



## *Confirmation of Product Type Approval*

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product.

This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 07/JAN/2020. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until 20/AUG/2020 subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

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.

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.

**Product Name:** Integral Bonnet Needle Valve  
**Model Name(s):** NV1, NV2, NV3, NV4

**Presented to:**

HY-LOK CORPORATION  
#1467-1, SONGJEONG-DONG  
KANGSEO-KU  
Korea, Republic of

**Intended Service:**

1. Fuel oil system 2. Lubricating oil system 3. Hydraulic oil system 4. Compressed air system 5. Fresh water system 6. Sea water system

**Description:**

NV series needle valves (Integral bonnet and metal to metal seat) 1. Nominal bore (orifice hole): 2.0/4.3/6.3/9.5 mm 2. Material a. Body: SS316/A182, SS316/A479, C377/B283, C3771BE/H3250, alloy 400/B564 b. Handle: Stainless steel, phenolic knob c. Packing nut: SS316/A479, C360/B16, alloy 400/B164 d. Panel nut: Stainless steel, C360/B16 e. Gland: SS316/A276, C360/B16, C3604BD/H3250 f. Packing: PTFE, PEEK g. Packing washer: SS316/A479, alloy 400/B164 h. Stem: SS316/A276, C360/B16, alloy 400/B164 3. End connection a. Male or female NPT/ISO: 1/8", 1/4", 3/8", 1/2" b. Hy-lok tube fitting manufactured by HY-LOK CORPORATION: 1/8", 1/4", 3/8", 1/2", 3/4", 3/ 6/ 8/ 10/ 12 mm

**Tier:**

3

**Ratings:**

1. Pressure-temperature rating a. Stainless steel body 1) PTFE (Packing): 344 bar (5,000 psi) at 38 deg.C ~ 236 bar (3,435 psi) at 232 deg.C 2) PEEK (Packing): 344 bar (5,000 psi) at 38 deg.C ~ 215 bar (3,130 psi) at 315 deg.C b. Brass body: 1) PTFE or PEEK (Packing): 206 bar (3,000 psi) at 38 deg.C ~ 26 bar (390 psi) at 204 deg.C c. Alloy 400 body 1) PTFE (Packing): 206bar (3,000 psi) at 38 deg.C ~ 164bar (2,380 psi) at 232 deg.C 2) PEEK (Packing): 206bar (3,000 psi) at 38 deg.C ~ 163bar (2,375 psi) at 315 deg.C 2. The minimum design temperature: -18 deg.C

**Service Restrictions:** 1. Unit Certification is not required for this product. 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. 2. Materials are to be suitable for intended service at the valve's pressure-temperature rating. 3. Valves conveying flammable fluids are to be constructed of steel or other materials with a melting point above 930 deg. C and with an elongation above 12%. in accordance with 4-6-2/3.5 of the SVR. 4. Regarding end connection, "Hy-lok tube fittings" are to be of approved type by ABS. 5. For classes I and II piping, the pressure rating of taper-thread joints is to comply with 4-6-2/5.5.5 (a) of the SVR. 6. Taper-thread joints for hydraulic oil system may be used without pressure limitation for connection to equipment only, such as pumps, valves, cylinders, accumulators, gauges and hoses. When such fittings are used solely to join sections of pipe, they are to be in accordance with 4-6-2/5.5.5(a) of the Steel Vessels Rules. However, hydraulic systems for the following services are to comply with 4-6-2/5.5.5(a) of the Steel Vessels Rules in all respects: a. Steering gear hydraulic systems b. Controllable pitch propeller hydraulic systems c. Hydraulic systems associated with propulsion or propulsion control

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

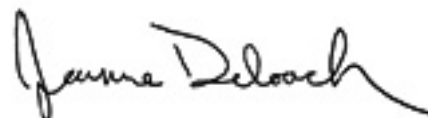
**Notes / Documentation:** 1. Dwg. No. 2015D01J01 (Rev.0) "NV Series Needle Valve" dated 1 April 2015 2. Burst test reports a. BK2825624 issued by ABS Surveyor dated 4 February 2015 b. BK2873438 issued by ABS Surveyor dated 7 April 2015

**Term of Validity:** This Product Design Assessment (PDA) Certificate 15-BK1355167-PDA, dated 21/Aug/2015 remains valid until 20/Aug/2020 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product. Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA. Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

**ABS Rules:** The Rules for Conditions of Classification, Part 1 2015 Steel Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following: Steel Vessels (2015): 4-6-2/5.15

**National Standards:**  
**International Standards:**  
**Government Authority:**  
**EUMED:**  
**Others:**

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	15-BK1355167-PDA	20/AUG/2015	20/AUG/2020



ABS Programs

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 was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. 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.