

# STEERING SYSTEMS SUPERYACHTS





HyDrive Engineering Pty Ltd has been designing and manufacturing hydraulic boat steering systems in South Australia since 1966, and is acknowledged as one of the world leaders in boat steering technology. The largest manufacturer in the Southern Hemisphere, HyDrive boasts sales of more than 600,000 units around the world. HyDrive power steering and electronic steering systems are precision manufactured to comply with all international survey authorities and to perform in the harshest marine environments of the world.

The range of steering has increased dramatically over the past 20 years with considerable emphasis being placed on the growing need for more efficient and powerful steering equipment to handle larger vessels. HyDrive has a product range which caters to all types of vessels to over 150 metres in length.

The pedigree of HyDrive steering systems includes a host of accolades and awards for design excellence over the years, including 4 Australian Design Awards, 2 Prince Phillip Prize Finalists, Premier's Award for design excellence, 2 Boating Industry Association awards for innovation, and several other commendations. These awards reflect the constant striving for performance and excellence that has made HyDrive a leader in the field of boat steering equipment.

The E-Series Commander range of electronic steering is designed for safe and reliable steer-by-wire control for all types of commercial vessels and Superyachts to 150 metres.

The E-Series Commander electric motor controls offer total steering control and monitoring by wire. Systems have the flexibility to incorporate multiple stations and different control types to meet even the most complex steering requirements.

HyDrive's increased production facilities, extensive quality control and testing procedures, and investment in product design and development have recently been rewarded. HyDrive is the 2010 Winner of the AIMEX Best Marine Industry Export Performance Award.



HyDrive manufacture a range of steering control options to suit all types of craft.

### ES-801 COMMANDER HELM UNIT

Compact and durable electronic helm with elegant black satin anodised finish for use on interior and exterior helm positions. Precision control.

**CONSTRUCTION:** Heavy duty marine construction with stainless steel wheel shaft, high quality bearings and seals with adjustable wheel tension for heavy seas.

**TURNS:** 3 turns lock to lock with limit stops



### ES-802 MINI HELM UNIT

Designed for use in restricted space or where finger-tip control is required. Easy to read display for precision steering.

**CONSTRUCTION:** Compact design includes mini wheel.

**TURNS:** 270 degrees for 90 degree control

**MOUNTING:** Panel mount - Square bezel optional



### ES-803 FOLLOW UP LEVER

Robust construction with elegant finish for use on interior and exterior steering positions. Easy to read scale and smooth operation with central detent position for added security.

**TURNS:** 270 degrees for 90 degree control

**DIMENSIONS:** 95mm x 150mm x 55mm

**MOUNTING:** Panel mount



### ES-900 CONTROLLER FOR MAIN BRIDGE

This elegant and modern panel is designed for use with integrated electronic steering systems or as a stand-alone motor & alarm monitoring panel. The fully back-lit panel features soft-touch key activation and automatic dimming control.

**INPUT VOLTAGE:** 12v - 24V DC

**DIMENSIONS:** 180mm x 140mm x 80mm

**MOUNTING:** Flush Mount

**FUNCTIONS:** Motor Select; Run Stop; Alarm functions for power-pack status; Mute; Auto-Dim and emergency Dodge-Steer command

Designed for use with either an E-Series electronic helm unit, or as a stand alone steering panel.



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## HD SERIES CYLINDERS

This superb range of cylinders are designed and constructed exclusively for use on boat steering equipment and are made from the finest marine-grade materials available.

- All Bronze end-caps and mounting bracket assembly
- 316 Stainless Steel Piston Rod
- Fully articulated construction with spherical rod-end and ball-mounting bracket.
- Field-replaceable gland seals.
- Insulated Piston rod design for maximum protection against wear and electrolysis



## SINGLE POWER PACK

HyDrive Single Motor Power Packs are supplied as complete modules and are available in various sizes of flow and motor size to suit the steering cylinders and application for each vessel.

