WEKA AG · Switzerland
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EU-KONFORMITÄTSERKLÄRUNG
EU DECLARATION OF CONFORMITY

Wir / We **WEKA AG**

(Name des Herstellers) (Manufacturers name)

erklären in alleiniger Verantwortung, dass das Produkt
declare under our sole responsibility that the product

Kryo-Ventil / Cryogenic valve

Typen / Types: **TDV, TEV, TGV, TYV, TZV, WDV, WEV, WGV, WZV**

Ausführung / Execution: **PM-, PK-, Hlc-, Hlcp-, Hls-, Hlsp-, HL-, EG-d, g, f**

(Bezeichnung Typ oder Modell, Los-, Chargen- oder Seriennummer, möglichst Herkunft und Stückzahl)
(Name, type or model, lot, batch or serial number, possibly sources and numbers of items)

auf das sich diese Erklärung bezieht, mit den folgenden Normen oder normativen Dokumenten übereinstimmt
to which this declaration relates is in conformity with the following standards or other normative documents

DIN EN 12516-2:2015-01
EN ISO 80079-36:2016
EN ISO 80079-37:2016

(Titel und/oder Nummer sowie Ausgabedatum der Normen oder der anderen normativen Dokumente)
(Title and/or number and date of issue of the standards or other normative documents)

Gemäss den Bestimmungen der Richtlinie(n)
Following the provisions of directive(s)
(falls zutreffend) (if applicable)

2014/68/EU (PED)	Art 4.3	WEKA AG (Art. 4.3)	
Qualitätssicherung /	Kat. I	WEKA AG (CE) Modul / module A	
quality assurance	Kat. ≥ II	DNV (CE 0575) Modul / module H	PEDH000000R
		DNV (CE 0575) Modul / module H1	PEDH10000017
		DNV AS, Veritasveien 1, 1363 Høvik, Norway	
2014/34/EU (ATEX)		Eurofins Conformity Statement	SEV 19 ATEX 0321
		Eurofins AG, Luppmenstrasse 3, 8320 Fehraltdorf, Switzerland	

(Richtlinie, Geltungsbereich / Kategorie, ggf. Name, Nummer und Anschrift der notifizierten Stelle)
(Directive, scope / category, if necessary name, number and address of notified body)

(Ort und Datum der Ausstellung)
(Place and date of issue)

Bäretswil, 19.04.2022

(Name und Unterschrift des Befugten)
(Name and signature of authorized person)

Marc Hofmann
(Quality Manager)

Pascal Erni
(Product Manager)

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Conformity Statement

(1)

(2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 2014/34/EU**

(3) Certificate number: **SEV 19 ATEX 0321**

(4) Product: Cryogenic valves TzxV, WzxV, BV

(5) Manufacturer: WEKA AG

(6) Address: Schürlistrasse 8, 8344 Bäretswil, Switzerland

(7) This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) Eurofins certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to Directive 2014/34/EU of the European parliament and of the Council, dated 26 February 2014.
The examination and test results are recorded in confidential report no. 19CH-00533.X03

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN ISO 80079-36:2016
EN ISO 80079-37:2016

Except in respect of those requirements listed at item 18 of the schedule.

(10) If the sign «X» is placed after the certificate number, it indicates that the product is subjected to special conditions for safe use specified in the schedule to this certificate. The sign "U" is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.

(11) This Conformity Statement relates only to the design and construction of the specified product and not to specific items of product subsequently manufactured.

(12) The marking of the product shall include the following:

II 2 G Ex h IIC T6 ...T3 Gb

Eurofins Electric & Electronic Product Testing AG
Notified Body ATEX

Martin Plüss
Product Certification

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(13) # Appendix

(14) **Conformity Statement no. SEV 19 ATEX 0321**

(15) **Description of product**

The above-mentioned valves are used as shut-off valves or control valves to regulate fluids (gases or liquified gases). The flow is usually controlled by an actuator (pneumatic, electric or manual) by moving the insert to open/close the valve. The actuator is not part of this certification. It is separate certified.

TzxV
The housing is usually integrated in a vessel and thermic insulated by vacuum. For the implementation in the piping of customers application there are several designs available to get an optimal connection. The 'outer' part is placed on the 'warm' side of the valve (ambient temperature range).

WzxV and BV
These valves are usually not thermic insulated. The housing is implemented in the piping of customers application. There are several designs available to get an optimal connection. Valve and accessories are under environmental conditions.

For Ex applications there are two possible cases to be considered:
1. Explosion hazardous atmosphere inside the valve.
2. Explosion hazardous atmosphere outside the valve.

