

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Flexible Hoses of Non-Metallic Material with Permanently Fitted Couplings**with type designation(s)  
**1102-14 EGEFLEX 2 CO EN 2SN**

Issued to

**Hydroscand Group  
OSLO, Norway**

is found to comply with

**DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems  
DNV GL class programme DNVGL-CP-0183 – Type approval – Flexible hoses  
DNVGL-OS-D101 – Marine and machinery systems and equipment, Edition July 2015****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Temperature range: -40°C to + 100°C  
Max. working press.: 80 bar to 415 bar  
Sizes: 3/16" to 2" (DN5 to DN51)**Issued at **Høvik** on **2017-06-21**This Certificate is valid until **2021-12-31**.for **DNV GL**DNV GL local station: **Oslo Maritime and CAP**Approval Engineer: **Adel Samiei**

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**Marianne Spæren Marveng  
Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.  
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



## Product description

Hose assemblies with designation 1102-14-xx EGEFLEX 2 CO EN 2SN according to EN 853 2SN

Inner tube: Synthetic oil resistant rubber.

Reinforcement: Two layers of steel wire braid.

Cover: Black weather and oil resistant synthetic rubber.

Hoses made by Semperit.

Couplings: Series HYDROSCAND design 4200 (carbon steel) and 4200S (stainless steel).

## Application/Limitation

| Hose size  | DN | Inches | Max working pressure |
|------------|----|--------|----------------------|
| 1102-14-03 | 5  | 3/16"  | 415 bar              |
| 1102-14-04 | 6  | 1/4"   | 400 bar              |
| 1102-14-05 | 8  | 5/16"  | 350 bar              |
| 1102-14-06 | 10 | 3/8"   | 330 bar              |
| 1102-14-08 | 12 | 1/2"   | 275 bar              |
| 1102-14-10 | 16 | 5/8"   | 250 bar              |
| 1102-14-12 | 19 | 3/4"   | 215 bar              |
| 1102-14-16 | 25 | 1"     | 165 bar              |
| 1102-14-20 | 31 | 1 1/4" | 125 bar              |
| 1102-14-24 | 38 | 1 1/2" | 90 bar               |
| 1102-14-32 | 51 | 2"     | 80 bar               |

This certificate is valid for the specific assembly of hose and coupling type as specified, assembled and delivered by the holder (named as manufacturer) of this certificate and below assembling location: Hydroscand Ågotnes / Hydroscand Bergen / Hydroscand Latvia SIA / Hydroscand Ålesund / Hydroscand Kristiansund / Hydroscand Automotive AB / Hydroscand Special Hoses / Hydroscand Forus / Hydroscand Bryne / Hydroscand Drammen / Hydroscand Porsgrunn / Hydroscand Finland OY / Hydroscand Estonia AS / Hydroscand Lithuania UAB

Hose assemblies are suitable for use with:

- Hydraulic fluids (for sizes DN≥10) in accordance with ISO 6734-4 (with exception of HFD-R, HFD-S and HFD-T) at temperature ranging from -40°C to 100°C
- Water based fluids at temperature ranging from -40°C to 70°C
- Water at temperature ranging from 0°C to 70°C

Sizes smaller than DN=10, are not covered by the fire tests and shall not be installed in systems where fire safe application is required.

Flexible hoses are only to be used in short lengths where it is necessary due to vibrations or flexible mounting of the machinery. The hoses shall not replace/be used where permanent piping is possible/required.

All hose assemblies delivered under the DNV GL type approval scheme shall be subject to a pressure test at 1.5 times the maximum working pressure and shall be delivered with the pressure test report with reference to the type approval certificate.

The hose assemblies must only be fitted in places where they are always accessible.

Flexible hoses of these types are not to be used on boiler fronts.

Hose assemblies with couplings made of carbon steel are not to be used at temperatures below -10°C unless the material is normalized.

## Type Approval documentation

### Tests carried out

Job Id: **262.1-006933-3**  
Certificate No: **TAP00000UA**

Fire test, burst test, Dimensional check test, Change in length test, Cold flexibility test, Oil resistance test, Cover adhesion test, Ozone resistance test, Pressure Pulsation test

### **Marking of product**

For traceability to this Type Approval, the products are at least to be marked with:

- Manufacturer's name or trade mark
- Type designation
- Maximum working pressure
- Size

### **Periodical assessment**

For retention of the Type Approval, DNV GL Surveyor shall perform a periodical assessment every second year on the main assembling location and at least once during validity of certificate on other assembling locations to verify that the conditions for the type approval are complied with and to burst tests on a selection of sizes.

The tests are to be performed with the type of couplings fitted that are Type Approved with the hoses.