steel frame, system custom designed and optimised for ease of shipping.

The Multiflo® CC pontoon barge system is fully scalable, designed with the capability to mount a number of floats based on required buoyant capacity, and allowing for expansion with the option of adding more floats in the future. The system also allows for flexibility, where each pontoon barge unit is designed to support one pump assembly, and can be tethered together in a multi-unit pontoon barge system to provide various pumping capacities and/or redundancies.

The custom pontoon barge design allows each float to be independently ballasted before delivery, based on equipment loading. The steel based frame is designed to support various Weir Minerals pump types with a wet well included for vertical style pumps. In addition, the three piece and stackable design of the frame makes it easy to ship and deliver.

The Multiflo® pontoon barge system also allows for specialised application options such as de-icing agitators for cold climates (operational up to -40°C) that utilise the geothermal effect of the water body by continuously pulling warmer water from the lower depths to the surface. Marine safety equipment such as a life floatation ring, a deployable ladder, and a marine safety pole is available where necessary.

Key environmental factors such as wind, snow and seismic loading can affect the buoyancy and stability of the barges.

Multiflo® pontoon barge systems are fully marine naval certified under all weather conditions and are marine architect certified.

### Design Features

- Weir Minerals proprietary design
- Custom scalable system
- Optimised steel base frame design ships in three pieces, easily stackable for shipping
- 4, 6, and 8 float mounting options
- Interlocking system to reduce stress on the top deck frame
- Rotomolded, seamless, construction with ribbed reinforcing for superior durability and strength
- Integrated ballast chamber in each float
- Marine-grade close-cell foam
- UV resistant, corrosion free polyethylene



## Multiflo® EC Pontoon Barge System

The Multiflo® EC mono hull pontoon barge system is a floated, steel frame, system custom designed and optimised for ease of shipping. Each float is made from polyethylene (PE) and is rotation moulded for seamless construction with ribbed reinforcing for superior durability and strength.

The Multiflo® EC pontoon barge system is fully scalable, designed with the capability to mount a number of pontoons based on required buoyant capacity, and allowing for expansion with the option of adding more floats in the future. The system also allows for flexibility, where each pontoon barge unit is designed to support one pump assembly, and can be tethered together in a multi-unit pontoon barge system to provide various pumping capacities and/or redundancies.

The custom pontoon barge design allows each float to be independently ballasted before delivery, based on equipment loading. The steel based frame is designed to support various Weir Minerals pump types with a wet well included for vertical style pumps. The Weir Minerals proprietary pontoon design also allows end suction pumps to be lifted to a safe, horizontal position for in situ servicing.

The Multiflo® EC mono hull pontoon barge system uses foam filled, roto-moulded, seamless floats made from UV resistant, corrosion free polyethylene in a zinc galvanised steel frame. In addition the EC system comes with marine safety equipment such as a life floatation ring, a deployable ladder, and a marine safety pole available where necessary.

### Design Features

- Weir Minerals proprietary design
- 4, 6, 8 and 10 float variants
- Integrated pump mounting and safety lifting equipment for horizontal pumps
- Vertical pump mounting options
- Direct coupled and overhead (CV) mounting options
- Foam filled, rotation moulded, seamless pontoon construction
- UV resistant, corrosion free polyethylene

Access to Multiflo® pontoon barges is made possible via a polyethylene pontoon floated, steel frame walkway system.

The optional walkway is available in 20ft sections to accommodate for any required distance, and comes with a variety of options including lighting and cable trays for managing cables safely.





## Multiflo® BR Donut Pontoon Barge System

The Multiflo® BR donut-style pontoon barge utilises a steel mono-hull design optimised to float close-coupled pumps without submerging the pump motor, providing a convenient alternative to submersible pumps.

The Multiflo® BR donut-style pontoon barge system is available in three (3) sizes, with a buoyant capacity designed to accommodate a range of high efficiency pump ends. These pump ends are available in a variety of materials to meet capacities of between 100m<sup>3</sup>/hr and 1400m<sup>3</sup>/hr and head conditions of 20m to 140m depending on the application.

The system also allows for flexibility, where each barge unit is designed to support one pump assembly, and can be tethered together in a multi-unit barge system to provide various pumping capacities and/or redundancies.

The barge design allows each pontoon to be independently ballasted before delivery, based on equipment loading. The steel based frame is designed to support various Weir Minerals direct coupled vertically mounted pump types with a wet-well included for vertical style pumps.

Safety is always a top priority at Weir Minerals. To help promote safe practices on site all Multiflo® pontoon barges are available with a range of marine safety features including; a life floatation ring, a deployable ladder, and a marine safety pole.

