



CERTIFICATE NUMBER	20-2036324-PDA
EFFECTIVE DATE	06-Oct-2020
EXPIRY DATE	05-Oct-2025
ABS TECHNICAL OFFICE	London Engineering Department

CERTIFICATE OF Product Design Assessment

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

PARKER HANNIFIN MANUFACTURING LIMITED

located at

**INSTRUMENTATION PRODUCTS DIVISION EUROPE, RIVERSIDE
ROAD, BARNSTAPLE, United Kingdom, EX31 1NP**

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 Valve

Model H, HRPV, HPB, HPM, HCY, H8B, MF, PB, FC, HAHM, HPDM, HCDM, CC, HPRV, 20K, HNV, HGV, VG, HVG and HYNV

This Product Design Assessment (PDA) Certificate remains valid until 05/Oct/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

Mohammed K.M. Abbas, 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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Tier: 3 - Type Approved, unit certification not required

Product: Valve
Model: H, HRPV, HPB, HPM, HCY, H8B, MF, PB, FC, HAHM, HPDM, HCDM, CC, HPRV, 20K, HNV, HGV, VG, HVG and HYNV

Intended Service:
Valves for Marine and Offshore tube / pipe systems: hydraulic, pneumatic, instrumentation, refrigeration.

Description:
'H' Series Compact Distribution Manifold, Series HCDM:
Distribution manifold unit in choices of 5 or 10 metal seated needle valves with PTFE gland packing.

20K H-Series needle valves & 20K Hi-Pro Ball valve: with PTFE gland packing

Hi-Pro Distribution Manifold, Series HPDM:
Modular Distribution Manifold with up to 20 Parker Hi-Pro ball valve outlets.

HPRV Proportional Relief valve: with moulded seat, orifice size of 3.6 mm, and maximum relieving flow of water 1.686 l/min @ 150 psi with zero back pressure & air 313 l/min @ 150 psi with zero back pressure.

Globe valves, HNV, HGV and VG Series: with PTFE or graphite gland packing.

H Series rising plug valves (HRPV series): with PTFE packing & PEEK soft seat

Multi-port gauge valves (HGV series): with PTFE or graphite gland packing.

Single port gauge valves with vent (HVG series): with PTFE or graphite gland packing.

Outside screw and yoke globe pattern needle valves (HYNV series): with PTFE or graphite gland packing.

Hi-Check Non-Return Valve: with Nitrile, Fluorocarbon, Ethylene Propylene Rubber (EPR) and Highly Fluorinated Fluorocarbon Rubber seats

'H' Series 3 and 5 valve differential pressure manifolds: with PTFE or graphoil gland packing

Double Block and Bleed Flanged Products with Fugitive Emission options: Parker Pro-Bloc:
One-piece integral forging incorporating up to 3 ball valves or mixture of ball and needle design, with PTFE packing, PEEK ball & needle seats.

Parker Monoflange (MF) manifolds:

Combination of needle and Outside Screw & Yoke valves, with PTFE or graphoil gland packing

Parker Hi-Pro Manifolds:

Combination of ball and needle valves with traditional NPT threaded connections

Hi-Pro ball valve for high performance process isolation: two piece bi-directional ball valves with PTFE and Graphoil gland packings & PEEK and PTFE ball seat materials.

'H' Series Two valve manifolds: with PTFE or graphoil gland packing

H series large bore needle / globe isolation valves: metal seated globe style needle isolation valves.

High Pressure "H" & "Y" Distribution Manifold, Series: DM (H or Y): High Pressure Distribution Manifold with up to 20 globe style needle valves. Alternatively using outside screw and yoke style (O.S. & Y.) valves.

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Hi-Pro Air Header Manifold, Series: HPAHM: High Pressure Air Header Manifold with up to 20 Parker Hi-Pro ball valve outlets, assembled to manifold body using welded nipple to taper threaded connection.

Rating:

Consult Pressure- Temperature Curve in Manufacturer's Catalogue.

'H' Series Compact Distribution Manifold, Series HCDM:

Maximum pressure: 6,000 psi (414 bar), Maximum Temperature: 260 C, Material: 316 Stainless steel

20K H-Series needle valves:

Maximum pressure: 20,000 psi (1379 bar), Temperature rating: -54 C to +200 C, Material: 316 Stainless steel

20K Hi-Pro ball valves:

Maximum pressure: 20,000 psi (1379 bar), Temperature rating: -20 C to +200 C, Material: 316 Stainless steel

Hi-Pro Distribution Manifold, Series HPDM:

Maximum pressure: 6,000 psi (414 bar), Temperature rating: -54 C to +232 C, Material: 316 Stainless steel

HPRV Proportional Relief valve:

Maximum pressure: 6,000 psi (414 bar), Temperature rating: -57 C to +204 C, Material: 316 Stainless steel

Globe valves, HNV, HGV and VG Series:

Maximum pressure: 10,000 psi (689 bar), Temperature rating: -54 C to +538 C, Material: 316 Stainless steel

H Series rising plug valves (HRPV series):

Maximum pressure: 10,000 psi (689 bar), Temperature rating: maximum +200 C, Material: 316 Stainless steel

Multi-port gauge valves (HGV series):

Maximum pressure: 10,000 psi (689 bar), Temperature rating: -54 C to +538 C, Material: 316 Stainless steel

Single port gauge valves with vent (HVG series):

Maximum pressure: 6,000 psi (414 bar), Temperature rating: -54 C to +538 C, Material: 316 Stainless steel

Outside screw and yoke globe pattern needle valves (HYNV series):

Maximum pressure: 10,000 psi (689 bar), Temperature rating: -54 C to +538 C, Material: 316 Stainless steel

Hi-Check Non-Return Valve:

Maximum pressure: 10,000 psi (689 bar), Material: 316 Stainless Steel, Duplex, Monel

Temperature rating:

Nitrile seated: -34 C to +135 C,

Fluorocarbon seated: -26 C to +204 C,

EPR seated: -57 C to +135 C and

Highly Fluorinated Fluorocarbon Rubber seated: -26 C to +93 C

'H' Series 3 and 5 valve differential pressure manifolds:

Maximum pressure: 10,000 psi (689 bar), Temperature rating: -54 C to +538 C, Material: 316 Stainless steel

Double Block and Bleed Flanged Products with Fugitive Emission options:

Parker Pro-Bloc Manifolds:

Material: Carbon Steel, Stainless Steel, Monel, Duplex, Super Duplex, Hastelloy, Low Temp. C. St., 6Mo, 825,

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Inconel 625; Flange Class: 150 to 10K

Parker Monoflange (MF) Manifolds:

Material: Carbon Steel, Stainless Steel, Monel, Duplex, Super Duplex, Hastelloy, Low Temp. C. St., 6Mo, Inconel 625; Flange Class: 150 to 2500

Parker Hi-Pro Manifolds:

Maximum pressure: 10,000 psi (689 bar), Temperature rating: -54 C to +232 deg C, Material: 316 Stainless steel

Hi-Pro ball valve for high performance process isolation:

Maximum pressure: 10,000 psi (689 bar), Temperature rating: -54 C to +232 degC, Material: 316 Stainless steel

'H' Series Two valve manifolds:

Maximum pressure: 10,000 psi (689 bar), Temperature rating: -54 C to +538 degC, Material: 316 Stainless steel

H Series Large Bore

Service Restriction:

Unit Certification is not required for this product.

If the manufacturer or purchaser requests 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. All valves are to bear permanent identification, such as the manufacturer's name or trademark, material identify, pressure rating, etc. at which the manufacturer guarantees the valves to meet the requirements of the manufacturer's standards. Such markings may be cast or forged integral with, stamped on, or securely affixed by nameplate on the component, and are to serve as a permanent means of identification of the component throughout its service life in accordance with 4-6-1/7.1.3 and 4-6-1/7.1.4 of the ABS Marine Vessels Rules.
3. Copies of the certificate material test reports are to be made available to the attending Surveyor and are to be traceable to the material.

Notes/Drawing/Documentation:

- 1) Parker Product Catalogs: Cat 4190-DM, Catalog 4190-HH/20K, Cat 4190-HPDM, Catalog 4190-HPRV, Catalog 4190-HV, Catalog 4190-PD, Cat 4190 CV, Catalog 4190-FM, Catalog 4190-FP, Catalog 4190-FP-ACC, Catalog 4190-HBM, Catalog 4190-HBV, Catalog 4190-PM, Catalogue 4190-CCIMS & Cat. 4190-HH/LBV.
- 2) TUV SUD Industrie Service GmbH, Technical Report no. IS-DDB-MAN/155/08 dated 28 Aug 2008.
- 3) TUV SUD Industrie Service GmbH, Technical Report no. IS-DDB-MAN/156/08 dated 15 Oct 2008.
- 4) Score (Europe) Ltd, Fire Test Report Number 282539-0001 dated 15 March 2012, API 6FA Test for for 8mm 10K Needle Valve.
- 5) Score (Europe) Ltd, Fire Test Report Number 296818-0001, dated 01 June 2012, API 6FA Test for 4mm 10K Needle Valve
- 6) OS&Y Needle Valve - Fire Test Assembly - HYNVS8FFHPFS
- 7) KCO Valve Fire Test Assembly - REV D

Terms of Validity:

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Rules and Standards.

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STANDARDS

ABS Rules:

2020 Marine Vessel Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-1/7.1.4, 4-6-2/3.1.7, 4-6-1/7.5.2, 4-6-2/3, 4-6-2/5.11, 4-6-2/5.13, 4-6-2/5.17.

2020 ABS Rules for Conditions of Classification - Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3.

2020 Rules for Building and Classing Mobile Offshore Units 4-2-2/9.

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA