

## Regulatory statements

### Europe

Navico declares under our sole responsibility that the product conforms with the requirements of:

- CE under RED directive 2014/53/EU

The relevant Declaration of Conformity is available on the following website: [www.bandg.com](http://www.bandg.com)

### United States of America

Navico declares under our sole responsibility that the product conforms with the requirements of:

- Part 15 of the FCC Rules.  
Operation is subject to the following two conditions:  
(1) this device may not cause harmful interference, and  
(2) this device must accept any interference received, including interference that may cause undesired operation.

→ **Note:** The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

**Warning:** Used when it is necessary to warn personnel that they should proceed carefully to prevent risk of injury and/or damage to equipment/ personnel.

→ **Note:** This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient or relocate the receiving antenna
- increase the separation between the equipment and receiver
- connect the equipment into an outlet on a circuit different from that of the receiver
- consult the dealer or an experienced technician for help.

### Canada

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:  
(1) this device may not cause interference, and  
(2) this device must accept any interference, including interference that may cause undesired operation of the device.

*Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :*

- (1) l'appareil ne doit pas produire de brouillage, et  
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Industry Canada Statement: Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

*Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.*

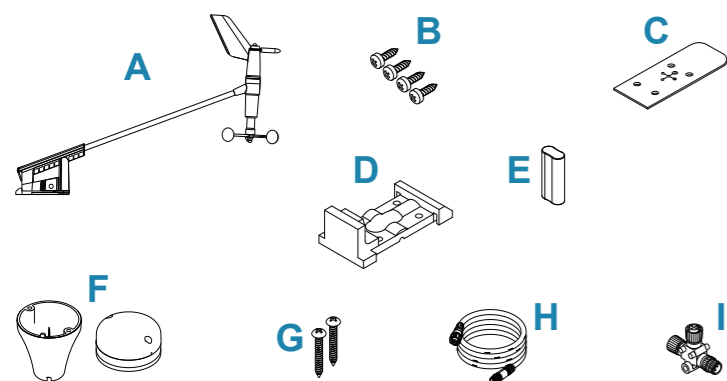
### Australia and New Zealand

Navico declares under our sole responsibility that the product conforms with the requirements of:

- level 2 devices of the Radiocommunications (Electromagnetic Compatibility) standard 2017
- radiocommunications (Short Range Devices) Standards 2014

The relevant Declaration of Conformity is available on the following website: [www.bandg.com](http://www.bandg.com)

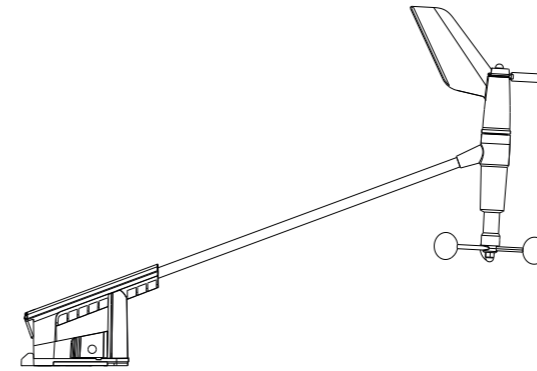
## Parts included



	Wind pack	Sensor only
A. WS320 wind sensor	x	x
B. Screws No.10 x 5/8 (4x)	x	x
C. Gasket	x	x
D. Masthead bracket	x	x
E. Battery	x	x
F. Bluetooth base station with mounting accessories	x	
G. Screw M4 30 mm SS316 (2x)	x	
H. NMEA 2000 drop cable	x	
I. Micro-C T-Joiner	x	

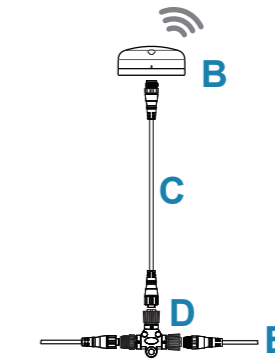
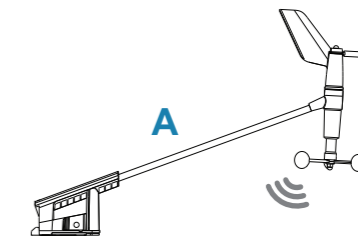
# B&G

## WS320 WIND SENSOR INSTALLATION GUIDE



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## Wiring



- A. WS320 wind sensor
- B. Bluetooth station
- C. NMEA 2000 drop cable
- D. Micro-C T-Joiner
- E. Micro-C backbone

## Technical specifications

WS320	
Weight	0.32 kg (0.7 lbs)
Waterproof	IPx6 and IPx7
Temperature	-25°C to 65°C
Power usage	Solar powered
Wind speed resolution	0.05 m/sec (0.1 Knots)
Wind speed accuracy	+/- 0.1 m/sec (0.2 kt) from 1 - 40 m/sec (2 - 80 kt)
Wind speed range	0.25 - 50 m/sec (0.5 - 97 knots)
Wind angle resolution	0.1°
Wind angle accuracy	+/- 0.5°
Wireless connectivity	<=30m (98 ft)
Data output	Apparent wind speed and angle at 5 Hz