A typical application concerning Ex protection is the use of the valve for Hydrogen application. In normal operation the Hydrogen flow is controlled by the valve. The Hydrogen is pure and liquefied (-254°C). There is no explosive atmosphere inside or outside the valve.

While setting the system to work, for a shut-down or maintenance there could get Oxygen into the system and creates an explosive atmosphere. Also, a leakage could cause a mixture of Hydrogen and air and therefore an explosive atmosphere outside the valve.

These considerations result in a division concept of zone 2 or rarely in zone 1.

A further thinkable constellation is a valve for Helium (inert gas) in an LNG (Liquid Natural Gas) environment. In this case only the outer parts of the valve are influenced by the Ex protection (incl. actuator and accessories). There is no zone specified for the inner side of the valve but Zone 1 or 2 for the outer side of the valve.

Classification of installation and use:	stationary
Ingress protection:	More than IP66
Rated ambient temperature range (°C):	-40 °C to +150 °C
Liquid temperature range (°C):	-271.15 °C to +150 °C Depending of temperature class and type. See type description
Rated ambient temperature range (°C) for Ex Components	---

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Dependence of the temperature class on the maximum liquid temperature

Temperature class	Maximum fluid temperature
T6	+75 °C
T4	+125 °C
T3	+150 °C

Type key

...	-	...	...	...	...	V	DN...	/	PN...	...	-	...	h=...
1.		2.	3.	4.	5.	6.	7.		8.	9.		10.	11.

1. Type of actuator
   could be pneumatic, electric or manual
   Is not part of this certificate and must be checked separately for each case (must be certified separately). See notes for type key below for more information.
2. Valve type (warm or cold)
   T: cryogenic valve. basic type of valve for deep temperature fluids (cold valve), typical below -196°C
   W: warm valve, basic type of valve for higher temperatures (warm valve)
   B: break valve (warm or cold valve with special kv characteristic)
3. Special parameter (guard connection, vacuum test connection, flanged)
   empty = no specialities (standard)
   b: valve design stainless steel (all outer parts in stainless steel 316/316L)
   c: valve design stainless steel with marine type approval code (all outer parts in stainless steel 316/316L, weld seams can be x-rayed. static seal with c-ring, no pressure bearing thread > 25mm)
   d: connection for integral vacuum test
   f: flanged connection between valve housing and pipe
   g: with a He guard sealing to outside i.e. full double seal
   h: Static, metallic sealing (Helicoflex)
   Remark: The digit can be omitted or it can be a simple parameter, but it can also be combined up to 4 digits. E.g. "omitted" aa-TEQV DN250/PN40 or E.g. combined up to 4 aa-TbdfhEQV DN250/PN40
4. Valve body pattern
   E: valve body in angle pattern
   D: valve body in globe pattern, welded
   G: valve body in globe pattern
   Y: valve body in Y-pattern, 45°
   Z: valve body with slanted in- and outlet nozzles
5. Stem sealing type
   Empty = bellow sealing with safety sealing
   Q: Quad ring sealing, without safety sealing
   F: spring-loaded Quad ring stem sealing (typical for high pressure valves)
6. **V:** for "valve", fixed
7. **DN..:** nominal size in "mm"
8. **PN..:** nominal pressure in "bar", specify also the max. allowable working pressure (T<=amb.)

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9. Control type (control valve or shut-off valve)
   D: shut-off valve
   C: control valve

10. Actuator mode
    Is not part of this certificate and must be checked separately for each case (must be certified separately)
    For pneumatic actuators the mode is added
    Po: pneumatic valve, normally closed i.e. less of air supply valve closed
    Ps: pneumatic valve, normally open i.e. less of air supply valve open

11. Cryogenic length
    h=...: cryogenic length, h in "mm
    empty: without cryogenic length i.e. warm-valve

Notes about type key:

Type of actuator
PM: valve with pneumatical diaphragm actuator
PK: valve with pneumatical piston actuator
PKS: valve with pneumatical piston actuator and springs (safety valve)
HL valve with manual drive, pillar design

HI: valve with manual drive, integral design
HIc valve with manual drive, integral design, compact
HIcp valve with manual drive, integral design, compact, precision with nonius
HIs valve with manual drive, integral design, switch controlled
HIsp valve with manual drive, integral design, switch controlled, precision with nonius

EG: valve with electrical actuator

Ambient temperature range:
For the part of the valve which is outside the cold, insulated area
-40°C bis +60°C

Fluid temperature range:
TxV -271.15°C bis +50°C
WxV -30°C bis +50°C
BV -40°C bis +150°C

(16) **Specific conditions of use**
None

(17) **Essential health and safety requirements**
In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
None	

(18) **Drawings and documents**

Number	Sheet	Issue date	Description
See Test Report "Manufacturer's Documents"			