



It's a beautiful day, the sun's out, the sea's blue and you're underway - what a great opportunity for your Raymarine autopilot to take over helming duties whilst you sit on deck soaking up the sun. Just hit the button and the day is yours.

The wind's come up, sea's getting choppy, and to cap it all it's starting to rain - just hit that button and let your Raymarine autopilot take the strain whilst you check everything is secure below.

The wind is screaming, the waves are 30 foot high, and you're racing hundreds of miles from land. Brad Van Liew, winner Class 2 Around Alone and Open 50 24hr distance record holder, was fulsome in his praise - *"I can't say enough about the reliability and performance of my Raymarine electronics. All the way around the world the nav radar systems, instruments and pilots have been a decided advantage. Other skippers have needed to hand steer to be competitive. On board Tommy Hilfiger Freedom America, the Raymarine pilot with its superior software steered as well as any fully concentrated professional."*



Brad Van Liew, winner Class 2 Around Alone and Open 50 24hr distance record holder.

© Billy Black

Raymarine's Autohelm Series.

An extra crew member at your command.

Starting life as Nautech/Autohelm nearly 30 years ago, Raymarine still invests heavily in research and development for new products and innovative technology including all the major advances in autopilot technology... integration with instrument and navigation systems, the fluxgate compass, push button steering, AutoSeastate™, AutoAdapt™,



AutoTrim™ and now AST™ – Advanced Steering Technology. From a basic tiller pilot to a powerful inboard system, each Raymarine pilot comes with a simple, intuitive keypad and clear, functional LCD display (option for SportPilot).

SeaTalk and NMEA compatibility allows you to integrate the pilot as part of a complete Raymarine navigation system. Set the pilot to steer a course, track to a waypoint from your GPS or chartplotter, or steer to the wind.

Additional control units and hand held remote controls ensure you remain in complete command anywhere on board.

Behind the scenes, intelligent software and proven hardware have earned Raymarine a reputation for building the world's finest autopilots to steer your boat in all conditions.

Some of the features you will find in Autohelm pilots from Raymarine:

- Clear and informative LCD displays.
- Intuitive push-button control keypad.
- SeaTalk/NMEA compatible.
- Track to waypoint from GPS or chartplotter.
- Instrument/navigation Data pages.
- Remote control and multi-station option.
- AutoTack (programmable turn).
- Steer to wind angle – True/Apparent.
- Rudder angle display.



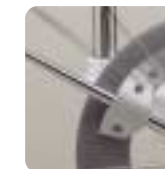
AST Advanced Steering Technology: state-of-the-art software for course computers with built in rate gyro, gives superb steering performance and boat handling.



SeaTalk networking: The world renowned on-board plug and play solution for connecting multiple remote autopilot displays and Raymarine integrated navigation systems.



AutoTack: Tacks the boat through a user-predefined turn.



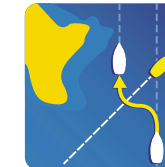
Auto Speed Gain: Adjusts the amount of helm applied at different boat speeds for a smooth safe ride.



Wind Trim: Fully adjustable (up to 9 levels) and the ability to select true/apparent wind to steer.



AutoSeastate and AutoTrim: Automatically adjusts for wind and sea conditions to hold the best course.



Course Memory: After a manual course change to avoid an obstruction, simply press Auto for one second to return to your previous course.



Vane Mode: Follows your autopilot to set the boat up so that the sails are at full trim (balanced).

Inboard autopilot control head selection.

Choosing the pilot head that best suits your needs.

ST7001/ST8001



Large displays and intuitive keypads give you quick and easy access to all pilot data from up to 15 pages of selectable instrument or navigation data. Powerful easy-to-use maxi control units.

Add a G-series course computer and it could not be easier to set up the pilot. Using AST (Advanced Steering Technology) software, the ST7001/8001 AutoLearns your boat's steering characteristics, selecting optimum settings for

crisp, smooth turns and superb course keeping. On longer passages, alter the response function to enjoy a comfortable ride whilst staying right on course.

ST6001

Found aboard more sail and motor yachts than any other inboard pilot, this is the recognised benchmark for autopilot performance. An ideal choice when space is at a premium. Monitor important navigational data from up to 7 SeaTalk data pages on the clear LCD display. Just like the ST7001/8001, with a G-series course computer the ST6001 will AutoLearn your boat's handling characteristics, and select the optimum settings for pilot performance.

Display features

- ST7001 and ST8001**
- Large crisp LCD display with easy-to-read rudder angle indicator.
 - Intuitive button control keypad.
 - Add multiple ST6001/7001/8001 control heads or ST600R handheld remotes using SeaTalk networking.
- ST6001**
- Compact stylish control head to match Raymarine ST60 Instruments.
 - Renowned Autohelm button control.
 - Add multiple ST6001 or ST7001 control heads or ST600R handheld remote controls using SeaTalk networking.

ST600R hand held remote control.

Full autopilot control at the touch of a button from anywhere on board, the ST600R autopilot remote control is a handy compact addition to any Raymarine autopilot system and monitors up to 21 pages of SeaTalk instrument and navigation data on the powerful LCD display.

Features

- Full function autopilot control*.
- Add SeaTalk deck sockets anywhere onboard for complete Autohelm control.
- Instrument/navigation data repeater.
- Up to 21 selectable pages of information.
- Chapter and Page menu for fast data retrieval.
- Compatible with any Raymarine SeaTalk autopilot and instrument system.

* G-Series course computer corepacks require either the ST6001/7001/8001 control heads for complete calibration and AutoLearn.

Autopilot control head features comparison chart

Product features	ST6001	ST7001	ST8001	ST600R
Display head size (mm)	110 x 115	170 x 115	170 x 115	112 x 53
Surface mount installation	•	•	•	
Flush mount installation option	•			
Hand-held unit				•
LCD size (mm)	81	98	98	51
Customisable data pages	7	15	15	21
Power steer			•	
Autolearn/AST (with gyro course computer)	•	•	•	

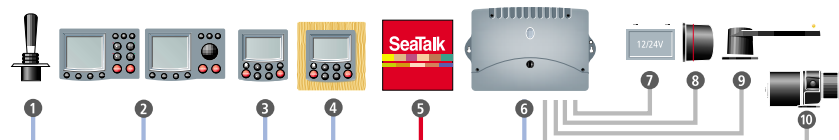


Integrates with Raymarine SeaTalk instruments with configurable data displays and GPS data.



ST6001/7001/ST8001

1. Joystick
2. Master head ST7001/ST8001
3. Master head ST6001
4. Optional ST6001 flush mount
5. SeaTalk network
6. Course computer
7. 12/24v DC
8. Fluxgate compass
9. Rudder reference
10. Drive units



Joystick Control

Use the fast response joystick for power-assisted manual steering – it adjusts the rudder angle using the autopilot course computer and drive unit. If your boat has two steering positions, you can use the joystick control as a compact replacement for one of the wheels.



Raymarine Smartpilot Series course computers.

Setting new standards in autopilot performance.



More powerful and rugged than ever before, Raymarine Smartpilot Series course computers serve as the central intelligence hub of our inboard pilot systems.

With Raymarine course computers you can:

Maintain a razor sharp course with smooth, crisp and controlled turns right onto your next heading with Advanced Steering Technology (AST)* software and the new G-series course computers.

Stay right on course when the going gets tough – use Fastrim AST to correct any changes in standing helm to keep the vessel on course (e.g. weather helm or loss of one engine).

