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For the flame arrester type 934-B-T/2x0,7 dimension sheet and pressure drop/volume flow diagram are available.

1. Use

The flame arrester type 934-B-T/2x0,7 complies with the standard EN ISO 16852:2016 “Flame Arresters- Performance requirements, test methods and limits for use”.

The general suitability as a deflagration and short time-burning flame arrester when used with inflammable gas/air mixture and vapour/air mixture of inflammable liquids of the explosion group IIB3 (gap $\geq 0,65$ mm) had been verified by tests executed at the Institute for Safety Technology IBExU Freiberg. The results of it were confirmed by the issued EC prototype test certificate **IBExU14ATEX2001 X**.

On principle, for all cases of use the placement conditions, especially the following limits for the operating pressure and temperature have to be considered:

- permissible operating pressure : atmospheric (0,8bar (absolute) to 1,1bar (absolute))
- permissible operating temperature : -20°C to 60°C

For the case of short time burning on the flame arrester element the flame arrester is equipped with an integrated temperature sensing element (resistance thermometer). In the case of exceeding the operating temperature by ≥ 60 K a temporary unlimited stabilized burning on the flame arrester element shall be prevented by installing a resistance thermometer in connection with an automatic initiating of emergency functions (interruption or blanketing of the mixture flow).

On delivery of the devices the technical parameter of the flame arrester with stating the EC prototype test certificate number are documented in the works test certificate according to EN 10204. In the declaration of compliance it is referred to the accordance with the harmonized standard EN ISO 16852:2016.

The maintenance of the basic safety requirements according to directive 2014/34/EU has been confirmed.

2. Construction


The flame arrester 934-B-T/2x0,7 consists of a casing (2), in which a flame arrester element (1) above set screws (5) and distance sockets (4) is clamped.

The flame arrester itself consists of a covering flange, a grid cage, a star and two metal foil elements.

The foil elements have different directions of winding in its gaps. The gap width amounts 0,7 mm. The metal foils are kept constant on a distance of 2 mm by a clamp and a ring. The welded nut at the housing flange use to screw in the resistance thermometer (8).

For protection against effects of the weather the flame arrester is equipped with a sheet metal cover (3).

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For the assembly or the transport it has to be paid special attention to the resistance thermometer (8), if necessary it has to be removed.

In flange version from DN25 to DN80 the flame arrester is equipped with a flanged connection PN16 – form C or ANSI 150 RF. While flanging be careful that the sealing face is not damaged and that there is no foreign matter or grease between the flanges for no gap to the atmosphere can occur.

In thread version the flame arrester is equipped with a pipe internal thread Rp or NPTF.

For the joint pipe line the suitable tapered outer pipe thread R resp. NPTF is recommended.

Parallel internal screw thread (FDS)	Rp (BSP) 1	Rp (BSP) 1 1/4	Rp (BSP) 2	Rp (BSP) 2 1/2
Tapered external thread (pipeline)	R 1	R 1 1/4	R 2	R 2 1/2
Width across flats	SW 50		SW 65	

Tapered internal screw thread (FDS)	NPTF 1	NPTF 1 1/4	NPTF 2	NPTF 2 1/2
Tapered external thread (pipeline)	NPTF 1	NPTF 1 1/4	NPTF 2	NPTF 2 1/2
Width across flats	SW 50		SW 65	

For connecting the temperature sensor to the measuring plant the manufacturers installation guidelines for the resistance thermometer and the conditions for guaranteeing the conformity shall be followed. The circuit between the resistance thermometer and the installation for interrupting the mixture inlet or a similar action (emergency function) has to be carried out in that way that the hazardous state will be stopped within 30 seconds after detecting a flame by the resistance thermometer.

5. Maintenance

The maintenance includes a periodic visual control of the flame arrester, especially the flame arrester element with regard to contamination and appearance. The intervals for the maintenance works depend on the operating conditions and the kind how the individual media tend to contamination. They are determined by the operator.

