CSW-7 Portable Electric Winch

The CSW-7 is an electric winch designed for use in oceanographic and geophysical research. This model is capable of lifting and lowering most small instrumentation payloads, while remaining light enough for four people to transport. It has a drum capacity of 1000 m of 0.25" cable. A slip ring adapter can be added to accommodate Mercotac slip rings or Klein sonar (modified Focal Technologies 180) slip rings. For Focal Technologies Model 180 fluid slip rings, please refer to the CSW-8 winch.

Typical uses: CTD profiling, side scan sonar towing, Rosette water sampling and seafloor coring

Models:

1 HP to 3 HP permanent magnet motor @ 90/180 VDC (1.5 HP to 3 HP @ 180 VDC only) with regenerative drive controller powered by 110/220 VAC

***Please specify: cable diameter and length, desired line speed, and load capacity

Features:

- 90/180 VDC models use 110/220 VAC and a regenerative drive controller (NEMA 4 case) with overload protection and 10 ft cable
- Frame dimensions are 27" L x 20.5" W x 23.5" H (24.5" W with footpads at bottom)
- With 22 inch reel, overall height is approximately 37"
- Nominal weight 210 to 285 lbs (without cable) depending on motor and gearbox selected
- Positive action "dog-clutch" allows free-wheeling for towing and paying out of line
- Torque adjustable manual disc brake for towing
- Shear pin lock
- Manual hand crank backup
- Drum capacity variable dependent on core selection, e.g. 600 m of 0.315" line
- Slip ring ready - two to eight conductor slip rings are available
- Watertight 3H Sub Sea connectors used on all connections except 110/220 VAC
- Wooden shipping and storage box

Options:

- Powered level wind
- Removable cable feed
- Slip rings
- Greater line capacity

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CSW-9 Multipurpose Electric Winch

The CSW-9 is the mid-sized winch in the CSW-series winch product line. Designed as a portable electric winch for oceanographic and geophysics applications, this model is capable of lifting and lowering many instrumentation payloads (300 lbs typical). It is typically used to perform CTD profiling, instrument towing, and water sampling.

The CSW-9 is commonly employed with lightweight instruments on long cable lengths or heavy instruments on very short cable lengths. It fills the gap between the lightweight and heavyweight models in the CSW-series.

Features:

- Powder coated aluminum frame, anodized or powder-coated aluminum, stainless steel and engineering thermoplastic components
- Cargo strap lifting points, removable carrying handles
- Available for motors from ½ HP to 2 HP
- Powered by 110 VAC (up to 1 HP) or 220 VAC, 24 VDC (½ HP only)
- On/off drive-line coupler for freewheeling capability
- Manual disc brake
- Shear pin lock for towing (shear pin provided by customer)
- Manual hand crank backup
- Upright configuration for ease of use with small vessels and close-set davits
- Watertight sub-sea connectors (except 110/220 VAC plug)

Available Sizes:

- Typical CSW-9 footprint: 23” L x 20.5” W (58 cm x 52 cm)
- Typical CSW-9 overall height: 36” (90 cm)
- Available with drum flange diameters: 18”, 19” and 20” (45, 48, 51 cm)
- Available with core diameters of 6”, 8”, 10”, 12” and 14” (17, 22, 27, 33, 36 cm)
- Standard core width of 12” (30 cm)
- Nominal weight without wire: 190 lbs (86 kg) without optional features
- Typical cable capacities: 200-300 meters of polyurethane jacketed multi-conductor

Options:

- Powered mechanical level wind for smoother cable spooling with short fair lead distances
- Slip ring adaptors and stainless steel cage for customer supplied slip rings
- AGO-SR series stainless steel slip rings with military style IP67 connectors or MCBH connectors
- Control system options: dual controls, emergency stop switch, extended cables

All A.G.O. Environmental winches are built as customized versions of standard models, specifically outfitted to meet customer cable, payload and operational requirements. When enquiring, please specify: cable diameter, bend radius and length (or provide a cable manufacturer's specifications sheet), desired line speeds, payload information and operational information such as available power supplies, towed or profiling operations and generic transportation information (small craft, inshore, offshore, ATV, truck, helicopter, man-pack).

SHARK MARINE
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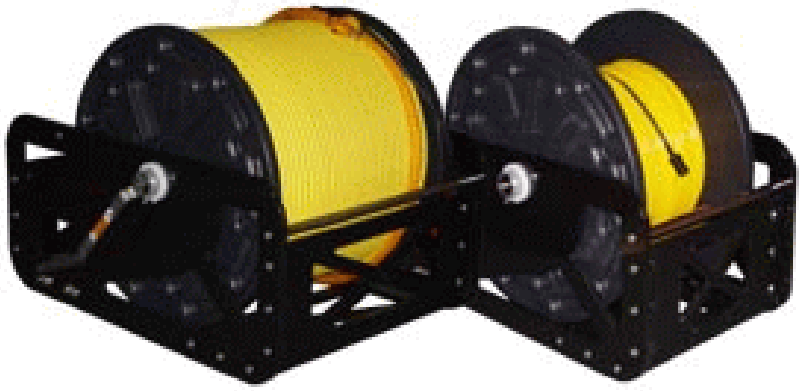
CABLE REELS

Features

- strong
- durable
- light weight
- low cost
- corrosion resistant materials
- base unit 23 kgs.