Base station	
Dimensions	Ø 90 mm (3.54") H 38 mm (1.50")
Power supply and interface	9-16 V DC via Micro-C network
Power consumption	1.2 W (<100 mA at 12 V DC)
Network Load	2 LEN (100 mA)
Temperature	Operating: -25°C to +60°C, Storage: -40°C to +85°C
Humidity	66°C, 95% RH, 18 hrs
Environmental protection	IPx7
In-rush current	2 A for 20 ms (at internal 5 V)
Connection cable:	Micro-C drop cable 1.8 m (6 ft)

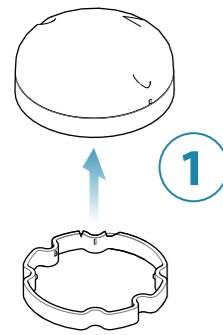
## Storage

During winter storage we recommend that the mast head unit (MHU) is removed from the mast and the battery removed to prevent the battery from being drained.

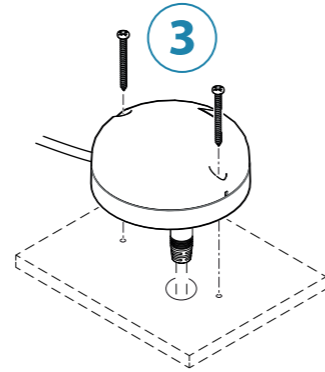
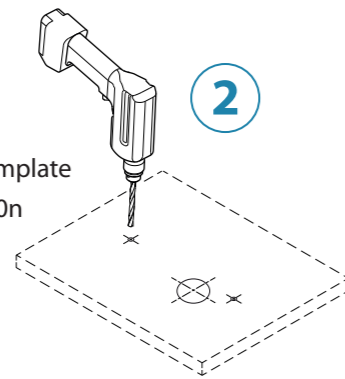
When required again, the pairing process will need to be followed to pair the MHU and base station.

## Bluetooth base station mounting

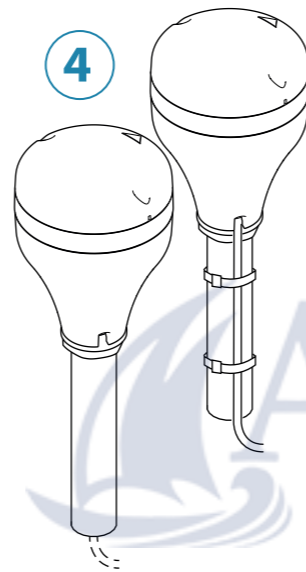
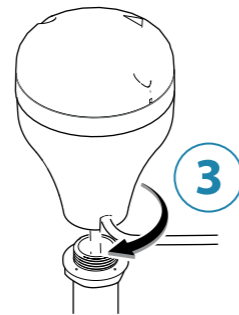
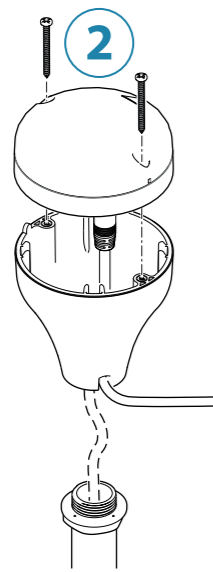
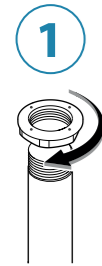
### Surface mount



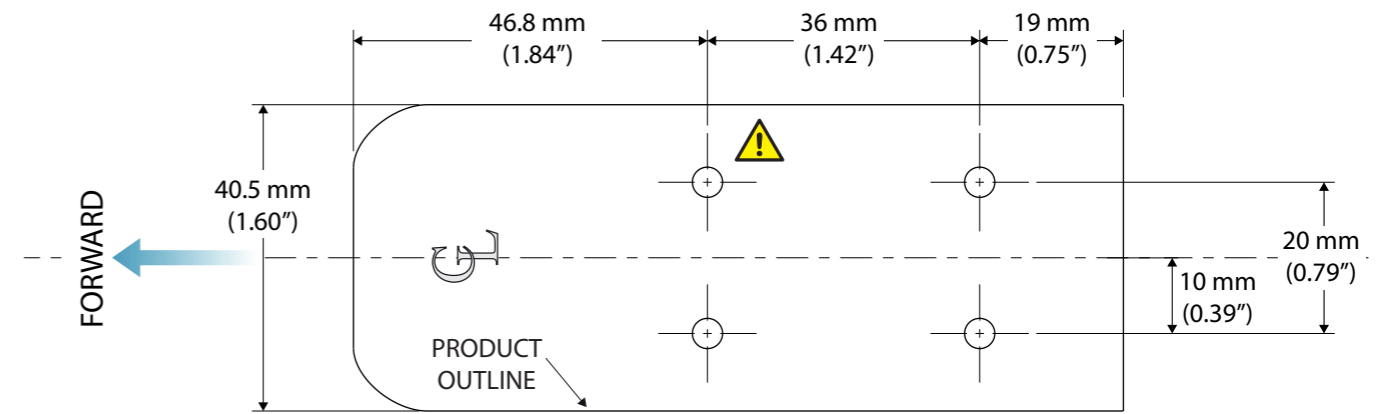
Refer to  
Mounting template  
988-10452-00n



### Pole mount



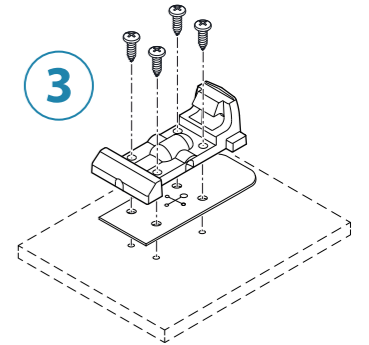
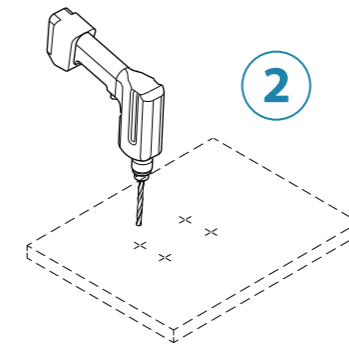
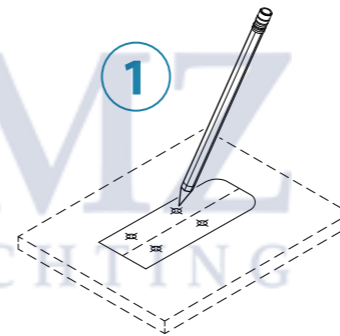
## Mounting template



Recommended pilot holes:

Material	10# screw
Hard materials e.g. fiberglass, aluminum, carbon fibre	Ø 4.1-4.7 mm (3/16")

## Bracket installation



## Pairing

→ **Note:** Pairing should be carried out prior to installing the wind sensor on the mast.

### Prior to pairing

1. Connect the Bluetooth base station to the NMEA 2000 network
2. Have the battery for the wireless wind sensor on-hand for later installation
3. The wind sensor must be less than or equal to 0.5 meters (1.6 ft) from the Bluetooth base station for pairing to succeed

### Ready to pair

4. Power on the NMEA 2000 network
5. Insert and connect the battery to the wind sensor
6. The Bluetooth base station and wind sensor will now attempt to pair. This can take up to 5 minutes to complete

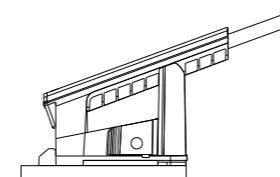
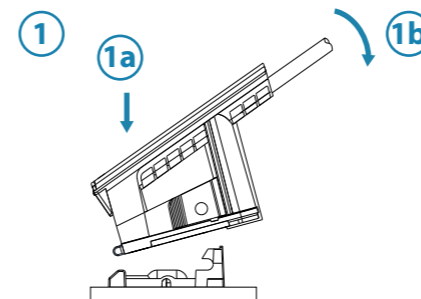
### Successful pairing

7. On an MFD or instrument display, go to the Device List in the Network settings dialog
8. Select the WS320 device to display the device information dialog
9. Select the Data option to display information
10. Check that the apparent wind angle and speed are correctly updating

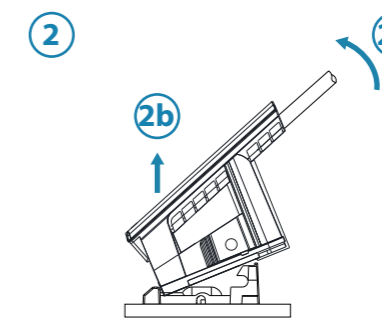
The wind sensor is now ready to be installed at the top of the mast. Wind angle calibration can be done later from the calibration option in the network settings dialog.

→ **Note:** If the battery is disconnected, the sensor will lose its pairing with the base station and the above procedure must be repeated.

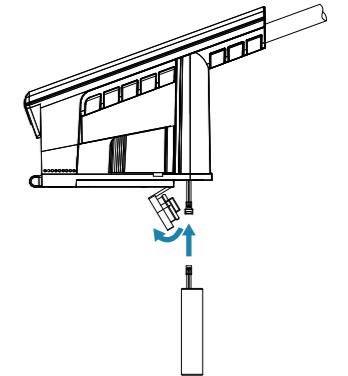
## Attach the wind sensor



## Remove the wind sensor



## Insert the battery



**Warning:** Risk of explosion if the battery is replaced by incorrect type!