

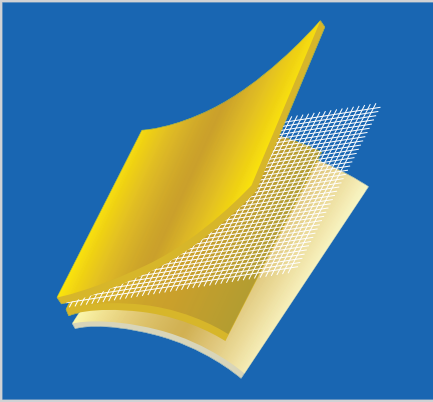


**UNDERWATER LIFT BAGS  
ENGINEERED FROM THE BOTTOM UP!**



**INNOVATORS IN BUOYANCY AND ENGINEERED INFLATABLES**





Polyurethane coated nylon fabric providing superior performance for all SUBSALVE products.



Product proof load testing of Salvage Pontoon 70,000 lbs.



Custom inflatable underwater decompression habitat used by Michael Lombardi with National Geographic



## WHY THE WORLD TURNS TO SUBSALVE

SUBSALVE is the worldwide leader and innovator in the design and manufacture of engineered inflatables. Our underwater lift bags are specified to meet the toughest challenges in recreational, commercial, scientific, and military applications. Since 1977, we have provided solutions and expertise for aircraft recovery, ship, yacht, and boat salvage, marine construction, offshore oilfield diving, and explosive ordnance disposal. We are proud to include the US Department of Defense, all branches of the US Armed Forces, NASA, and the FBI on our list of satisfied and ongoing customers, as well as leading companies in the private sector and the governments of more than 30 foreign countries.

### The polyurethane difference

SUBSALVE is the only major lift bag brand that offers polyurethane-coated fabrics in all of our products. We use high-strength synthetic base fabrics including nylon, polyester, and Kevlar which have been coated with urethane and urethane blends. The result? Our lift bags are more puncture-, abrasion-, and chemical-resistant than other conventional inflatables. This allows for a longer service life with less maintenance required. All SUBSALVE products are designed to perform in harsh and hostile environments. With their exclusive polyurethane coatings, you can count on them to get the job done like no other inflatable.

### Give us your toughest challenge

SUBSALVE has a legacy of meeting tough customer challenges with innovative solutions, including custom products for specialized applications. Multiple patents attest to our expert engineering and proven products.

### Why SUBSALVE?

- **Expertise** – Not only do we focus exclusively on the design and manufacture of engineered inflatables; our credentials include formal dive experience, and more than 4 decades of hands on experience in the field. *We know the challenges you face and can help you meet them!*
- **Quality** – Our products, including all components, are proudly made in the USA by skilled craftsmen. Every SUBSALVE product is tested prior to shipping to ensure reliable performance. *You can work with our solutions with confidence!*
- **Service** – We maintain an inventory of all standard products to ensure prompt delivery. We offer custom design services to address special needs. We are available 24 hours a day via toll-free telephone. *We are ready to respond whenever you need us!*
- **Price** – We purchase materials in large volumes from vendors near our factory, allowing us to pass savings along to our customers. We also offer volume and prepayment discounts. *We beat competitors on price and always beat them in quality and value.*
- **Compliance and Warranty** – All SUBSALVE products are compliant with IMCA (International Marine Construction Association) D-016-AIRBAGS, ABS, and U.S. Department of Defense Standards. All carry a one-year warranty. *Don't put your projects or your people at risk – insist on SUBSALVE USA for high quality.*





# SUBSALVE USA

Innovators in bouyancy and engineered inflatables



## SUBSALVE Credentials

SUBSALVE USA was founded in 1977 and has provided solutions, products, and services to thousands of satisfied end-users worldwide. SUBSALVE production, testing, and quality control methods are approved by the U.S. Department of Defense and have been accepted by NATO and are compliant with IMCA and ABS.

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**COVER PHOTO:** James Cameron's Deepsea Challenger used to set record-breaking 35,787 ft. solo dive to the deepest known place on Earth, the Mariana Trench off the coast of Guam. Photograph by Mark Thiessen for National Geographic Magazine, June 2013

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Commercial Lift Bag replacing a flange plate at the Atlanta Aquarium.



Commercial Lift Bags lifting artifacts from Sir Captain Morgan's shipwreck.



Commercial Lift Bags being used in the NASA Neutral Buoyancy Lab - International Space Station mock up.



# COMMERCIAL LIFT BAGS

## Multiple Applications

- Light salvage
- Object recovery
- Underwater construction
- Scientific research

## Excellent portability

- Fraction of the cost of a barge or crane
- Easy for a single diver to use
- Especially suited for remote locations
- Deployable from small craft

## Easy to use

- Proprietary SUBSALVE USA Plunger Dump Valve allows air control with a push of a button at the top of the bag and a lanyard at the bottom—vent air from above, beside, or below the lifting bag to achieve desired ascent rate.
- 1/4" NPT inflation port for remote filling, multiple bag manifolding, or to install optional stainless steel quick disconnect.
- Ready for immediate use—factory-equipped with all necessary hardware.



## Fabric

- Urethane-coated nylon—high-strength and heavy-duty
- Superior abrasion resistance
- Resistant to most petro-chemicals
- UV-resistant
- Low maintenance requirements and easy to clean
- RF welded seams

## Lift Straps Designed for Safety

- 6000lb. -load rated high strength resin-treated nylon webbing
- Sewn directly to the bottom of the bag
- Safe working ratio of 6:1

| Model | Lift Capacity | Diameter     | Overall Height | Packaged Cubic Dimension               | Weight        |
|-------|---------------|--------------|----------------|--|---------------|
| C-100 | 120lb / 55kg  | 16in / 0.41m | 30in / 0.77m   | 14in x 10in x 6in / .36m x .26m x .15m | 5lb / 2.27kg  |
| C-200 | 220lb / 100kg | 22in / 0.56m | 36in / 0.92m   | 15in x 11in x 7in / .38m x .28m x .18m | 7lb / 3.18kg  |
| C-500 | 550lb / 250kg | 29in / 0.74m | 43in / 1.07m   | 15in x 11in x 7in / .38m x .28m x .18m | 12lb / 5.45kg |

- Each SUBSALVE USA lift bag is tested prior to shipping.
- Custom sizes available.
- All Subsvalve USA products are compliant with IMCA D-016-AIRBAGS, ABS, U.S. Department of Defense Standards.





Professional lift bags used to lift a 100 ton concrete abutment during the Big Dig tunnel construction in Boston.



Raising a 100 ft sailboat using PF-12000's in Bora Bora.



Raising the Spiegel Grove, a 510 ft U.S. Navy troop transport ship.



# PROFESSIONAL LIFT BAGS

## Innovative Design

- When the U.S. Navy asked us to develop a flotation device that would dependably withstand particularly abusive conditions, SUBSALVE USA produced the 5-ton Deep Ocean Lift Bag, which has unprecedented strength, low elasticity and superior resistance to abrasion and chemical attack. It became our standard Professional Lift Bag design.

## Multiple Applications

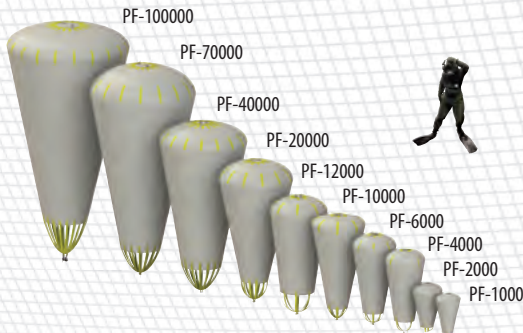
- Our most versatile and easy-to-use, these open-bottom, parachute-shaped lift bags with a single attachment point are essential in construction, heavy and light salvage and many offshore tasks.
- "Inverted water droplet" design facilitates maximum lift capacity with least possible weight, with stress distributed evenly over the fabric surface.
- Equipped with all the necessary hardware and ready for immediate use.
- Each SUBSALVE USA lift bag is tested prior to shipping.

## Fabric

- Urethane-coated nylon—high-strength and heavy-duty
- Superior abrasion resistance
- Resistant to most petro-chemicals
- UV-resistant
- Low maintenance requirements and easy to clean
- RF welded seams

## Easy to use

- Proprietary Plunger Dump Valve - air control with push-button at top of bag and lanyard at bottom. Vent air from above, beside or below lift bag to achieve desired ascent rate as well as 1/4" NPT inflation port.
- Below 2 tons
  - Multiple nylon lift straps sewn directly to bottom of lift bag, which bears load and provides safe working ratio of 6:1.
- 2 tons and over
  - Designed with a replaceable heavy-duty nylon webbing lift harness fabricated into the skin of the bag, which bears the load and provides a safe working ratio of 6:1.
- Fitted with a 3/4" NPT inflation port with quick disconnect or cam lock fitting and a 3/4" stainless steel ball valve for rapid deflation.



| Model     | Lift Capacity      | Diameter      | Overall Height | Packaged Cubic Dimension                   | Weight          |
|-----------|--------------------|---------------|----------------|--|-----------------|
| PF-1000   | 1100lb / 500kg     | 35in / 0.90m  | 56in / 1.44m   | 18in x 13in x 10in / .46m x .33m x .26m    | 17lb / 7.7kg    |
| PF-2000   | 2200lb / 1000kg    | 48in / 1.22m  | 59in / 1.50m   | 20in x 15in x 9.5in / .51m x .38m x .29m   | 30lb / 13.6kg   |
| PF-4000   | 4400lb / 2000kg    | 54in / 1.38m  | 94in / 2.41m   | 24in x 24in x 24in / .61m x .61m x .61m    | 50lb / 22.7kg   |
| PF-6000   | 6600lb / 3000kg    | 61in / 1.56m  | 108in / 2.77m  | 41in x 41in x 8in / 1.04m x 1.04m x .21m   | 80lb / 36.3kg   |
| PF-10000  | 11000lb / 5000kg   | 72in / 1.83m  | 120in / 3.05m  | 41in x 41in x 8in / 1.04m x 1.04m x .25m   | 105lb / 47kg    |
| PF-12000  | 13200lb / 6000kg   | 80in / 1.79m  | 130in / 3.33m  | 41in x 41in x 12in / 1.04m x 1.04m x .31m  | 125lb / 56.7kg  |
| PF-20000  | 22000lb / 10000kg  | 93in / 2.38m  | 146in / 4.10m  | 41in x 48in x 18in / 1.04m x 1.23m x .46m  | 190lb / 86.2kg  |
| PF-40000  | 44000lb / 20000kg  | 120in / 3.07m | 201in / 6.16m  | 41in x 48in x 24in / 1.04m x 1.23m x .62m  | 325lb / 147.7kg |
| PF-70000  | 77000lb / 35000kg  | 144in / 3.69m | 258in / 6.77m  | 41in x 48in x 38in / 1.04m x 1.23m x .97m  | 410lb / 186.9kg |
| PF-100000 | 110000lb / 50000kg | 166in / 4.22m | 316in / 8.03m  | 40in x 50in x 54in / 1.02m x 1.27m x 1.37m | 525lb / 238kg   |

- Each SUBSALVE USA lift bag is tested prior to shipping.
- Custom sizes available.
- All Subsalsve USA products are compliant with IMCA D-016-AIRBAGS, ABS, U.S. Department of Defense Standards.





# PROFESSIONAL ENCLOSED LIFT BAGS

## Multiple Applications

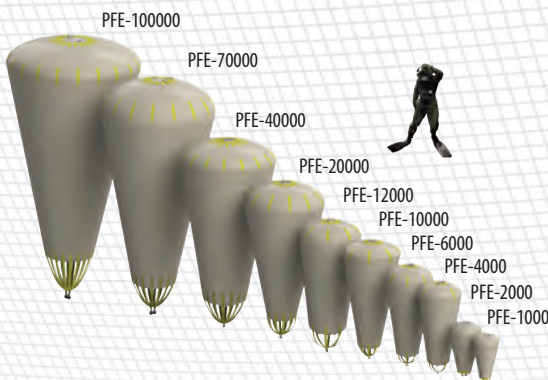
- Versatile and easy-to-use, these enclosed-bottom, parachute-shaped lift bags with a single attachment point are essential in construction, heavy and light salvage and many offshore tasks.
- "Inverted water droplet" design facilitates maximum lift capacity with least possible weight, with stress distributed evenly over the fabric surface.
- Able to be pre-inflated when necessary
- Will not dump air if the bag breaks the surface of the water
- Pressure relief valves at the bottom of the bag avoid over pressurization of the lift bag
- Equipped with all the necessary hardware and ready for immediate use.

## Fabric

- Urethane-coated nylon—high-strength and heavy-duty
- Superior abrasion resistance
- Resistant to most petro-chemicals
- UV-resistant
- Low maintenance requirements and easy to clean
- RF welded seams

## Easy to use

- Below 2 tons
  - Multiple nylon lift straps sewn directly to bottom of lift bag, which bears load and provides safe working ratio of 6:1.
  - Fitted with a 3/4" NPT inflation port with quick disconnect or cam lock fitting and a 3/4" stainless steel ball valve for rapid deflation.
- 2 tons and over
  - Designed with a replaceable heavy-duty nylon webbing lift harness fabricated into the skin of the bag, which bears the load and provides a safe working ratio of 6:1.
  - Fitted with a 3/4" NPT inflation port with quick disconnect or cam lock fitting and a 3/4" stainless steel ball valve for rapid deflation.



| Model      | Lift Capacity      | Diameter      | Overall Height | Packaged Cubic Dimension                   | Weight          |
|------------|--------------------|---------------|----------------|--|-----------------|
| PFE-1000   | 1100lb / 500kg     | 35in / 0.90m  | 56in / 1.44m   | 18in x 13in x 10in / .46m x .33m x .26m    | 17lb / 7.7kg    |
| PFE-2000   | 2200lb / 1000kg    | 48in / 1.22m  | 59in / 1.50m   | 20in x 15in x 9.5in / .51m x .38m x .29m   | 30lb / 13.6kg   |
| PFE-4000   | 4400lb / 2000kg    | 54in / 1.38m  | 94in / 2.41m   | 24in x 24in x 24in / .61m x .61m x .61m    | 50lb / 22.7kg   |
| PFE-6000   | 6600lb / 3000kg    | 61in / 1.56m  | 108in / 2.77m  | 41in x 41in x 8in / 1.04m x 1.04m x .21m   | 80lb / 36.3kg   |
| PFE-10000  | 11000lb / 5000kg   | 72in / 1.83m  | 120in / 3.05m  | 41in x 41in x 8in / 1.04m x 1.04m x .25m   | 105lb / 47kg    |
| PFE-12000  | 13200lb / 6000kg   | 80in / 1.79m  | 130in / 3.33m  | 41in x 41in x 12in / 1.04m x 1.04m x .31m  | 125lb / 56.7kg  |
| PFE-20000  | 22000lb / 10000kg  | 93in / 2.38m  | 146in / 4.10m  | 41in x 48in x 18in / 1.04m x 1.23m x .46m  | 190lb / 86.2kg  |
| PFE-40000  | 44000lb / 20000kg  | 120in / 3.07m | 201in / 6.16m  | 41in x 48in x 24in / 1.04m x 1.23m x .62m  | 325lb / 147.7kg |
| PFE-70000  | 77000lb / 35000kg  | 144in / 3.69m | 258in / 6.77m  | 41in x 48in x 38in / 1.04m x 1.23m x .97m  | 410lb / 186.9kg |
| PFE-100000 | 110000lb / 50000kg | 166in / 4.22m | 316in / 8.03m  | 40in x 50in x 54in / 1.02m x 1.27m x 1.37m | 525lb / 238kg   |

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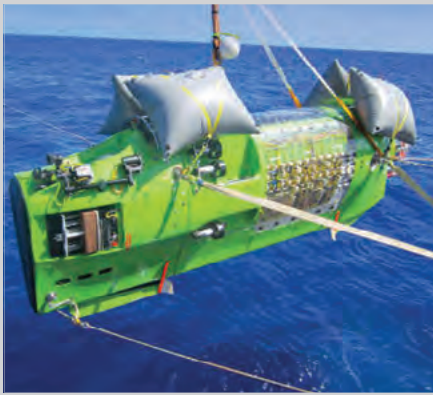




60 ft Yacht salvage using EFB-4000's and EFB-6000's. Photo Credit: Sea Tow Ocean City - Maryland , USA



Recovery of truck that fell through the ice. Timber Bay Scuba - Wisconsin, USA.



EFB-2000's used for the James Cameron's Deepsea Challenger mission to the bottom of the Mariana Trench.



# ENCLOSED FLOTATION BAGS

When you need to float an object close to the surface, use SUBSALVE's "pillow" shaped Enclosed Flotation Bags in any position—upright or flat, outside or inside of structures—for vessel salvage, auto recovery, pipeline and cable installation and emergency flotation for ships, aircraft, submersibles and ROVs.

## Adaptive

- Configure a multitude of rigging combinations.
- Use with a single pick point (shackle supplied on the bottom of the bag).
- Invert to use the multiple stainless steel rings on the top of the bag.

## Fabric

- Urethane-coated nylon—high-strength and heavy-duty
- Superior abrasion resistance
- Resistant to most petro-chemicals
- UV-resistant
- Low maintenance requirements and easy to clean
- RF welded seams

## Lifting Harness

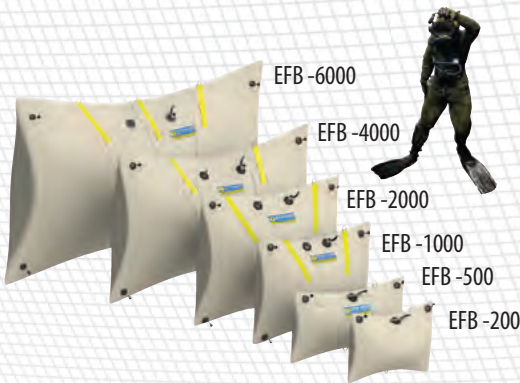
- Heavy nylon lift harness built into the body of the lift bag
- Safe working ratio of 6:1

## Safe and easy to use

- Equipped with all necessary hardware—ready for immediate use
- 3/4" NPT inflation/deflation port equipped with ball valve
- Stainless steel quick disconnect for inflation
- Pressure relief valves: set to release at 2.5 psi above ambient pressure
- Enough pressure relief valves are installed in each bag to allow expanding to vent should a free ascent occur.

| Model    | Lift Capacity    | Height        | Length         | Packaged Cubic Dimension                  | Weight         | Attachment Points |
|----------|------------------|---------------|----------------|---|----------------|-------------------|
| EFB-200  | 220lb<br>100kg   | 29in<br>.74m  | 38in<br>.97m   | 15in x 11in x 7in<br>.38m x .28m x .18m   | 12lb<br>5.4kg  | 1 bottom          |
| EFB-500  | 550lb<br>250kg   | 32in<br>.82m  | 51in<br>1.31m  | 17in x 12in x 8in<br>.44m x .31m x .21m   | 20lb<br>9.1kg  | 2 top<br>1 bottom |
| EFB-1000 | 1100lb<br>500kg  | 44in<br>1.13m | 51in<br>1.31m  | 18in x 13in x 10in<br>.46m x .33m x .26m  | 32lb<br>14.5kg | 2 top<br>1 bottom |
| EFB-2000 | 2200lb<br>1000kg | 55in<br>1.41m | 60in<br>1.54m  | 20in x 15in x 9.5in<br>.51m x .38m x .24m | 50lb<br>22.7kg | 2 top<br>1 bottom |
| EFB-4000 | 4400lb<br>2000kg | 69in<br>1.77m | 75in<br>1.92m  | 22in x 15in x 13in<br>.56m x .38m x .33m  | 70lb<br>31.7kg | 2 top<br>1 bottom |
| EFB-6000 | 6600lb<br>3000kg | 76in<br>1.94m | 112in<br>2.87m | 26in x 18in x 13in<br>.57m x .45m x .33m  | 90lb<br>40.8kg | 3 top<br>1 bottom |

- Each SUBSALVE USA lift bag is tested prior to shipping.
- Custom sizes available.
- All Subsvalve USA products are compliant with IMCA D-016-AIRBAGS, ABS, U.S. Department of Defense Standards.







# ENCLOSED SHALLOW WATER FLOTATION BAGS

When you need to float an object in extremely shallow water use SUBSALVE's shallow water "pillow" shaped Enclosed Flotation Bags (also referred to as boulder bags). Utilize them in any position - upright or flat, outside or inside of structures—for vessel salvage, auto recovery, pipeline and cable installation and emergency flotation for ships, aircraft, submersibles and ROVs.

## Adaptive

- Configure with a multitude of rigging combinations.
- Use with a single or multiple attachment points around the perimeter of the bag.

## Fabric

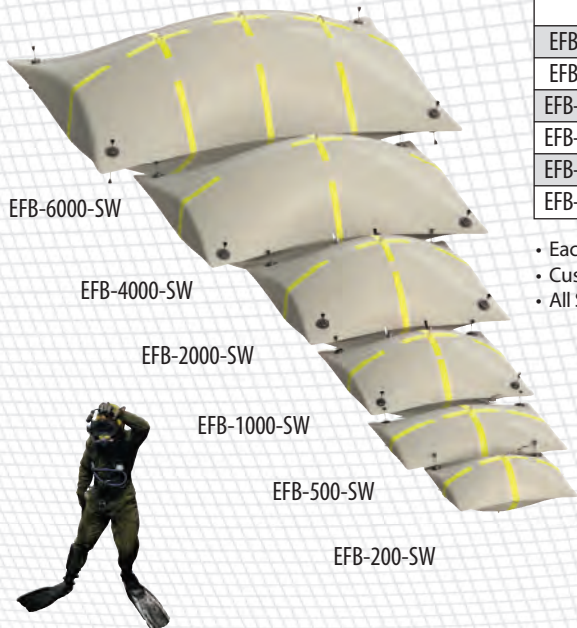
- Urethane-coated nylon—high-strength and heavy-duty
- Superior abrasion resistance
- Resistant to most petro-chemicals
- UV-resistant
- Low maintenance requirements and easy to clean
- RF welded seams

## Lifting Harness

- Heavy nylon lift harness built into the body of the lift bag
- Safe working ratio of 6:1

## Safe and easy to use

- Equipped with all necessary hardware—ready for immediate use
- 3/4" NPT inflation/deflation port equipped with ball valve
- Stainless steel quick disconnect for inflation
- Pressure relief valves: set to release at 2.5 psi above ambient pressure
- Enough pressure relief valves are installed in each bag to allow expanding to vent should a free ascent occur.



| Model       | Lift Capacity   | Height      | Length      | Packaged Cubic Dimension               | Weight        |
|-------------|-----------------|-------------|-------------|--|---------------|
| EFB-200-SW  | 220 lb/100 kg   | 29in/.74m   | 38in/.97m   | 15in x 11in x 7in/.38m x .28m x .18m   | 12 lb/5.4 kg  |
| EFB-500-SW  | 550 lb/ 250 kg  | 32in/.82m   | 51in/1.31m  | 17in x 12in x 8in/.44m x .31m x .21m   | 20 lb/9.1 kg  |
| EFB-1000-SW | 1100 lb/ 500 kg | 44in/1.13m  | 51in/1.31m  | 18in x 13in x 10in/.46m x .33m x .26m  | 32 lb/14.5 kg |
| EFB-2000-SW | 2200 lb/1000 kg | 55in/1.41m  | 60in/1.54m  | 20in x 15in x 9.5in/.51m x .38m x .24m | 50 lb/22.7 kg |
| EFB-4000-SW | 4400 lb/2000 kg | 69in/1.77m  | 75in /1.92m | 22in x 15in x 13in/.56m x .38m x .33m  | 70 lb/31.7 kg |
| EFB-6000-SW | 6600 lb/3000 kg | 76in /1.94m | 112in/2.87m | 26in x 18in x 13in/.57m x .45m x .33m  | 90 lb/40.8 kg |

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- Custom sizes available.
- All Subsvalve USA products are compliant with IMCA D-016-AIRBAGS, ABS, U.S. Department of Defense Standards.

## CAUTION

ENCLOSED SHALLOW WATER FLOTATION BAGS - RIGGING INSTRUCTIONS

**Primary Lift Points**

ONLY the primary lift points are to be used for carrying the full load being lifted.

**Stabilizing lift points**

Stabilizing lift points are used ONLY to stabilize the lift bag to keep it oriented correctly.





# SALVAGE PONTOONS



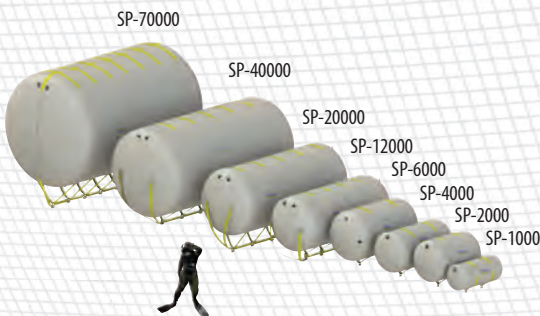
SP-70000's raising the Russian K-77 submarine.



SP-70000's and SP-40000's used to reduce the draft of a newly constructed tugboat during launch. Photo Credit: Ocean, Quebec, Canada.



SP-6000's used to support a pipeline during installation.



Totally-enclosed, cylindrical bags are ideal for shallow water salvage, reducing the draft of a vessel or raising an object closer to the surface. They are invaluable in cable and pipeline operations and where long tows are planned.

## Fabric

- Urethane-coated nylon—high-strength and heavy-duty
- Superior abrasion resistance
- Resistant to most petro-chemicals
- UV-resistant
- Low maintenance requirements and easy to clean
- RF welded seams

## Fittings

- Replaceable, heavy-duty nylon webbing lift harness is built into the body of the lift bag, with a safe working ratio of 6:1
- The harness maintains the lift bag in a horizontal position while insuring maximum stability
- Equipped with shackles, valves and all necessary hardware for immediate use
- 3/4" NPT inflation port with 3/4" stainless steel ball valves for inflation and deflating
- Stainless steel quick disconnect for inflation
- Pressure relief valves set to release at 2.5psi above ambient pressure

Available in both standard cylinder and elongated tubes

CAUTION: Salvage Pontoons have multiple attachment points. All attachment points must be connected with the shackles provided, and the load evenly distributed. Large pontoons may require a separate lifting beam to evenly distribute the load.

| Model    | Lift Capacity      | Height         | Length         | Packaged Cubic Dimension                    | Weight         | Attachment Points |
|----------|--------------------|----------------|----------------|---|----------------|-------------------|
| SP-1000  | 1100lb<br>500kg    | 28in<br>.72m   | 48in<br>1.23m  | 20in x 15in x 9.5in<br>.51m x .38m x .2 m   | 30lb<br>13kg   | 2                 |
| SP-2000  | 2200lb<br>1000kg   | 42in<br>1.13m  | 52in<br>1.23m  | 22in x 15in x 13in<br>.56m x .38m x .33m    | 50lb<br>23kg   | 2                 |
| SP-4000  | 4400lb<br>2000kg   | 44in<br>1.13m  | 78in<br>2.05m  | 26in x 18in x 13in<br>.67m x .46m x .33m    | 80lb<br>36kg   | 2                 |
| SP-6000  | 6600lb<br>3000kg   | 53in<br>1.36m  | 68in<br>2.05m  | 41in x 41in x 12in<br>1.05m x 1.05m x .31m  | 97lb<br>44kg   | 2                 |
| SP-12000 | 12200lb<br>5500kg  | 64in<br>1.54m  | 120in<br>3.10m | 41in x 41in x 18in<br>1.05m x 1.05m x .46m  | 140lb<br>64kg  | 4                 |
| SP-20000 | 22000lb<br>10000kg | 69in<br>1.77m  | 162in<br>4.15m | 41in x 48in x 24in<br>1.05m x 1.23m x .62m  | 190lb<br>86kg  | 4                 |
| SP-40000 | 44000lb<br>20000kg | 92in<br>2.36m  | 181in<br>4.64m | 41in x 48in x 38in<br>1.05m x 1.23m x .97m  | 325lb<br>173kg | 5                 |
| SP-70000 | 77000lb<br>35000kg | 115in<br>3.08m | 207in<br>4.77m | 41in x 48in x 48in<br>1.05m x 1.23m x 1.23m | 425lb<br>193kg | 7                 |

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- Custom sizes available.
- All Subsalve USA products are compliant with IMCA D-016-AIRBAGS, ABS, U.S. Department of Defense Standards.





# SALVAGE PONTOONS - VERTICAL



Totally-enclosed, cylindrical bags are ideal for shallow water salvage, reducing the draft of a vessel or raising an object closer to the surface. They are invaluable in cable and pipeline operations. These bags are rigged with a single bottom and top pick point with internal strap to allow for the load to be lifted from the top of the bag.

## Fabric

- Urethane-coated nylon—high-strength and heavy-duty
- Superior abrasion resistance
- Resistant to most petro-chemicals
- UV-resistant
- Low maintenance requirements and easy to clean
- RF welded seams

## Fittings

- Replaceable, heavy-duty nylon webbing lift harness is built into the body of the lift bag, with a safe working ratio of 6:1
- The harness maintains the lift bag in a vertical position while insuring maximum stability
- Equipped with shackles, valves and all necessary hardware for immediate use
- Two 3/4" NPT inflation ports with 3/4" stainless steel ball valves for inflation and deflation
- Pressure relief valves set to release at 2.5psi above ambient pressure

| Model     | Lift Capacity    | Diameter   | Height      | Packaged Cubic Dimension                | Weight       |
|-----------|------------------|------------|-------------|---|--------------|
| SPV-2000  | 2200 lb/1000 kg  | 38in/0.97m | 56in/1.42m  | 22in x 15in x 13in/.56m x .38m x .33m   | 50 lb/23 kg  |
| SPV-4000  | 4400 lb/2000 kg  | 48in/1.22m | 66in/1.68m  | 26in x 18in x 13in/.67m x .46m x .33m   | 80 lb/36 kg  |
| SPV-6000  | 6600 lb/3000 kg  | 59in/1.5m  | 82in/2.08m  | 41in x 41in x 12in/1.05m x 1.05m x .31m | 97 lb/44 kg  |
| SPV-10000 | 11000 lb/5000 kg | 65in/1.65m | 105in/2.67m | 41in x 41in x 16in/1.05m x 1.05m x .41m | 130 lb/59 kg |

- Each SUBSALVE USA lift bag is tested prior to shipping.
- Custom sizes available.
- All Subsalve USA products are compliant with IMCA D-016-AIRBAGS, ABS, U.S. Department of Defense Standards.

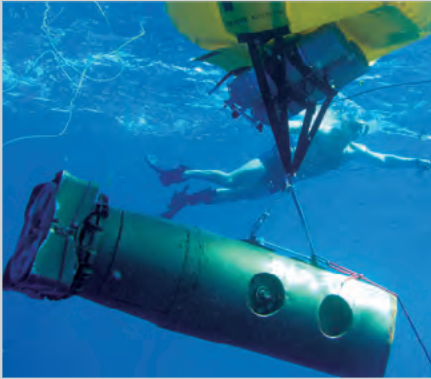






# MARK V/ORCA

## U/W ORDNANCE DISPOSAL SYSTEM



- This self-contained system is specifically designed for the removal of underwater mines, weapons or explosives.
- The system can be deployed by a single diver from a remote location, such as an inflatable boat.
- Designed to operate to full lift capacity to a depth of 175ft with the standard two cylinder kit, and the 330ft with the quad cylinder kit.
- Equipped with all necessary hardware – ready for immediate use.
- Each SUBSALVE USA lift bag is tested prior to shipping.
- Available in magnetic or non-magnetic MIL specification MIL-M-19595
- ROV deployable

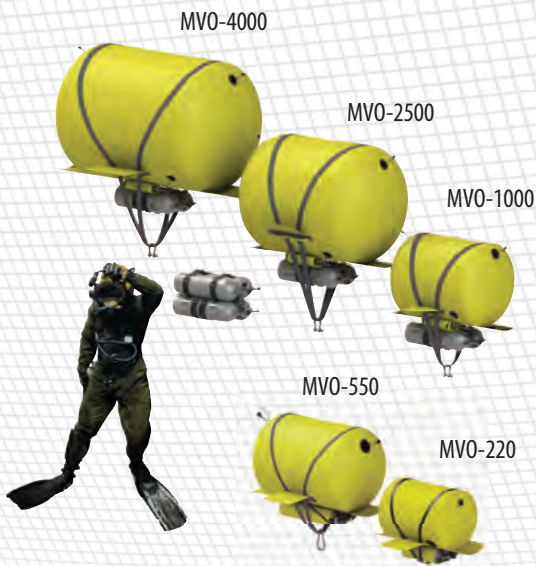
The Mark V/Orca base system is available in 2,500lb (1,200kg) and 4,400lb (2000kg) versions and includes:

- One enclosed lift bag manufactured of heavy-duty yellow 40 oz. urethane-coated nylon fabric for high abrasion resistance and fuel resistance.
- Two 80 ft<sup>3</sup> aluminum or 100 ft<sup>3</sup> aluminum or 87 ft<sup>3</sup> fiber-wrapped cylinders.
- Pressure relief valves
- Inflation manifold with hoses
- Tank harness
- Actuation valve
- Surface command unit
- Manual and electrical actuation



### Optional Items

- Carry bag
- Rigid storage/shipping box with carrying handles
- Time delay actuator
- Pneumatic actuation
- Acoustic actuation
- Spare parts kit
- Tool kit
- Repair Kit
- Quad cylinder kit (allows for deeper operational depth)



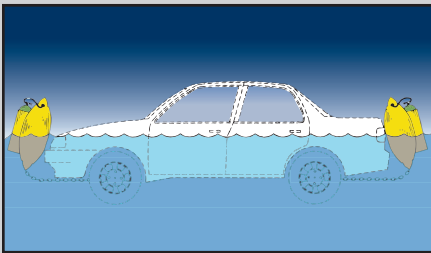
The Mark V/Orca Underwater Explosive Ordnance Disposal System replaces the obsolete U.S. Navy Mark II Mod I Flotation Bladder (NSN #8465-00-992-6689) of which SUBSALVE delivered over 200 units over the last decade.

The new Mark V/Orca System is approved by the U.S. Navy and is in use by over 25 navies throughout the world.

| Model    | Lift Capacity   | Diameter     | Length       | Packaged Cubic Dimension                 | Weight        |
|----------|-----------------|--------------|--------------|--|---------------|
| MVO-220  | 220lb / 100kg   | 18in / 0.46m | 24in / .61m  | 18in x 13in x 10in / .46m x .33m x .25m  | 18lb / 8.2kg  |
| MVO-550  | 550lb / 250kg   | 24in / .61m  | 36in / .92m  | 26in x 18in x 13in / .61m x .46m x .33m  | 36lb / 16.4kg |
| MVO-1000 | 1100lb / 500kg  | 31in / 0.79m | 42in / 1.07m | 24in x 24in x 30in / .61m x .61m x .76m  | 95lb / 43kg   |
| MVO-2500 | 2500lb / 1200kg | 43in / 1.09m | 61in / 1.55m | 37in x 27in x 19in / .94m x .69m x .76m  | 145lb / 66kg  |
| MVO-4000 | 4400lb / 2000kg | 48in / 1.22m | 74in / 1.88m | 56in x 27in x 36in / 1.42m x .69m x .91m | 195lb / 89kg  |

- Each SUBSALVE USA lift bag is tested prior to shipping.
- Custom sizes available.
- All Subsalve USA products are compliant with IMCA D-016-AIRBAGS, ABS, U.S. Department of Defense Standards.





Two 3ft chains with carabiners are rigged to lift rings placed 40in apart on the bottom of each bag. They allow for quick and easy attachment to the front and rear bumpers or shock brackets of most vehicles. Bags can also be rigged to cradle the car by connecting the chains together underneath the vehicle.



# VEHICLE RECOVERY SYSTEMS

## VRS-2000/VRS-4000/VRS-4000-HELO

The SUBSALVE USA VRS-2000 and VRS-4000 are the only self-contained patented systems available today. We have been refining every aspect of the system for over twenty years, incorporating input from the commercial and public safety diving communities as well as experience with actual recoveries. This all-purpose system is portable for rapid deployment. Equipped with all necessary hardware – ready for immediate use.

### Fabric

- Urethane-coated nylon—high-strength and heavy-duty
- Superior abrasion resistance
- Resistant to most petro-chemicals
- UV-resistant
- Low maintenance requirements and easy to clean
- RF welded seams

Used by 250 domestic and fifty worldwide public safety dive teams

VRS-2000 for automobiles and other small vehicles

VRS-4000 for trucks, buses and larger vehicles

VRS-4000-HELO emergency flotation to prevent sinking if an aircraft is ditched (NATO approved)

### System Components

#### VRS-2000 & VRS-4000

- Two 2000lb or two 4000lb enclosed flotation bags each with a pocket for an 80ft<sup>3</sup> aluminum SCUBA cylinder.
- The air cylinder connects to the lift bag with a SCUBA yoke and hose assembly with a one way check valve for easy tank changes while preventing any loss of air from the bag.
- Two stainless steel lift rings on top and two on the bottom of bag that allow the lift bag to be rigged either flat or upright.
- (2) Bottom lift rings are each equipped with a 3' length of ¼" galvanized proof coil chain and a stainless steel snap carabiner on the end.

#### VRS-4000-HELO

- For rapid deployment to prevent aircraft from sinking if ditched
- One 4000lb enclosed flotation bag with a pocket for an 80ft<sup>3</sup> aluminum scuba cylinder, a single pick point with stainless steel snap hook, and flaps to enclose the entire system.
- The air cylinder connects to the lift bag with a SCUBA yoke and hose assembly with a one way check valve for easy tank changes while preventing any loss of air from the bag.
- NATO approved



### Also available:

An optional two-valve station stainless steel manifold assembly with quick disconnects, shut-offs, and two 50ft hose assemblies for remote or controlled inflation. SUBSALVE VRS-2000 sales and instructional video, 18 min. DVD. U.S. Patent No. 5,755,172

| Model         | Lift Capacity (total) | Height       | Length       | Packaged Cubic Dimension                | Weight       |
|---------------|-----------------------|--------------|--------------|---|--------------|
| VRS-2000      | 4400lb / 2000kg       | 55in / 1.41m | 60in / 1.54m | 24in x 24in x 20in / .61m x .61m x .51m | 60lb / 27kg  |
| VRS-4000      | 8800lb / 4000kg       | 69in / 1.77m | 75in / 1.92m | 24in x 24in x 30in / .61m x .61m x .76m | 100lb / 45kg |
| VRS-4000-HELO | 4400lb / 2000kg       | 69in / 1.77m | 75in / 1.92m | 24in x 24in x 18in / .61m x .61m x .46m | 55lb / 25kg  |

- Each SUBSALVE USA lift bag is tested prior to shipping.
- Custom sizes available.
- All Subsalve USA products are compliant with IMCA D-016-AIRBAGS, ABS, U.S. Department of Defense Standards.





## QUAD BAGS

Tech divers, wreck divers and public safety divers use this multi-purpose bag as:

- A lift bag to recover objects.
- An up-line float.
- A decompression-line float.
- A dry bag.
- An inflatable dive flag/float to warn off boaters.

