



Marine & Offshore

Certificate number: 02076/H0 BV

File number: ACM 141/0107/001

Product code: 3715H

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

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

AUTEXIER
CHAUNY - FRANCE

for the type of product

LEVEL GAUGE - GLASS TYPE

Cylindrical Gauge Glasses Type 149, 150, 184, 186, 249, 250, 449, 450, 3184, 2184, 2276 & 2276P

Requirements:

- BUREAU VERITAS Rules for the Classification of Steel Ships

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 28 Sep 2026

For Bureau Veritas Marine & Offshore,

At BV VALENCIENNES, on 28 Sep 2021,

Lucien Fratini



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 Marine & Offshore. 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. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore 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 Marine & Offshore 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.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 4 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

Cylindrical Gauge Glasses Type 149, 150, 184, 186, 3184, 2184, 2276 & 2276P

1.1 - Design

- The gauges consist of a tubular borosilicate heat resistant Pyrex glass with a front protector of brass
- The gauges may be alternatively fitted with self-closing push buttons, parallel actuation system - lever type and a drain device

Type	DN (mm)	Design pressure (bar)	Temperature range °C	End connections
149	15~20	30	-20/200	Threaded
150	15~20	30	-20/200	Flanged
184	15~20	16	-30/100	Threaded
186	12~20	16	-30/100	Threaded
249	15~20	30	-20/200	Threaded
250	15~20	30	-20/200	Flanged
449	15~20	30	-20/200	Threaded
450	15~20	30	-20/200	Flanged
2276	15	16	-15/200	Flanged
2276 PI/PS	15	16	-15/200	Flanged
2276PI/PS.ØP	15	16	-15/200	Flanged
2276PSØP	15	16	-15/200	Flanged
3184PI/PS	15~20	10	-15/200	Threaded
3184Ø	15~20	6	-15/200	Threaded
3184.Ø+186.Ø	15~20	9	-15/200	Threaded
A2184 PI/PS	15	6	-15/200	Threaded

1.2 - Materials

Tubular	Borosilicate
Protector	CW614N EN 12164
Lower body	CC491K EN 1982
Upper body	CC491K EN 1982
Joint	FPM, NBR or PTFE
Packing	FPM or graphite fiber

2. DOCUMENTS AND DRAWINGS

2.1 - Drawings reference

- N° 3184.Ø rev. 04 + N° 3184PIØ rev. 03 dated 18/05/2021 + N° 3184PSØ rev. 03 dated 18/05/2021
- N° 3184.Ø+186.Ø rev. 00 + N° 186PIØ rev. 06 + N° 186PSØ rev. 06 dated 27/10/2016
- N° A2184PIØ rev. 01 dated 30/12/2002+ N° A2184PSØ rev. 01 dated 30/12/2002
- N° 2276PIØ rev. 03 dated 03/05/2010+ N° 2276PS.Ø rev. 01 dated 30/12/2002 + N° 2276PI/PS.ØP rev. 00 + N° 2276PIØ rev. 03 + N° 2276PSØ rev. 01 + N° 2276PSØP rev. 01
- Lower body 149PIØ and upper body 149PSØ N° 149 rev 07 dated 15/03/2021
- Lower body 150PIØ N° 150 Rev. 08 dated 15/03/2021 and upper body 150PSØ N° 150 rev 07 dated 15/03/2021
- Lower body 184PIØ and upper body 184PSØ N° 184 rev 08 dated 18/05/2021
- Lower body 186PIØ and upper body 186PSØ N° 186 rev 06 dated 27/10/2016
- Lower body 249PIØ and upper body 249PSØ N° 249 rev 00 dated 16/03/2021
- Lower body 250PIØ and upper body 250PSØ N° 250 rev 00 dated 16/03/2021
- Lower body 449PIØ and upper body 449PSØ N° 449 rev 06 dated 15/03/2021

- Lower body 450PIØ and upper body 450PSØ N° 450 rev 06 dated 15/03/2021

2.2 - Documentation

- General procedure PG824-6 Version 5 dated 04/11/2008
- Application 824-6 DA13 Version 6 dated 21/10/2013
- Application 824-6 DA14 Version 8 dated 21/10/2013
- Instructions 0904 DA140 version 06 dated 16/03/2021 and 0904 DA141 version 05 dated 16/03/2021
- Material certificate CC491K Bronze N°0630- N° BME0214 dated 19/01/2015
- ENR 53 Version 1 dated 06/04/2016

No departure from the above documents shall be made without the prior consent of the Society. The manufacturer must inform the Society of any modification or changes to these documents and drawings.

3. TEST REPORTS

- Report SOS-CR 76M95003L
- Burst test type 149/150 report N° 2014 E251 dated 13/01/2014
- Burst test type 184 report N° 2013 E216 dated 26/07/2013
- Burst test type 3184 dated 26/07/2013
- Type 184 pressure and tightness tests report N° 2015 E 004 dated 19/01/2015
- Type 186 pressure and tightness tests report N° 2014 E 002 dated 16/01/2014
- Type 3184 pressure and tightness tests report N° 2016 E 099 dated 11/03/2016

4. APPLICATION / LIMITATION

- 4.1 - Approved for tanks intended for fresh water according to requirements Pt C, Ch 1, Sec 10 [2.9.2] of Bureau Veritas Rules.
- 4.2 - The use of the cylindrical gauge glasses for oil fuel and other flammable oils is not acceptable on board passenger ships having to comply with the Regulation II-2/4-2 of SOLAS Convention as amended. When permitted [Pt C, Ch 1, Sec 10 2.9.2 of BV Rules] the cylindrical gauge glasses are to be fitted with self-closing valves at their lower ends as well as at their upper ends if connected to the tank below the maximum liquid level.
- 4.3 - The fitting of these glass indicators is to be in accordance with the manufacturer's instructions as well as the Rules and Regulations applicable to the ship.
- 4.4 - The cylindrical gauge glasses are to be adequately supported with intermediate support brackets at every 1 meter intervals.
- 4.5 - The glass indicators are to be installed and tested to the Surveyor's satisfaction.

5. PRODUCTION SURVEY REQUIREMENTS

- 5.1 - The products are to be supplied by **AUTEXIER** in compliance with the type described in this certificate.
- 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.
- 5.3 - **AUTEXIER** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.
- 5.4 - For information, **AUTEXIER** has declared to Bureau Veritas the following production site:

AUTEXIER
93 rue Louis Blanc
02300 CHAUNY
FRANCE

6. MARKING OF PRODUCT

Each cylindrical gauge glass shall be marked with at least:

- Manufacturer's name or logo
- Type designation
- Operational data

7. OTHERS

It is **AUTEXIER**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

This certificate supersedes the Type Approval Certificate N° 02076/G0 BV issued by the Society.

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