For the purpose of cleansing the flame arrester element shall be dismantled:

The metal sheet cover (3) had to dismount by loosening the screw (6). The resistance thermometer (8) is to remove, then the flame arrester element (1) by disconnecting the distance sockets (4).

In case of minor contamination the flame arrester element shall be blown up with compressed air or hot vapour. In case of major contamination a flushing with a cleaning agent can be carried out. After cleansing all parts which had been wetted by a cleansing agent; shall be blown dry.

The installation of the flame arrester and housing is carried out in reverse order.


During the cleansing works no mechanical modifications may be done on the flame arrester element or on the housing parts of the flame arrester.

On principle, the flame arrester element has to be replaced by a new one, if:

- a fire occurred at the flame arrester element;
- loosening or distortions in the structure of the metal foil elements can be recognized;
- corrosion damages at the metal foil elements have been detected;
- in case of strongly contaminated metal foil elements, even after cleaning, a residual contamination of more than 30 % of the free flow cross-section remained.

All works in connection with the replacement of metal foil elements in a flame arrester element shall be executed only by trained and authorized skilled personnel.

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In case of replacement of structural units only original spare parts listed in the spare parts list may be installed to ensure the required safety.

6. Spare part list

Table : spare parts 934-B-T/2x0,7

Pos. No.	Pipe size	Designation	No.	Material	Order No.
1	32(25)	Flame arrester element 2x0,7	1	NSt	FET15331191
	50(40)				FET15332721
	80(65)				FET15334262
3	32(25)	Metal cover	1	NSt	FET994723000
	50(40)				FET994739000
	80(65)				FET994738000
8	25 - 80	Resistance thermometer	1	NSt	FET662044220

Material marks

St ... steel	NSt ... stainless steel
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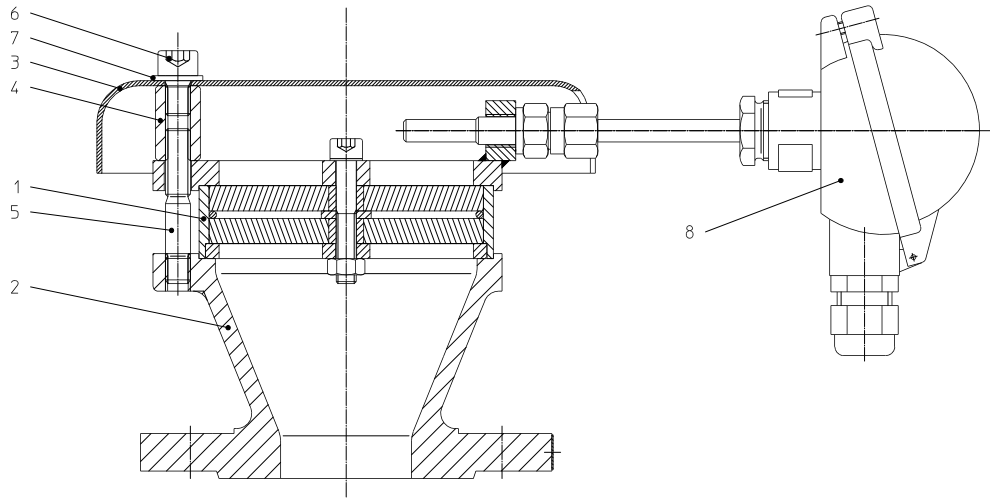


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Assembly Drawing 934-B-T/2x0,7



Hazard sign

Warning	Flame arrester have installation and application limits. Type design in accordance with ISO 16852		
DEF	$L_U/D = \text{---}$	BC: b	$t_{BT} = 1 \text{ min}$
	Ex G IIB3	$T_0 = 60 \text{ }^\circ\text{C}$	$p_0 = \text{atm.}$

Warning note

Note : This flame arrester is safe for short time burning !
Please refer to operating and maintenance instructions !

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