

the finest instruments | autopilots



50 years of classic style, winning pedigree and worldwide service

h1000 solutions



B&G performance, exceptional value and ease of use
Chosen by cruisers and club racers, both sail and power

h1000 solutions

Cruisers and club racers specify h1000 systems because they are the easiest to use and offer B&G reliability and performance.



h1000 pilot

Autopilots are invaluable crew members, especially on long trips or when short handed. Integrate the h1000 pilot with an h1000 system or with other manufacturers' equipment via selectable NMEA.

h1000 Pilot Display

- view instrument data whilst the pilot is engaged, all on one display
- adjust course easily using the rotary dial knob

h1000 ACP (Advanced Control Processor)

- powerful 16 bit processor
- self learning, it adjusts to the prevailing conditions and your boat to steer efficiently

Pilot Drive Units

- powerful, responsive, fast
- a range of rams for cable / rod steering
- a range of pumps for hydraulic steering

Rudder feedback sensors

- Rotary Rudder Reference Unit (industry standard)
- Linear Feedback Sensor (occupies less space)

Pilot Remote Control

- total freedom



Hydraulic Linear Drive Unit



Hydraulic Pump Drive Unit

h1000 sensors

Accurate sensor information is vital to the performance of any system.

h1000 Speed and Depth sensors

- plastic / bronze
- flush / flanged housing
- easily retro-fitted

h1000 496 Wind Sensor

- strong, robust design
- accurate and responsive in all conditions

h1000 Fluxgate Compass

- fully gimballed
- oil filled
- highly accurate



Functions

Speed

- speed: kts, kph, mph
 - sea temperature: °C, °F
 - stored log / trip log
 - velocity made good*
 - elapsed timer, race timer
- * wind interface required

Depth

- depth: m, fthms, ft
- histogram of depth against time
- waterline or keel offset reading

Wind

- wind: kts, kph, mph, m/s
 - apparent wind speed / angle
 - true wind speed / angle and direction
 - velocity made good*
- * speed interface required

Nav

- heading
- tide set and rate
- off course indicator / alarm

Performance

- opposite tack heading

GPS / NMEA

- bearing, distance and time to waypoint
- course over ground
- speed over ground
- cross track error
- velocity made good
- time
- date
- latitude and longitude
- VMG to waypoint

Pilot

- rudder position indicator
- steer to compass heading
- steer to waypoint
- steer to apparent wind angle
- smart tack
- delayed tack
- steer to true wind angle

h1000 - easy to use, exceptional value, outstanding performance

h1000 interface boxes

Simply connect interface boxes, sensors and displays using plug and play technology. h1000 is quick and easy to install.

Fully interfaces with other manufacturers' equipment via NMEA

install up to 3 universal interface boxes to connect to GPS, SatCom, Radar, GMDSS etc
install speed / depth and wind interface boxes to connect to your sensors

Selectable NMEA allows each NMEA source to be named for identification. You can turn NMEA sentences on / off as required and increase the frequency to send data to radar systems with MARPA

FastNet2 cables run data and power through your boat. They are bright yellow for easy identification. The twist and lock bayonet connectors ensure water tight integrity and make installation easy

h1000 displays

Vital information, when and where you need it.
All you need is one display.



Multifunction Displays

- access any information from a single display
- view 1, 2, 3 or 4 pieces of data, numerically and graphically
- red backlighting provides night time clarity
- robust and waterproof to IP67
- mast mount using custom brackets



Analogue

- classic style
- excellent clarity
- quick to read
- easy to follow trends
- round or square bezel option

Analogue Options

- compass
- magnified wind angle
- wind angle
- wind speed

3FD

- easy to read
- space saving
- multiple information at a glance
- vital information where you want it; e.g. on your mast or on the flybridge

CND (Central Navigation Display)

A full function colour chart plotter, GPS and instrument repeater for nav stations.

- bright, 1/4 VGA colour screen
- store waypoints, tracks, routes and marks
- display instrument data from the Fastnet2 data network



Benefits

- **easy to use:** just one display and three "Up Down Enter" buttons
- **easy to install:** plug and play
- **clear displays:** dot matrix LCD
- **fully customisable:** you choose what you want to display
- **highly compatible:** integrate with other systems via selectable NMEA
- **multi-lingual:** English, Francais, Deutsch, Espanol, Italiano
- **only buy what you need:** just one display is all you need to control all your sensors and display all data

Pilot

- one display does it all
- view instrument data such as speed / depth / wind, whilst the pilot is engaged
- change course easily with the rotary dial knob
- self-learning, efficient and effortless

Sensors

- highly accurate
- easy to fit
- compatible
- robust
- low maintenance
- proven reliability

Instrument Displays

- easy to read
- excellent clarity
- highly reliable
- waterproof
- robust
- true wind information

Analogues

- outstanding clarity
- easy to read
- classic style

Chart Plotter

- use as a stand alone
- integrate with other systems
- easy to use

specifications

h1000 acp pilot processor

dimensions: 207 x 136 x 90mm (8.2 x 5.4 x 3.5")
weight: 3.0Kgs (6.6lbs)
case construction: zinc casing
power supply (electronics): 12v dc nominal (10-16v) via Fastnet2
power supply (drive): 12-24v dc nominal (12-32v)
power consumption (electronics): 100mA (approx)
maximum current (drive): 25A
operating temperature range: -10 to +55°C (+14 to +130°F)
storage temperature range: -25 to +70°C (-13 to +158°F)
humidity range: up to 95% rh
compass safe distance: 100mm (3.9")

pilot drive unit - rams Type 0, 1, 2

type: electrically driven hydraulic ram with reversible DC pump
suitability: wheel steered yachts and power boats
connection: to rudder stock
basic dimensions: type 0: 101 x 728mm (4.0 x 28.6") / type 1: 101 x 728mm (4.0 x 28.6") / type 2: 125 x 728mm (4.9 x 28.6")
weight: type 0: 5.8Kgs (12.7lbs) / type 1: 7.5Kgs (16.5lbs) / type 2: 7.5Kgs (16.5lbs)
supply voltage: type 0: 12v dc / type 1: 12v dc / type 2: 12 or 24v dc (specify at time of order)
peak thrust: type 0: 300Kgs (660lbs) force / type 1: 425Kgs (935lbs) force / type 2: 680Kgs (1496lbs) force
peak current: type 0: 20A @ 12v / type 1: 20A @ 12v / type 2: 25A @ 12v
maximum stroke: type 0: 203mm (8") / type 1: 254mm (10") / type 2: 254mm (10")
coupling radius: (typical): type 0: 178mm (7.0") / type 1: 214mm (8.4") / type 2: 214mm (8.4")
max torque: type 0: 545Nm (4800lb.ins) / type 1: 892Nm (7867lb.ins) / type 2: 1427Nm (12574lb.in)
power consumption: 2-4A (typical)

pilot drive unit - rams Type 3

type: electrically driven hydraulic ram with reversible DC pump
suitability: wheel steered yachts and power boats
connection: to rudder stock
basic dimensions: pump 82 x 252mm (3.2 x 9.9") / ram 101 x 537mm (4.0 x 21.2")
weight: 10.3Kgs (22.7lbs)
supply voltage: 24v dc
peak thrust: 1062Kgs (2342lbs) force
peak current: 17A @ 24v dc
maximum stroke: 305mm (12.0")
coupling radius: 257mm (10.1") for +/-35deg rudder angle
max torque: 2688Nm (23780 lb.in)
power consumption: 2-4A (typical)

pilot drive unit - rams Type 4

type: electrically driven constantly running pump with twin hydraulic rams
suitability: wheel steered yachts and power boats
connection: to rudder stock
weight: 25Kgs (55lbs) approx.
supply voltage: 24v dc nominal
peak thrust: 2000Kgs (4400lbs)
peak current: 30A @ 24v dc
maximum stroke: 305mm (12.0")
coupling radius: 257mm (10.1") for +/-35° rudder angle
max torque: 5232Nm (46140lbs.in)
power consumption: 8-12A (typical)

pilot drive unit - pumps Type 1, 2, 3

type: electrically driven reversing hydraulic pump
suitability: hydraulically steered yachts and power boats
connection: to existing hydraulic steering system
supply voltage: type 1: 12v dc / type 2: 12v dc / type 3: 24v dc
weight: type 1: 3Kgs (6.6lbs) / type 2: 4Kgs (8.8lbs) / type 3: 4Kgs (8.8lbs)
cylinder capacity (suitability): type 1: 100-300cc (6.1-18.3 cu in) / type 2: 275-550cc (16.8-33.6 cu in) / type 3: 525-750cc (32.0-45.8 cu in)

pilot remote control

construction: waterproof ABS moulded casing
cable: 10m (33ft) straight section plus coiled length extending 1-3m (3-9ft) approx.

