



CERTIFICATE NUMBER	20-2006653-PDA
EFFECTIVE DATE	08-Jul-2020
EXPIRY DATE	07-Jul-2025
ABS TECHNICAL OFFICE	Houston ESD - Piping

CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

EATON

located at

**HYDRAULICS GROUP, FILTRATION DIVISION, 44 APPLE STREET,
TINTON FALLS, NJ, United States, 07724**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product Strainer

Model Model 72

This Product Design Assessment (PDA) Certificate remains valid until 07/Jul/2025 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.

American Bureau Of Shipping
Yongjin Lee,Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

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44 APPLE STREET

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Tier: 3 - Type Approved, unit certification not required

Product: Strainer**Model: Model 72****Intended Service:**

Marine and Offshore Applications - Fuel oil, lube oil, fresh water and sea water systems for marine vessels and offshore installations

Description:

Simplex basket strainers with flanged or threaded connections and fitted with a swinging yoke on top for removal of the basket. The strainers covered by this certificate are available in the following materials: Ductile Iron (ASTM A395), Carbon Steel (ASTM WCB), Stainless Steel (ASTM A351 CF8M) and Bronze (ASTM B148 C95400).

Rating:

Design Pressure: 200 psi (13.8 bar)

Design Temperature: 100degF (37.8degC)

Ductile Iron (ASTM A395); 150 # Flanged (ASME B16.42); Sizes: 1", 1.5", 2", 2.5", 3", 4", 5" & 6";

Ductile Iron (ASTM A395); NPT (ASME B1.20.1); Sizes: 1", 1.5", 2" & 2.5";

Carbon Steel (ASTM WCB); 150 # Flanged (ASME B16.5); Sizes: 1", 1.5", 2", 2.5", 3", 4" & 6";

Carbon Steel (ASTM WCB); NPT (ASME B1.20.1); Sizes: 1", 1.25", 1.5", 2", 2.5" & 3";

Stainless Steel (ASTM A351 CF8M); 150 # Flanged (ASME B16.5); Sizes: 1", 1.5", 2", 2.5", 3", 4" & 6";

Stainless Steel (ASTM A351 CF8M); NPT (ASME B1.20.1); Sizes: 1", 1.25", 1.5", 2", 2.5" & 3";

Bronze (ASTM B148 C95400); 150 # Flanged (ASME B16.24); Sizes: 1", 1.5", 2", 2.5", 3", 4", 5" & 6";

Bronze (ASTM B148 C95400); NPT (ASME B1.20.1); Sizes: 1/2", 3/4", 1", 1.25", 1.5", 2", 2.5" & 3";

Service Restriction:

1) Unit Certification is not required for this product. If the manufacturer or purchaser's 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) Strainers for piping systems containing flammable fluids are to be constructed of steel or other materials approved by ABS as per 4-6-2/3.5 of the Marine Vessel Rules.

Comments:

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

2) The strainers' body is to bear permanent identification, such as manufacturer's name or trademark, standard of compliance, material identity, pressure rating, etc., as required by the standard of compliance (ASTM F1199-88 or ASTM F1200-88, as applicable), as per 4-6-1/7.1.4 & Table 2 of the Marine Vessel Rules.

3) The installation of the strainers is to comply with the applicable requirements in 4-6-5/3.3.4, 4-6-5/3.5.4, 4-6-5/5.3.6, 4-6-5/5.5.2 and 4-6-5/7.7.2 of the Marine Vessel Rules, as applicable.

Notes/Drawing/Documentation:

ABS Manufacturing Assessment No. 17-NY3382831.R1 - ABS-TF-Manufacturing Assessment, dated 13 Sep 2017;

Revision: -, Pages: 1

ASTM F1199-88 (2010) & ASTM F1200-88 (2010), Letter of Conformance, Revision: A,

Document No. CALC4022, CALCULATION 1" 150# FF MODEL 72 DUCTILE IRON, Revision: A,

Document No. CALC4023, CALCULATION 1 1/2" 150# FF MODEL 72 DUCTILE IRON, Revision: A,

Document No. CALC4024, CALCULATION 2" 150# FF MODEL 72 DUCTILE IRON, Revision: A,

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Document No. CALC4025, CALCULATION 2-1/2" 150# FF MODEL 72 DUCTILE IRON, Revision: A,
Document No. CALC4026, CALCULATION 3" 150# FF MODEL 72 DUCTILE IRON, Revision: A,
Document No. CALC4027, CALCULATION 4" 150# FF MODEL 72 DUCTILE IRON, Revision: A,
Document No. CALC4028, CALCULATION 5" 150# FF MODEL 72 DUCTILE IRON, Revision: A,
Document No. CALC4029, CALCULATION 6" 150# FF MODEL 72 DUCTILE IRON, Revision: A,
Drawing No. Material Designations, Material designations BRZ, SS, CS, DI, Revision: A,
Drawing No. SD072011, model 72 simplex strainer NPT THREADED CONNECTIONS sizes 3/8" thru 3" bronze,
Revision: F,
Drawing No. SD072012, model 72 simplex strainer NPT THREADED CONNECTIONS sizes 3/4" thru 3"
STAINLESS STEEL, Revision: F,
Drawing No. SD072013, model 72 simplex strainer NPT THREADED CONNECTIONS sizes 3/4" thru 3" CARBON
STEEL, Revision: F,
Drawing No. SD072021, model 72 simplex strainer 150# flat faced flange sizes 1" thru 1-1/2" CARBON STEEL,
Revision: D,
Drawing No. SD072022, model 72 simplex strainer 150# flat faced flange sizes 2" thru 6" CARBON STEEL,
Revision: F,
Drawing No. SD072023, model 72 simplex strainer 150# flat faced flange sizes 1" thru 1-1/2" STAINLESS STEEL,
Revision: E,
Drawing No. SD072025, model 72 simplex strainer 150# flat faced flange sizes 2" thru 6" STAINLESS STEEL,
Revision: E,
Drawing No. SD072026, model 72 simplex strainer 150# flat faced flange sizes 2" thru 6" DUCTILE IRON,
Revision: A,
Drawing No. SD072031, model 72 simplex strainer 150# flat faced flange sizes 1" thru 1-1/2" bronze, Revision: B,
Drawing No. SD072032, model 72 simplex strainer 150# flat faced flange sizes 2" thru 6" bronze, Revision: E,
Drawing No. ST0720037T1C, 3/8" #72 150#THD BRZ STD, Revision: A,
Drawing No. ST0720050T1C, 1/2" #72 150#THD BRZ STD, Revision: A,
Drawing No. ST0720075T1C, 3/4" #72 150#THD BRZ STD, Revision: A,
Drawing No. ST072007BT20A, 3/4" #72 150#THD SS, Revision: A,
Drawing No. ST072007BT30A, 3/4" #72 150#THD CS, Revision: A,
Drawing No. ST0720100T1C, 1" #72 150#THD BRZ STD, Revision: A,
Drawing No. ST0720100T2C, 1" #72 150#THD SS, Revision: A,
Drawing No. ST0720100T3C, 1" #72 150#THD CS STD, Revision: A,
Drawing No. ST072010BF10A, 1" #72 150#FF BRZ B62 OR B148 ALLOY 954, Revision: A,
Drawing No. ST072010BF60A, 1" #72 150#FF DI ASTM A395, Revision: A,
Drawing No. ST072010BR20A, 1" #72 150#RF SS, Revision: A,
Drawing No. ST072010BR30A, 1" #72 150#RF CS, Revision: A,
Drawing No. ST0720125T1C, 1-1/4" #72 150#THD BRZ STD, Revision: A,
Drawing No. ST0720125T3C, 1-1/4" #72 150#THD CS, Revision: A,
Drawing No. ST072012BF10C, 1-1/4" #72 150#FF BRZ B62 OR B148 ALLOY 954, Revision: A,
Drawing No. ST072012BT20A, 1-1/4" #72 150#THD SS, Revision: A,
Drawing No. ST0720150T1C, 1-1/2" #72 150#THD BRZ STD, Revision: A,
Drawing No. ST0720150T2C, 1-1/2" #72 150#THD SSTL, Revision: A,
Drawing No. ST0720150T3C, 1-1/2" #72 150#THD CS STD, Revision: A,
Drawing No. ST072015BF10A, 1-1/2" #72 150#FF BRZ OR B148 ALLOY 954, Revision: A,
Drawing No. ST072015BF60A, 1-1/2" #72 150#FF DI ASTM A395, Revision: A,
Drawing No. ST072015BR20A, 1-1/2" #72 150#RF SS, Revision: A,
Drawing No. ST072015BR30A, 1-1/2" #72 150#RF CS, Revision: A,
Drawing No. ST0720200F1C, 2INCH #72 150#FF BRZ, Revision: A,
Drawing No. ST0720200F6C, 2" #72 150#FF DI ASTM A395, Revision: A,
Drawing No. ST0720200R2C, 2" #72 150#RF SS, Revision: A,
Drawing No. ST0720200R3C, 2" #72 150#RF CS, Revision: A,
Drawing No. ST0720200T1C, 2" #72 150#THD BRZ STD, Revision: A,

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Drawing No. ST0720200T2C, 2" #72 150#THD SS STD, Revision: A,
Drawing No. ST0720200T3C, 2" #72 150#THD CS STD., Revision: A,
Drawing No. ST0720250F1C, 2-1/2INCH #72 150#FF BRZB62 OR B148 ALLOY 954, Revision: A,
Drawing No. ST0720250F6C, 2-1/2"#72 150#FF DI ASTM A395, Revision: A,
Drawing No. ST0720250R2C, 2-1/2" #72 150#RF SS, Revision: A,
Drawing No. ST0720250R3C, 2-1/2" #72 150#RF CS, Revision: A,
Drawing No. ST0720250T1C, 2-1/2" #72 150#THD BRZ STD, Revision: A,
Drawing No. ST0720250T2C, 2-1/2" #72 150#THD SS STD, Revision: A,
Drawing No. ST0720250T3C, 2-1/2" #72 150#THD CS STD, Revision: A,
Drawing No. ST0720300F1C, 3INCH #72 150#FF BRZ, Revision: A,
Drawing No. ST0720300F6C, 3" #72 150#FF DI ASTM A395, Revision: A,
Drawing No. ST0720300R2C, 3" #72 150#RF SS, Revision: A,
Drawing No. ST0720300R3C, 3" #72 150#RF CS, Revision: A,
Drawing No. ST0720300T1C, 3" #72 150#THD BRZ STD, Revision: A,
Drawing No. ST0720300T2C, 3" #72 150#THD SS STD, Revision: A,
Drawing No. ST0720300T3C, 3" #72 150#THD CS STD, Revision: A,
Drawing No. ST0720400F1C, 4INCH #72 150#FF BRZ STDOR B148 ALLOY 954, Revision: A,
Drawing No. ST0720400F6C, 4" #72 150#FF DI ASTM A395, Revision: A,
Drawing No. ST0720400R2C, 4" #72 150#RF SS, Revision: A,
Drawing No. ST0720400R3C, 4" #72 150#RF CS, Revision: A,
Drawing No. ST0720500F1C, 5" #72 150#FF BRZ B62OR B148 ALLOY 954, Revision: A,
Drawing No. ST0720500F6C, 5" #72 150#FF DI ASTM A395, Revision: A,
Drawing No. ST0720600F1C, 6INCH #72 150#FF BRZ, Revision: A,
Drawing No. ST0720600F6C, 6" #72 150#FF DI ASTM A395, Revision: A,
Drawing No. ST0720600R2C, 6" #72 150#RF SS, Revision: A,
Drawing No. ST0720600R3C, 6" #72 150#RF CS, Revision: A,
Drawing No. ST072010BT60A, 1" #72 DUCTILE IRON NPT, Revision A
Drawing No. ST072015BT60A, 1 1/2" #72 DUCTILE IRON NPT, Revision A
Drawing No. ST072020BT60A, 2" #72 DUCTILE IRON NPT, Revision A
Drawing No. ST072025BT60A, 2 1/2" #72 DUCTILE IRON NPT, Revision A.

Terms of Validity:

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STANDARDS**ABS Rules:**

The Rules for Conditions of Classification, 2020 Marine Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:
2020 Rules for Building and Classing Marine Vessels: 4-4-1/Table 6, 4-6-1/7 and 4-6-2/3

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Rules for Conditions of Classification - Offshore Units and structures, 2020 Mobile Offshore Units Rules 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

2020 Rules for Building and Classing Mobile Offshore Units: 4-2-2/1.3, 4-2-2/3, 6-1-6/5 and 6-1-6/Table 1

National:

ASTM F1199 - 88 (Reapproved 2019) - Standard Specification for Cast (All Temperatures and Pressures) and Welded Pipe Line Strainers (150 psig and 150°F Maximum);

2019 ASME BPVC, Section VIII, Division 1 - Boiler & Pressure Vessel Code;

ASME B16.5-2017 - Pipe Flanges and Flanged Fittings: NPS 1/2 through NPS 24 Metric/Inch Standard;

ASME B16.24-2016 - Cast Copper Alloy Pipe Flanges, Flanged Fittings, and Valves: Classes 150, 300, 600, 900, 1500 and 2500;

ASME B16.42-2016 - Ductile Iron Pipe Flanges and Flanged Fittings, Classes 150 and 300;

ASME B1.20.1-2013 - Pipe Threads, General Purpose (Inch);

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA