



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 PTB 16.0017** Page 1 of 4 [Certificate history:](#)
Issue 0 (2016-11-10)

Status: **Current** Issue No: 1

Date of Issue: 2019-10-30

Applicant: **Jacob GmbH Elektrotechnische Fabrik**
Gottlieb-Daimler-Straße 11
71394 Kernen
Germany

Equipment: **Ex-screw plug type V***-xxx-zz-EX, Ex-reduction type R***-xxxx-zz-EX and Ex-enlarger type E***-xxxx-zz-EX**

Optional accessory:

Type of Protection: **"eb", "tb"**

Marking: Ex eb IIC Gb
Ex tb III C Db

Approved for issue on behalf of the IECEx
Certification Body:

Dr.-Ing. Detlev Markus

Position:

**Head of Department "Explosion Protection in Energy
Technology"**

Signature:
(for printed version)

Date:

07.10.19

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:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany





IECEX Certificate of Conformity

Certificate No.: **IECEX PTB 16.0017**

Page 2 of 4

Date of issue: 2019-10-30

Issue No: 1

Manufacturer: **Jacob GmbH Elektrotechnische Fabrik**
Gottlieb-Daimler-Straße 11
71394 Kernen
Germany

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 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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 Report:

[DE/PTB/EXTR16.0014/01](#)

Quality Assessment Report:

[DE/BVS/QAR08.0013/08](#)



IECEX Certificate of Conformity

Certificate No.: **IECEX PTB 16.0017**

Page 3 of 4

Date of issue: 2019-10-30

Issue No: 1

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Description

The Ex-screw plug type V***-xxx-zz-EX is used for sealing unused threaded holes or clearance holes in enclosures in the types of protection Increased Safety "eb" and Protection by enclosure "tb".

The Ex-reduction type R***-xxx-zz-EX and the Ex-enlarger type E***-xxx-zz-EX are used for changing thread sizes of threaded holes or clearance holes in enclosures in the types of protection Increased Safety "eb" and Protection by enclosure "tb".

The Ex-screw plug, the Ex-reduction and the Ex-enlarger are made from brass. O-ring sealings are mounted captively on the connecting threads. Accessories are hexagonal locknuts.

Technical data and Nomenclature see Annex.

SPECIFIC CONDITIONS OF USE: NO

Types with the risk of mechanical hazard "low" shall be mounted into the enclosure in such a way that they are mechanically protected against impact force.



IECEX Certificate of Conformity

Certificate No.: **IECEX PTB 16.0017**

Page 4 of 4

Date of issue: 2019-10-30

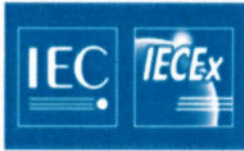
Issue No: 1

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- 1) The Specific Conditions of Use has been cancelled. All listed products are now suitable for the high mechanical risk level (7 J).
- 2) Change of the service temperature range to -40 °C to +85 °C
- 3) Change of IPX8 to 10 bar, 30 min
- 4) New test according to IEC 60079-0:2017 (Ed. 7), IEC 60079-7:2015+A1:2017 (Ed. 5.1)

Annex:

[COCA16.0017 Issue 1.pdf](#)



Applicant: Jacob GmbH Elektrotechnische Fabrik
Gottlieb-Daimler-Straße 11
71394 Kernen, Germany

Electrical Apparatus: Ex-screw plug type V***-*xxx-zz-EX
Ex-reduction type R***-*xxxx-zz-EX
Ex-enlarger type E***-*xxxx-zz-EX

Description

The Ex-screw plug type V***-*xxx-zz-EX is used for sealing unused threaded holes or clearance holes in enclosures in the types of protection Increased Safety "eb" and Protection by enclosure "tb".

The Ex-reduction type R***-*xxxx-zz-EX and the Ex-enlarger type E***-*xxxx-zz-EX are used for changing thread sizes of threaded holes or clearance holes in enclosures in the types of protection Increased Safety "eb" and Protection by enclosure "tb".

The Ex-screw plug, the Ex-reduction and the Ex-enlarger are made from brass. O-ring sealings are mounted captively on the connecting threads. Accessories are hexagonal locknuts.

Technical data

Connecting thread size	Metric: M12x1.5 to M63x1.5 as per EN IEC 60423
Connecting thread length	Standard length: 5 mm to 10 mm Long: > 10 mm Versions with connecting thread lengths greater than standard length or long are also approved.
Wall thickness of enclosure	≥ 4 mm - Threaded hole < 4 mm - Threaded hole with hexagonal locknut - Clearance hole with hexagonal locknut
Suited for equipment with the mechanical risk level	7 J for sizes M12x1.5 to M63x1.5
Service temperature range	-40 °C to +85 °C
Degree of protection	IP66 / IP68 (10 bar, 30 min) as per IEC 60529

Type and size of thread

Physikalisch-Technische Bundesanstalt (PTB)

Bundesallee 100, 38116 Braunschweig, Germany
Postfach 33 45, 38023 Braunschweig, Germany
Telephone +49 531 592-0, Telefax +49 531 592-3605

Ex-screw plug V***-*xxx-zz-EX		
Type/series	Size of connecting thread	Installation torque [Nm]
V102-1012-03-EX	M12x1.5	1.5
V102-1016-03-EX	M16x1.5	2.0
V102-1020-03-EX	M20x1.5	2.0
V102-1025-03-EX	M25x1.5	2.5
V102-1032-03-EX	M32x1.5	2.5
V102-1040-03-EX	M40x1.5	3.0
V102-1050-03-EX	M50x1.5	3.0
V102-1063-03-EX	M63x1.5	3.0

Ex-reduction R***-*xxxx-zz-EX		
Type/series	Size of connecting thread	Installation torque [Nm]
R102-11612-03-EX	M16x1.5	3.5
R102-12012-03-EX	M20x1.5	3.5
R102-12016-03-EX	M20x1.5	3.5
R102-12516-03-EX	M25x1.5	5.0
R102-12520-03-EX	M25x1.5	5.0
R102-13220-03-EX	M32x1.5	12.0
R102-13225-03-EX	M32x1.5	12.0
R102-14025-03-EX	M40x1.5	13.5
R102-14032-03-EX	M40x1.5	13.5
R102-15032-03-EX	M50x1.5	20.0
R102-15040-03-EX	M50x1.5	20.0
R102-16350-03-EX	M63x1.5	20.0

Ex-enlarger E***-*xxxx-zz-EX		
Type/series	Size of connecting thread	Installation torque [Nm]
E102-11216-03-EX	M12x1.5	3.5
E102-11620-03-EX	M16x1.5	3.5
E102-12025-03-EX	M20x1.5	6.7
E102-12532-03-EX	M25x1.5	5.0
E102-13240-03-EX	M32x1.5	13.5
E102-14050-03-EX	M40x1.5	16.0
E102-15063-03-EX	M50x1.5	20.0



Nomenclature

A) Ex-screw plug

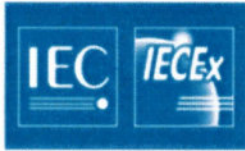
Name	V	*	**	-	*	xxx	-	zz	-	EX
1	2	3	4	5	6	7	8	9	10	11

- 1: Part of general type designation,
the name of series in different languages:
Ex-screw plug or Ex-Verschlussschraube (or designation refer to standard: Ex Equipment blanking element)
- 2: Code of type
V = Screw plug
- 3: Code of serial number, material
1 = Brass, nickel plated
- 4: Code of serial number, for example
02
- 5: Hyphen
- 6: Code of the connecting thread
1 = metric thread
- 7: Nominal size of the connecting thread xxx, for example
020 = metric thread M20x1,5
- 8: Hyphen
- 9: Code of the o-ring material, for example
01 = VMQ (Silicone rubber)
02 = EPDM (Ethylene Propylene Terpolymere rubber)
03 = NBR (Nitrile Butadien rubber)
04 = FKM (Fluorinated rubber)
- 10: Hyphen
- 11: Code for the application area
EX = explosionproof area

