Confirmation of Product Type Approval

Company Name: T-DRILL OY

Address: AMPUJANTIE 32 FI 66400 Finland

Product: Fitting, Flange

Model(s): F-Series: Pipe Flanging and Expansion

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	21-2106723-PDA	22-APR-2021	21-APR-2026
Manufacturing Assessment (MA)	22-5444569	05-SEP-2022	04-SEP-2027
Product Quality Assurance (PQA)	NA	NA	NA

Tier
3 - Type Approved, unit certification not required

Intended Service
Marine and Offshore Applications

Description
Lips/Stub ends listed as below, for the use of loose flanges (SAE, ANSI, DIN & JIS), are formed directly on the end of the pipe by F-Series pipe flanging machines (F-200, F-400 and F-420e) – a solution that saves you up to 40% in time and costs compared to traditional weld neck flange connections.

a) Flanging

b) Expansion

Ratings
System pressure up to 250 psi and temperature up to 400F:

Vapor and Gas: 10 bar up to 343 deg. C, Water: 16 bar up to 177 deg. C, Non-Flammable Hydraulic Oil: 16 bar up to 204 deg. C

Materials for Flanging: Carbon steels (NPS 1-1/4” to 16", SCH10 and SCH40), CuNi 90/10 & 70/30 (1-1/4” to 16" CL200) Stainless Steels (NPS 1-1/4” to 16” SCH 10 and SCH 40)

Materials for Expansion: Carbon steels (NPS 2" to 16", SCH40), CuNi 90/10 & 70/30 (2" to 16" CL200) Stainless Steels (NPS 2” to 16” SCH 10 and SCH 40)

F-200 Flanging Machine: capability of both hot and cold forming of most malleable materials within an O.D. range of 21.3–219.1 mm.

F-400 Flanging Machine: capability of both hot and cold forming within an O.D. range of 42.4–419 mm

for the most demanding requirements of pipe manufacturing on larger O.D. ranges.

Service Restrictions
1) Unit Certification is not required for this product.

2) If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

3) Not for toxic fluid, corrosive fluid, volatile flammable liquid, liquefied gas, fuel oil, lubricating oil, thermal oil, flammable hydraulic oil and steam systems per MVR 4-6-2/Table 7 Flange Type E.

4) Class III piping for other fluids (including water, air, gases, non-flammable hydraulic oil) and Open ended pipes (drains, overflows, vents, exhaust gas lines, boilers escapes pipes) per MVR 4-6-1/Table 1.

Comments
The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes, Drawings and Documentation
Supporting Documentation:

Standard characteristics of a T-DRILL fabricated lap joint, Pages 1;

Flange Pressure Tests 2015 Summary, Pages: 2 ;

Certificate No. 16021250265-1197 EN Rev. 1 per EN 1092-1 by Inspecta, Date: September 27/2016 Pages: 1;

Brochure Flanging Machines, F-Series F200/F-400, Pages: 6;

Brochure Flanging Machine, F-420E, Pages: 2;

Term of Validity
This Product Design Assessment (PDA) Certificate remains valid until 21/Apr/2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ABS Rules
The Rules for Conditions of Classification, 2021 Marine Vessel Rules:1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the followings;

2021 Rules for Building and Classing Marine Vessels: 4-6-1/Table 1 (Class III), 4-6-2/5.5.4, Table 6 (Type E) and Table 7 (Type E);

The Rules for Conditions of Classification - Offshore Units and Structures, 2021 Mobile Offshore Units Rules: 1-1-4/9.7, 1-1-A2, 1-1-A3 which covers the following:

2021 Rules for Building and Classing Mobile Offshore Units: 4-2-1/Table 1 (Class III) and 11.11;

International Standards
MSS SP-119-2010 Factory-Made Wrought Belled End Pipe Fittings for Socket-Welding

EU-MED Standards
NA

National Standards
ASTM F2015 - 00(2019) Standard Specification for Lap Joint Flange Pipe End Applications

Government Standards
NA

Other Standards
NA

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 19-Sep-2022 8:35

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.

