

Manufacturer's Declaration

within the meaning of Directive 2014/34/EU

We hereby declare,

Swissfluid AG


Industriestrasse 40, CH-5600 Lenzburg

that our fittings like

Diaphragm valves type SDV, cylinder valves type SCP, ball valves type SBV/SBW/SBT, sight glass fittings type SSP/SST, tubular sight glass fittings type SSP-T/SST-T, ball check valves type SBC, check valves type SSC, butterfly valves type SBP/ SBE (EPDM black, Viton FPM, NBR) , , inline sampling valves type SIV, sampling ball valves type SSB and reactor sampling systems type SRS

to which this declaration refers, **do not** fall within the scope of Directive 2014/34/EU!

It follows that...

1. ...our fittings may **not** be provided with a specific ATEX mark.
2. ...our fittings can be used in all hazardous areas if the process in which they are used does not represent a source of electrostatic charging.
3. materials must be used to avoid charging . Fittings equipped with conductive components may be used in hazardous areas, ie without restrictions in zones 0/20, 1/21 and 2/22.
4. ...the intended use of the fittings (with their pneumatic or electrical components) for the intended medium must be agreed with the manufacturer so that the design of the fittings is suitable for the application.
5. ...pneumatic and electrical structures may only be installed on Swissfluid fittings if they have been assessed in accordance with the directive and  provided with an ATEX label.
6. ...in order to dissipate the electrostatic charge that builds up via the conductive plastic and the metallic material of the fitting, the housing must be correctly grounded.

Responsibility of the operator for information about operator obligations according to 2014/34/EU (ATEX)

- If fittings are used that contain chargeable plastic parts or are provided with coatings of low electrical conductivity, it is the operator's responsibility to check whether they can be used.
- If the operation of the fitting represents a potential source of electrostatic charging, the user is obliged to assess the risk of electrostatic ignition sources in accordance with the relevant national and European regulations. He must operate his system safely and take these sources of ignition into account in the risk assessment of the workplaces.
- In order to ensure trouble-free operation in hazardous areas, fittings should be used in which all conductive parts are permanently connected to one another. Internal shut-off devices (e.g. ball, flap disc, slide blade) should be connected to the fitting housing in an electrically conductive manner by having an antistatic design. The fittings must have an electrically conductive connection to the pipeline to ensure equipotential bonding.
- Fittings must be included in the system's potential equalization measures
- Safety instructions in the operating instructions must be observed.

Consideration 1: fittings / pipeline components

A defining element of Directive 2014/34/EU is that devices within the meaning of the directive must have their **own** potential ignition sources. Potential sources of ignition could be, for example, electrical sparks, arcs and lightning, electrostatic discharges, electromagnetic waves, ionizing radiation, hot surfaces, flames and hot gases, mechanically generated sparks, radiation in the optical range, chemical reactions or adiabatic compression.

Quote 'Standing Committee on Directive 2014/34/EU' resp.

Statement by the Federal Ministry of Economics and Labor (BMWA).

"Simple' products, the only possible source of ignition of which is the static charge resulting from the flow of a substance, do not fall within the scope of Directive 2014/34/EU and consequently must not be marked with the Ex symbol."

They can therefore be used in all hazardous areas if the process in which they are used does not represent a source of electrostatic charging. If this cannot be ruled out, conductive material must be used to avoid static charging. This must be ensured by the operator's risk assessment and the resulting measures taken. (see section "Responsibility of the operator for information about operator obligations acc. 20U/34/EU (ATEX) at the end of the document or 'User' Directive 1999/92/ EG)

Depending on the conductivity of the medium, electrostatic charges may occur in fittings lined with plastic . Conductive plastics should be used to avoid electrostatic charges in fluidics. In the IBExU test report , no . Coatings made of conductive plastics cannot be charged and therefore do not have an actual source of ignition. The surface resistance can be found in the raw material manufacturer's data sheets /is authoritative.

Consideration 2: Risk of ignition as a result of assembling the valve and superstructure

Assessment of the Swiss Safety Center:

Article 2, 1.:

"Devices": Machinery, equipment, stationary or mobile devices, control and equipment parts, and warning and prevention systems, intended individually or in combination for the generation, transmission, storage, measurement, regulation and conversion of energy and/or for the processing of materials and which have their own potential sources of ignition and can thereby cause an explosion;

In your case, a device that is subject to the ATEX Directive 2014/34/EU is combined with one that is not subject to this directive. The question is whether new sources of ignition that have not previously been considered have arisen as a result of said combination, which would result in the combination of both systems as a whole fulfilling the above device definition.

Blue Guide of Directive 2014/34/EU provides information on how to proceed in such a case in Section 44:

In the procedure, which is described there in 2.a) and which I would recommend to you at this point, the manufacturer comes to the conclusion that the combination of both devices has not resulted in a new ignition source that has not yet been considered, so that the two devices do not form a functional unit in accordance with Article 2. **In this case, the manufacturer must supply the two declarations of conformity for the individual devices.**

Excerpts from the ATEX guidelines, 2nd edition 2017:

Excerpt from Guideline § 38 Examples of devices that are not covered by Directive 2014/34/EU

The problem of manually operated valves was also discussed. Provided they are moved slowly so that there is no possibility of hot surfaces forming (as explained in section §42 on non-electrical equipment) they do not fall within the scope of the Directive. Some designs contain plastic parts that can become charged; however, this case does not differ from that of plastic pipes. Given that it is obvious that the latter are outside the scope of Directive 2014/34/EU, it has been accepted that such valves are also outside the scope.

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Excerpt from guideline § 42 non-electrical devices

When non-electrical equipment has a potential ignition source, it is in most cases due to moving parts that can create a potential ignition hazard from hot surfaces or sparks from friction. Examples are: gears, fans, pumps, compressors, mixers, brakes. Mechanical devices of this type must usually be connected to a drive such as an electric motor. If they are placed on the market together in this form, they can constitute an assembly (see section § 44 on combined components (assemblies)).

Excerpt from guideline § 44 Combined components (assemblies)

2. a) In some cases, the pump and the electric motor can be considered separately, although they form a functional unit. In this case, provided that there is no additional ignition hazard as a result of the assembly of the pump and motor, this functional unit as a whole does not constitute a unit that falls within the scope of Directive 2014/34/EU. With regard to explosion protection, it is then to be regarded as a combination of "individual sub-devices". In this case, the manufacturers of the pump and the electric motor must therefore provide an EU declaration of conformity for each of the two sub-devices.

Assessment of the risk of ignition as a result of assembling the valve and superstructure:

An assessment of the risk of ignition according to EN ISO 80079-36:2016 has been carried out for Swissfluid fittings and their assemblies (pneumatic and electrical). No additional potential sources of ignition were determined due to the assembly, ie the fittings and their superstructures do not form a unit. This means that Swissfluid fittings do not fall within the scope of Directive 2014/34/EU and may therefore not be marked accordingly.

In accordance with Directive 2014/34/EU, the pneumatic and electrical structures of Swissfluid fittings must be assessed and labeled separately.

The area of application for Swissfluid fittings and their structures in potentially explosive atmospheres is therefore based on the component with the highest restrictions .

The use of the fittings in areas in which explosive atmospheres can occur is therefore possible within the scope of intended use.

CH-5600 Lenzburg, 05/29/2023

QA manager:

