Ventilation Safety Device (VSD)

- The storage of Green Energy is becoming increasingly important for today's and future generations, especially for e-mobility applications. The challenge is to make electrical energy available where ever and whenever it is needed. Efficient and reliable storage systems are needed for this purpose.

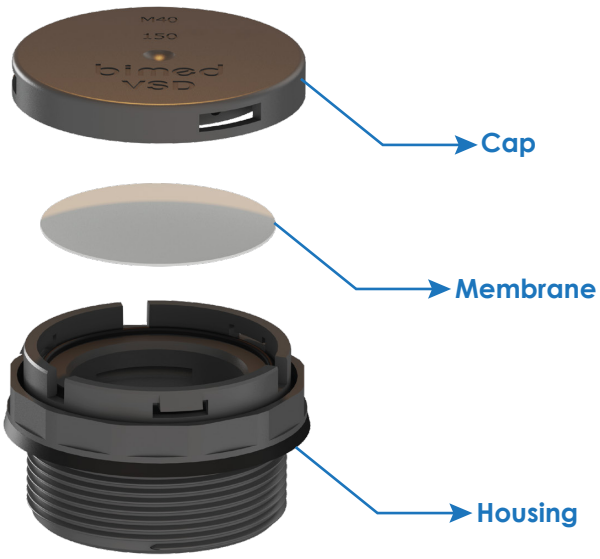
- Today's batteries consist mostly of stacks of Li-Ion cells. Since lithium is a highly reactive element, charging and discharging batteries can result in overheating of a cell which might cause an explosion. To avoid injuries as the result of such an explosion there are two possible options;

1- Use an explosion-proof casing
2- Use a valve which releases the pressure in the casing.

The first option increases weight and costs of the battery; that's why it's not preferred in the battery industry. VSD is aimed at the second option.

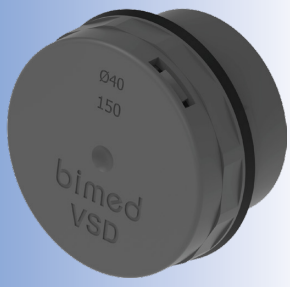
- This Ventilation and Safety Device developed by Bimed optimizes the lifetime of Li-Ion batteries and provides safety in case of an explosion. It meets protection classes IP 66, IP 67, and IP 69K.

- VSD can be used in electric vehicles with Li-Ion batteries, electric trains and stationary batteries for energy storage.



Normal Pressure Condition

High Pressure Condition



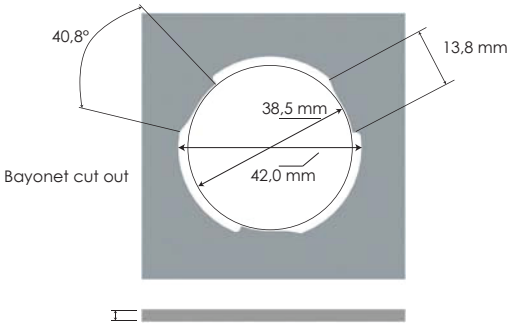
Ventilation Safety Device (VSD)

VSD with ventilation and burst function

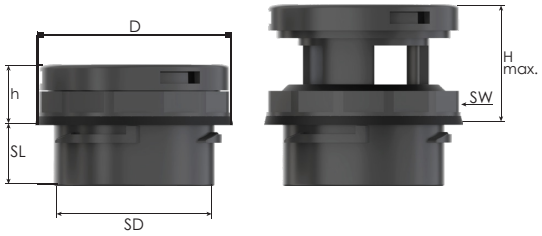
- Independent ventilation and burst function in one device,
- Balances pressure between inside and outside of housing,
- Complete opening in case of combustion,
- Avoids harmful explosion of Li-Ion battery,
- Discharges harmful gases in case of combustion in a battery housing.

Technical Details		
Material	**Body**	PA 66 Glass Fiber Reinforced
	Cap	PA 66 Glass Fiber Reinforced
	Seals	VMQ
	Vent Membrane	Oleophobic PTFE
Ingress Protection Rating		IP 66 IP 67 IP 69K
Flammability		V0 according to UL 94
Operating Temperature		-40 °C to +80 °C
UL Environmental Rating		Type 4X, Type 12, Type 13 acc. to UL 50E
Remarks		• Vibration test performed acc. to road vehicles standard **ISO 16750**.

Industrial Applications

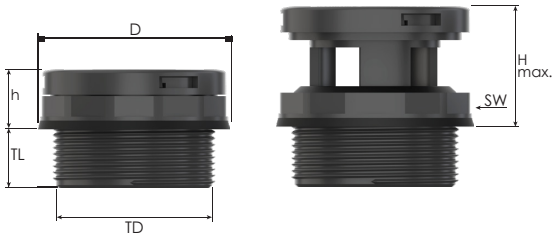


Wall thickness for bayonet version : 2,0 mm ± 0,2 mm
For more technical details please contact us.



BAYONET Fitting

Size	Pressure Balance Airflow for ΔP=70 mbar	Water Intrusion Pressure	Opening Pressure	Snap Length	Snap Ø	Spanner Width	Outer Ø	Height	max. Height	Part Number
	l/h	mbar	mbar	SL mm	SD mm	SW mm	D mm	h mm	H mm	
Ø 40	400	> 150	150 ± 50	15,0	38,2	45	47,0	13,6	28,0	**VSD BJ40PL-CT150**
Ø 40	400	> 150	350 ± 100	15,0	38,2	45	47,0	13,6	28,0	**VSD BJ40PL-CT350**



Thread Type **METRIC** acc. to EN 60423

Outer Thread Size (Male)	Pressure Balance Airflow for ΔP=70 mbar	Water Intrusion Pressure	Opening Pressure	Outer Thread Length	Outer Thread Ø	Spanner Width	Outer Ø	Height	max. Height	Part Number
	l/h	mbar	mbar	TL mm	TD mm	SW mm	D mm	h mm	H mm	
M40x1,5	400	> 150	150 ± 50	15,0	40,0	45	47,0	13,6	28,0	**VSD M40PL-CT150**
M40x1,5	400	> 150	350 ± 100	15,0	40,0	45	47,0	13,6	28,0	**VSD M40PL-CT350**