



Hypro
MARINE

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Hypro MARINE



Image courtesy of Sunseeker International

With over 40 years' experience specialising in boat control Hypro Marine has grown to be one of the most respected marine equipment specialists. Hypro Marine's core business has always been designing and manufacturing hydraulic/electronic steering for some of the most well-known and prestigious vessels in the world including Sunseeker and the RNLI.

Hypro Marine has a dedicated technical team and workshop that can calculate the required steering a boat requires. We also are able to overhaul existing equipment and are a Dometic Marine SeaStar Authorised Hydraulic Service Centre.

Hypro Marine also specialise in distribution of quality marine products with a unique selling proposition. SeaStar Solutions are the world leader in the manufacture of marine steering and we are proud to be their UK distributor. Along with SeaStar we have Lectrotab Trim Tabs, Shark Seats, Tectrax, Q-SPD, Glendinning Cablemaster, Zipwake Interceptors, Schmitt Steering Wheels and SeaStar Jackplates.

Our team are ready to take your call or email:

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Hypro Marine | Power Steering

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Hypro MARINE



Image courtesy of Sunseeker International

Engine Driven | Power Steering

Uncompromising in performance & reliability - manufactured by Hypro Marine.

Hypro Marine manufactures some of the most innovative engine driven pressurised systems on the market, as a result of the team's commitment to upgrading & improving the technology over the years. These systems are specified by many luxury yacht builders, coastguard and rescue organisations worldwide.

Hypro Marine has refined these steering systems to make them more compact, lightweight and responsive, without compromising on strength and performance and with fewer components to simplify the installation process.

We have two bulkhead reservoir sizes and three standard servo power cylinder sizes to suit torques to in excess of 90,000lb in @ 35°. Power pumps are available to directly fit on to most popular engine or gear box makes/models or can be specified to come fitted to the engine prior to delivery. Single or twin pumps can be used and a pressure and flow conditioning valve to suit is coupled to the bulkhead mounted reservoir.

An optional autopilot control valve is also available as part of the bulkhead reservoir. Systems are multi-station capable and because they operate with a pre charge pressure, the helm pumps are all fully sealed, not vented. In the event of loss of drive to the power pump, these systems automatically revert to manual wheel steering. Systems offer nominally three to four turns lock to lock extremely responsive fingertip effort steering.



Image courtesy of Fleming Yachts

Electronic | Command Steering

Quite simply a steering revolution.

Hypro Marine's electronic command steering (ECS) is a power-assisted steering system devised to significantly reduce installation and commissioning times for boat manufacturers and eliminate costly clean up procedures due to accidental leakage.

Hypro Marine has replaced the traditional hydraulic helm with an electronic helm, which is connected to an electronic power unit via a single pre-made wiring harness.

The ECS operates without the need to run multiple hoses and hydraulic oil throughout the boat, thereby eliminating potential concerns regarding air removal and oil leakage.

No set up procedure or calibration is required for installation and no rudder feedback device is needed. The only hydraulics in the system link the electronic power unit to the steering cylinder.

This system offers nominally four turns lock-to-lock steering at one rev per second, with a positive lock at end of stroke. This lock is replicated at the other control stations in the system. The result is highly responsive fingertip effort steering.

As well as being multi-station capable, options including front or rear mount fixed helm, tilt helm and several forms of emergency back-up are available.

The system has been designed for boats of 12m (40ft) and upwards in length.

Hypro MARINE



Image courtesy of Aluminium Marine Consultants

Independent DC | Power Steering

Simplicity with proven heritage - manufactured by Hypro Marine.

Hypro Marine manufactures some of the lightest, most compact and responsive DC power steering systems available on the market for some of the world's most prestigious motor yacht builders as well as commercial vessel operators.

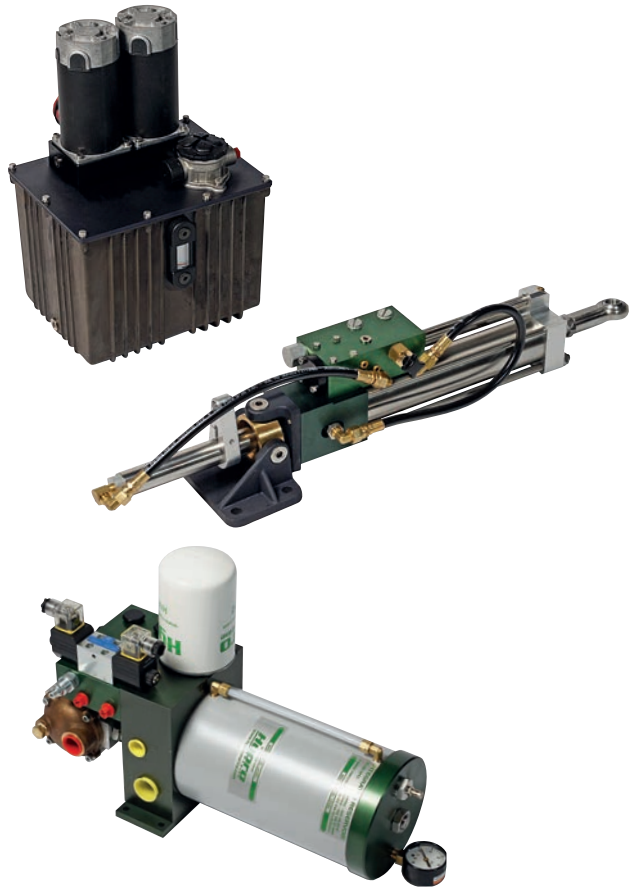
As a standalone system, DC power steering is the ideal solution for boat models with different engine options. Because there is no power reliance from the engine or gearbox, it vastly simplifies the installation process.

Systems are multi-station capable and can be configured as pressurised or non-pressurised. Bleeding can be done manually or by using a 12v automatic power purger keeping commissioning times to a minimum.

We have single and twin motor power pack assemblies with flows up to 10 LPM and three standard servo power cylinder sizes to suit torques to in excess of 90,000 lb in @ 35°. In the event of loss of drive to the power pump, these systems automatically revert to manual wheel steering.

Systems offer extremely responsive fingertip effort steering nominally three to four turns lock to lock.

Lloyds's Register has appraised and certified Hypro Marine 24v DC power steering system circuits to meet their Special Service Craft classification.



Hypro Marine | Service - Repair - Workshop

A service you can rely on.

Hypro Marine has over 40 years' experience in steering systems for boats for leisure and commercial applications. They have the experience and skills to recommend a steering system for your boat whether it be a small rib with a 50hp outboard or a luxury 100ft super yacht.

Hypro Marine has a dedicated workshop with SeaStar Solutions factory trained staff able to advise, overhaul and repair most hydraulic steering components from helms to steering cylinders.

Workshop Features:

- SeaStar Solutions Authorised Service Centre
- Factory Trained Staff
- Over 40 years' experience
- OEM parts used where possible
- Pressure testing available
- Fault finding
- Inspection only available
- Small repairs to full overhaul



BAYSTAR™

With mechanical steering you sacrifice a degree of comfort, traditional hydraulic systems may be more than is needed on lower horsepower outboard engines. Built in the tradition of SeaStar, BayStar brings the same efficiency and durability you would expect from SeaStar Solutions Hydraulic steering to smaller outboards up to 150 HP. Compact and affordable price make it an ideal upgrade for mechanically steered boats up to 150 total HP.

Applications:

BayStar is for single-outboard powered boats rated up to 150 HP, including runabouts and inflatables - and outboard engines with ABYC standard engine tilt tubes up to 150 HP (total). For single station, single engine use only BayStar is not intended for high speed, high performance type boats, such as Bass Boats.

Features:

- Designed just for smaller outboards.
- Low friction hydraulic steering system.
- 5 turns from lock-to-lock
- Balanced cylinder, featuring a compact design that fits most splashwells and provides full engine movement.
- Optional five position tilt helm available.
- Compact helm has only a 5" footprint; needs only 3" dash hole (standard or tilt).
- Packaged complete with helm, cylinder, fittings, tubing, oil, fill kit and detailed instructions.
- Standard 3/4" tapered steering shaft.
- Fast, easy installation.



Kit includes: 1x HC4645-3, 1x HH4314-3, 2x HA5430, 1x HT4420H

BayStar Steering Kits

HK4200A-3	BayStar Steering Kit - 20ft Nylon tube
HK4230A-3	BayStar Steering Kit - 30ft Nylon tube
HK4300A-3	BayStar Steering Kit - no hoses
HK4300A-3/**	BayStar Steering Kit - c/w Hoses

BayStar Components

HH4314-3	BayStar Helm 1.4 Cu.in
HH4514-3	BayStar Plus Helm
HH4513-3	BayStar Tilt Helm 1.4 Cu.in
HC4645-3	Compact Cylinder Compact
HC4647-3	Cylinder (Honda 115/130) Compact
HC4648-3	Cylinder (Short Plate) Compact
HC4658-3	Cylinder (Flipped Plate) BayStar
HC4670-3	Side Mount
HT4420H	BayStar Tubing 20ft (6.1m) x 2
HT4430H	BayStar Tubing 30ft (9.14m) x 2

Accessories

HA5430	Hydraulic Fluid 0.946ml (1 US Quart)
HA5440	Hydraulic Fluid 3.78ltr (1 US Gallon)
HA5438	Filler Kit
HO5090	Spacer Kit
HA5419	20. deg Mount
HA5476	BayStar Back Mount Kit
HP6058	Support Rod Clip & Nut

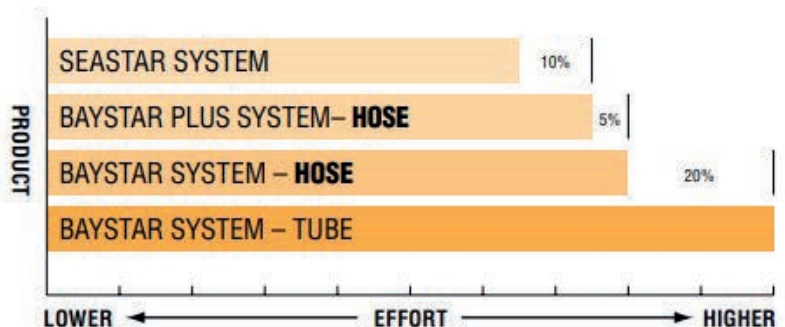




Image courtesy of Wolf Rock

BayStar Helm | Aftercare

225226	Shaft Seals (Current Helms)
600607	3/8" O/D 1/4" NPTF BayStar Helms - 45°
HA5431	Vent Plug
HS5147	Seal Kit - BayStar old style Helm
HS5176	Seal Kit - SeaStar & BayStar HELMS (Current)
HF6011	Orb 45 deg Elbow Kit
HM3186	Helm Nut
HP6032	Helm Service Kit (with shaft nut, key, shaft seal & plate)



BayStar Cylinder | Aftercare

HA4640	BayStar Pivot Plate for HC4645
HA4641	BayStar Pivot Plate for HC4647
HA4642	BayStar Pivot Plate for HC4648
HA4643	BayStar Pivot Plate for HC4658-3
HA5822	Pivot Plate Nut & Bolt Kit
HA5820	Pivot Plate Bushing Kit
HP4600	Cylinder End Gland Kit for HC4645 (Baystar Compact)
HP5607	Seal Kit - BayStar old style CYL. - Port
HP5608	Seal Kit - BayStar old style CYL. - Starboard
HF4201	BayStar Bleed Kit (Old Style)

BayStar Cylinder Pivot Plate

HC4645-3 compact cylinder is included in the BayStar steering kits. This cylinder can be converted to HC4658-3 by following instructions included in the product.

If your engine requires use of a cylinder other than HC4645-3 or HC4658-3, please refer to the chart on page 12 for the appropriate replacement pivot plate, which must be purchased separately.



HA4640

Install to make HC4645-3



HA4641

Install to make HC4647-3



HA4642

Install to make HC4648-3



HA4643

Install to make HC4658-3

SEASTAR

SeaStar Steering (Front Mount Pivot Cylinder) System:

Unmatched comfort and control. Only with SeaStar steering. The world's most popular outboard hydraulic system offers smooth, super-efficient steering for today's high performance hulls with single or multiple outboards up to 700 HP combined. It's the OEM choice for centre consoles, cruisers and more.

Applications:

- General purpose system.
- Single or multiple engine capability.
- Total power to 700 HP.
- Typical applications include centre console fishboats and cruisers.

Steering Features:

- Independent engine tilt for twin engine installation.
- 5 turns lock to lock steering response.
- Patented steering locking valves.
- Low friction hydraulic steering system.
- Standard 3/4" tapered steering shaft.



Use SeaStar Steering Fluid ONLY with SeaStar hydraulic steering systems

SeaStar Helms | Standard Series - 1000 p.s.i. wp

HH5271-3	Front Mount 1.7 Cubic Inch Helm Pump
HH5273-3	Front Mount 2.0 Cubic Inch Helm Pump
HH5272-3	Front Mount 2.4 Cubic Inch Helm Pump
HH5285-3	Front Mount 3.0 Cubic Inch Helm Pump
HH5261-3	Rear Mount 1.7 Cubic Inch Helm Pump
HH5263-3	Rear Mount 2.0 Cubic Inch Helm Pump
HH6541-3	Traditional Tilt 1.7 Cubic Inch Helm Pump
HH6543-3	Traditional Tilt 2.0 Cubic Inch Helm Pump
HH6542-3	Traditional Tilt 2.4 Cubic Inch Helm Pump
HH6145-3	Sport Tilt 2.0 Cubic Inch Helm Pump
HH6192-3	Sport Tilt 2.4 Cubic Inch Helm Pump
HH5217-3	Commercial 1.7 Cubic Inch Helm SS Shaft
HH5224-3	Commercial 2.4 Cubic Inch Helm SS Shaft

Please note: Rear Mount Helms also available, please ask for details.

