



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

Certificate No.: **IECEX FMG 21.0007X** Page 1 of 4 [Certificate history:](#)
Issue 0 (2021-10-26)

Status: **Current** Issue No: 1

Date of Issue: 2022-02-09

Applicant: **MAC Valves, Inc.**
30569 Beck Rd
Wixom, MI 48393
United States of America

Equipment: **D-Series Pilot Valves**

Optional accessory:

Type of Protection: **Flameproof "db", Dust-Protected Enclosure "tb"**

Marking: Ex db IIC T4 Gb, Ex tb IIIC T135°C Db
Ta = -25°C...+105°C (for models rated and marked over 5.4 Watts)
Ta = -25°C...+110°C (for models rated and marked 5.4 Watts and under)

Approved for issue on behalf of the IECEx
Certification Body:

J. E. Marquedant

Position:

VP, Manager - Electrical Systems

Signature:
(for printed version)

Date:

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 www.iecex.com or use of this QR Code.



Certificate issued by:

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





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Manufacturer: **MAC Valves, Inc.**
30569 Beck Rd
Wixom, MI 48393
United States of America

Additional
manufacturing
locations:

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 equipment 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 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-1:2014-06](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

This Certificate **does not** indicate compliance with 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 Reports:

[US/FMG/ExTR21.0008/00](#)

[US/FMG/ExTR21.0008/01](#)

Quality Assessment Report:

[GB/FME/QAR18.0008/05](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

General – The D-Series Pilot Valves (equipment) are electromagnetic valves controlled by current through a solenoid coil. When the coil is energized, it actuates a metallic operating rod, which in turn operates a connected valve assembly. The valve assembly is not a subject of this report. The equipment is intended for use controlling air used in industrial pneumatic or vacuum systems.

Construction – The equipment employs a solenoid constructed of plastic encapsulated magnet wire, which is contained and fastened inside a robust Aluminum enclosure. The enclosure has an operating rod and external mounting holes on the bottom for connection to the valve assembly. The housing also includes a permanently secured cover and a single 1/2-14 NPT entry with flying leads for wiring to a suitably rated junction box in accordance with the applicable electrical codes.

Ratings – The equipment has a maximum working pressure rating of 20...120 psi. Electrical ratings are 5...110 VDC or 5...240 VAC (50/60Hz); 7.3 Watts maximum.

D a b-0Ec Series Pilot Valves.

a = Voltage Code: two-letter code corresponding to electrical input ratings

b = Wire Length: one-letter code for wire length, minimum 24 in. (60 cm)

c = Approval Location: D (ATEX/IECEX markings) or E (combined markings)

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. *Contact the manufacturer for information on dimensions of flameproof joints.*
2. *The solenoid assembly shall only be secured internally by M3x0.5x30.0 SHCS with property class 70. The label shall only be secured by a M3x0.5x6.0 socket button head cap screw with property class 10.9*
3. *Equipment does not offer external grounding provisions and must be installed as part of a bonded system using the flying lead provided for protective bonding.*
4. *The external painted surfaces of the equipment may store electrostatic charge and become a source of ignition in applications with a low relative humidity where the surface is relatively free of contamination such as dirt, dust or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in PD CLC/TR 60079-32-1 and IEC TS 60079-32-1. Cleaning of the painted surfaces should only be done with a damp cloth, or outside of explosive atmospheres.*
5. *Do not open or separate the threaded cover. Contact the manufacturer if internal repair or maintenance is needed.*



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Minor updates to labels and instructions for combined markings and addition of UKCA certification.