

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That the Manufacturer

Manuli Fluiconnecto B.V.

Krimpen aan den IJssel, Zuid-Holland, Netherlands

is approved for the

Assembling of type approved hoses and couplings

The approval is granted on condition that

DNV GL class programme DNVGL-CP-0183 – Type approval – Flexible hoses

are complied with in all respect

Hose	Size
Rockmaster/1SN	DN6, 8, 10, 12, 16, 19, 25, 31, 38, 51, 60
Rockmaster/2SN	DN6, 8, 10, 12, 16, 19, 25, 31, 38, 51, 60
Rockmaster/2SC	DN5, 6, 8, 10, 12, 16, 19, 25, 31, 38, 51, 63, 76
Tractor/1SC	DN6, 8, 10
Tractor/1SN	DN5, 6, 8, 10, 12, 16, 19, 25, 31, 38, 51, 60
Tractor/2SC	DN6, 8, 10, 12, 16, 19, 25, 31, 38, 51, 63, 76
Tractor/2SN	DN5, 6, 8, 10, 12, 16, 19, 25, 31, 38, 51, 60
ASTRO 2	DN6, 8, 10, 12, 16, 19, 25, 31
Rockmaster/15	DN19, 25, 31, 38
Eternity/2	DN6, 8, 10, 12, 16, 19, 25
Astro 3FBS Fire Sleeve	DN6, 8, 10, 12, 16, 19, 25, 31, 38, 51
Rockmaster/13	DN19, 25, 31, 38, 51
Rockmaster/4SH	DN16, 19, 25, 31, 38, 51
Rockmaster/4SP	DN6, 10, 12, 16, 19, 25, 31, 38, 51
Equator/1	DN6, 8, 10, 12, 16, 19, 25, 31, 38, 51, 63
Equator/2	DN6, 8, 10, 12, 16, 19, 25, 31, 38, 51
Rockmaster/2 PLUS	DN6, 8, 10, 12, 16, 19, 25, 31, 38, 51, 76
Rockmaster/12	DN 25, 31, 38, 51

Manufacturer(s) approved by this certificate is/are accepted to deliver according to DNV GL, DNV and GL rules.

Issued at **Høvik** on **2018-10-12**

for **DNV GL**

This Certificate is valid until **2021-10-11**.

DNV GL local station: **Rotterdam, Product
Certification /Verification**

Approval Engineer: **Iselinn Vindstad**

Marianne Spæren Marveng
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in production facilities and methods may render this Certificate invalid.



Job Id: **263.11-008244-1**
Certificate No: **AMT000009X**

Approval basis

Manuli Fluiconnecto B.V. is approved as a hose assembling company to deliver type approved hose assemblies (hose and coupling types as described in this certificate) to DNV GL vessels.

Products

Holder of this certificate is authorized to assemble hoses and end fittings as specified in DNV GL certificates:

Rockmaster/1SN	TAP00000NS, TAP000002D
Rockmaster/2SN	TAP00000NS, TAP000002D
Rockmaster/2SC	TAP00000NS, TAP000002D
Tractor/1SC	TAP00000NS
Tractor/1SN	TAP00000NS, TAP00000BG
Tractor/2SC	TAP00000NS, TAP000002D
Tractor/2SN	TAP00000NS, TAP000002D
ASTRO 2	9373789 HH, TAP00000SM
Rockmaster/15	TAP00000B6
Eternity/2	TAP000002D
Astro 3FBS Fire Sleeve	9373889 HH
Rockmaster/13	TAP000002E
Rockmaster/4SH	TAP000002E
Rockmaster/4SP	TAP000002E
Equator/1	TAP00000BG
Equator/2	TAP00000BG
Rockmaster/2 PLUS	TAP00000BG
Rockmaster/12	TAP0000106

Limitation

The approval is valid by considering all conditions in relevant type approval certificate(s) and authorization letter, during the validity of current certificate as well as the relevant type approval certificate(s).

Each hose assembly is to be hydraulic pressure tested to 1.5 times the maximum working pressure before delivery and to be delivered from the certificate holder with pressure test report with reference to the type approval certificate and this certificate.

Approval documentation

Form TA411 dated 2018-09-13
Jose explains...Hydraulic connectors
186633-2015-AQ-NLD-RvA, Management system certificaat
Form 20.101a, dated 2017-10-31
Werkinstructies, versie 1
Werkinstructies WI1.4 Assembleren van slangen, versie 5
Kwaliteitsbeleid, WI2.2 Classificatiebureaus, versie 1
Kwaliteitsbeleid, WI2.4 druktest protocol FLC certificaat, versie 2
Kwaliteitsbeleid, WI2.5 planning en afspraken classificatie, versie 1
Standard 1 Crimping parameters chart
Burst test report witnessed by DNV GL 2017-11-21

Certificate Retention Survey

For retention of the certificate, a DNV GL surveyor shall perform a survey before the expiry date of this certificate to verify that the conditions of approval are complied with. Any alteration to the approved condition during the period of validity, e.g. method of manufacture, maximum dimensions or conditions of supply, is to be reported to the Society. In addition, burst tests on every 3rd size of each type shall be witnessed by DNV GL surveyor.