SeaStar Cylinders

HC5345-3	O/B Front Mount Cylinder (Standard plate)
HC5347-3	O/B Front Mount Cylinder (Honda 115/130)
HC5348-3	O/B Front Mount Cylinder (Short plate)
HC5358-3	O/B Front Mount Cylinder (Flipped plate)
HC5370-3	O/B Side Mount Cylinder
HC5380-3	O/B Splashwell Mount Cylinder
HC5343	O/B Small Catamaran Cylinder
HC5374	O/B Large Catamaran Cylinder

SeaStar Accessories

HA5418	SeaStar Back Mount Kit - square bezel
HA5478	SeaStar Back Mount Kit - round bezel
HA5419	20 deg. Mount
HA5430	SeaStar Hydraulic Oil - 0.946Ltr
HA5440	SeaStar Hydraulic Oil - 3.78Ltr
HA5438	Filler Kit
HA5822	High Strength Tiller Bolt
HF5502	Dual Station Kit
HM3563	Hydraulic Oil - 25Ltr
HO5090	Spacer Kit



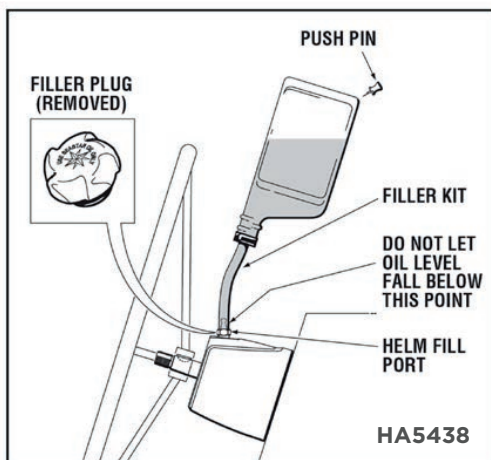
Image courtesy of Ribcraft

SeaStar Aftercare | Cylinder

HS5157	Seal Kit O/B FM CYL c/w END GLANDS and SPANNER
HS5167	Seal Kit O/B FM CYL c/w END GLANDS NO SPANNER
HS5153	Seal Kit O/B Side Mount Cylinder
828045	SeaStar Pivot Plate for HC5345
828047	SeaStar Pivot Plate for HC5347
828048	SeaStar Pivot Plate for HC5348
HF5548	Bleed Nipples for SeaStar O/B Pivot Cylinder-set of 2
600620	St/St 90° Elbow for SeaStar O/B Pivot Cyl.
HM2592	3/8" O/D Tee with 1/4" NPTF on Branch SeaStar Cyl.
HM3284	3/8" O/D Tee with 1/4" NPTF on run SeaStar Cyl
HM3286	Bleed Nipple Assembly for General SeaStar Cyl
HA5822	Tiller Bolts - SeaStar
HA5820	Pivot Plate Bushing Kit
409620	Bleed Tee Kit - Pair, HC5342,5340,5365,5370,5380
828085	Adjuster Nut and Screw
839120	Support Bracket
HP6016	Support Rod - SeaStar - (730229)
HP6033	Hardware Kit, space kit, nuts and washer
HP6036	Hardware Kit c/w Nuts/Washers



SeaStar Aftercare | Helm



HS5176	Seal Kit for SeaStar and BayStar Helms (Current)
HS5151	Seal Kit for SeaStar Helm (Pre-1990)
225226	Shaft Seals
HA5431	Vented Plug
058733	Non Vent Plug (HA5432)
HM3186	Helm Shaft Nut
HM2246/6/4	3/8" O/D 1/4" NPTF 90° Elbo w. S'S and B'S Helms
260126	Woodruff Key
HA5438	Filler Kit
HF6004	ORB 90deg Elbow (2 per pack)
HP6032	Helm Service Kit

BayStar | Application Guide

Manufacturer	Year	Model	Cylinder	Notes
Force	1985–Date	90–150 HP	HC4645H	
Honda	1992–Date	30–90 HP	HC4645H	
Honda	1998–2009	115–130 HP	HC4647H	
Honda	2001 to Date	150 HP	HC4645H	
Honda	2003 to Date	BF135 HP	HC4645H	
Honda	2010 to Date	115–150 HP	HC4645H	
Johnson/Evinrude	1977–1990	65–150 HP	HC4648H	
Johnson/Evinrude	1991 to Date	40–150 HP	HC4645H	
Johnson/Evinrude	1997 to Date	115 HP Ficht	HC4658H	See Notes 4, 5
Johnson/Evinrude	1997 to Date	75–150 HP Ficht	HC4645H	
Johnson/Evinrude	1998 to Date	40–140 HP 4-Stroke	HC4658H	See Notes 1, 4
Mercury/Mariner	1984 to Date	75–150 HP	HC4645H	
Nissan	1990 to Date	120–140 HP	HC4645H	
Suzuki	1986 to Date	150 HP	HC4645H	
Suzuki	1996 Only	115–140 HP	N/A	
Suzuki	1987–2002	115–140 HP	HC4645H	See Note 1
Suzuki	1990–2000	90–100 HP	HC4645H	
Suzuki	1998 to Date	40–70 4-Stroke	HC4645H	See Note 1
Suzuki	2001 to Date	115–140 HP 4-Stroke	HC4658H	See Notes 1, 4
Tohatsu	1990 to Date	40–140 HP	HC4645H	
Yamaha	1998 to Date	40–50 HP	HC4645H	See Note 2
Yamaha	1998 to Date	60 HP	HC4645H	See Note 3
Yamaha	1986 to Date	70–90 HP	HC4645H	See Note 1
Yamaha	1997 to Date	80–150 HP 4-Stroke	HC4645H	
Yamaha	2000 to Date	25–60 HP 4-Stroke	HC4648H	See Note 1
Yamaha	2010 to Date	70HP 4-Stroke	HC4648H	
Yamaha	1997–2013	115A 4-Stroke	HC4658H	
Yamaha	2014 to Date	115B 4-Stroke	HC4645H	
Yanmar	1990 to Date	27–36 HP	HC4645H	

Model Installation Notes:

1. Requires Spacer kit part # HO5090
2. Engine clamp brackets must be cut or ground, and the engine through bolted onto the transom, or interference will occur, restricting engine trim and tilt.
3. Steering hook Yamaha Part # 63D-48511- 14D must be installed.
4. Cylinder HC4645 may be used in these applications. The pivot plate will need to be flipped before installation. Instructions provided with Owner's Manual.
5. Johnson 115 HP 2-Stroke engines, require the pivot plate to be flipped. See Note #4.

SeaStar Application Guide				
Manufacturer	Year	Model	Cylinder	Notes
Force	1985 to Date	90-150HP	HC5345-3	
Honda	1996 to Date	75-90HP	HC5345-3	
Honda	1998 to 2009	115-130HP	HC5347-3	
Honda	1998 to Date	30-50HP	HC5345-3	See Note 1
Honda	2001 to Date	BF200-250	HC5445-3	
Honda	2003 to Date	BF135HP	HC5345-3	
Honda	2010 to Date	115HP	HC5345-3	
Johnson/Evinrude	1977 to 1990	65-300HP	HC5348-3	
Johnson/Evinrude	1988 to 1997	250-300HP V8	HC5342-3	
Johnson/Evinrude	1991 to Date	40-300HP	HC5345-3	Inc. ETech
Johnson/Evinrude	1996 to Date	75-250HP Ficht	HC5345-3	
Johnson/Evinrude	1998 to Date	40-140HP 4-STROKE	HC5358-3	See Note 1
Johnson/Evinrude	2000 to Date	115HP Ficht	HC5358-3	See Note 1
Johnson/Evinrude	2002 to Date	200-225HP 4-STROKE	HC5345-3	
Johnson/Evinrude	2007 to Date	3.3L/3.4L 200-250HP	HC5345-3	Inc. H.O. Models
Mercury	1984 to 1994	2.4/2.5HP EFI	HC5345-3	See Note 2
Mercury	1989 to Date	75-300HP	HC5345-3	
Mercury	1998 to Date	30-60HP	HC5345-3	See Note 1
Mercury	2003 to Date	115-300HP XS	HC6345-3	See Note 3
Mercury	2004 to Date	150-200HP VERADO	HC5345-3	See Note 4, 5
Nissan	1990 to Date	90-140HP	HC5345-3	
Suzuki	1986 to Date	100HP	HC5345-3	
Suzuki	1986 to 2002	115-140HP	HC5345-3	NOT 1996
Suzuki	1986 to Date	150-300HP 2 & 4 STROKE	HC5345-3	
Suzuki	1996 to Date	115-140HP	HC5348-3	
Suzuki	1998 to Date	40-140HP 4-STROKE	HC5358-3	See Note 1
Yamaha	1990 to 2003	40-90 HP 2-STROKE	HC5345-3	See Note 1
Yamaha	1986 to Date	100-300 HP 2-STROKE	HC5345-3	
Yamaha	1997 to Date	80-250 HP 4-STROKE	HC5345-3	
Yamaha	2000 to Date	150-300 HPDI	HC5345-3	
Yamaha	2003 to Date	25-70 HP 4-STROKE	HC5348-3	See Note 1
Yamaha	2007 to Date	200-300 HP 4.2L V6 4-STROKE	HC5345-3	
Yamaha	2007 to Date	F300-F350 HP 5.3V8	HC5345-3	See Note 4
Yamaha	2011 to 2013	F115A	HC5358-3	
Yamaha	2014 to Date	F115B	HC5345-3	

Model Installation Notes:

1. Requires spacer kit HO5090.
2. May require extensive cowling modifications.
3. MUST use High Strength Tiller bolt, part #HA5822. Refer to the notice on this page identifying the high strength bolt.
4. Optional cylinder part # HC5358. Slight interference may occur when using the HC5358, with the engine in the full tilt position.
5. Cylinder part # HC5358 may also be used in these single engine applications, please see note #4 for interference concerns.

SeaStar/Baystar | Hoses & Tubing

SEASTAR/BAYSTAR HOSES & TUBING

SeaStar Steering hoses are a custom multi-layered composite design, engineered specifically for SeaStar systems. They are designed to exceed SAE and ABYC specifications and provide precise steering control not achievable with hydraulic industry standard hoses. SeaStar hoses are engineered to provide the system with very low thermal expansion properties and are kink and abrasion resistant. Due to performance and safety concerns, SeaStar Solutions recommends that **ONLY** SeaStar or SeaStar PRO steering hoses be used in SeaStar Steering Systems. All hoses are made with brass swaged ends, stainless steel ends are also available.

BAYSTAR TUBING (HT4420H/HT4430H)

Can be used with all BayStar helms with appropriate fittings. Kit contains two cut lengths or tubing.



BAYSTAR TUBING KIT HT44xxH

BAYSTAR TUBING KITS

HT4420H 20' Kit (2x 20' lengths of tubing)

HT4430H 30' Kit (2x 30' lengths of tubing)

* Decrease effort by installing Hydraulic Hoses HM3242/XX

BAYSTAR OUTBOARD HOSES

HM3242/XX SeaStar hose with brass swage ends

HM3242/XX/SS SeaStar hose with stainless steel swage ends

replace XX with length required in metres

SEASTAR OUTBOARD HOSES (Sold Individually)

Can be used with all SeaStar Systems, except SeaStar PRO, Capilano and 3-line inboard systems.

HM3320/XX SeaStar hose, bend restrictor with brass swage ends

HM3320/XX/SS SeaStar hose, bend restrictor with stainless steel swage ends



HM3320/XX

SEASTAR PRO OUTBOARD KEVLAR HOSES (Sold Individually)

Can be used with all SeaStar / BayStar Steering Systems.

HM3625/XX SeaStar PRO hose with brass swage ends

HM3625/XX/SS SeaStar PRO hose with stainless steel swage ends

HM3620/XX SeaStar PRO hose, bend restrictor with brass swage ends

HM3620/XX/SS SeaStar PRO hose, bend restrictor with stainless steel swage ends



HM3620/XX

ALL HOSES ARE MADE TO ORDER SO ANY LENGTH IS POSSIBLE

BULKHEAD FITTINGS

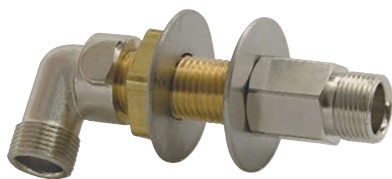
HF5512 Bulkhead Fitting Kit 3/4" Single

HF5516 Black Anodised Bulkhead Pigtail Fitting

HF5556 Single Stainless Bulkhead Fitting

HF5557 Double Bulkhead Fitting St/St Plate

Bulkhead fittings assure a neat hydraulic steering installation. Each hose fitted with an integral bulkhead fitting for tidy routing of hoses through a splashwell bulkhead, helping to eliminate excess loose hose, kinking or chafing.



HF5512 Bulkhead Fitting Kit 3/4" Single



HF5516 Bulkhead Pigtail Fitting



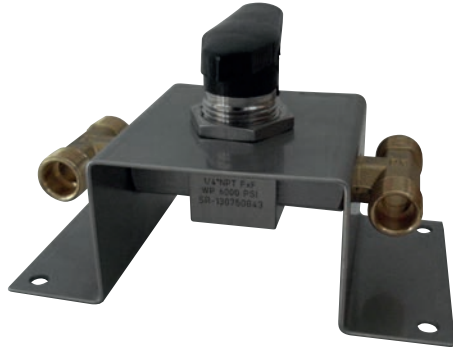
HF5557 Twin Bulkhead Fitting

Tie Bars*

HO5009	Tie Bar - Side Mount Cylinder
HO6001	Tie Bar - Single Pivot Cylinder use with HC5345
HO6002	Tie Bar - Twin Pivot Cylinder use with HC5345
HO6003	Tie Bar - Single Pivot Cylinder use with HC5345
HO6823	Tie Bar - Universal Tournament

* See SeaStar Solutions selection guide for Centre Distances for applications.

Emergency Steering/Synchronising



HM5750 Bypass valve



HYCL-001 4" Long Stabilizer Clips for SeaStar Pro Cylinders (pack of 2)

POWERPURGE

Power Purge Kit Features:

- Steering feel is solid every time.
- 100% portable.
- Powered by 12v battery.
- Quick connect fittings.
- Easy to operate.
- Filter screens help keep contamination out of your steering system.
- Complete Fill & Purge in 10 minutes or less.



Hypro
MARINE



Image courtesy of Kerry Bobin

SeaStar Steering | Pro Series & Tournament

SEASTAR
PRO

SEASTAR PRO STEERING

The ultimate steering for high speed single outboards, SeaStar PRO®, is designed for the high speed and performance of today's top-end bass boats. Recommended for single outboards up to 350 HP (even with jackplates and performance props), SeaStar PRO has steered the BASS Masters Classic® since 1994 and it's the choice of high performance outboard boatbuilders.

APPLICATIONS

Seastar Pro is for high-performance boats with single non-power-assisted outboards up to 300 HP, especially those capable of speeds over 60 MPH, which demand maximum steering control and comfort. It is suitable for use with high-performance propellers and jackplates.

Features:

- Low friction hydraulic steering system. 4.25 turns from lock-to-lock.
- Compact helm has only a 4-7/16" footprint - needs only 3" dash hole (Tilt requires larger hole).
- Optional PRO Cylinders with longer shaft bushings and larger pivot bushings for an even more solid feel!
- Optional hoses with through-bulkhead fittings; multiple helm mounting options Factory swaged hoses are Kevlar® reinforced.

Pro & Tournament Series | 1500 p.s.i. wp

HH5770-3	Front Mount 2.0 Cubic Inch Helm Pump
HH5772-3	Front Mount 2.4 Cubic Inch Helm Pump
HH6574-3	Traditional Tilt 2.0 Cubic Inch Helm Pump
HH6189-3	Sport Tilt 1.7 Cubic Inch Helm Pump
HH6190-3	Sport Tilt 2.0 Cubic Inch Helm Pump
HC6345-3	Cylinder Pro O/B Front Mount Cylinder (Pro)
HYCL-001	Pro & Tournament Stabiliser Kit - 4" Long Clips - Pack of 2
HC6845	Tournament Cylinder
HC6845S	Tournament Cylinder Single
PT1000-1P	Pro Trim Single Function
PT2000-1P	Pro Trim Dual Function



SeaStar Tournament Cylinders

Tournament Series Cylinders & Tie Bars are ESSENTIAL for multi-engine boats

APPLICATIONS

Ideal for nearly any multi-engine outboard-powered boat which sees heavy use. For use with SeaStar helms and hoses.

