

# AUTOPILOT REFERENCE TABLE

Steering Type	Vessel Size/Type and Overall Use	Recommended Core Pack	Drive Unit Type	Components Included in Core Pack	Required Components not Included in Core Pack
<b>Hydraulic</b>	Premium, recommended option for most hydraulic steering installations, including Verado®, power assist and total cylinder volumes up to 24 cubic inches	Reactor™ 40 Hydraulic Core Pack with SmartPump™	SmartPump	Reactor 40 SmartPump Shadow Drive GHC 20	
<b>Hydraulic</b>	Mid-tier performance for total cylinder volumes from 10 to 24 cubic inches	Reactor 40 Hydraulic Autopilot	GHP™ 2.1L Pump	Reactor 40 ECU 10 Shadow Drive	010-11099-10: GHP 2.1L Pump
<b>Hydraulic</b>	Low-cost option for Verado and single-cylinder applications with cylinder volumes from 6 to 14 cubic inches	Reactor 40 Hydraulic Autopilot	GHP 1.2L Pump	Reactor 40 ECU 10 Shadow Drive GHC 20	010-00705-64: GHP 1.2L Pump
<b>Hydraulic</b>	Low-cost option for dual-cylinder applications with total cylinder volumes from 10 to 24 cubic inches	Reactor 40 Hydraulic Autopilot	GHP 2.0L Pump	Reactor 40 ECU 10 Shadow Drive GHC 20	010-00705-63: GHP 2.0L Pump
<b>Hydraulic</b>	Cruising applications only; for single engine outboard vessels less than 30' long for cylinder sizes up to 10 cubic inches	Compact Reactor™ 40 with Pump, GHC 20™ and Shadow Drive Technology Pack	1.0L Pump	Reactor 40 Compact ECU 1.0L Pump Shadow Drive GHC 20	
<b>Hydraulic</b>	Cruising applications only; for single-engine outboard vessels less than 30' long for cylinder sizes up to 10 cubic inches	Compact Reactor 40 Hydraulic Autopilot with GHC 20 Pack	1.0L Pump	Reactor 40 Compact ECU 1.0L Pump Shadow Drive	
<b>Hydraulic</b>	Cruising Applications only, for single-engine outboard vessels less than 30' long for cylinder sizes up to 10 cubic inches	Compact Reactor 40 Hydraulic Autopilot Starter Pack	1.0L Pump	Reactor 40 Compact ECU 1.0L Pump	
<b>Mechanical Steering</b>	Total vessel displacements from 48,000 to 79,000 pounds	Reactor 40 Mechanical/Solenoid/Retrofit Core Pack	Class B Linear Actuator	Reactor 40 ECU 12 GHC 20	010-11573-00: Class B linear actuator; has rudder feedback included
<b>Mechanical Steering</b>	Total vessel displacements up to 48,400 pounds	Reactor 40 Mechanical/Solenoid/Retrofit Core Pack	Class B Compact Linear Actuator	Reactor 40 ECU 12 GHC 20	010-12029-00: Class B linear actuator; has rudder feedback included
<b>Mechanical Steering</b>	Total vessel displacements up to 28,500 pounds, with very low backdrive force required	Reactor 40 Mechanical/Solenoid/Retrofit Core Pack	Class A Linear Actuator	Reactor 40 ECU 12 GHC 20	010-11572-00: Class A linear actuator; has rudder feedback included
<b>Mechanical Steering</b>	Sailboats with non-Garmin drive units	Reactor 40 Mechanical/Solenoid/Retrofit Core Pack	Third-party Drive Unit	Reactor 40 ECU 12 GHC 20	Third-party drive unit 010-11829-00: GRF 10 rudder sensor or 010-11532-00 plus third-party rudder sensor
<b>Steer by Wire</b>	SeaStar Optimus	Reactor 40 Steer-by-wire Standard Core Pack		Reactor 40 GHC 20	Third-party drive unit 010-11829-00: GRF 10 rudder sensor or 010-11532-00 plus third-party rudder sensor
<b>Steer by Wire</b>	ZF Pod Drive	Reactor 40 Steer-by-wire Standard Core Pack		Reactor 40 GHC 20	
<b>Steer by Wire</b>	Yanmar	Reactor 40 Steer-by-wire Standard Core Pack		Reactor 40 GHC 20	
<b>Steer by Wire</b>	Yamaha Helm Master	Reactor 40 Steer-by-wire Core Pack for Yamaha Helm Master	Gateway Included	Reactor 40 Autopilot Gateway GHC 20	
<b>Steer by Wire</b>	Volvo IPS or Sterndrive	Reactor 40 Steer-by-wire Core Pack for Volvo-Penta	Gateway Included	Reactor 40 Autopilot Gateway GHC 20	
<b>Steer by Wire</b>	Viking VIPER	Reactor 40 Steer-by-wire Core Pack for Viking Viper		Reactor 40 GHC 20	
<b>Solenoid</b>	Constant running hydraulic pump systems with solenoid autopilot control	Reactor 40 Mechanical/Solenoid/Retrofit Core Pack	Third-party Solenoid Required	Reactor 40 ECU 12 GHC 20	010-11533-10: Solenoid Cable 010-11829-00: GRF 10 rudder sensor or 010-11532-00 plus third-party rudder sensor
<b>Cable Steer</b>	Most cable steered vessels	Reactor 40 Mechanical/Solenoid/Retrofit Core Pack	Third-party 12VDC Brushed Motor Actuator Required	Reactor 40 ECU 12 GHC 20	010-11533-10: solenoid cable 010-11829-00: GRF 10 rudder sensor or 010-11532-00 plus third-party rudder sensor
<b>Auxiliary Gas Engine (Kicker)</b>	<15HP auxiliary gas engines from most major manufacturers	TR-1 Gold Marine Autopilot	Pump Unit and Hydraulic Cylinder Included	CCU HPU Cylinder Wired Remote Deck-mount Switch	Custom throttle and actuator kits; contact dealer for details