TECHNICAL CONSTRUCTION FILE

EN 62444

Metric Cable Glands for electrical Installations

Report Reference No.....:	TLZJ21061631607
Reviewed by (name+signature).....:	Sophia Yu
Approved by (name+signature).....:	Brain Vent
Approved by (name + signature)	Kent Hook
Date of issue.....:	June 17,2021
Reviewing Laboratory.....:	Shanghai Global Testing Services Co., Ltd.
Address.....:	Floor 2nd, Building D-1, No. 128, Shenfu Road, Minhang District, Shanghai, China.

GLOBAL TESTING SERVICES CO., LTD. GTS CERTIFICATION

Review specification:

Standard.....:	☒ EN 62444:2013
Review procedure.....:	CE
Non-standard Review method.....:	N/A

Review Report Form No.....:	
TRF Originator.....:	GTS
Master TRF.....:	Dated 2010-05
Review item description.....:	BRASS CABLE GLANDS
Model/Type reference.....:	PG7, PG9, PG11.PG13.5, PG16, PG19, PG21, PG25, PG29, PG36, PG42, PG48, PG63, M8×1, M10×1, M12×1.5, M14×1.5, M16×1.5, M18×1.5, M20×1.5, M22×1.5, M24×1.5, M25×1.5, M27×1.5, M28×1.5, M30×1.5, M32×1.5, M36×1.5, M40×1.5, M42×1.5, M48×1.5, M50×1.5, M54×1.5, M60×1.5, M63×1.5
Ratings.....:	Material: Body: Nickel-plated brass, Seal: PA66, Sealing: NBR, Protection rating: IP68.

Copy of marking plate:

CE

Summary of Reviewing:

This Review report complies with EN 62444

1. These cable glands are designed for use with unarmored cable. These cables must be with extruded sealing (solid polymeric) completely surrounding the "core" (insulation and conductor), allowing for no holes or ventilation through the inner jacket or along the cores.

2. These cable glands are designed for appropriate cable, as per the manufacturer's specifications, to maintain integrity of the installation.

3. According to manual, threads number is at least 5 fully engaged threads.

Review Report Content

This Review report consists of:

Main report

Annex I: Photo Documentation, **8** page(s).

Review case verdicts:	
Review case does not apply to the Review object ...:	N/A
Review object does meet the requirement .....:	Pass (P)
Review object does not meet the requirement ..:	Fail (F)
Reviewing:	
Date of receipt of Review item .....:	June 10,2021
Date(s) of performance of Review .....:	June 10,2021 to June 17,2021

General remarks:

The Review results presented in this report relate only to the item(s) Reviewed.

This report shall not be reproduced, except in full, without the written approval of the Reviewing laboratory.

"(see remark #)" refers to a remark appended to the report.

"(see Annex #)" refers to an annex appended to the report.

"(see appended table)" refers to a table in the CB Review Report.

Throughout this report a comma (point) is used as the decimal separator.

Remarks:

1. The samples for each group of Reviewing were selected randomly from the samples provided by the manufacturer.
2. The Review results reported in this Review report shall refer only to the sample actually Reviewed and shall not refer or be deemed to refer to bulk from which such a sample may be said to have been obtained.
3. The trademark and type identification are shown both in manual and enclosure. See manual firstly.
4. Determination of the Review result includes consideration of measurement uncertainty from the Review equipment and methods.
5. We conclude that the product(s) presented in this Review report complies (comply) with the standard according to the Review results on the submitted samples.

EN 62444:2013			
Clause	Requirement – Review	Result	Verdict
7	MARKING AND DOCUMENTA		P
7.1	An appropriate part of the cable gland shall be legibly and durably marked in a visible place with the following:		P
	-name, logo or registered mark..... :		P
	-identification (or type reference)		P
7.2	Marking durable and easily legible. Review: 15 s with water and 15 s with petroleum spirit		P
	Compliance is checked by inspection		P
7.3	Shall provide in his literature, such as		
	sealing range - installation torques - entry thread length - type of cable anchorage and anchorage range - impact category - correct assembly of the cable gland - IP code in accordance with EN60529 (not 8.4) - temperature range (not 8.6) - resistance to salt and sulphur dioxide laden atmospheres - multi orifice seals		
8	CONSTRUCTION		P
8.1	Those parts of a cable gland that are used for tightening or for holding during installations should be hexagon form		N
	Alternatives to the hexagon form, if any		N
	The entry thread, if any, shall be constructed in accordance with table 1 of EN 60423	EN 60423	P

