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B&G

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A brand by Navico - Leader in Marine Electronics

B&G Driven to perform

Catalogue 2009

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A brand by Navico - Leader in Marine Electronics

B&G - World leading sailing technology for discerning yachtsmen, developed through an uncompromising approach to performance, precision, and reliability.

Contents:

Offshore Challenges Sailing Team

"Racing 25,000 miles solo, in the most severe weather conditions, and against the world's best offshore sailors is the greatest challenge I can face. Preparing for this, B&G not only supplied the best equipment, they also provided essential tuning and calibration specific to my needs. This allows my Pilot to perform perfectly."

Seb Josse
Skipper BT Open 60

foto: Vincent Curutchet/DPPI

B&G have been making instruments for over 50 years and throughout this time have been innovators of the most highly advanced marine technology.

High performance systems that are second to none

With over fifty years at the forefront of marine technology, B&G is a proven industry leader in the performance sailing market. Throughout this time B&G has remained focused on the most important factor in producing award-winning products, our customer's needs. As the performance of yachts evolves, so does the sailor's demand for high-capability systems . B&G is an innovator in the field of high-quality marine instruments, autopilots and navigation equipment and is proud to live up to the constant demands of the yachting community by developing new technology to fulfil every sailor's needs.

With B&G you get nothing but the highest standard of products and services, which is why our systems are chosen by more winning yachtsmen than any other. Sailing experts choose B&G because they need the best equipment to handle the most challenging conditions. Our accurate, durable technology and uncompromising support is available to all our customers, to ensure you get the best from your sailing whether you are racing or cruising.

A team of experts passionate about sailing

Our commitment to every customer is that we will deliver the best products based on technology developed at the highest level of sailing. Whether you are cruising or racing our global support team is available to provide a customised, personal service to ensure you obtain maximum value from your investment in B&G equipment.

When speaking to a member of the B&G team, you are speaking to someone who is passionate about sailing. So if you need advice about what system you should be installing on your boat or how to get the best from your instrument, Pilot or navigational software, you can be confident that you are speaking to the most knowledgeable people in the business.

Meticulous on-the-water testing

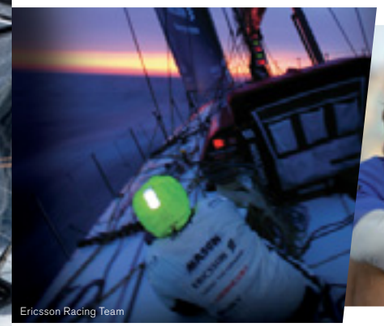
The B&G sales, customer support and research and development teams are regularly out on the water developing their understanding of what is required, not only by professional racers but also by owners who simply want to go sailing with the utmost confidence in their navigational equipment and Pilots. All our new products undergo rigorous testing, firstly by the B&G team but more essentially by professionals who make consistently high demands on our equipment.

A performance solution to suit you

This catalogue aims to help you select the best B&G package to suit your boat and your individual sailing requirements. Choose from our range of easily integrated instruments, Pilots and navigation equipment. And if you need advice, please contact one of our specialists and we will help you decide on a solution that is right for you.

TP52 Quantum Racing – winner of the 2008 Audi MedCup with B&G onboard

Sander van der Borch



Ericsson Racing Team

Knut Frostad CEO of the Volvo Ocean Race 2008-09

B&G have always listened to sailors' needs and feedback to enable the technology and functionality of our products to be developed to the highest level.

This combined with advice and assistance available where it is needed, at regattas: on the dockside and on the water. Wherever you are in the world B&G support is close by.

With at least one sailing event taking place somewhere in the world almost every day of the year, B&G's unparalleled track record in providing comprehensive global regatta support is one of the key elements in our unswerving commitment to customer service. Our extended network of country distributors, partner dealers and B&G specialists ensures that we have an expert presence at many hundreds of events every year. At the larger regattas you will find B&G's dedicated regatta support team providing an unequalled level of service to all B&G users – when and where they need it most.

Visit www.bandg.com for our full regatta support schedule.

Our regatta commitment

B&G notification of regattas and activities
Pre-race, dockside visits to yachts by B&G team members
On the water tuning and calibration
Upgrade advice
B&G seminars
Pre-race briefings including local knowledge and tips
On the water support both pre and post-race
Stock of spares
Help and advice

"Many thanks to the B&G team for all your support on the TP52 Audi MedCup circuit. 2008 was a great year for us, made a great deal easier through having B&G specialists around to help us gain a competitive edge."

Ian Moore
Navigator aboard TP52 Quantum Racing and VOR Green Dragon Team

Team ABN AMRO/VOR

Worldwide support

Many boats race or cruise a long way from their home waters, but when you purchase B&G equipment you can be confident that you will receive a high level of support wherever you are in the world. B&G has an experienced global team that will provide the information, service and support you need when abroad. Following the integration of B&G into the Navico group, we have combined our extensive international team of experts and substantially increased our worldwide support network.

The global network of B&G support includes affiliations with professional sailors, electronics experts and yacht clubs such as the Royal Yacht Squadron in Cowes, the Yacht Club Costa Smeralda in Sardinia and the New York Yacht Club, USA. This extensive network allows us to provide comprehensive support to all our travelling customers as well as work with high profile partners and organisations such as Nautor's Swan and the Volvo Ocean Race.

View the list of distributors in this catalogue or visit www.bandg.com for local dealer information.

"B&G is the major player when it comes to offshore sailing performance. B&G have proven over several Volvo Ocean Races that they have an outstanding track record. The support from B&G is critical."

Knut Frostad
CEO of the Volvo Ocean Race 2008-09

Lloyd Images

Custom Projects

B&G Custom Projects develop tailor-made solutions offering one-off projects and yacht racing teams the exact system they need. Often using our high speed WTP2 (Wave Technology Processor) integrated with the latest B&G display technology and Deckman tactical navigation software, Custom Projects offers technology and expertise for ultimate performance and accuracy, like that on most America's Cup, Volvo Ocean Race and winning Grand Prix race boats. Deckman can be linked to all current B&G Instrument systems providing precise tactical and weather-related information, for advanced tactical decision-making. Deckman is constantly refined with new features.

The B&G name is synonymous with the superyacht industry and has supplied performance enhancing systems for the largest and most complex yachts in the world. The Custom Projects team provided custom software and a unique wind solution for Maltese Falcon and more recently supplied the impressive 37m Sloop Bristolian with custom sensors for monitoring boom-height, rig tension, rudder angle and keel angle.

Examples of recent Custom Project work

Ecover 3

Vertical Mast Head Units
Pilot Software

Ericsson Volvo Ocean Race Team

Vertical Mast Head Units

Victory Challenge 32nd America's Cup

WTP2 Software
Deckman add-ins

Team Shosholoza 32nd America's Cup

WTP2 Software
Deckman add-ins

Hugo Boss

Pilot software

Bristolian 37m Composite Sloop

Sensors for monitoring boom-height, rig tension, rudder angle and keel angle

B&G Innovation. B&G maintain an acute focus on the development and introduction of new and enhanced products to further compliment the B&G range. Being leaders in technology for many years has allowed B&G an inside view of cutting edge performance sailing from every aspect; inshore to offshore, performance cruising to grand prix racing, advances in building technologies and increased expectations from those who depend on the accuracy and durability of our equipment. Experience gained here is translated into future products.

Introducing HVision

The brand new HVision Display Range is here and with it comes the introduction of the all new 10/10 HV for ultimate clarity in a compact display: providing numbers where they are needed.

HVision revolutionises the design of instrument displays, presenting the clearest information through unique display technology. The new 10/10 HV is joined by the 20/20 HV, 30/30 HV and 40/40 HV to offer a lightweight, high performance data display for every application.

Bonded screen technology is used throughout the range, providing high contrast, wide viewing angles and zero condensation. The high integrity mechanical construction, including toughened glass, provides ultimate reliability and performance.

Motion Correction for H3000

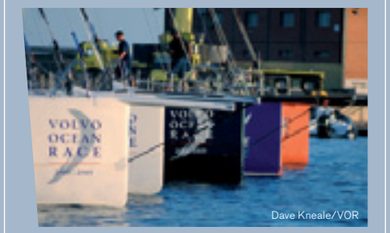
Motion Correction is an additional H3000 processor software level including enhanced wind measurement technology that will be available in 2009. Developed and tested over many hours on the water, the increased data accuracy will significantly enhance Pilot performance and provide more accurate numbers.

Motion Correction uses rate-gyro sensors to measure the motion of the masthead and in turn cancels out errors in wind measurement induced by this motion. This allows lower damping values and a much more responsive instrument system.


Offshore Challenges

Record breaking Pilots

B&G's Pilots are well recognised for their precision driven performance. The software used to provide this record-breaking performance has been enhanced to further improve accuracy and safety. With the introduction of the enhanced ACP processors, along with a simplified interface, reliable and responsive auto steering is now available to all B&G boats from racers to cruisers and monohulls to multihulls. Originally developed in response to needs identified by the Open 60 fleet, the new Pilot technology has been tested by sailors who demand the most from it.



Dave Kneale/VOR

Offshore racing

2009 is an extremely exciting year for offshore yacht racing, with both the Volvo Ocean Race and Vendee Globe promising extreme action from the world's wildest oceans.

The 2008-09 Vendee Globe boasts the largest and most international fleet ever, with 30 skippers competing to win the sixth edition of this solo round the world race. It takes a certain breed of sailor with great ambition, courage and skill to race optimised IMOCA 60s non-stop for three months through the most severe weather conditions. With every part of these IMOCA 60s designed to achieve maximum efficiency, only the best performance equipment makes it onboard. B&G Instrument and Pilot systems on the majority of the fleet are individually set up to perform exactly to the requirements of the skipper.

The iconic Volvo Ocean Race is the ultimate test of human and technological endurance and undeniably one of the most demanding team sporting events in the world. The new Volvo 70s are supreme grand prix offshore racing machines that require the utmost physical endurance and competitive spirit from the 11 professional crew to successfully sail them to victory. B&G Instrument technology and Deckman tactical navigation software is being used by every boat to enhance their racing performance both on the offshore legs and in-port races.


Tim Wright

Grace and Performance combined

Anyone witness to the impressive J Class yachts on a start line could not deny their pure power and beauty. Therefore it was no surprise that plans to build a number of new J class yachts were revealed in 2008, which presents the exciting prospect of nine Js present at the great regatta venues of the world.

The class currently includes Velsheda, Endeavour, Shamrock V and Ranger, all of which are fitted with classically styled B&G Instrument systems. The new builds are based on historic designs and will be no exception to the rule, with B&G performance systems throughout.

B&G Instrument and Pilot systems, at every level, allow you to specify performance and safety options to suit your needs.

How to specify your system?

When selecting a system for your boat you need to carefully consider what type of sailing you will be doing and under what conditions.

The H3000 system is split into four areas, processors, sensors, Pilots and displays. First choose the base pack that suits your application and then select the most suitable sensors and displays from the guide within this catalogue. These can easily be added to or changed at a later date. If in doubt, contact B&G or your local dealer to be guided through your best options.

The new Hercules Motion is the ideal selection for those at the very top end of yacht racing who are looking for the ultimate data accuracy, but who do not require the additional power and complexity of the WTP2 system. Hercules Motion uses a Motion Sensor along with B&G's Performance Wind Filter to provide the most stable and accurate data available outside of the WTP2 processor.

The H3000 Hercules Performance system will be considered by those at the very top end of yacht racing who are looking for ultimate accuracy, flexibility and performance. System specialists may also consider Hercules Motion or a bespoke solution utilising the B&G WTP2 system.

The H3000 Hercules system was designed with Grand Prix racing in mind, however racers or cruisers who demand higher performance and accuracy from their instrument system often choose this solution.

The H3000 Hydra system can be seen on most superyachts, as well as premium brand boats, blue water cruisers and many racer/cruisers, as its reputation is second to none. This is the system if you are considering going offshore or sail your boat regularly.

Once you have chosen the most suitable system, the next step is to consider where you would like controllers and displays situated for visibility and ease of use.

B&G offer a number of larger displays from the HVision range for highly visible information on such places as the mast. The Graphical Function Display and Graphical Pilot Display are complimented by the Analogues, all of which are listed in this catalogue.

If you need control and information whilst moving around the boat, you should include a RemoteVision wireless controller depending on the application. One of the B&G team or a specialist B&G dealer can help with numbers and positions of displays as they may already have agreed recommended layouts with your boat builder.

When choosing a B&G Pilot you should use the table in this catalogue to select the most suitable solution for your type and size of boat. All B&G Instruments and Pilots are designed to integrate with other electronics.

It is important to remember that the Instruments and Pilots are an integral part of your boat's performance and safety. Do not compromise on your equipment specification. If in doubt, call B&G.

Learn how to get the best from your boat's electronics.

We strive to pass on the wealth of knowledge we have gathered over the years to our customers, in order for you to choose the correct electronics and receive the full benefits they offer.

B&G provide this help through our sales and technical support teams, detailed and easy-to-read literature, expert tuition and on the water support. We are here every step of the way to ensure you get the best from your electronic system.

The world's top sailors have many times credited B&G Instruments for their ease of use and clear presentation of data. Nevertheless B&G have decided to help even further by offering a variety of seminars teaching you more about your electronics and navigation.

B&G Instrument displays for highly visible information on such places as the mast.

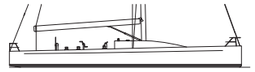
Dave Kneale/VOR

High profile sailors such as Russell Coutts use B&G systems for enhanced performance.

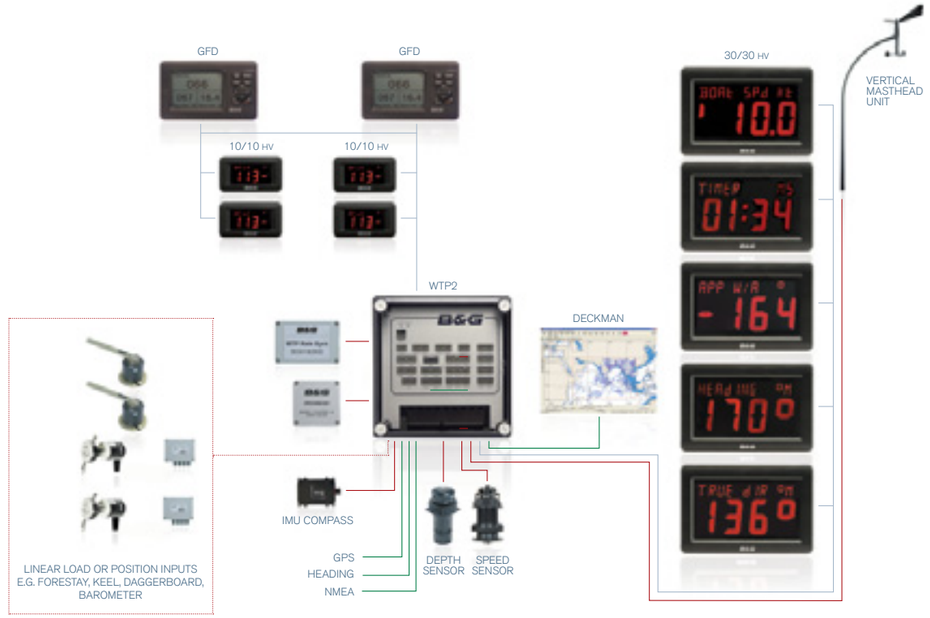
Johan Widhagen

Sander van der Borch

Configure the WTP2 with data switching depending on the point of sail. This optimises the use of the available displays. For example a 20/20 HV display unit can automatically show AWA upwind and TWA downwind



GRAND PRIX RACERS OF 40FT - 100FT



GRAND PRIX RACER Around the cans or close racing offshore, the grand prix racer demands ultimate accuracy and unbeatable capability in its instrument systems. Custom-built racing yachts like the fiercely competitive TP52, the large and powerful maxi racers and performance superyachts like the Wally lead the way in performance and results. They all expect the flexibility of a tailor-made solution including the ability to add a variety of sensors.

Key System Components

WTP2

Deckman tactical navigation software

IMU sensor

Benefits of the system

The WTP2 system, with the latest generation Wave Technology Processor at its core, is the most powerful, flexible and accurate instrument system available. Wind data is corrected to remove the errors induced by the motion of the yacht, measured by a dedicated multi-axis rate-gyro sensor. Data is calculated and displayed more quickly than on any other system.

The WTP2 can be configured to accept a large variety of data including multiple GPS, heading and speed inputs along with sensors to allow measurement and display of almost any variable on the yacht – rudder angle, forestay load, mast rake etc. to provide data for rapid repeatability of settings when racing or testing.

The IMU (Inertial Measurement Unit) provides highly accurate Heading, Heel and Trim data under dynamic sailing conditions at a 10Hz update rate.

Display units can be selected from the entire H3000 range, the new HVision displays are recommended for most on-deck applications requiring quick and clear data updates to crew. GFDs should be used where the requirement is for more control of the data displayed, for example at the nav station.

Deckman software acts as the primary interface for WTP2. Seamlessly integrated, via a direct Ethernet link, Deckman gives access to WTP2 whilst providing race functions to the processor and deck displays.

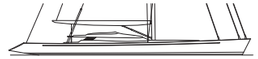
Options

The compact 10/10 HV displays can be mounted almost anywhere there is a requirement for data

For mast displays choose from 20/20 HV, 30/30 HV or 40/40 HV depending on the distance from helm-to-mast

Custom loadcells, masthead units, software development and other non-standard solutions are available from B&G Custom Projects

Tim Wright



SUPERYACHTS OF 80FT +

Fit 20/20 HV displays in social areas to give guests an overview of key data

Install a position sensor for the vang, calibrated to read zero when the boom is positioned at the optimum mainsail furling height

Utilise RemoteVision to access data and configure remote displays around the yacht

SUPERYACHT Advanced construction technology seamlessly meets onboard luxury on every superyacht and the same standards of sophistication and flexibility are expected from their navigation systems. Custom superyachts and luxury production yachts each require a system that will integrate flexibly with other onboard systems. B&G offers these capabilities as well as a host of expansion options, plus intuitive user interfaces. Traditional, unobtrusive styling ensures that design is complimentary to the bridge layout.

Key System Components include

- H3000 CPU for core functionality
- 40/40 HV displays
- Shut-Off Valve (SOV) sensors

Benefits of this system

B&G's display range provides unsurpassed data visibility for all applications, in all conditions. The 40/40 HV range was designed specifically as a mast display for superyachts, whilst the 10/10 HV provides a compact display, which can be used on control panels or in cabins.

A wide sensor range is used to meet the specific requirements of larger yachts. Aft Depth sensor allows a permanent secondary depth reading for use during manoeuvring, Shut-Off Valve (SOV) hull housings allow retraction of speed and depth sensors for maintenance and Ocean specification Vertical Masthead Units for wind measurement above mast top fittings.

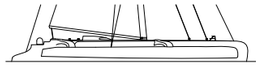
The H3000 CPU provides inputs to allow 3rd party sensors to be integrated with the system, typical applications would be to monitor and display boom height, to aid with furling, and to provide draught measurement for boats with lifting keels.

The Pilot ACP can control custom drive hardware, such as solenoid-controlled systems, allowing the use of its sailing functions on larger yachts.

Options

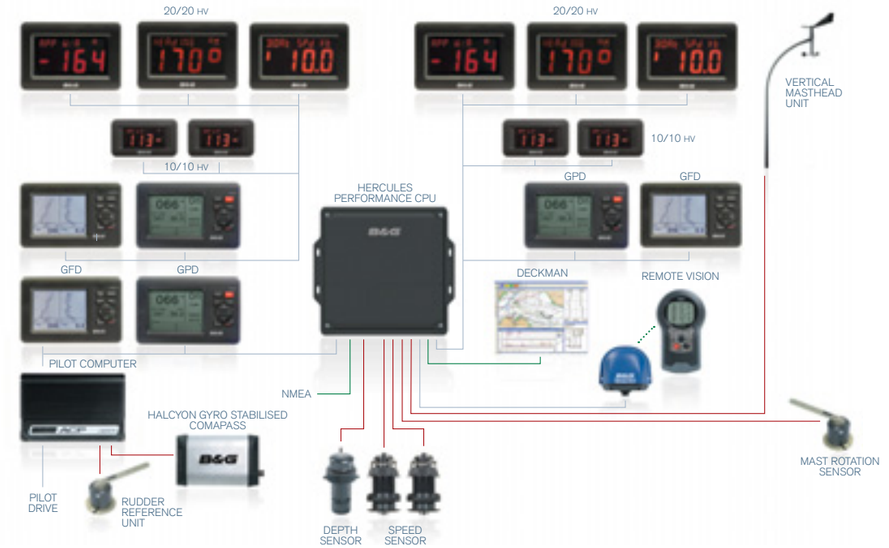
- Loadcells for safety monitoring of rigging loads
- Custom Projects can assist with non-standard systems and complex applications
- Expansion processor for additional sensor inputs

Tim Wright



MULTIHULLS OF 40FT - 100FT

Use Pilot in true wind mode when sailing downwind - apparent wind varies significantly with acceleration causing course changes



MULTIHULL Whether a trimaran or catamaran, multihulls have their own unique brand of performance and instrument system requirements. Both cruising and racing multihulls benefit from this B&G system, including short-handed and single-handed racing yachts. The CPU's dual boat speed inputs automatically switch to use the optimum sensor. Measurement and calculation of key wind data has correction for mast rotation angle.

Key System Components include

- H3000 Hercules Performance CPU
- Pilot with Halcyon Gyro-Stabilised Compass
- Dual Speed sensors
- Mast Rotation sensor

Benefits of this system

This system utilises many of the multihull specific features implemented within H3000. Boat Speed is measured from dual speed sensors, with the CPU selecting the favoured data automatically using either wind angle, heel angle or a combination of the two. A mast rotation sensor is used to adjust wind angle data to correct for the angle of a rotating mast.

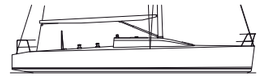
The Pilot ACP, using the Halcyon Gyro-Stabilised Compass, is a race proven multihull Pilot with a choice of steering modes including True Wind Angle. Other functions include Auto Response switching to respond to changes in sea-state and Recovery Mode to correct for rogue waves or significant wind shifts. Additionally the Pilot can steer to a Target TWA from the Polar Table stored in the CPU.

Deckman tactical navigation software is used to great effect to call laylines and time-to-mark when racing at high speeds.

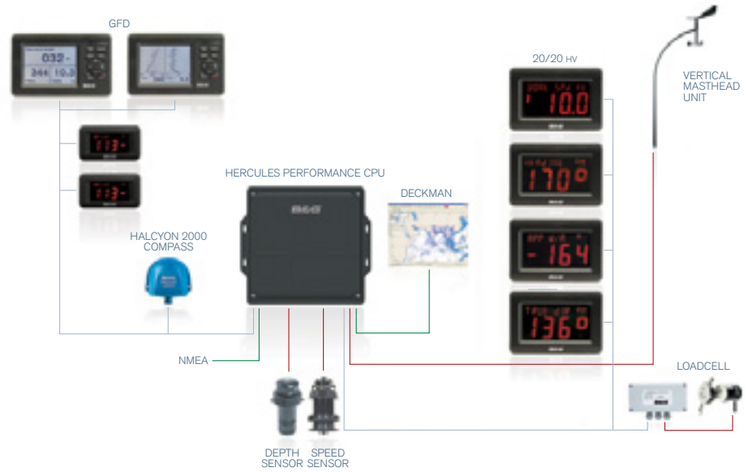
Options

- True Wind Angle Analogue displays for cruising applications
- 30/30 HV or 40/40 HV displays for larger multihulls
- WTP2 processor based systems for special projects
- Dual Pilot systems for solo and short-handed sailing

Lloydimages



PERFORMANCE RACERS OF 30FT - 80FT



PERFORMANCE RACER Whether club racing or sailing at national or international regatta level, performance racing crews are looking to be first across the line. Production one design racing yachts and custom built racing yachts expect rugged reliability and high performance, both features that B&G delivers in a system with the H3000 Hercules Performance CPU at its core. Large digit 20/20 HV displays enable the crew to see vital data and the system also includes the Vertical Masthead Unit, Loadcell and Deckman. Advanced calibration and damping features plus tactical software all combine to provide the high performance demanded by top championship racers.

Key System Components include

- Vertical Masthead Unit
- 20/20 HV mast displays
- Deckman tactical navigation software

Benefits of this system

The combination of the H3000 Hercules Performance CPU and a Vertical Masthead Unit provides accurate wind data, updated virtually instantly to the helm, navigator and trimmers on deck. Dynamic Damping allows the data to be smoothed for readability, whilst allowing data to update rapidly during periods of significant change, for example fast reaction to wind shifts or acceleration.

The combination of GFD and 20/20 HV displays ensures that all the data is clearly available, day or night.

Deckman tactical navigation software gives all the information required for the navigation and strategic decision making on board including charting, performance analysis, tracking of wind trends and layline calculations – even in tidal areas.

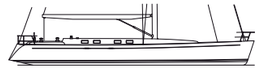
Options

- 30/30 HV mast displays where helm-to-mast distance is over 10m (30')
- Heel sensor for improving tack-to-tack wind and speed data
- Halcyon Gyro-Stabilised Compass, for improved heading, heel and trim data, with highly accurate true wind calculations

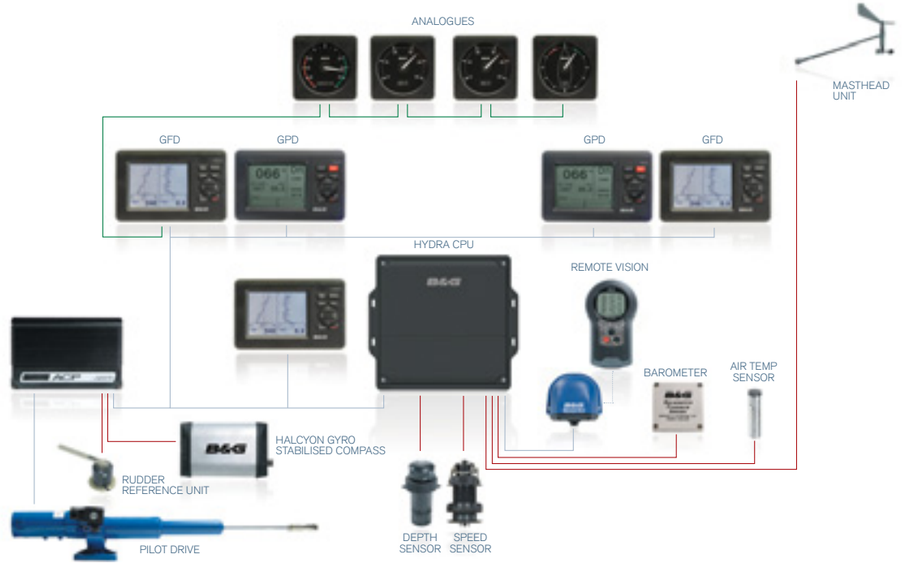
Accurate use of polars relies on well calibrated boat speed and wind data. Get raw functions accurate before collecting data for polars

Display Target Speed on 20/20 HV to give crew a reference when accelerating out of tacks

Use Target Boat Speed as the performance reference when sailing upwind, % Performance when reaching and Target True Wind Angle downwind



BLUE WATER CRUISERS OF 40FT - 80FT



BLUE WATER Having durable, reliable instruments onboard when sailing across oceans, between islands, and in some of the most remote parts of the world is incredibly important and that is why quality, comfortable cruising yachts like Swan and Oyster choose B&G. Traditional unobtrusive styling complements sleek and contemporary interiors, while the system offers integral cruising features such as alarm systems

Key System Components include:

- H3000 Hydra CPU
- ACP Pilot
- GFD displays
- Analogue displays

Benefits of this system

Performance, reliability and durability have all been proven in some of the world's toughest ocean races and adventures. Additional safety and cruising features include extensive alarm options, logs and dead-reckoning features.

Barometric Pressure and Air Temperature sensors monitor weather trends and Remote Vision provides access to all instruments and pilot functions from anywhere onboard.

The Halcyon Gyro Compass provides the best in Pilot performance.

Options

- Vertical Masthead Unit for more stable wind readings, enhancing Pilot performance
- Loadcells for safety load monitoring
- Additional displays for owner's cabin
- Deckman software for weather routing on offshore voyages

Keylock function on displays prevents accidental changes

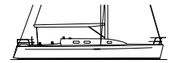
Preset pages on GFD and 20/20 HV will show your most useful data, then power down when your favourite pages are showing - they will become the system start-up defaults

Ensure heading and boat speed are well calibrated to ensure good Pilot performance

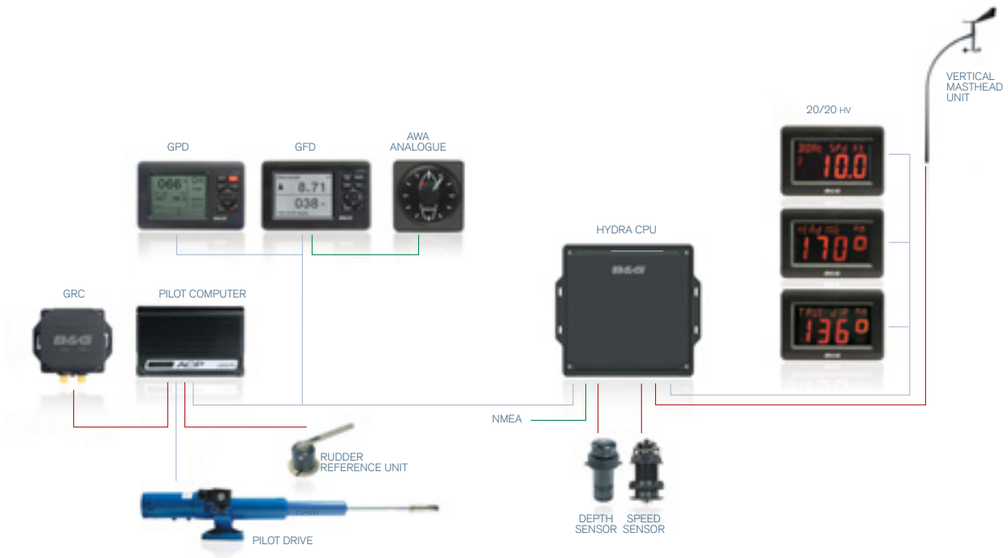
Kurt Arrigo

When racing use a 20/20 HV to display the race timer in the starting sequence for all the crew to see

When coastal cruising display depth on a 20/20 HV to ensure clear visibility



CRUISER RACERS OF 30FT - 60FT



CRUISER RACER B&G understands the requirements of the dual purpose yacht that is competitive on the race track and comfortable for family cruising. This flexible system is capable of winning a regatta yet can be easily operated by an enthusiastic cruising crew. Accurate and reliable racing functionality combines with integral fundamentals for cruising.

Key System Components include:

- H3000 Hydra CPU
- Vertical Masthead Unit
- 20/20 HV displays
- ACP Pilot

Benefits of this system

Accurate and repeatable data is always important. Safety decisions such as whether to take out a reef while cruising need to be made with at least the same level of confidence as calling a layline when racing – this system allows the skipper to make the right decisions, cruising or racing.

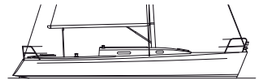
The H3000 Hydra CPU combined with high quality sensors, including a Vertical Masthead Unit, provide accurate data to the system, which is then displayed to the crew on a choice of displays. The large digit 20/20 HV displays mounted on the mast provide clear view of the key data, even with a cockpit full of crew or family.

The GFD display allows more complex data, such as graphical representations of wind trends or depth, to be viewed easily whilst the clarity of an Analogue display is often appreciated by less experienced members of the crew, particularly for Wind Angle.

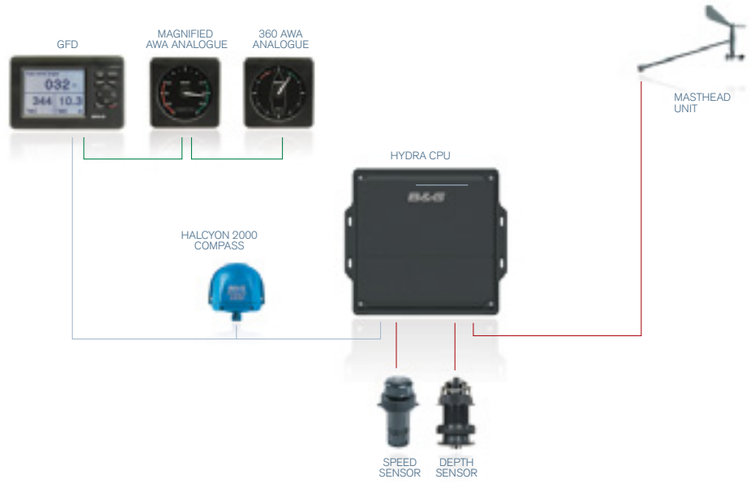
The ACP Pilot provides a competent extra pair of hands when required.

Options

- Extra displays for larger yachts to give all crew access to relevant data
- Halcyon Gyro-Stabilised Compass for better Pilot performance by using stabilised heading, heel and trim data
- Forestay loadcell for monitoring rig loads
- RemoteVision for racing information on the rail. Its integral compass can also help call the laylines



DAY CRUISERS / CLUB RACERS OF 30FT - 45FT



Configure the display pages to your preference so that your favourite data is only a click away

The AutoCal routines are simple to use: take the time to use them and benefit from more accurate information

DAY CRUISER / CLUB RACER Smaller production yachts have exact demands for navigation and racing. Yachts like the X-34 or J/109 require an easy-to-use, intuitive system without breaking the bank, and at the same time expect the high level of quality and reliability found in B&G's more advanced systems. Less-experienced crew can benefit from the straightforward display of data.

Key System Components include:

- H3000 Hydra CPU
- GFD display
- Analogue displays

Benefits of this system

The multi-function operation of the GFD display, combined with simple to read. Analogue displays, allows this system to present a full range of key data to the crew in an affordable, easy to use, package.

The GFD display has access to all the information on the system and can be configured to display multiple items at the same time – any data that isn't displayed is often just a key press away.

Analogue displays give a clear representation of the wind angle for less experience sailors, with no compromise on quality. This system will perform in the most demanding of conditions.

Options

- An ACP Pilot system with Graphical Pilot Display for longer trips where you may want an extra pair of hands
- Additional displays to suit yacht size and budget

Tim Wright

The CPU sits at the heart of every H3000 system. Available in four processor levels offering progressive performance features, H3000 has a level to suit every sailor and is software upgradeable at any stage.

B&G H3000 - THE CORE COMPONENT The constant challenge to develop new technological solutions has culminated in a wealth of experience and knowledge, enabling B&G to harness technical developments and provide proven solutions for every sailor's need. Designed to appeal to both the serious cruising and racing owner, H3000 is an evolution of a successful formula that consists of race proven technology and brand new elements, which redefine electronic excellence. Improvements experienced with the H3000 system are striking, with particular advances in display technology, ease of use, ease of installation and durability. H3000 adds unique products and advanced functionality to the B&G range whilst retaining compatibility with existing products already familiar to B&G users.

WARRANTY

ALL H3000 SYSTEMS OFFER TWO-YEAR WARRANTY AS STANDARD WITH THE OPTION OF FREE GOLD CARD REGISTRATION, WHICH EXTENDS THE WARRANTY UP TO A MAXIMUM OF THREE YEARS WHEN INSTALLED BY A CERTIFIED B&G DEALER.

The H3000 Instrument and Pilot Packs make specifying your system quicker and easier, enabling you to start with the basics and build on this to suit your specific needs.

The Club Race Pack is a ready-made instrument pack designed for the keen racing sailor.

Club Race Pack – BGH300021
H3000 GFD
3 x H3000 20/20 HV display
20/20 HV Mast Bracket
H3000 CPU: Hydra
Masthead Unit - Standard Pack
Speed Sensor
Depth Sensor
Halcyon 2000 Compass Sensor
Installation accessories and documentation

The Cruise Pack allows you to buy a pre-prepared pack that has been specifically designed for the cruising sailor.

Cruise Pack – BGH300022
H3000 GFD
H3000 Analogue: AWA 360
H3000 Analogue: Magnified AWA
H3000 CPU: Hydra
Masthead Unit - Standard Pack
Speed Sensor
Depth Sensor
Halcyon 2000 Compass Sensor
Installation accessories and documentation

The Cruise with Pilot Pack is the perfect solution for anyone wishing to cruise and enjoy the added bonus of a performance Pilot system.