Quad bags are ready to go

- Manufactured of high-strength, lightweight, vinyl coated nylon fabric.
- Can be rolled up small enough to carry on every dive.
- Screened on both sides with a bright red "divers down" flag for high visibility
- Equipped with an oral inflation and an optional lanyard operated dump valve.
- Equipped with
  - Velcro tie strap
  - Bottom waterproof closure
  - Stainless steel snap
  - Oral inflation
- Equipped with all necessary hardware ready for immediate use.
- U.S. Patent No. D-362,817



| Model  | Lift Capacity | Width        | Overall Height | Packaged Cubic Dimension               | Weight         |
|--------|---------------|--------------|----------------|--|----------------|
| QB-50  | 55lb / 25kg   | 14in / 0.36m | 30in / 0.77m   | 15in x 10in x 2in / .38m x .26m x .05m | 1.0lb / 0.45kg |
| QB-100 | 105lb / 47kg  | 28in / 0.72m | 30in / 0.77m   | 15in x 10in x 2in / .38m x .26m x .05m | 1.5lb / 0.68kg |
| QB-200 | 205lb / 93kg  | 40in / 1.02m | 36in / 0.92m   | 15in x 10in x 3in / .38m x .26m x .08m | 2.5lb / 1.13kg |



## RAPID RECOVERY SYSTEM

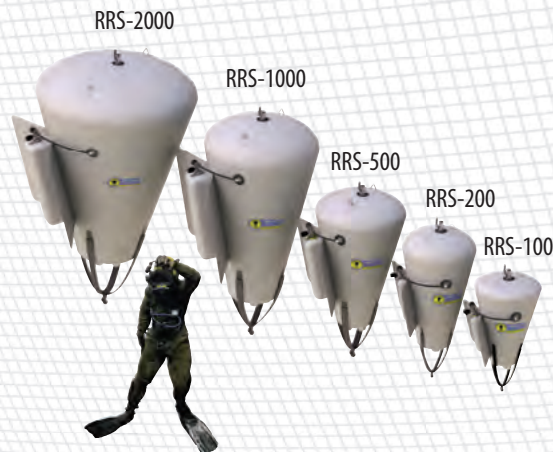
The Rapid Recovery System is a self-contained system including an enclosed commercial or professional lift bag with a pocket to hold the necessary air cylinder to fully inflate the lift bag at 100ft of depth.

RRS Includes:

- Tank pocket
- Inflation yoke with check valve and hose
- Velcro valise to contain the bag
- Optional remote actuation valve
- Air cylinder optional—not included



Optional Actuation Valve



| Model    | Lift Capacity   | Width        | Overall Height | Packaged Cubic Dimension                 | Weight        |
|----------|-----------------|--------------|----------------|--|---------------|
| RRS-100  | 120lb / 55kg    | 16in / 0.41m | 30in / 0.77m   | 14in x 10in x 6in / .36m x .26m x .15m   | 5lb / 2.27kg  |
| RRS-200  | 220lb / 100kg   | 22in / 0.56m | 36in / 0.92m   | 15in x 11in x 7in / .38m x .28m x .18m   | 7lb / 3.18kg  |
| RRS-500  | 550lb / 250kg   | 29in / 0.74m | 43in / 1.07m   | 15in x 11in x 7in / .38m x .28m x .18m   | 12lb / 5.45kg |
| RRS-1000 | 1100lb / 500kg  | 35in / 0.90m | 56in / 1.44m   | 18in x 13in x 10in / .46m x .33m x .26m  | 17lb / 7.7kg  |
| RRS-2000 | 2200lb / 1000kg | 44in / 1.13m | 63in / 1.62m   | 20in x 15in x 9.5in / .51m x .38m x .29m | 30lb / 13.6kg |

- Each SUBSALVE USA lift bag is tested prior to shipping.
- Custom sizes available.
- All Subsalve USA products are compliant with IMCA D-016-AIRBAGS, ABS, U.S. Department of Defense Standards.





## CABLE FLOAT/PIPELINE FLOATS

### Cable/Pipeline Float - Salvage Float Balloon

- Includes 3 stainless steel lift rings and inflation port.
- Used for light salvage as well as cable flotation and suspension
- Part No. SFB-300 - Manufactured to US Military specification NSN 2050-00-574-7963 and in accordance to dwg. No. 4563094.



| Model   | Lift Capacity | Inflated Diameter | Packaged Cubic Dimension                | Weight       |
|---------|---------------|-------------------|---|--------------|
| SFB-100 | 110lb / 50kg  | 22in / 0.56m      | 15in x 11in x 7in / .38m x .28m x .18m  | 6lb / 2.7kg  |
| SFB-200 | 220lb / 100kg | 27in / 0.69m      | 15in x 11in x 7in / .38m x .28m x .18m  | 8lb / 3.6kg  |
| SFB-300 | 330lb / 150kg | 30in / 0.76m      | 18in x 13in x 10in / .46m x .33m x .25m | 10lb / 4.5kg |
| SFB-500 | 550lb / 250kg | 34in / 0.86m      | 24in x 18in x 10in / .61m x .46m x .25m | 12lb / 5.4kg |



## PROPELLER BAGS

### Prop bag

- Specially designed lift bags used to remove and install boat propellers.
- Available in three standard sizes (100lb, 200lb, 300lb), custom sizes available.
- Each lift bag has 4 lift points and one dump valve with lanyard for manual operation.



| Model  | Lift Capacity  | Length        | Width        | Height       | Packaged Cubic Dimension                 | Weight        |
|--------|----------------|---------------|--------------|--------------|--|---------------|
| PB-100 | 110lb<br>50kg  | 28in<br>.71m  | 9in<br>.23m  | 14in<br>.36m | 15in x 11in x 7in<br>.38m x .28m x .18m  | 6lb<br>2.7kg  |
| PB-200 | 220lb<br>100kg | 36in<br>.91m  | 12in<br>.31m | 18in<br>.46m | 18in x 13in x 10in<br>.46m x .33m x .25m | 8lb<br>3.6kg  |
| PB-300 | 330lb<br>150kg | 48in<br>1.22m | 16in<br>.41m | 24in<br>.61m | 24in x 18in x 10in<br>.61m x .46m x .25m | 10lb<br>4.5kg |



## BRS-100

- Specially designed for use by law enforcement to recover or remove explosives or other dangerous devices.
- The Bomb Recovery System 100 includes the following.
  - One 25lb float
  - One 50lb float
  - One 100lb float
- Each float includes one 2.5psi pressure relief valve and a 1/4in quick disconnect for inflation.
- 100ft LP inflation hose with quick disconnects
- 105ft high strength polypro line with carabiner
- Carry bag



- Each SUBSALVE USA lift bag is tested prior to shipping.
- Custom sizes available.
- All Subsalve USA products are compliant with IMCA D-016-AIRBAGS, ABS, U.S. Department of Defense Standards.





# WATER LOAD TEST BAG



## Innovative Design

- SUBSALVE USA's Water Load Test Bags are constructed using the same technology used in our world class lift bags. These bags makes it easier to load test structures due to their very low handling weight and make it possible to test in areas with insufficient access for conventional solid weights.
- Equipped with all the necessary hardware and ready for immediate use.

## Fabric

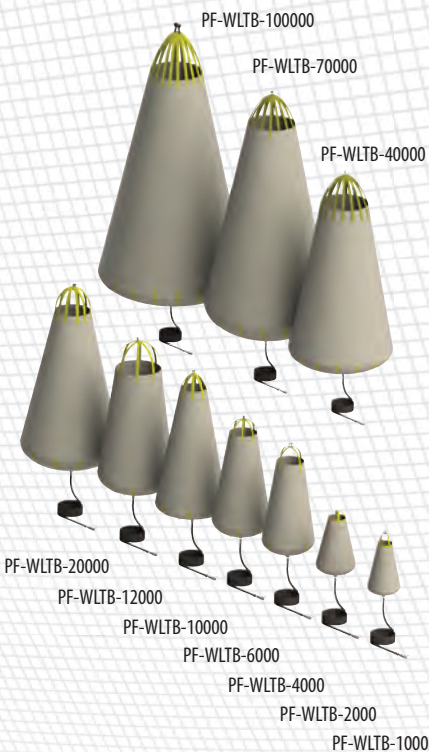
- Urethane-coated nylon—high-strength and heavy-duty
- Superior abrasion resistance
- Resistant to most petro-chemicals
- UV-resistant
- Low maintenance requirements and easy to clean
- RF welded seams

## Easy to use

- PF-WLTB-1000 – PF-WLTB-6000  
1 1/4 in NPT port accepts a 1 1/4in discharge hose for fast deflation.
- PF-WLTB-10000 – PF-WLTB-20000  
2in NPT stainless steel flange accepts a 2in discharge hose for fast deflation.
- PF-WLTB-40000 – PF-WLTB-70000  
3in NPT stainless steel flange accepts a 3in discharge hose for fast deflation of the larger water weight test bags.
- PF-WLTB-100000  
4in NPT stainless steel flange accepts a 4in discharge hose for fast deflation of the larger water weight test bags.

## Lift Straps

- Below PF-WLTB-4000  
– Multiple nylon lift straps sewn directly to bottom of lift bag, which bears load and provides safe working ratio of 6:1.
- PF-WLTB-4000 and above  
– Designed with a replaceable heavy-duty nylon webbing lift harness fabricated into the skin of the bag, which bears the load and provides a safe working ratio of 6:1.



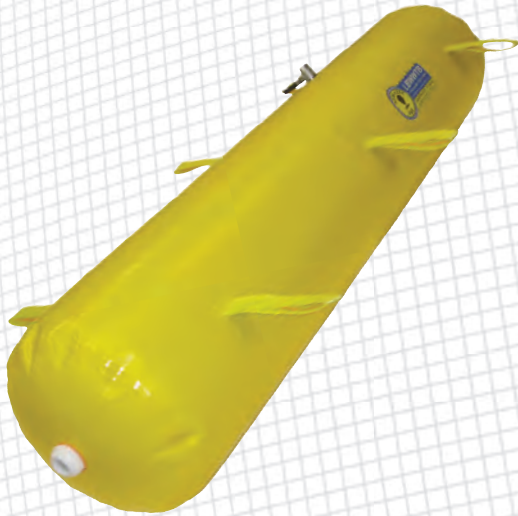
| Model          | Lift Capacity      | Diameter      | Overall Height | Packaged Cubic Dimension                   | Weight          |
|----------------|--------------------|---------------|----------------|--|-----------------|
| PF-WLTB-1000   | 1100lb / 500kg     | 35in / 0.90m  | 56in / 1.44m   | 18in x 13in x 10in / .46m x .33m x .26m    | 17lb / 7.7kg    |
| PF-WLTB-2000   | 2200lb / 1000kg    | 48in / 1.22m  | 59in / 1.50m   | 20in x 15in x 9.5in / .51m x .38m x .29m   | 30lb / 13.6kg   |
| PF-WLTB-4000   | 4400lb / 2000kg    | 54in / 1.38m  | 94in / 2.41m   | 24in x 24in x 24in / .61m x .61m x .61m    | 50lb / 22.7kg   |
| PF-WLTB-6000   | 6600lb / 3000kg    | 61in / 1.56m  | 108in / 2.77m  | 41in x 41in x 8in / 1.04m x 1.04m x .21m   | 80lb / 36.3kg   |
| PF-WLTB-10000  | 11000lb / 5000kg   | 72in / 1.83m  | 120in / 3.05m  | 41in x 41in x 8in / 1.04m x 1.04m x .25m   | 105lb / 47kg    |
| PF-WLTB-12000  | 13200lb / 6000kg   | 80in / 1.79m  | 130in / 3.33m  | 41in x 41in x 12in / 1.04m x 1.04m x .31m  | 125lb / 56.7kg  |
| PF-WLTB-20000  | 22000lb / 10000kg  | 93in / 2.38m  | 146in / 4.10m  | 41in x 48in x 18in / 1.04m x 1.23m x .46m  | 190lb / 86.2kg  |
| PF-WLTB-40000  | 44000lb / 20000kg  | 120in / 3.07m | 201in / 6.16m  | 41in x 48in x 24in / 1.04m x 1.23m x .62m  | 325lb / 147.7kg |
| PF-WLTB-70000  | 77000lb / 35000kg  | 144in / 3.69m | 258in / 6.77m  | 41in x 48in x 38in / 1.04m x 1.23m x .97m  | 410lb / 186.9kg |
| PF-WLTB-100000 | 110000lb / 50000kg | 166in / 4.22m | 316in / 8.03m  | 40in x 50in x 54in / 1.02m x 1.27m x 1.37m | 525lb / 238kg   |

