ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Industrie Service

Flowserve Ahaus GmbH
von-Braun-Straße 19a
48683 Ahaus

The above organization is hereby entitled, on the basis of certificate no. 21 07 90321 002 and the appendant test report „VU20-09-3“, to affix the certification body's certification mark shown below to the following product (see description below).

The product meets the following requirements according to DIN EN ISO 15848-1:2017 and VDI 2440:2000 / German Clean Air Act (TA-Luft 2021)

– Vacuum method:	Helium/Annex A (DIN EN ISO 15848-1:2017)
– Leakage class:	BH
– Temperature class:	RT bis +200 °C
– Endurance class:	C03 (2500 cycles)
– Design pressure:	PN 16 / CL 150
– Test condition:	RT / 16 bar, +200 °C / 6 bar
– Number of stem seal adjustments:	none (SSA0)

The basis of this certificate is the testing principles according to the German Clean Air Act (TA-Luft) DIN EN ISO 15848-1:2017, which contains the observance of the specific leakage rate according to the German Clean Air Act (TA-Luft) DIN EN ISO 15848-1 [$\lambda \leq 1 \times 10^{-4}$ mg /s x m] and VDI 2440 [$\lambda \leq 1 \times 10^{-2}$ mbar x l / (s x m)] under the above-mentioned operating conditions.

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Product description:

– Ball valve:	AKH2/AKH2.2/AKH2A/AKH3/AKH5/AKH6/ AKH7/APN/ATP/AtoPro/AMP3/Atostar
– Nominal diameters:	½“ - 14“ DN: 15 - 350
– Design:	ball valve
– Packing:	specific packing design Roof sleeves with Viton O-rings
– Stem diameter:	based on test diameter

– Required surface pressure in the sealing system according to the operating manual
– Quality of the packing materials in accordance with purchase order specifications
– Surface roughness in accordance with drawings
– Dimensions, shape and position tolerances in accordance with drawings
– Spring characteristic of the preloaded springs accordance with purchase order specifications

Test identification:

ISO FE BH – C03 – SSA0 – t (RT- +200 °C) – PN 16 / ½“ - 14“ / DN 15 - 350

Extension of qualification to untested valves (Paragraph 8 of ISO 15848-1:2017):

– The valves of the same type of construction relating to material, design (shape), tolerances classes and surface finishes specifications of all components which affect the sealing performance.
– The valve Class or PN designation is equal or lower.
– Stem diameters are within the range of 50 % lower and 100 % higher of those of the test valve. Do / 2 ≤ D ≤ 2Do, where Do is the shaft diameter of the tested valve.

This certificate is valid until Juli 2024.
Annual monitoring of the production.

Munich, 2022-12-20

TÜV SÜD Industrie Service GmbH
Institute for Plastics

i. A. Mindl

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