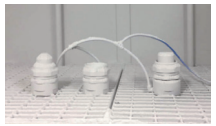
Degrees of protection by enclosure (IP Code)

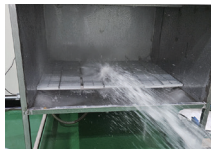
Degree of protection against solid objects

Dust chamber size (㎜) :
1800(w) x 1200(d) x 1200(h)
Weight : 300 kg



	1	Protection against the penetration of foreign objects of 50 mm in diameter or larger
	2	Protection against the penetration of foreign objects of 12.5 mm in diameter or larger
	3	Protection against the penetration of foreign objects of 2.5 mm in diameter or larger
	4	Protection against the penetration of foreign objects of 1 mm in diameter or larger
	5	Protected against dust; a limited amount of dust may penetrate
	6	Dust-tight; there is no dust penetration

Degree of protection against water



IPx8 Test chamber size:
Circular type : Ø1300 ㎜
Square type : 900 x 900 ㎜
height : 600 ㎜
Design Max. Pressure : 9 bar

	3	Protection against splashing rain (10 l/min) up to an angle of 60 °
	4	Protection against splashing rain (10 l/min) at any angle
	5	Protection against a jet a water (12.5 l/min) at any angle
	6	Protection against a jet a water (100 l/min) at any angle
	7	Protection against water penetration for at least 30 minutes at an immersion of up to 1 m depth from the bottom
	8	Protection against water penetration when immersed up to a depth as specified by the supplier (more than 30 minutes and deeper than 1 m)

Determining the pressure for IPx8
The pressure is calculated by converting the water depth to 1 bar (0.1 MPa) per 10 meters of submersion. For instance, a depth of 90 meters of immersion can be interpreted as 9 bar.

DEKRA Korea Laboratory has been accredited by A2LA, an ILAC (International Laboratory Accreditation Cooperation) member in accordance with ISO/IEC 17025, signifying that our laboratory has successfully undergone thorough assessments and complies with internationally recognized standards.

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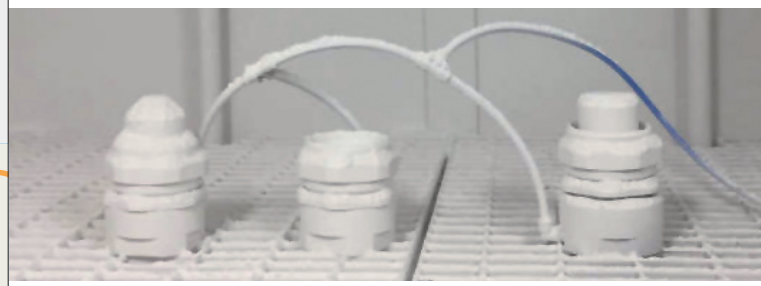

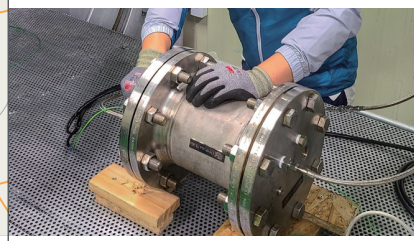

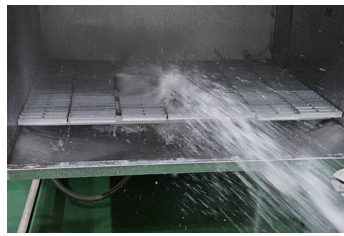

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Explosion tests for flameproof equipment



Tests per IEC/EN 60079-1

- Reference pressure tests; increased pressure for below -20°C ambient temperature
- Dynamic overpressure tests
- Non-transmission tests
  - Testing by increased pressure
  - Testing by oxygen enrichment of test gases
- Thermal tests and non-transmission tests for breathing and draining devices
- Flame erosion tests for non-metallic enclosure

Tests per UL1203

- Explosion tests
- Explosion tests on conduit seals
- Dynamic Pressure Test

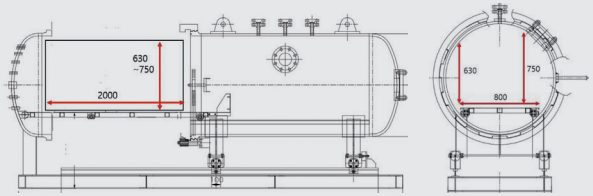
Tests per NIIS-TR-NO.39(2006)

工場電気設備防爆指針(ガス蒸気防爆2006)

- Explosion-withstand test 爆発強度試験
- Flame-propagation test 爆発引火試験
- Pre explosion test 爆発予備試験

Maximum size of test sample

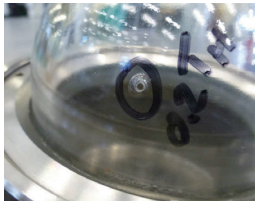
Length : max. 2000 ㎜, Width : max. 700 ㎜, Height : max. 700 ㎜



Electrical and mechanical tests

IEC/EN 60079-0

- Temperature measurement
- Impact test/Drop test
- Thermal shock test
- Torque test
- Thermal endurance tests
- Cable gland clamping tests, etc.



IEC/EN 60079-1

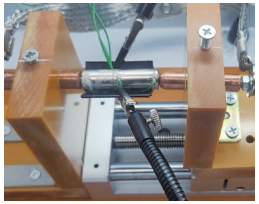
- Static overpressure test
- Entry device sealing test and mechanical strength test
- Sinter pore size and density test, etc.

IEC/EN 60079-2

- Maximum overpressure test
- Leakage test
- Purging and dilution tests
- Tests for containment, etc.

IEC/EN 60079-7

- Terminal insulating material tests
- Pluggable connection
- Electric strength, etc.



IEC/EN 60079-11

- Electrolyte leakage test
- Battery container pressure test, etc.

IEC/EN 60079-15

- Tests for sealed devices
- Type test requirements for restricted breathing enclosures, etc.

IEC/EN 60079-18

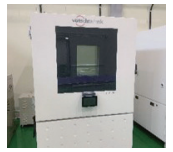
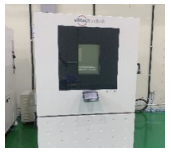
- Water absorption test
- Dielectric strength test, etc.

Environmental tests (Thermal endurance tests)

Environmental testing

is the process of evaluating whether a product can withstand various conditions (such as temperature changes, humidity, etc.) that it may encounter in real-world use. This process helps to verify the product's durability and performance, ensuring its reliability. It is essential in many industries.

Test equipment specification

	Climate chamber 1	Climate chamber 2
Test space(㎜)	1100(w) x 950(d) x 950(h)	1100(w) x 950(d) x 950(h)
Temperature	-40 °C to +150 °C	-40 °C to +150 °C
R.H.	+15% to +98%	+15% to +98%


	Oven 1	Oven 2
Test space(㎜)	800(w) x 800(d) x 800(h)	970(w) x 1000(d) x 1020(h)
Temperature	Up to +300 °C	Up to +150 °C

	Freezer 1
Test space(㎜)	1000(w) x 1000(d) x 1000(h)
Temperature	-70 °C to +50 °C