



Pressure equalization by Venting

Protection against condensation
in electrical enclosures

VENTING
by WISKA



We take the pressure off

Being a pioneer in the development of breathable cable glands, WISKA today is an expert for watertight yet breathable components avoiding condensation. With the launch of the VentGLAND® in 2007, the world's first cable gland with pressure equalization, WISKA set new benchmarks. Since then WISKA has continued to expand and optimise its venting products.

The diversity of our products provide venting solutions for a broad range of applications. Thread sizes include M 12 to M 63 with a wide range of materials such as polyamide, brass and stainless steel. Completed by their high protection classes of IP 68 and 69K, venting

products by WISKA appear to be true multi-talents. On top of that, they have application specific membranes with different air flow rates and robust properties such as resistance to UV, salt water and aggressive chemicals.

WISKA offers many years of experience and working with customers to provide solutions that meet any individual requirements. VentGLAND® cable glands and VentPLUG pressure equalization units are nowadays being used around the world, especially in sectors that are moisture and temperature sensitive such as shipping, and the lighting and solar industries.

Why venting?

Hermetically sealed enclosures are insufficient to protect electrical installations from moisture and contaminants. Fluctuating temperatures and environmental factors, especially during outdoor usage, create pressure inside tightly sealed enclosures. This leads to a build-up of condensation as well as damage to the seal that can result in the penetration of moisture and

dirt. Breathable venting products from WISKA ensure effective pressure equalization between the interior and exterior. This reduces stress on the seal and maintains the enclosure's protection classes. Venting products from WISKA therefore help to increase operational safety and extend the service lives of electrical installations. This has a sustaining positive effect on maintenance costs.

Example: Maintenance of street lighting

In a municipal district, 2,000 street and outdoor lights with an IP 68 protection classification require maintenance every 3 years. If pressure equalization components are

not used in the lighting enclosures, protection classes and lighting performance are reduced. This results in maintenance being required every 1.75 years.¹

2,000 lights	IP 68 protection	IP 5X protection
Maintenance interval	3 years	1.75 years
Maintenance per year	667 lights	1,143 lights
Maintenance cost per light	20 euros	20 euros
Maintenance cost per year	13,340 euros	22,860 euros

¹ Based on the CIE report 154:2003 of the International Commission on Illumination "The Maintenance of Outdoor Lighting Systems".

→ **Conclusion:** Without using venting products additional costs of more than 70 percent may arise due to higher maintenance requirements.

Your benefits with Venting products by WISKA



Effective pressure equalization



Protection against condensation



Protection against contaminants



High operational safety



Increased profitability



Wide product range



Ideal for roughest conditions



Highest product quality

Count on us

Use our venting calculator to compute the optimal application of pressure equalization products. It gives you detailed information about which and how many units are required to avoid condensation to critical levels. We will be glad to personally advise you on your specific requirements for optimal venting usage.



You can access our venting calculator on www.wiska.com/ventingcalculator

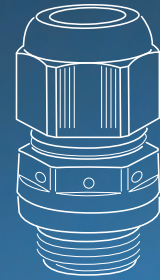
VentGLAND® Cable glands

The VentGLAND® combines pressure equalization and cable gland in a single unit. It features high air flow rates as well as high water protection capacity. The breathable VentGLAND® cable glands are a part of the tried and tested modular SPRINT system. The VentGLAND® can easily be used to replace

standard cable glands due to its identical clamping ranges and compatibility with all cap nuts and ranges of multiple and special sealing inserts. The product portfolio is rounded off with VentGLAND® cable glands with EMC-inserts for protection against electromagnetic interference.

Technical data

Protection class	IP 68 / 69K		
Temperature range	-40 °C · 100 °C		
Material	Polyamide, brass nickel-plated, stainless steel		
Material sealing gasket	EPDM, silicone		
Material membrane	ePTFE		
Thread sizes	Polyamide	– M 16 · M 40	
	Brass nickel-plated	– M 16 · M 63	
	Stainless steel	– M 16 · M 63	



VentGLAND® cable gland

Air flow rate for the VentGLAND® at a reference value of 70 mbar pressure difference

Tread sizes	M 16	M 20	M 25	M 32	M 40	M 50	M 63
Air flow rate	52 l/h	42 l/h	65 l/h	115 l/h	150 l/h	225 l/h	285 l/h

SPRINT
by WISKA

VentPLUG Pressure equalization units

The VentPLUG is used when a cable gland with an additional pressure equalization unit is required to vent the enclosure. Pressure equalization units from WISKA are now also available in thread sizes M 20 and M 40, in addition to M 12. Both feature a flat, space-

saving design to enable flexible usage. Thanks to an improved membrane, the air flow rate of the new VentPLUG in the sizes M 20 and M 40 has more than doubled. The high air flow version even achieves a 2.5 times higher value.

Technical data

Protection class	IP 68 / 69K	
Temperature range	-40 °C - 100 °C	
Material	Polyamide, brass nickel-plated	
Material sealing gasket	TPE, EPDM, silicone	
Material membrane	ePTFE	
Thread sizes	Polyamide – M 12, M 20, M 40	Brass nickel-plated – M 12



VentPLUG pressure equalization unit

Air flow rate for the VentPLUG at a reference value of 70 mbar pressure difference

Thread sizes	M 12	M 12 HF*	M 20	M 20 HF*	M 40	M 40 HF*
Air flow rate	22 l/h	34 l/h	110 l/h	280 l/h	660 l/h	1,650 l/h

* High air flow version

The venting membrane

The high performance ePTFE membrane used in WISKA venting products has billions of breathable pores to enable an effective air exchange between the interior and exterior. The micrometre pores also prevent liquids, dirt and contaminants from passing through the membrane and entering the enclosure.

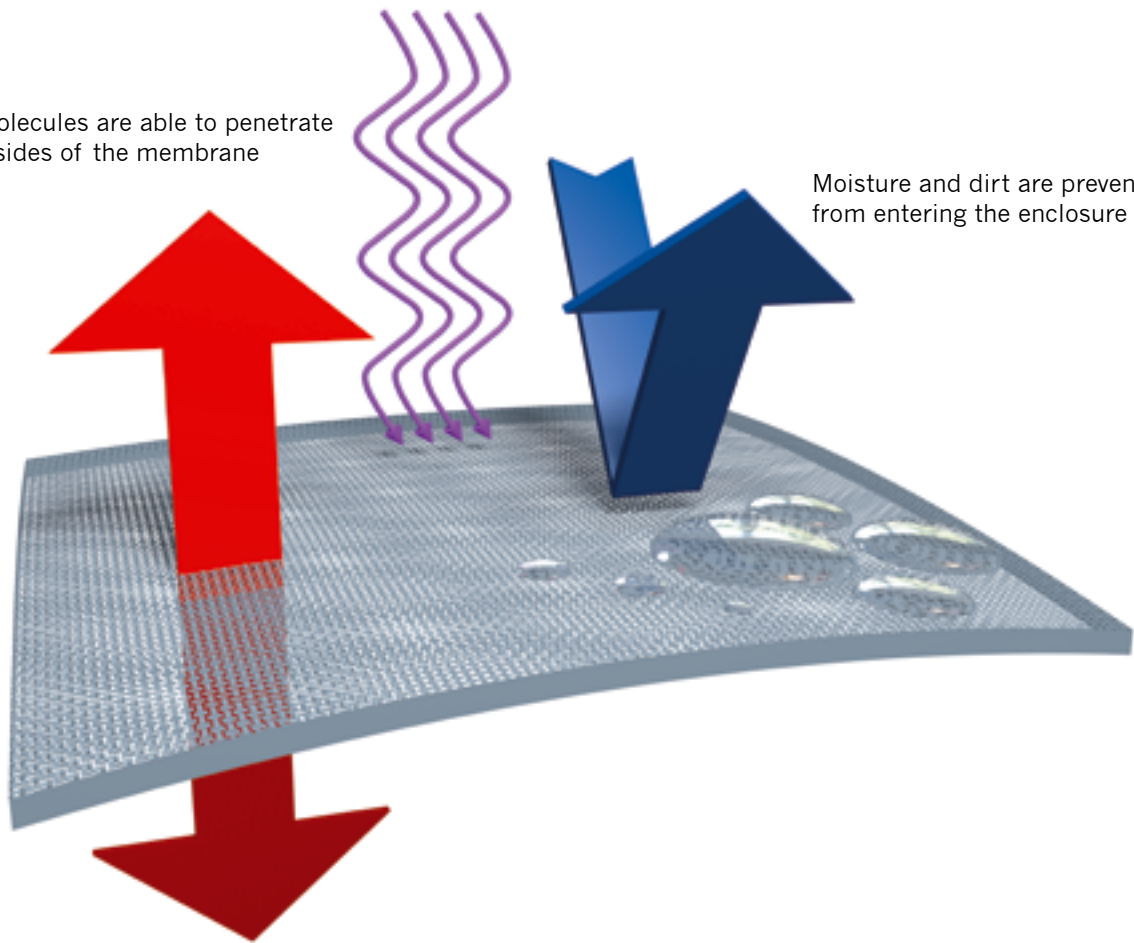
The membrane is available with different air flow rates. All of them offer all the properties required for the roughest environmental conditions: They are resistant against UV, salt water, oils and grease. Chemicals and aggressive cleaning substances also have no effect on the membrane's structure and performance.

Salt water resistant

UV resistant

Oil and grease resistant

Air molecules are able to penetrate both sides of the membrane



Moisture and dirt are prevented from entering the enclosure



Application areas



Lighting technology

The space-saving venting products from WISKA are ideally suited for LED modules and maintain long-term lumen and lighting performance.



Switchboard construction

The large and highly breathable WISKA venting products are ideal solutions for the large enclosures in switchboard construction.



Automation

Automation processes are always in motion. WISKA products are robust enough to cope with the most demanding of conditions such as continuous vibrations and fluctuating temperatures.



Solar energy systems

Components in solar energy systems are exposed to wind and weather on a daily basis. WISKA solutions provide a long service life and increase profitability even under the roughest environmental conditions.



Telecommunications

Mobile communication facilities are difficult to access and are subject to fluctuating environmental conditions. Venting provides a high level of network stability and long-term service lives for sensitive equipment.



Shipping

Venting products from WISKA are ideal for use in the shipping and offshore industries. Their UV and salt water resistance provides reliability even under extreme conditions.



Rail industry

WISKA products meet the rail industry's high safety requirements according to EN 45545 and Hazard Level 3. Their reliability remains unaffected by rain, cold, heat, dirt and vibrations.



Wind energy plants

Maintaining and repairing wind turbines is costly. Pressure equalization products from WISKA provide planning and operational security and enable maintenance intervals and repair costs to be accurately planned.

About WISKA



WISKA is one of the leading manufacturers of electrical equipment for industry, trade and shipbuilding, as well as maritime lighting products and CCTV camera surveillance. Our cable glands and junction boxes are in use around the globe and are characterised by flexible applications in various industrial sectors as well as the highest quality standards. Founded in Hamburg in 1919, the first plastic cable glands were produced as early as the mid-1920s. Since then, WISKA has become an expert partner for high-quality plastic products with its own injection moulding manufacture. Today, the family-owned company employs over 260 people worldwide. WISKA operates its own research and development facilities and production plants at its headquarters in Germany and has a global network of representatives and subsidiaries who ensure a quick and effective on-site customer service.

Venting Order Numbers

Type	WISKA-No. RAL 7035	WISKA-No. RAL 9005	WISKA-No. Brass	WISKA-No. Stainless steel
VentGLAND M 16	10104412	10104413	10065899	10104410
VentGLAND M 20	10060974	10060802	10065900	10069400
VentGLAND M 25	10100666	10100667	10065901	10069401
VentGLAND M 32	10100801	10100802	10065902	10069402
VentGLAND M 40	10102471	10102472	10065903	10069403
VentGLAND M 50	-	-	10065904	10069404
VentGLAND M 63	-	-	10065905	10069405
VentPLUG M 12	10102369	10102370	10103265	-
VentPLUG M 12 HF	10103263	10103264	10103266	-
VentPLUG M 20	10106591	10106595	-	-
VentPLUG M 20 HF	10106615	10106619	-	-
VentPLUG M 40	10106593	10106597	-	-
VentPLUG M 40 HF	10106617	10106621	-	-

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More about Venting by WISKA on
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