

MARINE DIVISION
17 Bis Place des Reflets - La Défense 2
92400 Courbevoie - France
Tel. 33 1 42 91 52 91
Fax 33 1 42 91 28 94



**BUREAU
VERITAS**

Published on <http://www.veristar.com>

Certificate N°:
13454/A0 EC
File Number : NAV 11/1356/1
MED item number : A.1/4.2
This Certificate is not valid where presented without the full attached
Schedule composed of 10 sections.

EUROPEAN COUNCIL DIRECTIVE 96/98 EC on MARINE EQUIPMENT (M.E.D.)

**EC TYPE EXAMINATION CERTIFICATE
(CERTIFICATE OF TYPE APPROVAL)**

This is to certify that Bureau Veritas, acting within the scope of its notification, did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with the International Instruments and testing standards under the requirements of Council Directive 96/98/EC, as amended.

TRANSMITTING MAGNETIC HEADING DEVICE (TMHD)

Static compass Model/Type: PVBEN 466

MANUFACTURED BY:

I2E DIFFUSION
Aix-en-Provence - FRANCE

REGULATIONS & STANDARDS in accordance with Council Directive 96/98/EC, as amended by Commission Directive 2002/75/EC :
SOLAS 74, as amended, Regulations V19.2.3.5 - IMO Resolutions 97(73)13.2.5 (2000 HSC code), MSC 86(70) annex 2,
A.694(17) - IEC 60945(1996), IEC 61162 - ISO 11606 (2000).

Expiry date: 10/02/2009

Local Office : BUREAU VERITAS MARSEILLES

At Paris la Défense, on : 10/02/2004

E. DANION

Responsable Marine
Secteur Sud



J. Benoit

J. BENOIT

Marine Equipment Certification Manager
BUREAU VERITAS, EC Notified Body N°0062



The Manufacturer is allowed to affix the MED Conformity Mark to approved equipment and issue a Declaration of Conformity, only when the production/product assessment module referred to in the Directive 96/98/EC, is fully complied with.

This Certificate remains valid until its date of expiry, unless cancelled or revoked, providing the conditions in the attached Schedule are complied with and the equipment remains satisfactory in service. This Certificate does not apply to equipment which has been varied or modified from the specimen tested. Should the specified standards be amended during the validity of this Certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended standards apply.

This Certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine Division. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgment, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

Issued under the authority of the French Maritime Administration.



**BUREAU
VERITAS**
MARINE DIVISION

File Number : NAV 11/1356/I

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

**Static compass Model/Type:
PVBEN 466**

System comprising:

1.1 - A measuring unit made of aluminium alloy, cylinder-shaped (ref. PVBEN464). It includes:

- 1 set of moving equipment which supports the flux gate sensor mounted on a gimbal universal joint (ref. PVBEN135).
- 1 processing card (ref. SQBEN081).

Dimensions: diameter 160 mm, height 140 mm.

Power supply: 24V to 30 VDC supplied by the display unit.

- Software (ref. 2050).

1.2 - An industrially soldered display unit (ref. PVBEN463) which includes:

- 1 cabinet unit (ref. PVBEN465).
- 1 battery unit, 24V 700mAh (ref. PVBEN347).
- 1 CPU repeater card (ref. SQBEN246).

Dimensions: 144 mm wide, 144 mm high, depth of 164 mm.

Power supply: 115-230V/50-60Hz.

The display unit has a software which determinates according the reception of data from measuring unit or NMEA sentence HDG, HDT the status of the display unit:

- detection of PBEN, 05 sentence from measuring unit: main display unit function,
- detection of HCHDG or HCHDT sentence: secondary display unit function.
- Software (ref. 2049).

1.3 - A data-entry keyboard (PVBEN211) which includes:

- 1 data-entry keyboard (ref. PERJTM2700).
- 1 connection cable.

Dimensions: 180 mm long, 104 mm wide, depth of 28 mm.

