

# ~ SEA-HORSE ~

***An Effective Deepwell Management Tool  
Safe Drilling Enhancement***



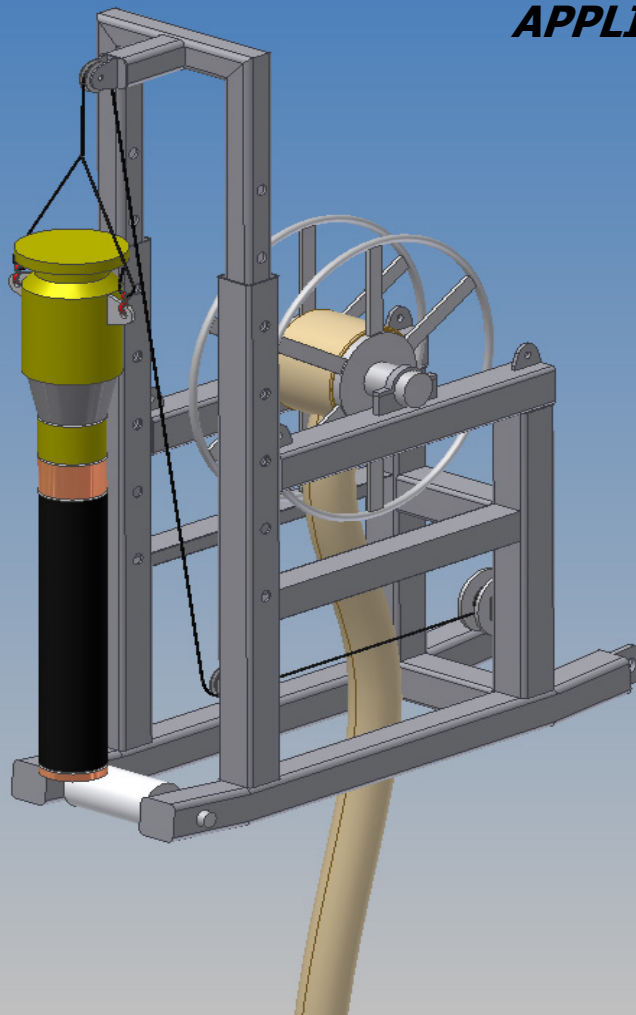
**SEA TECHNOLOGY, Ltd.**

*A division of Alexander/Ryan Marine & Safety Co.*

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ADVANCED OFFSHORE DRILLING ENHANCEMENT TOOLS

***PLATFORM & PLATFORM RIG  
APPLICATIONS***





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# Deepwell Sea Delivery System

