Certificate No: LR2002601TA
Issue Date: 25/11/2019
Expiry Date: 24/11/2024

# Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

| | |
|---|---|
| **Manufacturer** | **Hydrasun Ltd** |
| **Address** | Moss Road, Hydrasun Group, Gateway Business Park, Aberdeen, AB12 3GQ, United Kingdom |
| **Place of Production** | Hydrasun Ltd<br>Moss Road, Hydrasun Group, Gateway Business Park, Aberdeen, AB12 3GQ, United Kingdom |
| **Type** | Flexible Hoses |
| **Description** | Flexible hose assemblies |
| **Trade Name** | GOLDENSPIR |
| **Application** | Marine, offshore and industrial use subject tothe following operational limitations:<br>• Not suitable for supplying fuel to burners (no external braid).<br>Not suitable for kill, choke or jumper hoses, or hoses serving well completion units or blow-out preventers. |
| **Specified Standard** | Lloyd's Register's Rules and Regulations for the Classification of Ships (Part 5, Chapter 12, Section 7)<br>BSEN 856:1997 (Excluding impulse tests on completed hose assemblies) |

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**Mohamed Mohamed Rila**

Senior Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, UK

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**Ratings**

| | | | | | | |
|---|---|---|---|---|---|---|
| 4SH Nominal Dia (mm) | 19 | 25 | 31 | 38 | 51 | N/A |
| 4SH Max. Working pressure (psi) | 6090 | 5511 | 4713 | 4206 | 3625 | N/A |
| 4SP Nominal Dia (mm) | 6 | 10 | 12 | 16 | 19 | 25 |
| 4SP max. Working pressure (psi) | 6526 | 6454 | 6019 | 5076 | 5076 | 4061 |

**Other Conditions**

1. Hoses are to be selected, installed and tested in accordance with the manufacturer's recommendations and Lloyd's Register's Rules and Regulations for the Classification of Ships, Part 5, Chapter 12, Section 7.
2. Materials for hoses and fittings are to be manufactured and tested in accordance with the requirements for Class I piping systems.
3. Hoses are not approved for use in with flammable liquids, or for essential services in locations where a source ofignition is present.
4. Hoses are not approved for use in piping systems where pressure pulses and/or high levels of vibration are expected to occur in service.
5. The each flexible hose with end fittings is to be provided with the manufacturer's pressure test report and conformity of the production and the following details are to be permanently marked:
    - Manufacturer's name or trademark.
    - Date of manufacture (month/year).
    - Designation type reference.
    - Nominal diameter.
    - Pressure rating.

Temperature range.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document No. LR2002601TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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