- Each SUBSALVE USA lift bag is tested prior to shipping.
- Custom sizes available.
- All Subsalve USA products are compliant with IMCA D-016-AIRBAGS, ABS, U.S. Department of Defense Standards.





# LIFEBOAT DAVIT TEST BAGS/KIT



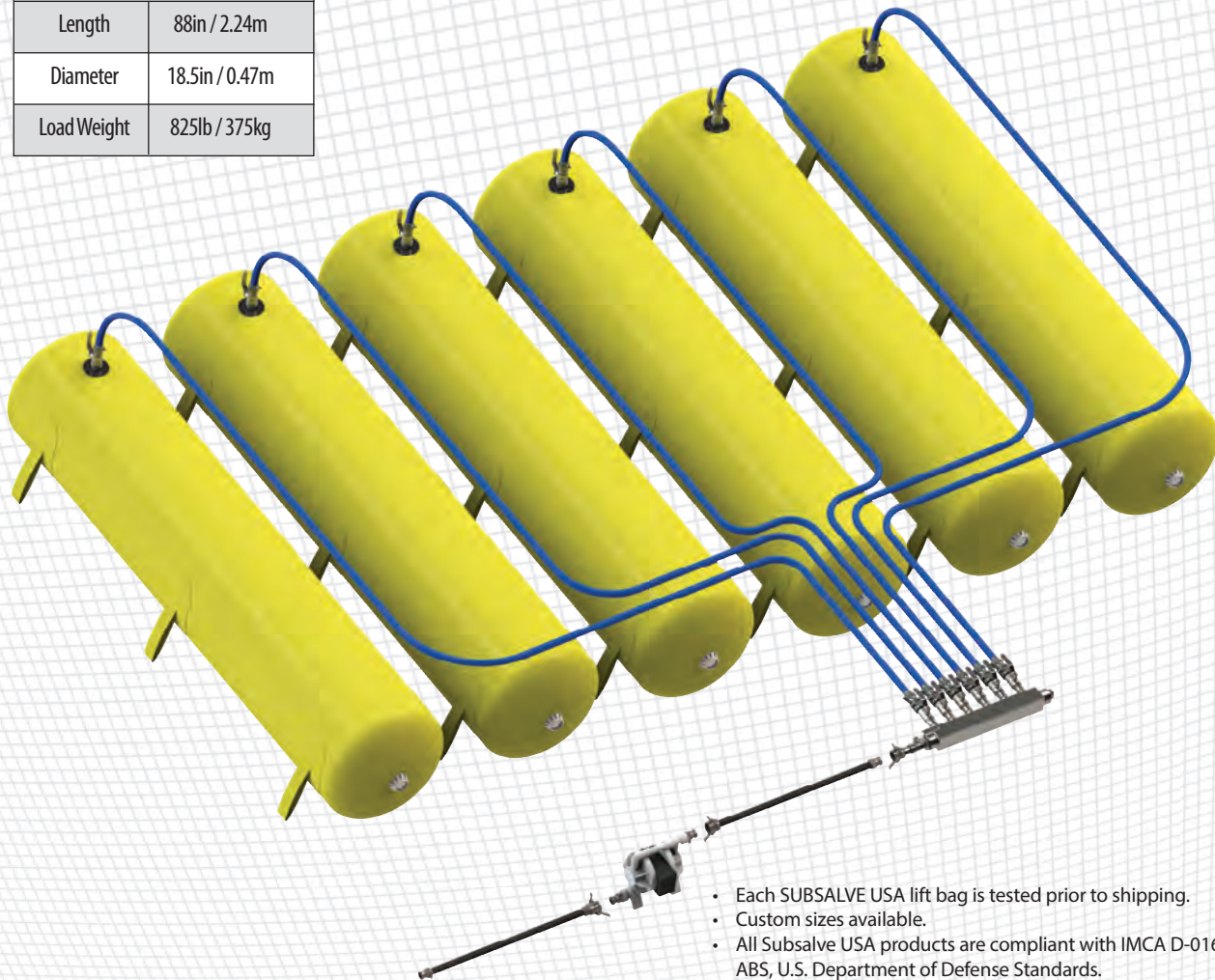
The Subsalve USA lifeboat davit testing system allows for lifeboat davits and other structures to be load tested in areas with insufficient access for conventional solid weights. The handling weight of water filled test bags compared to solid weights is substantially reduced increasing ease of use.

To use the system simply place the empty bag in the desired location, fill with water, execute the load test and discharge the water from the bag.

## Components

- Desired number of 375KG capacity test bags (6 handling straps per bag)
- 3/4" x 50ft Inflation & discharge hoses with quick couplers fittings
- 6 station manifold with 3/4" quick couplers
- Air driven double diaphragm pump rated to 15 GPM.
- 25ft Inflation & discharge hoses

| General Dimensions |                |
|--------------------|----------------|
| Length             | 88in / 2.24m   |
| Diameter           | 18.5in / 0.47m |
| Load Weight        | 825lb / 375kg  |



- Each SUBSALVE USA lift bag is tested prior to shipping.
- Custom sizes available.
- All Subsalve USA products are compliant with IMCA D-016-AIRBAGS, ABS, U.S. Department of Defense Standards.





# FEND-AIR® INFLATABLE MARINE FENDERS

| Stock#<br>Fenders | Size                         |
|-------------------|------------------------------|
| FA-1224           | 12in x 24in / 30cm x 61cm    |
| FA-1236           | 12in x 36in / 30cm x 91cm    |
| FA-1248           | 12in x 48in / 30cm x 122cm   |
| FA-1260           | 12in x 60in / 30cm x 152cm   |
| FA-1272           | 12in x 72in / 30cm x 183cm   |
| FA-1296           | 12in x 96in / 30cm x 244cm   |
| FA-12120          | 12in x 120in / 30cm x 305cm  |
|                   |                              |
| FA-1824           | 18in x 24in / 46cm x 61cm    |
| FA-1836           | 18in x 36in / 46cm x 91cm    |
| FA-1848           | 18in x 48in / 46cm x 122cm   |
| FA-1860           | 18in x 60in / 46cm x 152cm   |
| FA-1872           | 18in x 72in / 46cm x 183cm   |
| FA-1896           | 18in x 96in / 46cm x 244cm   |
| FA-18120          | 18in x 120in / 46cm x 305cm  |
|                   |                              |
| FA-2424           | 24in x 24in / 61cm x 61cm    |
| FA-2436           | 24in x 36in / 61cm x 91cm    |
| FA-2448           | 24in x 48in / 61cm x 122cm   |
| FA-2460           | 24in x 60in / 61cm x 152cm   |
| FA-2472           | 24in x 72in / 61cm x 183cm   |
| FA-2496           | 24in x 96in / 61cm x 244cm   |
| FA-24120          | 24in x 120in / 61cm x 305cm  |
|                   |                              |
| FA-3636           | 36in x 36in / 91cm x 91cm    |
| FA-3648           | 36in x 48in / 91cm x 122cm   |
| FA-3672           | 36in x 72in / 91cm x 183cm   |
| FA-3684           | 36in x 84in / 91cm x 213cm   |
| FA-36120          | 36in x 120in / 91cm x 305cm  |
| FA-36168          | 36in x 168in / 91cm x 427cm  |
|                   |                              |
| FA-4860           | 48in x 60in / 122cm x 152cm  |
| FA-4872           | 48in x 72in / 122cm x 183cm  |
| FA-4884           | 48in x 84in / 122cm x 213cm  |
| FA-48120          | 48in x 120in / 122cm x 305cm |
| FA-48240          | 48in x 240in / 122cm x 610cm |



Made to the highest yacht quality to provide maximum protection to your vessel while at a floating or stationary dock or while rafted. For use on vessels of all sizes including recreation,

commercial and military. Manufactured of heavy-duty urethane and vinyl coated nylon fabric for high strength puncture and abrasion resistance and resistance to petro-chemicals. Stainless steel rings on each end allows FEND-AIR fenders to be rigged horizontally or vertically. High quality inflatable boat valve for convenient inflation or deflation for storage. Light weight and easy to deploy.

FEND-AIR fenders are available in black, white and navy blue. Custom colors and sizes available.

FEND-AIR fender covers are available in Polartec fleece.

## ACCESSORIES

- Each SUBSALVE USA lift bag is tested prior to shipping.
- Custom sizes available.
- All Subsalve USA products are compliant with IMCA D-016-AIRBAGS, ABS, U.S. Department of Defense Standards.



120V High Volume Pump



Turbo Foot Pump



12V High Volume Pump



Dock fendering System Straps and Bracket Kit





# AIRCRAFT LIFT BAG

The Aircraft Lifting Bag is used to lift crippled aircraft from runways or terrain where it is impractical or impossible to use standard aircraft jacks. SUBSALVE USA is currently manufacturing these airlifting pneumatic bags for the U.S. Air Force, as well as many other foreign air forces throughout the world (NSN # 173-00-263-2962).

