



## 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.

<b>Manufacturer</b>	<b>T-Drill Industries, Inc (U.S. Division of T-Drill OY)</b>
<b>Address</b>	1740 Corporate Drive Suite 820, Norcross, Georgia, 30093, United States
<b>Place of Production</b>	T-DRILL Oy PL 20, LAIHIA, 66401, Finland
<b>Place of Production</b>	T-Drill OY 23 Tolkkintie, Isokyrö, 61500, Finland
<b>Type</b>	Mechanical Pipe Joints
<b>Description</b>	Lips & stub ends formed by F Series Flanging machines (F-200, F400 and F-420e) for use of loose flanges as per SAE, ANSI, DIN and JIS standards.
<b>Trade Name</b>	T-Drill Flanged and Expanded Lips & stubs.
<b>Application</b>	Marine and Offshore applications for class III systems of water, air, nonflammable gases, nonflammable hydraulic oils and open-ended pipes (drains, overflows, vents, exhaust gas lines).
<b>Specified Standard</b>	Rules and Regulations for Classification of Ships 2021 Rules and Regulations for Classification of Offshore Units 2022 MSS-SP-119-2010

1330 Enclave Parkway, Houston, Texas, 77077,  
United States

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**Gopal Nair**

Piping & Pressure System Principal Specialist  
to Lloyd's Register North America, Inc.  
A member of the Lloyd's Register group

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ASTM F2015-00

### Ratings

Lloyd's Register Class III piping systems only with MAWP 16 bar & Maximum Temperature upto 200-degree C.

Materials of flanging: -

Carbon Steel NPS 1-1/4" to 16" – Sch 10 & 40.

Cu/Ni 90/10& 70/30 NPS 1-1/4" to 16" class 200.

Stainless Steel NPS 1-1/4" to 16" – Sch 10 & 40.

Materials of Expansion: -

Carbon Steel NPS 2" to 16" – Sch 40.

Cu/Ni 90/10& 70/30 NPS 2" to 16" class 200.

Stainless Steel NPS 2" to 16" – Sch 10 & 40

### Other Conditions

1. The flanges / slips are only approved for Class III systems.
2. Loose flange designs where the pipe end is flared as shown in Rules Part 5 Chapter 12 figure 12.2.3 (b) are only to be used for water pipes and on open ended lines.
3. Industrial and offshore process side applications, the flanges should confirm to the code of construction such as ASME B 31.3, ASME B 16.5 etc.
4. The thickness of the lapped portion should be greater than or equal to the main pipe as per figure 2-4 of ASME Sec VIII Division 1 Appendix 2.
5. The products covered in this certificate for Lloyd's Register Class III items may be produced at a third-party location using OEM machines (*Flanging Machines, F-Series F20- F-400 and F -420 e*) & process, provided the products are produced in accordance with OEM procedures and the properties of the fittings or flanges are not unduly altered or impaired. This should be ensured periodically to the satisfaction of this certificate holder.

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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 North America, Inc. of any modification or changes to the equipment in order to obtain a valid Certificate.

**Previous Version:** New

The Design Appraisal Document Q/ATSO-23-0692/001/GN and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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