



Industrie Service

Attestation of TA-Luft according to DIN EN ISO 15848-1 and VDI 2440

Flowserve (Austria) GmbH
Control Valves-Villach Operation
Kasernengasse 6
9500 Villach
AUSTRIA

Hereby, it is certified that the control valve Flow Pro of the above mentioned company has been tested and approved according to TA-Luft, DIN EN ISO 15848-1:2006 and VDI 2440:2000. Details could be taken from the corresponding test report TR13 001.

The product meets the following requirements according to DIN EN ISO 15848-1 and VDI 2440:

- Vacuum method: Helium / Annex A (ISO 15848-1:2006)
- Leakage class: B
- Temperature class: -196 °C to RT
- Endurance class: CC1 (20.000 cycles)
- Design pressure: PN160
- Test condition: RT/100 bar, -196 °C/100 bar
- Number of stem seal adjustments: none (SSA0)

The basis of attestation are the testing principles according to the German Clean Air Act (TA-Luft) DIN EN ISO 15848-1:2006, 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 [$\lambda \leq 1 \times 10^{-4}$ mbar x l / (s x m)] under the above-mentioned operating conditions.

Product description:

- Control valve: Flow Pro PN160
- Design: Insulating Bonnet
- Packing: LATTYFLON 3206 SO
- Required surface pressure in the sealing system according to the operating manual
- Specific packing design
- 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 – CC1 – SSA0 – t (-196 °C, +40 °C) – Test pressure 100 bar

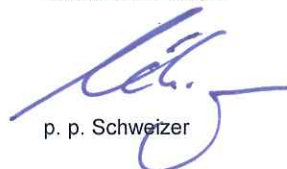
Extension of qualification to untested valves (Paragraph 8 of ISO 15848-1:2006):

- The valves of the same type of construction as FlowTop and FlowPak relating to material, design (shape), tolerances classes and surface finishes specifications of all components which affect sealing performance.
- The valve Class or PN designation is equal or lower.
- Stem diameters are within the range of 50 % lower and 200 % higher of those of the test valve.

This certificate is valid until November 2016.

Munich, 05th November 2013

TÜV SÜD Industrie Service GmbH
Institute for Plastics


p. p. Schweizer