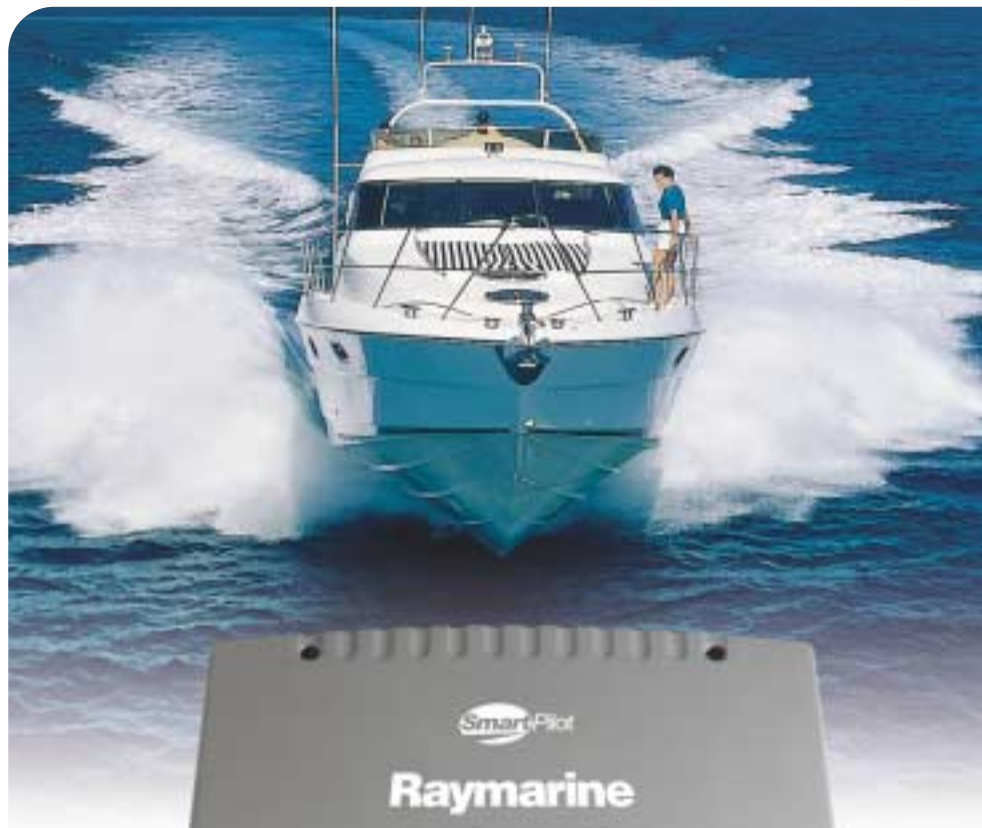
Control the way the pilot steers your boat using Sensitive Response AST for the most comfortable ride or to conserve power on long sail passages.

Make cross track error a thing of the past – use your inboard pilot with a Raymarine GPS to track straight to your next waypoint.

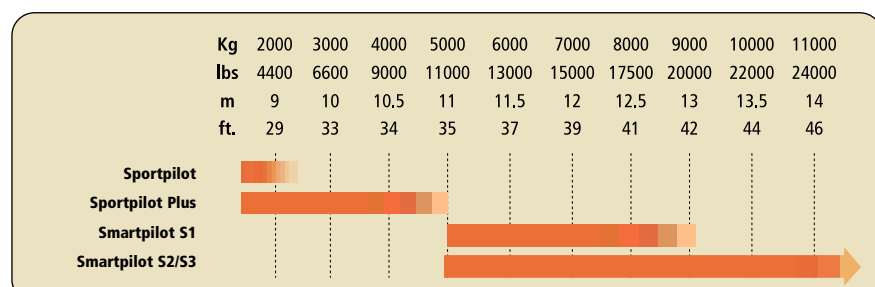
Set your pilot up for optimum performance using the Intelligent AutoLearn function with new control units, AST* and AutoLearn* software to automatically learn your boat's handling characteristics.

MARPA and Radar/Chart Overlay*. G-series course computers also provide accurate and stable heading data for MARPA and chart overlay functions on Raymarine's Pathfinder radars and chartplotters.

* With Gyro course computer corepacks only.



Inboard Autopilot selection chart



The latest Smartpilot Series course computers showing all the available connections, clearly labelled for ease of installation.

www.raymarine.com

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Course computer features

- Complete all-in-one autopilot options.
- Patented external fluxgate compass for optimum performance and course keeping accuracy.
- SeaTalk networking.
- Simple installation – fixes with two screws.
- Connects to ST6001/7001/8001 control heads and ST600R remote control.
- Easy access enclosure.
- Speed connectors for wiring.
- Gyro option or upgradeable.
- Current limiting protection.



An S3G course computer installed 'out of sight' behind a bulkhead.

Course computer comparison chart

	S1	S1G	S2	S2G	S3	S3G
Product features						
Supply voltage	12v	12v	12v	12v	12/24v	12/24v
Motor drive Amps – continuous (peak)	6 (15)	6 (15)	15 (20)	15 (20)	30 (40)	30 (40)
Clutch current – Amps	2	2	5	5	5	5
Drive types	Type 1	Type 1	Type 1	Type 1	Type 1/2	Type 1/2
Solenoid drive interface	No	No	Yes	Yes	Yes	Yes
SeaTalk connections	1	1	2	2	2	2
SeaTalk current – Amps	2	2	5	5	5	5
Gyro installation	Upgradeable	Standard	Upgradeable	Standard	Upgradeable	Standard
AST	+	•	+	•	+	•
AutoLearn	+	•	+	•	+	•
MARPA and radar/chart overlay	+	5Hz	+	10Hz	+	10Hz

+ With gyro upgrade

Inboard pilots. Selecting the perfect pilot for your vessel.

Inboard pilots must be powerful enough to handle the demanding loads applied to the steering system of larger boats. The drive unit of an inboard pilot is mounted below decks linking directly with the boat's steering system – all you see at the helm is the control unit. Raymarine offers a range of control units to suit your needs and style.

Selecting the right pilot. An inboard pilot consists of a drive unit, course computer and your choice of control units.

The right pilot, correctly installed, will give you many years of dependable service in all weather conditions and will quickly become a valued member of the crew. Start by selecting the correct pilot for your needs.

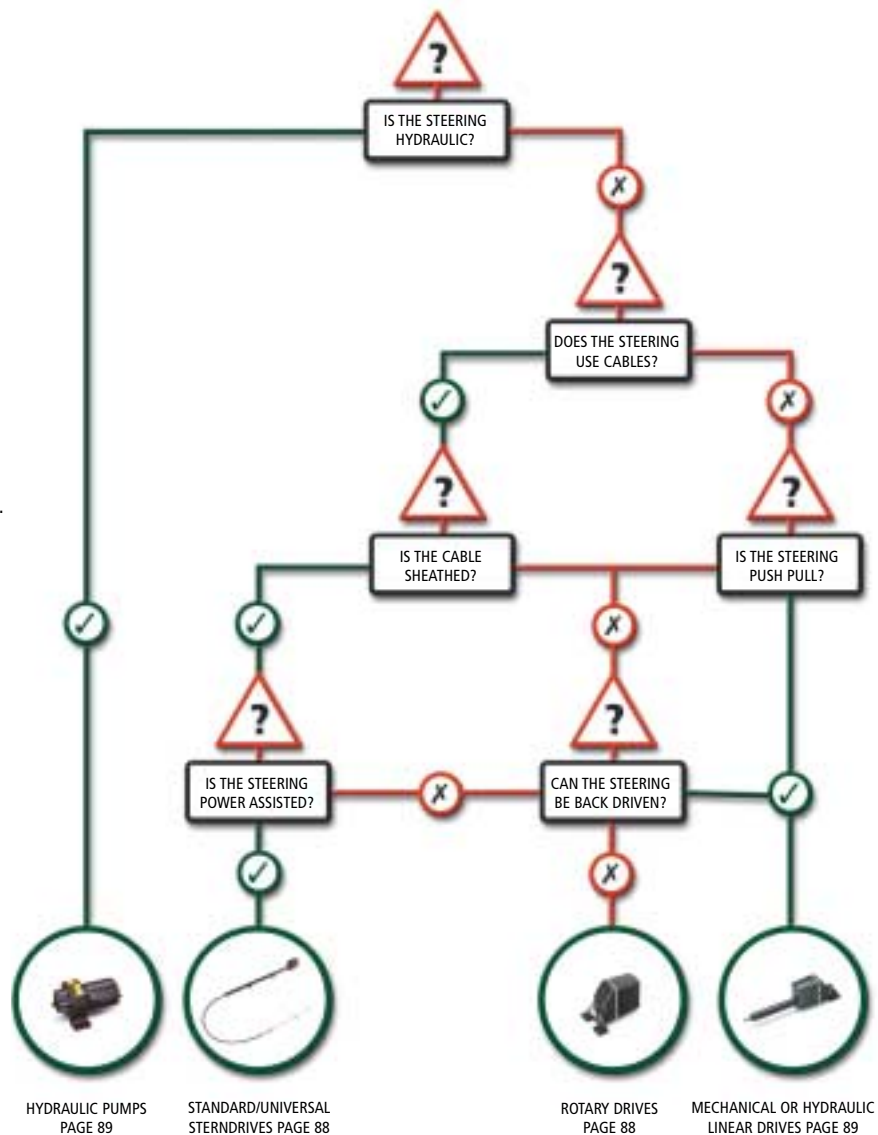
1. Choose a display head.
2. Select the correct drive unit and associated course computer using the flowchart (right) and specifications on pages 86, 88 & 89 as a guide*.

