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FLUXX® Product portfolio

Packaging using the X)-tra

FLUXX® is a portfolio of quality products made by SABEU, consisting of innovative closing and dosing systems as well as venting solutions:

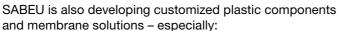
- Dispensing Taps for bottling and decanting liquids
- Degassing Inserts used in caps for the continuous pressure compensation of containers
- Vented Caps ready-to-use for the continuous pressure compensation of containers
- Screw Caps for various containers











- Membranes even combined with plastic components
- Sealing caps
- Drum closures
- Shaker cans and caps
- Tube tips and nozzles
- Ring nuts and diffusion-resistant closures



Dispensing Taps

The excellent dispensing properties of the FLUXX® Dosing Systems are based upon our innovative ventilation system. The purpose of our Dispensing Taps with a 13 mm outlet spout is that the Tap can also be inserted into narrow bottle necks to enable accurate, clean filling processes. The Dispensing Taps with a 23 mm outlet spout are designed to facilitate the decanting of large amounts of liquids quickly.



Degassing Inserts

FLUXX® Degassing Inserts are equipped with hydrophobic as well as oleophobic membranes. The membranes make it possible for gaseous substances to diffuse, thereby preventing pressure from building up and decreasing in the containers. Furthermore, our Degassing Inserts are calibrated in such a way that the membranes are not saturated even by liquids with a low surface tension and thus remain fully breathable at all





Vented Caps

Our FLUXX® Vented Caps are equipped with the SAVE (SAfety VEnt) System and are available with several DIN thread sizes. For the venting system we are using high-quality membranes, which enable the continuous pressure compensation with gaseous liquids, to prevent the containers from swelling and collapsing.



Screw Caps

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The FLUXX® Screw Caps are available for the common thread sizes DIN 45, 51 and 61. Because of the construction, our Caps can meet all requirements for authorization with various containers - especially in accordance with the test specifications set forth in the ADR regulations. As a standard feature, the Caps are equipped with a molded on tamper-evidence ring as well as an EPE sealing ring.







Customized membrane solutions

SABEU - Everything from a single source





Please visit our website www.fluxx-sabeu.com for the latest and most up-to-date information. The information provided in this document herein is subject to change at any time rithout notification. This document does not commit SABEU in any way. SABEU is not responsible for any errors that may appear in this document.

Dispensing Taps Series AH (1/2)

Ready, steady, flow

Series AH 13 and 23 mm - easy, fast and clean



Scope of application

The innovative FLUXX® Dispensing Taps perfectly facilitate the easy, fast and clean decanting of liquids without gurgling. Series AH 13 supports the accurate and clean dosing especially in bottles with small threaded necks. Series AH 23 is designed to support the dosing of large amounts of liquids within a short period of time.

Broad product portfolio

Our FLUXX® Dispensing Taps are suitable for all containers bottles, canisters, drums and IBCs - with an external thread ranging from DIN 38 to DIN 71 as well as plastic and steel drums with an 34" and BCS/PPS internal thread.

Unique ventilation system

The outstanding flow properties are based on the unique ventilation system from SABEU. This allows our FLUXX® Dispensing Taps AH 13 series to deliver a flow rate of 1.5 L/min at the minimum. The AH 23 series even delivers a flow rate higher than 5 L/min.

No leaking

FLUXX® Dispensing Taps have a high impermeability even with aggressive chemicals and strongly seeping liquids.

Benefits

- Easy, fast and clean dispensing without gurgling
- Available for all common thread sizes
- Drip-off edge for convenient and clean dosing - even in narrow bottle necks
- Smooth moving and ergonomic lever for easy operability
- High flow rates
- Resistance to a multitude of chemicals
- Declaration of food conformity

Declaration of food conformity

Upon request, our products are available with regulations EU no. 10/2011, EC no. 1935/2004, LFGB, FDA as well as Mercosur - inspected and approved by certified testing institutes.

