



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx FMG 17.0009X

Issue No: 0

Certificate history:

[Issue No. 0 \(2018-02-02\)](#)

Status: **Current**

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Date of Issue: **2018-02-02**

Applicant: **Azbil Vortek, LLC**
8475 West interstate 25
Frontage Road, Suite 300
Longmont, CO 80504
United States of America

Equipment: **Pro V Multi-Parameter VorTex & Pro T Multi-Parameter Turbine Mass Flow Meters**

Optional accessory: *Pro V Vortex Models M22, M23, M24 and Pro T Turbine Mass Flow Meters*

Type of Protection: **Ex db, Ex tb**

Marking:

Pro V and Pro T (ST)

Ex db IIB + H2 T6...T2 Gb

Ex tb IIIB T85°C Db

Ta = -40°C to 60°C; IP66

Pro V (HT)

Ex db IIB + H2 85°C ...405°C Gb

Ex tb IIIB T85°C Db

Ta = -40°C to 60°C; IP66

Pro T (HT)

Ex db IIB + H2 85°C ...459°C Gb

Ex tb IIIB T85°C Db

Ta = -40°C to 60°C; IP66

Approved for issue on behalf of the IECEx
Certification Body:

J. E. Marquedant

Position:

VP, Manager - Electrical Systems

Signature:
(for printed version)

Date:



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1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](#).

Certificate issued by:

FM Approvals LLC
1151 Boston-Providence Turnpike
Norwood, MA 02062
United States of America





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Manufacturer: **Azbil Vortek, LLC**
8475 West interstate 25
Frontage Road, Suite 300
Longmont, CO 80504
United States of America

Additional Manufacturing location(s):

Vortek Instruments, LLC
8475 West interstate 25
Frontage Road, Suite 300
Longmont, CO 80504
United States of America

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

[US/FMG/ExTR17.0027/00](#)

Quality Assessment Report:

[GB/FME/QAR16.0013/01](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

PRO-Tabcdefghij. Insertion TurboPro™ Multivariable Mass Turbine Flowmeter.

- a. = Multivariable options V, VT, VTP, VTEP, VETEP, VT-EM, VTP-EM, VTEP-EM or VETEP-EM.
- b. = Probe length SL, CL or EL.
- c. = Electronics enclosure L or R(*). *Specify cable length.
- d. = Display options DD or ND.
- e. = Input power DCL, DCH or AC.
- f. = Output 1AB, 1AHL, 1AH, 1AM, 3AB, 3AH or 3AM.
- g. = Temperature options ST or HT.
- h. = Pressure options P0, P1, P2, P3, P4 or P5.
- i. = Process connections CNPT, C150, C16, C300, C40, C600, C64, PNPT, P150, P16, P300, P40, PNPTR, P150R, P16R, P300R, P40R, P600R, or P64R.
- j. = Rotor options R40, R30, R25, R20, R15, R10 or L40.

M22abcdeghij. In-Line Pro-V™ Multivariable Mass Vortex Flowmeter.

- a. = Multivariable options V, VT, VTP, VTEP, VETEP, VT-EM, VTP-EM, VTEP-EM or VETEP-EM.
- b. = Flow body 04, 06, 08, 12, 16, 24, 32, 48, 64, 80 or 96.
- c. = Meter body material C, S or H.
- d. = Process connection 150, 300, 600, W, 16, 40, 64 or 100.
- e. = Electronics enclosure L or R(*).*Specify cable length
- f. = Display options DD or ND.
- g. = Input power DCL, DCH or AC.
- h. = Output 1AB, 1AH, 1AHL, 1AM, 3AB, 3AH or 3AM.
- i. = Process ST or HT.
- j. = Process pressure P0, P1, P2, P3, P4 or P5.

M23abcdeghi. Insertion Pro-V™ Multivariable Mass Vortex Flowmeter.

- a. = Multivariable options V, VT, VTP, VTEP, VETEP, VT-EM, VTP-EM, VTEP-EM or VETEP-EM.
- b. = Probe length SL, CL or EL.
- c. = Electronics enclosure L or R(*). *Specify cable length
- d. = Display options DD or ND.
- e. = Input power DCL, DCH or AC.
- f. = Output signal 1AB, 1AH, 1AHL, 1AM, 3AB, 3AH or 3AM.
- g. = Temperature options ST or HT.



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h. = Pressure options P0, P1, P2, P3, P4 or P5.

i. = Process connections CNPT, C150, C16, C300, C40, C600, C64, PNPT, P150, P16, P300, P40, PNPTR, P150R, P16R, P300R, P40R, P600R, or P64R.

M24abcdefghijkl. In-Line Pro-V™ Multivariable Mass Vortex Flowmeter.

a. = Multivariable options V, VT, VTP, VTEP, VETEP, VT-EM, VTP-EM, VTEP-EM or VETEP-EM.

b. = Flow body 04, 06, 08, 12, 16, 24, 32, 48, 64, 80 or 96.

c. = Meter body material C, S or H.

d. = Process connection 150, 300, 600, W, 16, 40, 64 or 100.

e. = Electronics enclosure L or R(*).*Specify cable length

f. = Display options DD or ND.

g. = Input power DCL, DCH or AC.

h. = Output 1AB, 1AH, 1AHL, 1AM, 3AB, 3AH or 3AM.

i. = Process ST or HT.

j. = Process pressure P0, P1, P2, P3, P4 or P5.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Contact Manufacturer regarding flamepath information.
2. Clean with a Damp cloth only to avoid build-up of electrostatic charge
3. The Model Pro-T Multivariable Mass Turbine Flowmeters standard temperature option (ST) process temperature range is -40°C to +238°C. The high temperature option (HT) process temperatures range is -40°C to +454°C.

The Model Pro-T Multivariable Mass Turbine Flowmeters

TMax (Process)	Temperature Class Value (Gas)	
	ST Version	HT Version
80°C	T6	85°C
95°C	T5	100°C
130°C	T4	135°C
195°C	T3	200°C
238°C	T2	300°C
445°C	N / A	450°C
454°C	N / A	459°C



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4. The Pro-VTM Multivariable Mass Vortex Flowmeters Models M22, M23, and M24 standard temperature option (ST) process temperature range is -40°C to 260°C. The high temperature option (HT) process temperature range is -40°C up to +400°C.

Model M22, M23, M24 and Pro-V TM Multivariable Mass Vortex Flowmeters		
TMax (Process)	Temperature Class Value (Gas)	
	ST Version	HT Version
80°C	T6	85°C
95°C	T5	100°C
130°C	T4	135°C
195°C	T3	200°C
260°C	T2	300°C
400°C	N / A	405°C