Constructed of the same urethane-coated nylon as our underwater lift bags, these lift bags are highly resistant to extreme atmospheric temperature, abrasion and petrochemicals.

Equipped with all necessary hardware - ready for immediate use

Each SUBSALVE USA lift bag is tested prior to shipping.

Accessories:

- 3/4in diameter 50ft inflation hose
- Ground cover

| Model      | Lift Capacity       | Inflated Dimension                            | Weight        |
|------------|---------------------|---|---------------|
| ACLB-12-3C | 12 tonne / 12,000kg | 90in x 78in x 72in / 2.29m x 1.98m x 1.83m    | 185lb / 84kg  |
| ACLB-20-3C | 20 tonne / 20,000kg | 130in x 112in x 104in / 3.30m x 2.86m x 2.65m | 400lb / 181kg |
| ACLB-40-3C | 40 tonne / 40,000kg | 165in x 142in x 132in / 4.19m x 3.61m x 3.36m | 600lb / 272kg |

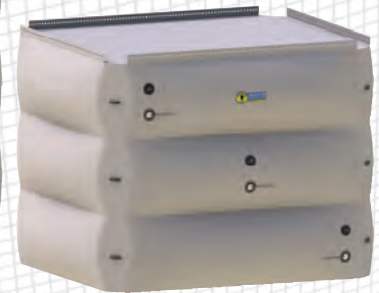
ACLB-40-3C



ACLB-20-3C



ACLB-12-3C



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- All Subsvalve USA products are compliant with IMCA D-016-AIRBAGS, ABS, U.S. Department of Defense Standards.





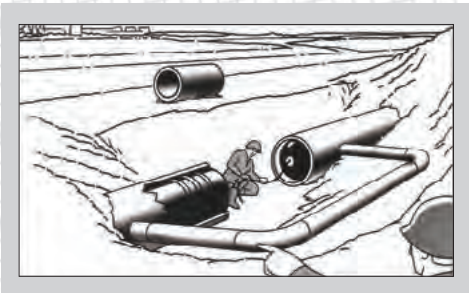
# PIPE PLUGGERS



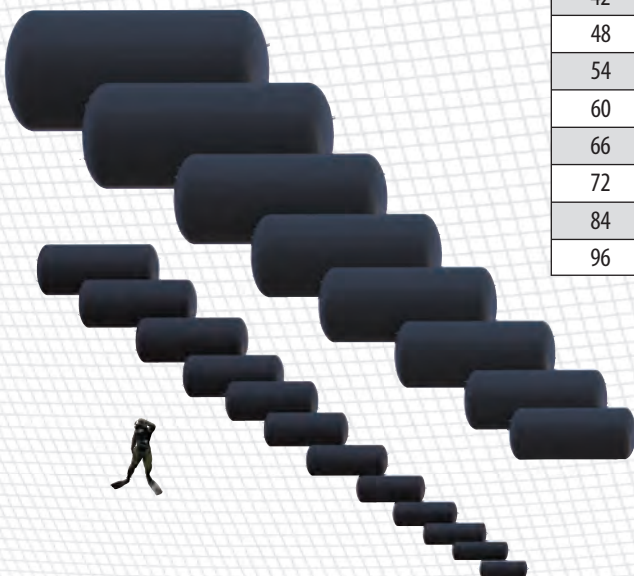
## PIPE PLUGGERS

Nothing temporarily closes a cavity or seals an opening better than an inflatable plug. PIPE PLUGGERS are heavy

duty, inflatable pipe plugs especially designed for use during the construction, maintenance, and repair of pipeline, ducts, and tunnels. PIPE PLUGGERS are constructed of high tenacity, urethane coated nylon fabric for high strength of over 1000lbs. per inch, and the urethane coating is resistant to fuel and most other petro-chemicals. Each PIPE PLUGGER is equipped with rigging hardware, 1/4" to 3/4" inflation ports, and pressure relief valves to prevent blow ups. PIPE PLUGGERS are also available with a by-pass design. Stock sizes are available from 12" to 96" diameter. Custom sizes, shapes, and configurations can be designed and manufactured to meet special needs.



| Pipe Dia. | Max. Press. | Max. Head | Thrust at Maximum Head |      | Volume | Disp. | Length | Weight | Valve |
|-----------|-------------|-----------|------------------------|------|--------|-------|--------|--------|-------|
|           |             |           | psi                    | tons |        |       |        |        |       |
| 12        | 23          | 52        | 22                     | 1.3  | 2.22   | 138   | 32     | 12     | Stem  |
| 14        | 23          | 52        | 22                     | 1.9  | 3.9    | 243   | 40     | 15     | 0.75  |
| 16        | 23          | 52        | 22                     | 2.3  | 5.24   | 327   | 44     | 20     | 0.75  |
| 18        | 23          | 52        | 22                     | 2.9  | 6.18   | 386   | 46     | 25     | 0.75  |
| 20        | 22          | 50        | 21                     | 3.5  | 8.2    | 512   | 49     | 28     | 0.75  |
| 22        | 22          | 50        | 21                     | 4    | 9.9    | 624   | 58     | 33     | 0.75  |
| 24        | 20          | 45        | 19                     | 4.5  | 13.6   | 848   | 60     | 40     | 0.75  |
| 28        | 19          | 43        | 18                     | 5    | 18.92  | 1179  | 66     | 44     | 0.75  |
| 30        | 17          | 39        | 17                     | 6    | 25.42  | 1584  | 72     | 50     | 0.75  |
| 32        | 16          | 35        | 15.2                   | 6.5  | 30.5   | 1915  | 80     | 55     | 0.75  |
| 34        | 15          | 34        | 14.5                   | 7    | 31.42  | 1980  | 84     | 57     | 0.75  |
| 36        | 15          | 34        | 14.5                   | 7.5  | 35.37  | 2208  | 87     | 65     | 0.75  |
| 42        | 13          | 30        | 13                     | 9    | 65.87  | 4105  | 101    | 96     | 0.75  |
| 48        | 11          | 25        | 11                     | 10   | 96.48  | 6021  | 114    | 140    | 0.75  |
| 54        | 9           | 210       | 9                      | 10.5 | 135.42 | 8448  | 128    | 160    | 0.75  |
| 60        | 8           | 19        | 8.5                    | 12   | 192.08 | 11987 | 142    | 190    | 0.75  |
| 66        | 7           | 16        | 7                      | 12.3 | 253.66 | 15850 | 152    | 255    | 0.75  |
| 72        | 6           | 14        | 6.2                    | 13   | 338.8  | 20085 | 170    | 270    | 0.75  |
| 84        | 6           | 14        | 6.2                    | 17   | 555.1  | 34500 | 200    | 280    | 0.75  |
| 96        | 5           | 12        | 5                      | 20   | 796.25 | 49650 | 210    | 378    | 0.75  |



- Each SUBSALVE USA lift bag is tested prior to shipping.
- Custom sizes available.
- All Subsalve USA products are compliant with IMCA D-016-AIRBAGS, ABS, U.S. Department of Defense Standards.





# INFLAT-A-TANK

INFLAT-A-TANK manufactures rugged, flexible storage containers for water, fuel, sanitary discharge, and other liquids. Every tank is manufactured of heavy duty urethane coated nylon fabric. The nylon fabric has a breaking strength of over 1000 lbs. per inch, and the urethane coating is resistant to fuels and most petro-chemicals. Each tank is equipped with inlet and discharge ports and are available with optional vents and tie downs. Stock sizes are available for boats, campers, mobile homes, and industrial applications. Tanks are affordable, easy to install, and require minimal maintenance.



| Water, Oil and Fuel Storage Tanks |           |          |                         |        |                          |        |        |                      |                   |
|-----------------------------------|-----------|----------|-------------------------|--------|--------------------------|--------|--------|----------------------|-------------------|
| Model Number                      | Capacity  |          | Dimensions empty (±6in) |        | Dimensions Filled (±6in) |        |        | Approx. Weight (lbs) | Ship Weight (lbs) |
|                                   | (Gallons) | (Liters) | Width                   | Length | Width                    | Length | Height |                      |                   |
| IFT-250                           | 250       | 946      | 6'8"                    | 6'8"   | 6'2"                     | 6'2"   | 1'     | 25                   | 55                |
| IFT-500                           | 500       | 1893     | 6'8"                    | 9'9"   | 5'11"                    | 9'     | 1'6"   | 32                   | 62                |
| IFT-900                           | 900       | 3407     | 9'                      | 10'2"  | 8'                       | 9'2"   | 2'     | 41                   | 75                |
| IFT-1000                          | 1000      | 3786     | 9'                      | 11'2"  | 6'8"                     | 8'     | 10'1"  | 44                   | 78                |
| IFT-1200                          | 1200      | 4543     | 11'2"                   | 10'    | 10'1"                    | 8'11"  | 2'2"   | 49                   | 83                |
| IFT-1500                          | 1500      | 5678     | 11'2"                   | 11'2"  | 9'11"                    | 9'11"  | 2'6"   | 54                   | 97                |
| IFT-2000                          | 2000      | 7571     | 12'4"                   | 12'4"  | 11'                      | 11'    | 2'8"   | 63                   | 102               |
| IFT-2500                          | 2500      | 9464     | 13'6"                   | 13'6"  | 12'2"                    | 12'2"  | 2'8"   | 74                   | 123               |
| IFT-3000                          | 3000      | 11356    | 13'6"                   | 15'    | 12'                      | 15'6"  | 3'     | 87                   | 141               |
| IFT-3500                          | 3500      | 13249    | 13'6"                   | 17'    | 12'                      | 15'6"  | 3'     | 91                   | 145               |
| IFT-5000                          | 5000      | 18927    | 16'10"                  | 16'8"  | 15'                      | 14'10" | 3'8"   | 110                  | 170               |
| IFT-6000                          | 6000      | 22713    | 18'                     | 17'6"  | 16'                      | 15'6"  | 4'     | 122                  | 180               |
| IFT-10000                         | 10000     | 37854    | 21'4"                   | 22'4"  | 19'4"                    | 20'4"  | 4'     | 180                  | 258               |
| IFT-15000                         | 15000     | 56781    | 27'                     | 25'1"  | 25'                      | 23'1"  | 4'     | 252                  | 333               |
| IFT-20000                         | 20000     | 75708    | 24'                     | 29'    | 22'                      | 27'    | 5'8"   | 325                  | 410               |
| IFT-25000                         | 25000     | 94635    | 24'                     | 36'    | 23'                      | 35'    | 5'8"   | 440                  | 528               |
| IFT-50000                         | 50000     | 189271   | 23'11"                  | 65'    | 22'9"                    | 63'9"  | 5'8"   | 780                  | 820               |
| IFT-100000                        | 100000    | 378541   | 61'3"                   | 61'9"  | 59'3"                    | 59'9"  | 4'     | 1519                 | 1668              |

