



EU - TYPE EXAMINATION CERTIFICATE

According to Directive 2014/34/EU Annex III

DAN 23ATEX0302X

2 Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014

3 EU - Type Examination Certificate Number: DAN 23ATEX0302X

4 Product: Spray Dryer
Type: SGA xxx/yy

5 Manufacturer: Sanovo Technology Process A/S

6 Address: Datavej 3, 5220 Odense SØ, Danmark

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

8 Dancert Danish Technological Institute, Notified Body number 1073, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No. 23ATEX0302X

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 1127-1:2019
EN ISO 80079-36:2016
EN ISO 80079-37:2016
EN14460:2018

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 subject to the Specific Conditions of Use specified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the technical design of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following:



II 1/3D

Ex h IIIB T150°C ... 250°C Da/Dc

Valid as of: 27-06-2023



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For Dancert

A handwritten signature in blue ink that reads "JB Jensen".

Jørgen Baadsgaard-Jensen
CEO

**13 Schedule****14 Certificate Number DAN 23ATEX0302X****15 Description of Product**

The SANOVO Gentle-Air Spray Drying Chamber is designed for use with egg liquid products or other similar liquid food ingredients.

The spray dryer chamber is of the horizontal type and are generally smaller than other dryers with the same capacity and can often be installed in an existing building.

Versions: **SGA xxx/yy**

Where:

xxx: 50, 100, 150, 180, 225 or 300, and
yy: 02, 04, 06, 09 or 12.

Where: xxx is the size and yy is the number of nozzles.

The T-code is the maximum air / surface temperature in the cabinet and depending on the product the dryer is design for.

T-code may be between T150 °C and T250 °C, and for the actual dryer design the T-code is included in the marking.

Specifications

The dryer may only be used according to manufacturer's specifications for the actual dryer. Each dryer is optimised for the actual explosion safety data for the specified powder.

Safety data in the manual shall include the maximum dust concentration in the dryer doing normal operation shall be less than 250 g/m³, and the details data shall be:

Dust group IIIB,

MIE ≥ 10 m joule,

MIT_{dc} > xxx °C,

MIT_{dl} > xxx °C,

K_{st} ≤ xxx bar*meter/sec,

P_{max} ≤ xx bar,

P_{red,max} ≤ 0,3 bar

T_{si} ≥ xxx °C, (Isothermal basket test - EN 15188)

Burning class 1-3



Schedule

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The number of Q-boxes is determined by the volume of the box and by K_{st} multiplied by P_{max} .

Version	Number of Q-boxes	$K_{st} \times P_{max}$ [bar x m-bar/s]
SGA300/12	14	≤ 1287
SGA300/12	15	≤ 1386
SGA300/12	16	≤ 1467
SGA225/9	09	≤ 1287
SGA225/9	11	≤ 1530
SGA225/9	12	≤ 1665
SGA180/9	8	≤ 1089
SGA180/9	11	≤ 1494
SGA180/9	12	≤ 1629
SGA150/6	8	≤ 1098
SGA150/6	11	≤ 1512
SGA150/6	12	≤ 1647
SGA100/4	5	≤ 0846
SGA100/4	7	≤ 1107
SGA100/4	8	≤ 1359
SGA50/2	3	≤ 0792
SGA50/2	5	≤ 1332
SGA50/2	6	≤ 1593

Ambient temperature (outside): $-20\text{ °C} \leq T_{amb} \leq +40\text{ °C}$



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16 Report Number

Assessment report reference 23ATEX302X

17 Specific Conditions of Use

- All electrical equipment mounted on the spray dryer shall be certified / evaluated in adequacy with the installed zone and according to harmonized standards under the ATEX directive 2014/34/EU.
- The electrical equipment shall be installed according to EN60079-14 and to any local electrical installation requirements.
- When the dryer is equipped with Q-boxes for venting the dryer in case of internal explosion, the free room net volume, where the dryer is installed, shall be maintained during lifetime. See manufacturer manual.
- When dryer is equipped with relief panels for venting the dryer in case of internal explosion, the relief panels shall be ventilated to the outside. Safety area around the outlet shall be specified.
- The hot air into the dryer shall come from a source where there are no risk of sparks or glowing particles.
- The area around the dryer shall be cleaned regularly, so there is no risk of explosive atmosphere, during normal operation. The procedure for housekeeping shall be good, according to EN/IEC60079-10-2:2015 Annex B, saying that the dust layers shall be kept to a negligible thickness ($\ll 1$ mm) or non-existent.
- In the classified area around the dryer there may not be installed equipment or other items there can contribute to the zone classification.

18 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: No additional requirements.



Schedule

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Drawings and Documents

Number	Vers.	Date	Description
SGA 50/2			
Z557744	E	08-05-2023	Type examination certificate SGA 50/2 – related
Z561565	B	21-06-2023	Volume and Q-box calculation for all SGA 50/2 – schedule
SGA 100/4			
Z588422	E	23-05-2023	Type examination certificate SGA 100/4 - related
Z596710	A	21-06-2023	Volume and Q-box calculation for all SGA100/4 – schedule
SGA 150/6			
Z585990	F	11-05-2023	Type examination certificate SGA150/6 – related
Z598262	B	21-06-2023	Volume and Q-box calculation for all SGA150/6 – schedule
SGA 180/9			
Z560053	G	25-05-2023	Type examination certificate SGA180/9 – related
Z566013	C	21-06-2023	Volume and Q-box calculation for all SGA 180/9 – schedule
SGA 225/9			
Z541972	G	16-05-2023	Type examination certificate SGA225/9 – related
Z558668	B	21-06-2023	Volume and Q-box calculation for all SGA 225/9 – schedule
SGA 300/12			
Z541944	I	12-05-2023	Type examination certificate SGA300/12 – related
Z548344	C	21-06-2023	Volume and Q-box calculation for all SGA 300/12 – schedule
All dryers	-	2023-05-30	ATEX Compare List of scheduled drawings.