

EU-TYPE EXAMINATION CERTIFICATE

- [2] EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 2014/34/EU
- [3] EU-Type Examination Certificate Number: **Presafe 17 ATEX 9970 X** **Issue 2**
- [4] Product: **Centrifugal fans DKEX/KTEX**
- [5] Manufacturer: **Systemair Sverige AB**
- [6] Address: **Industriv 3
SE 739 30 Skinnskatteberg
Sweden**
- [7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] DNV GL Presafe AS, notified body number 2460, 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 reports listed in section 16.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012/A11:2013, EN 60079-7:2015 and EN14986:2017
- [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 design and construction of the specified product. 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 2 G** **Ex eb IIB + H₂ T3 Gb**

Date of issue:
2020-12-09



Asle Kaastad
For DNV GL Presafe AS
The Certificate has been digitally signed.
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[13] **Schedule**

[14] **EU-Type Examination Certificate No:** Presafe 17 ATEX 9970 X Issue 2

[15] **Description of Product**

The centrifugal (radial) fan with axial air intake is intended for ventilation purposes. It consists of Ex certified electric cage motor and fan casing with impeller. Cooling is achieved by heat exchange, using convection current of the transported air.

The impeller is mounted directly on the motor designed for fans and protected from the mechanical damage by metallic enclosure (“fan casing in form of rectangular duct”). Fan casing is made of galvanized steel sheets and fixed to motor by fastening screws. Fans must not be installed outdoors.

The impeller is squirrel cage shape and it is made of galvanized steel sheets in five (diameter) sizes 225, 250, 280, 315 and 355 mm. Intake cone as the closest to the impeller made of copper to comply with permissible material pairings (acc. to EN 14986:2017).

Electric motors used are three phase asynchronous motors with 4 or 6 poles:

-MK106-4DK.07.Y or MK106-4DK.14.Y cert. acc. to PTB 08 ATEX 3061

-MK137-4DK.10.Y, MK137-4DK.20.Y and MK137-6DK.20.Y cert. acc. to PTB 08 ATEX 3062

Temperature sensors (3xPTC) embedded in the windings shall be connected to trigger device conforming to EN 50495:2010.

In order for the fan’s permitted current and power consumption not to be exceeded the fan may need to be pressurized with a minimum back pressure according to table 1 in [15].

The fans can be speed controlled by reduction of supply voltage by transformer or three phase AC controller. Speed control using frequency inverter is not permitted.

If the free end of the permanently connected cable terminates in hazardous area it shall be protected by type of protection listed in clause 1 of EN 60079-0:2018.

Type designation: KTEX and DTEX

Models: DKEX 225-4, DKEX 250-4, DKEX 280-4, DKEX 315-4, DKEX 355-6.

KTEX 50-25-4, KTEX 50-30-4, KTEX 60-30-4, KTEX 60-35-4, KTEX 70-40-6.

Electrical Data (rating) and ambient temperature are specified in Table 1:

Model	Phase	Supply voltage	Rated current	Power	Back pressure required	Tamb
DKEX 225-4	3	380-400V (Y) AC 50Hz 230V (Δ) AC 50Hz	0.88 A 1.52 A	0.5 kW	125 Pa	-20°C to +40°C
DKEX 250-4	3	380-415V (Y) AC 50Hz 230V (Δ) AC 50Hz	1.80 A 3.10 A	0.9 kW	60 Pa	-20°C to +40°C
DKEX 280-4	3	380-415V (Y) AC 50Hz 230V (Δ) AC 50Hz	2.25 A 3.90 A	1.3 kW	300 Pa	-20°C to +40°C
DKEX 315-4	3	380-415V (Y) AC 50Hz 230V (Δ) AC 50Hz	3.90 A 6.80 A	2.1 kW	300 Pa	-20°C to +40°C

DKEX 355-6	3	380-415V (Y) AC 50Hz 230V (Δ) AC 50Hz	3.76 A 6.50 A	1.8 kW	-	-20°C to +40°C
KTEX 50-25-4	3	380-400 (Y) AC 50Hz 230V (Δ) AC 50Hz	0.88 A 1.52 A	0.5 kW	110 Pa	-20°C to +40°C
KTEX 50-30-4	3	380-415V (Y) AC 50Hz 230V (Δ) AC 50Hz	1.80 A 3.10 A	0.9 kW	40 Pa	-20°C to +40°C
KTEX 60-30-4	3	380-415 (Y) AC 50Hz 230V (Δ) AC 50Hz	2.25 A 3.90 A	1.3 kW	250 Pa	-20°C to +40°C
KTEX 60-35-4	3	380-415 (Y) AC 50Hz 230V (Δ) AC 50Hz	3.90 A 6.80 A	2.1 kW	225 Pa	-20°C to +40°C
KTEX 70-40-6	3	380-415 (Y) AC 50Hz 230V (Δ) AC 50Hz	3.60 A 6.20 A	1.6 kW	-	-20°C to +40°C

Routine tests: N/A.