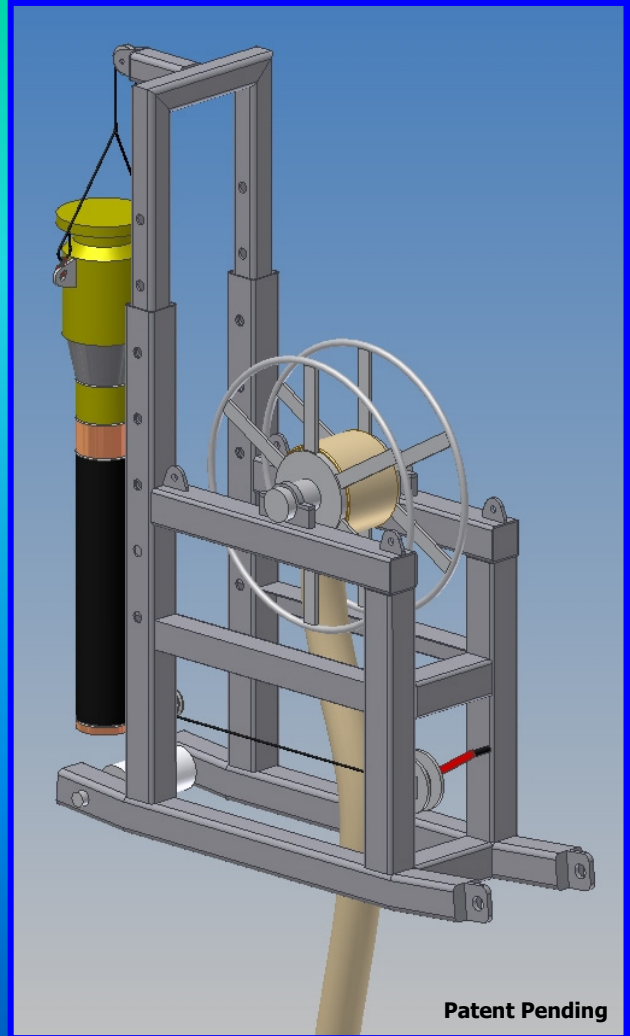
*An Effective Deepwell Management Tool*

*Safely Delivering Seawater to Your Offshore Rig*

## Features & Benefits

- **SAFE:** Allows safe deployment and extraction of submersible deepwell pumps.
- **ONE-MAN OPERATION:** Easy to use and quick infield maintenance.
- **PLUG & PLAY:** Modular design makes switching out components quick and easy.
- **LIGHT WEIGHT:** Small size allows easy mobility of the unit around and under decks.
- **MOBILE:** Easy to maneuver around on decks.
- **MODULAR:** Simple to integrate into platform decks and rig components.
- **SAVES SPACE:** Much smaller footprint than any other delivery system.
- **EASY PUMP CHANGE OUT:** Quick and easy deployment of deepwell pumps. Jib assisted.
- **EFFECTIVE:** Seawater delivery pump rates can be designed for as high as 1,500 gpm.
- **DURABLE:** Designed to withstand the harsh seawater environment.

## Sea-Horse



## System Description

The **Sea-Horse** is a new seawater delivery tool designed to eliminate the hazards and inefficiencies associated with current delivery systems. This lightweight system utilizes technologies from other industries to minimize weight and space consumption. Seawater is delivered to offshore elevated structures through a unique compact flexible conduit deployed from a streamlined reeling system. The pump is plugged into the feeding end of the conduit, lowered into the water by the delivery reel and turned on with soft-start powering. The conduit is a specially designed fire resistant bundle incorporating safety cable and electrical cable. The reeling system is easily operated by one worker and is mounted near handrails on the edge of a deck or over deck openings for easy installation and maintenance. Each reel and conduit system weighs between 1,500 and 2,000 lbs with a small footprint of 3 ft (W) x 6 ft (L). The unit is easily pushed or pulled into position and has a built in adjustable jib to handle the deepwell pump.

