

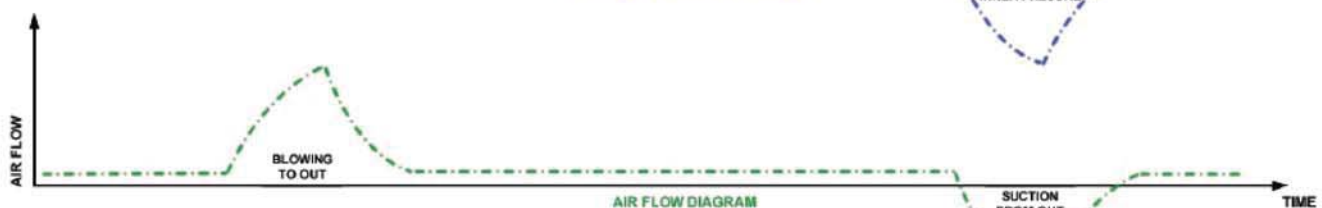
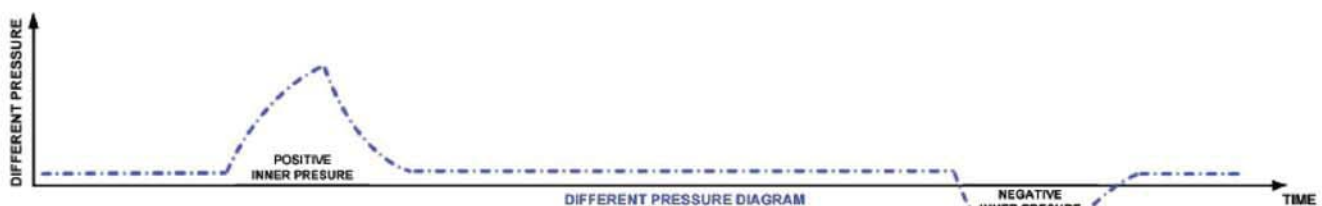


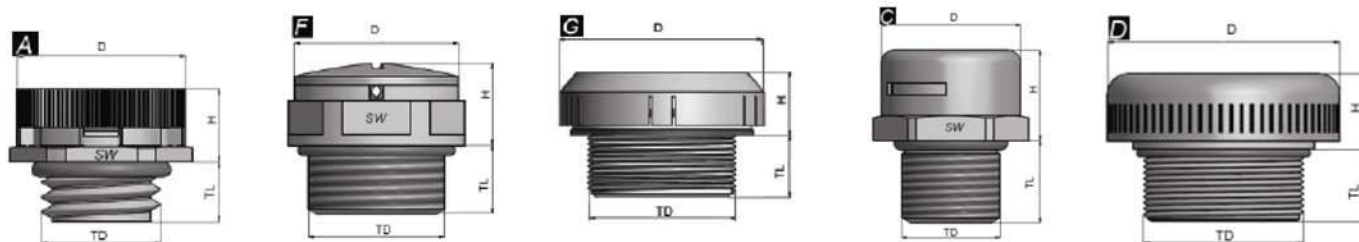
**Principle.....** The pressure balance function depends on the differential pressure between the inner and the outer environments of the enclosure. As a reference pressure, 70mBar (70mBar = 1psi) valued is chosen to present data. Under normal condition, air circulation existed for all differential pressure levels. But the volume flow rate is very low for smaller values and obviously increases with increasing pressure value. Of course the air flow rate also depends on the properties of the membrane (classified as standard, medium, high, and ultra high permeability types).

In essence, there is air circulation in the enclosure from the inside to the outside when the device is heating up due to its operation. Similarly, a circulation in reverse direction occurs during the cooling period. It should also be noted that there is always a level of humidity in air, hence some water in the form of vapour is also circulated with air. However condensed water is blocked by the water repellent membrane unless the differential pressure exceeds the intrusion pressure threshold.

Heat generated by electrical and electronic components in an enclosure, as well as fluctuating outside temperature, result in pressure difference. A semipermeable membrane inside the ventilator plugs / cable glands allows air and humidity to leave the enclosure, however doesn't allow dirt and water to enter from the outside.

DIAGRAMS EXPLAINED THE EFFECTS OF PRESSURE BALANCE ELEMENTS  
(VENTILATION PLUGS OR INTEGRATED VENTILATION GLANDS)

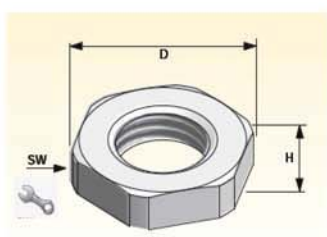




### Technical Data

Housing Materials	PA6-V2 or Stainless Steel AISI303	Protection Degree	IP 66 / 67
Membrane Materials	Acrylic co-polymer on nylon support	Working Temperature	-40 C up to +105 C
Membrane Feature	Hydrophobic-Oleophobic	Membrane Permeability	High
O-ring	NBR		

Thread Type	TD mm	TL mm	H mm	D mm	SW mm	Ave. Air Perm lt / hour ΔP = 1psi	Water Intrusion (Bar)	Model	
								Dark Gray RAL7001	Black RAL9005
Plastic PA6									
M12x1.5-A	12.0	10.0	7.5	17.0	17	120	0.2	BVPB-H-01L	BVPB-H-21L
M20x1.5-F	20.0	10.0	12.5	24.0	24	450	0.2	BVPE-H-01	BVPE-H-21
M40x1.5-G	40.0	18.0	19.0	60.0	-	1350	0.2	BVPX-H-08S	BVPX-H-28S
Stainless Steel AISI303									
M12x1.5-C	12.0	10.0	11.0	17.0	17	120	0.2	BBVP-H-01L	
M20x1.5-C	20.0	6.0	13.5	17.0	22	120	0.2	BBVP-H-03	
M40x1.5-D	40.0	10.0	20.4	58.5	-	1350	0.2	BBVPX-H-05	



### Technical Data (PA6)

#### Materials

Lock Nut	Polyamide 6
	30% Glass Fiber Reinforced

#### Flammability

UL 94 HB

#### Operating Temperature

Permanent -20 C up to +100 C

Intermittent -30 C up to +150 C

Thread Type	H mm	SW mm	D mm	Model	
				Dark Gray RAL7001	Black RAL9005
Plastic PA6					
M12x1.5	5	18	19.5	BLMN-0S	BLMN-2S
M20x1.5	6	26	28.6	BLMN-02	BLMN-22
M40x1.5	7	50	55.3	BLMN-05	BLMN-25
Stainless Steel AISI303					
M12x1.5	-	-	-	BMBLS-01	
M20x1.5	-	-	-	BMBLS-03	
M40x1.5	-	-	-	BMBLS-06	