(1) EU type examination certificate

Product Service

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

(3) Number of the EU type examination certificate:

TPS 22 ATEX 092005 0011 X Version 00

(4) Device: Metal separator

(5) Type: GF4000-50-GO-EX; GF4000-80-GO-EX; GF4000-100-GO-EX
GF4000-120-GO-EX; GF4000-150-GO-EX

(6) Manufacturer: Sesotec GmbH

(7) Address: Regener Str. 130
94513 Schönberg / GERMANY

(8) The model of this device as well as the various permissible versions are specified in the annex to this type examination certificate.

(9) TÜV SÜD Product Service GmbH certifies as notified body no. 0123 according to Article 17 of Directive 2014/34/EU of the European Parliament and of the Council of the European Union of February 26, 2014, the compliance with the essential health and safety requirements for the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres in accordance with Annex II of the Directive. The results of the audit are set out in the confidential audit report 713234073.

(10) The essential health and safety requirements are met by conformity with:

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

EN IEC 60079-0:2018 **EN ISO 60079-31:2014**

(11) If the sign “X” is placed after the certificate number, special conditions for the safe use of the device are referred to in the annex to this certificate.

(12) This EU type examination relates only to the design and construction of the specified device in accordance with Directive 2014/34/EU. Other requirements of this directive apply to the manufacture and placing on the market of this device.

(13) The marking of the device must contain the following information:

Device	Ex marking					
GF4000-***-GO-EX in all sizes	Ex	II 1/2 D	Ex h tb	IIIC	T130°C	Da/Db
	Ex	II 1/3 D	Ex h tc	IIIC	T130°C	Da/Dc
	Ex	II 1/- D	Ex h	IIIC	T130°C	Da/-
Control Unit GENIUS ONE EX	Ex	II 2 D	Ex tb	IIIC	T85°C	Db

$0°C \leq T_a \leq 50°C$

Certification Body Explosion Protection 09.02.2022

digitally signed by U. Jacobs on 09.02.2022
Dipl.-Ing. Ulrich Jacobs

TÜV SÜD Product Service GmbH - Certification Body - Ridlerstraße 65 - 80339 Munich - Germany

TÜV®

(14) **Annex**

Product Service

(15) **EU type examination certificate TPS 22 ATEX 092005 0011 X** Version 00

(16) Description of the devices:

The GF4000-***-GO-EX metal separator is used to inspect granules, fine-grained bulk materials and powders in pneumatic suction and pressure conveying lines. It detects all magnetic and non-magnetic metal contaminants (steel, stainless steel, aluminium, ...) - even if they are enclosed in the product. These metal impurities are separated from the product stream via the separation unit.

GF 4000 series metal separators can be integrated in horizontal, vertical and inclined suction and pressure conveying lines. The conveying direction in the horizontal position can be from left to right or from right to left. In the vertical conveying direction, conveying can be from bottom to top (standard), or from top to bottom. The metal separator can be used in continuous or discontinuous conveying.

The Sesotec GF 4000 series metal separator consists of

- a detection unit (metal detector coil)
- a separating mechanism with collecting tank and sluice,
- and a GENIUS ONE (EX) control unit.

Sizes:

Type designation	GF4000-50-GO-EX	GF4000-80-GO-EX	GF4000-100-GO-EX	GF4000-120-GO-EX	GF4000-150-GO-EX
Connection Ø (mm)	50	84	104	129	154
Deviating connection dimensions possible, the use of transition pieces is permissible					

Options:

- Multifrequency DUO - two different operating frequencies
- Terminal box (Ex-protected) for power cable connection
- Signal combination 4x luminaire for zone 21 resp. 22
- Button for function test in separate housing (Ex-protected)
- Automatic test equipment (single or triple)
- Function monitoring of the separating unit (Ex-protected)
- Level detector (sensor Ex-protected)
- Cable lengths remote control unit 6 m / 10 m
- Ethernet interface on the control unit (inside, cable gland)
- Additional interface Profibus (inside, cable gland)
- Extension of frame and intermediate tube
- Compressed air monitoring
- Filter control valve

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Technical data:

Designation		Value(s)
Metal separator GF4000-***-GO-EX		
	Detection coil, mechanics, electronics housing	Stainless steel 1.4301 / 1.4305 Higher-grade stainless steels are also possible as a special design
	Sensing tube	conductive sensing tubes or alternatively non-conductive sensing tubes material thickness ≥ 10mm
	Operating voltage	100-240 VAC, N , PE
	Maximum current consumption	0.8-0.4 A (nominal current 0.6 A-0.3 A)
	Max. operating frequency detector	600 kHz
	Max. operating frequency detector	< 6W
Nominal width (***):		50, 80,100,120,150 [mm]
Product temperature		0°C to +60°C
Ambient temperature		0°C to +50°C
Climatic conditions		25-85% rH, non-condensing
Bulk materials:		Powder, fine-grained bulk materials, granules, flakes, etc.
Material flow:		Vacuum or pressure conveying
		Horizontal or vertical
		Continuous or discontinuous
Conveying speed:		Max. 20 m/s (optionally 25 m/s)
Max. permissible overpressure in the conveying line:		1 bar (NW 120/150 maximum 0.5 bar)
Max. permissible negative pressure in the conveying line:		0.5 bar
Minimum ignition energy of the dusts:		≥ 3 mJ
Minimum ignition temperature of the dusts		≥ 195 °C
Minimum glow temperature of the dusts		≥ 205 °C
Grain size		Ø ≤ 8 mm
Size/weight of metallic foreign bodies		Maximum Ø 24 mm / 60 g

(17) Test report: 713234073

(18) Special conditions for use:

- The operator must ensure by means of a preseparator (e.g. sieve) that there are no metal parts heavier than 60 g or larger than 24 mm in the product stream.
- With the GF4000-***-GO-EX metal separator, only powders or other products may be tested according to the specifications in the technical data.
- Specific operating data (checklist) agreed with the manufacturer must be observed.
- The equipment/plant parts upstream and downstream of the GF4000-***-GO-EX metal separator must be designed to be explosion-proof in such a way that no explosion can occur there or that an explosion cannot affect the separator.

- If upstream and downstream apparatus / plant components are protected by constructive explosion protection measures (e.g. explosion pressure shock resistant design), then the metal separator must be explosion decoupled from these parts. For explosion decoupling, only decoupling systems (protective systems, e.g. burst discs or cellular wheel sluices) with a suitability certificate according to RL 2014/34/EU must be installed.
- Device earthing and potential equalisation must be carried out professionally on all relevant parts of the device.
- The instructions in these operating instructions (also section 1.3.5) must be observed at all times; this applies in particular to the permissible ambient and bulk material temperatures, the exclusion of certain aggressive materials to be conveyed and ambient media.
- Plastic surfaces must be cleaned with a damp cloth.

(19) Essential health and safety requirements:

covered by standards listed under (9).