



HyDrive

HYDRAULIC BOAT STEERING

Commander Series



PERFORMANCE

RELIABILITY

QUALITY

Commander Series

FOR OUTBOARDS

The new Commander Series 501 helm unit combines the elements of great performance and economic design, consolidating HyDrive Engineering's position as a world-leader in hydraulic boat steering. Two years of design, development and testing have resulted in these helms being selected as the standard helm supplied in the all-new Commander Series kits for outboards and inboards which also feature the new 510, 511 and 512 series cylinders.

The new 511BH cylinder features a radical new design, which not only provides a competitive price, it also includes the most comprehensive range of protection measures against the effects of corrosion and electrolysis in an aluminium cylinder.

The new 516FM cylinder utilises the same materials and technology to provide a powerful front-mount cylinder which offers a highly competitive price, but with superior quality and performance to other alternatives.

The Commander Series is designed to offer a budget range of hydraulic steering to leisure boat users without sacrificing quality and performance. The new range is designed for use on smaller horsepower outboards and also inboards and jets.

For larger outboard applications, you should either select the PRO version of the kit which upgrades the helm units to the model 401 or 101, or choose the Admiral Series model which best suits the motor. *See separate brochure on the Admiral Series which features chrome plated marine brass, bronze and stainless steel cylinders for outboards - giving the maximum corrosion resistance and strength of any outboard steering system on the market.*

The new Commander Series comes with the standard 2 year warranty for leisure use.

Separate Data Sheets are available on request for each kit.

TYPICAL KIT

Each kit includes the following:-

- Model 501 Helm unit
- 2 litres Ultra-15 hydraulic fluid
- 15 metres high-pressure nylon hydraulic tubing
- The cylinder type of your choice
- All fittings to suit
- Bleeding kit
- All instructions



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For High Horsepower and the optimum in power, strength and performance - see the Admiral Series of outboard steering kits such as the **OBKIT-1** and **OBKIT-1-XT** for extreme applications

NON-FEEDBACK

Commander Series Helms



Take control of your boat with a new HyDrive Commander Series hydraulic steering system.

Hydrive, Australia's largest selling hydraulic steering for small boats, offers the finest in smooth, powerful steering manufactured in Australia using the highest quality materials.

It doesn't matter whether you have a small boat with a small outboard, or a larger craft with multiple large HP outboards, there is a HyDrive system to suit. Everything you need to handle virtually any boat using outboards, inboards, sterndrives or jet units from 4-15 metres - delivered in a single carton.

COMMANDER SERIES

The *Commander Series* features the use of the model 501 (28cc/rev) Helm unit combined with a series of cylinders to suit a boat's requirements. This unique 7-piston pump has a highly efficient combination of features designed to provide maximum performance and longevity for leisure boat users. It is not designed for commercial users or for very large HP outboards.

COMMANDER-PRO SERIES

The *Pro Series* features the model 401(28cc/rev) and 402 (35cc/rev) helm units. These helms feature high performance bearings and components designed for use in commercial and high HP applications where optimum performance is required.

Why fit HyDrive?

The unique, saltwater resistant design and precision manufacturing offer the most corrosion resistant steering cylinders on the market, resulting in greater product longevity in the harsh marine environments of the world.

Designed as a complete Do-It-Yourself installation, everything you need is supplied including detailed step-by-step instructions.



Model 501 Helm unit



Model 401 & 402 Pro Series Helm unit

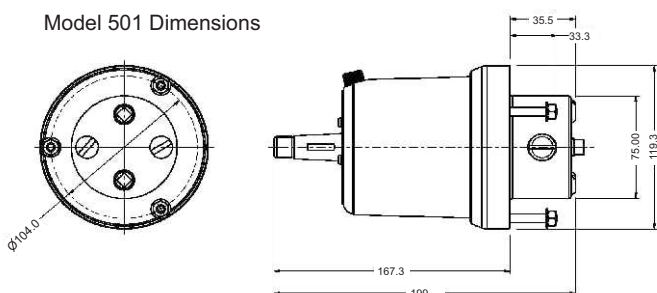
COMMANDER HELM OPTIONS

Commander Series Helms

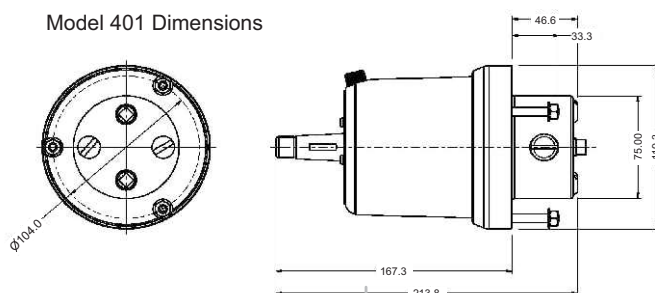
FEATURES:

- Compact front-mount design
- Unique high-tech composite alloy body for total corrosion resistance
- In-built lock valve prevents torque feedback - the wheel stays where you put it.
- Field replaceable shaft seal
- Rear-mount kit available
- Wedge kit available

Model 501 Dimensions



Model 401 Dimensions



Front-mount Cylinders

BULL-HORN STYLE

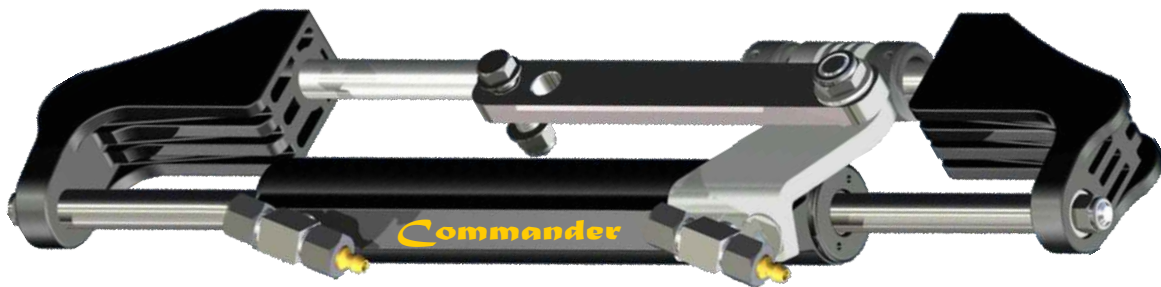


512BH Bullhorn Cylinder

UP TO 150HP

For single outboard motors up to 150HP, the 512BH is an ideal choice for leisure boats - offering the advantage of full hydraulic control of your boat at an economical price. Installation is simple, performance is great and handling is direct with only 3 turns HO/HO. The 512BH cylinder comes in kit form with all necessary fittings including high pressure nylon hydraulic tubing, 2 litres of Ultra-15 fluid, model 501 helm unit and detailed instructions.

COMKIT-6 - supplied with 501 Helm unit - or **COMKIT-6-PRO** supplied with 401 Helm unit for commercial use. *Check the model selection chart for confirmation of the correct version to suit your particular motor.*



511BH Bullhorn Cylinder

UP TO 200HP

For larger outboard motors up to single 200HP, or twin motors up to 400HP total (counter-rotating), the 511BH is an ideal choice for leisure boats - powerful steering control and great value. Installation is simple and performance is impressive compared to conventional cable steering. The 511BH cylinder comes in kit form with all necessary fittings - including high pressure nylon hydraulic tubing, 2 litres of Ultra-15 fluid, model 501 helm unit and detailed instructions.

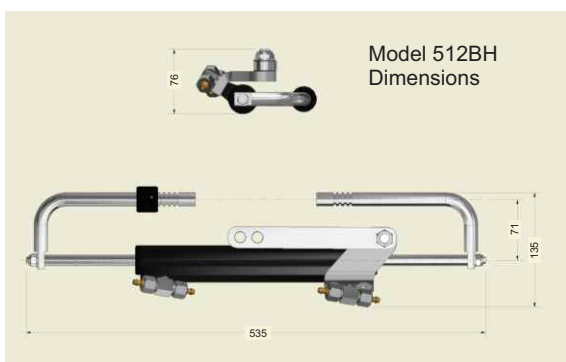
COMKIT-1 - supplied with 501 Helm unit for pleasure use only. *Check the model selection chart for confirmation of the correct version to suit your particular motor.*

PRO SERIES OPTION

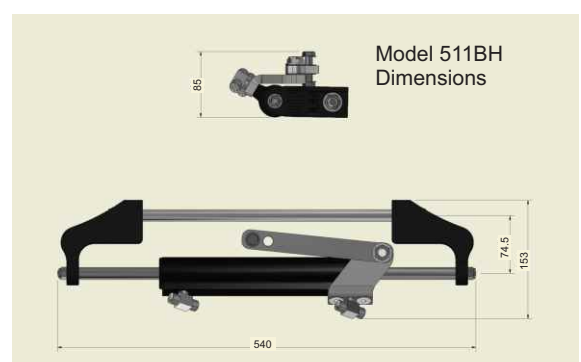
For Larger Outboards or Commercial use

UP TO 300HP

COMKIT-1-PRO supplied with model 401 Helm unit for commercial use and for larger HP outboards up to single 300HP or twin motors up to 600HP total (counter-rotating). *Check the model selection chart for confirmation of the correct version to suit your particular motor.*



Model 512BH
Dimensions



Model 511BH
Dimensions

FOR OUTBOARDS

NON-FEEDBACK

HyDrive

Front-mount Cylinders



516FM Front-Mount Cylinder

UP TO 200HP

The 516FM is designed for installation directly onto most V4 and V6 outboards and mounts to the front of the motor using 4 small bolts. Attaches to the outboard motor's tiller arm using the motor's existing drag-link.

The cylinder requires more room than the bullhorn style cylinder, however the hoses remain stationary making it an ideal choice for wider engine wells. Installation is simple and performance is impressive when compared with conventional cable steering.

The 516FM cylinder comes in kit form with all necessary fittings including 15 metres high pressure nylon hydraulic tubing, 2 litres of Ultra-15 fluid, model 501 helm unit and detailed instructions.

COMKIT-5 - supplied with 501 Helm unit for leisure use.

PRO SERIES OPTION For Commercial use

Side-mount Cylinders



512T Side-Mount Cylinder

UP TO 135HP

The 512T is designed for installation directly onto the tilt-tube of the outboard motor in the same way as conventional cable steering. Attaches to the outboard motor's tiller arm using the motor's existing drag-link. Suitable for use on a single outboard up to 135HP or twin motors (counter-rotating) up to 250HP total.

The cylinder requires sufficient side clearance to fit, however the hoses remain stationary which makes it an ideal choice for many small boats. Installation is simple and performance is impressive when compared with conventional cable steering.

The 512T cylinder comes in kit form with all necessary fittings including high pressure nylon hydraulic tubing, 2 litres of Ultra-15 fluid, model 501 helm unit and detailed instructions.

COMKIT-SPORT - supplied with 501 Helm unit for leisure use.

PRO SERIES OPTION For Commercial use

UP TO 175HP

COMKIT-SPORT-PRO supplied with 401 Helm unit for commercial use and up to single 175HP or twin (counter-rotating) up to 300HP total.

Note: **COMKIT-SPORT** system can be used to control power steering on stern-drives and connects very simply to the same bracket as a conventional cable steering unit. The use of this system allows the easy fitting and operation of an autopilot as well as providing superior control of the original power steering system.

FOR OUTBOARDS

FOR OUTBOARDS & STERN-DRIVES WITH POWER STEERING

NON-FEEDBACK



Side-mount Cylinders



UP TO 200HP

510T Side-Mount Cylinder

The 510T is designed for installation directly onto the tilt-tube of the outboard motor in the same way as conventional cable steering. Attach to the outboard motor's tiller arm using the motor's existing drag-link. Suitable for use on a single outboard up to 200HP or twin motors (counter-rotating) up to 400HP total.

The cylinder requires sufficient side clearance to fit, however the hoses remain stationary which makes it an ideal choice for many small boats. Installation is simple and performance is impressive when compared with conventional cable steering.

The 510T cylinder comes in kit form with all necessary fittings including high pressure nylon hydraulic tubing, 2 litres of Ultra-15 fluid, model 501 helm unit and detailed instructions.

COMKIT-2 - Balanced cylinder - supplied with 501 Helm unit for leisure use.

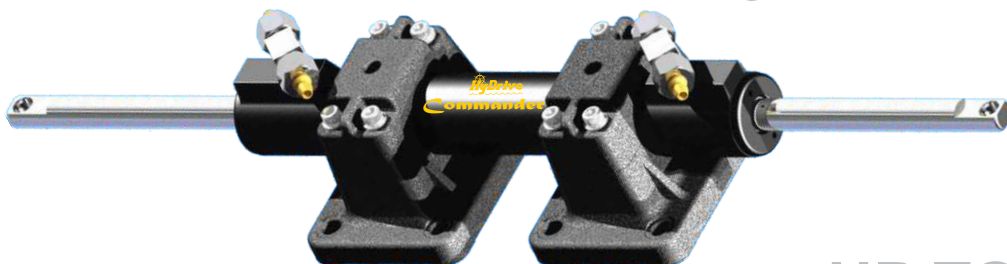
COMKIT-3 - Single-ended (unbalanced) cylinder - supplied with 501 Helm unit for leisure use.

PRO SERIES OPTION For Larger Outboards or Commercial use UP TO 300HP

COMKIT-2-PRO - Balanced cylinder - supplied with 401 Helm unit for commercial use and for larger HP outboards up to single 300HP or twin (counter-rotating) up to 600HP total.

COMKIT-3-PRO - Single-ended (unbalanced) cylinder - supplied with 401 Helm unit for commercial use and for larger HP outboards up to single 300HP or twin (counter-rotating) up to 600HP total.

Centre-mount Cylinders



UP TO 200HP

510DE Double-Ended Centre-Mount Cylinder

The 510DE is designed for installation between two outboards, and connected by means of two drag-links to the two outboards' tiller arms. The most common position for mounting is under swim platforms, marlin boards or onto the transom. A popular means of hydraulically steering outboard powered catamarans, and relies on the installer to tailor two suitable drag-links or tie-bars to complete the installation.

The 510DE cylinder comes in kit form with all necessary fittings including high pressure nylon hydraulic tubing, 2 litres of Ultra-15 fluid, model 501 helm unit and detailed instructions.

COMKIT-4 - supplied with 501 Helm unit for leisure use.

PRO SERIES OPTION For Larger Outboards or Commercial use UP TO 300HP

COMKIT-4-PRO - supplied with 401 Helm unit for commercial use and for larger HP outboards up to single 300HP or twin (counter-rotating) up to 600HP total.