EN 62444:2013			
Clause	Requirement – Review	Result	Verdict
8.2	All external projection edges, and corners of cable gland components shall be smooth, to prevent danger from injury in handling the cable gland		P
8.3	Cable glands shall be constructed to avoid cable damage when installed in accordance with manufacturers		P
8.4	Cable glands shall provide a minimum degree of IP54		P
	Compliance is checked by 9.4 and 9.5		
8.5	Care shall be taken in the construction of cable glands to ensure than no detrimental effects occur between dissimilar materials which may impair the performance of the cable glands		
8.6	Cable glands shall be suitable for use with in a minimum temperature range of –20°C to 65°C. For Review purposes the temperature tolerance is +/-2°C		P
9	MECHANICAL PROPERTIES		
9.1	Cable retention for cable glands without protective bonding to earth.		P
	Except for armoured cables, which are Reviewed in accordance with 10.4.1, compliance is checked by the following Review.		P
	Cable glands declared to have cable anchorage in accordance with 6.2.2 are Reviewed in accordance with 9.3, if the sealing range and the anchorage range are the same.		P
	For Review mandrels which are not circular in shape i.e. where non-circular cables are being simulated, their cross- sectional area shall be determined, and the diameter of a circular cable of the same cross-sectional area shall be calculated. The Review values shall be appropriate to the nearest circular		N

EN 62444:2013			
Clause	Requirement – Review	Result	Verdict
	Review mandrel size.		
	The Review mandrel is marked when unloaded so that any displacement relative to the cable gland can be easily detected.		P
	The load is maintained for 5 min and at the end of this period the displacement shall be not exceed 3 mm when unload.		P
9.2	Cable retention for cable glands with protective bonding to earth		N
	Cable glands declared in accordance with 6.3.1.3 shall provide cable retention.		N
9.3	Cable anchorage		P
	Cable glands declared with cable anchorage in accordance with 6.2.2 shall relieve the conductors from strain, including twisting..		P
	Compliance is checked by the following Reviews.		-
	The Review mandrel is marked when unloaded so that any displacement relative to the gland can be easily detected.		P
	The Review mandrel is pulled for a duration of 1 s, 50 times, without jerks in the direction of the axis with the relevant force specified in Table 2A.		P
	At the end of this period the displacement shall not exceed 2 mm. This measurement is to be carried out after unloading the force the Review mandrel.		P
	The sample with the Review mandrel is then mounted onto the Review arrangement for the cable anchorage twist Review.		P
	The Review mandrel is marked when unloaded so that any displacement can be easily detected and is then subjected for 1 min to the torque as shown in Table 3.		P

EN 62444:2013			
Clause	Requirement – Review	Result	Verdict
	During this Review the Review mandrel shall not turn by more than an angle of 45C.		P
	The Reviews shall be repeated using a Review mandrel equivalent to the maximum value of the anchorage range of the cable gland as declared by the manufacturer or supplier with the Review value of the relevant maximum cable diameter specified in Table3.		P
9.4	Resistance to impact		P
	Cable glands shall be resistant to impact.		P
	The weight shall be fitted with an impact head of hardened steel in the form of a hemisphere of 25 mm diameter.		P
	The point of impact shall be the place considered to be the weakest.		P
	The base shall have a mass of at least 20kg or be rigidly fixed or inserted in the floor.		P
	The sample is subjected to the weight as given in Table 4 according to the category declared by the manufacturer to supplier.		P
	After the Review the sample shall show no signs of damage likely to impair safety.		P
	The sample shall then be subjected to the appropriate Reviews in accordance with 12.1 but considering the classification according to 6.4.1 if so declared by the manufacturer or supplier.		P
9.5	Excess tightening an seal performance		P
	Cable glands shall be capable of withstanding excess tightening which is likely to occur during installation.		P
	Compliance is checked with new samples by the following Review.		-
	After the Review, the samples shall show no signs of		P

EN 62444:2013			
Clause	Requirement – Review	Result	Verdict
	damage likely to impair safety.		
	The sample shall then be subjected to the appropriate Reviews in accordance with 12.1, but considering the classification according to 6.4.1 if so declared by the manufacturer or supplier.		P
9.6	Cable guard		N
	A cable guard which is part of a cable gland shall be constructed so that the flexible cable is adequately protected against excessive flexing.		N
	Compliance is checked in accordance with the Reviews described in the relevant standard for equipment for which the cable glands with guards are intended.		N
10	ELECTRICAL PROPERTIES		-
10.1	Equipotential bonding		N
	Cable glands declared in accordance with 6.3.1.1 shall have adequate conductivity to the enclosure		N
	In no case shall the resistance exceed 0,1 ohm.		N
10.2	Electrical connection to metallic layer(s) of cable		N
	Cable glands declared in accordance with 6.3.1.2 shall have adequate electrical connection with the metallic layer of the cable		N
	the resistance shall not exceed 0,1 ohm.		N
10.3	Insulation resistance		P
	Cable glands declared in accordance with 6.3.2 shall have adequate Insulation resistance		P
	Compliance is checked by 10.3.2 after 10.3.1		
10.3.1	Compliance checked by a humidity treatment carried out in a humidity cabinet containing air with relative humidity maintained between 91 % and 95 % in condition of 20-30C		P
	Specimens kept in the cabinet for 120h (5 days)		P

EN 62444:2013			
Clause	Requirement – Review	Result	Verdict
10.3.2	Insulation resistance Review(500 V d.c. for 1 min):		-
	The insulation resistance shall not be les than 5 MΩ		P
10.4	Protective connection to earth		N
	Cable glands declared in accordance with 6.3.1.3 shall resistant to earth fault current		N
10.4.1	Mechanical pre-stressing		N
	The load is maintained for 5 min and at the end of the this period the displacement shall not exceed 3mm at either cable gland		N
10.4.2	Electrical current Review		N
11	ELECTROMAGNETIC COMPATIBILITY		N
12	EXTERNAL INFLUENCES		
12.1	IP code in accordance with EN60529		P
	The degree of protection provided by cable glands is checked in accordance with 12.1.1 immediately followed by 12.1.2		P
12.1.1	IPX4 or above		P
	The sample is deemed to have passed the Review if there is no ingress of dust		P
12.1.2	IP4X or above		P
	The sample is deemed to have passed the Review if there is no ingress of water visible to normal or corrected vision without magnification.		P
12.2.	Resistance to abnormal heat		P
	Exposed non-metallic parts of cable glands shall be resistant to abnormal heat from an external source		P
	Sealing systems are exempt from this Review		P
	Temperature of glow wire is 650C		P
	No visible flame or glowing		P
	Flame and glowing extinguish within 30 s		N
	No ignition of the tissue paper		P

EN 62444:2013			
Clause	Requirement – Review	Result	Verdict
12.3	Resistance to salt and sulphur dioxide Lander atmospheres		N
	Cable glands if declared in accordance with 6.4.3 shall have adequate resistance to salt and sulphur dioxide laden atmospheres		N
	After each Review, the samples are to be carefully rinsed and dried and shall show no sign of corrosion		N
	Discoloration and effects on sealing systems are neglected		N

TABLE: List of Components

Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity

[1] An asterisk indicates a mark which assures the agreed level of surveillance

- End of Review Report -

Type of equipment, model: BRASS CABLE GLANDS,
PG7, PG9, PG11.PG13.5, PG16, PG19, PG21, PG25, PG29, PG36, PG42, PG48, PG63, M8×1, M10×1, M12×1.5, M14×1.5, M16×1.5, M18×1.5, M20×1.5, M22×1.5, M24×1.5, M25×1.5, M27×1.5, M28×1.5, M30×1.5, M32×1.5, M36×1.5, M40×1.5, M42×1.5, M48×1.5, M50×1.5, M54×1.5, M60×1.5, M63×1.5

