

# 欧葛兰压力平衡通风防水口 带过滤膜或烧结滤芯

**AGRO Pressure balance elements.**  
With membrane or sinter filter.

为户外电子设备提供更好的全天候工作性能  
For optimal all-weather performance of outdoor electronics.





## 欧葛兰压力平衡通风防水口和排水口 防止压力和温度差异的产生以及凝水的形成

### AGRO Pressure balance and drainage elements prevent differences in pressure or temperature as well as water condensation

无论是街道照明、轨道车辆还是太阳能电池板，各类设备，包括其电子和电气元器件，都必须能够耐受风吹雨打日晒等天气和气候影响。气压、温度和湿度等因素随时可能发生变化，因此密封措施无法做到完全一丝不漏。许多电气机壳可以做到防水和防尘密封（IP68），但无法阻止水汽的进入。日照和内部电子设备的发热均可能导致温度上升，从而使机壳和周围环境之间产生压力差，进而导致机壳内外的空气流通。进入机壳的空气含有水汽，在温度低于露点时将会产生凝水。机壳内产生的积水可能导致腐蚀和设备故障。

为防止机壳内产生压力差、湿度上升和凝水，必须始终保持压力平衡和空气交换。AGRO压力平衡通风防水口能够有效保持电气和电子机壳的压力平衡和空气流通，并能根据需要具有排水功能。

Whether **street lighting, railway vehicles or solar panels** – all types of equipment must resist the effects of wind and weather, heat and rain. And that applies also for their electronics and electrics. **Air pressure, temperature and humidity levels** are constantly changing. Seals are never completely airtight. Many electrotechnical housings are sealed against the ingress of water and dust (IP 68), but are not vapour-tight. As a result of warming, from either the sun's radiation or the enclosed electronics, pressure differences develop between the housing and its surrounding environment, which result in the transfer of air from one to the other. Air drawn into the housing carries moisture, which condenses when the temperature drops below the dew point. The water which is now trapped in the enclosure can lead to corrosion and equipment failures.

**The installation of AGRO pressure compensation elements prevents this phenomenon.** Depending on the location of the installation, pressure balance elements made of UV resistant synthetics or of nickel-plated brass are used. The assembly of two opposite pressure balance elements produces the most effective air exchange (circulation). Drainage elements are available when needed.



## 三种不同类型： Three different types:

### 带过滤膜的壓力平衡通风防水口，尼龙及黄铜镀镍材质

使用一种特殊的PES(聚苯醚砜)薄膜，薄膜上的小孔比水汽分子要大数百倍，但是比水滴直径要小数千倍。这种薄膜能够保证顺畅的空气流通，从而确保封闭空间内保持干燥。这种特殊结构使得AGRO压力平衡通风防水口兼具透气性和不透水性的特性，密封等级为IP68（压力不超过0.8bar）。这种薄膜具有防水、防油和防尘特性。

### 带烧结滤芯的壓力平衡口：

烧结滤芯的粗糙特性能够提供更好的空气流动性，从而平衡超大型机壳内可能产生的极端压力和湿度变化。烧结滤芯能够防止溅水和昆虫的进入。

### 带编织网的排水口：

在可能因为环境因素产生凝水的应用中，可以使用排水口。该部件使用特种不锈钢编织网，实现快速排水，同时防止昆虫和大于0.2mm的灰尘颗粒进入封闭空间。该部件通常安装在机壳的最低处。

为提供更好的排水性能，另有部分开槽的定位螺母可供选择。

### Pressure balance elements made of synthetic material or nickel-plated brass with membrane

A special membrane of PES (polyethersulfone) has pores which are many hundreds of times bigger than water vapour molecules but thousands of times smaller than water droplets. It allows easy air exchange and thus ensures that the enclosed area remains dry. Its special structure makes this AGRO pressure balance element air-permeable but not water-permeable. The element is rated IP 68 at pressures of up to 0.8 bars. Its membrane is water-, oil- and dirt-repellent.