[16] **Report No.:** D0003085/02
Project No.: PRJC-562324-2017-PRC-NOR

[17] **Specific Conditions of Use**

1. The (PTC) sensors embedded in the motor windings shall be connected to an appropriate safety protection device conforming to Directive 2014/34/EU Annex II 1.5 which shall immediately disconnect the motor from the main power supply upon activation of the PTC sensors.
2. When the fans are installed in a duct system the degree of protection IP 20 at the inlet and outlet side acc. to (EN 60529) shall be fulfilled for the duct system. Components which contribute to the enclosure protection must be of suitable design material and durability.
3. Fans are intended only for fixed installation. The motor's connection cable on KTEX is secured with the cable ties in order to guide the cable correctly in relation to the hinge of the hatch. Attachment must be carried out so that the cable will be extended after fixing w/o the cable insulation being damaged.
4. Ambient temperature and temperature of transported air shall remain within the range -20°C to +40°C. Fans must not be run at flows below 200m³/h at ambient temperature of +20°C. Otherwise there is a risk that the exhaust temperature is higher than the permitted ambient temperature.

[18] **Essential Health and Safety Requirements**

Essential Health and Safety Requirements (EHSRs) are covered by the standards listed at item 9

[19] Drawings and documents

Number	Title	Rev.	Date
203315	Typskylt 400V 3-fas DKEX 225-4	A	2017-02-14
203316	Typskylt 400V 3-fas DKEX 250-4	A	2017-02-14
203317	Typskylt 230/400V 3-fas DKEX 280-4	A	2017-02-14
203318	Typskylt 230/400V 3-fas DKEX 315-4	A	2017-02-14
203319	Typskylt 230/400V 3-fas DKEX 355-6	A	2017-02-14
203415	Typskylt 230V 3-fas DKEX 225-4	A	2017-02-14
203416	Typskylt 230V 3-fas DKEX 250-4	A	2017-02-14
203320	Typskylt 400V 3-fas KTEX 50-25-4	A	2017-02-14
203321	Typskylt 400V 3-fas KTEX 50-30-4	A	2017-02-14
203322	Typskylt 230/400V 3-fas KTEX 60-30-4	A	2017-02-14
203323	Typskylt 230/400V 3-fas KTEX 60-35-4	A	2017-02-14
203324	Typskylt 230/400V 3-fas KTEX 70-40-6	A	2017-02-14
203417	Typskylt 230V 3-fas KTEX 50-25-4	A	2017-02-14
203418	Typskylt 230V 3-fas KTEX 50-30-4	A	2017-02-14
6312-406	Rad Luefter RE22P	A2	2007-10-04
6312-314	Rad Luefter RE25P	A2	2007-10-04
6312-363	Rad Luefter RE28P	A2	2009-08-10
6312-359	Rad Luefter RE31P	A2	2007-10-04
6312-311	Rad Luefter RE35P	A2	2007-10-04
19000-28	Matris for motor och flakthjul for Ex Flaktar-ATEX	-	2011-12-13
13500-21	Etikett Tillv. ordernr	B	2012-02-08
L-AL-3163	Mått på motor och flakthjul	007	2020-01-16
19960	Slutmontering KTEX 50-25 - 70-40	-	2016-10-17
19962	Slutmontering DKEX 225-355	-	2016-10-17
BOM 19960	Bill of material KTEX	-	2017-05-31
BOM 19962	Bill of material DKEX	-	2017-05-31

[20] Certificate History

Issue	Description	Issue date	Report no.
0	Original issue	2017-06-19	D0003085
1	Update acc. to new standard issue (EN14986:2017)	2019-10-22	D0003085/01
2	Minor update of descriptive drawing	2020-12-09	D0003085/02

END OF CERTIFICATE