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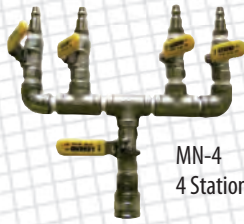




# ACCESSORIES



MN-2  
2 Station Manifold



MN-4  
4 Station Manifold



MN-8  
8 Station Manifold



IHA - Inflation Hose Assembly  
(3/8" x 50' w/ SS Quick Disconnects)



IYA - Inflation Yoke Assembly



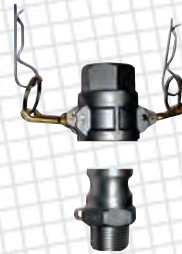
Integrated Inflation System:  
• (1) IYA  
• (1) MN-2  
• (2) IHA



SSBV - Stainless Steel Ball Valve:  
• 1/4" NPT  
• 3/4" NPT  
• 1 1/4" NPT



SSQD - Stainless Steel Quick Disconnect



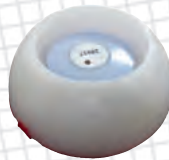
3/4" Cam-Lock Coupler



Shackle: 5/8" to 2"



PDV - Plunger Dump Valve



PRV-L  
Pressure Relief Valve



PRV-F  
Pressure Relief Valve



PRV-S-HV  
Pressure Relief Valve



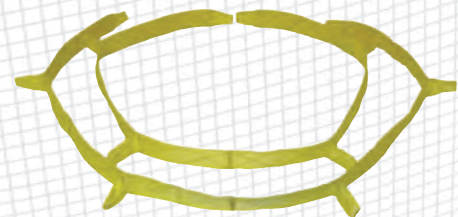
PRV-S  
Pressure Relief Valve



Minor Repair Kit (Part # RK)



Major Repair Kit (Part # MJRK)



FS10 - Flex Straps 3" x 10':

- The SUBSALVE Flex strap is 3" by 10' heavy nylon lift strap with 6 lift eyes per strap
- 6000lb Safe working load per eye
- 2 straps per set

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- Custom sizes available.
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# CLIENTS

## GOVERNMENT CLIENTS

Argentinean Navy  
Australian Navy  
Austrian Navy  
Bureau of Alcohol, Tobacco & Firearms  
Canadian Coast Guard  
Canadian Force Army Dive Centre  
Canadian Navy  
Chilean Navy  
Connecticut State Police  
Danish Defence  
E.P.A.  
Ecuadorian Navy  
Estonian Navy  
F.B.I.  
Finnish Navy  
German Navy  
Greek Air Force  
Indian Navy  
Israeli Navy  
Italian Navy  
Japanese Defense Agency  
Joint POW/MIA Command  
Kentucky State Police  
Korean Maritime Police  
Maine State Police  
Mexican Navy  
Michigan State Police  
Moscow Airport  
N.A.S.A.  
N.O.A.A.  
National Marine Fisheries  
National Park Service  
Naval Undersea Warfare Center  
New York State Police  
New Zealand Navy  
Norwegian Navy  
NSPA NATO  
Panamanian Navy  
Peruvian Navy  
Portuguese Navy  
Romanian Navy  
Royal Canadian Mounted Police  
Royal Thai Navy  
Saudi Arabian Government  
Saudi Navy  
Singapore Navy  
South Carolina Law Enforcement  
South Korean Navy  
Spanish Navy  
State of Qatar  
Swiss Military  
Tawain Navy  
Tennessee Valley Authority  
Turkish Air Force

Turkish Air Logistic Command  
U.A.E. Government  
US Air Force  
US Army  
US Army Corps of Engineers  
US Border Patrol  
US Coast Guard  
US Department of Interior  
US Geological Survey  
US Navy

## INSTITUTIONAL CLIENTS

Audubon Society  
Brigham Young University  
Broward College  
Canadian Forces School of Military Engineering  
College of Oceaneering  
Florida Institute of Technology  
Florida State University  
Indiana University  
Institute of Nautical Archeology  
Louisiana Technical College  
National Polytechnic College of Engineering  
& Oceaneering  
Oregon State University  
Pennsylvania State University  
Scripps Institute of Oceanography  
Texas A&M  
University of Alaska  
University of Azores  
University of Bremen  
University of California  
University of New Hampshire  
University of North Carolina  
University of Wisconsin  
US Merchant Marine Academy  
US Navy EOD Training School  
Webb Institute  
Woods Hole Oceanographic Institution

## COMMERCIAL CLIENTS

Aceryg US, Inc.  
ADS Inc.  
American Diving Supply  
Amron International, Inc.  
Aqua Air Industries, Inc.  
Aqua Lung  
Aquatica  
Arco  
Atlantis Submarines  
Bauer Compressors, Inc.  
Beauchat International  
Bisso Marine Co., Inc.  
Blue Ocean Tackle, Inc.  
Cal Dive International  
Casco Antiquo  
CBS Entertainment - CSI Miami  
Chaxton  
Chevron  
Cold Water Divers Inc.  
Con Edison  
Conrad Industries, Inc.  
Deca Diving Equipment of America

Deutsche Unterwasser  
Discovery Channel  
Disney Cruise Lines  
Dive Commercial International, Inc.  
Dive Rescue International  
Divers Supply, Inc.  
Divex  
Duke Energy  
Exxon  
Geico Insurance  
General Dynamics  
General Motors  
Global Diving & Salvage, Inc.  
GPC  
Halliburton Subsea  
High-Tech Diving & Safety, Inc.  
Interspiro  
Jack Vilas & Associates, Inc.  
James Cameron  
Kirby Morgan Dive Systems, Inc.  
Lifeguard Systems, Inc.  
Lockheed Martin  
Lufesa Divers  
Mainstream Commercial Divers, Inc.  
Matjack  
McCallister Towing  
McDermott Caspian Contractors, Inc.  
Metro Goldwyn Mayer  
Modern Continental Construction  
Monterey Bay Aquarium  
Moran Towing  
Myto S.R.L.  
Nippon Kaiyo Co., Ltd.  
Northrop Grumman  
Oceaneering International, Inc.  
Oracle Team USA  
Pacific Commercial Diving Supply  
Phoenix International  
Resolve Marine Group, Inc.  
Rovsco, Inc.  
SAIC  
Sea Tow International  
Submarine Manufacturing & Products LTD  
Subsea 7  
Swiber Offshore  
Synergy Diving & Equipment  
Technip  
The Ocean Corporation  
Titan Maritime, LLC  
Tow Boat US  
Trim Systems  
Trinity Yachts, LLC  
Underwater Construction Corporation  
United Space Alliance  
United Technologies  
Universal Studios  
Vessel Assist  
Vetter GMBH  
Warner Brothers





# PHOTO GALLERY



Draft reduction for newly constructed tugboat launching using Salvage Pontoons 40,000 lbs. and Salvage Pontoons 70,000 lbs.



Custom Vertical Pontoons manufactured to allow accurate horizontal control during large pipe and valve maintenance and assembly.



Professional 4,000 lbs. Lift Bags raising 5 ton marble column sections from a 200 BC Roman shipwreck off of Turkey.



Divers re-rigging Enclosed Flotation Bags 2,000 lbs. on James Cameron's Deepsea Challenger.



Enclosed Flotation Bags 6,000 lbs. used as pneumatic jacks/skids to remove and re-launch a grounded crewboat.



Raising Wayne Newton's yacht with Professional Lift Bags 12,000 lbs. and Enclosed Flotation Bags 6,000 lbs. Metropolitan Marine Solutions, Arizona, USA.



Lowering instrumentation using Enclosed Flotation Bags 500 lbs. and Enclosed Flotation Bags 6,000 lbs.



Salvage Pontoons 4,000 lbs. being used on an ocean wave energy system.



Fend Air Inflatable Marine Fenders on custom motor yacht.



Shallow water wreck removal using clusters of Enclosed Flotation Bags 2,000 lbs.



Roof load testing using Enclosed Water Load Test Bags.



Installation of oil pipeline in the Middle East using Salvage Pontoons 6,000 lbs.



Small aircraft salvage using Enclosed Flotation Bags 2,000 lbs.



Yacht salvage using Salvage Pontoons 2,000 lbs. and Salvage Pontoons 20,000 lbs. Photo credit: Vessel Assist - San Diego.





# SUBSALVE USA

SUBSALVE USA is the world-leading innovator in buoyancy and engineered inflatables delivering the best products available all totally manufactured in the USA.

SUBSALVE USA has patented and trademarked designs, and is America's #1 manufacturer of standard and custom underwater flotation devices. SUBSALVE has created systems for every branch of the U.S. Military in addition to more than 30 foreign navies, militaries and governments.

SUBSALVE USA manufactures open bottom, enclosed and custom flotation devices. Standard bags are available in lift capacities from 25 to 100,000 lbs. as well as custom flotation devices and systems for special applications that exceed the capabilities of our standard products.

Each SUBSALVE USA product is tested prior to shipping, and must meet rigorous U.S. Department of Defense requirements and compliance with IMCA Standards.

Our other products and brands include:

**MARK V/ORCA**

**VEHICLE RECOVERY SYSTEMS**

**WATER WEIGHT TEST BAGS**

**AIRCRAFT LIFTING BAGS**

**PIPE PLUGGERS®**

**INFLAT-A-TANK®**

**FEND AIR®**

**RAPID RECOVERY SYSTEMS**

**CABLE & PIPELINE FLOATS**

**PROPELLER BAGS**

**BOMB RECOVERY SYSTEMS**

