OUR PORTFOLIO FOR BATTERY VENTING SYSTEMS

The battery venting systems from KACO ensure that the required amount of air can escape quickly in the case of a battery fault. The **flow-optimized venting solutions** from the sealing expert offer an excellent balance between height and maximum possible volume flow. Our **emergency vents** are available as reversible and irreversible solutions. All designs can be fitted with additional aeration and venting elements to ensure regular pressure equalization of the battery due to pressure and temperature fluctuations in addition to protecting against faults.

FIELDS OF APPLICATION

- Battery systems
- Battery modules
- BEVs
- Hybrids
- Energy storage systems

	Irreversible BVS	EvoLift®	EvoLift® Pro
Vent Type	Irreversible plastic version	Reversible plastic or metallic version	Reversible plastic or metallic version with additional valve for humidity reduction
Main diameter	Ø 62 mm*	Ø 50 or 60 mm*	Ø 50 or 60 mm*
Height	18 mm*	23 mm*	29 mm*
IP-Protection class	IP68, IPX9K, IPXXD		
Flame resistant	UL94 V0		
Temperature	-40 °C to +80 °C (wider temperture range available on request)		

*Standard sizes, custom development for specific installation space and requirements possible

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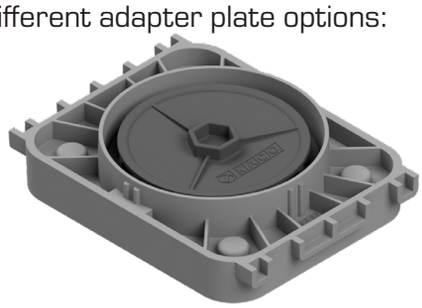
IRREVERSIBLE BATTERY VENTING SYSTEM

A summary of the benefits

- Cost-efficient solution
- Small installation space
- Variable design: Opening force, geometry and fastening can be adapted to customer needs

Material	PP GF25
Main diameter	Ø 62 mm
Height	18 mm
Assembly	• Bayonet lock • Adapter plate - more assembly options available on request
Opening pressure (adjustable) **• Emergency venting**	Set by the force of the spring, easily customizable 250 mbar ± 100 mbar
Air flow **• Venting and ventilation** **• Emergency venting**	 ≥ 500 ml/min @ 25 mbar ≥ 80 l/s @ 150 mbar
Leakage	≤ 1 ml/min @ -50 mbar
Water resistance	≥ 30 min @ 250 mbar
IP-Protection class	IP68, IPX9K (only with adapter plate)
Flame resistant	UL94 V0
Temperature	-40 °C to +80 °C (wider temperature range available on request)

Different adapter plate options:



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EvoLift®
REVERSIBLE BATTERY VENTING SYSTEM

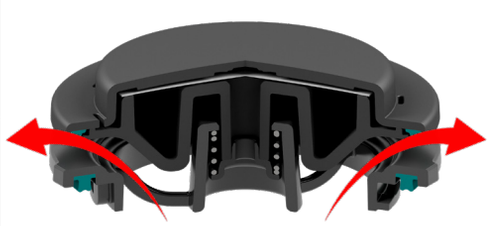
A summary of the benefits

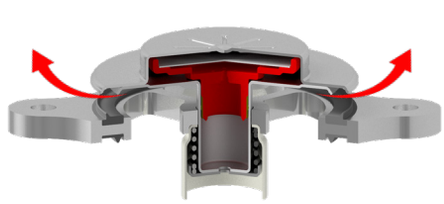
- Small cost-efficient solution
- Relatively small installation space
- Opening force can be easily adjusted to customer needs
- 100% EOL test of key functions in production
- Low opening tolerances due to use of metallic spring
- Customer-specific design possible

The data provided corresponds to the standard dimensions of the EvoLift

Vent type	Spring loaded reversible vent
Main body material	PA66 or Aluminium
Dimension	Ø 60 mm x 23 mm
Installation type **• plastic variant** **• metallic variant**	 • Bayonet (standard) or flange mounting • Flange mounting
Opening pressure (adjustable) **• Emergency venting**	Set by the force of the spring, easily customizable ≥ 35 mbar
Air flow **• Venting and ventilation** **• Emergency venting**	 ≥ 500 ml/min @ 25 mbar ≥ 80 l/s @ 200 mbar
Leakage	≤ 1 ml/min @ -50 mbar
Water resistance	≥ 30 min @ 250 mbar
IP-Protection class	IP68, IPX9K, IPXXD
Flame resistant	UL94 V0
Temperature	-40 °C to +80 °C (higher temperature range possible upon request)

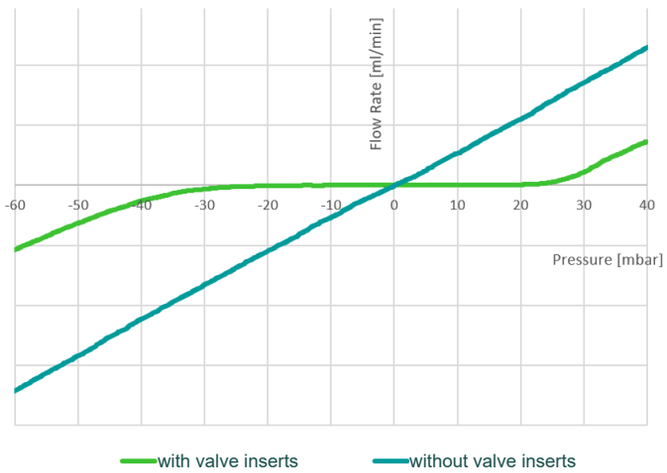
Emergency venting:





EvoLift® Pro

BATTERY VENTING SYSTEM WITH VALVE CIRCUIT



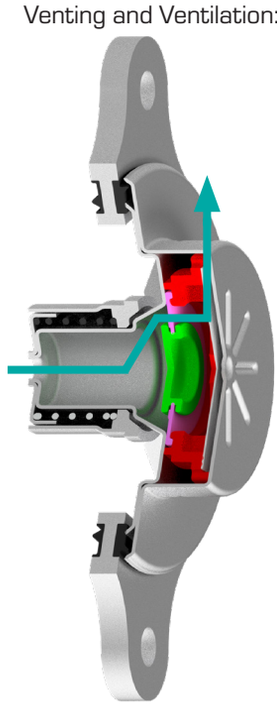
A summary of the benefits

- Variable connection from outside with relatively low installation effort
- 100% EOL (End of Line) Test of key functions in production
- Reduction of humidity in the battery pack as the membrane is sealed at low pressure → no water vapor transmission into the battery pack
- Customer specific design possible

The data provided corresponds to the standard dimensions of the EvoLift Pro

Vent type	Reversible version with valve circuit
Main body material	Aluminum or PA66
Dimension	Ø 50 or 60 mm
Installation space **• Connection** **• Connection dimensions** **• Hole**	 flange type (2xM5) 77 mm Ø 45 mm
Opening pressure **• Ventilation** **• Venting** **• Emergency venting**	 ≤ -30 mbar (adjustable) ≥15 mbar (adjustable) ≥80 mbar (adjustable)
Air flow **• No breathing** **• Breathing** **• Emergency venting**	 Adjustable pressure range (e.g.±20 mbar) ≥ 400 ml/min @ ±50 mbar ≥ 50 l/sek @ 130 mbar
Leakage	≤ 1 ml/min @ -10 mbar ≤ p ≤ +5 mbar
Water resistance	≥ 30 min @ 250 mbar
IP-Protection class	IP68, IPX9K, IPXXD
Flame resistant	UL94 V0
Temperature	-40 °C to +80 °C (higher temperature range possible upon request)

Venting and Ventilation:



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