B) Ex-reduction

Name	R	*	**	-	*	xxxx	-	zz	-	EX
1	2	3	4	5	6	7	8	9	10	11

- 1: Part of general type designation,
the name of series in different languages:
Ex-reduction or Ex-Reduktion (or designation refer to standard: Ex Equipment thread adapter)
- 2: Code of type
R = reduction
- 3: Code of serial number, material
1 = Brass, nickel plated
- 4: Code of serial number, for example
02
- 5: Hyphen
- 6: Code of the connecting thread
1 = metric thread



- 7: Nominal size of the connecting thread xxxx, for example
2516 = reduction from outer metric thread M25x1,5 to inner metric thread M16x1,5
- 8: Hyphen
- 9: Code of the o-ring material, for example
 - 01 = VMQ (Silicone rubber)
 - 02 = EPDM (Ethylene Propylene Terpolymere rubber)
 - 03 = NBR (Nitrile Butadien rubber)
 - 04 = FKM (Fluorinated rubber)
- 10: Hyphen
- 11: Code for the application area
EX = explosionproof area

C) Ex-enlarger

Name	E	*	**	-	*	xxxx	-	ZZ	-	EX
1	2	3	4	5	6	7	8	9	10	11

- 1: Part of general type designation,
the name of series in different languages:
Ex-enlarger or Ex-Erweiterung (or designation refer to standard: Ex Equipment thread adapter)
- 2: Code of type
E = enlarger
- 3: Code of serial number, material
1 = Brass, nickel plated
- 4: Code of serial number, for example
02
- 5: Hyphen
- 6: Code of the connecting thread
1 = metric thread
- 7: Nominal size of the connecting thread xxxx, for example
2025 = enlarger from outer metric thread M20x1,5 to inner metric thread M25x1,5
- 8: Hyphen
- 9: Code of the O-ring material, for example
 - 01 = VMQ (Silicone rubber)
 - 02 = EPDM (Ethylene Propylene Terpolymere rubber)
 - 03 = NBR (Nitrile Butadien rubber)
 - 04 = FKM (Fluorinated rubber)
- 10: Hyphen
- 11: Code for the application area
EX = explosionproof area

Notes for operation

Degree of protection IP66 / IP68 will be safeguarded only when O-rings and Ex-screw plug, Ex-reduction and Ex-enlarger are properly fitted. The manufacturer's instructions must be followed.

Specific Conditions of Use

None



IECEX Test Report Summary

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

ExTR Ref. No.: **DE/PTB/ExTR16.0014/01** Page 1 of 1

ExTR Free Ref. No.: Status: **Issued**

Details of change: 1) The Specific Conditions of Use has been cancelled. All listed products are now suitable for the high mechanical risk level 7 J.
2) Change of the service temperature range to -40 °C to +85 °C
3) Change of IPX8 to 10 bar, 30 min
4) New test according to IEC 60079-0:2017 (Ed. 7), IEC 60079-7:2015+A1:2017 (Ed. 5.1) and IEC 60079-31:2013 (Ed. 2) Date of issue: **2019-10-30**

List of Standards Covered: **IEC 60079-0:2017 Edition:7.0, IEC 60079-31:2013 Edition:2, IEC 60079-7:2017 Edition:5.1**

Issuing EXTL: **PTB - Physikalisch-Technische Bundesanstalt (PTB)**

Endorsing ExCB: **PTB - Physikalisch-Technische Bundesanstalt (PTB)**

Manufacturer: **Jacob GmbH Elektrotechnische Fabrik**
Gottlieb-Daimler-Straße 11
71394 Kernen

Location of Manufacturer: **Germany**

Ex Protection: **Ex eb IIC Gb**
Ex tb IIIC Db

Ratings: **See certificate**

Equipment: **Ex-screw plug, Ex-reduction and Ex-enlarger**

Model Reference: **Type V***-*xxx-zz-EX, type R***-*xxxx-zz-EX and type E***-*xxxx-zz-EX**

Related IECEx Certificates:
[IECEX PTB 16.0017 Issue 1](#)

Comments: