



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 CCVE 17.0004X

Issue No: 1

Certificate history:

Issue No. 1 (2018-12-28)

Issue No. 0 (2017-09-29)

Status: **Current**

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Date of Issue: **2018-12-28**

Applicant: **"ZAVOD GORELTEX" Co. Ltd.**
195176, Saint Petersburg, Revolutsii road, 18, lit.A
Russian Federation

Equipment: **Cable glands types K...**

Optional accessory:

Type of Protection: **Flameproof enclosures "d", protection by increased safety "e", type of protection "n" and dust ignition protection by enclosure "t"**

Marking:

Ex db IIC Gb

Ex eb IIC Gb

Ex nR IIC Gc

Ex tb IIIC Db

IP66/IP67

Approved for issue on behalf of the IECEx
Certification Body:

Alexander Zalogin

Position:

Head of NANIO CCVE

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 the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

NANIO "CCVE"
Zavod ECOMASH, VUGI Settlement
Lyubertsy, Moscow region
140004
Russian Federation





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Manufacturer: "ZAVOD GORELTEX" Co. Ltd.

193149, Novosaratovka township area, liter A, Vsevolzhsky district, Leningrad region
Russian Federation

Additional Manufacturing location(s):

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 60079-15 : 2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*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:

[RU/CCVE/ExTR17.0006/00](#) [RU/CCVE/ExTR17.0006/01](#)

Quality Assessment Report:

[RU/CCVE/QAR16.0004/00](#) [RU/CCVE/QAR16.0004/01](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The following types of the cable glands were considered: KOV and KNV .

KNV cable glands are intended for insertion of round non-armored cables. KNV cable gland has one sealing ring for cable crimping, which prevents transfer of forces to the cores and contact clamps caused by pulling and twisting loads, and ensures explosion protection of the cable gland.

KOV cable glands are intended for insertion of round armored cables. KOV cable gland has two sealing rings. Sealing ring at the entry of the cable into the cable gland is used for armor crimping and ensures ingress protection. Internal sealing ring is used for cable crimping and prevents transfer of forces to the cores and contact clamps caused by pulling and twisting loads, and ensures explosion protection of the cable gland.

Additionally the following types of the cable glands were considered: KOVTV, KOVTN, KNVTV and KNVTN .

KNVTV, KNVTN cable glands are intended for insertion of non-armored cables in hoses, pipes and metal hoses: N - external thread, V - internal thread. KNVTV and KNVTN cable gland has one sealing ring for cable crimping, which prevents transfer of forces to the cores and contact clamps caused by pulling and twisting loads, and ensures explosion protection of the cable gland.

KOVTV, KOVTN cable glands are intended for insertion of armored cables in hoses, pipes and metal hoses: N - external thread, V - internal thread. KOVTV and KOVTN cable gland has two sealing rings. Sealing ring at the entry of the cable into the cable gland is used for armor crimping and ensures ingress protection. Internal sealing ring is used for cable crimping and prevents transfer of forces to the cores and contact clamps caused by pulling and twisting loads, and ensures explosion protection of the cable gland.

Cable glands may be used in enclosures and equipment with the following types of explosion protection: «d», «e», «i», «n», and dust ignition protection type «t» taking into account the specific conditions of use listed below.

Degree of protection (IP Code according to IEC 60529) is IP66/IP67. Degree of protection is ensured when cable glands are installed in accordance with operating, safety and maintenance manual.

Cable gland can be applied for input and output of intrinsically safe circuits "i", and it can be marked blue.

Connecting thread of the cable gland can be metric (M), cylindrical British Standard Pipe Parallel Thread (G) or National Standard Taper Pipe Thread (NPT).

The cable glands characteristics are further described in the Annex to this certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- 1) British Standard Pipe Parallel Thread G is not applicable for explosion protection type "flameproof enclosures "d" cable glands;
- 2) For the cable gland sizes 7 and above additional clamping of the cable shall be provided to ensure that pulling is not transmitted to the terminations, because the clamping tests were performed with the values reduced to 25 % of the required values.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

New sizes of the cable glands KNV and KOV and new types of cable glands KNVTV, KNVTN, KOVTN and KOVTV were added.

Specific conditions of use for the cable glands with G threads added.

Копия для каталога



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Additional information:

See attached annex.

Annex:

[IECEX CCVE 17.0004X Annex.pdf](#)

Копия для каталога

NANIO CCVE
Zavod ECOMASH, VUGI Settlement
Lyubertsy, Moscow region
140004
Russian Federation



Issue No. 1

Annex to IECEx CCVE 17.0004X

Cable glands types K... are used in mobile and stationary electrical installations inside production facilities and in outdoor facilities, ensuring explosion-proof cable sealing and additional ingress protection for cable armor.

Cable glands can be made from:

- brass;
- nickel-plated brass;
- stainless steel;
- galvanized steel.

Sealing ring material – silicone.

Service temperature: minus 60 °C...+130 °C.

Type of cable gland connecting thread:

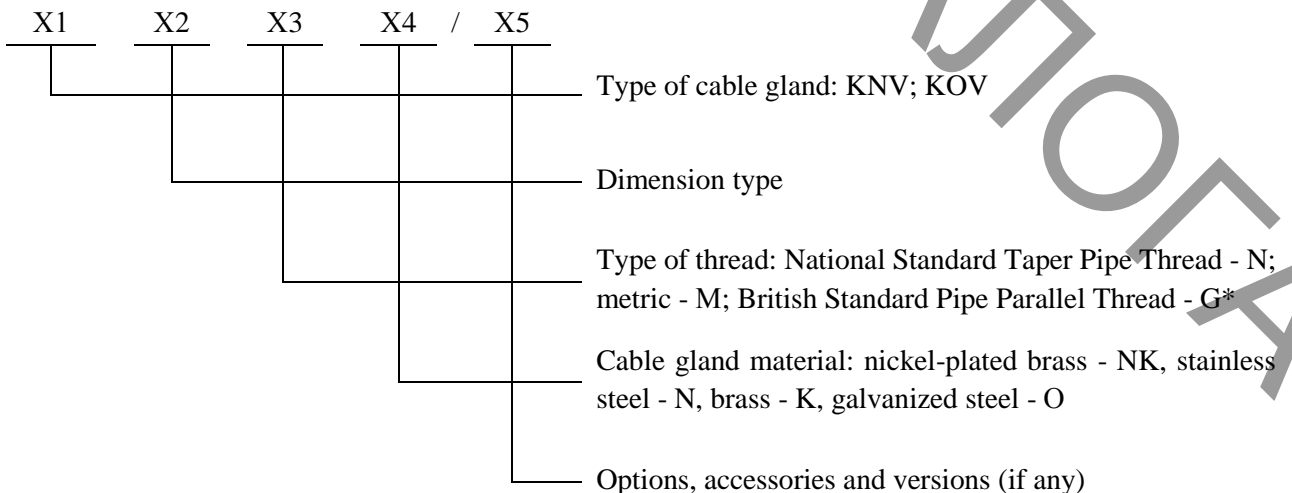
- metric (M);
- British Standard Pipe Parallel Thread (G)*;
- National Standard Taper Pipe Thread (NPT).

*G thread is not applicable for explosion protection type "flameproof enclosures "d".

Cable gland shall be used only with round cables, diameters of which match the crimping range of cable gland.

For fixation of cable gland with metric or pipe cylindrical thread in the equipment, the following additional items shall be used: KG locknut or special lubricant, UKF sealant. Also ground A-ring may be applied. Locknut shall be used for thin-walled enclosures. For thin-walled plastic enclosures ground A-ring shall additionally be used.

Formation of marking



*G thread is not applicable for explosion protection type "flameproof enclosures "d".

Dimension types of KNV cable glands are given in Table 1 in accordance with types of connecting thread and diameters of crimped cables:

Table 1

Dimension type of cable gland	Thread		Diameter of crimped cable (d), mm
	M	G, NPT	
KNV01	M16x1,5	3/8"	3 – 8
KNV1	M20x1,5	1/2"	6 – 12
KNV2	M25x1,5	3/4"	12 – 18
KNV2.../P	M25x1,5	3/4"	6 – 18
KNV3	M32x1,5	1"	18 – 25
KNV3.../P	M32x1,5	1"	12 – 25
KNV4	M40x1,5	1 1/4"	25 – 31
KNV5	M50x1,5	1 1/2"	31 – 39
KNV6	M63x1,5	2"	39 – 47
KNV7	M75x1,5	2 1/2"	47 – 55
KNV71	M75x1,5	2 1/2"	55 – 63
KNV8	M90x1,5	3"	63 – 71
KNV81	M90x1,5	3"	71 – 79
KNV10	M100x1,5	4"	79 – 87
KNV101	M100x1,5	4"	84 – 92