Cruise with Pilot Pack – BGH300023
As the BGH300022 Cruise Pack plus
H3000 ACP1 Pilot Pack
Rudder Reference Unit, Rotary Type
Hydraulic Ram - Size 1, 12 Volt
Installation accessories and documentation

Hydra Base Pack – BGH300001
H3000 GFD
H3000 CPU: Hydra
Installation accessories and documentation

Hercules Base Pack – BGH300002
H3000 GFD
H3000 CPU: Hercules
Installation accessories and documentation

Hercules Performance Base Pack – BGH300003
H3000 GFD
H3000 CPU: Hercules Performance, incl. Deckman
Installation accessories and documentation

Hercules Motion Base Pack - BGH300004
H3000 GFD
H3000 CPU: Hercules Motion, incl. Deckman Motion Sensor
Installation accessories and documentation

H3000 ACP1 Pack – BGH300031
H3000 Graphical Pilot Display GPD
H3000 ACP1 Pilot Processor
Installation accessories and documentation
Junction Box - 7 Terminal

H3000 ACP2 Pack – BGH300051
H3000 Graphical Pilot Display GPD
H3000 ACP2 Pilot Processor
Installation accessories and documentation
Junction Box - 7 Terminal

Owners with B&G's H3000 predecessor, the H2000 system, can add an H3000 GFD to gain graphical display abilities

Accurate calibration of your Instrument system will optimise the accuracy of information, helping you to measure and improve the performance of your yacht

GRAPHICAL FUNCTION DISPLAY PART NO: BGH210001

THE GRAPHICAL FUNCTION DISPLAY (GFD) acts as both a flexible display unit and a controller for the H3000 system.

The high-resolution graphical display allows the use of both graphical data representation and a very intuitive user interface. The screen detail is sharp and clear for on deck use and viewing from a distance. Clarity is equally effective in short range applications when viewing at nav stations, in cabins and on pedestal mounts.

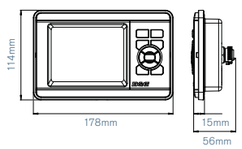
- High resolution graphical display provides intuitive user interface and improved ways of visualising sailing data and pilot control
- New AutoCal screens to aid speed and wind calibration
- Bonded display technology for improved contrast and zero condensation
- High integrity mechanical construction including toughened glass display window

Part Numbers

GFD	BGH210001
WTP GFD	BGH210003

Technical specifications

Dimensions: 178 x 114 x 56mm/7 x 4.5 x 2.2"
Weight: 0.7kg/1.5lbs
Construction: Moulded ABS with Aluminium rear case
Supply Voltage: 12V (10 -16V range)
Power Consumption lights on/off: 90mA / 40mA
Sealing: IP67
Display Resolution: 320 x 240 pixel
Operating Temperature: -10 to 55°C/14 - 131°F
Humidity Range: Up to 95% rh
Compass Safe Distance: 200mm/7.9"



FOR DISPLAY ACCESSORIES SEE PAGE 56

HVision revolutionises the design of instrument displays, presenting the clearest information through unique display technology. The brand new 10/10 HV is joined by the 20/20 HV, 30/30 HV and 40/40 HV to offer a lightweight, high performance data display for every application.

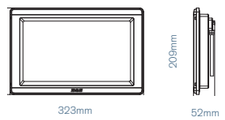
40/40 HV display

40/40 HV PART NO: BGH280001

- New HVision display technology
- Optimal data clarity both day and night
- Addresses the data display requirements of large yachts
- Ideal for yachts of 70ft and above

Technical specifications

Dimensions: 323 x 209 x 52mm/12.8 x 8.2 x 2"
Weight: (w/standard cable) 2.3kg/5.1lbs
Construction: Moulded ABS w/ aluminium rear case
Supply Voltage: 12V
Power Consumption lights on/off: 50mA/25mA
Sealing: IP67
Display Resolution: Custom Segmented HVision
Operating Temperature: -10 to 55˚C/14 to 131˚F
Humidity Range: Up to 95%
Compass Safe Distance: 200mm/7.9"
Interfaces: FastNet



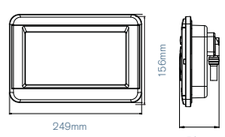
30/30 HV display

30/30 HV PART NO: BGH240001

- New HVision display technology
- Mast and cockpit repeater
- Providing larger yachts with optimum data clarity in all conditions
- Ideal for yachts in the 50ft to 90ft range

Technical specifications

Dimensions: 249 x 156 x 50mm/9.8 x 6.1 x 2"
Weight (w/ standard cable): 1.2kg/2.7lbs
Construction: Moulded ABS w/ aluminium rear case
Supply Voltage: 12V
Power Consumption lights on/off: 50mA/25mA
Sealing: IP67
Display Resolution: Custom Segmented HVision
Operating Temperature: -10 to 55˚C/14 to 131˚F
Humidity Range: Up to 95%
Compass Safe Distance: 200mm/7.9"
Interfaces: FastNet



Bonded screen technology is used throughout the range, providing high contrast, wide viewing angles and zero condensation. The high integrity mechanical construction including toughened glass provides ultimate reliability and performance.

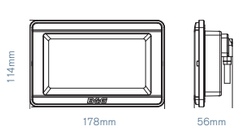
20/20 HV display

20/20 HV PART NO: BGH290001

- New HVision display technology
- Mast and cockpit repeater
- Extremely clear display for maximum visibility of key information
- Ideal for yachts in the 30ft to 50ft range

Technical specifications

Dimensions: 178 x 114 x 56mm/7 x 4.5 x 2.2"
Weight (w/ standard cable): 0.9kg/ 1,9 lbs
Construction: Moulded ABS w/ aluminium rear case
Supply Voltage: 12V
Power Consumption lights on/off: 50mA/25mA
Sealing: IP67
Display Resolution: Custom Segmented HVision
Operating Temperature: -10 to 55˚C/14 to 131˚F
Humidity Range: Up to 95%
Compass Safe Distance: 200mm/7.9"
Interfaces: FastNet



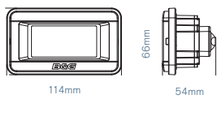
10/10 HV display

10/10 HV PART NO: BGH320001

- New HVision display technology
- Ultimate clarity in a compact display
- Providing numbers where they're needed
- Ideal display for focus areas such as pedestals and trimming positions

Technical specifications

Dimensions: 114 x 66 x 54mm/ 4,4" x 2,5" x 2,1"
Weight (w/ standard cable): 0.3kg/ 0,6 lbs
Construction: Moulded ABS
Supply Voltage: 12V
Power Consumption lights on/off: 50mA/25mA
Sealing: IP67
Display Resolution: Custom Segmented HVision
Operating Temperature: -10 to 55˚C/14 to 131˚F
Humidity Range: Up to 95%
Compass Safe Distance: 200mm/ 7.9"
Interfaces: FastNet



FOR DISPLAY ACCESSORIES SEE PAGE 56

Available to repeat the most common functions, the H3000 Analogues retain the classic appearance for which B&G Analogue displays are famous, whilst improving accuracy and durability.

Analogues FOR ANALOGUE DISPLAY ACCESSORIES SEE PAGE 56

TWS 0-50KT PART NO: BGH230004

BOAT SPEED 25KT PART NO: BGH230008

DEPTH FT/FATHOMS PART NO: BGH230011

MAGNIFIED AWA PART NO: BGH230005

AWS 0-50KT PART NO: BGH230003

AWA 360 PART NO: BGH230001

Analogues utilise the simple and reliable installation of the SimNet databus, further improving the ease of installation of the H3000 system as a whole.

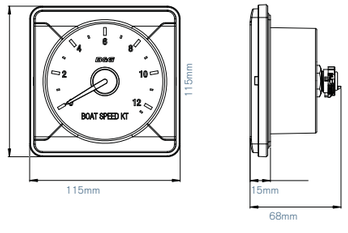
- Front mounted, low profile design
- Wide range of display options
- Daisy-chain system for ease of installation
- Clear night lighting
- High integrity mechanical construction including toughened glass display window

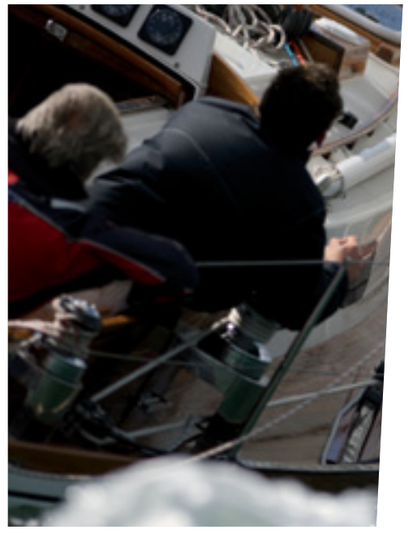
Further Part Numbers

TWA 360	BGH230002
Boat Speed 12.5kt	BGH230006
Depth 200m	BGH230007
Heading	BGH230009
Rudder Angle	BGH230010

Technical specifications

Dimensions: 115 x 115 x 68mm/4.53 x 4.53 x 2.7"
Construction: Moulded ABS with cast alloy rear case and toughened glass window
Weight: 0.5kg/1.1lbs
Sealing: IP67
Operating Temperature: -10 to 55°C/14-131°F
Humidity Range: Up to 95% rh
Supply Voltage: 12V
Interfaces: SimNet





The H3000 CPU is the core of the system, taking the majority of sensor inputs and using a dedicated processor to rapidly calculate and calibrate further functions for distribution to display units and external devices.

CPU - Processors FOR CPU ACCESSORIES SEE PAGE 57

H3000 CPU - HYDRA	PART NO: BGH250001
H3000 CPU - HERCULES	PART NO: BGH250002
H3000 CPU - HERCULES PERF.	PART NO: BGH250003
H3000 CPU - HERCULES MOTION	PART NO: BGH250004
UPGRADES:	
HYDRA-HERCULES	PART NO: BGH250012
HYDRA-HERCULES PERF.	PART NO: BGH250013
HERCULES-HERCULES PERF.	PART NO: BGH250023
HERCULES-HERCULES MOTION	PART NO: BGH250024
HERCULES PERF-HERCULES MOTION	PART NO: BGH250034

Enhances ease of installation with its plugged connections whilst the connectors are firmly retained by locking screws to ensure reliability in all conditions

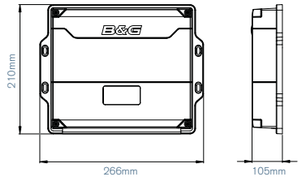
Upgradeable to allow additional functionality at any time

USB interface allows connection of a PC for either NMEA communications or the optional H-Link™* communication protocol

*H-Link is an advanced B&G protocol for communication with external PC applications

Technical specifications

Dimensions: 266 x 210 x 105mm/10.5 x 8.3 x 4.1"
Construction: Moulded ABS
Sealing: IP65
Operating Temperature: -10 to 55°C/14 - 131°F
Supply Voltage: 12V (10 – 16V range)
Operating Current: 400mA
Interfaces: Fastnet, NMEA 0183 in/out, USB 2.0, RS232



CPU software features:

Hydra

Update rates to 4Hz
AutoCal calibration routines
USB port for NMEA interfacing with PCs
NMEA 0183 input and output

Hercules (additional functions)

Update rates up to 6Hz
Wind data corrected for Heel Angle
Advanced True Wind Speed Calibration
Dynamic Damping
Secondary Pulse input for second boat speed sensor
Boat Speed Heel/Linearity correction

Hercules Performance (additional functions)

H-Link communications
Polar Functions to optimise sailing performance
Polar Table storage
Deckman Software

Hercules Motion (additional functions)

Dual-axis Motion Sensor
Wind data measurement corrected for pitch and roll motion of yacht
Performance Wind Filter provides the most accurate and stable wind data available

Expansion Processor and Gyro Processor

In addition to the H3000 CPU we also produce a number of optional Processors to enhance your system. These are compatible with any H3000 system and can be specified as part of a new installation or added as a retrofit upgrade to an existing system.

Gyro Processor

The Halcyon Gyro Processor is a Heading interface which can be used in several different modes to suit the application.

Interface for B&G Halcyon Gyro-Stabilised Compass sensor

10Hz NMEA Heading output for RADAR North-Up and ARPA stabilisation

200ms AD10 Heading output

NMEA Input to allow use of external NMEA Heading Sources

Expansion Processor

The Expansion Processor is for systems requiring additional Linear inputs.

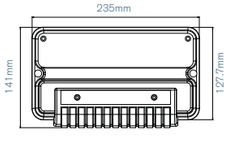
Twelve additional linear inputs

Part Numbers

Halcyon Gyro Processor	BGH061001
Expansion Processor	340-00-009

Technical specifications

Dimensions: 235 x 140 x 82mm/9.3 x 5.5 x 3.2"
Weight: 0.6kg/1.3lbs
Construction: Moulded ABS case
Supply Voltage: 12V nominal (10-16V)
Operating Current: 50mA
Sealing: IP54
Operating Temperature: -10 to 55°C/14 - 131°F



B&G PILOTS HAVE LONG BEEN RECOGNISED FOR THEIR SUPERIOR PERFORMANCE AND UNBEATABLE RELIABILITY. USED ON ALL SIZES OF CRUISING AND RACING YACHTS, THERE IS A B&G PILOT SOLUTION TO SUIT YOU. WITH THE NEW ENHANCED PILOT COMPUTERS COME IMPROVED RESPONSE RATES THAT APPLY RAPID AND INTELLIGENT RESPONSE TO CHANGES IN WIND AND SEA CONDITIONS.