Features:

- Suitable for use with all SeaStar Helms & SeaStar Power Assist
- Heavy duty universal cylinder.
- Bolt on stainless steel tie bar plates, also reversible (patent pending).
- Robust design with heavy duty support brackets, barrel, shaft & seals.
- Superior corrosion resistance
- New pivot plate design provides smooth articulation and sealed joint (patent pending).
- Heavy duty adjustable tie bar (patent pending)
- Equipped with stainless steel adjustable o-ring sealed elbow fittings which can be easily orientated in any direction.

Tournament Cylinder Tie Bars*

HO6820	Tournament Series Tie Bar - Small
HO6821	Tournament Series Tie Bar - Medium
HO6822	Tournament Series Tie Bar - Large
HO6823	Tournament Series Tie Bar - X-Large
HO6824	Tournament Series Tie Bar - 36"-58"

Tournament Cylinder Kits

HA6802	Hardware Kit - Twin engine, single cylinder STBD
HA6804	Hardware Kit - Twin engine, dual cylinder
HA6806	Hardware Kit - Triple engine, dual cylinder
HA6811	Hardware Kit - Quad engine, dual cylinder
HP6160	Tournament Cylinder Seal Kit

Important Notice:

Each configuration requires a hardware kit AND tie bar kit, with the exception of the single engine configuration.





SeaStar Steering | Power Assist



The Marine Industry is continually introducing heavier outboard engines, higher horsepower engines, more aggressive propellers, bigger and/or faster boats.

SeaStar Power Assist

PA1200-2	SPA System - 15' (4.57m) Harness
PA1225-2	SPA System - 25' (7.62) Harness
PA1315-2	SPA PRO System - 15' (4.57m) Harness
HA1201	Dual Ignition Control Kit
HA1230	Replacement Motor
HA1206	Maxi Fuse 40amp Kit
HA1205	Power Assist Autopilot retrofit kit
799047	Motor Shaft Coupling

Boat Operators are asking for increased comfort and lighter steering loads. These were the driving force behind the design of the SeaStar™ and SeaStar PRO™ Power Assist Unit.

This new and innovative product is highly recommended on any 200 HP and above outboard application, to give your boat the same, easy steering that you are accustomed to in your car.

SeaStar Power Assist Features:

- Dramatically increases steering comfort.
- Reduced wheel effort
- Easy Installation.
- Simple 'add-on' to existing SeaStar manual system (up to 2.0cu. in. helms) Compatible with autopilots.
- Wiring harness included.
- Ignition protected (SAE J-1171).
- Auto recognise system voltage (12v or 24v)
- ABYC, CE, NMMA, ISO 10592 Approved



SeaStar Power Assist with built-in Autopilot

PA6010	SPA System + Type 1 12V Autopilot
PA6020	SPA System + Type 2 12V Autopilot
PA7010	SPA System + Type 1 24V Autopilot
PA7020	SPA System + Type 2 24V Autopilot



Image courtesy of Cobra Ribs

SeaStar | Autopilot & Power Assist Units

The SeaStar Autopilot unit is a fixed flow, reversible type set that uses an internal hydraulic gear pump, producing very little vibration or noise. It is offered in 12 or 24 volt configurations, as well as two different pump sizes (type 1 and type 2). It can be used as a stand alone pilot pump or can be mounted to a previously installed SeaStar Power Assist unit and can prevent the need to break into hydraulic lines.

SeaStar Autopilot Features:

- Long Life DC Motor (i.e. long life brushes).
- Simplified installation.
- ABYC, CE and J1171 compliant.
- Stand alone or mounts to SeaStar Power Assist unit.
- Compact design.
- Low power consumption.
- Superior corrosion resistance.

Autopilot

AP1219	Type 1 - 12v - 60cu.in/min
AP1233	Type 2 - 12v - 100cu.in/min
AP2419	Type 1 - 24v - 60cu.in/min
AP2433	Type 2 - 24v - 100cu.in/min

Smart Stick

AR4502RM	Ray Marine Installations Only - 2.2V to 2.8V
AR4502SI	SimRad Installations Only - 2.8kHz to 4.0kHz
AR4502	Generic - 0.5V to 4.5V





Image courtesy of L3Harris

Inboard Steering Solutions

BayStar Inboard Steering

Built in the same tradition as SeaStar Inboard Steering Systems, these BayStar Systems are designed for relatively low torque inboard applications, including inland waterways and other low speed displacement vessels. The systems are easy to install with “cut to length” tubing. Available in complete kits or by individual components.

SeaStar Inboard Features:

- Regular duty aluminum cylinders.
- Heavy duty brass cylinders.
- Easy installation for single and dual rudder vessels.
- Cylinders supplied with bleeder fittings.
- Two axis articulation.
- Easy autopilot interface.

BayStar Inboard Steering

HC4460-3	BayStar Inboard Cylinder
HH4314-3	BayStar Helm
HT4420H	BayStar Tubing 20ft x 2
HT4430H	BayStar Tubing 30ft x 2



SeaStar Inboard Steering

SeaStar Inboard Steering Systems are engineered and manufactured for all Pleasure and Work Boat applications up to 50ft. with some exceptions. System selection, installation and service is substantially simplified with just three major components – helm, cylinder and tube or hose.

SeaStar has a comprehensive range of available cylinders to handle a variety of Outboard, Sterndrive and Inboard steering applications. These are suitable for both pleasure and commercial applications. Extra steering stations and/or autopilots are easily added.

SeaStar | Inboard Steering

- HH5271-3 Front Mount 1.7 Cubic Inch Helm Pump
- HH5272-3 Front Mount 2.4 Cubic Inch Helm Pump
- HH5273-3 Front Mount 2.0 Cubic Inch Helm Pump
- HH6541-3 Traditional Tilt 1.7 Cubic Inch Helm Pump
- HH6542-3 Traditional Tilt 2.4 Cubic Inch Helm Pump
- HH6543-3 Traditional Tilt 2.0 Cubic Inch Helm Pump
- HH6192-3 Sport Tilt 2.4 Cubic Inch Helm Pump
- HH5217-3 Commercial 1.7 Cubic Inch Helm SS Shaft
- HH5224-3 Commercial 2.4 Cubic Inch Helm SS Shaft



HH6541-3

Please note: Rear Mount Helms also available, please ask for details.

Capilano Stearing Helms | Rear Mount

- HH5250 1.7-3.4 Cubic Inch Helm SS1250V - Variable
- HH5275 2.7-5.4 Cubic Inch Helm SS1275V - Variable

Cylinders

- HC5303-3 BA125-3ATM Jet Drive Cylinder
- HC5312-3 BA125-7ATM - Inboard Cylinder
- HC5313-3 BA135-7ATM - Inboard Cylinder
- HC5314-3 BA150-7ATM - Inboard Cylinder
- HC5319-3 BA175-7TM - Brass Inboard Cylinder (SeaStar Bleed)
- HC5323-3 K-19 Cylinder replacement (Hynautic)
- HC5326-3 BA150-7EM
- HC5328-3 125-8EM - Sterndrive Cylinder
- HC5331-3 92 VPS - Sterndrive Cylinder
- HC5332 BA135-7EM Mercruiser/Volvo Cylinder (non power assist)
- HC5351 BA200-7TMB Brass Inboard Cylinder (Capilano Bleed)
- HC5373-3 BA175-9TM Brass Inboard Cylinder (Capilano Bleed)
- HC5378 BA200-11TMB Brass Inboard Cylinder (Capilano Bleed)
- HC6324-3 I/B Cylinder BA150-3.5ATM



HC5313-3



Images Courtesy of Hardy Marine

Inboard Steering Solutions | Aftercare

SEASTAR™

SeaStar | Cylinder Aftercare

HS5154	Seal Kit - HC5331
HS5155	Seal Kit - HC5313, HC5327 & HC5332
HS5156	Seal Kit - HC5314, HC5326, HC5336
HS5182	Seal Kit - HC5318, HC5369
HS5183	Seal Kit - HC5319
HP5611	Alu Trunion Mount Kit - HC5303, HC5312, HC5313 & HC5314
HP6068	Mounting foot for all brass / inboard cylinders
HP6025	Seal Kit for HC5313-3 & HC5314-3
HP6026	Seal Kit for HC503-3 & HC5312-3
HP6027	Seal Kit for HC5329-3, HC5330-3 & HC5331-3



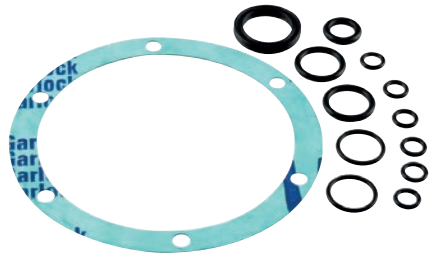
SeaStar | Helm Aftercare

HS5176	Seal Kit for SeaStar and BayStar Helms (Current)
HS5151	Seal Kit for SeaStar Helm (Pre-1990)
225226	Shaft Seals
HA5431	Vented Plug
058733	Non Vent Plug (HA5432)
HM3186	Helm Shaft Nut - 21NC Plated
HM3265	3/8" O/D 1/4" NPTF STR. - SeaStar and BayStar Helms
HM2246/6/4	3/8" O/D 1/4" NPTF 90° Elbow. S'S and B'S Helms
260126	Woodruff Key
HA5438	Filler Kit
HP6032	Helm Service Kit



BayStar | Aftercare

- HS5176 Seal Kit Helm - Current
- HS5147 Seal Kit for BayStar old style Helm (Plastic)
- 225226 Helm Shaft Seal (Current Helms)
- HA5438 Filler Kit
- HP6032 Helm Service Kit



CAPILANO™





Capilano | Helm and Cylinder Aftercare

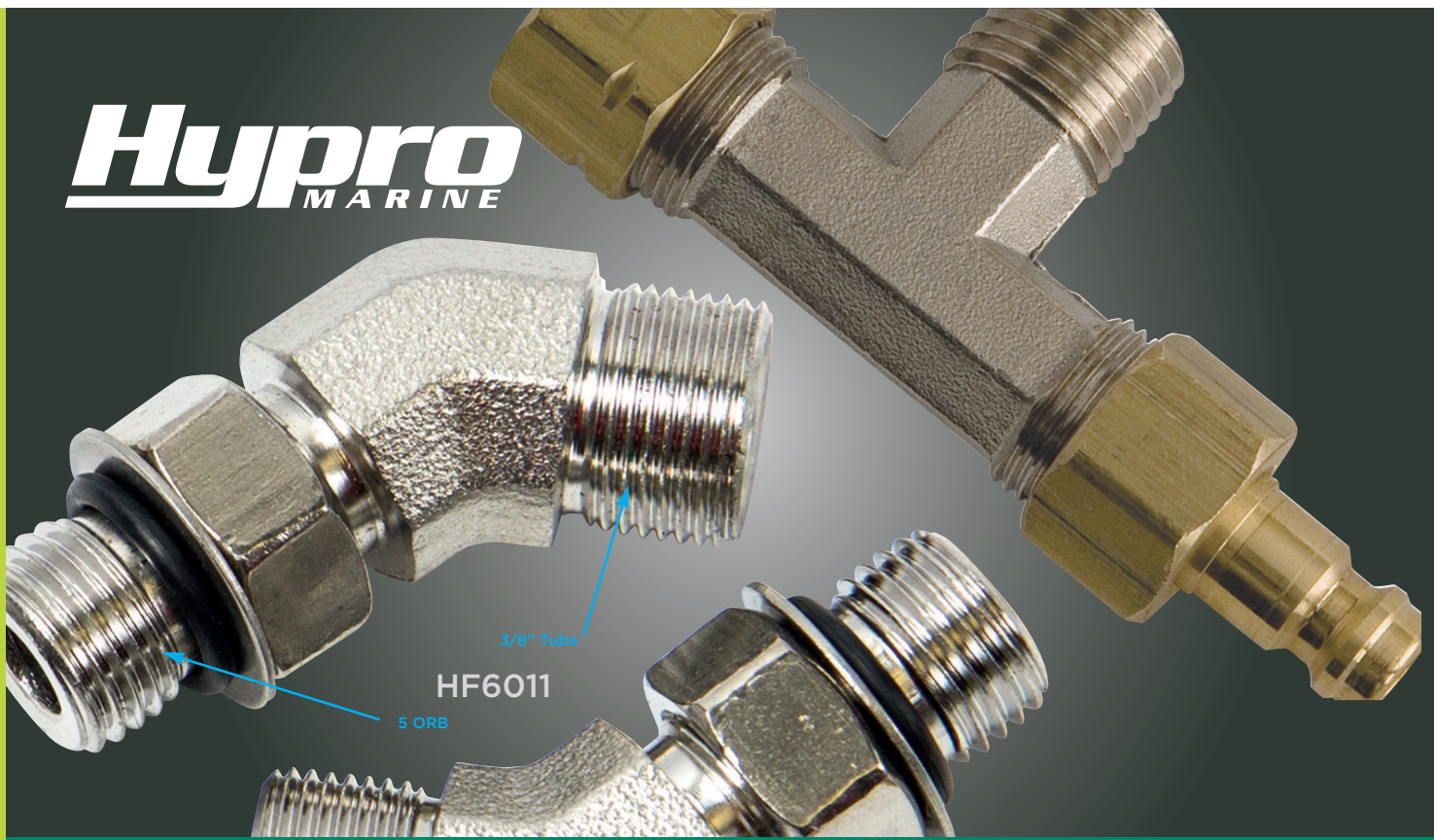
- HF5519 3/4 SAE 45° Tee with 3/8" NPT c/w Bleed Nipple Assy
- HS5161 Seal kit 250v/75v; 1250v/75v - HH5275, HH5250, HH0217, HH0132
- HS5171 Helm seal kit 1350 and 1350S - HH0426
- HA5450 Remote fill & vent kit

Capilano Helms and Cylinders are engineered and manufactured for heavy duty marine usage, and are suitable for commercial, work boat and pleasure boat applications. Capilano Hydraulic Steering has been designed to meet ABS, Lloyds and DNV specifications.

Capilano Hydraulic fittings are shown in the panel below.

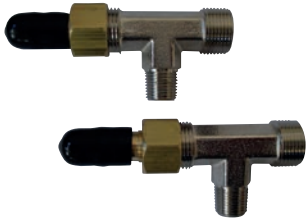


<p>1/4" NPT</p>  <p>5/8" SAE</p> <p>HM2242 each Straight fitting</p>	<p>1/4" NPT</p>  <p>5/8" SAE</p> <p>HM2242/6 each Straight fitting</p>	<p>5/8" SAE</p>  <p>3/8" NPT</p> <p>HM2243/6 each Elbow Fitting</p>	 <p>1/4" NPT</p> <p>5/8" SAE</p> <p>HM2243 each Elbow Fitting</p>
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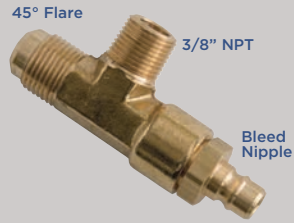


Hydraulic Fittings & Accessories | ORB Fittings

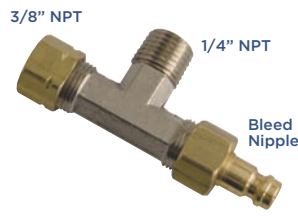
<p>HF5600 Adaptor Fitting kit (pair) 6 ORB with bleed tee</p>	<p>HF6001 Horizontal Hose (pair)</p>	<p>HF6002 Vertical Hose (pair)</p>	<p>HF6003 Hynautic Hose (pair)</p>
<p>HF6004 90 degree Elbow (pair) (343184)</p>	<p>HF6005 Cylinder Tee Fitting (pair)</p>	<p>HF6006 Tee Fitting (pair)</p>	<p>HF6009 Straight Fitting (pair) (343088)</p>
<p>HF6010 Fitting Kit</p>	<p>HF6011 45 degree Fitting (pair) (343186)</p>	<p>HF6012 -5 ORB(M)-1/4 NPT(F) (pair) (343087)</p>	<p>HF6013 -6 ORB Bleed Tee Kit For Mercury cylinder</p>



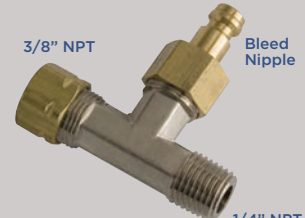
HF4201/HF4202
BayStar Bleed Tee Kit



HF5519 kit
Bleed Tee (TMCylinder)



HF5520 kit
Horizontal Bleeder Tee



HF5521 kit
Vertical Bleeder Tee



HM2109/6 each
Union Coupling Fitting



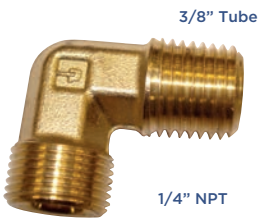
HM3265 each
Straight Fitting



HF5532 (3 per kit)
Connector Fitting



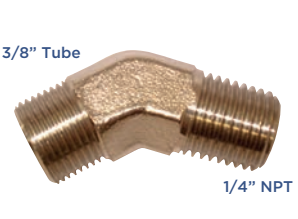
HF5566 kit
Adaptor Fitting



HM2246/6/4 each
Elbow Fitting



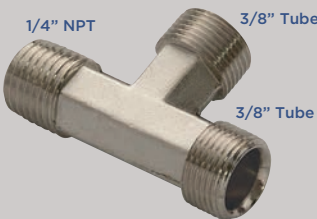
HM3686 each
Elbow Fitting



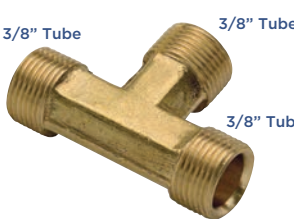
600607 each
45 Degree Fitting



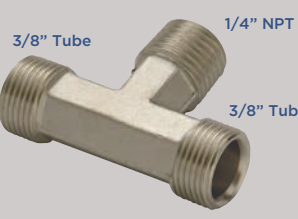
600620 each
Fitting Stainless Steel



HM3284 each
Tee Fitting



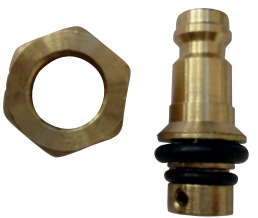
HM2591/6 each
Tee Fitting



HM2592 each
Tee Fitting



HM5250 each
Bypass Valve



HM3286 each
Seastar Bleed Probe Set



HF5548
Bleed Nipple (set of 2)



HM3285 each
Tube Compression Nut



HF5524 each
Cap Plug Nut



Seal Kits

ECS-05	Seal Kit for Engine Control/Sender	HM5086	Seal Kit for HM5080/HM5070
ECS-06	Seal Kit for Engine Control/Slave	HM5110/SK	Seal Kit for HM5110
HM1127/S	Seal Kit	HM5225	Seal Kit for both Head Design (HM5035)
HM1870	Seal Kit for HM1647 Cylinder/Servo/Valve	HM5697	Seal Kit - HM4040/12/C
HM1871	Seal Kit for HM1698 Auxilliary Power Cylinder	HM5832	Seal Kit for Catridge Relief Valve
HM1872	Seal kit for HM1690	HM5880/SK	Seal Kit for Lock Bolt Cylinder
HM1873	Seal Kit for HM1844 Flow Control Valve	HM5900/SK	Seal Kit for Ramp Cylinder
HM1874	Seal Kit for HM1790 Economy Servo Assembly	HM5990/SEAL	Seal Kit for HM5990 Cylinder
HM1875	Seal Kit for HM1820 Economy Reservoir	HP6025	Seal Kit for HC5313-3 & HC5314-3
HM1877	Seal Kit for HM1087 Hydraulic Cylinder	HP6026	Seal Kit for HC5303-3 & HC5312-3
HM1954	H20/40 Series Helm Seal Kit	HP6027	Seal Kit for HC5329-3/HC5330-3/HC5331-3
HM1958	Seal Kit - PSK10V K1B	HP6160	Tournament Cylinder Seal Kit
HM2081	Helm Seal Kit for (20 series)	HS-08	HS-08 Seal Kit
HM2138	Helm Seal Kit for HM1099 (50 series)	HS-09	Helm Seal Kit H-800 after to C
HM2229A	Seal Kit for HM2042 Reservoir Assy	HS5147	Helm Seal Kit Baystar HH4016/HH4015
HM2265	Cylinder Seal Kit K3/K4 & PSK11/12 all versions	HS5151	Helm Seal Kit (old style 1984-1989)
HM2268/SK	Seal Kit for Oil Cooler 820201	HS5153	Seal Kit Side Mount
HM2275	Seal Kit for HM1518/HM1909/HM4440 Garage Cylinder	HS5154	Cylinder Seal Kit BA125 EM MV BJ ATM
HM2297	Seal Kit for HM1490 Emergency Steering Valve	HS5155	Cylinder Seal Kit BA135 EM MV BJ ATM
HM2544/MSK	Seal Kit Marzocchi pump	HS5156	Cylinder Seal Kit BA150 EM MV BJ ATM
HM2587	Cylinder Seal Kit for K-7	HS5157	Cylinder Seal Kit - Screw-in End Glands O/B F/M-with Spanner
HM2628	Seal Kit for HM1748/HM2905	HS5158	Seal Kit Uniflow Valve
HM2634	Seal Kit for HM1725 interface	HS5161	Helm Seal Kit Capilano 250V/75V 1250V 1275V
HM2639	Seal Kit for HM2550 Hydraulic Power Pack	HS5171	Helm Seal Kit Capilano 1350/1350S
HM2644	Seal Kit for HM2076/HM4118/9/HM4434/35	HS5176	Helm Seal Kit new Helm HH5270 thru to 62 & HH4314
HM2704	Seal Kit for HM1570 C/L R/V	HS5182	Cylinder Seal Kit 150 -7 BA STD TR TM
HM2711	Seal Kit for HM2218	HS5183	Cylinder Seal Kit 175-7 BA STD TR TM
HM2711/CAP/1	Seal Kit for HM2218/HM1886	HS5184	Cylinder Seal Kit 200 -7 BA STD TR TM
HM2843	Seal Kit for HM2835/HM2915/HM2980 Cylinder	HS5185	Cylinder Seal Kit BA200 11 Seastar/Capilano TM Inboard
HM2877	Seal Kit for HM2930 Cylinder	HS5196	Cylinder Seal Kit PSServo Valve
HM3146	Cylinder Seal Kit for O/B Side Mount	HS5197	Cylinder Seal Kit for HC5803 Power Steering
HM3148	Cylinder Seal Kit 200-11TR/200-15	HS5198	Cylinder Seal Kit for H5803 Servo
HM3722	Seal Kit for HM5860 Cylinder	KS-02	Cylinder Seal Kit for HM1139 K18 thru K19
HM3747	Seal Kit - Hand Pump	KS-03	Cylinder Seal Kit for K2 & H100
HM3796SK	Seal Kit for Hydraulic Cylinder	KS-05	Seal Kit
HM3996	Seal Kit (HM5822)	KS-06	Cylinder Seal Kit (K21 Thru 29)
HM4109/SEAL	Seal Kit for Platform Lock Valve	KS-11	Cylinder Seal Kit for HM1107/PSK-10B
HM4308	Seal Kit for HM4040/HM5090 Servo Cylinder	KS-12	Seal Kit for K2-B
HM4344/SK	Seal Kit for HM4344	KS-13	Cylinder Seal Kit HM1238/9 before 15.4.2009
HM4418	Seal Kit for Servo Cylinder	KS-14	Seal Kit K51
HM4522	Seal Kit for HM4470 Auxilliary Cylinder	KS-18	Cylinder Seal Kit for K8 new
HM4542	Seal Kit for HM4406 Valve	KS-19	K6 Seal Kit
HM4650/SK/RES	Seal Kit for Hydraulic Reservoir	RS-01	Reservoir Seal Kit
HM4889	Seal Kit for HM2940/HM4490/HM5030		
HM4893	Seal Kit for HM4893 Steering Cylinder		
HM5005	Seal Kit for Ultra Dynamics Round Section Cylinders		

SCHMITT™

SCHMITT | Steering Wheels



Destroyer - 5 Stainless Spoke - PU Rim - 22° Dish - 342mm

HM6030



Torcello - Brushed Silver Spoke - Black cap 3/4 Taper Hub - 355mm

HM6038/6039



Torcello Lite - Satin Silver Spoke - Black cap 3/4 Taper Hub - 330mm

HM6043



Evo Pro Wheel - Cast 316 Stainless Spoke with PU Grip - 342mm

HM6032



Destroyer - 5 Stainless Spoke & rim with finger grip - 22° Dish - 342mm

HM6031



Torcello - Polished Silver Spoke - Black cap 3/4 Taper Hub - 355mm

HM6035



Torcello Lite - Black Spoke - Black cap 3/4 Taper Hub - 330mm

HM6042



Evo Pro Wheel - Cast 316 Stainless Spoke with PU Grip & control knob - 342mm

HM6033



Stainless Steel Cap, 2.5" to upgrade your Destroyer Wheel

CAPSLG



Torcello - Black Spoke - Black cap 3/4 Taper Hub - 355mm

HM6037



ABS Chrome Scallop Cap to upgrade your Torcello or Torcello Lite

CAP0103



Evo Pro Wheel - Cast 316 Stainless Spoke with finger grip - 342mm

HM6034



SeaStar Optimus EPS | Electronic Power Steering

The incredible feel you get when you're behind the wheel of a boat equipped with Optimus EPS is the result of an innovative array of technology and engineering. Each component has been designed to complement the other, resulting in a seamless experience of steering control in virtually every situation on the water.

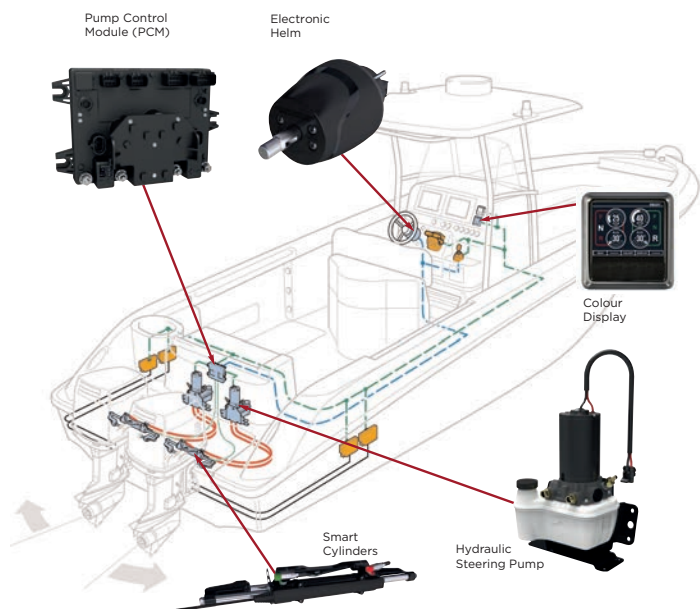
Optimus EPS truly raises the bar when it comes to comfort, control and maneuverability, especially for the new breed of high performance powerboats, saltwater fishing vessels, catamarans, RIBS and high end pontoon boats. Active Sensitivity Lock-to-lock turns and wheel effort are programmed to change with engine RPM. At slow speeds, Optimus EPS can be set to reduce the number of turns lock-to-lock, for example 4 and make it easier to steer. When you're negotiating through traffic or in a tight spot, those smaller moves of the wheel give you precise control. When you're running at speed in open water, Optimus EPS can be set to increase lock-to-lock turns, for example, and increase steering effort giving the driver more stability to comfortably keep on course.

Lock-to-lock turns and wheel effort are programmed to change with engine RPM. At slow speeds, Optimus EPS can be set to reduce the number of turns lock-to-lock, for example 4 and make it easier to steer. When you're negotiating through traffic or in a tight spot, those smaller moves of the wheel give you precise control. When you're running at speed in open water, Optimus EPS can be set to increase lock-to-lock turns, for example, and increase steering effort giving the driver more stability to comfortably keep on course. And through it all, Optimus EPS does the work, so you can relax and take it easy.

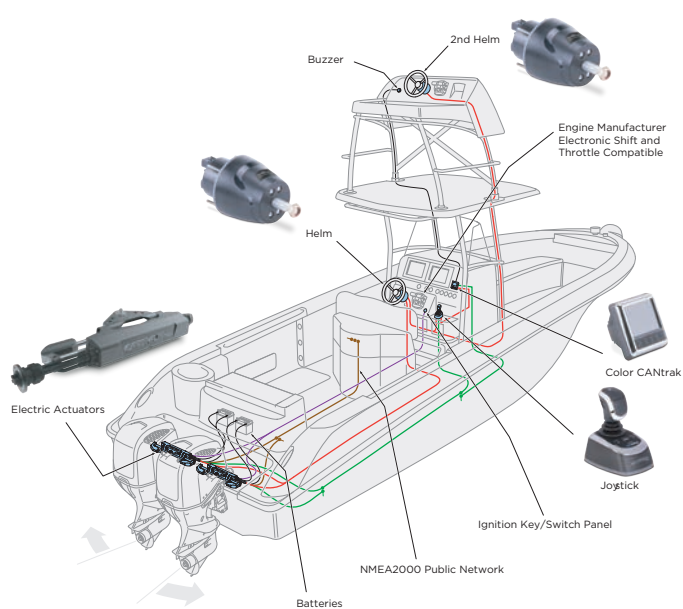
Advantages of Electronic Power Steering (EPS):

- No oil at the helm
- Plug and play autopilot compatibility
- No auto pilot pump or rudder feedback unit
- Adjustable speed sensitive wheel effort
- Adjustable speed sensitive turns lock to lock
- Can be retrofitted to existing mechanical and electronic controlled engines.
- No tie-bars (twin configuration)
- No liquid tie-bar (CAT)













Outboard Electronic Hydraulic



Outboard Electric

SeaStar | Engine and Configuration

	Single Engine	Duel Engine	Tripple Engine	Quad Engine
BRP 	150-300hp ● ○	150-300hp ● ○	150-300hp ● ○	150-300hp ● ○
Cox Diesel 	V8 4.4L ● ○	V8 4.4L ● ○	Coming soon	Coming soon
Honda 	200-250hp ● ○	200-250hp ● ○	200-250hp ● ○	200-250hp ● ○
Mercury CMS 	I4/V6/V8 to 300hp ● ○	I4/V6/V8 to 300hp ● ○	I4/V6/V8 to 300hp ● ○	I4/V6/V8 to 300hp ● ○
OXE Diesel 	L4 200hp 2.0L ● ○	L4 200hp 2.0L ● ○	Coming soon	Coming soon
Suzuki 	175-350hp ● ○	175-350hp ● ○	250-350hp ● ○	250-350hp ● ○
Mercury Verado 	V6/V8 250-400hp ● ○	V6/V8 250-400hp ● ○	V6/V8 250-400hp ● ○	V6/V8 250-400hp ● ○
Yamaha 	150-350hp ● ○	150-350hp ● ○	F300 and F350 ● ○	F300 and F350 ● ○

● Outboard Electronic Hydraulic Option Available ○ Outboard Electric Option Available

Hypro
MARINE



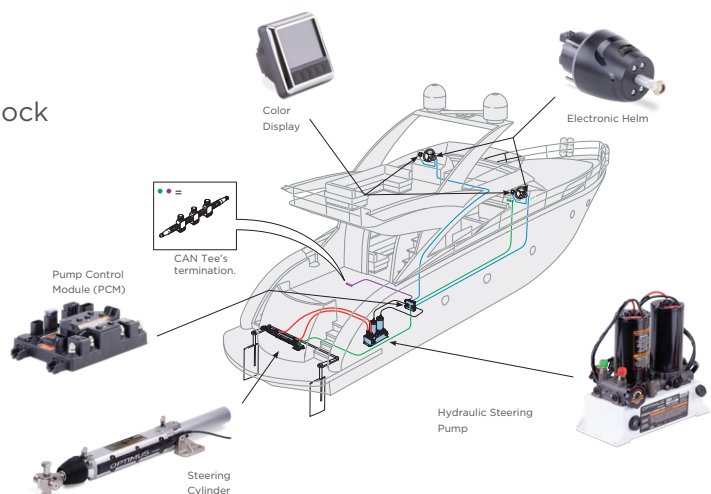
Image courtesy of Pascoe International

SeaStar Optimus EPS | Electronic Power Steering

The incredible feel you get when you're behind the wheel of a boat equipped with Optimus EPS is the result of an innovative array of technology and engineering. Each component has been designed to complement the other, resulting in a seamless experience of steering control in virtually every situation on the water. The high level of engineering also extends to the reliability of the system, with quality materials, careful manufacturing and redundant systems, all to stand up to the rigors of life on the water.

Features:

- Up to three helms stations
- Automatic battery management with sensing, warnings & best battery selection
- On demand hydraulic steering pump minimizing power consumption
- No oil at the helm
- Rugged electronics for 12 or 24 VDC applications
- Color dash display showing rudder command and rudder position graphic
- Displays system health
- Display provides system setup interface
- Communicates faults and any special handling instructions to the operator
- Simple software updating via
- Programmable number of turns lock to lock with speed
- Auto-adjusting steering end stops and resistance with speed
- Dual redundant position sensing on all moving components
- Helm shaft: 3/4" taper
- Utilises fault tolerant CAN network
- Full autopilot CANbus connectivity and integration. No additional pumps or sensors required
- Adjustable max rudder hard over angle with speed range 20° to 30° Center to hard over
- Position proportional rudder gain for faster steering response near neutral rudder position
- RPM input: NMEA 2000, J1939 or analog pulse compatible
- Pump features an Integrated service/bypass valve allows a limp home mode



MOBILE LIVING MADE EASY.

OPTIMUS ELECTRONIC POWER STEERING AND
OPTIMUS 360 JOYSTICK CONTROL



► DOMETIC



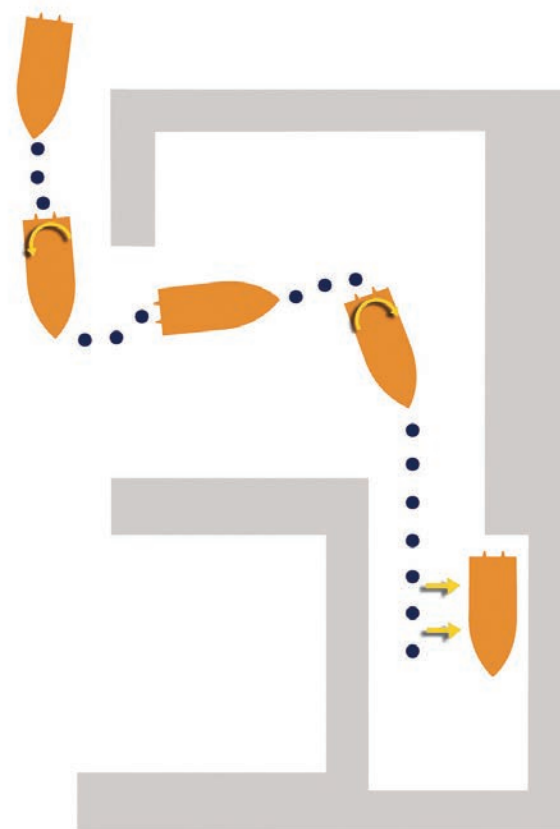
Optimus 360 | Joystick Control System

Optimus 360 gives your boat a whole new dimension of control. By developing the joystick function to be intuitive, Optimus 360 allows you to move your boat not only forward and back, but also sideways, by pushing the joystick to the left, or to the right, and even, rotate on a dime, all with a simple twist of the joystick.

Optimus 360 is designed for low speed maneuvering, and really excels in the marina, when pulling in and out of your slip, or docking. Optimus 360 uses intelligent programming to minimize the amount of shifting required to complete a manoeuvre.

With progressive throttling, the joystick becomes a natural extension of your hand. A light push on the joystick provides minimal thrust while more thrust can be applied by pushing harder on the joystick. The boost mode increases the RPM to give you more thrust when needed.

Each component has been designed to complement the other, resulting in a seamless experience of steering control in virtually every situation on the water. The high level of engineering also extends to the reliability of the system, with quality materials, careful manufacturing and redundant systems, all to stand up to the rigors of life on the water.

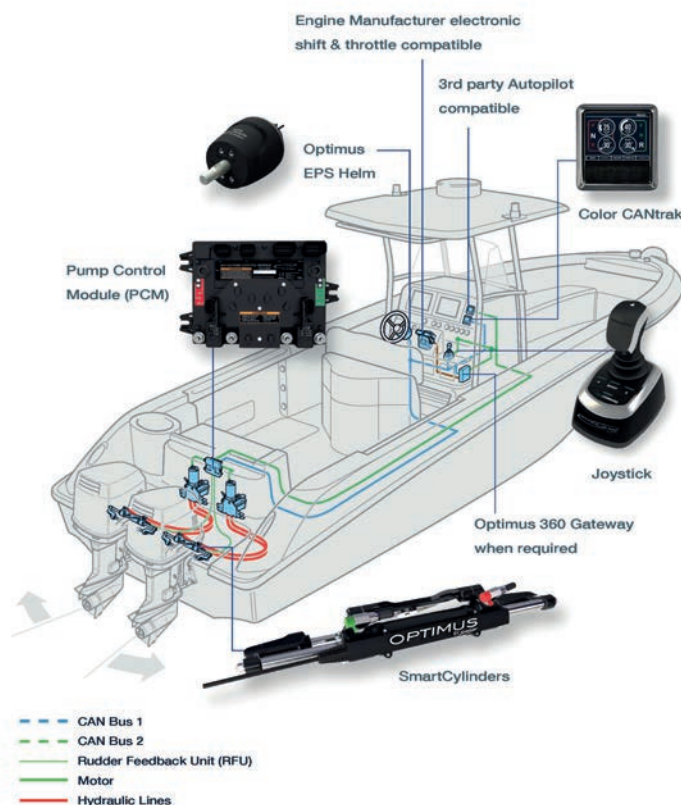


Optimus 360 Joystick Features:

- Three axis joystick with guided feel
- Boost mode
- Take Command Mode Benefits
- Provides intuitive joystick docking
- Confidently control the boat fore/aft, sideways, diagonal and rotational movements
- Provides increased docking power to overcome winds/currents
- Single touch button activation transfers control to the joystick



Optimus 360 System Schematic



	Single Engine	Duel Engine	Tripple Engine	Quad Engine
BRP 	Dual Icon 150-300ETEC ● ○	Dual G2 250-300hp ●	Quad G2 150-300hp ●	Mech Dual 150-300ETEC ● ○
Honda 	Dual IST 200-250hp ● ○	Not Available	Not Available	Mech Dual 200-250hp ● ○
Mercury CMS 	CMS Dual Conventional mid-section ● ○	Not Available	Not Available	Not Available
Suzuki 	Dual SPC 175-350hp ● ○	Triple SPCI 175-350hp ● ○	QUAD SPC 175-350hp ● ○	Mech Dual 175-350hp ● ○
Mercury Verado 	Dual DTS 6cyl 200-300hp ● ○	Triple DTS 6cyl 200-350hp, 400R ● ○	Quad DTS 6cyl 200-350hp, 400R ● ○	Mech Dual Optimax/ Verado Series ● ○
Yamaha 	Dual DEC 150-350hp ● ○	Triple DEC F300 & F350 ● ○	QUAD DEC F300 & F350 ● ○	Dual Mech 150-350hp ● ○

● Outboard Electronic Hydraulic Option Available ○ Outboard Electric Option Available

NOTE: For Optimus 360 Sterndrive options please enquire for further information as boat manufacturer, engine and drive details are required.



SeaStar | Jackplates

The JP1000 Series Jackplate comes in 4", 6", 8", and 10" setbacks to help you find the best match for your boat and optimise performance. 3" of available lift.

Manual Features:

- Interlocking slide guides offer enhanced strength while providing smooth, 3" of bind-free travel.
- The lead screw assembly sets the plate height and the Side Locks are used to hold the position.
- The stainless steel lead screw is resistant to corrosion and pre-greased for smooth operation.
- Maximum supported engine weight of 585 lbs is capable of handling the most demanding outboard engines including the latest generation of 4-strokes.

SEASTAR JACKPLATE



JP1040SS
4" Setback

JP1060SS
6" Setback

JP1080SS
8" Setback

JP1100SS
10" Setback

SeaStar Jackplates

JP1040SS	Manual Jackplate 4" Setback
JP1060SS	Manual Jackplate 6" Setback
JP1080SS	Manual Jackplate 8" Setback
JP1100SS	Manual Jackplate 10" Setback

SeaStar | Hydraulic Jackplates

The SeaStar Jackplate is one of the sleekest and most durable engine Jackplates available. This essential performance accessory allows for higher speed, gains in fuel economy and the ability to run in shallow water. The all new SeaStar Jackplate features sleek, bold styling that is redefining the look for Jackplates.

Hydraulic Features:

- Presenting a full range of plates in 4, 6, 8, 10 & 12 inch setbacks.
- Aesthetically matched to SeaStar steering cylinders.
- Rapid hydraulic response
- Rated for 300hp engines
- Complete rigid engine support at full thrust.
- Easily moves engine at full thrust.
- Designed to maximise engine tilt with SeaStar steering cylinders.
- High visibility lift scale for quick glance operation.
- Integrated circuit breaker gives electrical protection right at the battery post.
- All hydraulic Jackplates come with basic rocker switch DK4020.



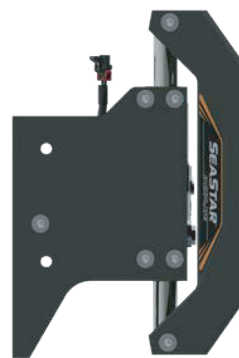
JP5040R
4" Setback



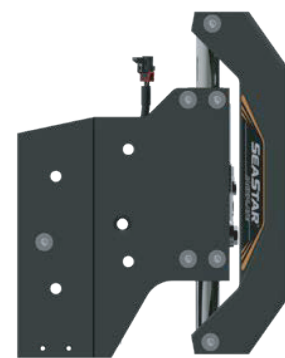
JP5060R
6" Setback



JP5080R
8" Setback



JP5100R
10" Setback



JP5120R
12" Setback

SeaStar Jackplates

JP5040R	Hydraulic Jackplate 4" Setback
JP5040RSK	Hydraulic Jackplate 4" Setback with Smartstick
JP5060R	Hydraulic Jackplate 6" Setback
JP5060RSK	Hydraulic Jackplate 6" Setback with Smartstick
JP5080R	Hydraulic Jackplate 8" Setback
JP5080RSK	Hydraulic Jackplate 8" Setback with Smartstick
JP5100R	Hydraulic Jackplate 10" Setback
JP500RSK	Hydraulic Jackplate 10" Setback with Smartstick
JP5120R	Hydraulic Jackplate 12" Setback
JP5120RSK	Hydraulic Jackplate 12" Setback with Smartstick

NOTE: JP5040R requires an adapter kit DK4600 for Power Pole® and Talon® anchor systems mounting.

Hypro
MARINE

SEASTAR
JACKPLATE **X**TREME

SeaStar Xtreme | Jackplates

The SeaStar Xtreme Jackplates utilise high strength materials to be able to handle some of the strongest engines on the water. The heavy duty frames are capable of handling 400 HP. Designed with speed and durability in mind the Xtreme Jackplate can adjust the engine height in just 8.5 seconds, even while the boat is moving at full power.

Features:

- Xtreme Jackplate is using high strength materials and is easily capable of handling 400hp engines.
- Rapid hydraulic response in 8.5 seconds.
- Complete rigid engine support at full thrust
- Easily moves engine at full thrust
- Compatible with Power Pole® and Talon®



NOTE: JP5040X requires an adapter kit DK4600 for Power Pole® and Talon® anchor systems mounting.