FOR OUTBOARDS

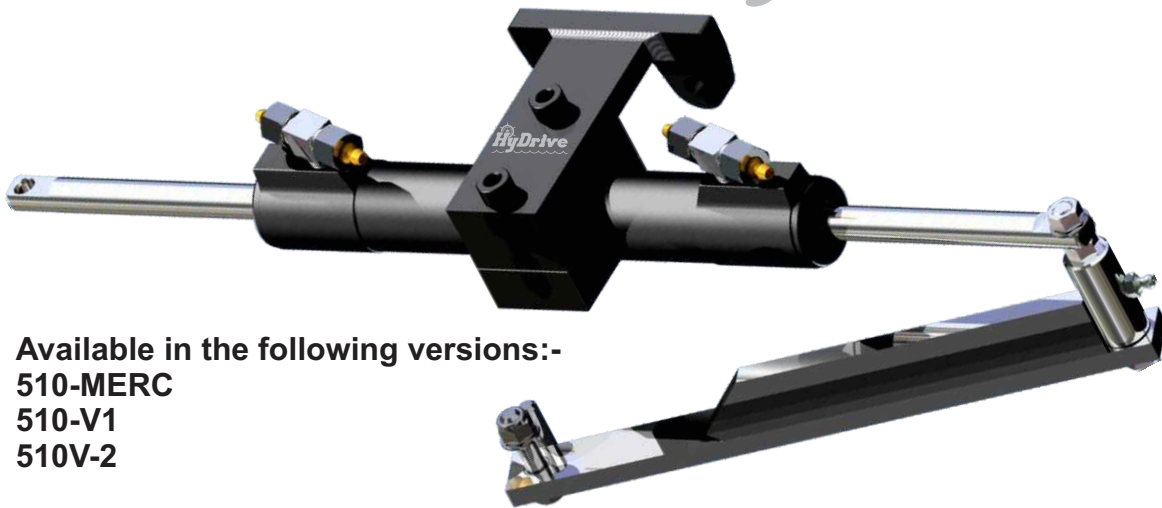
NON-FEEDBACK

HyDrive

Stern-Drive Cylinders



FOR STERN-DRIVES



Available in the following versions:-
510-MERC
510-V1
510V-2

510- Stern-Drive Cylinders

The new 510 Series cylinder range now includes a stern-drive version to suit both Mercruiser and Volvo stern-drive legs, mounting directly to the transom-shield and keeping the cylinder foot-print to a minimum. Where room is available, standard side-mount cylinders are recommended.

The 510 Stern-drive cylinders come complete with mounting bracket, stainless steel drag link and fittings (except the 510-V1 which uses the standard Volvo drag-link). Stern-drive models are only sold as **PRO** versions due to the higher torque requirements on most stern-drive models - regardless of HP.

COMKIT-MERC-PRO - supplied with the **510-MERC** cylinder

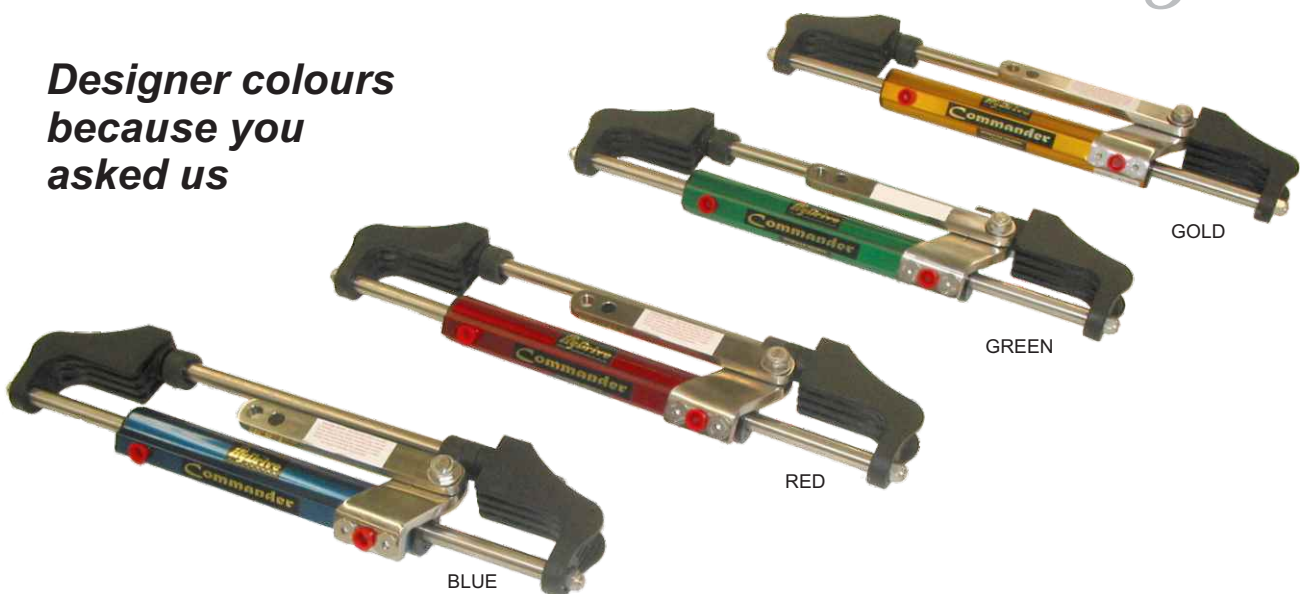
COMKIT-V-PRO-1 -supplied with the **510-V1** cylinder This model suits Volvo **DPS & SX** legs.

