



+ Advanced Erosion Control

+ Sustainable Material Use

+ Broad Application Range

+ Streamlined Deployment

+ Enhanced Durability

AQUAROCKBAG®

PRODUCT OVERVIEW

The **AquaRockBag®** is a revolutionary solution designed for erosion control and shoreline protection. Crafted with durability and flexibility in mind, these bags offer a robust alternative to traditional methods. Made from environmentally friendly materials, **AquaRockBag®** are not only effective in stabilising coastal and riverbank areas but also promote ecological balance. Their versatility makes them suitable for a wide range of applications, from reinforcing hydraulic structures to providing support in various water-related environments. **AquaRockBag®** are an epitome of combining engineering excellence with environmental consciousness, making them a preferred choice for sustainable erosion control projects.

PRODUCTS

Range	Weight Capacity	Net
Classic	1T - 2T - 4T - 8T	Virgin Polyester
Prime	1T - 2T - 4T - 8T	Virgin HDPE
Max	12T - 14T	Virgin HDPE

TECHNICAL SPECIFICATIONS FOR AQUAROCKBAG® RANGE

-Dimensions: The **AquaRockBag®** range includes various sizes to cater to different project needs, from small-scale riverbank reinforcements to large off-shore applications.

-Material: All **AquaRockBag®** are made with Virgin Polyester and Virgin HDPE, ensuring durability, resilience to environmental factors, and suitability for a variety of aquatic conditions.

-Weight Capacity: Each model in the **AquaRockBag®** range is designed to support specific weights, making them versatile for both light and heavy-duty erosion control tasks.

-Application Diversity: **AquaRockBag®** are suitable for a wide array of applications, including but not limited to shoreline stabilization, protection of hydraulic structures, and seabed cable stabilisation.



+ Environmental Protection

+ Cost-Effective Solution

+ Low Maintenance Needs

+ Flexible Design

+ Minimal Ecological Footprint

ENVIRONMENTAL BENEFITS AND BROAD APPLICATIONS

ECO EFFECTIVE SOLUTION

ENVIRONMENTAL IMPACT OF AQUAROCKBAG®

AquaRockBag® are designed with an emphasis on environmental responsibility:

-Eco-Friendly Materials: Made from Virgin Polyester and Virgin HDPE, these materials are selected for durability and minimal environmental impact.

-Low Microplastic Release: The construction of **AquaRockBag®** ensures a reduced release of microplastics, protecting aquatic ecosystems and water quality.

-Promoting Natural Ecosystems: They support natural sedimentation and vegetation growth, enhancing ecological balance.

-Erosion Control Benefits: **AquaRockBag®** effectively control erosion, preserving natural landscapes and waterways.

APPLICATIONS AND USES OF AQUAROCKBAG®

-Coastal and Shoreline Protection: Ideal for preventing erosion along coastlines and riverbanks.

-Scour Protection: Effectively used around bridges, monopiles, offshore platforms, and for sea cable stabilisation on the seabed.

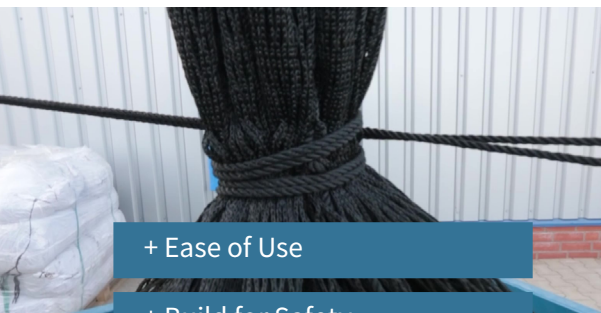
-Infrastructure Support: Suitable for reinforcing and protecting hydraulic structures and other water-bound installations.

-Flood Control: Used in constructing barriers and defenses against flooding.

COMMON SPECIFICATIONS

	1T	2T	4T	8T	12T	14T
Filled stone used	50 mm to 80 mm	50 mm to 80 mm	50 mm to 80 mm	100 mm to 170 mm	100 mm to 170 mm	100 mm to 170 mm
Mesh size	25mm	25mm	25mm	50mm	50mm	50mm
Stone size to be used	50mm to 180mm	50mm to 180mm	50mm to 180mm	50mm to 180mm	50mm to 180mm	50mm to 180mm
Type of stone to be used	The rocks should preferably not have sharp or jagged edges (as sharp edges may cut the net and degrade its performance)					
Dimensions of filling jig (w x l x h)	1 x 1 x 0.65m	1.2 x 1.2 x 0.9m	1.5 x 1.5 x 1.15m	2.25 x 2.25 x 1m	2.74 x 2.74 x 1m	2.97 x 2.97 x 1m
Safe Water velocity (m/s) in Single Form	< 2.72	< 2.88	< 3.33	< 3.40	< 3.82	< 3.90
Safe water velocity (m/s) in Multi Form	< 4.70	< 5.00	< 5.77	< 5.90	< 6.60	< 6.75

Above dimensions are applicable to the size of the filling stones used.
Please note that variations in stone size and its grading shall result in variation to the dimensions.