GRAPHICAL PILOT DISPLAY PART NO: BGH210021

THE H3000 GRAPHICAL PILOT DISPLAY (GPD) adds the graphical abilities and construction of the GFD to Pilot control. A clear, easy-to-use Pilot controller with dedicated control keys allows confident control of the Pilot system.

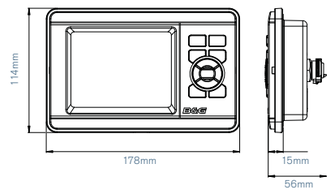
- All common functions accessible from the main screen
- Bonded display technology for improved contrast and no misting
- High integrity mechanical construction including toughened glass display window

Part Numbers

GPD	BGH210021

Technical specifications

- Dimensions: 178 x 114 x 56mm/7 x 4.5 x 2.2"
- Weight: 0.7kg/1.54lbs
- Construction: Moulded ABS with Aluminium rear case
- Supply Voltage: 12V (10 -16V range)
- Power Consumption lights on/off: 90mA / 40mA
- Sealing: IP67
- Display Resolution: 320 x 240 pixel
- Operating Temperature: -10 to 55°C/14 - 131°F
- Humidity Range: Up to 95% rh
- Compass Safe Distance: 200mm/7.9"



lloydimages.com

The Pilot takes into account the heading, boat speed, wind speed and wind angle, so that the boat can be safely steered at optimum wind angles

Lloydimages

RemoteVision

REMOTEVISION PART NO: BGH120000

The RemoteVision is a wireless link to your instrument system and a Pilot controller in the palm of your hand. This lightweight, palm sized unit is linked to the instrument and Pilot network through a small wireless port and secure wireless connection, suitable for use on both small and large vessels.

View data from your system, including Boat Speed, Wind, Heading or Depth information and check your Heading and Bearing to Waypoint, then alter course from anywhere onboard up to 50m from the wireless port. An alarm answer mode is built in for safety purposes. RemoteVision also makes instrument calibration easy and has simple control buttons based on mobile phone logic.

Technical specifications

Dimensions: 133 x 81 x 35mm/5.2 x 3.2 x 1.4"
Weight: 300g/0.7lbs
Tough moulded acrylic case with a waterproof rating of IP67
Transflective LCD display with 3 levels of lighting
High brightness white LED torch
Battery power from standard AA or rechargeable batteries
Wireless communication
Internal, gimballed, fluxgate compass
Secure communication
50m communication range
Wireless Port: 111 x 104 x 75mm/4.4 x 4.1 x 3",
Moulded ABS, 600g/1.3lbs, IP66
Compatible with H2000 or H3000 system
Standard two year worldwide warranty

Pilot Joystick

PILOT JOYSTICK & CONTROL BUTTON PART NO: 545-00-060

The Pilot Joystick control allows the helmsman to control the rudder position remotely using the Power Steer functionality of the Pilot.

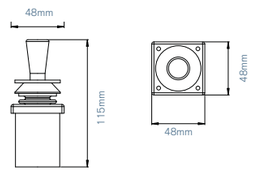
Ideal for deck saloon type yachts where the nav station can double as a compact second helm position

Simple Push-to-Engage and Push-to-Disengage remote button control

Proportional or Normal steering modes

Technical specifications

Dimensions: 115 x 48 x 48mm/4.5 x 1.9 x 1.9"
Weight: 0.5kg/1.1lbs (with cable)
Construction: Moulded ABS with neoprene gaiter



Pilot Remote

HANDHELD PILOT CONTROLLER PART PLHH-ACP

The Handheld Pilot Controller ensures that control and safety is always to hand.

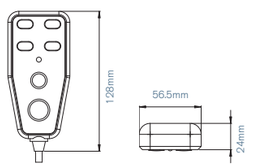
Course change, Engage, Disengage and Resume Last Course functions

No need to be near the main Pilot display to control the Pilot

Tangle-free curly cable ensures that a wide area of the boat can be covered by the remote.

Technical specifications

Dimensions: 128 x 57 x 24mm/5 x 2.2 x 1"
Weight: 1.0kg/2.2lbs with cable
Construction: Waterproof ABS moulded



Pilot Selection Guide THIS SECTION HELPS YOU SELECT THE CORRECT PILOT FOR YOUR BOAT

Cable / Rod Steering Systems					
Typical Yacht Size	20-30m	16-22m	15-18m	15-18m	0-16m
Typical Yacht Displacement	30-50 tonnes	6-32 tonnes	8-18 tonnes	8-18 tonnes	5-9 tonnes
Recommended Pilot Drive	RAM-T4-24V	RAM-T3-24V	RAM-T2-24V	RAM-T2-12V	RAM-T1-12V
Recommended Pilot Computer	ACP2	ACP2	ACP1	ACP1	ACP1

Hydraulic Steering Systems					
Cylinder Capacity	1500cc	525-750cc	275-550cc	275-550cc	100-300cc
Recommended Pilot Drive	PMP-T4-24V	PMP-T3-24V	PMP-T2-24V	PMP-T2-12V	PMP-T1-12V
Recommended Pilot Computer	ACP2	ACP2	ACP1	ACP1	ACP1

A wide range of self-contained hydraulic drive systems to suit yachts with either cable or rod steering systems.

ACP FOR ACP ACCESSORIES SEE PAGE 58

PILOT COMPUTER

ACP 1 PILOT COMPUTER PART NO: BGH171001

The B&G H3000 Pilot has been proven in the world's most testing environments - used by Bluewater Cruisers, Single-handed racers and Record Breakers

Steer to Compass

Steer to Apparent or True Wind Angle

Steer to Waypoint

Power Steer mode

SmartTack and SmartGybe

Enhanced Response, Recovery and Auto Response features for optimum course keeping (requires Halcyon Gyro-Stabilised Compass BGH060001 or BGH060004)

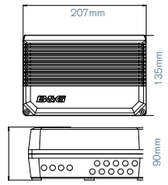
Compatible with a wide range of common drive types

Part Numbers

ACP 1 Pilot Computer	BGH171001
ACP 2 Pilot Computer	BGH171002

Technical specifications

Dimensions: 207 x 135 x 90mm
Weight: 3.1kg
Construction: Powder Coated/Zinc casing
Supply Voltage: 12V (12-24V Drive)
Power Consumption (electronics): 100mA
Maximum Current: 20A (ACP1) - 40A (ACP2)
Sealing: IP65
Operating Temperature: -10 to +55°C
Humidity Range: Up to 95% rh
Compass Safe Distance: 100mm



Hydraulic Ram

12V HYDRAULIC RAM PART NO: RAM-T0-12V

High power, efficient drive units for maximum power with minimum consumption

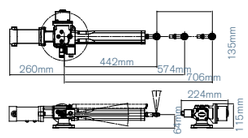
Ram drives allow the Power Steer mode on the Pilot to be used in cases of manual steering failure

Fully Integrated (T0, T1 and T2 units) hydraulic system, no external hoses, reservoirs etc

T3 drives have a separate hydraulic pump to allow for greater mounting flexibility on this larger cylinder

Type 4 systems utilise a constant running hydraulic pump and two steering cylinders for the best compromise of performance, reliability and efficiency on larger vessels. (For a detailed drawing of the Type 4 Ram System please contact B&G)

Yacht size range up to approximately. 100ft (30m)



Technical specifications

RAM PART NO:	RAM-T1-12V	RAM-T2-12V	RAM-T2-24V	RAM-T3-24V	RAM-T4-24V**
Dimensions	101 x 728mm/4 x 28.7"	125 x 728mm/5 x 28.7"	125 x 728mm/5 x 28.7"	101 x 537mm/4 x 21"	120 x 659mm/4.7 x 26"
Weight	7.5kg/16.5lbs	7.5kg/16.5lbs	7.5kg/16.5lbs	10.3kg/22.7lbs	25kg/55lbs
Construction	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Supply Voltage	12V	12V	24V	24V	24V
Power Consumption*	2-4A	2-4A	2-4A	2-4A	8-12A
Peak Current	15A	25A	17A	17A	30A
Peak Thrust	425kg/937lbs	680kg/1499lbs	680kg/1499lbs	1062kg/2341lbs	2000kg/4409lbs
Max Stroke	254mm/10"	254mm/10"	254mm/10"	305mm/12"	305mm/12"
Coupling Radius	214mm/8.4"	214mm/8.4"	214mm/8.4"	257mm/10.1"	257mm/10.1"
Max Torque	892Nm	1427Nm	1427Nm	2688Nm	5232Nm

*Typical average cruising consumption **Diagram not shown

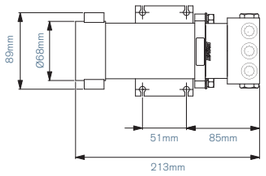
Where a manual hydraulic steering system already exists the simplest installation is to fit a Hydraulic Pump into the existing system.

Hydraulic Pump

12V HYDRAULIC PUMP

Compact, powerful pump units

Options to suit steering cylinder volumes from 100 - 1500cc



Technical specifications

PUMP PART NO:	PUMP-T1-12V	PUMP-T2-12V	PUMP-T2-24V	PUMP-T3-24V**	PUMP-T4-24V**
Dimensions in mm	225x88x78mm	227x88 x 76mm	227x88x76mm	223x112x100mm	332x224x240mm
Dimensions in inches	8.9 x 3.5 x 3"	8.9 x 3.5 x 3"	8.9 x 3.5 x 3"	8.8 x 4.4 x 4.3"	13.1 x 8.8 x 9.5"
Weight in kg	1.3kg	2.4kg	2.4kg	3.4kg	12Kg
Weight in lb	12.9lbs	5.3lbs	5.3lbs	7.5lbs	26.5lbs
Construction Aluminium	Aluminium	Aluminium	Aluminium	Aluminium	
Supply Voltage	12V	12V	4V	24V	24V
Power Consumption*	2-4A	2-4A	2-4A	2-4A	7-10A
Cylinder Capacity	100-300cc	275-550cc	275-550cc	525-750cc	1500cc

*Typical average cruising consumption **Diagram not shown

Oskar Kihlborg/VOR

WTP2 is controlled via B&G's advanced Deckman tactical software, which enables full control of navigation, calibration and configuration

WTP2 PART NO: BGH191001

B&G WAVE TECHNOLOGY PROCESSOR 2 (WTP2) is the ultimate instrument processor for professional grand prix and ocean racing.

Every single yacht in the 2008-09 Volvo Ocean Race and the majority of the TP52 MedCup fleet, including the 2008 circuit winner Quantum Racing, is fitted with B&G WTP2. Version 2 of the WTP2 includes new features developed with the syndicates competing for the next America's Cup.

The WTP2 is the latest generation of Grand Prix level processor from B&G and is a significant step forward from its predecessor, the highly regarded Wave Technology Processor (WTP).

In addition to the normal sensors a WTP2 system also includes a 3-Axis Rate-Gyro sensor for measuring the pitch, roll and yaw motion of the boat. It is this sensor that gives the WTP2 its name because it allows the removal of the wave motion components from the wind measured at the masthead.

The processor is based upon an embedded PC that runs Windows CE and samples sensors at up to 100Hz whilst displaying the data twice as fast as even the latest H3000 system. This makes it the fastest instrument processor available. It is capable of accepting up to 16 analogue inputs (with an option to expand this to 32). It also accepts multiple boat speed, heading and NMEA sources. The processor is controlled directly from the Deckman software provided.

The WTP2 meets three principle objectives:

To provide the most powerful and flexible instrument system for high-end race boats and super yachts

To increase the accuracy of the data provided by eliminating the effects of boat motion

To calculate and display data more quickly than any other system

WARRANTY

TWO YEAR WORLDWIDE WARRANTY, WITH THE OPTION OF FREE GOLD CARD REGISTRATION, WHICH EXTENDS THE WARRANTY UP TO A MAXIMUM OF THREE YEARS, WHEN INSTALLED BY A CERTIFIED B&G DEALER

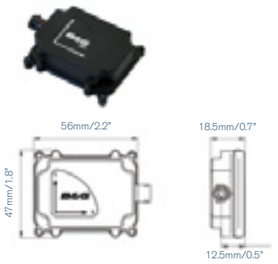
Key features of the WTP2

- High sensor sampling rates, up to 100 times per second
- Wind calculations are corrected for yacht motion using measurements from high-resolution sensors
- Compass inputs can be gyro-corrected using the rate sensors
- Ethernet communications with one or more PCs running Deckman tactical software
- FTP access to software and data files via LAN
- Users can create custom variables based on existing data
- Advanced filtering and calibration, including dependent damping between variables
- Data is written to the display network at high rates (10Hz)
- Users can configure the way information is displayed with intelligent data switching
- Data redundancy support: use of multiple heading, speed and GPS sources

IMU sensor

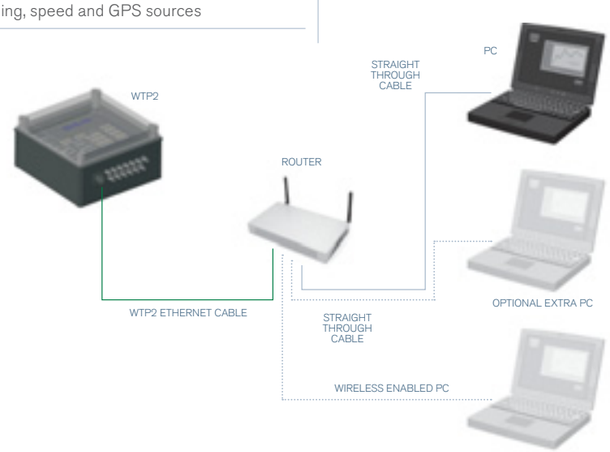
The IMU is a high-performance attitude and heading reference sensor that provides the highest quality heading information available for WTP2. Using multi-axis rate gyros and accelerometers to correct for the motion of the yacht the IMU is able to perform accurately even when subject to accelerations of up to 5g.

- Highly accurate heading provides significant improvements in True Wind data
- Heel and Trim data can be used by WTP2 to correct wind for static angle offsets
- 10 Hz update rate, the fastest supported by WTP2
- Max accelerations up to 5g, provides accurate data even in the worst conditions
- Solid State design, no moving parts to wear or damage
- Very compact and lightweight
- Waterproof (IP67)

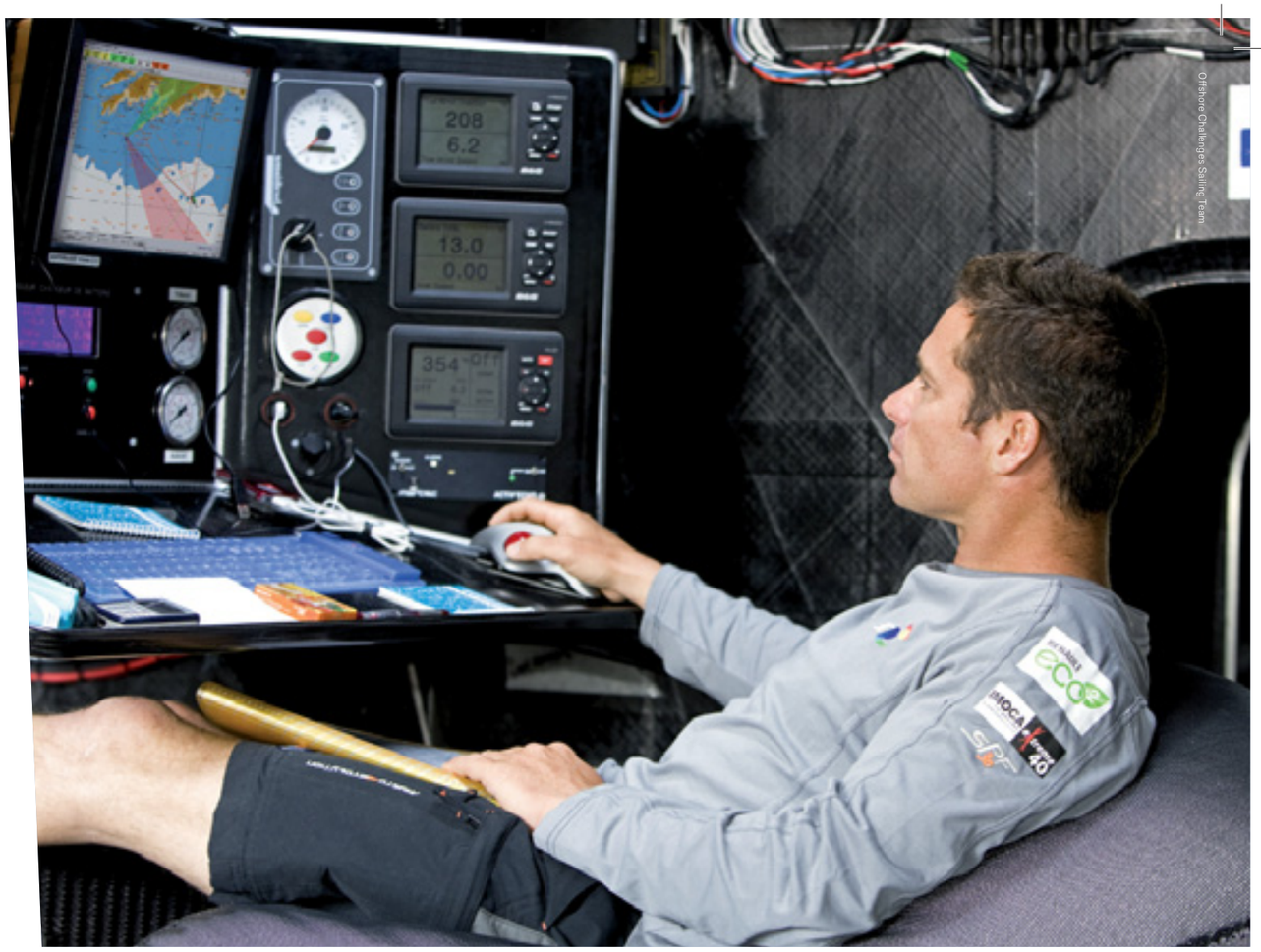


Requirements

- B&G instrument displays and sensors
- Suitable PC for Deckman software
- 12V DC 2 Amp Supply



The Ethernet interface allows the WTP2 to be installed on a computer network or a network between two boats. The processor can be accessed from any number of PCs and take advantage of wireless LAN set-ups as illustrated.



DECKMAN is the world's most advanced tactical navigation software and is used by winners in every field, from larger sports boats to the Volvo Ocean Race and the America's Cup.

Deckman

Deckman includes all the tools you need for short course round the buoys racing, offshore racing and boat tuning.

Deckman has numerous functions to assist the racing navigator and tactician in making the right decisions on the race course, it is also closely integrated with instrument systems and in many cases is able to output functions back to the instrument system displays for use by crew on deck. Deckman provides the edge required to win races.

New in v9

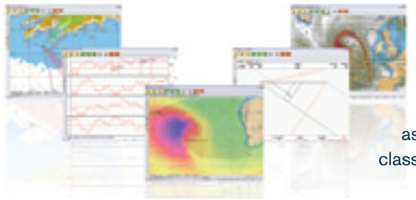
AIS overlay

View all boats equipped with commercial or leisure AIS NMEA 0183 transceivers. Targets are provided as a chart overlay, with options to add vectors in front of moving targets. Used for collision avoidance and competitor positioning.

Further vessel detail, including name, call-sign, course and speed, is available by clicking on the target displayed.

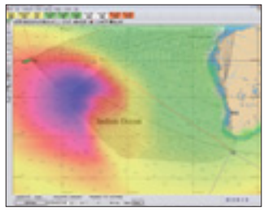
Weather enhancements

- Deckman's weather services have been enhanced by several additions:
- Weather Animation gives a clear visualisation of how the weather is likely to develop
- Precipitation display provides clearer identification of weather front positions
- Wave Height display gives the navigator information on the likely sea-state ahead
- GRIB file manager allows loading and prioritisation of multiple GRIB files, allowing local high-resolution data to be used alongside wider area.
- Advanced GRIB options allow the advanced user to modify GRIB files based on observations.
- UGRIB service now provides wave height alongside wind, pressure and precipitation



Deckman provides the best optimum routing calculations available, as used to win all the classic ocean races.

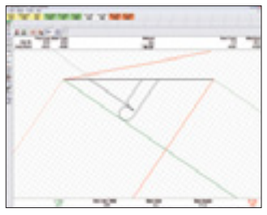
Routing
The Optimum Routing module now includes the option to avoid areas with waves larger than a user set height – increasing speed and reducing the risk of damage to the boat offshore.



Wave Height visualisation and routing

Enhanced Graphics
An enhanced graphics engine - including new layline options, including shaded limit layline sectors - helps the navigator visualise wind shift limits when approaching a mark of the course.

Deckman's wide set of features allows the navigator to optimise strategy and tactics whilst racing, and allow structured testing while tuning and training.



Start screen showing bias, layline and times

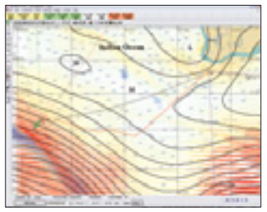
Inshore the Start screen, giving live updates of boat position, favoured end, gain/loss through line bias and time to line is the key to consistently good starts. Add in the ability to quickly generate windward/leeward courses, track wind-shifts and overlay tidally adjusted laylines on the chart whilst assessing strategic options on future legs and you have a clear advantage on the race course.

A competitor handicap tool allows you to keep track of competitors in handicap events with race position calculations based on user input of mark rounding times.

Offshore the navigator's focus is on the weather. Deckman provides the best optimum routing calculations available, as used to win all the classic ocean races.

Deckman allows the user to animate multiple GRIB weather files including wind, pressure, precipitation and wave height to visualise the weather forecast data. With UGRIB, OCENS Weathernet and Saildocs services integrated the navigator need never be more than a few clicks from the latest weather downloads.

Using the Optimum Routing module the navigator can calculate the fastest route, whilst also using wave avoidance to route around areas with dangerous wave heights. Reverse isochrones can be used, along with competitor tracking, to determine relative positions in the fleet.



Optimum routing

Other key features for offshore use include the use of multiple polar tables, one for performance targets, one for navigation – allowing the navigator to adjust one polar to be accurate for the actual performance of the yacht, while the crew strive to attain 100% performance based on their own polar.

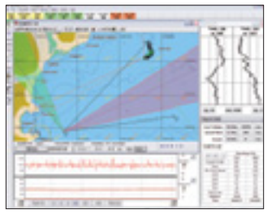
Performance testing is possible via a suite of integrated data logging and analysis tools to allow accurate assessment of the performance of the yacht and crew under different conditions, during or after a race.

Time Plots with analysis tools

Single boat testing, such as a comparison of headsails, is accomplished by running Speed Tests to allow statistical comparison of one sail versus another, with a polar table overlay.

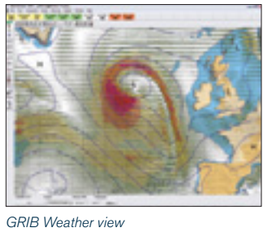
Multi boat campaigns utilise Deckman's Two-Boat module to share data via a telemetry link, allowing wind-shift compensated performance comparison between yachts.

In either case Deckman's integrated database logs all available data every second for 7 days, then at reduced frequency for a full year, allowing analysis of historical data against current performance.



All the tools required to win races

Advanced Options
B&G Custom Projects can supply various advanced add-ins for Deckman, including Alarm Manager, T&T Reporter, Laser Range Finder and 2-Boat Telemetry modules. The Deckman Add-In interface allows 3rd party developers to integrate new functionality.



GRIB Weather view

Item No	Description
BGH140001	Deckman v9 C-Map (USB)
BGH140025	Laser Range Finder Module
BGH140026	2-Boat Telemetry module
BGH140027	T&T Reporter Add-In
BGH140028	Alarms Manager Add-In
BGH140030	SHOM Tidal Database - All Areas
BGH140031	SHOM Tidal Database 3 - Baie de Seine
BGH140032	SHOM Tidal Database 5 - Bretagne Nord
BGH140033	SHOM Tidal Database 8 - Bretagne Sud
BGH140034	SHOM Tidal Database 7 - Gascogne
BGH140035	SHOM Tidal Database 6 - Iroise
BGH140036	SHOM Tidal Database 1 - La Manche
BGH140037	SHOM Tidal Database 4 - Normand Breton
BGH140038	SHOM Tidal Database 2 - Pas de Calais
BGH140039	SHOM Tidal Database 9 - Vendee Gironde
BGH140040	Winning Tides Database - Solent & Isle of Wight

Tim Wright

The popularity of Deckman with racing tacticians around the world stems from its remarkable versatility and the sophistication of its processing capabilities

213 MHU

213 MASTHEAD UNIT PART NO: 213-00-02

The 213 Type Masthead Unit has been proven over many years in applications from coastal cruising to Round the World record setting.

