Confirmation of Product Type Approval

Company Name: T-DRILL OY

Address: AMPUJANTIE 32 FI 66400 Finland

Product: Pipe Fittings, Butt-Welding

Model(s): Collaring Machines: S-Series, T-Series, Plus-500 and CEC-170

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	21-2147515-PDA	12-AUG-2021	11-AUG-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: Cold formed extruded outlets on pipes and tubes for butt welded joints

Description
Collaring machines processes extruded outlets for butt welded branch connections directly from the run tube/pipe material for straight and bent tubes/pipes. The entire process from pilot hole milling to a complete, trimmed branch outlet can be performed on a single workstation in three work cycles.

Each work cycle is automatic – pilot hole milling, collaring process and trimming of the collar.

Ratings
S-Series for Stainless Steels, CuNi, Carbon Steel Pipes/Tubes up to Schedule 10:

S-54: Run Tube Diameter: NPS 1" to 3-1/2", Branch Diameter: NPS 1" to 1-1/2";

S-56: Run Tube Diameter: NPS 1" to 4", Branch Diameter: NPS 1" to 1-1/2";

S-80: Run Tube Diameter: NPS 1" to 4", Branch Diameter: NPS 1" to 3";

SEC-100: Run Tube Diameter: NPS 1" to 6", Branch Diameter: NPS 1" to 3";

T-Series for Stainless Steels, CuNi, Carbon Steel Pipes/Tubes up to Schedule 40:

T-115: Run Tube Diameter: NPS 1" to 12", Branch Diameter: NPS 1" to 4";

TEC-150: Run Tube Diameter: NPS 1" to 22", Branch Diameter: NPS 1" to 6";

TEC-220: Run Tube Diameter: NPS 1" to 32", Branch Diameter: NPS 1" to 8";

T-850: Run Tube Diameter: NPS 1" to 48", Branch Diameter: NPS 1" to 32";

Plus-500, CEC-170: Stainless Steels up to Schedule 40:

Plus-500: Run Tube Diameter: NPS 1" to 48", Branch Diameter: NPS 1" to 20";

CEC-170: Run Tube Diameter: NPS 1" to 10", Branch Diameter: NPS 1" to 6";

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.

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

2) Materials, pressure and temperature ratings of pipes or tubes are to be suitable for intended service or applications.

3) Pipe fittings are to be suitable for the intended piping system, butt welded joints, where complete penetration at the root is achieved, may be used for all classes of piping. Degree of verification of sound root penetration is to be in accordance with 2-4-4/5 and 2-4-4/11 of the ABS Marine Vessels Rules.

4) Per ASME B31.3 Code for Pressure Piping Section 304.3.4, the followings are to be followed.

a. The header pipe is defined by ASTM F2014-00. Other metals can be used, but acceptability must be determined by consultation with the manufacturer of the equipment.

b. The elliptical pilot hole is precisely made to controlled dimensions that have been determined will produce the outlet with minimal wall thinning (#35%) and sufficient height to be faced flat for welding and meet the following conditions.

b.1 The root radius is greater than or equal to .05 x the branch diameter.

b.2 The collar height is greater than or equal to .05 x the branch diameter.

c. The extruded outlet shall be made perpendicular to the header by a rotating die passing through the pilot hole. Said die is to be adjustable to allow for matching the ID of the extruded outlet to its mating branch pipe.

d. The branch pipe will be welded in accordance the governing weld procedures of the locale as determined by the material of the header and branch, thickness of the material, etc.

e. There are no restrictions on the diameter of the outlet relative to the header diameter.

Notes, Drawings and Documentation
Certificate of Assessment by Kiwa Inspecta No. 1318-16092001, Pressure Equipment Directive (PED) 2014/68/EC Annex I section 3.1.1 dated 9/16/2020, Page: 1;

PED pressure test report No. 1318-180518 by Kiwa Inspecta dated 5/18/2018, Pages: 18;

Brochure Collaring Machine, TEC-Series, Pages: 8;

Brochure Collaring Machine, S-80, Pages: 2;

Brochure Collaring Machine, T-115, Pages: 4;

Brochure Collaring Machine, S-56, Pages: 4;

Brochure Collaring Machine, SEC-100, Pages: 2;

Brochure Collaring Machine, PLUS 500, Pages: 4;

Spec Sheet Collaring System, CEC-170, Page:1;

Spec Sheet Collaring Station, T-850, Page:1;

Spec Sheet Collaring Station, S-54, Page:1;

Term of Validity
This Product Design Assessment (PDA) Certificate remains valid until 11/Aug/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 Rules: 4-6-2/5.3 & 5.5.1

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: 4-2-1/11.11

International Standards
NA

EU-MED Standards
NA

National Standards
ASTM F2014 - 00 (2019) Standard Specification for Non-Reinforced Extruded Tee Connections for Piping Applications;

ASME B31.3 - 2020 Process Piping/Section 304.3.4 Extruded Outlets in Stainless Steel;

Government Standards
NA

Other Standards
NA

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 19-Sep-2022 8:33

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.

