

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	RATTAY DK
Address	Energivej 20, Esbjerg, 6700, Denmark
Type	Expansion Bellows
Description	Metallic expansion bellows. Single or multiple layers.
Trade Name	OMEGA ZH (WZH)
Application	LNG and other liquefied gas systems on ships and terminals.
Specified Standard	LR Rules and Regulations for the Construction and Classification of Ships for the Carriage of Liquefied Gases in Bulk, 2019, incorporating the IGC Code.
Ratings	Diameter (inches): 2 to 32 Design temperature (°C): -196 to +125 Design pressure (bar): Up to 16
Other Conditions	<ol style="list-style-type: none">Expansion joints are to be selected and installed in accordance with the manufacturer's instructions and recommendations.Suitability of the bellows connection pieces does not require a design review and are to be verified by the attending Lloyd's Register Surveyor prior to installation.

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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 LR2001991TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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