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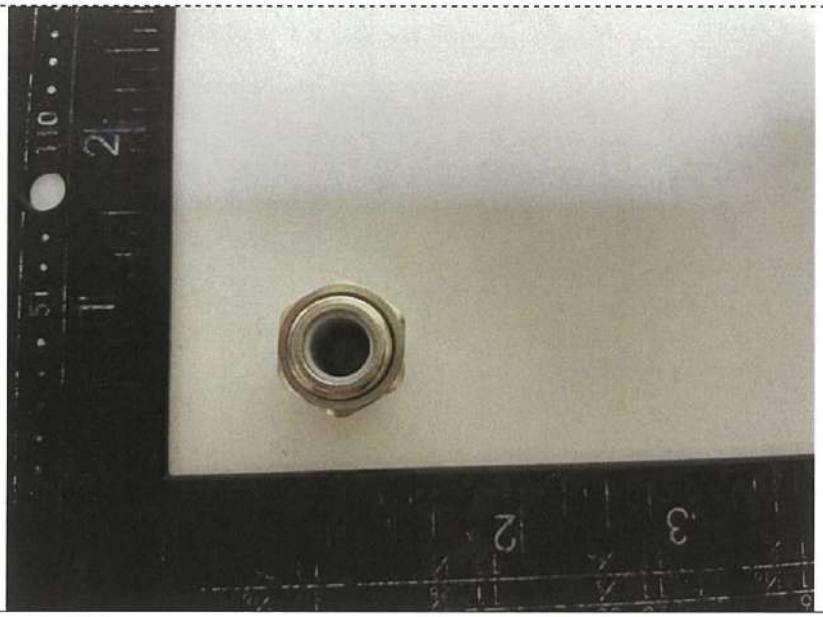

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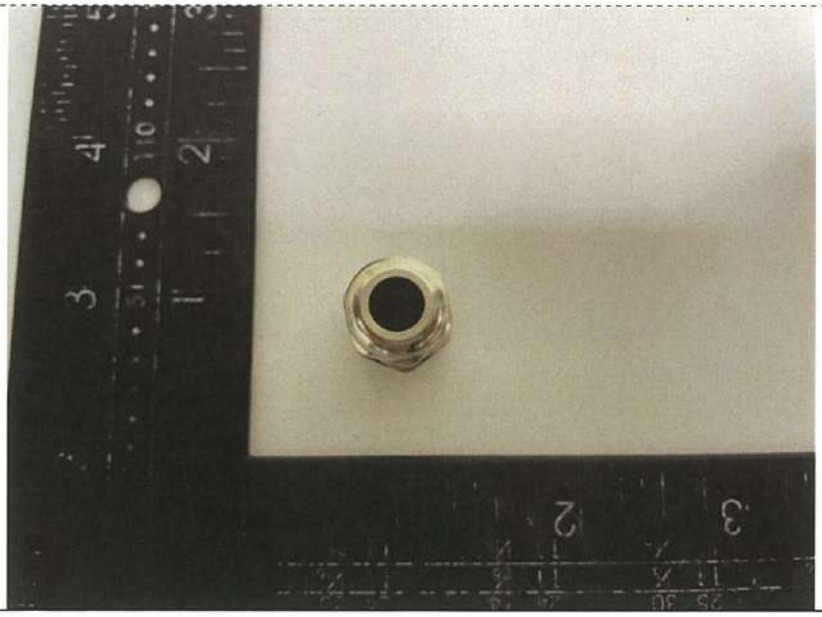

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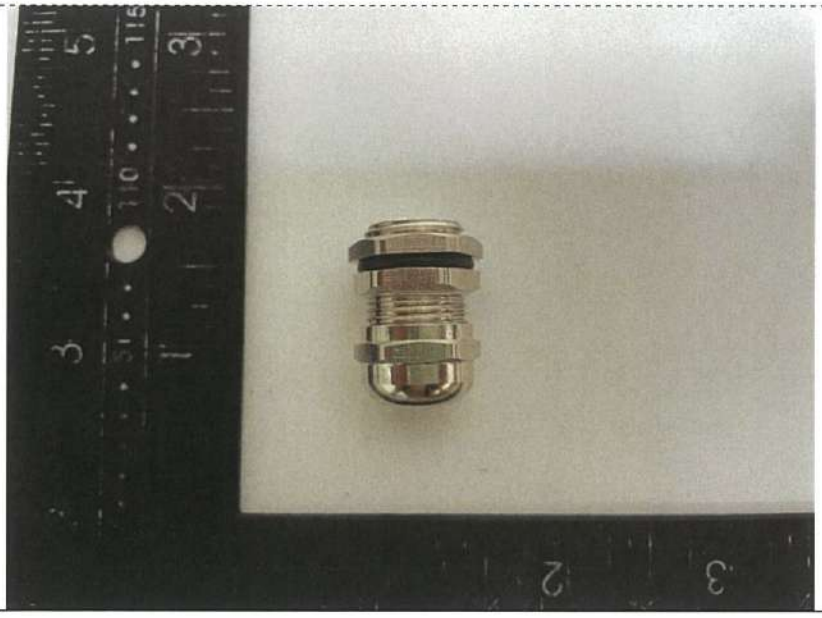

