Certificate No: LR26249838TA
Issue Date: 28/10/2025
Expiry Date: 27/10/2030

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	**YADA Green Energy Solutions Co., Ltd.**
Address	525 Xinda Road, Xinfeng Town, Nanhu District, Jiaxing, 314005, China
Place of Production	Zhejiang Tianmu Technology Co., Ltd. ,Economic and Technological Development Zone, No.8 Building 255 Lane Longzhu Street, Qisi Village Shacheng Street Wenzhou, Wenzhou, China
Type	Mechanical Pipe Joints
Description	Caps, Straight Couplings, Reducer Couplings, Tees, Elbows, Internal Thread Couplings, External Thread Couplings, Bridge, Straight Pipe Couplings & Flange Couplings
Trade Name	Mechanical Joints - Press Fittings (Type D & S)
Application	Fresh Water & Seawater Marine Piping Systems of non-essential service.
Specified Standard	Lloyd's Register Rules and Regulations for the Classification of Ships, July 2025 Lloyd's Register Type Approval System - Test Specification Number 2, October 2024, Appendix 4, Chapter 5 - Mechanical Pipe Joints – Fixed Connections IACS UR P2 "Mechanical Joints" (Oct 2023) ISO 19921 : 2005 ISO 19922 : 2005

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Mandar Ojale

Engineering Piping - Specialist to Lloyd's Register Marine and Offshore India LLP
A member of the Lloyd's Register group

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Ratings

Cap:	Type D & Type S
Nominal Diameter (mm):	DN15 ~ DN100
Nominal Wall Thickness (mm):	0.6 ~ 1.5
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body) EPDM (Seal)

Straight Coupling:	Type D & Type S
Nominal Diameter (mm):	DN15 ~ DN100
Nominal Wall Thickness (mm):	0.6 ~ 1.5
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body) EPDM (Seal)

Reducer Coupling:	Type D & Type S
Nominal Diameter (mm):	DN15 ~ DN100
Nominal Wall Thickness(mm):	0.6 ~ 1.5
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body) EPDM (Seal)

Straight Tee:	Type D & Type S
Nominal Diameter (mm):	DN15 ~ DN100
Nominal Wall Thickness(mm):	0.6 ~ 1.5
Nominal Pressure Rating(bar):	16
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body) EPDM (Seal)

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Reducer Tee:	Type D & Type S
Nominal Diameter (mm):	DN15 ~ DN100
Nominal Wall Thickness(mm):	0.6 ~ 1.5
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110 (Stainless Steel 316L/304L)
Materials:	Stainless Steel 316L/304L EPDM (Seal)

Tee with Female Thread End:	Type D & Type S
Nominal Diameter(mm):	DN15 ~ DN100
Nominal Wall Thickness(mm):	0.6 ~ 1.5
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body) EPDM (Seal)

Tee with Male Thread End:	Type D & Type S
Nominal Diameter (mm):	DN15 ~ DN50
Nominal Wall Thickness(mm):	0.6 ~ 1.2
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body) EPDM (Seal)

A-90˚ Elbow:	Type D & Type S
Nominal Diameter (mm):	DN15 ~ DN100
Nominal Wall Thickness(mm):	0.6 ~ 1.5
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~110
Materials:	Stainless Steel 316L/304L (Body) EPDM(Seal)

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B-90˚ Elbow:	Type D & Type S
Nominal Diameter (mm):	DN15 ~ DN100
Nominal Wall Thickness (mm):	0.6 ~ 1.5
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body) EPDM (Seal)

90˚ Female Elbow:	Type D & Type S
Nominal Diameter (mm):	DN15 ~ DN50
Nominal Wall Thickness(mm):	0.6 ~ 1.2 (Type D) / 0.6 ~ 1.0 (Type S)
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body) EPDM (Seal)

90˚ Male Elbow:	Type D & Type S
Nominal Diameter(mm):	DN15 ~ DN50
Nominal Wall Thickness(mm):	0.6 ~ 1.2 (Type D) / 0.6 ~ 1.0 (Type S)
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body) EPDM (Seal)

A-90˚ Reducer Elbow:	Type D & Type S
Nominal Diameter (mm):	DN15 ~ DN50
Nominal Wall Thickness (mm):	0.6 ~ 1.2 (Type D) / 0.6 ~ 1.0 (Type S)
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body) EPDM (Seal)

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90˚ Female Elbow-Short:	Type D & Type S
Nominal Diameter (mm):	DN15 ~ DN25
Nominal Wall Thickness (mm):	0.6 ~ 1.2 (Type D) / 0.6 ~ 0.8 (Type S)
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body) EPDM (Seal)

A-45˚Elbow:	Type D & Type S
Nominal Diameter (mm):	DN15 ~ DN100
Nominal Wall Thickness (mm):	0.6 ~ 1.5
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body) EPDM (Seal)

B-45˚Elbow:	Type D & Type S
Nominal Diameter(mm):	DN15 ~ DN100
Nominal Wall Thickness(mm):	0.6 ~ 1.5
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body) EPDM (Seal)

Internal Thread Coupling:	Type D & Type S
Nominal Diameter (mm):	DN15 ~ DN50
Nominal Wall Thickness (mm):	0.6 ~ 1.2 (Type D) / 0.6 ~ 1.0 (Type S)
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body)

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	EPDM (Seal)
External Thread Coupling:	Type D & Type S
Nominal Diameter (mm):	DN15 ~ DN80
Nominal Wall Thickness (mm):	0.6 ~ 1.5 (Type D) / 0.6 ~ 1.0 (Type S)
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body) EPDM (Seal)
Bridge:	
Nominal Diameter(mm):	DN15 ~ DN25
Nominal Wall Thickness(mm):	0.6 ~ 1.2
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body) EPDM (Seal)
Straight Pipe Coupling:	
Nominal Diameter (mm):	DN15~DN25
Nominal Wall Thickness(mm):	0.6 ~ 1.2
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body) EPDM (Seal)
Flange Coupling:	Type D & Type S
Nominal Diameter (mm):	DN15 ~ DN100
Nominal Wall Thickness (mm):	0.6 ~ 1.5
Design Pressure (MPa):	1.6
Max. Design Vacuum Pressure (MPa):	- 0.084
Working Temperature Range (˚C):	- 20 ~ 110
Materials:	Stainless Steel 316L/304L (Body)

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Type Approval Certificate

EPDM (Seal)

Additional Tests Fire resistance test has been conducted according to ISO 19921 : 2005 and ISO 19922 : 2005.

Other Conditions

1. Materials for mechanical pipe joints used in Class I and Class II piping systems are to be produced at a works approved by LR and are to be tested in accordance with the LR Rules for Materials (as per Part 5 Chapter 12 Section 1.7.1).
2. Mechanical pipe joints are to be selected and installed in accordance with the manufacturer's instructions.
3. In all cases, pressure and temperature ratings of the fittings are to be suitable for the intended service conditions.

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 Marine and Offshore India LLP of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: LR2037486TA

The Design Appraisal Document LR26249838TA_DAD and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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