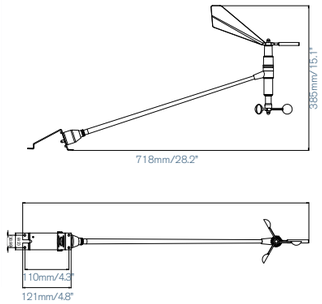
- High performance
- Rugged construction
- Fully field serviceable - easily replaced bearings etc

Part Numbers

213 Masthead Unit Pack	213-PK-12
213 Masthead Lightweight Unit Pack	213-PK-13

Technical specifications

Weight: 0.2kg/0.44lbs
Construction: Sealed elec housing, conductive plastic
Spar Length: 530mm/21"
Sealing: IP66



Vertical Masthead Units (VMHU)

VERTICAL MASTHEAD UNIT PACKS PART NO: BGH030001
BGH030002
BGH030003

The Vertical Masthead Unit utilises the proven sensing componentry from the standard 213 Masthead Unit combined with a vertical spar to elevate the wind sensor clear of the most disturbed air flow around the top of the sails, minimising errors and allowing more accurate calibration.

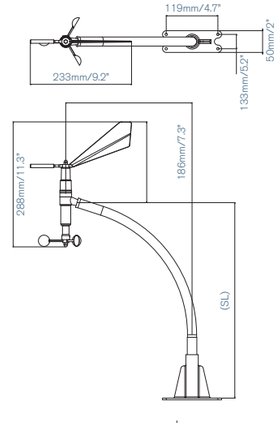
- Better wind information on which to base your race winning decisions inshore and offshore
- Improves steer-to-wind performance on Pilot due to reduced turbulence around sensor
- High-Modulus carbon spar for lightweight strength
- Design proven over several million offshore miles
- Ocean specification available for increased strength and durability in extreme applications

Part Numbers

Vertical Masthead Unit Packs consist of:
Required unit size plus:

Mast Cable 36m	BGH030006
Mast Base to Processor Cable 9m	135-0A-097
Junction Box 7 Terminal	288-00-001
VMHU Mounting Bracket	BGH033007

Fixing Kit for VMHU Mounting Bracket



Technical specifications

VMHU	BGH031001	BGH031002	BGH031002/S	BGH031003	BGH031003/S	BGH031010
Height (SL)	0.8m/31.5"	1.05m/41.3"	1.05m/41.3"	1.45m/57"	1.45m/57"	1.8m/71"
Weight	0.3kg/0.67	0.4kg/0.98lbs	0.5kg/1.1lbs	0.6kg/1.3lbs	0.6kg/1.3lbs	0.7kg/1.5lbs
Construction	Carbon Fibre	Carbon Fibre	Carbon Fibre	Carbon Fibre	Carbon Fibre	Carbon Fibre
Sealing	IP66	IP66	IP66	IP66	IP66	IP66
Laminate	Standard	Standard	Ocean	Standard	Ocean	Standard

Paddlewheel Speed Sensors

SPEED SENSOR PLASTIC
PART NO: SEN-SPD-HP

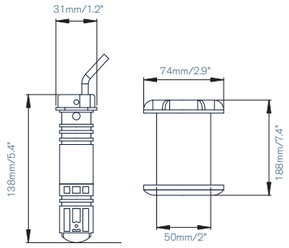
Integrated Sea Temperature sensor

Self-Closing valve to enable easy removal of sensor

Part Numbers

Paddlewheel sensor w/plastic flanged housing	SEN-SPD-HP
Paddlewheel sensor w/bronze flanged housing	SEN-SPD-HM
Paddlewheel sensor w/plastic flush housing	SEN-SPD-HPF
Paddlewheel sensor w/bronze flush housing	SEN-SPD-HMF

Technical specifications
Dimensions: 138mm/5.4" (total) / 88mm/3.5" housing
Weight: 0.9kg/2lbs (with cable)
Construction: Plastic housing / plastic sensor



SOV Speed

PADDLEWHEEL SENSOR PACK SOV PART NO: 202-PK-15
PACK CONSISTS OF:
202-00-064 PADDLEWHEEL SENSOR
155-00-025 SOV HOUSING

Shut-Off Valve (SOV) housings enable larger vessels to safely remove Speed and Depth sensors for cleaning and maintenance

Shut-Off Valve transducer housing allows safe removal of sensors on deep draft boats

Two stage withdrawal process ensures a dry operation

Technical specifications
Dimensions: 203mm/8" (total)
Weight: 1.8kg/4lbs
Construction: Bronze, plated steel & ABS

FOR SOV HOUSING SEE SOV DEPTH SECTION ON P51

MicroSonic Speed

MICROSONIC SPEED SENSOR PACK PART NO: 275-PK-10
PACK CONSISTS OF:
275-00-001 - SPEED & DEPTH XTL FIN
254-00-024 - MICROSONIC PROCESSOR

The MicroSonic system with XTL Fin is a 'no moving parts' sensor system, ideally suited to larger vessels

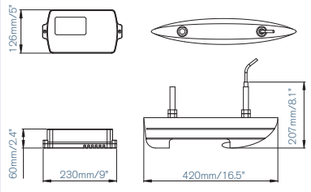
External fitting

Choice of Speed/Depth, Speed/Temp or speed only XTL Fin units

Stainless steel or bronze mounting stud options

Standard or extended mounting studs

Technical specifications
Dimensions: 230 x 130 x 60mm/9 x 5.1 x 2.4"
Weight: 0.8kg/1.8lbs
Construction: Moulded ABS



Technical specifications

XTL Fin	275-00-001	275-00-017	275-00-031	275-00-032	275-00-045	275-00-046	275-00-048
Type	Speed & Depth	Speed Only	Speed & Depth	Speed Only	Speed Only	Speed & Depth	Speed & Temp
Weight	2kg/4.4lbs	1.9kg/4.2lbs	2.2kg/4.9lbs	2.1kg/4.6lbs	1.9kg/4.2lbs	2kg/4.4lbs	2.1kg/4.6lbs
Construction	Reinforced Resin	Reinforced Resin	Reinforced Resin	Reinforced Resin	Reinforced Resin	Reinforced Resin	Reinforced Resin
Stud Mtl & Lgth	Bronze Standard	Bronze Standard	Bronze Extended	Bronze Extended	St/St Standard	St/St Standard	St/St Extended
Dimensions (mm)	420 x 207 x 73	420 x 207 x 73	420 x 357 x 73	420 x 357 x 73	420 x 207 x 73	420 x 207 x 73	420 x 357 x 73
Dimensions (inch)	16.5 x 8.2 x 2.9"	16.5 x 8.2 x 2.9"	16.5 x 14 x 2.9"	16.5 x 14 x 2.9"	16.5 x 8.2 x 2.9"	16.5 x 8.2 x 2.9"	16.5 x 14 x 2.9"

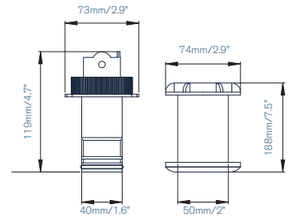
Depth

DEPTH SENSOR PLASTIC PART NO: SEN-DPT-HP

Technical specifications
Dimensions: 119mm/4.7" (total) / 88mm/3.5" housing
Weight: 0.9kg/2lbs (with cable)
Construction: Plastic housing / plastic sensor
Frequency: 170KHz

Part Numbers

Depth Sensor Plastic	SEN-DPT-HP
Depth Sensor Bronze	SEN-DPT-HM
Depth sensor w/plastic flush	SEN-DPT-HPF
Depth sensor w/bronze flush	SEN-DPTHMF



SOV Depth

DEPTH SENSOR PACK SOV PART NO: 155-00-025
PACK CONSISTS OF:
157-AA-00-38 DEPTH SENSOR
155-00-025 SOV HOUSING

DEPTH SENSOR SOV
PART NO: 157-AA-038

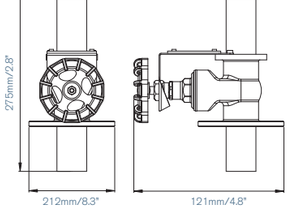
Shut-Off Valve (SOV) housings enable larger vessels to safely remove sensors for cleaning and maintenance

Shut-Off-Valve transducer housing allows safe removal of sensors on deep draft boats

Two stage withdrawal process ensures a dry operation

Technical specifications
SOV Housing
Dimensions: 275 x 42mm (dia)/10.8 x 1.7"
Weight: 3.7kg/8.2lbs
Construction: Bronze

Technical specifications
Dimensions: 203mm (total)/8"
Weight: 0.7kg/1.5lbs
Construction: Bronze, plated steel & ABS
Frequency: 170KHz



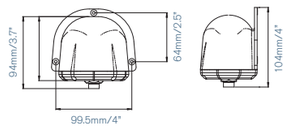
Halcyon 2000 Compass

HALCYON COMPASS SENSOR PART NO: 486-00-009

- Gimballed Fluxgate sensor for accuracy at all normal angles of Heel
- Simple, accurate AutoSwing calibration
- Connects directly to H3000 network

Technical specifications

Dimensions: 111 x 104 x 75mm/4.4 x 4.1 x 3"
Weight: 0.2kg/0.44lbs
Construction: Moulded ABS
Supply Voltage: 12V nominal (10 - 16V)
Power Consumption: 50mA



Gimballed Rate Compass

GIMBALLED RATE COMPASS PART NO: BGH330001

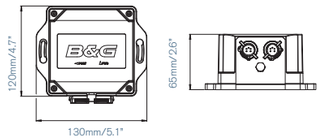
The new Gimballed Rate Compass (GRC) has been designed to bring the full advantage of single-axis rate-sensors to the sailing market.

Normally a single-axis gyro is fixed in the plane of the boat, this means that when the boat is heeled the rate-gyro is susceptible to errors when the boat pitches fore and aft - ironically this often makes the performance worse than a non-stabilised fluxgate! The GRC solves this problem by gimballing the rate-sensor, ensuring that it is always measuring the true Yaw Rate, independent of any heel and trim effects. The GRC also integrates high-accuracy Heel and Trim sensors. Lightweight single-axis gyro-stabilised compass.

- High accuracy Heel and Trim output
- Interfaces directly to H3000 ACP Pilots or to GFD displays

Technical specifications

Dimensions: 120 x 130 x 65mm/4.7 x 5.1 x 2.6"
Weight: 0.3kg/0.66lbs
Construction: Moulded ABS
Supply Voltage: 12V nominal (10-16V) (TBC)
Power Consumption: 100mA (TBC)



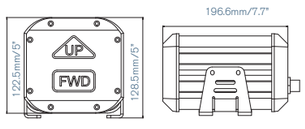
Halcyon Gyro Stabilised Compass

HALCYON GYRO STABILISED COMPASS PACK PART NO: BGH060001

- 3 Axis Rate-Gyro Stabilised heading sensor
- Highly accurate Heading, Heel and Trim data
- Improves core data such as Wind Angle and Direction - better data to make better decisions
- Improved Pilot performance with advanced functionality
- Simple, accurate AutoSwing calibration

Technical specifications

Dimensions: 197 x 128 x 128mm/7.8 x 5 x 5"
Weight: 1.6kg/3.5lbs
Construction: Aluminium
Supply Voltage: 12V nominal (10 - 16V)
Power Consumption: 150mA



Loadcells

LOADCELL AMPLIFIER* PART NO: BGH040028

LOADCELL PART NO: BGH040001

Loadcells enable consistent monitoring of loads on rigs through backstays, forestays etc. This information will be displayed on any B&G displays or logged on Deckman via H-Link™.

- Shear Pin type loadcell, suitable for many applications on-board including forestay, shroud and mainsheet loads
- Digital Amplifier unit provides analogue, FastNet and serial interfaces
- User configurable function name for easy identification of multiple loadcells
- Range of standard pin sizes available from 12.7mm (0.5") to 32mm (1.25")
- Custom variants available from B&G Custom Projects

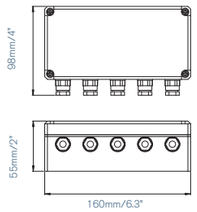
Part Numbers

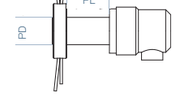
	PD (mm)	PL (mm)	SWL (Kg)
BGH041001	12.7	23	1.815
BGH041002	16	29	4.090
BGH041003	19	32	6.135
BGH041004	22	43	8.182
BGH041005	25	44	12.273
BGH041006	29	54	14.318
BGH041007	32	58	16.364
BGH040011	Custom specification		

Technical specifications

Dimensions: 160 x 98 x 55mm/6.3 x 3.9 x 2.2"
Weight: 0.4kg/0.8lbs
Construction: Moulded ABS
Supply Voltage: 12V nominal (10 - 16V)
Power Consumption: 90mA

*Included in loadcell packs.