COMKIT-V-PRO-2 -supplied with the **510-V2** cylinder This model suits Volvo **DPD & DPE** legs

These kits come complete with cylinders listed and with all necessary fittings, high pressure nylon hydraulic tubing, 2 litres of Ultra-15 fluid, model 401 helm unit and detailed instructions.

Commander Series Colour range

**Designer colours
because you
asked us**



In response to our customers' requests, HyDrive has introduced a limited range of four designer colours for the Commander Series models **511BH** and **516FM** cylinders. A small colour surcharge applies to the standard price of each model. The new colour series is an ideal option for customers who want to match the gel-coat colour of their boats. To order simply place the colour immediately after the standard part number. e.g. **511BHN8-BLUE** etc.

NON-FEEDBACK



Accessories

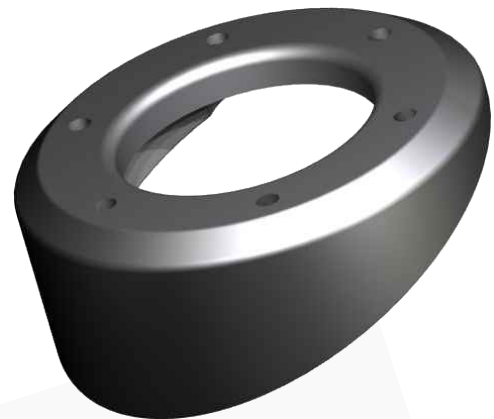


REAR-MOUNT KIT

The **REAR-MOUNT KIT** fits any model 401, 402 or 501 helm unit and is adjustable from low-profile to full protrusion for maximum flexibility in helm placement. Simply trim the spacers and studs to adjust the amount of protrusion into the helm position. The front dash or console ring is fully O-ring sealed against pump body to prevent water ingress to the rear of the console. Easy to fit, easy to adjust and looks great.

FOR HELM UNITS

20 DEGREE WEDGE



The **WEDGE-401** 20-degree wedge kit is designed for mounting from fully horizontal to fully vertical installations and fits any standard model 401, 402 and 501 helm unit.

DO-IT-YOURSELF TIE-BAR KITS



- 1:-Stainless outer tube
- 2:- Stainless threaded rod
- 3:- Locking sleeves
- 4:- Rod-ends
- 5:- Tiller bolts (not shown)