SeaStar Jackplates

JP5040X	Hydraulic Jackplate 4" Setback Xtreme
JP5040XSK	Hydraulic Jackplate 4" Setback Xtreme with Smartstick
JP5060X	Hydraulic Jackplate 6" Setback Xtreme
JP5060XSK	Hydraulic Jackplate 6" Setback Xtreme with Smartstick
JP5080X	Hydraulic Jackplate 8" Setback Xtreme
JP5080XSK	Hydraulic Jackplate 8" Setback Xtreme with Smartstick
JP5100X	Hydraulic Jackplate 10" Setback Xtreme
JP5100XSK	Hydraulic Jackplate 10" Setback Xtreme with Smartstick
JP5120X	Hydraulic Jackplate 12" Setback Xtreme
JP5120XSK	Hydraulic Jackplate 12" Setback Xtreme with Smartstick

Jackplates Add Ons

JC4010	Protap Controller
DK4020	Basic Rocker Switch - included with all hydraulic jackplates
DK4220	SmartStick and Gauge Kit
DK4320	Gauge and Harness Kit
HSP5060	Hole Shot Plate Kit 6"
HSP5080	Hole Shot Plate Kit 8"
HSP5100	Hole Shot Plate Kit 10"
HSP5120	Hole Shot Plate Kit 12"
DK3010	Jackplate Relay
DK4420	Jackplate Wire Harness
DK4710	Actuator Kit, 3/8" Mount Bolt, 5/16" socket
DK4720	Actuator Kit, 7/16" Mount Bolt, 3/8" socket
HYCL-001	SeaStar Stabiliser Clips (pack of 2)
DK6125	Bolt Kit 1/2-20 unc 2.5"L
DK6135	Bolt Kit 1/2-20 unc 3.5"L
DK6145	Bolt Kit 1/2-20 unc 4.5"L
DK6165	Bolt Kit 1/2-20 unc 6.5"L

TAP FOR



MAX SPEED & PERFORMANCE IN SECONDS

WITH A PROTAP JACKPLATE CONTROLLER



SEASTAR
PROTAP CONTROLLER

ProTap Controller takes the guesswork out of setting a jackplate height or engine trim every time you get underway. Use ProTap to quickly recall your pre-memorised positions. It works with any jackplate and trim control switch, and allows you to fine tune jackplate and engine trim predictably by moving both in set increments.

- Reach max speed fast with a ProTap controller.
- Provides full tilt engine protection.
- Dual engine support.

www.seastarsolutions.com



DOMETIC



Image courtesy of Sunseeker International

Zipwake | Interceptors

We're proud to present Zipwake, the new, Dynamic Trim-Control System that's set to revolutionise the boat world. Featuring an advanced, intuitive control system and a stunning new innovative design, Zipwake delivers a more comfortable ride, better performance and improved fuel consumption - whatever the conditions.

Key Features:

- **Comfort and Safety**
Dynamically eliminates uncomfortable and dangerous boat pitch and roll.
- **Performance and Fuel Economy**
Automatically minimises wave resistance and saves fuel.
- **Intuitive and Precise Control**
Innovative 3D controls provide unmatched control of running trim, heel or heading.
- **Durable and Effective**
Patented series of durable fast-acting interceptors provide supreme lift force characteristics.
- **Complete and Competitive**
All-inclusive mass-produced modular design provides built-in quality, simple installation and easy expansion, whilst making them affordable.

All in a Box

A Kit Box includes all parts needed to install a Dynamic Trim Control System with one pair of fast-acting straight interceptors. There are four different Kit Boxes, one for each interceptor length.

Any base installation can be expanded with up to two extra pairs of Series S interceptors, thus allowing a total of six interceptors without any need for additional connectors or power supply.



ZIPWAKE

CHOOSE COMFORT. ENJOY PERFORMANCE.



Straight Interceptor

This first-ever modular design made for mass production makes the interceptors durable, affordable and perfectly adapted to any planing or semi-planing boat between 6m and 18m (20-60ft).

Intermediate Interceptor

When space between multiple outboards or sterndrives is tight, an intermediate interceptor offers a viable alternative for additional pitch and roll motion control not possible with a straight interceptor without degrading propeller performance.

Thanks to their special blade shape, intermediate interceptors generate a narrower trail, thus migrating propeller inflow disturbance and even allowing installation between outboards mounted at their minimum offset.



V-Shaped Interceptors



V-Shaped interceptors for centerline mounting are perfect for filling the gap between twin outboards or sterndrives, as well as dual propeller tunnels. The four V-shaped models cover deadrise angles effectively between 11 to 24 degrees. V-shaped centerline mounted interceptors can be included in new installations, or retro-fitted to already installed systems. The modular design enables boat designers to develop their own novel applications, e.g. in multihulls or stepped high-speed craft.

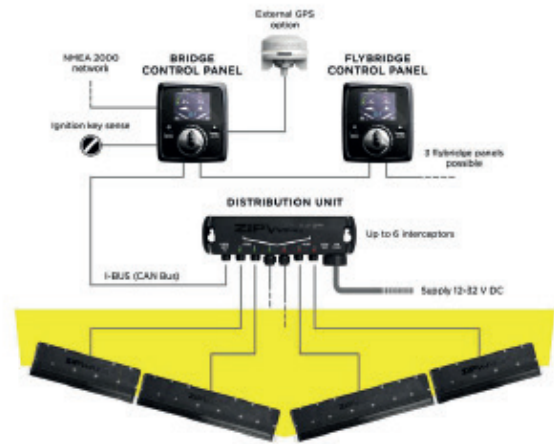


Chine Interceptors

Chine interceptors provide a unique means of maximising pitch and roll motion by utilising the furthest outboard surfaces of the hull bottom for lift generation. As a rule, the lift effect of a chine interceptor matches the lift of a straight interceptor one size larger mounted inboard of the chine, making them the go-to choice when selecting interceptors.

Zipwake | Interceptor Kits S Series

2011145	Zipwake Box Kit 300S
2011146	Zipwake Box Kit 450S
2011147	Zipwake Box Kit 600S
2011148	Zipwake Box Kit 750S
2011732	Zipwake Chine Box Kit 300S
2011733	Zipwake Chine Box Kit 450S



Zipwake | Interceptor Spares / Accessories

2011482	Zipwake IT450-S V13 Interceptor with 3m Cable	
2011483	Zipwake IT450-S V16 Interceptor with 3m Cable	
2011484	Zipwake IT450-S V19 Interceptor with 3m Cable	
2011485	Zipwake IT450-S V22 Interceptor with 3m Cable	
2011232	Zipwake Interceptor IT300-S with 3m Cable	
2011233	Zipwake Interceptor IT450-S with 3m Cable	
2011234	Zipwake Interceptor IT600-S with 3m Cable	
2011235	Zipwake Interceptor IT750-S with 3m Cable	
2011238	Control Panel Unit with 7m Cable	
2011239	Distribution Unit with 4m Cable	
2011240	Global Positioning Unit with 5m Cable	
2011252	Interceptor 300 S Front Cover	
2011253	Interceptor 450 S Front Cover	
2011254	Interceptor 600 S Front Cover	
2011255	Interceptor 750 S Front Cover	
2011258	M12 Extension Cable 1.5m	
2011259	M12 Extension Cable 3m	
2011260	M12 Extension Cable 5m	
2011261	M12 Extension Cable 10m	
2011281	Control Panel Aluminium Frame	
2011071	Cable Cover S	
2011230	Servo Unit S with 3m Cable	
2011381	Control Panel Cover - White	
2011382	Control Panel Cover - Light Grey	
2011383	Control Panel Cover - Mid Grey	
2011384	Control Panel Cover - Dark Grey	
2011385	Control Panel Cover - Black	
2011701	IT300-S Inter	(Available as spare part / accessory only)

BOAT WORLD REVOLUTION

Reduced fuel consumption

Better comfort and performance

Minimizes wave resistance

Interceptors respond 5-10 times faster than trim tabs

Automatic roll and pitch control

Built-in GPS, 3D-Gyro and 3D-Accelerometer



Zipwake is a trim control system like no other. Now at the push of a button, you can get immediate lift and stability for a safe, comfortable ride – and you don't have to pay a fortune. Designed for powerboats 20 – 60 feet. Developed and manufactured in Sweden.

www.zipwake.com

ZIPWAKE

CHOOSE COMFORT. ENJOY PERFORMANCE.

Hypro Marine - UK Distributor
Email - info@hypromarine.co.uk
Web - www.hypromarine.com
Tel - 01590 681445



Zipwake | Series E

The Dynamic Trim Control System Series E is an evolved version of the successful Series S that incorporates a state-of-the-art family of large durable, fast-acting Interceptors perfectly engineered for bigger boats, from 50-100 ft. Unique 3D controls with a large display provide the helmsman with unmatched, user-friendly, intuitive and precise control of running trim, heel or heading. The system is fully automatic and significantly enhances the boat's performance, fuel economy, comfort and safety.

Features:

- **COMFORT AND SAFETY**
Dynamically eliminates uncomfortable and dangerous boat pitch and roll.
- **PERFORMANCE AND FUEL ECONOMY**
Automatically minimises wave resistance and saves fuel.
- **INTUITIVE AND PRECISE CONTROL**
Innovative 3D controls provide unmatched control of running trim, heel or heading.
- **DURABLE AND EFFECTIVE**
Patented series of large, durable fast-acting interceptors provide supreme lift force characteristics.
- **COMPLETE AND COMPETITIVE**
All-inclusive mass-produced modular design provides built-in quality, simple installation and easy expansion, while making the system affordable.
- **EXTERNAL MONITORING AND SYSTEM CONTROL**
The system can be monitored and/or controlled from external devices, e.g. multifunction displays or plotters via its NMEA 2000® interface.
- **CONFIGURABLE LIFT FORCE ALLOCATION**
The Series E system allows customised allocation of control forces by setting active or inactive control of pitch, roll and yaw for each pair of port and starboard interceptors. A pair's function may also be swapped e.g. to mitigate roll-induced steering forces from another interceptor pair or pairs.

Zipwake | Series E

2012011	Kit Box 600 E
2012012	Kit Box 800 E
2012013	Kit Box 1000 E
2012014	Kit Box 600 E Chine



All in a box

Zipwake | Series E

2012032	Control Panel E with Standard Cable 15 m
2012033	Distribution Unit E with Power Cable 6 m
2012034	Distribution Expansion Unit E with Power Cable 6 m
2012018	Interceptor 600 E with Cable 3 m & Cable Cover
2012019	Interceptor 800 E with Cable 3 m & Cable Cover
2012020	Interceptor 1000 E with Cable 3 m & Cable Cover
2012021	Interceptor 600 E Tunnel R500 with Cable 3 m & Cable Cover
2012022	Interceptor 600 E Tunnel R600 with Cable 3 m & Cable Cover
2012023	Interceptor 600 E Tunnel R800 with Cable 3 m & Cable Cover
2012024	Interceptor 600 E Chine Port with Cable 3 m & Cable Cover
2012025	Interceptor 600 E Chine Starboard with Cable 3 m & Cable Cover
2011258	M12 Extension Cable 1,5 m
2011259	M12 Extension Cable 3 m
2011260	M12 Extension Cable 5 m
2011261	M12 Extension Cable 10 m
2012038	M12 Extension Cable 15 m
2012039	M12 Extension Cable 20 m
2012037	M12 Standard Cable 15 m
2011281	Control Panel Alu Frame
2011381	Control Power Cover, White
2011382	Control Power Cover, Light Gray
2011383	Control Power Cover, Mid Gray
2011384	Control Power Cover, Dark Gray
2011385	Control Power Cover, Black
2011240	GPS-Unit with Cable 5 m & Mount Kit
2011622	Gimbal Bracket for Control Panel



As a rule, the lift effect of a chine interceptor matches the lift of a straight interceptor one size larger mounted inboard of the chine, making them the go-to choice when selecting interceptors. Chine interceptors are particularly useful when transom space is limited abeam of swim platform lifts, waterjets, surface drives, or outboards.



The three tunnel models with different radii, R500, R600 and R800, make sure that most large boat propeller tunnels can be covered with negligible deviation between hull and interceptor curvature. Tunnel interceptors can be included in new installations, or retro-fitted to systems already installed.



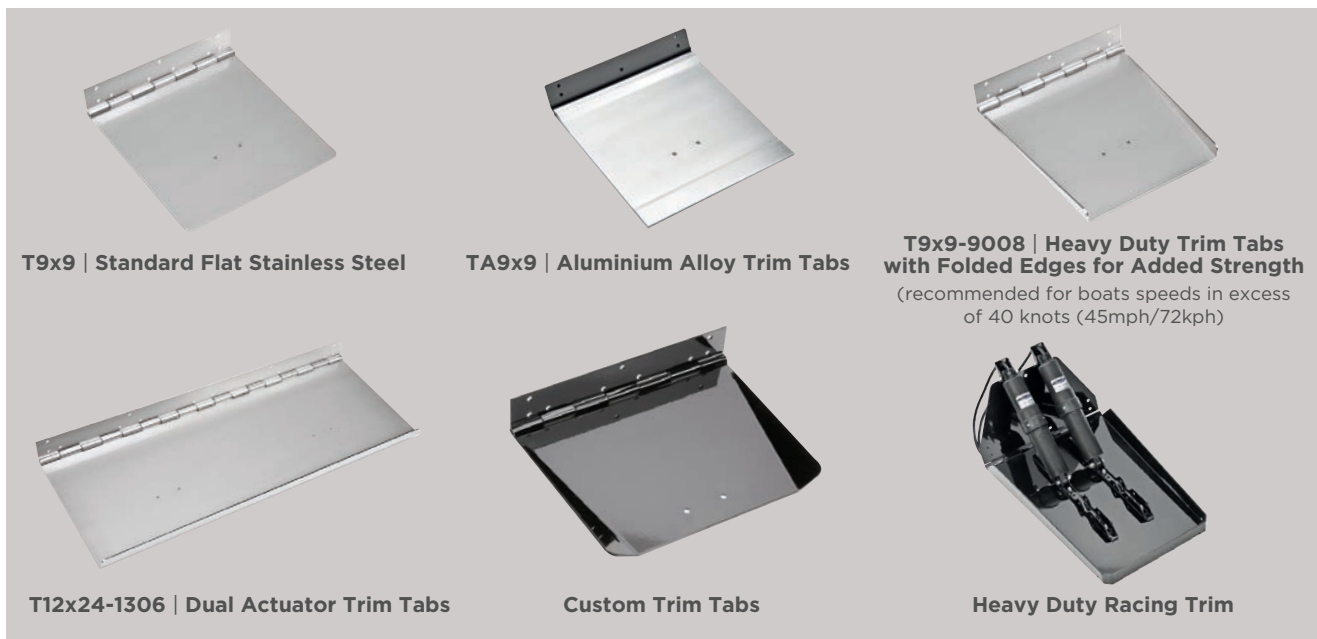
All Lectrotab actuators are covered by a Worldwide Lifetime Warranty.