Rudder

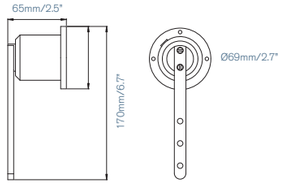
RUDDER REFERENCE UNIT (ROTARY) PART NO: RRF-ACP

A choice of Rudder Reference sensors are available to allow for a variety of configurations.

- Rotary Rudder Reference sensors can be used on all drive types

Technical specifications

Dimensions: 170 x 69 x 65mm/6.7 x 2.7 x 2.6"
Weight: 0.8kg/1.8lbs
Construction: Anodised aluminium & ABS

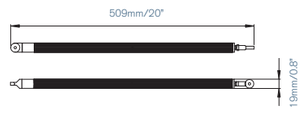


RUDDER REFERENCE UNIT (LINEAR) PART NO: SEN-RUD-LF2

Linear Rudder Reference sensor fits directly to Type 1 and Type 2 Hydraulic Rams for minimum installation time

Technical specifications

Dimensions: 509 x 19mm dia/20 x 0.8"
Mechanical Stroke: 329mm/13"
Weight: 0.4kg/0.88lbs
Construction: Anodised aluminium & ABS



Heel/Trim

CLINOMETER SENSOR PART NO: 690-00-004

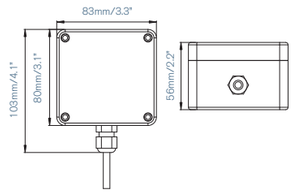
The Clinometer can be used for measurement of either Heel Angle or Trim Angle

Heel is a useful reference to determine when efficiency is being lost when overpowered

Heel and Trim values are used to correct wind data for the benefit of enhanced precision in True Wind, Apparent Wind and Pilot steering

Technical specifications

Dimensions: 83 x 103 x 56mm/3.3 x 4.1 x 2.2"
Weight: 0.4kg/0.88lbs with 2m of cable
Construction: Moulded ABS
Sealing: IP65



Barometric Pressure

BAROMETRIC PRESSURE SENSOR PART NO: 690-00-007

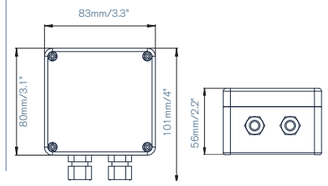
Accurate barometric pressure data allows the navigator to confirm the forecast weather and determine weather trends

Barometric pressure displayed in millibars

Pressure trend data displayed over user configurable timescale

Technical specifications

Dimensions: 83 x 101 x 56mm/3.3 x 4 x 2.2"
Weight: 0.3kg/0.66lbs with 2m of cable
Construction: Moulded ABS
Sealing: IP65



Sea Temperature

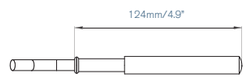
SEA TEMPERATURE SENSOR PART NO: 224-00-065

Provides accurate Sea Temperature data allowing identification of local currents, such as the Gulf Stream.

Available to display in Celsius or Fahrenheit

Technical specifications

Dimensions: 124 x 12mm dia./4.9 x 0.5"
Weight: 0.5kg/1.1lbs with 9m of cable
Construction: Fibreglass



Air Temperature

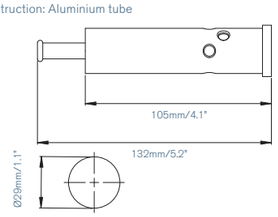
AIR TEMPERATURE SENSOR PART NO: 224-00-066

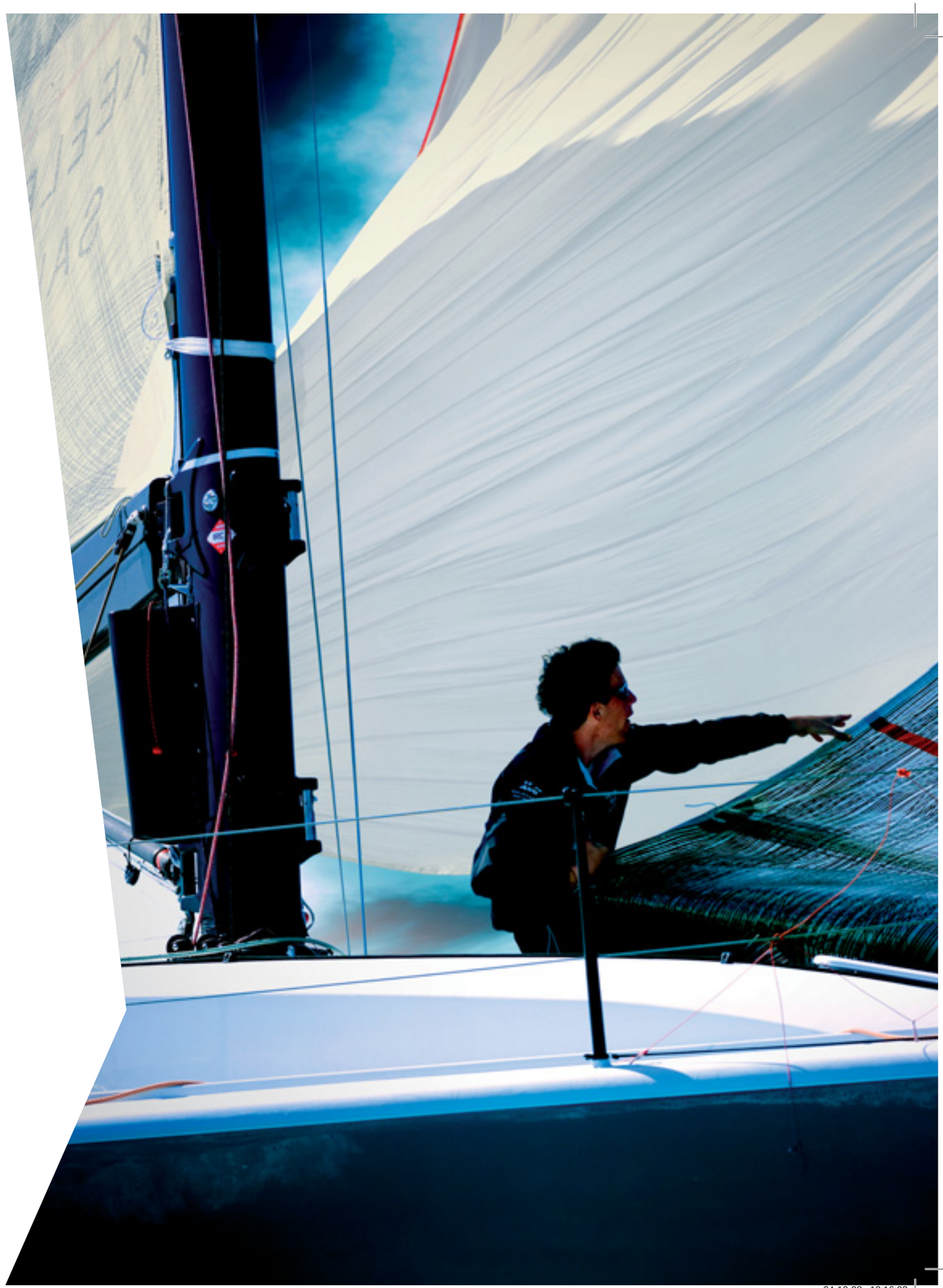
Accurate Air Temperature data allows confirmation of the forecast weather and warns of likely changes in the weather

Available to display in Celsius or Fahrenheit

Technical specifications

Dimensions: 132 x 29mm dia./5.2 x 1.14"
Weight: 0.6kg/1.3lbs with 9m of cable
Construction: Aluminium tube





Digital Displays Accessories Bezels & Sun Covers FOR DISPLAYS SEE PAGES 31-33

20/20 HV Coloured Bezels
BGH271017 - White
BGH271018 - Red
BGH271019 - Green
BGH271020 - Blue
BGH271021 - Yellow

H3000 Bezels
BGH291004 - GFD Bezel
BGH291024 - GFD WTP Bezel
BGH291034 - GPD Bezel
BGH291011 - 20/20 HV Bezel - Black

H3000 Sun Covers
BGH204004 - 20/20 HV Sun Cover
BGH214015 - GFD & GPD Sun Cover
BGH083005 - 40/40 HV Sun Cover

Remote Button

Remote Display Control for 10/10 HV, 20/20 HV, 30/30 HV and 40/40 HV Display

Dimensions: 52 x 29mm/2.1 x 1.1" diameter
Weight: 0.9kg/2lbs (with cable)
Construction: Moulded ABS

Remote Button
Part No: 302-00-007

20/20 HV Mast Bracket

3-WAY MAST BRACKET (20/20 HV)
PART NO: BGH220013

Lightweight, aluminium mast bracket for mounting 20/20s HV Display.

Dimensions: 380 x 185 x 210mm/15 x 7.2 x 8.3"
Weight: 1kg/2.2lbs
Construction: Anodised aluminium

Mast Brackets
BGH220013 - 3-Way Mast Bracket
BGH220014 - 4-Way Mast Bracket
BGH220015 - 5 Way Mast Bracket

Analogue Displays Accessories FOR ANALOGUE DISPLAYS SEE PAGE 34

SimNet Cable 90°/90° connectors 0.35m/13.8"
Part No: BGH301035

SimNet Cable 90°/straight connectors 3m
Part No: BGH301300

Simnet Power cable
Part No: BGH301001

Analogue Sun Cover
Part No: BGH234017

CPU Cables FOR PROCESSORS SEE PAGE 35

H3000 CPU USB Cable Pack
Part No: BGH250010

H3000 CPU RS232 Cable Pack
Part No: BGH251011

Fastnet Cable 10m
Part No: 135-0A-130
Other lengths available

Audible Alarm

An alarm sounder which gives audible warning of system alarms such as Shallow Water and Off Course. Installs to either the H3000 CPU or the Pilot ACP Processor.

Dimensions: 50 x 30mm/2 x 1.2"
Weight: 0.2kg/0.44lbs
Construction: Aluminium with moulded ABS

Audible Alarm Pack
Part No: 130-PK-10

Junction Box

Junction Box 7 Terminal
Part No: 288-00-001

Wind Sensor Accessories FOR SENSORS SEE PAGE 49

VMHU Bracket Top Mount
Part No: BGH030008

VMHU Bracket Face Mount
Part No: BGH030009

Wind Vane
Part No: 213-10-056

Wind Cups
Part No: 213-30-027

A choice of mounting brackets for the Vertical Masthead Units.

Mast top or mast face mounting options

Simple, rugged design for reliability with minimum weight

Suits all VMHUs except Ocean laminates and BGH031010

Type	Top Mount	Face Mount
Dimensions	136x50x104mm, 5.4 x 2 x 4.1"	80x111x120mm, 3.1 x 4.4 x 4.7"
Weight	0.2kg/0.44lbs	0.2kg/0.44lbs
Construction	Aluminium	Aluminium

NB: Contact us for mast cable information.

Gravity Switch

Gravity Switch
Part No: 190-00-146

Allows the use of twin Speed or Depth sensors

Automatic gravity swiching of sensor

Manual override to Port or Starboard

Dimensions: 109 x 109 x 61mm/4.3 x 4.3 x 2.4"
Weight: 0.4kg/0.9lbs
Construction: Moulded ABS
Sealing: IP65

Speed Sensor Accessories

Spare paddlewheel kit (post 1996)
Part No: SEN-SPRS-SPD

Spare paddlewheel kit (pre 1996) & SOV
Part No: 202-00-129

MOB Button

MOB Button Part No: 302-00-007

A simple easy Man Overboard button to give the best possible chance of finding the casualty should the worst happen.

One push triggers the MOB mode

Dead Reckoned Range and Bearing to the initial MOB position is displayed

Dimensions: 52 x 29mm/2.0 x 1.14" diameter
Weight: 0.9kg/2lbs (with cable)
Construction: Moulded ABS

Audible Alarm

Audible Alarm Pack Part No: 130-PK-10

An alarm sounder which gives additional warning of system alarms such as Shallow Water and Off Course. Installs to either the H3000 CPU or the Pilot ACP Processor

Dimensions: 50 x 30mm/1.9 x 1.2"
Weight: 0.2kg/0.44lbs
Construction: Aluminium with moulded ABS

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