* **We recommend that you consult a Raymarine approved dealer who can specify, install and commission the correct Raymarine system for your boat. An approved installation also carries our full worldwide 2 year warranty.**

Tech tip

Consider the type of boating you plan to do, then match your boat's steering system, **fully laden** displacement weight (as a guide, take the manufacturer's stated displacement weight for your boat and add a further 20%) and length with the tables (right) to find the right pilot model for you.

To determine which drive unit you require, simply answer the questions in this chart. Once you have selected a drive, refer to pages 88 & 89 for detailed drive specification and part number information.



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ROTARY DRIVES PAGE 88

MECHANICAL OR HYDRAULIC LINEAR DRIVES PAGE 89

Corepack

Contains course computer, rudder reference and fluxgate compass.



S1 Course Computer



Rudder Reference



Fluxgate compass

Wheel and tiller pilots. Selecting the right pilot for your vessel.

The right pilot, correctly installed, will give you many years of dependable service in all weather conditions and will quickly become a valued member of the crew. Start by selecting the correct pilot for your needs.

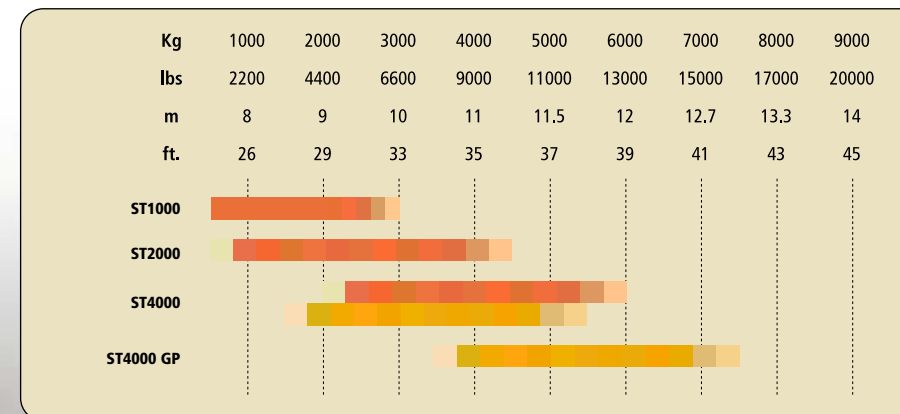
Consider the type of boating you plan to do, then match your boat's steering system, fully laden displacement weight and length with the tables (right) to find the right pilot model for you.

We recommend that you consult a Raymarine approved dealer who can specify, install and commission the correct Raymarine system for your boat. An approved installation also carries our full worldwide 2 year warranty.

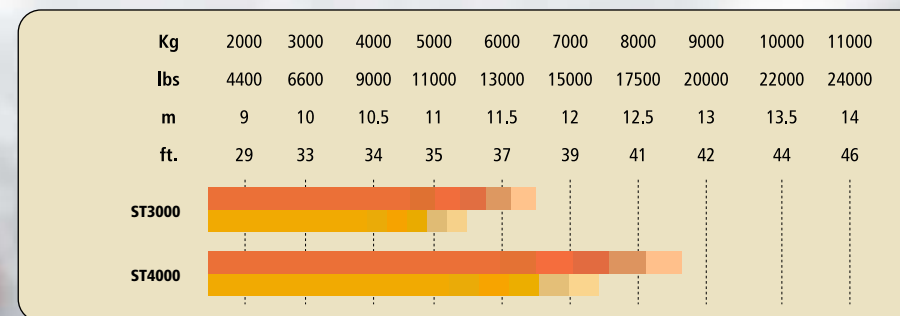
Tech tip

Remember, always take the fully laden displacement weight of your vessel into account, this is often **20% above the designed displacement**, so don't be tempted to choose a pilot which will always be working at the limits of its design capabilities. If you choose your pilot with safety in mind, it won't struggle when the going gets tough.

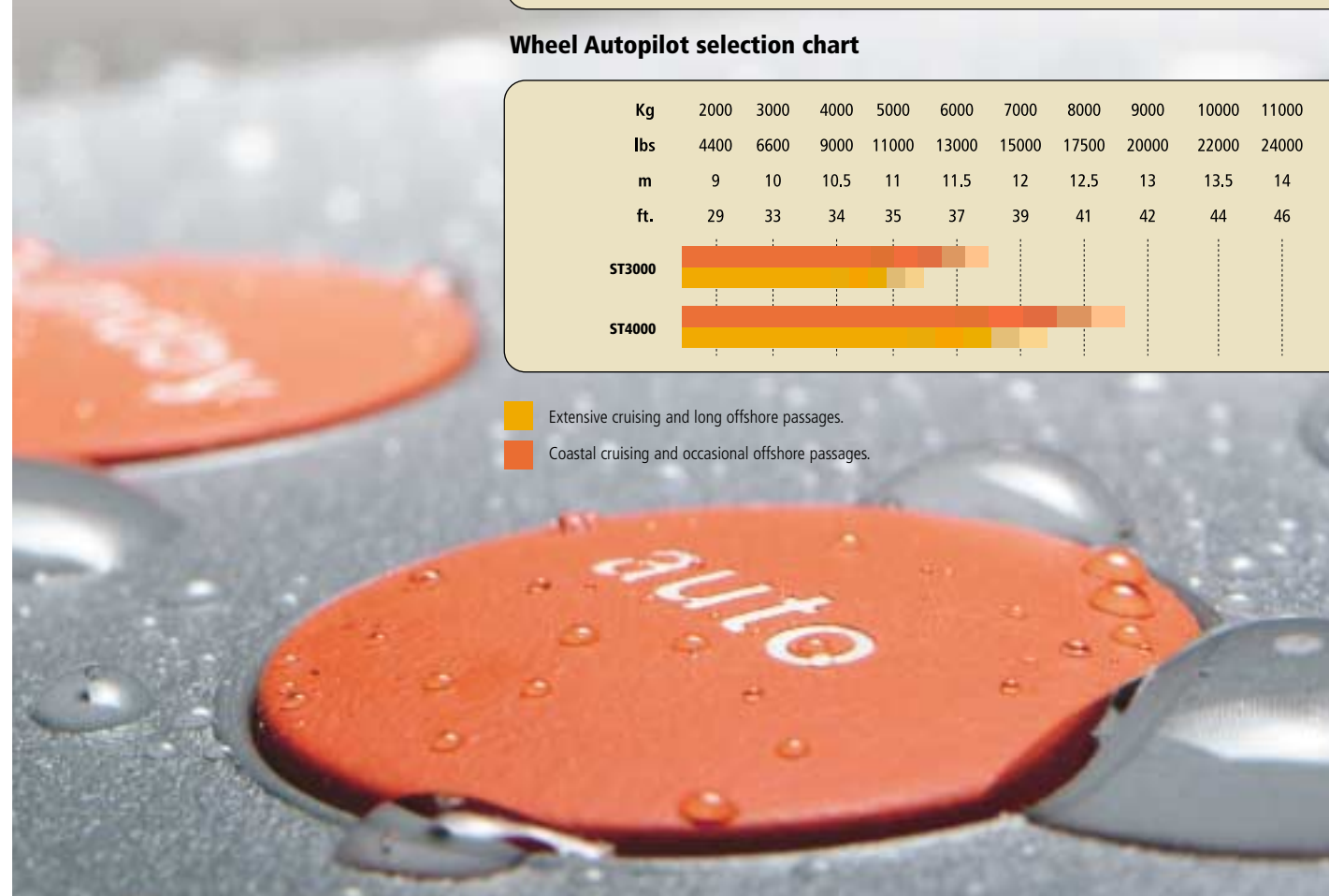
Tiller Autopilot selection chart



Wheel Autopilot selection chart



Extensive cruising and long offshore passages.
 Coastal cruising and occasional offshore passages.



ST4000 WheelPilot.

The innovative ST4000 wheelpilot is equipped with the fully enclosed Mk II wheel-drive for simple installation and below deck autopilot performance. Mount the separate control unit where it is easy to reach and see. The patented fluxgate compass is mounted separately for optimum performance.

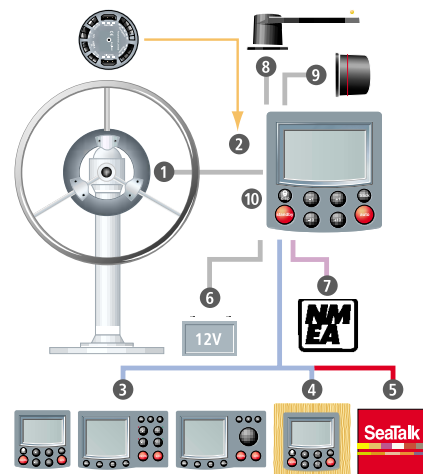


The LCD shows the pilot status and repeats up to seven pages of user-defined navigation data from your ST60 system.

The rugged Mk II 4000 wheel drive unit is available as an upgrade for existing ST4000 systems.

ST4000 features

- Quick and easy installation.
- Fits most types of wheels.
- Independent display for 'best location'.
- Simple clutch engagement mechanism.
- Clean design.



ST4000 MKII wheeldrive system

1. Drive only
2. Autopilot control head (rear)
3. Optional control heads (ST6001/ST7001/ST8001)
4. Flush mount option
5. SeaTalk network
6. 12v DC
7. NMEA GPS
8. Rotary rudder reference (optional)
9. Fluxgate compass
10. Master head



ST4000 designed for yachts with a laden displacement up to 8,500kg (18,700lbs).



SportPilot and SportPilot Plus.

Sportpilot features

- Quick shift from auto into manual by simply taking hold of the wheel.
- So simple – select Auto and go!
- Very easy to install.
- GPS waypoint navigation.
- Fits 0.75" and 1" tapered wheel shafts.
- Max. wooden wheel diameter for 0.75" and 1" steering shafts: 21" (540mm).
- Max. metal wheel diameter for 1" steering shafts: 18" (460mm).
- SportPilot Plus recommended for trolling speed applications.



ST3000 Wheelpilot



Belt driven autopilot for wheel-steered yachts up to 13,200lb (see tech tip on page 48). This proven Autohelm

series belt driven wheel pilot has integrated control and compass unit to make installation easy. The pilot can be quickly removed when not in use. Further details on the ST3000 available at www.raymarine.com

Just line up on the desired course, turn the control stick to AUTO and let go of the wheel – it really is that simple! When you want to steer again, grab hold of the wheel and steer as normal. With built in SeaTalk and NMEA interface, you can select a waypoint on your GPS or chartplotter and the SportPilot will take you straight to it. SportPilot and SportPilot Plus are easy-to-use and easy-to-fit pilots for powerboats with a single-station helm.

SportPilot Plus is ideal for smaller sports fishing boats* with easy speed settings for high speed pursuits or trolling, so you can prepare the bait while the pilot steers the boat. The standard SportPilot is ideal for sports cruisers and rigid inflatable boats.



SportPilot is designed for: manual cable steered boats with laden displacements up to 2000 kg (4400 lbs) and 3500 kg (7700 Lbs) for manual hydraulic and servo hydraulic steering.

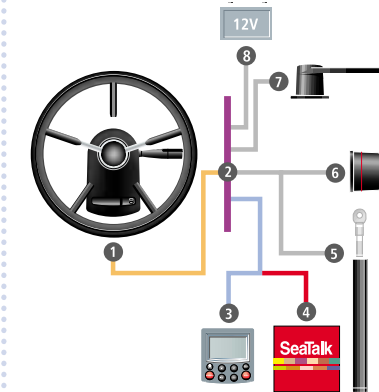
* For boats where the autopilot is used for long periods of time (many hours on a daily basis), we recommend the fitting of the SportPilot Plus which has a more powerful motor.