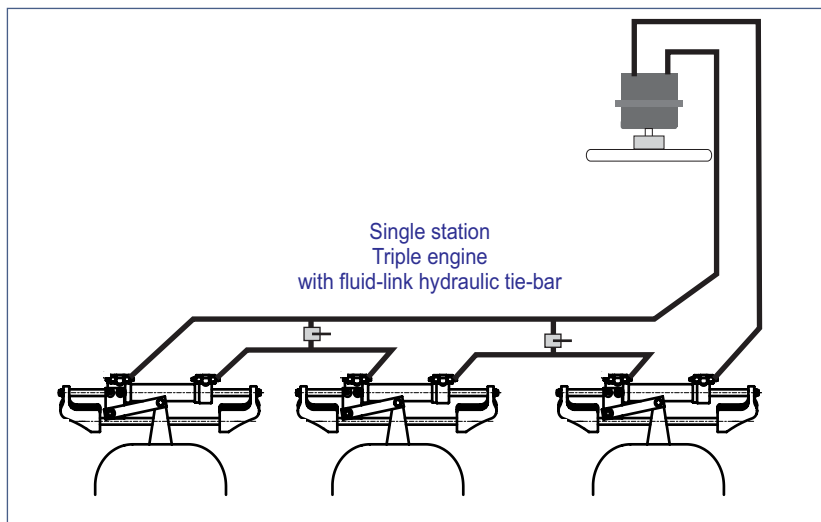
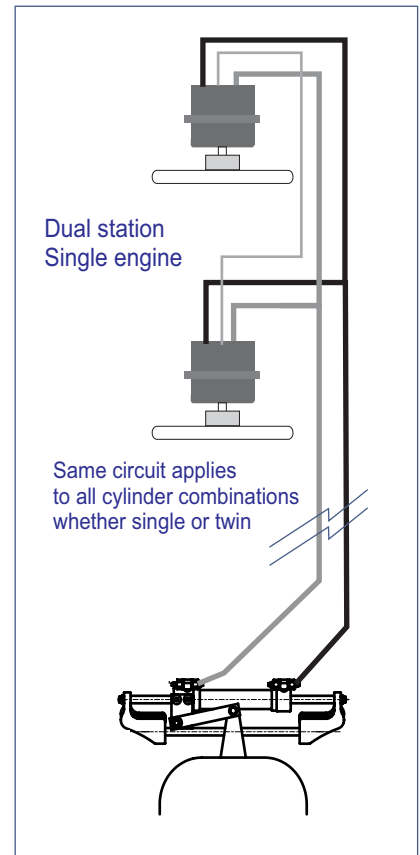
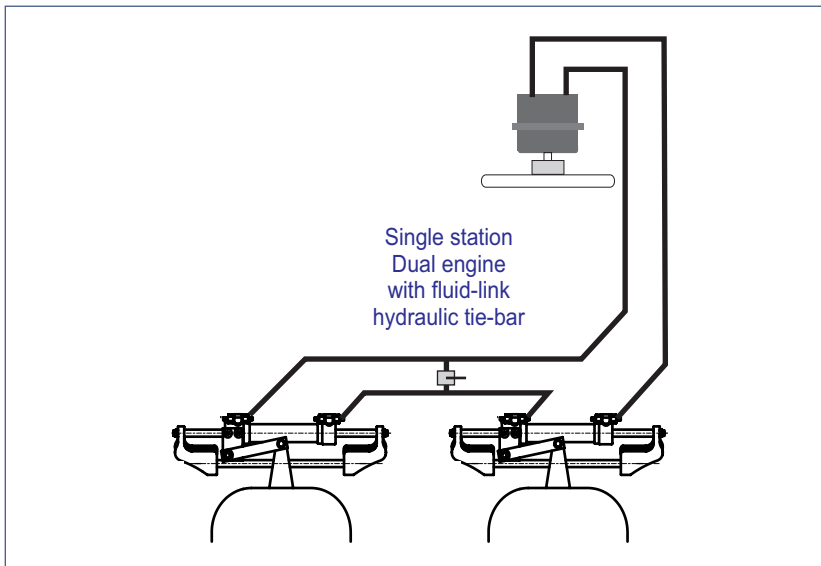
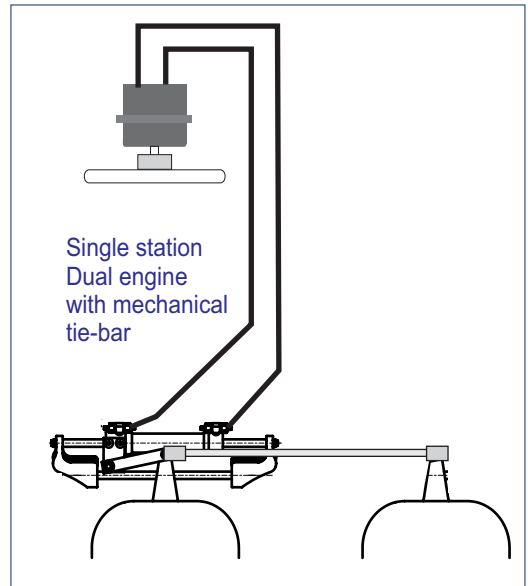
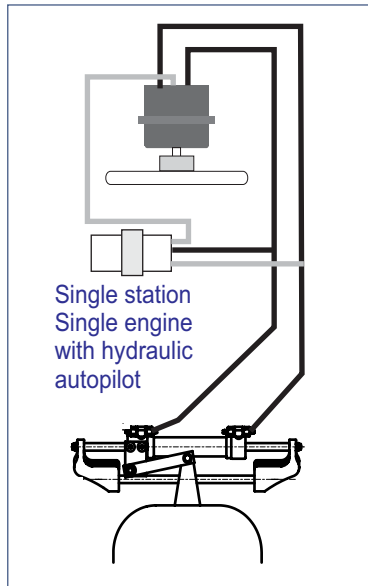
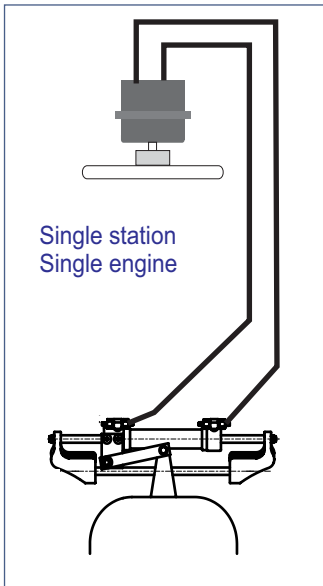
The HyDrive UNITIEBAR is available for tie-bars up to maximum of 700mm between centres and up to twin 175HP outboards. For larger HP outboards - ask for a data sheet on our HD tie-bar kits.