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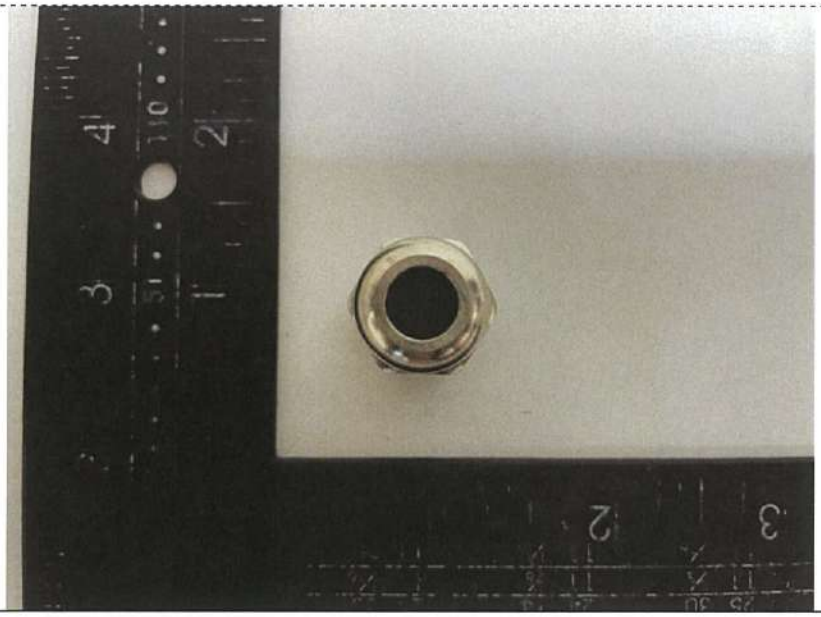

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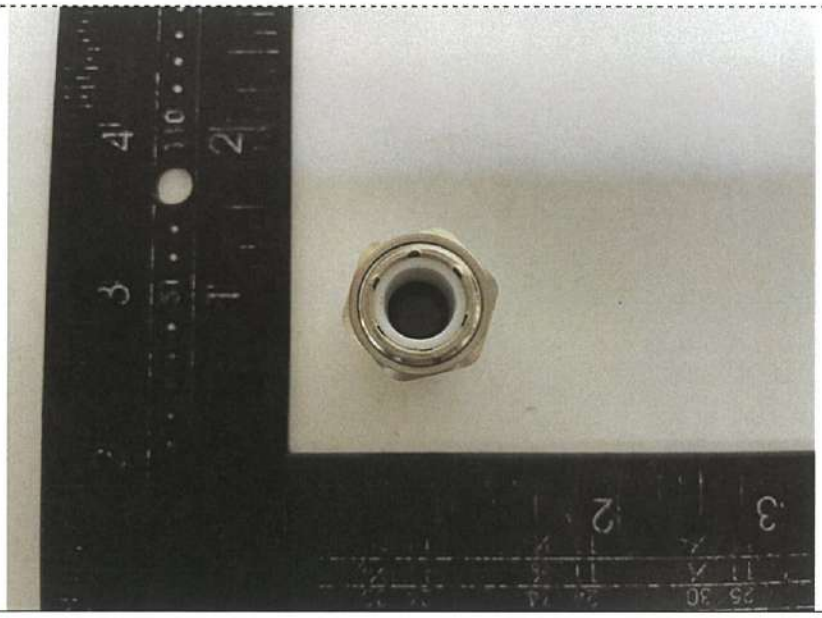

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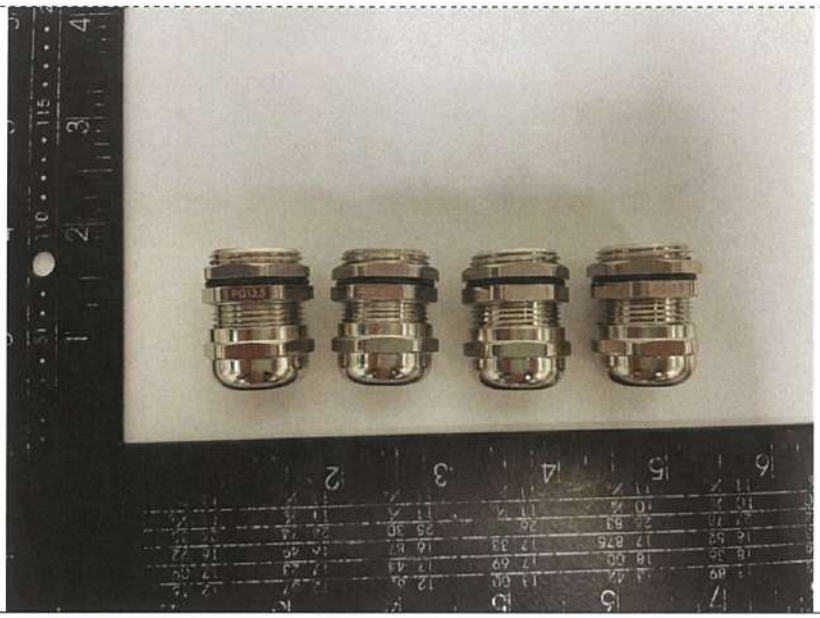

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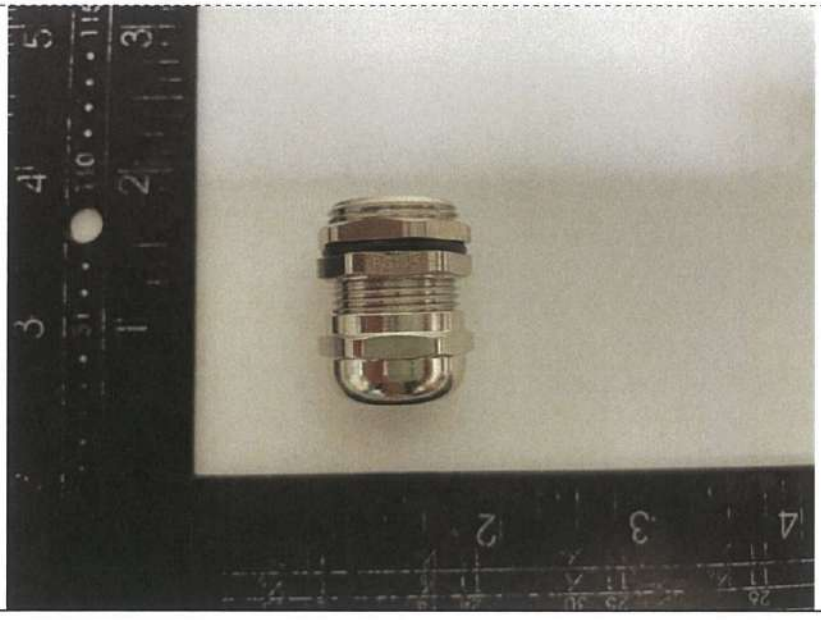

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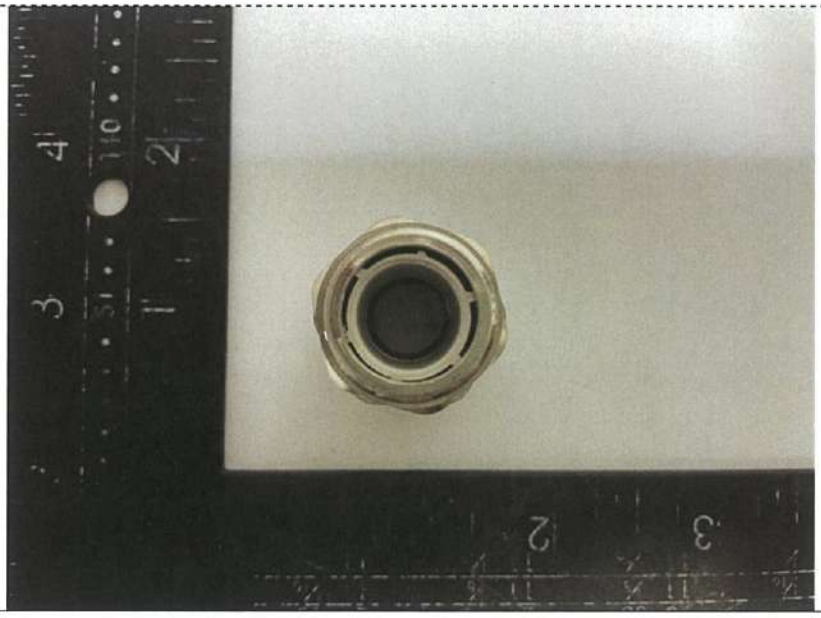