# Deepwell Sea Delivery System

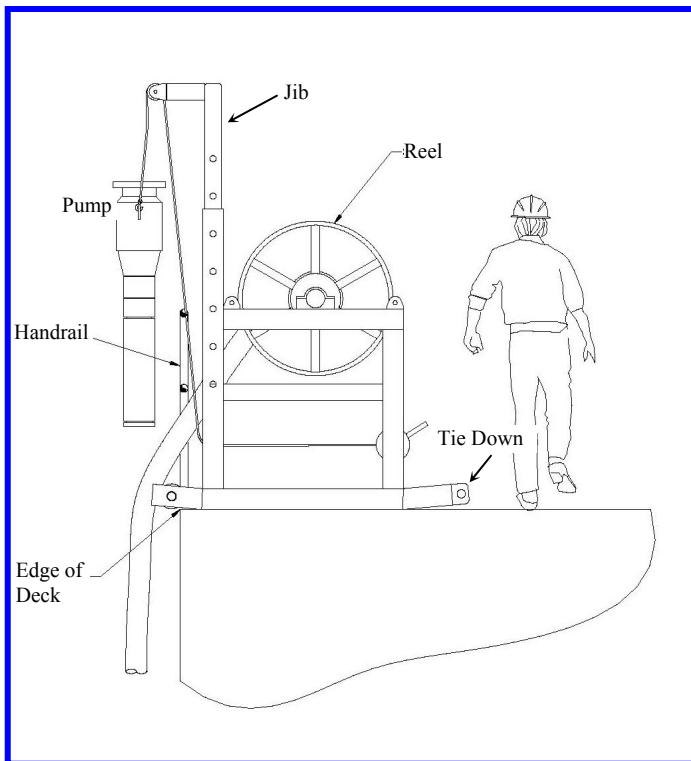
*An Effective Deepwell Management Tool*

## System Overview

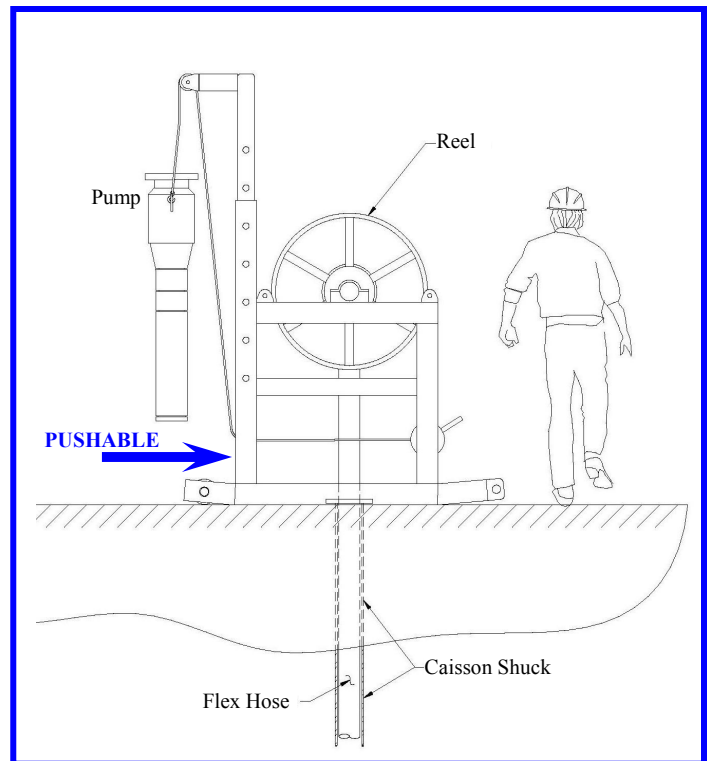
- Delivery**.....Up to 1,500 gpm flow rate, depending on head, motor and pump combination.
- Unit Size** .....Compact 3 ft (width) x 6 ft (length) per reel.
- Unit Weight**.....1,500 to 2,000 lbs per reel with hose. Easy to maneuver and secure.
- Reel**.....Reinforced drum holds a single row of hose totaling 3 ft diameter when spooled.
- Hose**.....High strength, 4" flexible flat hose bundle with integrated shielded power cable.
- Driver**.....10 hp electric AC motor with designed gear reducer.
- Gear Reducer** .....Modular worm gear provides high stall and running torque.
- Hoisting Speed** .....Pump is retrieved at an average safe speed of 30 ft per minute.
- Brake**.....Inherent braking system with worm gear drive. Manual parking locks.
- Control Box** .....Pump On/Off switches in composite box to control deepwell pumps.

## SEA-HORSE

### DECK EDGE POSITION



### INBOARD POSITION



Patent Pending

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# SEA-HORSE

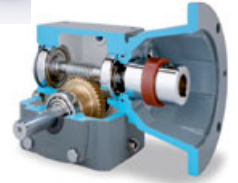
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## Equipment Specifications

### Motor Drive

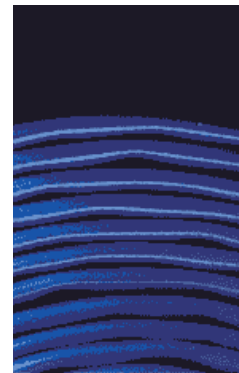
- 10 hp 480 volt 3 phase AC motor drive.
- Modular Worm or Helical Beveled Gear designed for low RPM and high torque.
- Reel hoisting capacity to 2,000 lbs.
- High strength output shaft.



Worm or Helical Bevel Gear

### Hose Bundle

- 4" flexible flat hose bundle with an integral textile reinforced rib for location of the power cable strapping system.
- Manufactured from high strength synthetic yarns, circular woven and totally encapsulated in a tough high performance continuous woven, polymer elastomer coating.
- The thermoplastic elastomer composite lining and cover for high abrasion resistance to saltwater.
- Flexible shielding cover and high strength support cables.
- Conduit bundled with plug and play features.
- Ultimate Actual Tensile Strength 26,500 lbs
- Max working pressure 370 psi and 825 psi burst rating.
- Maximum stretch - 2% of length.
- 5-year manufacturer's warranty.



Coiled Flat Hose

### Bearing

- UHMW bearing. A self-lubricating polyethylene with very low friction coefficient, outstanding impact strength, no maintenance and no rusting.

### Brake

- Inherent braking system with worm gear drive or motor brake in Helical Beveled Gear system. Manual parking locks.