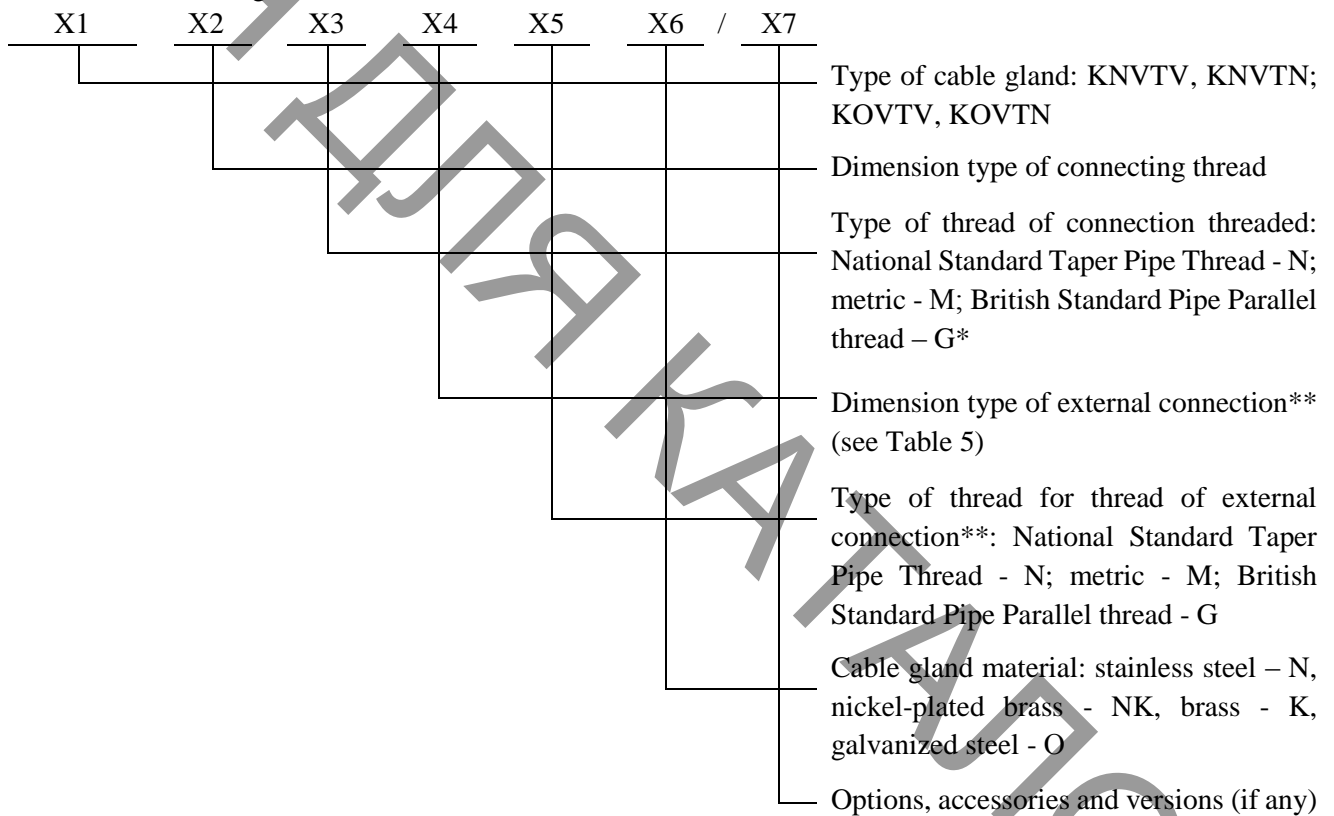
Dimension types of KOV cable glands are given in Table 2 in accordance with types of connecting thread and diameters of crimped cables with armor (D) and with removed armor (d):

Table 2

Dimension type of cable gland	Thread		Diameter of crimped cable, mm	
	M	G, NPT	d	D
KOV01	M16x1,5	3/8"	3 – 8	8 – 12
KOV011	M16x1,5	3/8"	6 – 11	9 – 17
KOV1	M20x1,5	1/2"	6 – 12	9 – 17
KOV12	M20x1,5	1/2"	6 – 12	15 – 25
KOV12.../P	M20x1,5	1/2"	6 – 12	9 – 25
KOV11	M20x1,5	1/2"	12 – 15	15 – 25
KOV11.../P	M20x1,5	1/2"	3 – 15	9 – 25
KOV2	M25x1,5	3/4"	12 – 18	15 – 25
KOV2.../P	M25x1,5	3/4"	6 – 18	9 – 25
KOV22	M25x1,5	3/4"	12 – 18	21 – 31
KOV22.../P	M25x1,5	3/4"	6 – 18	15 – 31
KOV21	M25x1,5	3/4"	18 – 20	21 – 31
KOV21.../P	M25x1,5	3/4"	7 – 20	15 – 31
KOV3	M32x1,5	1"	18 – 25	21 – 31
KOV3.../P	M32x1,5	1"	12 – 25	15 – 31
KOV32	M32x1,5	1"	18 – 25	27 – 37
KOV32.../P	M32x1,5	1"	12 – 25	27 – 32
KOV31	M32x1,5	1"	25 – 27	27 – 37
KOV4	M40x1,5	1 1/4"	25 – 31	27 – 37

Dimension type of cable gland	Thread		Diameter of crimped cable, mm	
	M	G, NPT	d	D
KOV42	M40x1,5	1 1/4"	25 – 31	36 – 46
KOV41	M40x1,5	1 1/4"	31 – 34	36 – 46
KOV5	M50x1,5	1 1/2"	31 – 39	36 – 46
KOV52	M50x1,5	1 1/2"	31 – 39	45 – 53
KOV51	M50x1,5	1 1/2"	39 – 42	45 – 53
KOV6	M63x1,5	2"	39 – 47	45 – 53
KOV62	M63x1,5	2"	39 – 47	52 – 65
KOV61	M63x1,5	2"	47 – 54	52 – 65
KOV7	M75x1,5	2 1/2"	47 – 55	52 – 65
KOV71	M75x1,5	2 1/2"	55 – 63	65 – 75
KOV8	M90x1,5	3"	63 – 71	71 – 81
KOV81	M90x1,5	3"	71 – 79	81 – 91

Formation of marking



*G thread is not applicable for explosion protection type "flameproof enclosures "d".

**Code of dimension type of external thread is not indicated if it coincides with connecting thread. Code of type of external thread is not indicated if the type and dimension type of external thread coincide with connecting thread.

Parameters of thread and diameters of crimped cables for KNVTV, KNVTN type cable glands are given in Table 3.

Table 3

Dimension type of connecting thread	Thread		Diameter of crimped cable (d), mm
	M	G, NPT	
01	M16x1,5	3/8"	3 – 8
1	M20x1,5	1/2"	6 – 12
2	M25x1,5	3/4"	12 – 18
2.../P	M25x1,5	3/4"	6 – 18
3	M32x1,5	1"	18 – 25
3.../P	M32x1,5	1"	12 – 25
4	M40x1,5	1 1/4"	25 – 31
5	M50x1,5	1 1/2"	31 – 39
6	M63x1,5	2"	39 – 47
7	M75x1,5	2 1/2"	47 – 55
71	M75x1,5	2 1/2"	55 – 63
8	M90x1,5	3"	63 – 71
81	M90x1,5	3"	71 – 79

Parameters of thread and diameters of crimped cables with armor (D) and with removed armor (d) for KOVTV, KOVTN type cable gland are given in Table 4.

Table 4

Dimension type of connecting thread	Thread		Diameter of crimped cable, mm	
	M	G, NPT	d	D
01	M16x1,5	3/8"	3 – 8	8 – 12
1	M20x1,5	1/2"	6 – 12	9 – 17
2	M25x1,5	3/4"	12 – 18	15 – 25
2.../P	M25x1,5	3/4"	6 – 18	9 – 25
3	M32x1,5	1"	18 – 25	21 – 31
3.../P	M32x1,5	1"	12 – 25	15 – 31
4	M40x1,5	1 1/4"	25 – 31	27 – 37
5	M50x1,5	1 1/2"	31 – 39	36 – 46
6	M63x1,5	2"	39 – 47	45 – 53

Dimension types of external connection are given in Table 5.

Table 5

Dimension type of external connection	Thread	
	M	G, NPT
01	M16x1,5	3/8"
1	M20x1,5	1/2"
2	M25x1,5	3/4"
3	M32x1,5	1"
4	M40x1,5	1 1/4"
5	M50x1,5	1 1/2"
6	M63x1,5	2"
7	M75x1,5	2 1/2"
71	M75x1,5	2 1/2"
8	M90x1,5	3"
81	M90x1,5	3"