### Design Features

- Weir Minerals proprietary pontoon design
- Three (3) pontoon variants
- Integrated pump mounting and safety lifting equipment
- Internal ballasting compartments
- Adjustable pump level mounting system
- Recessed discharge piping system
- Close-coupled pump options
- Option to utilise submersible or vertical pumps in accordance with local engineering recommendations

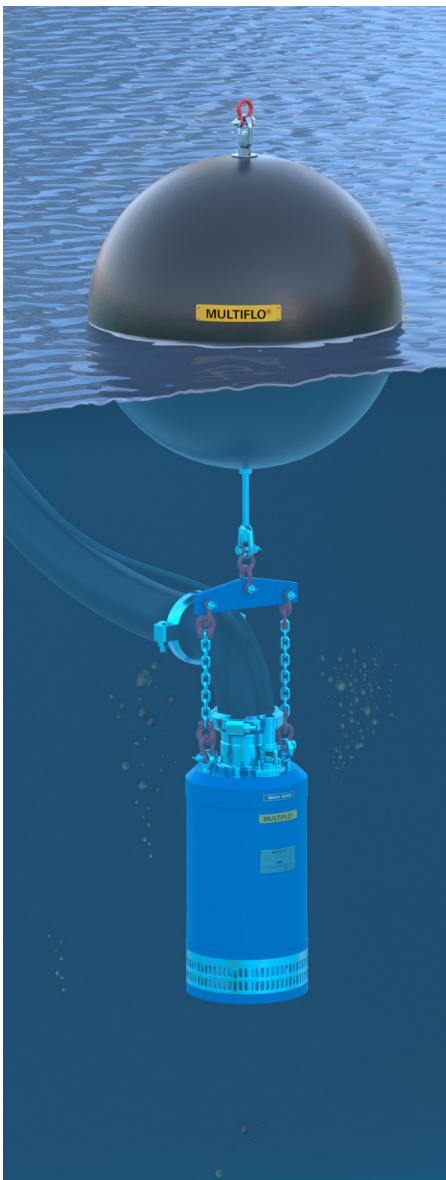


## Multiflo® Submersible Pump Floats

The Multiflo® submersible pump ball float and Multiflo® submersible pump frame float are simple, polyethylene, floats specifically engineered for submersible pump applications without the need for large floatation equipment such as pontoons and barges.

The Multiflo® ball float offers a solution to vertically suspend one submersible pump, and because of the simple design can be assembled and installed on site quickly. The Multiflo® frame float offers a solution to suspend up to two submersible pumps vertically or horizontally that is optimised for ease of shipping and portability on site.

The Multiflo® ball float is available in three different sizes with up to 452 kg / 995 lbs of buoy capacity, whereas the Multiflo® frame float comes in two different sizes with a maximum buoy capacity of 2,360 kg / 5,190 lbs. All of the Multiflo® submersible pump floats can be used across a range of environments and are rated for operating temperatures between -45C and +40C.



### Multiflo® submersible pump float design features

- Engineered specifically for submersible pump applications
- Available in range of sizes and buoyancy capacities
- Rotomolded, seamless, construction with ribbed reinforcing for superior durability and strength
- Marine-grade close-cell foam
- UV resistant, corrosion free polyethylene
- Operating temperature range: -45C to +40C
- Single lifting eye point connection
- Optional discharge hose and piping

### Multiflo® submersible pump ball float features

- Simple economical floatation
- Pump suspended vertically with spreader bar and chain connections

### Multiflo® submersible pump frame float features

- Optimised steel base frame design ships in easily stackable configuration for shipping
- Painted carbon steel frame
- Corner mounted mooring connection points
- Pump can be configured in vertical or horizontal orientation using double chain connection
- Optional de-icing system for cold climate applications

## Engineered-To-Order Solutions

Our long-standing relationships with our customers is just the beginning. We hear feedback directly from the people who work with our equipment every day, and that helps us create even better solutions.

Having in-house engineering expertise means that we work directly with our customers to create solutions that consolidate waste to recover more product more easily, while also extracting reusable water and sending it back into the process plant more quickly than standard solutions. With our extensive product portfolio we are equipped to provide the entire solution. From initial consultation and design, to manufacturing, commission, and training and supervision of site operators.

The Weir Minerals dewatering team designs in-house solutions using highly engineered and reliable equipment that isn't just efficient, but also adds value to our customers' site process. And for our customers these all-in-one Multiflo® packages eliminate the need for separate integration of civil construction, electrical control rooms, control systems, pipes, cables, and mechanical and electrical works. No matter the application, Weir Minerals' solutions put partnership and efficiency first.

### Our capability

- Project Management and Superintendence
- Civil Construction
- Civil Design
- Electrical Design
- Electrical Construction and Installation
- Mechanical Design, Analysis and RPEQ Sign off
- Quality Systems Improvement and Delivery
- On Site Installation and Commissioning
- Maintenance Programs and Agreements
- Marine Naval Certification







## Our Expertise

The Weir Minerals team has been responsible for successfully designing, manufacturing and optimising processes around the world. Our teams take the time to understand your objectives and design a solution which fully meets your needs.

After delivery and commissioning, our partnership continues through our unmatched global service network. Our local service experts remain on-hand to assist with any maintenance, operational or improvements needs you may have, as your process or operating conditions change.





## Minerals

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