Options:

- powered with remote hand control
  - lifting bar
  - level wind
  - encoder
- easy changing of cables
- same cable can be used with or without the reel system



These reels will handle cables for small ROVs, camera systems, sonar equipment as well as many other applications. They are available in two drum sizes (11" x 24" and 19" x 24" both with 11 inch cores). Options included, power or manual drive, level wind, lifting bar, and an encoder for metering the cable payout.

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Reel Specifications:

Reel Size	29.2cm/11.5inch	48.25cm /19inch
Height :		
without handle	64.75cm /25.5 inches	64.75cm /25.5 inches
with handle	82.5cm 32.5 inches)	82.5cm /32.5 inches
Width	58.4cm (23 inches)	75cm /29.5 inches
Length	87.6cm (34.5 inches) without drive motor	87.6cm /34.5 inches without drive
	90.17cm (35.5 inches) with drive motor	90.17cm/35.5 inches with drive motor
Weight	22.25kg(49 lbs) empty no drive motor	24.5kg /54 lbs empty no drive motor
	36kg (79 lbs) empty with drive motor	38kg/84 lbs empty with drive motor
Drive Speed	Maximum 73m/min(240ft/min) Minimum 3.5m/min(12ft/min)	
Bollard Pull	Max 45.3kg (100lbs) (Adjustable)	

Options

Motor Drive: weather resistant 120vac, ½ hp DC motor, with variable speed & dual directional hand control. Drive Speed Maximum (240ft/min),Minimum (12ft/min) Minimum power required 450w 120 vac.

Level Wind: manages the cable during input and output to ensure an even wind on the reel.

Cable Encoder: tracks the cable output and displays it on the controller or optional RS-232 output to computer

Optional deck cable/hand controller pouch.

Capacities for common Shark Marine cables

Core Size	Sonar .320	Camera .400	Stealth .550	SeaWolf .830
24"x10"x11"core	2500'	1500'	500'	250'
24"x19"x11"core	5000'	3000'	1500'	500'

Figures are based on a perfect wind to the outside edge of reel.

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CONTAINED CABLE REEL

Features

- strong, durable
- portable
- corrosion resistant materials
- power driven
- variable speed
- bi-directional
- remote hand control
- level wind
- cable encoder and display with optional RS232 o/p
- 25' deck cable
- tie-down bars
- caster option
- reel removal tool
- standard 12 contact slip-ring

The Contained Cable Reel is designed for easy handling and storage of smaller diameter cables. It's an all-in-one tethering solution for camera systems, scientific instruments, sonar equipment and many other applications. The easily transportable unit includes a 1 Hp bidirectional variable speed drive with a maximum speed of 1 m/s, a variable gearing level wind system, slipring and a built in encoder with shive for monitoring the cable payout

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Reel Specifications:

Reel Core Size: 27 cm (10.625inches) core dia. x 27.94 cm (11 inches) wide

Container Height :

without Castors	64.77cm (25.5 inches)
with Castors	67.31cm (26.5 inches)
Width	68.58cm (27 inches)
Length	68.58cm (27 inches)
Weight	88.73kg (195 lbs) empty with drive motor
Drive Speed	Maximum 73 m/min (240'/min)
	Minimum 3.5 m/min (12'/min)
Bollard Pull	Max 91kg (200 lbs) (Adjustable)

Optional deck cable/hand controller pouch.

Contained Reel Capacities for common Shark Marine Cables

Cable Size	Sonar (Steel) .190"	Sonar (PU) .320"	
Total Length	5500'	2000'	

Figures are based on a perfect wind to the outside edge of reel.

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CSS Stainless Steel Cable Reels

Shark Marine's Stainless Steel cable reels are a perfect compliment to their underwater video, and sonar systems. The reels are available with either a standard manual wind or electrically powered with an assortment of slip-rings to select from. The motorized units include a remote hand controller. Deck mounting brackets are also supplied.
Other options available; level wind system, cable encoder with display or USB input and cable clamps. Various models and sizes are available depending on the users requirement. If an off-the-shelf reel will not work for your application, Shark Marine has the capabilities to design a custom unit to meet your requirements.

Specifications:

Model	CSS-1124	CSS-1924
Spool Size	13” dia. 11” wide with 24” dia sidewalls 350m dia, 279mm wide, 609 dia sidewalls	13” dia. 19” wide with 24” dia sidewalls 350m dia, 483mm wide, 609 dia sidewalls
Cable Capacity	5mm dia = 500m 10mm dia = 300m	5mm dia = 850m 10mm dia = 500m
Electric Drives	1 hp = 200lb pull 1.5 hp = 300lb pull	1 hp = 200lb pull 1.5 hp = 300lb pull
Slip-rings	12, 18, 24 or 36 contact	12, 18, 24 or 36 contact
Dimensions	28" long x 30" wide x 30" high	28" long x 38" wide x 30" high
Weight	with 1 hp motor	with 1 hp motor

Available options:
Electric Drives 1 or 1.5 hp
Level wind system
Cable encoder with display or optional USB o/p to computer
Extra Deck cable – dependent on cable used
Extra Mounting brackets

Model CSS-1124K or 1924K
Specific for Klein models 3900-5000 series side-scans.
Includes12 contact slip-ring with waterproof connector to mate with Klein cable