



Marine & Offshore  
Division

Certificate number: 09578/D0 EC

File number: LSA 22689/03

Annex A1 Item number: A.1/1.36

*This certificate is not valid when presented without the full  
attached schedule composed of 7 sections*

www.veristar.com

Notified Body 0062 - MARINE EQUIPMENT DIRECTIVE 96/98/EC

## EC TYPE EXAMINATION CERTIFICATE

as per Module B of European Union Council Directive 96/98/EC on marine equipment  
as amended by Commission Directive 2013/52/EU

*This certificate is issued to*

**NANNI INDUSTRIES SAS**

LA TESTE - FRANCE

*for the type of product*

**LIFEBOAT/RESCUE BOAT PROPULSION ENGINE**

Inboard NANNI diesel engines, type N4.50

### Requirements:

SOLAS 74 Convention as amended, Regulations III/4, III/34, X/3,  
IMO Res. MSC.48(66) amended by MSC.207(81), MSC.218(82), MSC.272(85), MSC.293(87) and MSC.320(89) IV, V  
IMO Res. MSC.81(70) amended by MSC.200(80), MSC.226(82), MSC.274(85), MSC.295(87), MSC.321(89) and MSC.323(89)  
IMO MSC/Circ.980

*This certificate is issued on behalf of the French Maritime Authorities to attest that BUREAU VERITAS did undertake the relevant  
type-examination procedures for the product identified above which was found to comply with the relevant requirements of the Council Directive  
96/98/EC of 20 December 1996 as amended.*

*This certificate is a renewal of certificate N° 09578/C0 EC expiring on 07/06/2015*


**This certificate will expire on: 07 Jun 2020**

**For BUREAU VERITAS Notified Body 0062,**

At BV BORDEAUX, on 03 Jun 2015,

Jacky BOUQUET



**This certificate does not allow to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark ) to the products corresponding to this type. To this end, the production-control phase module (D, E or F) of Annex B of the Directive is to be complied with and controlled by a written inspection agreement with a notified body.**

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or 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 regulations or standards apply. BUREAU VERITAS is designated by the French Maritime Authority as a "notified body" under the terms of the French Regulations Division 140 Chapter 140-2. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. 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 judgement, 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.

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION :

Inboard diesel engines, type NANNI DIESEL **N4.50**

#### **Main characteristics:**

- 4 cylinders in Line Engine base: KUBOTA, Japan (Bore x Stroke: 87 mm x 92.4 mm)
- Four stroke
- Sea Water cooled (equipped with a closed fresh water cooling system)
- Specific fuel consumption: 232 g/kWh at 2800 rpm full load
- Compression ratio: 23 : 1
- Dry weight with reverse gear: 232 kg
- Crank shaft power / rotating speed: 36.8 kW at 2800 rpm

### 2. DOCUMENTS AND DRAWINGS :

#### 2.1 - Drawings:

- N° N4050E--- General arrangement with heat exchanger details (with reverse gear ZF 12M)
- N° E401 601 T04 Equipment for keel cooler
- N° 16641-23111 Crankshaft
- N° E400801H05 Non-return device for lubricating oil
- N° K674SLS Basic electrical wiring
- N° 970 310 220 Gravity engine stop device
- N° E401 001 C01 Stop solenoid

### 3. TEST REPORTS :

3.1 - Model 4220 HE, serial number 115 615, type tested in accordance with IMO Resolution A.689(17), Part 1, 6.11.2 to 6.11.6 and 6.15, by the Manufacturer under the supervision of a representative of the French Maritime Authorities (MMF), as per test report N° SO4, dated 16/01/96 ; (4220H is a previous denomination of Model N4.50).

3.2 - Model 4150 H, type tested for new type of Non-return device for lubricating oil in accordance with IMO Resolution MSC 81(70), 6.14.6 to 6.14.8, as per test report N° 3048BDX06, dated 06/09/2006 ; (4150H is a previous denomination of Model N4.38 approved by Certificate N° 09577/B1, LSA 22689/02).

### 4. APPLICATION / LIMITATION :

4.1 - Other materials and/or components:

- **Reverse gear** ZF HURTH type:
  - ZF 12M ratio: 2.14/1 ; 2.63/1
  - ZF 15M ratio: 1.56/1 ; 1.88/1 ; 2.63/1
  - ZF 25M ratio: 1.54/1 ; 1.88/1 ; 2.74/1

TECHNODRIVE type:

- TMC60 ratio: 1.52/1 ; 2/1
- TMC260 ratio: 1.54/1 ; 2/1 ; 2.47/1 ; 2.88/1
- TM345 ratio: 1.54/1 ; 2/1 ; 2.47/1 ; 2.88/1

KANZAKI type:

- TTMC35P ratio: 2.33/1 ; 2.63/1

- **Injection pump**  
Nippon Denso (type Bosch)

- **Battery**  
Type recommended as minimum: 12V / 110 Ah

- **Cold starting device**  
electrically operated glow plugs (5.5V, 650 W each) fitted one per cylinder.

- **Electric stop under inverting condition**  
Gravity type.

#### 4.2 - Application / Limitation of use:

- Inboard diesel engines intended for propulsion of Life-Saving Appliances as defined by LSA Code (IMO Resolution MSC.48(66)):
  - section 4.4 (lifeboat)
  - section 4.5 (partially enclosed lifeboats)
  - section 4.6 (totally enclosed lifeboats)
  - section 4.7 Free-fall Lifeboats
  - section 5.1 (Rescue boats)
 and for fast rescue boats (SOLAS 74/96 Convention Reg. III/26.3).
- These engines are suitable for use when cold starting at -15°C is required with disposition of § 4.1 above.

#### 4.3 - On board installation & Maintenance requirements:

- The engines shall be equipped with the parts listed in the manufacturer's Parts Catalog exclusively.
- The engines shall be delivered with the relevant documentation for their maintenance and their operation.

### **5. PRODUCTION SURVEY REQUIREMENTS:**

5.1 - This certificate alone does not allow the applicant to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark) to the products corresponding to this type. To this end, the production-control phase module D "Production Quality Assurance" or E "Product Quality Assurance" or F "Product Verification" of Annex B of the Directive is to be complied with and controlled by a written inspection agreement with a Notified Body.

5.2 - For information concerning the production phase modules, **NANNI INDUSTRIES SAS** has declared the following manufacturing place:

**NANNI INDUSTRIES SAS**  
**Avenue Mariotte-Zone industrielle**  
**BP 107**  
**F-33260 LA TESTE**  
**FRANCE**

5.3 - The engine must be tested with all its final accessories.

5.4 - Each equipment or batch of equipment is to be supplied with its Manual for installation, use and maintenance.

### **6. MARKING OF PRODUCT :**

- Type and serial number
- Rated power and speed
- Date of workshop trial.
- Markings as per MED 96/98/EC:
- ☒ YYYY/XX where YYYY is the number of the Notified Body undertaking surveillance module (when BV, 0062) and where XX are the last two digits of year mark affixed.

**7. OTHERS :**

7.1 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the engines at any time and that the manufacturer will accept the responsibility for informing shipbuilders or their sub-contractors and/or shipowners of the proper methods of use and general maintenance of the engine and the condition of this approval.

7.2 - This certificate supersedes EC Type Examination Certificate n° 09578/C0 EC issued on 07 Jun 2010 by the Society.

**\*\*\* END OF CERTIFICATE \*\*\***