Lectrotab designs and manufactures premium quality electromechanical trim tab systems for the leisure and commercial marine markets. The Lectrotab system is easy to install on new boats or to replace existing trim tabs.

3 Easy Steps to Ordering Your Complete Trim Tab System:

- Choose the type, style of trim tab plate and size.
- Choose the Actuator type.
- Choose the Control Switch type.

Step 1 | Trim Tab | Check out the sizing chart at www.hypromarine.com



Step 2 | Actuator



Step 3 | Switch Type





Image courtesy of Redbay Boats

Lectrotab Trim Tab | Stainless Steel Single Actuator Trim Tab

T9x9	9x9 Stainless Steel	T12x9	12x9 Stainless Steel
T9x12	9x12 Stainless Steel	T12x12	12x12 Stainless Steel
T9x18	9x18 Stainless Steel	T12x18	12x18 Stainless Steel
T9x24	9x24 Stainless Steel	T12x24	12x24 Stainless Steel
T9x30	9x30 Stainless Steel	T12x30	12x30 Stainless Steel
T9x36	9x36 Stainless Steel	T12x36	12x36 Stainless Steel
		T12x42	12x42 Stainless Steel
		T12x48	12x48 Stainless Steel

Heavy Duty Stainless Steel Single Actuator Trim Tab

T9x9-9008	9x9 HD Stainless Steel Trim Tab
T9x12-9008	9x12 HD Stainless Steel Trim Tab
T9x18-9008	9x18 HD Stainless Steel Trim Tab
T9x24-9008	9x24 HD Stainless Steel Trim Tab
T9x30-9008	9x30 HD Stainless Steel Trim Tab
T9x36-9008	9x36 HD Stainless Steel Trim Tab
T12x9-9008	12x9 HD Stainless Steel Trim Tab
T12x12-9008	12x12 HD Stainless Steel Trim Tab
T12x18-9008	12x18 HD Stainless Steel Trim Tab
T12x24-9008	12x24 HD Stainless Steel Trim Tab
T12x30-9008	12x30 HD Stainless Steel Trim Tab
T12x36-9008	12x36 HD Stainless Steel Trim Tab
T12x42-9008	12x42 HD Stainless Steel Trim Tab
T12x48-9008	12x48 HD Stainless Steel Trim Tab

Flat Stainless Steel Tab Model Identification

T	12	X	12
T = Stainless Steel 12 Gauge	1st Number (A) = Tab Chord Length (Inches)		2nd Number (B) = Tab Width Across Transom (Inches)

Aluminium Single Actuator Trim Tab

TA9x9	Aluminium Alloy Trim Tab
TA9x12	Aluminium Alloy Trim Tab
TA9x18	Aluminium Alloy Trim Tab
TA9x24	Aluminium Alloy Trim Tab
TA12x9	Aluminium Alloy Trim Tab
TA12x12	Aluminium Alloy Trim Tab
TA12x18	Aluminium Alloy Trim Tab
TA12x24	Aluminium Alloy Trim Tab

Dual Actuator | Stainless Steel Dual Actuator Trim Tab

T12x24-1306	12x24 Stainless Steel Dual Activator Trim Tab
T12x30-1306	12x30 Stainless Steel Dual Activator Trim Tab
T12x32-1306	12x32 Stainless Steel Dual Activator Trim Tab
T12x36-1306	12x36 Stainless Steel Dual Activator Trim Tab
T12x42-1306	12x42 Stainless Steel Dual Activator Trim Tab
T12x48-1306	12x48 Stainless Steel Dual Activator Trim Tab



Hypro
MARINE



Image courtesy of Redbay Boats

Lectrotab



Lectrotab | Actuators

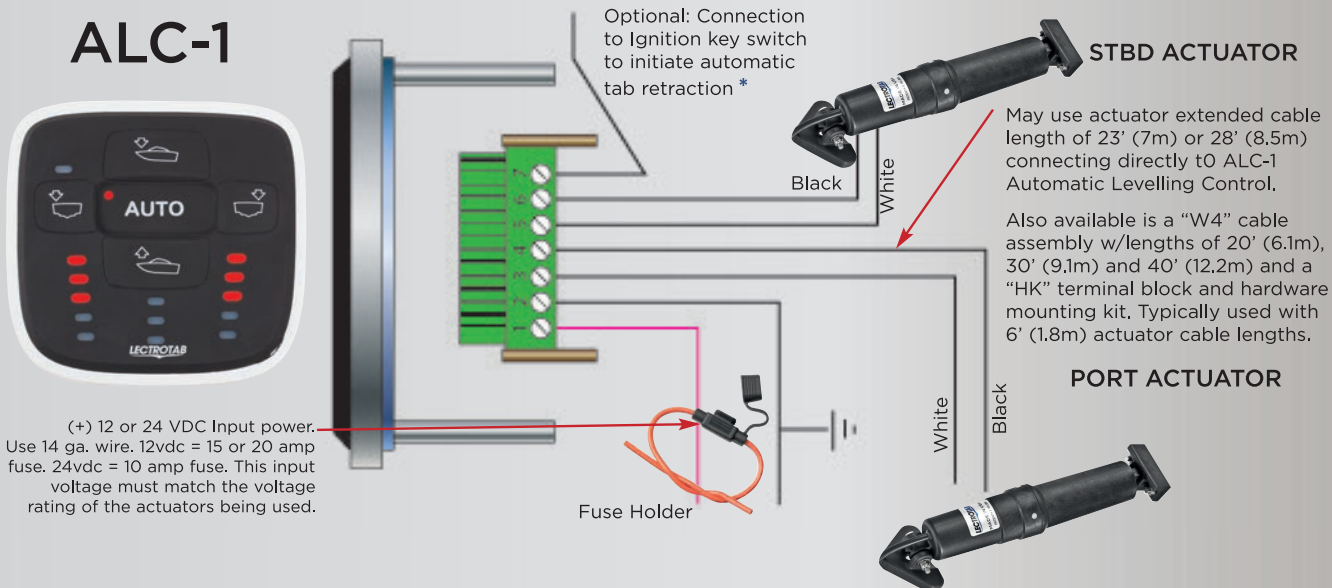
A-BK-13	Actuator with 7m Cable 12v
A-BK-20	Actuator - Heavy Duty 12v
B-BK	Actuator - Standard 24v
B-BK-20	Actuator Heavy Duty 24v
S-BK	Actuator - Short 12v
SB-BK	Actuator - Short 24v

Lectrotab Trim Tab Kit | Switch Choice

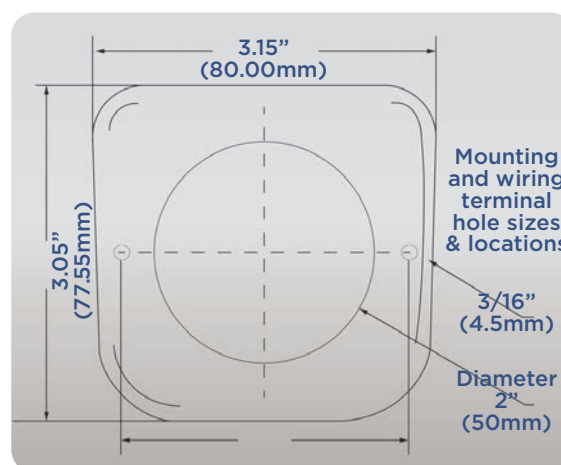
ALC-1	Automatic Levelling Control - Single station
ALC-1D	Automatic Levelling Control - Dual station
ALC-2D	Automatic Levelling Control - Dual station - Dual Actuator
ALC-2S	2nd Station keypad for ALC-1D or ALC-2D
WTR-111	Wireless switch - LED oval
MLC-1	Manual Level control - LED
SLC-11	Switching Levelling Control
SAF-SC	Flat Rocker Switch - Single station
SAF-NSC	Flat Rocker Switch - Dual station - 1 switch per station

Lectrotab | Accessory Parts

W4-20	4-Conductor Cable, 14 Gauge Wire 20'
W4-30	4-Conductor Cable, 14 Gauge Wire 30'
HK	Hardware Kit, Terminals, (2 Actuators & 2 Tab kit)
HK-4	Hardware Kit, Terminals, (4 Actuators & 2 Tab kit)
SR	SR Cable for multiple Stat, Wireless Control



As wind shifts, water conditions change or passengers move about, the Automatic Levelling Control (ALC) will automatically adjust your trim tabs to maintain a level boat for a more comfortable and enjoyable ride. The ALC automatically corrects the roll from side to side and pitch from fore to aft to enhance your boating experience and improve your fuel economy.



Automatic Levelling Control Features:

- Microprocessor based automatic levelling trim tab control with LED tab position indicators.
- Controls roll and pitch automatically.
- Internal GPS no GPS antenna or network required.
- Automatically adapts to varying sea conditions.
- Completely sealed and waterproof (IP68).
- UV protected - will not deteriorate in sunlight.
- Prevents automatic corrections while turning.
- Designed for planing and semi displacement hulls larger than 20ft.
- Actuators connect directly to ALC-1 display panel (no external power module box required).
- Automatically dims LED tab position indicators in darkness and brightens in sunlight.
- Automatically retracts trim tabs when boat is off plane or using optional key switch connection.
- Dual station operation available (ALC-1D and ALC-2D does require external power module).
- Operates on 10 to 30 Volts DC.
- 2 Year Warranty.
- CE Approved (Compliance with EMC regulations).

*Please note: Tabs will automatically retract if the boat is stopped after a few minutes delay if this connection is not used.

Hypro
MARINE

Image courtesy of Shark Seating

Shark Seating

Purpose built Jockey suspension seats for Professional, Military, and Commercial fast boats. Built in New Zealand to exacting standards to be lighter, better performing, and even more cost effective than anything else out there.



Shark ULTRA Jockey Suspension Seat

The Shark ULTRA is used when a simple, reliable, and affordable Jockey suspension seat is required. It's equipped with tough, modular foam pads which are very easy to clean. A plinth is not included as standard but can be added if required.

Shark ULTRA-plus Jockey Suspension Seat

The Shark ULTRA-plus includes the plinth unit. This raises the seat by 200mm.

Shark XTRA Jockey Suspension Seat

The Shark XTRA is used on high speed craft when added comfort and style are required. The fully waterproof neoprene upholstery is coupled with EAF (Energy Absorbing Foam), which provides extra padding and is very comfortable. XTRA also comes default with the plinth unit and seating height can be 720mm or 770mm unloaded depending on your requirement.



Shark FLEX Suspension System

The Shark FLEX is the core of the Shark system. It provides 200mm of ultra-smooth travel in a system that is completely corrosion proof, light and tough. Compatible with a variety of off the shelf seats, as well as those made by Shark.

Shark FLEX-plus Suspension System

The FLEX-plus includes the FLEX suspension unit as well as the plinth unit. This raises it 200mm.



Front Grab Handle



Rear Grab Handle



Foot Pegs (foldaway)



Aluminium Plinth



Cordura Seat Cover



Side Handle



Lap Belt

Shark Seating | Options & Spares

SA-302-07	Ultra
SA-302-08	Xtra (Seat Only)
SA-302-05	High Back Option
SA-310-01	Flipable adjustable armrests, seatback stiffener, black rear handle
SA-303-01	Cargo satchel, mounting frame, back rear handle
FJ-131-01	Side handle set plastic
FJ-120-03	Rear handle and brace, black alloy (Spare only)
SA-302-04	Ultra Seat Foam
SA-302-03	Ultra back foam (Spare only)
FX-119-10	Plinth for welding to floor (natural AL), height 175mm
FX-106-12	Sliding plinth (black AL), multi height 175-250mm, slides 500m long
FX-201-07	Shock Absorber (Stainless steel, 200mm travel)
FL-201-207	Nameplate (black) plastic
FX-126-01	500mm rails for AL sliding plinth

Hypro MARINE



Image courtesy of Q-Marine

Q-SPD | Surface Drives



Q-SPD Surface Drives are reliable high performance propulsion solutions that are user friendly and simple to install and maintain. Q-SPD offers complete usability right through the speed range, not just at high speed and there is no need for complicated operations such as trimming the propeller to enable startup and reverse.

Q-SPD just does it, with swift acceleration, effortless cruise speeds and no undue stress on engines, boat or crew. The boat will track accurately and steering is responsive and precise. The advanced dynamic design of Q-SPD's main housing assures unequalled reverse performance whilst providing the perfect propeller ventilation mix at all times.

Q-SPD is predictably agile at low speed whilst offering increased efficiencies and fuel savings with higher cruise and sprint speeds.

QSD 1 Series					
Models	(1) Nominal Drive Weight	(2) Max Torque	Nominal Power Range per drive	Nominal Max Vessel Weight per drive	Max Prop Dia.
QSD102	85kg	1,100 Nm 812 lbft	134 to 330 kW 180 to 440 bhp	5,000 kg 11,000 lb	25" 635mm
QSD120	90kg	1,600 Nm 1,180 lbft	150 to 410 kW 200 to 550 bhp	5,000 kg 11,000 lb	26" 660mm
QSD125	95kg	3,200 Nm 2,210 lbft	187 to 600 kW 250 to 800 bhp	6,000 kg 13,215 lb	26" 660mm
QSD130	110kg	4200 Nm 3094lbft	370 to 820 kW 500 to 1100 bhp	6,000 kg 13,215 lb	26" 660mm
QSD 2 Series					
QSD202	150	3,200 Nm 2,210 lbft	328 to 485 kW 440 to 650 bhp	11,000 kg 24,220 lb	31" 780mm
QSD220	170	4200 Nm 3,094lbft	450 to 600 kW 600 to 800 bhp	11,000 kg 24,220 lb	31" 780mm
QSD230	190	5200 Nm 3,835 lbft	520 to 1120 kW 700 to 1500 bhp	11,000 kg 24,220 lb	31" 780mm
QSD 3 Series					
QSD302	280kg	5,200 Nm 3,835 lbft	560 to 900 kW 750 to 1200 bhp	17,000 kg 37,450 lb	34" 865 mm
QSD351	320 kg	8,300 Nm 6,122 lbft	600 to 1550 kW 800 to 2100 bhp	17,000 kg 37,450 lb	34" 865 mm
QSD360	340kg	8,300 Nm 6,122 lbft	600 to 1650 kW 800 to 2200 bhp	25000 kg 55,000 lb	40" 1,016 mm
QSD 4 Series					
QSD400	400 kg	12,000 Nm 8,851 lbft	750 to 2000 kW 1000 to 2690 bhp	38,000kg 84,000lb	45" 1,140 mm
QSD450	450 kg	17,600 Nm 12,981 lbft	1120 to 2690 kW 1500 to 3600 bhp	55,000 kg 121,000 lb	54" 1370 mm

(1) Weights are nominal excluding propeller.

(2) These specifications are a guideline only. Actual application limits will depend on shaft speed, power to weight ratio and vessels speed and mission.

