



Marine & Offshore

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This certificate is not valid when presented without the full attached schedule
composed of 7 sections
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Notified Body 2690 - MARINE EQUIPMENT DIRECTIVE 2014/90/EU

EC TYPE EXAMINATION CERTIFICATE

as per Module B of Directive 2014/90/EU of the European Parliament and of the Council of 23 July 2014 as transposed in the French Regulations and Commission Implementing Regulation (EU) 2021/1158 of 22 June 2021

This certificate is issued to:

LINGJACK ENGINEERING WORKS PTE LTD

Singapore - SINGAPORE

for the type of product

FIXED FIREFIGHTING HOSE SYSTEMS - HOSE REELS WITH SEMI RIGID HOSE

COMBAT / LINGJACK HR-1SW, HR-1 MF, AHR-1 SW, HR-1 AF, HR-0278, HR-0279, HR-0280, HR-0281

Requirements:

SOLAS 74 convention as amended, Regulations II-2/10, X/3
IMO Res. MSC.36(63) -(1994 HSC Code)- as amended, 7
IMO Res. MSC.97(73) -(2000 HSC Code)- as amended, 7
EN 671-1:2012

This certificate is issued on behalf of the French Maritime Authorities to attest that Bureau Veritas Marine & Offshore did undertake the relevant type-examination procedures for the product identified above which was found to comply with the relevant requirements of the Directive 2014/90/EU of the European Parliament and of the Council of 23 July 2014 as transposed in the French Regulations.

This certificate will expire on: 13 Dec 2026

For Bureau Veritas Marine & Offshore Notified Body 2690,

At BV SINGAPORE, on 13 Dec 2021,

Shivananda Upadhyaya



This certificate does not allow to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark) to the products corresponding to this type. To this end, the production-control phase module (D, E or F) of Annex II of the Directive is to be complied with and controlled by a written inspection agreement with a notified body.

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. Bureau Veritas Marine & Offshore is designated by the French Maritime Authority as a "notified body" under the terms of the French Regulations Division 140 Chapter 140-2. 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.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

COMBAT / LINGJACK MANUAL SWING HOSE REEL HR-1SW

Hose reel details

Maximum working pressure	12 bar
Working temperature	5 to 55 °C
Nozzle type	Jet / Spray
Flow rate @Jet - Brass Jet/Spray nozzle	62 lpm @6 bar
Flow rate @Spray - Brass Jet/Spray nozzle	79 lpm @6 bar
Flow rate @Jet - Plastic Jet/Spray nozzle	61 lpm @6 bar
Flow rate @Spray - Plastic Jet/Spray nozzle	70 lpm @6 bar
Throw range @Jet	>10 m @2 bar
Throw range @Spray	>6 m @2 bar
Max hose length	30 m
Hose inside diameter	25 mm
Nozzle diameter	6 mm

Materials:

Hose	Plastic
Brass Jet / Spray nozzle	Brass
Plastic Jet / Spray nozzle	Plastic
Waterway	Aluminium Alloy
S-Bend Outlet Assembly	Aluminium Alloy
Hose reel	Powder coated mild steel
Inlet valve	Brass

COMBAT / LINGJACK MANUAL FIXED SLIM HOSE REEL HR-1MF

Hose reel details

Maximum working pressure	12 bar
Working temperature	5 to 55 °C
Nozzle type	Jet / Spray
Flow rate @Jet - Brass Jet/Spray nozzle	63 lpm @6 bar
Flow rate @Spray - Brass Jet/Spray nozzle	76 lpm @6 bar
Flow rate @Jet - Plastic Jet/Spray nozzle	59 lpm @6 bar
Flow rate @Spray - Plastic Jet/Spray nozzle	60 lpm @6 bar
Throw range @Jet	10m @2 bar
Throw range @Spray	3m @2 bar
Max hose length	30 m
Hose inside diameter	25 mm
Nozzle diameter	6 mm

Materials:

Hose	Plastic
brass Jet / Spray nozzle	Brass
Plastic Jet / Spray nozzle	Plastic
Waterway	Aluminium Alloy
S-Bend Outlet Assembly	Aluminium Alloy
Inlet adapter	Brass
Hose reel	Powder coated mild steel
Inlet valve	Brass

COMBAT / LINGJACK AUTOMATIC SWING HOSE REEL AHR-1SWHose reel details

Maximum working pressure	12 bar
Working temperature	5 to 55 °C
Nozzle type	Jet / Spray
Flow rate @Jet - Brass Jet/Spray nozzle	63 lpm @6 bar
Flow rate @Spray - Brass Jet/Spray nozzle	76 lpm @6 bar
Flow rate @Jet - Plastic Jet/Spray nozzle	59 lpm @6 bar
Flow rate @Spray - Plastic Jet/Spray nozzle	60 lpm @6 bar
Throw range @Jet	10m @2 bar
Throw range @Spray	3m @2 bar
Max hose length	30 m
Hose inside diameter	25 mm
Nozzle diameter	6 mm

Materials:

Hose	Plastic
Brass Jet / Spray nozzle	Brass
Plastic Jet / Spray nozzle	Plastic
Waterway	Aluminium Alloy
S-Bend Outlet Assembly	Aluminium Alloy
Automatic Valve assembly	Brass / Aluminium
Hose reel	Powder coated mild steel

COMBAT / LINGJACK AUTOMATIC FIXED SLIM HOSE REEL HR-1AFHose reel details

Maximum working pressure	12 bar
Working temperature	5 to 55 °C
Nozzle type	Jet / Spray
Flow rate @Jet - Brass Jet/Spray nozzle	63 lpm @6 bar
Flow rate @Spray - Brass Jet/Spray nozzle	76 lpm @6 bar
Flow rate @Jet - Plastic Jet/Spray nozzle	59 lpm @6 bar
Flow rate @Spray - Plastic Jet/Spray nozzle	60 lpm @6 bar
Throw range @Jet	10m @2 bar
Throw range @Spray	3m @2 bar
Max hose length	30 m
Hose inside diameter	25 mm
Nozzle diameter	6 mm

Materials:

Hose	Plastic
Jet nozzle and brass Jet / Spray nozzle	Brass
Plastic Jet / Spray nozzle	Plastic
Waterway	Aluminium Alloy
S-Bend Outlet Assembly	Aluminium Alloy
Inlet adapter	Brass
Automatic Valve assembly	Brass / Aluminium
Hose reel	Powder coated mild steel

COMBAT / LINGJACK MANUAL SWING HOSE REEL HR-0278Hose reel details

Maximum working pressure	12 bar
Design pressure	20 bar
Working temperature	5 to 55 °C
Nozzle type	Jet / Spray
Flow rate @Jet - Jet/Spray nozzle	162 lpm @6 bar
Flow rate @Spray - Jet/Spray nozzle	169 lpm @6 bar
Throw range @Jet	>11 m @2 bar
Throw range @Spray	>7 m @2 bar
Max hose length	30 m
Hose inside diameter	25 mm
Nozzle diameter	12 mm

Materials:

Hose	Plastic
Jet / Spray nozzle	Brass
Swing arm	Powder coating mild steel
Waterway	Bronze
Hose reel	Powder coating mild steel
Inlet valve	Brass

COMBAT / LINGJACK MANUAL SWING HOSE REEL HR-0279Hose reel details

Maximum working pressure	12 bar
Design pressure	20 bar
Working temperature	5 to 55 °C
Nozzle type	Jet / Spray
Flow rate @Jet - Jet/Spray nozzle	162 lpm @6 bar
Flow rate @Spray - Jet/Spray nozzle	169 lpm @6 bar
Throw range @Jet	>11 m @2 bar
Throw range @Spray	>7 m @2 bar
Max hose length	30 m
Hose inside diameter	25 mm
Nozzle diameter	12 mm

Materials:

Hose	Plastic
Jet / Spray nozzle	Brass
Swing arm	Powder coated stainless steel
Waterway	Bronze
Hose reel	Powder coated stainless steel
Inlet valve	Brass

COMBAT / LINGJACK MANUAL SWING HOSE REEL HR-0280Hose reel details

Maximum working pressure	7.5 bar
Design pressure	20 bar
Working temperature	5 to 55 °C
Nozzle type	Jet / Spray
Flow rate @Jet - Jet/Spray nozzle	212 lpm @6 bar
Flow rate @Spray - Jet/Spray nozzle	208 lpm @6 bar
Throw range @Jet	>11 m @2 bar
Throw range @Spray	>6 m @2 bar
Max hose length	30 m
Hose inside diameter	33 mm
Nozzle diameter	12 mm

Materials:

Hose	Plastic
Jet / Spray nozzle	Brass
Swing arm	Powder coated mild steel
Waterway	Bronze
Hose reel	Powder coated mild steel
Inlet valve	Brass