### Pressure balance element with sinter filter:

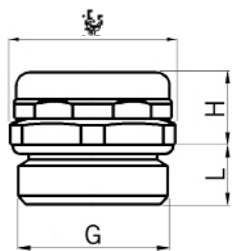
The coarser nature of the sinter disc's material allows greater air transfer. Extreme pressure and moisture fluctuations in very large housings can be easily balanced. The sinter disc protects against splashing of water and insects.

### Drainage element with mesh:

In applications where, due to environmental conditions, condensation of water is to be expected, drainage elements are used. A special stainless steel mesh allows water to drain away quickly, but protects the enclosed area from insects and dust particles larger than 0.2 mm. This element is typically located at a housing's lowest point.

For optimal drainage, partially slotted counter nuts are available.

## 欧葛兰压力平衡通风防水口 | AGRO Pressure balance elements






材料: 黄铜镀镍  
O型圈: NBR  
过滤原理  
过滤膜: PES (聚苯醚砜)  
烧结滤芯: 烧结青铜  
(过滤等级: 40 微米)  
排水口: 不锈钢 (1.4301)

Material: Polyamide / Nickel-plated brass  
O-ring: NBR  
Filter element  
Membrane: PES (Polyethersulfone)  
Filter disc: Sintered bronze  
(Degree of filter: 40 µm)  
Drainage element: Mesh stainless steel (1.4301)  
Protection class  
Membrane: IP 66 / IP 68 / IP 69K  
Filter disc: IP 54 / IP x9K  
Drainage element: IP 4x

**New/Innovation**






### 尼龙材质压力平衡通风防水口 | Pressure balance element made of synthetic material

G		H mm	L mm		型号   Art. no.	
M12x1.5		17	9	10	-40°C / +100°C	2445.12 25

根据要求可以提供浅灰色RAL 7035 | Available on request: Version in light grey RAL 7035






### 带过滤膜的的压力平衡通风防水口 | Pressure balance element with membrane

G		H mm	L mm		型号   Art. no.	
M12x1.5		18	9.5	8	-40°C / +110°C	2450.12.34 25
M16x1.5		18	9.5	8	-40°C / +110°C	2450.17.34 20
M20x1.5		22	10.0	8	-40°C / +110°C	2450.20.34 20
Pg 7		18	9.5	8	-40°C / +110°C	2450.07.34 25
Pg 11		22	10.0	8	-40°C / +110°C	2450.11.34 20

根据要求可以提供不锈钢 A2 或 A4 | Available on request: Stainless steel A2 or A4






### 带烧结滤芯的压力平衡口 | Pressure balance element with sinter filter

G		H mm	L mm		型号   Art. no.	
M12x1.5		18	9.5	8	-50°C / +110°C	2450.12.32 25
M16x1.5		18	9.5	8	-50°C / +110°C	2450.17.32 20
M20x1.5		22	10.0	8	-50°C / +110°C	2450.20.32 20
Pg 7		18	9.5	8	-50°C / +110°C	2450.07.32 25
Pg 11		22	10.0	8	-50°C / +110°C	2450.11.32 20

根据要求可以提供不锈钢 A2 或 A4 | Available on request: Stainless steel A2 or A4






### 带编织网的排水口 | Drainage element with mesh

G		H mm	L mm		型号   Art. no.	
M12x1.5		18	9.5	10	-50°C / +110°C	2450.12.36 25
M16x1.5		18	9.5	10	-50°C / +110°C	2450.17.36 20
M20x1.5		22	10.0	10	-50°C / +110°C	2450.20.36 20

根据要求可以提供不锈钢 A2 或 A4 | Available on request: Stainless steel A2 or A4



### 排水口配套的定位螺母 | Lock nut for drainage element

G		M mm		型号   Art. no.	
M12x1.5		15	4.5	-50°C / +110°C	8324.12 25
M16x1.5		19	5.5	-50°C / +110°C	8324.17 20
M20x1.5		24	5.5	-50°C / +110°C	8324.20 20

3D 动画 中文



3D-Animation EN