SportPilot system and SportPilot Plus system (no rudder reference)

1. SportPilot or SportPilot Plus
2. Rear wheel connection
3. Optional autopilot control head
4. SeaTalk network
5. Linear rudder reference
6. Fluxgate compass
7. Rotary rudder reference
8. 12v DC

GOTO


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ST4000 Tiller Pilots.



Data displays can be accessed via the display key (maximum of seven displays).

 ST4000T designed for vessels with a laden displacement up to 6000kg (13,200lbs) and ST4000T GP for vessels up to 7,500kg (16,500lbs).

ST4000T & ST4000T GP Features

- Unique Tiller pilot system with full function ST4000 control head and remote mounted fluxgate compass.
- SeaTalk networking allows for additional ST8001, ST7001, ST6001 display heads or an ST600R remote control.
- Powerful tiller drive unit is compact and unobtrusive.

The rugged drive units belonging to the ST4000T Plus range make them the perfect pilots for larger tiller steered yachts.

You can steer straight to a waypoint, lock on to a given wind angle, or simply set and follow a course to steer by making the most of the full SeaTalk and NMEA compatibility. The fluxgate compass is separated from the drive unit for greater accuracy and you can mount the control unit wherever it will be within easy reach for you. Whichever you choose, the large clear display keeps you up to date and also acts as a multi-function instrument or navaid repeater. Used by the world's top single-handed race skippers, they will meet the demands of the serious sailor.

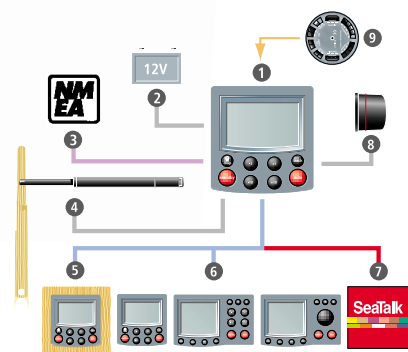


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Hand-held remote control.

Full course change control from virtually anywhere on the boat using this 4-button keypad compact cable remote.



ST4000T and ST4000T GP
 1. Master head 2. 12v DC 3. NMEA GPS 4. Tiller drive
 5. Flush mount option 6. Optional control heads
 ST6001/ST7001/ST8001 7. SeaTalk network 8. Optional: fluxgate compass 9. Autopilot control head (rear)

ST1000 and ST2000 Tiller Pilots.

ST1000/ST2000 features

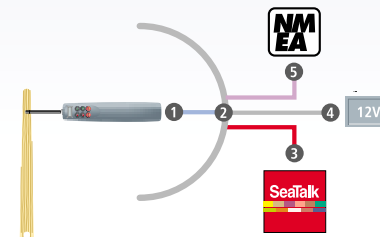
- Built in LCD display for easy setup, compass heading display, and waypoint navigation data display.
- Connect multiple control heads using the SeaTalk network
- Seamless SeaTalk integration with other Raymarine equipment.
- NMEA 0183 compatible for GPS navigation.

High performance, reliable and easy to use – invented by Autohelm nearly 30 years ago, tiller pilots have consistently been the world's most popular pilot ever since.

Handle sheets with ease whilst the pilot 'AutoTacks' the boat for you.


Conserve your power – use AutoSeastate to keep the boat on course.

Easy-read display – whether as a stand-alone pilot or connected to SeaTalk/NMEA GPS, the clear backlit LCD and six button keypad make these pilots safe and easy to use.



1. Tiller drive 2. Bulkhead connection
 3. SeaTalk network 4. 12v DC 5. NMEA GPS



 ST1000 designed for yachts with a laden displacement up to 3,000kg (6,600lbs). ST2000 for yachts with a laden displacement up to 4,500kg (10,000lbs) (see tech tip on page 49).



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Typical ST1000 and ST2000 tiller pilot displays.