COMBAT / LINGJACK MANUAL SWING HOSE REEL HR-0281Hose reel details

Maximum working pressure	7.5 bar
Design pressure	20 bar
Working temperature	5 to 55 °C
Nozzle type	Jet / Spray
Flow rate @Jet - Jet/Spray nozzle	212 lpm @6 bar
Flow rate @Spray - Jet/Spray nozzle	208 lpm @6 bar
Throw range @Jet	>11 m @2 bar
Throw range @Spray	>6 m @2 bar
Max hose length	30 m
Hose inside diameter	33 mm
Nozzle diameter	12 mm

Materials:

Hose	Plastic
Jet / Spray nozzle	Brass
Swing arm	Powder coated stainless steel
Waterway	Bronze
Hose reel	Powder coated stainless Steel
Inlet valve	Brass

2. DOCUMENTS AND DRAWINGS :**2.1 - COMBAT / LINGJACK MANUAL SWING HOSE REEL HR-1SW**

Description	Drawing number
GA drawing	80800100 Issue A02 dated 24/11/2021
1" Armset Assembly	03008000 Issue A00 dated 29/06/2010
Drum Holder	03007000 Issue A00 dated 01/12/2011
S-Bend Outlet Assembly	03007100 Issue A00 dated 01/12/2011
Brass Jet/Spray Nozzle	03172600 Issue A02 dated 27/07/2016
Plastic Jet/Spray Nozzle	03008502 Issue A00 dated 03/01/2013
1" x 30m EN694 Hose	03003300 Issue B00 dated 02/12/2015
1" Inlet Valve	03153900 Issue A00 dated 18/12/2012

2.2 - COMBAT / LINGJACK MANUAL SLIM HOSE REEL HR-1MF

Description	Drawing number
GA drawing	80800502 Issue A02 dated 24/11/2021
1" Armset Assembly	03065200 Issue A00 dated 08/03/2011
1" Inlet Adapter	03230700 Issue A00 dated 02/10/2012
Drum Holder	03100702 Issue A00 dated 01/12/2011
S-Bend Outlet Assembly	03007100 Issue A00 dated 01/12/2011
Brass Jet/Spray Nozzle	03172600 Issue A02 dated 27/07/2016
Plastic Jet/Spray Nozzle	03008502 Issue A00 dated 03/01/2013
1" x 30m EN694 Hose	03003300 Issue B00 dated 02/12/2015
1 Meter Inlet Hose Extension	03003321 Issue B00 dated 02/12/2015
1" Inlet Valve	03153900 Issue A00 dated 18/12/2012

2.3 - COMBAT / LINGJACK AUTOMATIC SWING HOSE REEL AHR-1SW

Description	Drawing number
GA drawing	80800200 Issue A02 dated 24/11/2021
1" Armset Assembly	03004700 Issue A00 dated 15/11/2012
Drum Holder	03073000 Issue A00 dated 02/12/2011
S-Bend Outlet Assembly	03007100 Issue A00 dated 01/12/2011
Brass Jet/Spray Nozzle	03172600 Issue A02 dated 27/07/2016
Plastic Jet/Spray Nozzle	03008502 Issue A00 dated 03/01/2013
1" x 30m EN694 Hose	03003300 Issue B00 dated 02/12/2015
Automatic valve assembly	03055201 Issue A00 dated 02/12/2011

2.4 - COMBAT / LINGJACK AUTOMATIC FIXED SLIM HOSE REEL HR-1AF

Description	Drawing number
GA drawing	80800503 Issue A02 dated 24/11/2021
1" Armset Assembly	03065201 Issue A00 dated 08/03/2011
1" Inlet Adapter	03230700 Issue A00 dated 02/10/2012
Drum Holder	03073001 Issue A00 dated 02/12/2011
S-Bend Outlet Assembly	03007100 Issue A00 dated 01/12/2011
Brass Jet/Spray Nozzle	03172600 Issue A02 dated 27/07/2016
Plastic Jet/Spray Nozzle	03008502 Issue A00 dated 03/01/2013
1" x 30m EN694 Hose	03003300 Issue B00 dated 02/12/2015
1 Meter Inlet Hose Extension	03003321 Issue B00 dated 02/12/2015
Automatic valve assembly	03055201 Issue A00 dated 02/12/2011

2.5 - COMBAT / LINGJACK MANUAL SWING HOSE REEL HR-0278

Description	Drawing number
GA drawing	HR-0278 Issue A01 dated 24/11/2021
Waterway	03209703 Issue B00 dated 03/08/2012
1" Swivel Connection	03230700 Issue A00 dated 02/10/2012
Drum Holder	03211204 Issue A00 dated 08/02/2011
Swing Arm	03208501 Issue A00 dated 08/02/2011
Jet / Spray Nozzle	03190000 Issue A00 dated 22/06/2011
1" x 30m EN694 Hose	03003314 Issue B00 dated 02/12/2015
1m 20Bar Inlet Extension Hose	03003321 Issue B00 dated 02/12/2015
1" Inlet Valve	03153900 Issue A00 dated 18/12/2012

2.6 - COMBAT / LINGJACK MANUAL SWING HOSE REEL HR-0279

Description	Drawing number
GA drawing	HR-079 Issue A01 dated 24/11/2021
Waterway	03209703 Issue B00 dated 03/08/2012
1" Swivel Connection	03230700 Issue A00 dated 02/10/2012
Drum Holder	03211209 Issue A00 dated 08/02/2011
Swing Arm	03208500 Issue A00 dated 08/02/2011
Jet / Spray Nozzle	03190000 Issue A00 dated 22/06/2011
1" x 30m EN694 Hose	03003314 Issue B00 dated 02/12/2015
1m 20Bar Inlet Extension Hose	03003321 Issue B00 dated 02/12/2015
1" Inlet Valve	03153900 Issue A00 dated 18/12/2012

2.7- COMBAT / LINGJACK MANUAL SWING HOSE REEL HR-0280

Description	Drawing number
GA drawing	HR-0280 Issue A01 dated 24/11/2021
Waterway	03209703 Issue B00 dated 03/08/2012
1" Swivel Connection	03231300 Issue A00 dated 02/10/2012
Drum Holder	03211400 Issue A00 dated 08/02/2011
Swing Arm	03208801 Issue A00 dated 08/02/2011
Jet / Spray Nozzle	03190000 Issue A00 dated 22/06/2011
1.25" x 30m EN694 Hose	03145301 Issue B00 dated 02/12/2015
1m 20Bar Inlet Extension Hose	03145302 Issue B00 dated 02/12/2015
1.25" Inlet Valve	03153905 Issue A00 dated 18/12/2012

2.8 - COMBAT / LINGJACK MANUAL SWING HOSE REEL HR-0281

Description	Drawing number
GA drawing	HR-0281 Issue A01 dated 24/11/2021
Waterway	03209703 Issue B00 dated 03/08/2012
1" Swivel Connection	03231300 Issue A00 dated 02/10/2012
Drum Holder	03211401 Issue A00 dated 08/02/2011
Swing Arm	03208804 Issue A00 dated 08/02/2011
Jet / Spray Nozzle	03190000 Issue A00 dated 22/06/2011
1.25" x 30m EN694 Hose	03145301 Issue B00 dated 02/12/2015
1m 20Bar Inlet Extension Hose	03145302 Issue B00 dated 02/12/2015
1.25" Inlet Valve	03153905 Issue A00 dated 18/12/2012

2.9 - Installation, operation and maintenance manual: n°LIS-IOM-105 Issue 4 dated 16/05/2018.

2.10 – Hose specifications and detailed drawings:

- 1" x 30m EN694 Hose 03003300:
 - Cross-sectional drawing issue Initial dated 18/01/2011 from Barfell.
 - Product information sheet dated 15/10/2012 from Barfell.
- 1" x 30m EN694 Hose 03003314:
 - Cross-sectional drawing issue Initial dated 24/01/2011 from Barfell.
 - Product information sheet dated 22/03/2012.
- 1.25" x 30m EN694 Hose 03145301:
 - Cross-sectional drawing issue Initial dated 24/01/2011 from Barfell.
 - Product information sheet dated 20/01/2011

3. TEST REPORTS :

3.1 - HR-1SW, HR-1 MF, AHR-1SW, HR-1AF:

- Test report N°252162 dated 24/03/2010 as per EN 671-1:2012 from BRE Global.
- Test report N°S08MEC04855/B1/TSM dated 22/08/2008 as per EN 671-1:2012 from TÜV SUD PSB Pte. Ltd.
- Test report n°P112679 model HR-1SW Issue: 1 as per EN 671-1:2012 dated 27/03/2019 from BRE Global.
- Test report n°P112679 model AHR-1SW Issue: 1 as per EN 671-1:2012 dated 27/03/2019 from BRE Global.
- Technical statement for similarity dated 09/11/2021 from LINGJACK.
- Test report n°S08MEC04855/A2-PGK dated 09/10/2008 as per EN 671-1:2012 from TÜV SUD PSB Pte. Ltd.
- Test report N°S08MEC04855-A3-EHK dated 14/01/2009 as per EN 671-1:2012 from TÜV SUD PSB Pte. Ltd.
- Test report N°285/4714431 dated 24/10/2005 as per EN 694 from BSI Product Services.

3.2 - HR-0278:

- Test report N°281969 dated 07/09/2012 as per EN 671-1:2012 from BRE Global.
- Resistance to corrosion of coated parts: test report N°7191022010-CHM12/3-PGK(MEC)dated 12/03/2012 as per ISO 9227:2006 from TÜV SUD PSB Pte. Ltd.
- Resistance to corrosion of waterway: test report n°7191022010-CHM12-3B-LSM dated 21/03/2012 as per EN 671-1:2012.
- Test report N°285/4714431 dated 24/10/2005 as per EN 694 from BSI Product Services.

3.3 - HR-0279:

- Test report N°281967 dated 07/09/2012 as per EN 671-1:2012 from BRE Global.
- Resistance to corrosion of coated parts: test report N°7191022010-CHM12/3-PGK(MEC)dated 12/03/2012 as per ISO 9227:2006 from TÜV SUD PSB Pte. Ltd.
- Resistance to corrosion of waterway: test report n°7191022010-CHM12-3B-LSM dated 21/03/2012 as per EN 671-1:2012
- Test report N°285/4714431 dated 24/10/2005 as per EN 694 from BSI Product Services.

3.4 - HR-0280:

- Test report N°281970 dated 07/09/2012 as per EN 671-1:2012 from BRE Global.
- Resistance to corrosion of coated parts: test report N°7191022010-CHM12/3-PGK(MEC)dated 12/03/2012 as per ISO 9227:2006 from TÜV SUD PSB Pte. Ltd.
- Resistance to corrosion of waterway: test report n°7191022010-CHM12-3B-LSM dated 21/03/2012 as per EN 671-1:2012.
- Test report N°7191022010-MEC11/01-TSM dated 22/11/2011 as per EN 694 from TÜV SUD PSB Pte. Ltd. .

3.5 - HR-0281:

- Test report N°281968 dated 07/09/2012 as per EN 671-1:2012 from BRE Global.
- Resistance to corrosion of coated parts: test report N°7191022010-CHM11/2-PGK(MEC)CR1 dated 09/01/2012 as per ISO 9227:2006 from TÜV SUD PSB Pte. Ltd.
- Resistance to corrosion of waterway: test report n°7191022010-CHM12-3B-LSM dated 21/03/2012 as per EN 671-1:2012
- Test report N°7191022010-MEC11/01-TSM dated 22/11/2011 as per EN 694 from TÜV SUD PSB Pte. Ltd. .

4. APPLICATION / LIMITATION :

4.1 - Approved for use as fixed firefighting hose systems: hose reels with semi-rigid hose.

4.2 - The equipment are to be installed, used and maintained in accordance with instruction manual supplied by the Manufacturer.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - This certificate alone does not allow the applicant to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark) to the products corresponding to this type. To this end, the production-control phase module D Production Quality Assurance or module E Product Quality Assurance or module F Product Verification of Annex II of the Directive is to be complied with and controlled by a written inspection agreement with a Notified Body.

5.2 - For information concerning the production phase modules, **LINGJACK ENGINEERING WORKS PTE LTD** has declared the following manufacturing site(s):

**No. 1, Woodlands Terrace,
Lingjack Industrial Building
Singapore
Singapore
SINGAPORE**

6. MARKING OF PRODUCT :

As per EN 671-1 and the provisions of the Directive:

- 1 - Manufacturer's name or trade mark, or both;
- 2 - Number of this European Standard;
- 3 - Year of manufacture;
- 4 - Maximum working pressure;
- 5 - Length and inside diameter of hose;
- 6 - Nozzle equivalent diameter (marked on the nozzle).
- 7 - Reference is made to MED 2014/90/EU chapter 2.

In particular Article 10.3 specifies that the wheelmark shall be followed by the identification number of the Notified Body involved in the production control phase (module D, E or F) and by the year in which the mark is affixed (4 digits or last 2 digits).

7. OTHERS :

7.1 - It is **LINGJACK ENGINEERING WORKS PTE LTD**'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.

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