Certificate No: LR2656495TA
Issue Date: 04/06/2026
Expiry Date: 03/06/2031

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	**HANSA-FLEX Hydraulic (Shanghai) Co., Ltd**
Address	No. 500 Feizhou Road, Lingang New Town, Pudong New District, Shanghai, 201306, China
Type	Mechanical Pipe Joints
Description	Bite type tube fittings- Straight fitting (XV); Right angle fitting (XW); Tee (XT); End straight fitting (XVR-ED).
Application	Marine piping systems with water, gas and oil as medium (Applications where fire test is not required & 30min wet fire test is considered sufficient). Remark: Dry fire tests have not been conducted.
Specified Standard	LR Rules and Regulations for the Classification of Ships, July 2025; Lloyd's Register Test Specification Number 2, October 2024; ISO 19921:2005, ISO 8434-1, ASTM A276.

Ratings

Nominal size (mm):	DN4 to DN40 (OD: 6 to 42, for L series) DN3 to DN32 (OD: 6 to 38, for S series)
Design Pressure (MPa):	10 to 25 (for L series) 25 to 63 (for S series)
Design Vacuum Pressure (MPa):	-0.084
Design Temperature (˚C):	-40 to 120 (General) -25 to 100 (for NBR seal in end straight fitting)

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Johannes Wiegel
Engineering Piping/Decarbon - Senior Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

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	-20 to 120 (for FKM seal in end straight fitting)
Materials:	Body: 304, 316L

Other Conditions

For application on a LR classed vessel, the following conditions to be complied with:-

1. Materials for bite type fittings of Class I & II piping systems are to be produced at a works approved by LR and are in general to be tested in accordance with the Rules for Materials.
2. Compression fittings are to be used within their specified pressure and temperature rating for all normal operating conditions, and are to be suitable for the intended purpose.
3. The materials used for compression fittings are to be suitable for the medium and the service for which the piping is intended on board.
4. Each compression fitting is to be tested at the manufacturer's production facility to a hydrostatic pressure not less than 1.5 times the rated pressure.
5. The fittings are not designed to be capable of operating under dry fire endurance test conditions, as such dry fire tests (30mins dry/ 8min dry+22min wet) have not been conducted and products is not qualified for such applications.
6. The product type selection and installation are to be in accordance with the manufacturer's instructions and to the attending surveyor's satisfaction.
7. The application of the joints is to be in accordance with Part 5, Chapter 12, Table 12.2.8 Application of mechanical joints of LR Ship Rules.

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 LR2656495_DAD and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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