



CERTIFICATE NUMBER 21-2085823-PDA
EFFECTIVE DATE 08-March-2021
EXPIRATION DATE 07-March-2026
ABS TECHNICAL OFFICE Singapore Engineering Services

CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

GOLDEN MOUNTAIN ENTERPRISE CO., LTD.

located at

**NO.9, LANE 133, XING-HUA ST., CHIEN-CHEN DISTRICT,
, KAOHSIUNG, Taiwan, R.O.C.-80673**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product Pressure Gauge

Model Digital Pressure Gauge: DPG3000, DPG3000T, DPG3500-W, DPG3500-G and DPG3600; Pressure Gauge with Micro Switch: PIS5000W and PIS5000X; Differential Pressure Gauge: DPH series, DPH200, DPH300, DPH400, DPG4000 and DPG5000; Pressure Gauge: PG-SERIES, PGC-SERIES, PGE-SERIES, PGR-SERIES, PGS-SERIES, PG-60P, PGF-60P and DMG SERIES.

This Product Design Assessment (PDA) Certificate remains valid until 07-March-2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau of Shipping

Vibin Chandrabose, Senior Engineer

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement

GOLDEN MOUNTAIN ENTERPRISE CO.

NO.9, LANE 133, XING-HUA ST.

CHIEN-CHEN DISTRICT

KAOHSIUNG TAIWAN

Taiwan 80673

Telephone: +886-7-8135500

Fax: +886-7-8225588

Email: info@new-flow.com

Web: www.new-flow.com

Tier: 3 - Type Approved, unit certification not required

Product: Pressure Gauge
Model: Digital Pressure Gauge: DPG3000, DPG3000T, DPG3500-W, DPG3500-G and DPG3600;
Pressure Gauge with Micro Switch: PIS5000W and PIS5000X;
Differential Pressure Gauge: DPH series, DPH200, DPH300, DPH400, DPG4000 and DPG5000;
Pressure Gauge: PG-SERIES, PGC-SERIES, PGE-SERIES, PGR-SERIES, PGS-SERIES, PG-60P, PGF-60P and DMG SERIES.

Endorsements:

Intended Service:

Control or alarm for liquid indication in tanks and piping systems on Ships and Offshore Facilities

Description:

Digital Pressure Gauge 3", Digital Pressure Gauge 2.5", Digital Pressure Gauge 1.5", Pressure Gauge with Micro Switch Weather Proof Type, Differential Pressure Gauge, Capsule Type Pressure Gauge, Stainless Steel Pressure Gauge, Polypropylene Case Pressure Gauge, Diagram Seal Pressure Gauge and Diagram Pressure Gauge DMG Series.

Rating:

Pressure Range:

- Model DPG3000: 100~3000psi and -1~0 Bar;
- Model DPG3000T: 15~5000psi;
- Model DPG3500-W and DPG3500-G: 0~5000psi;
- Model DPG3600: 0~150psi;

Proof Pressure:

- Model PIS5000: 40 MPa (400 kg/cm²);

Measuring Pressure Range:

- Model PIS5000 and PIS5000X: 0~(-1) kg/cm²; 1~400 kg/cm² available;

Working Pressure:

- Model DPH SERIES, DPH200, DPG4000 and DPG5000: 200 kg/cm²;
- Model DPH300: 100 kg/cm²;
- Model DPH400: 30 kg/cm²;

Pressure Range:

- Model PG-SERIES: -1~0 to 0~1000 kg/cm² (bar, psi) available;
- Model PGC-SERIES: 25mbar to 600mbar;
- Model PGE-SERIES: -760mmHg~0 kg/cm²...0~70 kg/cm²;
- Model PGR-SERIES and PGS-SERIES: -1~0 to 0~1600 kg/cm²;
- Model PG-60P and PGF-60P: -76cmHg~0 to 0~20 kg/cm²;

Operating Pressure Limited:

- DMG SERIES: Steady pressure - full scale value, Fluctuating(pulsating) - 90% of full scale value, Pressure greater or equals 40 mbar for membrane- SS316+PTFE(Teflon lining), Pressure greater or equals 40 mbar for case filled gauge.

Ex Rating:

- Model PIS5000X: Ex d IIB+H2 Gb, Ex tb IIIC Db

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Operating Temperature:

- Model DPG3000 and DPG3000T: -10 to 60 Deg. C.;
- Model DPG3500-W and DPG3500-G: -10~60 Deg. C.;
- Model DPG3600 (Compensated): -10~60 Deg. C.;
- Model PIS5000 and PIS5000X (Ambient): -20 Deg. C.~70 Deg. C.;
- Model DPH SERIES, DPH200, DPH300, DPH400, DPG4000 and DPG5000: max. 80 Deg. C.;
- Model PG-SERIES: -20 Deg. C. to 100 Deg. C. (process fluid);
- Model PGC-SERIES (Ambient): -25 Deg. C. to 65 Deg. C. and Process temp.: max 150 Deg. C.;
- Model PGE-SERIES (Ambient): 0 Deg. C. to 65 Deg. C. and Process temp.: max 200 Deg. C.;
- Model PGR-SERIES (Ambient): -20 Deg. C. to 65 Deg. C. and Process temp.: max 150 Deg. C.;
- Model PGS-SERIES (Ambient): -25 Deg. C. to 65 Deg. C. and Process temp.: max 300 Deg. C.;
- Model PG-60P and PGF-60P: -20 Deg. C.~60 Deg. C.;
- DMG SERIES: -20 Deg. C.~0 to 100 Deg. C., w/cooling element or capillary, up to 350 Deg. C.

Service Restriction:

1. Unit Certification is not required. If the manufacturer or purchaser requests an ABS Certificate for compliance with a specification or standard; the specification or standard, including inspection standards and tolerances, must be clearly defined the conformity criteria.
2. ATEX certified equipment is not to be installed in hazardous areas on U.S vessels unless it can be proved to have been tested to the applicable IEC 60079 series standards by an independent laboratory accepted by the U.S Coast Guard. USCG notice 01-12 (February 7, 2012).

Comments:

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in these products.
2. Where pressure gauges are fitted in piping systems, valves are to be provided so that the devices can be isolated and removed without impairing the integrity of the pressurized system.

Notes/Drawing/Documentation:

Drawing No.: 1a, Pressure Gauge Catalogue, Revision: -, Pages: 32

Drawing No.: 2a, Explosion Proof Certificate for PIS5000X - IECEx UL 13.0039U, Revision: -, Pages: 11

Drawing No.: 3a, Explosion Proof Certificate for PIS5000X - DEMKO 03 ATEX 0303070U, Revision: -, Pages: 7

Terms of Validity:

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STANDARDS**ABS Rules:**

Rules for Conditions of Classification (2021) – 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:
Rules for Building and Classing Marine Vessels: 4-1-1/Table 3, 4-6-2/9.11.2, 4-8-3/Table 2

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Rules for Conditions of Classification (2021) – Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

Rules for Building and Classing Mobile Offshore Units: 4-2-1/11.27.2, 4-3-3/Table 1

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA