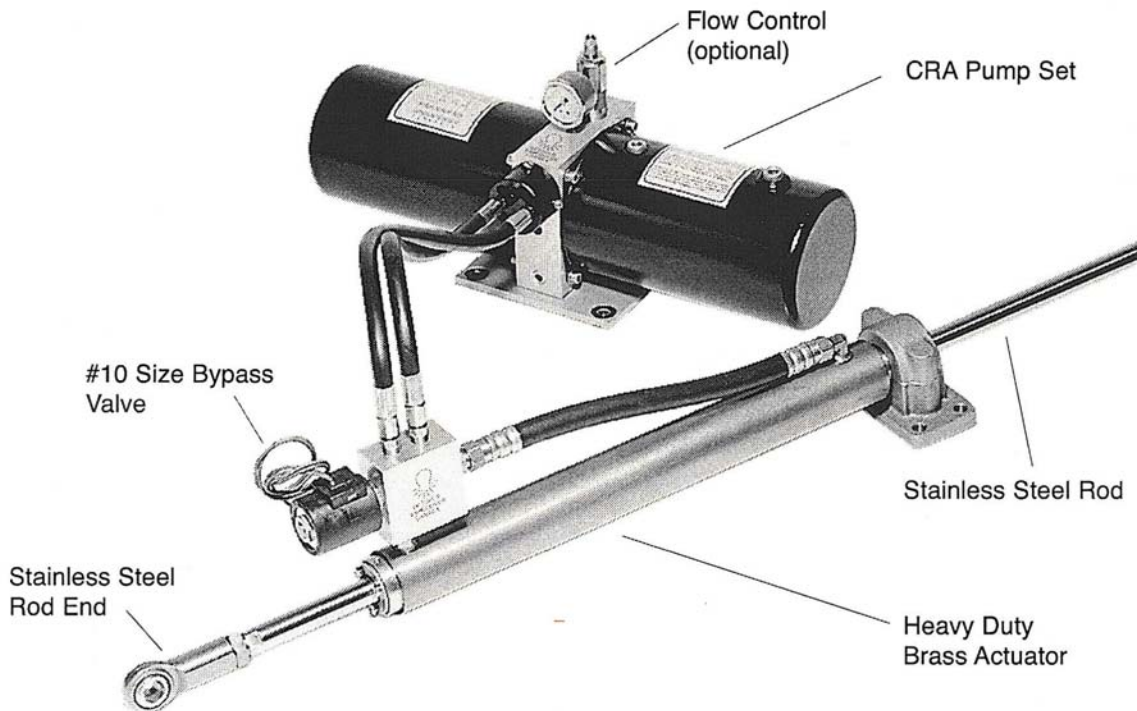




INNOVATORS IN AUTOMATIC PILOT DRIVE SYSTEMS

HEAVY-DUTY LINEAR ACTUATOR (45mm BORE) & CONTINUOUS RUNNING PUMP SYSTEM



GENERAL DESCRIPTION

An Octopus Heavy Duty Hydraulic Linear Actuator and Continuous Running Pump System is a simple and effective way to drive the rudder on a boat equipped with a mechanical steering system. The linear Actuator is mounted on the rudder quadrant and onto a suitable structural surface of the hull. The Continuous Running Pump is mounted in a convenient location adjacent to the Linear Actuator. When the autopilot is not in use, the apparatus runs freely along with the rudder and the pump does not run – this bypass allows free-hand steering. When the autopilot is in use, a solenoid valve on the actuator closes and locks the cylinder to the quadrant and the pump runs, powered through the built in starter relay. Steering signals from the autopilot are now fed to the 2 solenoid valves inside the pump. De-energizing the solenoid valve immediately disconnects the autopilot from the rudder. The pump has its own reservoir and optional pressure gauge and flow control valve. This drive system has the minimum of moving parts. Mechanical simplicity gives our product reliability and ease of service when compared to complicated gear and screw actuators, making our units a favourite of offshore mariners. These systems are shipped from our factory completely filled with oil and require no additional plumbing.

STANDARD FEATURES

1. **LOW POWER CONSUMPTION** – Pumpsets typically draw under 150 watts.
2. **COMPACT EFFICIENT DESIGN** – The units are custom built for the marine environment. Stainless steel rod, rod end and brass barrel on the actuator. Anodized aluminum on the pump.
3. **LONG LIFE MECHANICAL SEAL** – Between the pump and the motor, will not damage shaft after long service unlike more usual lip seal, which wears a groove in the shaft.
4. **Wide Voltage Range** – 12 volt, 24 volt and 32 volt systems are available.

STANDARD FEATURES (con't)

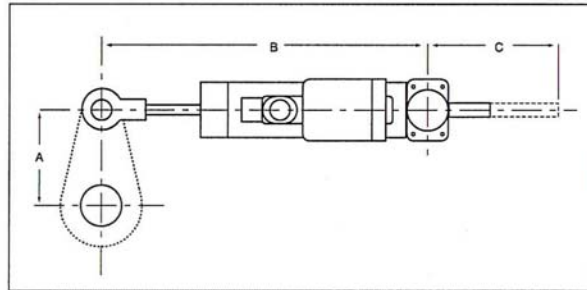
5. COMPLETE WATERPROOF CONSTRUCTION – The motor, steering solenoid valves, starting relay and terminal connections on the pump are all enclosed in a waterproof cover.
6. LARGE BYPASS VALVE – The #10 size bypass valve ensures minimum resistance to hand steering.
7. RUNNING INDICATOR LAMP – The pump has a running indicator lamp to show that the motor is running.
8. BUILT-IN STARTER RELAY – The pump has a starting relay built into the motor enclosure, to switch the motor on and off from the auto pilot.

OPTIONAL FEATURES

1. FLOW CONTROL – An adjustable flow control valve can be fitted. This allows the operator to adjust flow to approx 65% of maximum rated flow (0.50 GPM or 2000 cc/min).
2. PRESSURE GAUGE – A pressure gauge can be fitted to show steering pressures.
3. PRESSURE RELIEF VALVE – Adjustable between 50 to 900 psi (4 to 60 bar).
4. EXTENDED HOSES – The length of the hoses between the pumpset and the actuator can be up to 8 feet long (2.5 metres). Standard length is 2 feet (0.60 metres).

SPECIFICATIONS AND DIMENSIONS

MODEL NUMBER	All Models	
STROKE	300 mm	
THRUST	600 Kg	
STROKE TIME	16 /sec.	
DIMENSION	A	250 mm
	B	720 mm
	C	310 mm
VESSEL APPLICATION	Up to 78ft	



ORDERING INFORMATION

Order CRA Pumpsets and Heavy Duty Linear Actuator System using the following part number system.

VOLTAGE		OPTIONS	
12	12 VOLT DC	P	Pressure Gauge
24	24 VOLT DC	F	Flow Control
32	32 VOLT DC	R	Relief Valve

AF-CRA - 02 - ___ - ___ - ___ - ___ - LAR-12

Example: If you order a Model CRA-02-24-P-F-R-LAR-12, you will get a pump which delivers a maximum flow of 2000 cc/min (0.5 GPM), with a 24 volt DC motor, a 24 volt directional solenoid valve and optional pressure gauge, flow control valve and relief valve. The actuator will be connected with 2 ft. long hoses (0.60 m) and a 24 volt bypass valve.

Note: For smaller sailboat drive systems, see our product information sheet on Octopus 38mm Bore Linear Actuators & Reversing Pump 45mm Bore Linear Actuators.

Specifications subject to change without notice.