Power: supplied by the display unit.

2. DESIGN DRAWINGS and/or SPECIFICATIONS

2.1 - In accordance with the manufacturer's drawings and documents,
at latest and at any subsequent issue endorsed by Bureau Veritas:

2.1.1 - User's Technical Manual ref. 03MU004 with addendum ref. 04RT020 dated 06/02/2004.

2.1.2 - Supporting file containing following documents ref.: 99RT011, 99RT008, N° 2849, 99MU005.

Nb: This above documents list can be revised to show changes to drawing issue status.

Before changes can be implemented, new drawings must be provided to Bureau Veritas for review and acceptance.

The new drawing list will be stamped and endorsed accordingly.

2.2 - Manufacturing documentation: to be approved by Bureau Veritas e.g. Manufacturing, test and inspection plan.

2.3 - Manual(s) for installation, use and maintenance:

- to be stamped by a Society's Surveyor,
- to be available in one of the IMO languages, in addition to the ship's flag language.

3. TYPE TEST REPORTS / LABORATORY RECOGNITION STATUS

Test reports N°s: DCN performance test report ref. : NM51 ver. B dated 22/Oct./2003
 EMITECH test report ref. RG-03-91144-A-DM/IM dated 21/Oct./2003
 EMITECH test report ref. RG-03-91070-A-RG/CD dated 23/Aug./2003
 LNE Test report ref. D050304 - doc.CLE/1 dated 22/May/2003
 LNE Test report ref. D050304 - doc.CLE/2 dated 21/May/2003
 LNE Test report ref. D080127 - doc.CQPE/1 dated 02/Sep./2003
 I2E Test report ref. 04RT019 dated 04/Feb./2004.

4. MATERIALS or COMPONENTS REQUIRED TO BE TYPE APPROVED or TYPE TESTED

Nil.

5. OTHER MATERIALS and/or COMPONENTS

Nil.

6. APPLICATION / LIMITATION OF USE

6.1 - As per requirements of regulations stated on the front page of this certificate.


6.2 - According to Manufacturer's specifications.

6.3 - The repeaters are not intended for use on open deck and to take bearing.

7. PRODUCTION SURVEY REQUIREMENTS

7.1 - Arrangements shall be made for a Society's Surveyor to carry out, on a periodic basis, visits of the manufacturer's premises and product audits.

7.2 - The production conformity assessment Module shall be "D" Production Quality Assurance.

7.3 - Each manufactured equipment is to bear the  mark and the Notified Body number undertaking surveillance module (for BV: 0062).

7.4 - Each Static Compass shall be delivered with a Declaration of Conformity, which shall be signed by the manufacturer.

7.5 - Each equipment is to be supplied with manual (s) for installation, use and maintenance (cf. 2.3 above).

8. ON BOARD INSTALLATION & MAINTENANCE REQUIREMENTS

8.1 - According to Manufacturer's specifications.

8.2 - Each Static Compass is to be properly compensated and its table or curve of residual deviations is to be available on board, in the vicinity of the compass, at all time.

9. MARKING FOR IDENTIFICATION

- 9.1 - Maker's name or trade mark,
- Serial number of the units,
 - Equipment type number or model identification under which it was type-tested,
 - Minimum safe distance at which the equipment may be mounted from a standard and a steering magnetic compass,
 - ⚙ mark and the Notified Body number undertaking surveillance module (for BV: 0062),
 - Last two digits of construction year mark affixed.
- 9.2 - Markings as detailed in article 11 of the Directive, must not be applied until the relevant module 'D' certificate has been issued to the manufacturing works by the notified body.

10. OTHERS

This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the Static Compass at any time, and that **I2E DIFFUSION, Aix-en-Provence - FRANCE**, will accept the responsibility for informing shipbuilders or their sub-contractors of the proper methods of use and general maintenance of the Static Compass and the conditions of this approval.

***** Last page (End of Document) *****

BUREAU VERITAS MARSEILLES

