THE BENEFITS OF AN OCTOPUS REVERSING PUMP

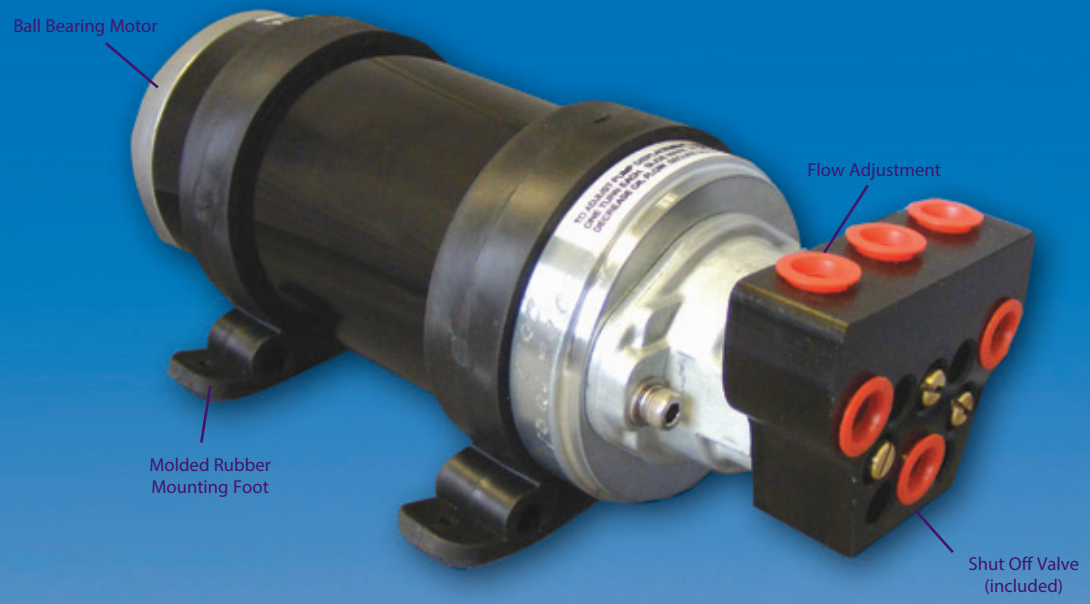
RELIABLE - Patented piston pump technology with only three moving parts

TWICE THE POWER - Delivers over twice the hydraulic output per watt of input

HALF THE CONSUMPTION - Accurate ram positioning means fewer course corrections

ADJUSTABLE FLOW RATE - Configure performance to suit your vessel

EASY SERVICING - Shut off valves allow removal without draining steering system



ONLY THREE MOVING PARTS!

pinpoint accuracy...
...maximum performance

PROFESSIONAL SOLUTIONS FOR HYDRAULICALLY STEERED BOATS

TWICE THE POWER
The unique Octopus piston pump delivers over twice the hydraulic output per watt of input than a standard hydraulic gear pump.

HALF THE CONSUMPTION
Gear pumps leak oil between the gears, while a piston (such as used in car engines) does not. This means the piston pump will place the cylinder ram exactly where it is required, positioning the rudder accurately. This gives far sharper steering, reducing unnecessary course corrections meaning battery consumption on Octopus pumps is up to half that of other pumps.

PINPOINT ACCURACY
Leading autopilot manufacturers choose Octopus pumps for their non RFB pilot systems which do not have a Rudder Feedback unit. Previously, slop in the system caused by gear leakage meant that a Rudder Feedback unit was necessary to tell the pilot the exact rudder position. As Octopus pumps will always bring the ram back to the required position the Rudder Feedback unit is not required, which also greatly simplifies installation.

SAVE ON INSTALLATION COSTS
A professional installation should always have a method of isolating the pump from the steering system - Octopus pumps feature inbuilt shut off valves in the pump manifold.

ADJUSTABLE FLOW RATE
A pump that does not have variable flow (unless dedicated to a range of cylinders such as our fixed 0.8L pump) will be operating too fast or too slow in 90% of cases. Autopilot manufacturers get around this problem by adjusting the output to the pump to compensate, which either forces the pump to operate for longer periods of time which increases power consumption and wear on the parts, or it will operate at high pressure for short periods of time - also putting unnecessary strain and wear on the system.

Octopus Variable Flow Reversing Pumps precisely control the speed of the ram, reducing unnecessary battery consumption, pressure, strain and wear on the hydraulic system.

SELECTION GUIDE

PART No.	FLOW RATE (Adjustable)	CYLINDER RANGE	VOLTAGE	MAX CURRENT	AVERAGE CURRENT
1012	500cc - 1L/min	150-300cc (9-18in³)	12v	19A	4–6A
1024	500cc - 1L/min	150-300cc (9-18in³)	24v	10A	2–3A
1212	600cc - 1.2L/min	180-360cc (11-22in³)	12v	19A	4–6A
1224	600cc - 1.2L/min	180-360cc (11-22in³)	24v	10A	2–3A
2012	1.0 - 2.0L/min	245-500cc (15-30in³)	12v	22A	6–8A
2024	1.0 - 2.0L/min	245-500cc (15-30in³)	24v	11A	3–4A

ACCESSORIES

OC17SUK01 #8 Bypass Valve Manifold 12v DC
OC17SUK02 #8 Bypass Valve Manifold 24v DC

OC17SUK03 Unbalanced Valve

OC17SUK34 Verado Hydraulic Hose Kit

GETTING THE BEST STEERING PERFORMANCE FOR THE BOAT

The flow rate of the pump can be set to get the best 'hard over time' (cylinder ram speed) for the particular boat. There is a simple equation to calculate the hard over time:

$$\text{HARDOVER TIME} = \frac{\text{CYLINDER (RAM) CAPACITY} \times 60}{\text{FLOW RATE}}$$

EXAMPLE
A boat has a 200cc steering cylinder (ram) and a 12 volt system. So either the OCTAF1012 or the OCTAF1212 would be suitable (see table below left). For this example we are using the OCTAF1212 which has a minimum flow rate of 600cc/min and a maximum flow rate of 1200cc/min:

$$\text{MIN HARDOVER TIME: } \frac{200 \times 60}{600} = 20 \text{ sec}$$

$$\text{MAX HARDOVER TIME: } \frac{200 \times 60}{1200} = 10 \text{ sec}$$

The flow rate on the pump can be adjusted so that the hard over time is between 10 & 20 seconds - select which is most suitable for this particular boat.