- Single 380/415V AC 4kW motor and pump assembly with inbuilt relief valve
- Sight level gauge
- Filler breather
- Pressure Gauge
- Return line filter



Models can also be supplied with 220/240V AC motors should this be required

## DUAL POWER PACK

HyDrive Dual Power Packs are supplied as complete modules and are available in various sizes of flow and motor size to suit the steering cylinders and application for each vessel. These dual motor systems are designed for only one motor to operate at a time. The second motor is used only to provide emergency back-up in the event of power failure to the primary motor. Each motor/pump is isolated internally from the other to ensure integrity of supply of the two separate systems

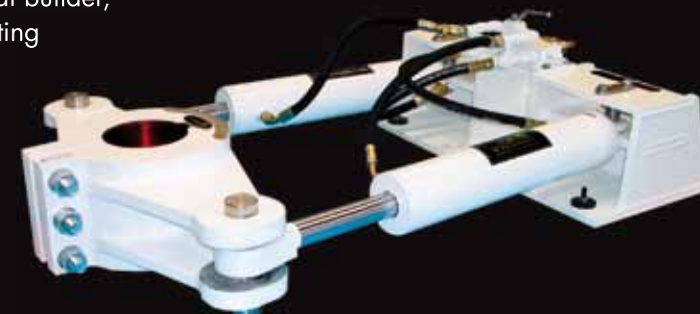
- DUAL 380/415V AC Heavy Duty motor and pump assembly.
- In built relief valve.
- Sight level gauge.
- Filler breather.
- Pressure Gauge with shut-off valve
- Return line filter.
- Autopilot solenoid control valve
- Pressure Compensated Flow Control for speed adjustment of pilot or joystick response time.
- Provision for automatic changeover of pump in case of power failure.



## 5000 SERIES CYLINDERS

HyDrive manufacture a wide range of steering cylinders to suit all types of steering installations. These cylinders are built to meet the toughest requirements of International Survey Societies and to withstand the harshest marine environment. Cylinders can be supplied as individual components for installation by the boat builder, or as complete assemblies with mounting plates and tiller arms to match

- Heavy Duty steel construction
- Hard-Chromed high tensile piston rods.
- Polyurethane coated for high protection against the environment
- Stainless steel clevis pins.
- High safety Factors



## E-SERIES PEDESTAL

The E-SERIES Pedestal unit is a state-of-the-art electronic full follow-up controller which offers an integrated system featuring:

- Electronic follow-up wheel control.
- Non-follow-up joystick for emergency control and rapid docking.
- Integrated motor controls for single or twin electric motors.
- Full alarm monitoring system.
- Rudder angle display
- Wheel angle display
- Optional CM880 commercial autopilot controller.
- Provision for GPS / Gyro repeater.
- Heavy duty construction with grab rails.
- Twin hinged front doors for ease of electrical access.
- Meets all International Survey requirements.

This flexible controller can be tailored to suit any steering requirement on any size vessel.



## ES-901 MONITORING CONTROL SYSTEM

ES-901 Monitoring Control System is available in a range of types and sizes and can be supplied for single, twin or multiple motor controls. These Survey approved panels feature:

- Heavy Duty Motor Starters with variable overloads.
- Phase Alarm.
- Motor Overload Alarm.
- Local control from bridge hand-over switch.
- Local joystick control (optional).
- 24VDC transformer for bridge controls.
- REMOTE ALARM panel for non-manned spaces





## Integrated E-Series

The E-Series Commander range of electronic steering control and systems equipment is designed for large modern vessels with Electric Power-Assisted steering, and gives a modular control system which is both simple to install and highly reliable with steering status monitoring at all times.

The foundation of the system is the ES-900 bridge controller and the ES-901 to activate and monitor single or twin electric motor driven power packs for the steering gear.

The self powered ES-900 24V DC bridge control is installed using a single multicore cable from the engine room AC switchboard. Full back-up of both AC and DC is an in-built feature of the standard ES-901 twin motor switchboard.

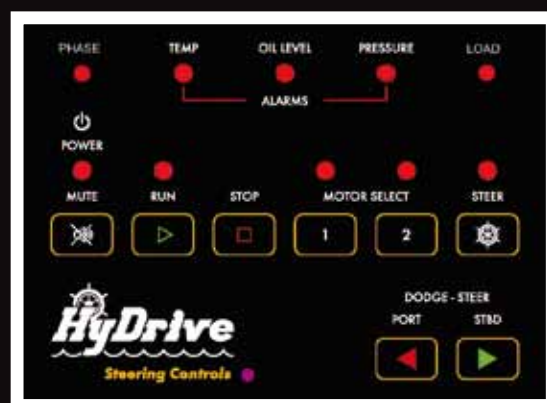
The E-Series Commander ES-801 helm can integrate directly into the bridge module without the need for any additional equipment and thereby offers full digital steering for a fraction of the cost of a stand-alone steering unit.

The advanced controller technology is highly resistant to on-board voltage spikes typical of many marine installations. Robust in construction and using state-of-the-art programming, the HyDrive steering control system offers the best performance for long term professional use.