Some System Options

Typical steering circuits for outboard motors

Bullhorn type cylinders pictured but same circuits can be used on all cylinder types

FOR OUTBOARDS



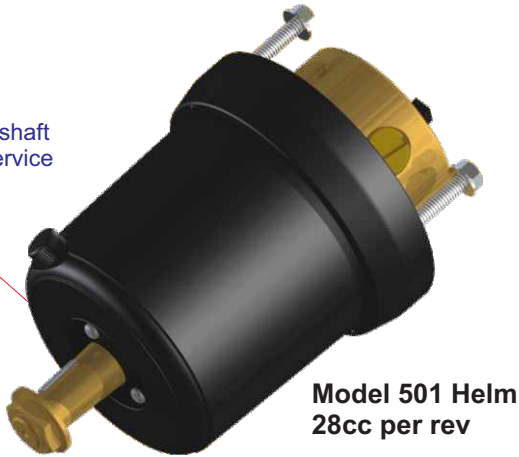
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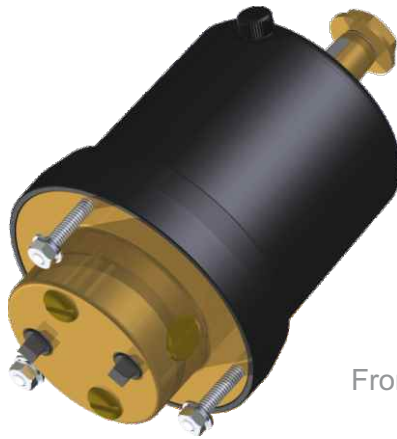
Product Features



Field-replaceable shaft seal for ease of service



Model 501 Helm
28cc per rev



Sleek new shape to match modern console designs

Front-mount design for maximum appeal

Hi-Tech composite alloy housing material which is stronger than aluminium and totally corrosion resistant for maximum exposure to the elements

- Cadmium plated wheel nut and washer
- High tensile anodised Aluminium steering shaft
- Anti-splash filler cap for rough conditions
- Unique assembly design for ease of service and maximum performance
- Stainless steel studs, nuts & washers pre-fitted for convenience
- Highly efficient non-return valves for non feedback of helm unit - eliminates all torque from the steering cylinder

FOR HELM UNITS



Bull-horn style mounting

Model 511BH

Totally new cylinder barrel construction offering increased strength and compact design

Anodised high tensile aluminium for performance and protection

Precision ground and polished 316 stainless steel piston rods for maximum service life. This is not chrome-plated lower-grade stainless which can flake and damage seals.

New design polished stainless steel mounting plate and tiller arm - high strength and good looks

Unique design for maximum electrical protection against electrolysis in harsh environments

FOR CYLINDERS



Front-Mount style

Model 516FM

Totally new cylinder barrel construction offering increased strength and compact design

Precision ground and polished 316 stainless steel piston rods for maximum service life. This is not chrome-plated lower-grade stainless which can flake and damage seals

Anodised high tensile aluminium for performance and protection