h1000 speed/depth, wind and universal interface boxes

dimensions: 132 x 68 x 37mm
case construction: moulded abs, ultrasonically welded
power supply: 12v dc nominal (10 to 16v) via Fastnet2
power consumption (typical): speed/depth: <200mA / wind: <200mA / universal: <50mA
temperature range: operating: -10 to +55°C (+14 to +130°F) / storage: -25 to +70°C (-13 to +158°F)
humidity range: up to 95% rh
interfacing (Universal Interface only):
remote alarm output
NMEA 0183 v2.3 (1 output, 1 input)
NMEA input sentences (selectable):
apb, dbt, dpt, gga, gll, gsa, gsv, hdg, mwd, mvw, vhw, rmb, rmc, vtg, zda, ztg
NMEA output sentences (selectable):
dpt, hdg, hdm, hdt, mtw, mwd, mvw, rmb, rmc, vhw, vlw

speed sensor (includes built-in sea temperature sensor)

type: paddlewheel
dimensions: 94mm (housing), 139mm (total), dia: 75mm (flange), 51mm (tube)
construction: housing: plastic or bronze / sensor: plastic

depth sensor

frequency: optional 170KHz or 235KHz
dimensions: 94mm (housing), 129mm (total), dia: 75mm (flange), 51mm (tube)
construction: housing: plastic or bronze / sensor: plastic

496 masthead unit

construction: aluminium spar assembly, conductive plastic electronic housing for electrostatic discharge protection
dimensions: height from mount: 310mm (12.2") excluding vane/cups / forward extension 270mm (10.6") excluding vane/cups, mounting plate: dia 60mm (2.4")

fluxgate compass sensor

case construction: moulded abs
dimensions: 95 x 110 x 75mm (3.7 x 4.3 x 2.9")
temperature range: operating: -10 to +55°C (+14 to +130°F) / storage: -25 to +70°C (-13 to +158°F)

h1000 displays (all variants)

power supply: 12v dc nominal (10 to 16v) via Fastnet2
power consumption: 0.45w to 0.85w (dependent on lighting level selected)
temperature range: operating: -10 to +55°C (+14 to +130°F) / storage: -25 to +70°C (-13 to +158°F)
humidity range: up to 95% rh
compass safe distance: 100mm (3.9")
lighting: red backlighting on display and button legends. 3 variable intensities

h1000 displays (dsp)

construction: moulded acrylic, ultrasonically welded
sealing: IP67
display technology: fstn dot-matrix transfective LCD
display resolution: 120 x 80 pixels
dimensions: visible: 110 x 110 x 18mm (4.3 x 4.3 x 0.7"), total: 110 x 110 x 40mm (4.3 x 4.3 x 1.6")

h1000 analogue displays (awa, aws, amw, acs)

construction: moulded acrylic, ultrasonically welded, separate bezel.
sealing: IP67
display technology: analogue
dimensions: visible: 110 x 110 x 18mm (4.3 x 4.3 x 0.7"), total: 110 x 110 x 40mm (4.3 x 4.3 x 1.6")

h1000 pilot displays (pdu)

construction: moulded acrylic, ultrasonically welded.
sealing: IP67
display technology: fstn dot-matrix transfective LCD
display resolution: 120 x 80 pixels
dimensions: visible: 165 x 110 x 18mm (6.5 x 4.3 x 0.7"), total: 165 x 110 x 40mm (6.5 x 4.3 x 1.6")

h1000 3FD displays

construction: moulded acrylic front case, alloy rear case, detachable bezel.
sealing: IP67
display technology: custom transfective LCD
display resolution: multi-segment
dimensions: visible: 165 x 110 x 18mm (6.5 x 4.3 x 0.7"), total: 165 x 110 x 40mm (6.5 x 4.3 x 1.6")

mast mounting bracket (MB1, MB2)

construction: lightweight toughened aluminium with a resilient polyester coating
included accessories: 5 metre Fastnet2 Right-Angle/Straight cable, cable ties, protective rear case cover(s)

central navigation display (CND)

dimensions: 220 x 155 x 73mm (8.7 x 6.1 x 2.9")
viewable area: 142mm (5.6")
weight: 0.95Kgs (2.1lbs)
case construction: moulded abs with acrylic window
power supply: 12v dc nominal (10 to 16v)
power consumption: 6w nominal
operating temperature range: 0 to +55°C (+32 to +130°F)
storage temperature range: -20 to +60°C (-4 to +140°F)
humidity range: up to 95% rh
compass safe distance: 0.3m (12")
lighting: backlighting on display and button legends. 3 intensities
display technology: fstn dot-matrix transfective colour TFT
display resolution: qvga (320 x 240 pixel)
cartography supported: C-Map NT/NT+ (2 cartridge slots, hot swappable)
interfaces supported: B&G Fastnet2, NMEA 0183 v2.3 (1 output, 1 input [2 inputs when used with no Fastnet2 connection])
NMEA input sentences:
dbt, dpt, hdg, hdm, hdt, gga, gll, gsa, gsv, mvw, rmc, vhw, vtg, vwr, vwt, wpl
NMEA output sentences:
apb, bwc, bwr, gga, gll, rmb, rmc, vtg, xte, wcv, zoa, ztg

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