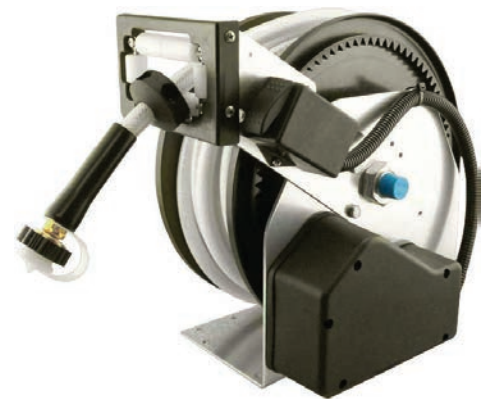
*Specifications subject to change.

Hypro
MARINE



Image courtesy of Sunseeker International

Glendinning | Hosemaster



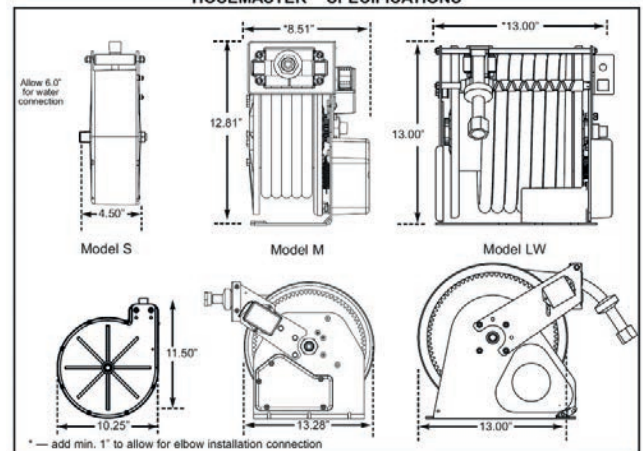
Storing Your Water Hose Has Never Been Easier

Glendinning offers a diverse line of automatically retractable hose reels. The reels were originally designed for the marine environment, making them robust and corrosion resistant. Glendinning hose reels are highly customisable and have already been widely used in several applications including marine, RV, and industrial. Glendinning currently manufacture reels that can handle water, pressure washer, and air hose.

Hosemaster™

- Retract and store your water hose with ease.
- Easily pull out as much hose as you need.
- Store your water hose in the most compact way.
- Simple installation using mounting brackets and templates.
- Built to provide years of maintenance free use in any environment.

HOSEMASTER™ SPECIFICATIONS



Glendinning Hosemaster | S Model

05550-08-E	HM-S 8' Hose & Edge Mount Bracket
05550-08-S	HM-S 8' Hose & Side Mount Bracket
05550-08-SE	HM-S 8' Hose & Side & Edge Mount Bracket
05550-08-U	HM-S 8' Hose & U Bracket
05550-20-E	HM-S 20' Hose & Edge Mount Bracket
05550-20-S	HM-S 20' Hose & Side Bracket
05550-20-SE	HM-S 20' Hose & Side & Edge Mount Bracket
05550-20-U	HM-S 20' Hose & U Bracket

Glendinning Hosemaster | S Model Shower Heads



99582-DK
Deck mount chrome shower head with chrome mounting socket



99593-DW
Deck wash shower head with white plastic mounting socket



99582-REC
99582-REC-SS
Flush mount chrome shower head with white bulkhead mount (& SS cover)



99582-SN
Flush mount white shower head with white bulkhead mount & cover

Glendinning Hosemaster | M Model Water

05510-12-35	HM-M 35ft 150 PSI 1/2" ID Hose - 12V
05510-24-35	HM-M 35ft 150 PSI 1/2" ID Hose - 24V
05510-12-50	HM-M 50ft 150 PSI 1/2" ID Hose - 12V
05510-24-50	HM-M 50ft 150 PSI 1/2" ID Hose - 24V
05511-12-35	HM-M 35ft 150 PSI 5/8" ID Hose - 12V
05511-24-35	HM-M 35ft 150 PSI 5/8" ID Hose - 24V

Glendinning Hosemaster | LW Model

05520-12-75	HM-LW 75ft Hose - 12V
05520-24-75	HM-LW 75ft Hose - 24V
05520-12-100	HM-LW 100ft Hose - 12V
05520-24-100	HM-LW 100ft Hose - 24V



Image courtesy of Fairline Yachts Ltd

Glendinning | Cablemaster™

The Cablemaster™ is the best way for boat owners to handle heavy shore power cable with ease! With unbeatable options like powered extension & retraction, unlimited cable length, multiple installation options, and compact designs, the Cablemaster™ continues to be the experienced boater's ultimate shore power cable handling solution.

Cable Handling Made Simple

Any length and amperage of shore power cable handling made simple with automatic extension and retraction. Never struggle with bulky power cable again!

Easily Accessible

Chrome hawsepipe serves as a through hull fitting to make your shore power cord easily accessible and sealed from the environment.

Built to Last

Robust design and framework to reliably handle any size and length of shore power cable and the harsh marine environment.

The Cablemaster™ product line includes a complete line of devices for handling almost all types of portable power cables. It is divided into two categories CRMA and CM models.

Glendinning Cablemaster | CRMA

CRMA 16/30/32



CRMA 50/63



Typical Amperage:

30 amp (US)

50 amp (US)

16/32 amp (EU)

63 amp (EU)

Cable Type:

16, 30 & 32 amp
(3-4 cond.)

50 & 63 amp
(3-4 cond.)

Retraction Voltage:

12 or 24 VDC

12 or 24 VDC



05010



04022



04091 (bin not included)

Glendinning Cablemaster | CM4

05010	Cablemaster CM-4 12v incl. hawse pipe
05013	Cablemaster CM-4 12v incl. hawse pipe

Glendinning Cablemaster | CM7

04021	Cablemaster CM- 7 12v - 3 conductors
04020	Cablemaster CM- 7 12v - 4 conductors
04023	Cablemaster CM- 7 24v - 3 conductors
04022	Cablemaster CM- 7 24v - 4 conductors
04022-RF	Cablemaster CM- 7 24v - 4 conductors with filter

Glendinning Cablemaster | CM8

04091	Cablemaster CM-8 24v - Inc Aluminium hawse pipe
04093	Aluminium hawse pipe
04094	CM-8 Cablemaster Without Hawse Pipe

Glendinning Cablemaster | CM9

04097-21-24	CM-9 Power Unit 24v Only
04097-25-24	CM-9 Power Unit 24v with CM-8 Hawse Pipe (Aluminium)
04095	CM-9 Hawse Pipe (Stainless Steel)

Glendinning Cablemaster | Cable

187706	63amp Yellow Shore Cable - 3 Core - 16mm - 65ft (20m)
187708	63amp Yellow Shore Cable - 3 Core - 16mm - 100ft (30m)
94004	50amp Yellow Shore Cable - 125volt - 6/3 - per ft
94004/65	50amp Yellow Shore Cable - 125volt - 6/3 - 65ft (20m)
94004/100	50amp Yellow Shore Cable - 125volt - 6/3 - 100ft (30m)
94005	50amp Yellow Shore Cable - 125/250 volt - 6/4 - per ft
94005/50	50amp Yellow Shore Cable - 125/250 volt - 6/4 - 50ft
94005/65	50amp Yellow Shore Cable - 125/250 volt - 6/4 - 65ft
94005/100	50amp Yellow Shore Cable - 125/250 volt - 6/4 - 100ft (30 m)
94006	30amp Yellow Shore Cable - 125 volt 10/3 - per ft
94006/65	30amp Yellow Shore Cable - 125 volt 10/3 - 65ft (20m)
94006/100	30amp Yellow Shore Cable - 125 volt 10/3 - 100ft (30m)
94007	50amp White Shore Cable - 125/250 volt - 6/4 - per ft
94007/65	50amp White Shore Cable - 125/250 volt - 6/4 - 65ft (20m)
94007/100	50amp White Shore Cable - 125/250 volt - 6/4 - 100ft (30m)



Glendinning | Engine Controls

No matter what type of propulsion system your boat is equipped with (whether electronic or mechanical), Glendinning engine control systems takes the guess work out of deciding which control system is right for you.



Electronic Engine Controls

With the advent of electronic engines into the marine industry, the control of your propulsion system has never been more important. Your electronic propulsion system has become more demanding in terms of information it receives from the electronic engine control system. Glendinning's Complete Controls™ system offers the latest in digital technology which allows it to interface with all types of electronic engines while providing the operator with complete control over the propulsion system. Complete Controls™ was designed to give the boat operator everything from basic control operation to advanced control operation of any propulsion system that is equipped with electronic throttles and electric (solenoid operated) transmissions.

Features:

- Basic Control Operation (model EEC4™)
- Cruise Mode: Normal operating control of engine speed and transmission
- Warm Mode
- Sync Mode: Very precise engine
- Exclusive Station Transfer
- Warning Mode
- Alarm Mode
- Slow Mode
- Optional Troll Mode
- Optional Automatic Gear/Throttle Backup



Electronic Engine Controls

Tired of fighting with hard to move mechanical cables? Wish your smaller boat could be controlled like a luxury liner? Now your mechanically controlled propulsion system can have the feel of electronic precision.

Features:

- Integrated Multiple Engine Capability
- Optional Automatic Mechanical Backup: The Smart Actuator I™
- Integrated Trim Control Capability: The Smart Actuator II
- Warm Mode: Locks transmission in Neutral
- Sync Mode: One control handle can control the speed of both engines
- Exclusive Station Transfer
- Warning Mode: A visual indication
- Alarm Mode: The system will continuously monitor system functions
- Optional Slow Mode: Great for “no wake” areas
- Optional Troll Mode

Joystick Control System

Combine the control of your shift, throttle and thruster in a single knob.

Features:

- Suitable for all types of boats. The joystick control system can be used with any Glendinning Complete Controls system, and is capable of working with any electronic or mechanically controlled engine.
- Integrated thruster control panel included in the keypad compatible with most types of thrusters. The joystick control system will integrate the function of your single speed bow and/or stern thruster, along with the shift and throttle control.
- Compatible with any existing Glendinning Smart Actuator or EEC3, EEC4 Complete Control System



Tectrax
MOTION THROUGH INNOVATION



The boat you really want just became **amphibious** and **electric**

Tectrax is making waves as the world's most advanced electric amphibious solution.

Our patented system is available on a number of the industry's most trusted performance hulls - so only Tectrax gives you the freedom to enjoy electric amphibious capability on the boat you really want.

The all wheel drive system is reliable, powerful and easy-to-use, delivering so much more than just the standard amphibious features. And because Tectrax is created by boaties for boaties, 100% of our focus is on creating the best possible electric amphibious systems with first class service, and no compromise on development, design and build.

Advantage of Electric

The Tectrax electric system is the future of amphibious. It's quieter and more reliable than diesel or petrol, requiring just one service every two years. And it has an advanced battery management system (BMS), which protects the long-life lithium iron phosphate batteries from overcharging, short circuiting or overheating. Proprietary Tectrax 2-hour fast charger using a standard household socket per battery.

Minimum 2,000 recharge cycle battery life span. Clear and easy to read fuel gauge keeps you fully informed. A reserve 'tank' within the battery provides emergency power if required.



The Tectrax system gives greater power and control through a combination of high torque electric hub motors guided by an easy-to-use intuitive joystick. All Wheel Electric Drive (AWED™) with traction control and regenerative braking is standard across the range, ensuring improved safety, the ability to climb gradients up to 22% and a top speed of 8 km/h. Four models to choose from to suit your hull size, with different weight capability and power levels up to 4000kg and continuous output of 21.60 Kw

- Fly-by-wire electronics
- Liquid-cooled motors keep the temperature constant for continuous operation on land
- Class-leading 72 volt battery system
- Brushless hub motors provide quiet and energy-efficient operation



Tectrax Electric Amphibious System

	Note	T2500R AWED	T3000R AWED	T3500R AWED	T4000R AWED
Performance					
Total weight carrying capability - kg (lb)	1	2500 (5510)	3000 (6610)	3500 (7710)	4000 (8810)
Typical vessel length - m (ft)	2	Up to 7m (22.12)	6.5 - 7.5 (21.4 - 24.7)	6.5 - 8 (21.4 - 26.3)	7+ (22.12 +)
All Wheel Electric Drive		✓	✓	✓	✓
Traction Control		✓	✓	✓	✓
Electrics					
Marine Lithium Iron long life batteries (72volt)		1	1	2	2
Expected run time on land	5	35 minutes	35 minutes	40 minutes	40 minutes
Re-charge time per standard system	6	2 hours	2 hours	4 hours	4 hours
Fly by wire		✓	✓	✓	✓
Max speed over land fully loaded - kmh (mph)		8km/hr (5)	8km/hr (5)	8km/hr (5)	8km/hr (5)
Power (Kw)		10.8	12.96	17.28	21.6
Tectrax system weight - kg (lb)		580 (1279)	580 (1279)	602 (1328)	602 (1328)



Image courtesy of Ribcraft

Measurement Equivalents

Metre	Feet		Feet	Metre
1	3' 3"		1	0.31
1.5	4' 11"		2	0.61
2	6' 7"		3	0.92
2.5	8' 2"		4	1.22
3	9' 10"		5	1.52
3.5	11' 6"		6	1.83
4	13' 2"		7	2.13
4.5	14' 9"		8	2.44
5	16' 5"		9	2.75
5.5	18' 1"		10	3.05
6	19' 8"		11	3.35
6.5	21' 4"		12	3.66
7	23' 0"		13	3.96
7.5	24' 7"		14	4.27
8	26' 3"		15	4.57
8.5	27' 11"		16	4.88
9	29' 6"		17	5.18
9.5	31' 2"		18	5.49
10	32' 8"		19	5.79
			20	6.1
			21	6.4
			22	6.71
			23	7
			24	7.32
			25	7.62



Image courtesy of Scorpion Ribs Ltd

BayStar | Hoses

HM3242/3.6	1 x 3.6m Hose (12ft)
HM3242/4.2	1 x 4.2m Hose (14ft)
HM3242/4.9	1 x 4.9m Hose (16ft)
HM3242/5.5	1 x 5.5m Hose (18ft)
HM3242/6.1	1 x 6.1m Hose (20ft)

SeaStar | Hoses with bend restrictors

HM3320/4.9	1 x 4.9m Hose (16ft)
HM3320/5.5	1 x 5.5m Hose (18ft)
HM3320/6.1	1 x 6.1m Hose (20ft)
HM3320/6.7	1 x 6.7m Hose (22ft)

SeaStar | Pro Series Hoses - 1500 psi wp with bend restrictors

HM3620/4.9	1 x 4.9m Hose (16ft)
HM3620/5.5	1 x 5.5m Hose (18ft)
HM3620/6.1	1 x 6.1m Hose (20ft)
HM3620/6.7	1 x 6.7m Hose (22ft)

Bulkhead options available on request.

All hoses are made with brass swage ends. Stainless steel ends are also available on request (cost additional).

ALL HOSES ARE MADE TO ORDER SO ANY LENGTH IS POSSIBLE