+ Ease of Use

+ Build for Safety

+ Adaptable Design

+ Low Equipment needs

+ Long Term Stability

GUIDELINES FOR SECURE SETUP AND SAFE HANDLING

INSTALLATION & SAFETY

INSTALLATION GUIDE FOR AQUAROCKBAG®

The installation of **AquaRockBag®** involves a series of steps to ensure they are effectively and safely deployed:

- 1. Site Preparation:** Choose a level area for installation and clear it of debris and obstacles.
- 2. Bag Inspection:** Before filling, inspect each **AquaRockBag®** for any damages or defects.
- 3. Filling Frame Setup:** Position the filling jig on the prepared site and align the **AquaRockBag®** within it.
- 4. Filling Process:** Begin filling the bag with the specified type and size of rocks or aggregates, ensuring even distribution for stability.
- 5. Closing and Securing:** Once filled, lift up and close the **AquaRockBag®** using the rope provided for this purpose. After securing, remove the filling jig.
- 6. Post-Filling Inspection:** Conduct a final inspection to ensure the bag is properly filled and secured.
- 7. Deployment:** Carefully move the filled **AquaRockBag®** to the desired location and position it as per the project requirements.

Remember, safety is paramount during installation. Always wear appropriate protective gear and follow safety guidelines. For more detailed instructions, refer to the specific section in the user manual.

SAFETY AND HANDLING INSTRUCTIONS FOR AQUAROCKBAG®

- 1. Personal Protective Equipment (PPE):** Always wear appropriate safety gear, including gloves, safety helmets, and eye protection, during handling and installation.
- 2. Proper Lifting Techniques:** Use ergonomic lifting methods, keeping the back straight and lifting with the legs to avoid strain or injury.
- 3. Equipment Safety:** Ensure all equipment used, like filling frames and loading machinery, is in good working condition and operated by trained personnel.
- 4. Awareness of Surroundings:** Be vigilant about the surrounding environment during installation, especially when operating heavy machinery.
- 5. Communication:** Maintain clear and continuous communication with team members to coordinate efforts and prevent accidents.
- 6. Emergency Preparedness:** Have a first aid kit readily available and an emergency plan in place.

These safety and handling instructions are crucial for ensuring a safe and efficient installation process of **AquaRockBag®**. Always prioritise safety and adhere to these guidelines to minimise risks.



EFFICIENT TRANSPORT AND STORAGE

SIZING & LOGISTICS

AquaRockBag® are designed to offer practicality both in use and logistics.

Size Optimization: Each **AquaRockBag®** is crafted to maximize space efficiency without compromising on performance. The range of sizes available caters to diverse project needs, from small-scale protections to large infrastructure support.

Transportation Ease: Thanks to their adaptable sizes and durable materials, transporting **AquaRockBag®** to various sites is streamlined. Whether moving across land or water, the logistics of getting **AquaRockBag®** to where they're needed is a straightforward process.

Storage Considerations: When not in use, **AquaRockBag®** maintain a compact form, facilitating easy storage. This design aspect ensures that they occupy minimal space, making them an ideal choice for projects where storage space is a consideration.

With these logistical features, **AquaRockBag®** stand out as a convenient solution, ensuring that ease of use extends beyond installation to encompass all aspects of handling and storage.

SIZE & LOGISTICS

	1T		2T		4T		8T		12T	14T
	PET	HDPE	PET	HDPE	PET	HDPE	PET	HDPE	HDPE	HDPE
Number of nets per pallet sea/air transport	90	50	75	40	27	24	12	9	5	5
Loaded Pallet Dimensions	1.1m Length x 1.1m Width x 1m Height									
Illustration for measured height and Diameter										
Height (m)	0.35	0.30	0.50	0.40	0.62	0.50	0.83	0.70	0.73	0.76
Diameter (m)	1.50	1.60	1.90	2.10	2.30	2.50	3.20	3.50	4.00	4.30
Volume (Cubic m)	0.65	1.25	1.25	1.25	2.58	2.58	5.00	7.50	7.50	8.82
Weight in kg, excluding ring (before filling) (Tolerance -5%)	4.6	5.7	5.7	7.7	11.5	13.2	37.0	33.2	70.1	70.1
Ring weight in kg (Tolerance -5%)	0.72		0.72		0.92		1.6		1.6x2	1.6x2