HyDrive has been a specialist steering manufacturer since 1966 and the long term experience in the technology and requirements of steering are reflected in this 21st Century addition to our range of steering equipment.

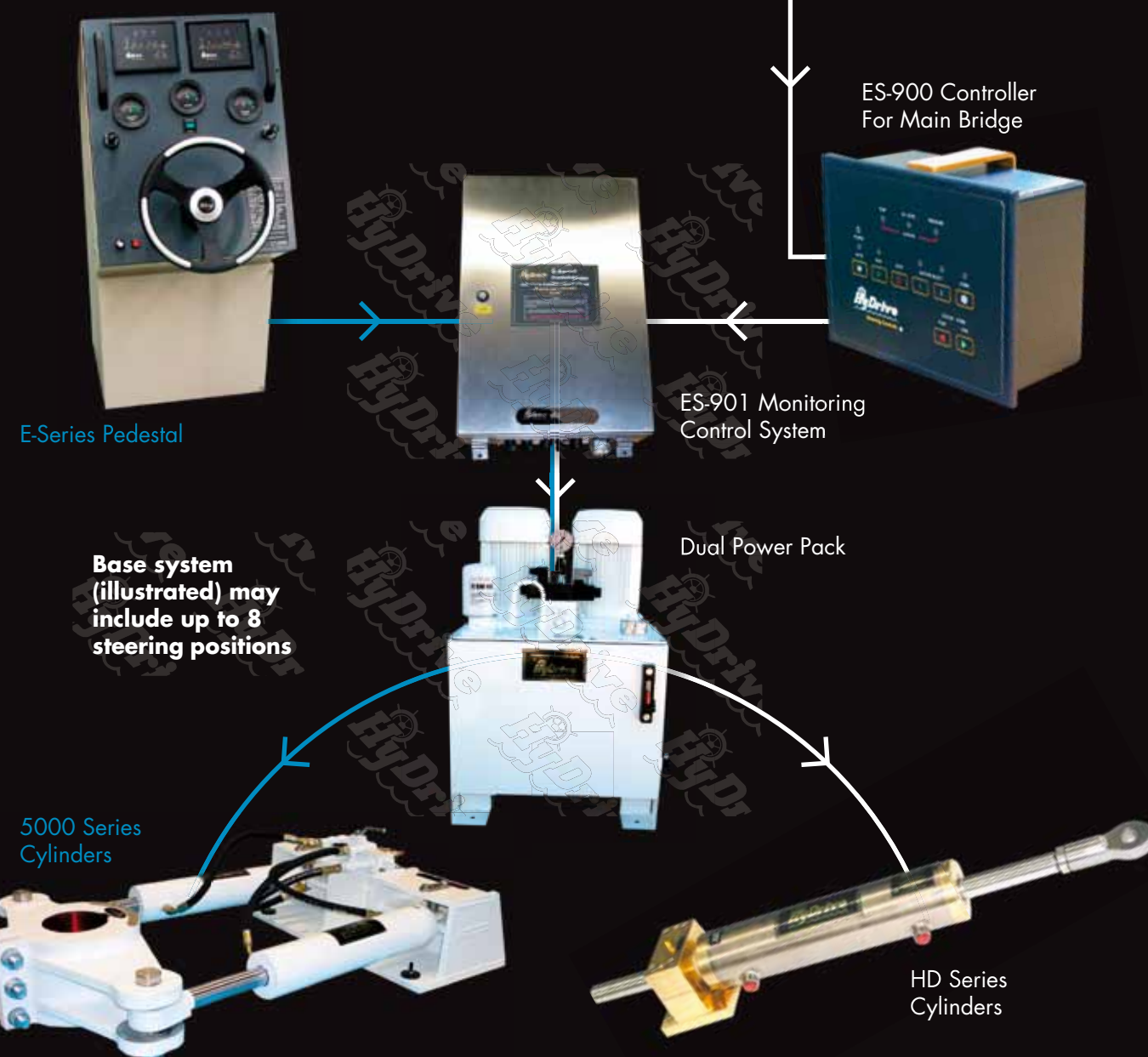
### STANDARD FEATURES OF CONTROLLER

- Run-stop indicator
- Motor 1 or Motor 2 select
- High temperature alarm
- Low oil level alarm
- Low oil pressure alarm
- Phase fail alarm
- Overload alarm
- Alarms are audible/visual
- Mute button
- Dodge steer control buttons
- Electronic steer select
- Automatic dimmer system



### COMMERCIAL

### SUPERYACHT





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