

**SEA CATCH** TOGGLE RELEASE

Standard design for shackle release. Models from .65 to 600 ton SWL.



Standard Series



New "M" Series for release of line or cable.

**McMillan DESIGN, INC.**

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most innovative design in quick release history. This is a device designed exclusively for safe release under load, the Sea Catch Toggle Release. Key to its success are the combination of a proven toggle linkage principle, low friction, computer-generated parts and a great deal of thought on what jobs it may be a good fit for.

These include such tasks as when a sea plow was launched safely in the Atlantic; a flowline bundle installed safely on the seabed of the Gulf of Mexico; a telescope "crashes" safely during filming of a Batman/Robin movie; the safe lowering of Oceanographic equipment for NOAA; tug/barge operations are now safer for Great Lakes Dredge and Dock Company as are submarine acoustic testing operations for the US Navy.

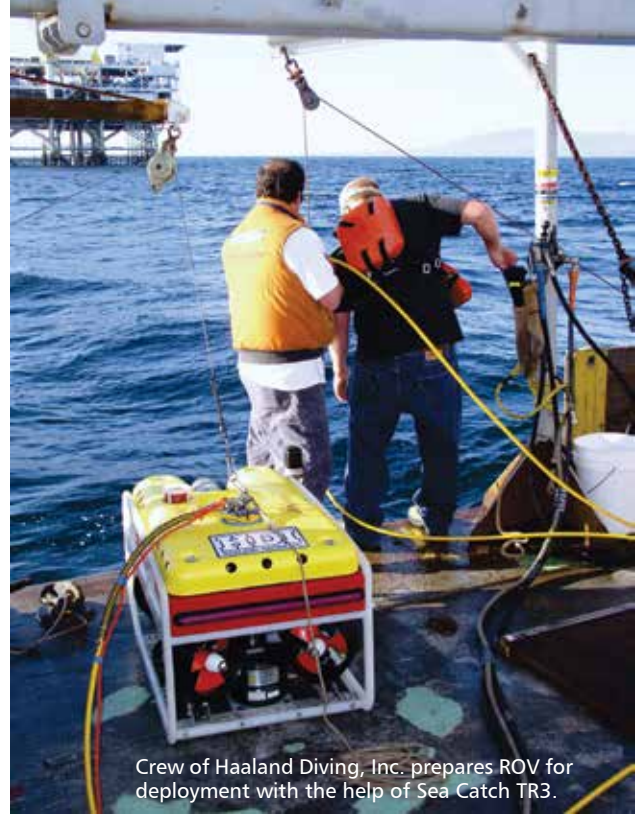
And in fact quick releases also have to be specific. Movie special effects, purse seine operations, rescue launch deployment, and equipment weighing 20 tons each pose very different challenges. Sea Catch meets those hurdles with models

ranging from .65-ton capacity to the TR18 with a 77.11-ton capacity. Since 1994 Sea Catches have played significant roles in safer releasing operations in many industries around the world. Some units have exceeded 5,000 cycles and are still in service.

Sea Catch's Model TR7 is an especially good fit for many industries and situations. The Sea Catch toggle release is a device designed exclusively for the safe release of a line or object under load. The unit's multi-purpose design offers a combination of features never seen before in a quick release, including multi-directional releasing, on and off load releasing, as well as a hitch-pin safety lock to prevent inadvertent release for maximum safety.

Parts crafted from aerospace-grade stainless plate are found in the unit, along with an ability to make easy connection to common shackles, a lack of any springs, and an amazingly user-friendly size – 3.7 inches by 6.5 inches. And this equipment is the world's only quick release using the toggle linkage principle as an in-line release mechanism. And each Sea Catch model is designed to be used with a specific common shackle size.

Typically, one shackle connects to the jaw end and one of the same size to the rear end of the unit. The one at the jaw end will be released when activat-



Crew of Haaland Diving, Inc. prepares ROV for deployment with the help of Sea Catch TR3.

ed. The TR7 takes a pair of 5/8" sized shackles and is rated for an incredible 7,042 pounds. The release lever is closed, which in turn pushes the jaw shut, subsequently encircling the pin of the shackle and locks over the center like a pair of vice-grip pliers.

The device is now firmly locked and the seven thousand plus pound load can then be applied to the shackles themselves. When the time comes to release the load, the lanyard is pulled – opening the release lever – which in turn brings the toggle linkage back over the center line; the load is safely released from the device. Safety is an important part of this innovative link's design. As the company points out on their website, "safety occurs with a Sea Catch release."

As mentioned above, all Sea Catch parts are longitudinally cut from aerospace-grade 15-5 PH stainless steel plate. Its Rockwell hardness is between 34 & 42 after heat treat. Precipitation hardening (PH) stainless steels are chromium-nickel alloys. 15-5 PH stainless steel offers a combination of high strength and hardness, good corrosion resistance plus excellent transverse mechanical properties. 15-5 is the ferrite-free version of 17-4 stainless steel. Both are used in the production of Sea Catch products and both are widely used in the aerospace, chemical, petrochemical, food processing, paper and general metalworking industries.

Pins are turned from 15-5 stainless steel round stock. All material is air-



Sea Catch TR7 being tested for Swedish Navy's rescue and tow operations. Hitch pin in safety position, attached to the release lanyard enabling removal remotely.

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