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Confirmation

As per acc. to TA-Luft/VDI 2440/ VDI 3479 and EN ISO 15848-1: 2015

TÜV SÜD Industrie Service

Name and postal address of manufacturer:

Kingdom Flow Control Co., Ltd.
No.23-1, Nan-he West Rd., Nan-tou Town,
Zhongshan City, 528427, Guangdong Province,
P. R. China.

We hereby certify that the ball valve specified below and made by above company was tested and approved acc. To VDI 2440/ VDI 3479/ EN ISO 15848-1 with more stringent requirements regarding the leakage rate. The details are outlined in the pertinent test report
It reflect only our witness findings to tested valve described herein and does not refer to any other matters. This confirmation only includes the external leakage test to the stem assembly, excluding any valve body part or sealing leak rate measurement.
Detail valve technical data and manufacturer information refer to annex and test report.

Poduct description:

Ball Valve: KV-L20H, Nominal diameter: NPS1/ Class 800(2000 WOG)

The product satisfies the following requirements:

- TA-Luft standard(measurement of leakage) as per VDI 2440/ VDI 3479
- Leakage test according to EN ISO 15848-1($\lambda \leq 1*10^{-4} mg*s^{-1}*m^{-1}$)

Service conditions:

- Ball valve: KV-L20H
- Tightness class: BH
- Load cycles: 1500/CO2
- Temperature: -29ºC ~ 100ºC
- Visual verification of the required surface pressure set forth in the operatng manual.
- Specified structure of the seal assembly

Performance category:

ISO FE BH-CO2-t(-29 to +100ºC)-Class 800-ISO15848-1

The product meets the requirements for leakage measurement defined in Secion 5.2.6.4 of the TA-Luft standard.

The confirmation covers leakage measurement carried out a stem seal as per VDI 2440/ VDI 3479 to verify tightness/ compliance with the specific leakage rate defined in the TA-Luft standard [$\lambda \leq 1*10^{-4}$mbar x l/(s x m); Δp=16 bar depending on type]; as per VDI 2440/ VDI 3479/ EN ISO 15848-1 to verify tightness/ compliance with the specific leakage rate defined in the TA-Luft standard [$\lambda \leq 1*10^{-4}$mbar x l/(s x m), and extended tests under the above operating conditions.

This confirmation will not be valid until Kingdom Flow Control Co., Ltd. Has completed leak and material testing and prepared a manufacturer's certificate in accordance with EN 10204 3.1, including the exact type designation plus serial number.

Beijing, Jun. 30th, 2016
(Place, date)

TÜV SÜD Industrie Service GmbH
Beijing Branch

Mr. LU Bingjiang

TÜV SÜD Industrie Service GmbH

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Industrie Service

ANNEX: Data for Ball Valve: KV-L20H

Name of manufactuer: Kingdom Flow Control Co., Ltd.

Address of manufacturer: No.23-1,Nan-he West Rd., Nan-tou Town, Zhongshan City, 528427, Guangdong Province, P. R. China.

Test Report: C160016 dated 2016-06-28

We hereby certify that the valve below has passed the fugitive emission test successfully according to Class BH of ISO 15848-1:2015 for a total of 1500 cycles.

Model	Ball Valve: KV-L20H
Nominal Diameter	NPS1/ Class 800(2000WOG)
Type of Valve	Ball Valve
Stem Sealing	PTFE+FKM+PTFE
Body Sealing	PTFE
Valve assembly drawing no.	91624103000004670, Rev.0
Test Gas	Helium
Tightness Class	B: Leakage Rate≤10-4 mg.s-1.m-1
Endurance Class	CO2; 1500 mechanical cycles
Temperature class	-29°C ~100°C

The test was verified by TÜV SÜD engineer according to requirements of ISO15848-1:2015 and found compliance with the above mentioned requirements. The test and the classification is based on a type approval and does not include the factory inspection.

The tested valve covers performance class (para.6.6):

ISO FE BH-CO2-t(-29 to +100°C)-Class 800-ISO15848-1.

Extension of qualification (in particular) to untested valves in accordance with paragraph 8 of ISO 15848-1.

Stem sizes qualified: Ø55/ Half to twice (included) the tested valve diameter.

Pressure ranges qualified: Class 600/ the valve class or PN designation is equal or lower

Beijing/P. R. China
Jun 30th, 2016

TÜV SÜD Industrie Service GmbH
Beijing Branch

(Liu Bingjiang)