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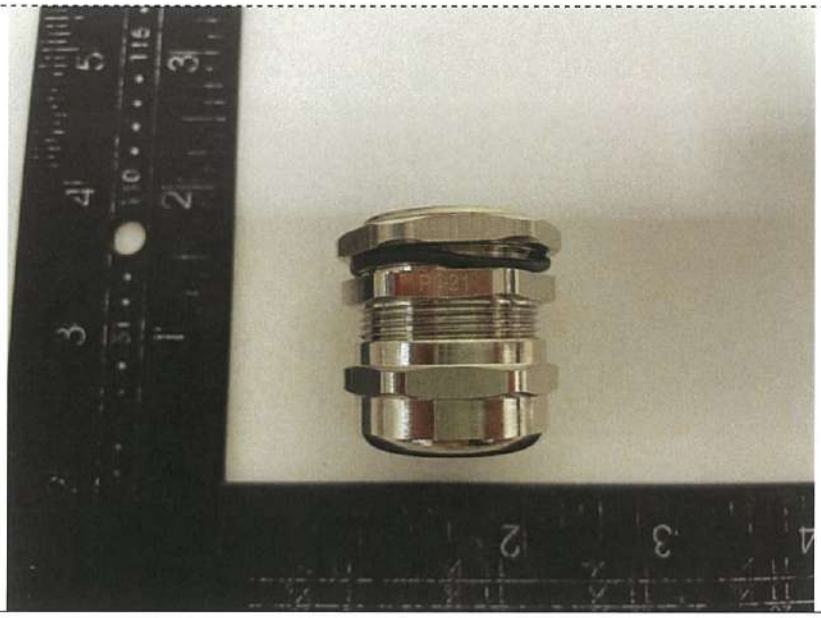

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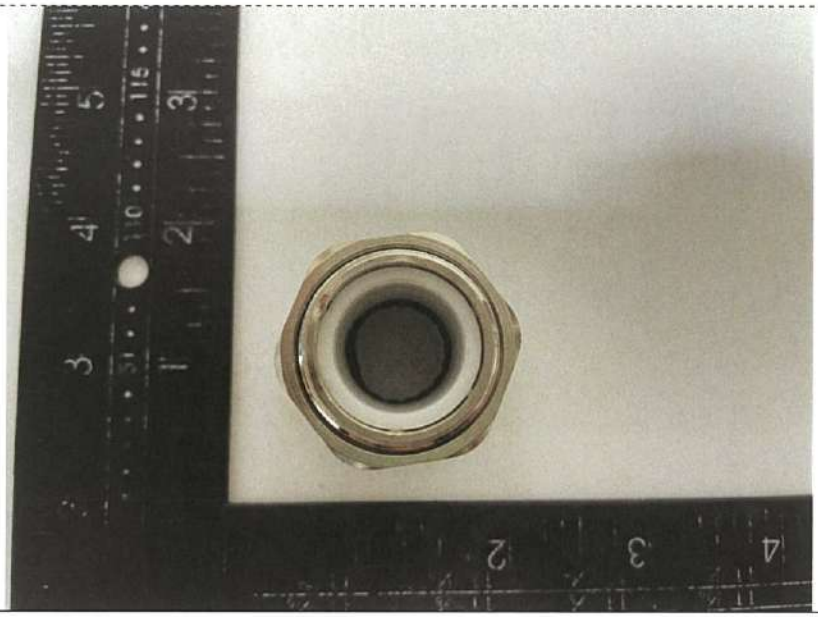

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