Application examples

Decanting especially of:

- Liquid food
- Cleaners
- Lubricants and motor oils
- Hygiene and care products
- Chemicals
- Agrochemicals





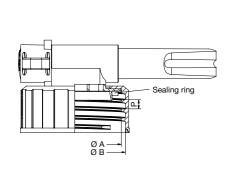
		Series AH 13	Series AH 23	
	Polyethylene (PE)	Housing, cover cap, reducing cap, adapter	Housing, cover cap, adapter, sealing ring for plug, "cap nut AH 23/63"	
Materials	Polypropylene (PP)	Lever, cap nut	Lever, cap nut, plug, lock nut	
Mate	EPE	Sealing ring for cap nut	Sealing rings for adapter and cap nut	
	EPDM		Sealing ring for "cap nut AH 23/63"	
olors	Red / Black	Cap nut	Cap nut	
Standard colors	Red	Lever, cover cap	Lever, cover cap	
Stan	Natural/White	Housing, adapter, reducing cap	Housing, adapter, plug, "cap nut AH 23/63"	
			Other colors upon reques	

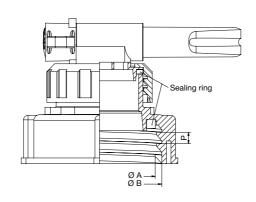
istics	Flow rate	≥ 1.5 L/min	≥ 5 L/min	
racteris	Outlet spout diameter	13 mm	23 mm	
Cha	Thread sizes	DIN 38 to DIN 61	DIN 45 to DIN 71 and for drums with 3/4" and BCS/PPS thread	



Our products achieve a high chemical resistance to many liquids. However, we cannot quarantee comprehensive chemical resistance of specific applications. Therefore, we recommend individual testing of customer applications prior to use - with the support of our experts.

Dispensing Taps Series AH (2/2)

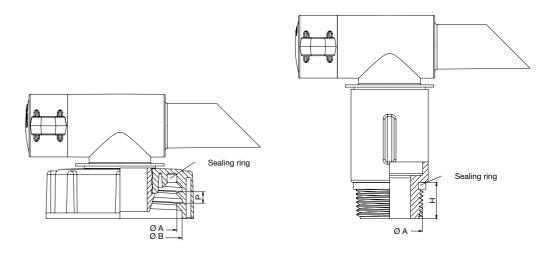




Product portfolio AH 13

Description	Picture	Item number	Quantity per carton	Dimensions
AH 13/38 for DIN 38 thread		402 144	750 pcs.	Ø A = 36.1 mm / 1.421 in. Ø B = 37.9 mm / 1.492 in. P (Thread pitch) = 3 mm / 0.118 in.
AH 13/40 for DIN 40 thread		403 133	750 pcs.	Ø A = 38.8 mm / 1.528 in. Ø B = 42.2 mm / 1.661 in. P (Thread pitch) = 4 mm / 0.157 in.
AH 13/45 for DIN 45 thread	→	404 133	650 pcs.	Ø A = 41.1 mm / 1.618 in. Ø B = 44.8 mm / 1.764 in. P (Thread pitch) = 4 mm / 0.157 in.
AH 13/50 for DIN 50 thread		405 232	250 pcs.	Ø A = 46.1 mm / 1.815 in. Ø B = 50.1 mm / 1.972 in. P (Thread pitch) = 4 mm / 0.157 in.
AH 13/51 for DIN 51 thread		405 133	250 pcs.	Ø A = 50.2 mm / 1.976 in. Ø B = 54.8 mm / 2.157 in. P (Thread pitch) = 5 mm / 0.197 in.
AH 13/61 for DIN 61 thread	***	406 133	200 pcs.	Ø A = 55.6 mm / 2.189 in. Ø B = 60.5 mm / 2.382 in. P (Thread pitch) = 6 mm / 0.236 in.

Customizations upon request.



Product portfolio AH 23

Description	Picture	Item number	Quantity per carton	Dimensions
AH 23/45 for DIN 45 thread	**	410 124	325 pcs.	Ø A = 41.1 mm / 1.618 in. Ø B = 44.8 mm / 1.764 in. P (Thread pitch) = 4 mm / 0.157 in.
AH 23/50 for DIN 50 thread	*	410 224	275 pcs.	Ø A = 46.1 mm / 1.815 in. Ø B = 50.1 mm / 1.972 in. P (Thread pitch) = 4 mm / 0.157 in.
AH 23/51 for DIN 51 thread	*	407 124	250 pcs.	Ø A = 50.2 mm / 1.976 in. Ø B = 54.8 mm / 2.157 in. P (Thread pitch) = 5 mm / 0.197 in.
AH 23/61 for DIN 61 thread		408 124	200 pcs.	Ø A = 55.6 mm / 2.189 in. Ø B = 60.5 mm / 2.382 in. P (Thread pitch) = 6 mm / 0.236 in.
AH 23/63 for DIN 63 thread	7	410 426	150 pcs.	Ø A = 60.7 mm / 2.390 in. Ø B = 64.5 mm / 2.539 in. P (Thread pitch) = 4.2 mm / 0.165 in.
AH 23/71 for DIN 71 thread	**	410 320	125 pcs.	Ø A = 67.0 mm / 2.638 in. Ø B = 72.3 mm / 2.846 in. P (Thread pitch) = 7 mm / 0.276 in.
AH 23 / ¾" with ¾" external thread	**	409 120	250 pcs.	Ø A = R ¾" BSP thread ‡ H = 16 mm / 0.630 in.
AH 23 / ¾" on BCS 70x6 rough thread	**	409 220	175 pcs.	Ø A = R ¾" on BCS 70x6 rough thread
AH 23 / ¾" on BCS 56x4 rough thread	T	409 320	175 pcs.	Ø A = R ¾" on BCS 56x4 rough thread
AH 23 / ¾" on PPS 2" fine thread	***	409 420	175 pcs.	Ø A = R ¾" on PPS 2" fine thread
Protective cap AH 23	*	999 008	Upon request	Suitable for all Dispensing Taps AH 23

Customizations upon request.

Degassing Inserts

Series F (1/2)

Scope of application

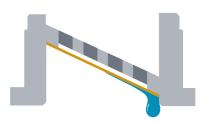
The high-quality FLUXX® Degassing Inserts make it possible for gaseous substances to diffuse, thereby preventing pressure from building up and decreasing in the containers - including bottles, canisters, drums and IBCs. The membranes are hydrophobic as well as oleophobic, and as a result, they are not saturated even by liquids with a low surface tension.

Broad product portfolio

For a continuous pressure compensation of containers, our FLUXX® Degassing Inserts F15, F17 & F38 – without and with catch (LOCK) - can be pressed in customized closures or other applications. The Degassing Inserts contain various highperformance membranes which were validated for specific product solutions.

Patented drip-off edge

Thanks to the diagonally developed membrane surface of the innovative FLUXX® Degassing Inserts, liquids can rinse off immediately after contact and thus the membrane remains fully breathable at all times.

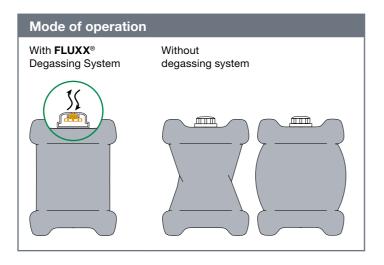


Declaration of food conformity

Our listed products comply with regulations EU no. 10/2011, EC no. 1935/2004, LFGB, FDA, Mercosur as well as JFSA (Japan) and are fit for human consumption under the food law as well as from a physiological point of view - inspected and approved by certified testing institutes.

Suitability for hazardous goods

Because of the construction and performance values, our FLUXX® Degassing Inserts can meet all requirements for authorization with various containers – especially in accordance with the test specifications set forth in the ADR regulations.



Benefits

- Continuous pressure compensation
- Prevent containers from swelling and collapsing
- Reliable protection against leaks
- Drip-off edge for a rapid re-ventilation after contact with liquids
- Easy to install
- Declaration of food conformity

Application examples

- Liquid food
- Agrochemicals
- Hazardous substances and other chemicals
- Cleaners
- Hygiene and care products

Materials	
Plastic insert:	Polyethylene (PE)
Membrane: Backing:	Polytetrafluorethylene (PTFE) Polypropylene (PP)

Installation variants					
Without catch	With catch (LOCK)				

Degassing Inserts - F15

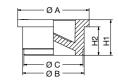
incl. drip-off edge

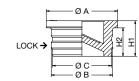
recommended for 1 – 25 L / 0.25 – 7 gal.



F15

F15 LOCK





Product portfolio

Description	Picture	Item number	Quantity per carton	Dimensions	Typical airflow at 12 mbar	Typical WEP ²
F15	9	924 005	- 40,000 pcs.	Ø A = 15.1 mm / 0.594 in. Ø B = 13.0 mm / 0.512 in.		
F15 LOCK ¹	9	924 006		40,000 pcs.	Ø C = 12.6 mm / 0.496 in. ‡ H1 = 7.5 mm / 0.295 in. ‡ H2 = 6.0 mm / 0.236 in.	5.2 L/h

Customizations (especially alternative membranes) upon request.

¹LOCK = With catch/snap-fit

² WEP = Water Entry Pressure

Our products achieve a high chemical resistance to many liquids. However, we cannot quarantee comprehensive chemical resistance of specific applications. herefore, we recommend individual testing of customer applications prior to use – with the support of our experts.

Degassing Inserts Series F (2/2)

Degassing Inserts – F17

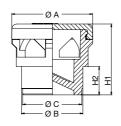
incl. drip-off edge & splash protection

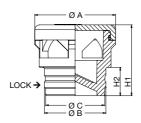
recommended for 25 – 60 L / 7 – 15 gal.



F17, F17 HF

F17 LOCK, F17 LOCK HF





Product portfolio

Description	Picture	Item number	Quantity per carton	Dimensions	Typical airflow at 12 mbar	Typical WEP ²
F17	8	924 015			501/h	0.0 hav
F17 LOCK ¹	8	924 016	10,000 pcs.	Ø A = 17.1 mm / 0.673 in. Ø B = 13.0 mm / 0.512 in.	5.2 L/h	0.8 bar
F17 HF with increased airflow	8	924 055		Ø C = 12.6 mm / 0.496 in. ‡ H1 = 15.0 mm / 0.591 in. ‡ H2 = 6.0 mm / 0.236 in.	45.01 //-	0.0 h a
F17 LOCK¹ HF with increased airflow	8	924 056			15.2 L/h	0.3 bar

Customizations (especially alternative membranes) upon request. ¹LOCK = With catch/snap-fit

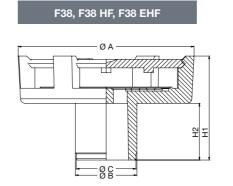
²**WEP** = Water Entry Pressure

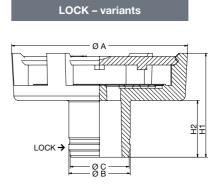
Degassing Inserts – F38

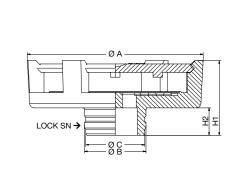
incl. splash protection

recommended for 60 – 1,500 L / 15 – 330 gal.









LOCK SN – variants

Product portfolio

Description	Picture	Item number	Quantity per carton	Dimensions	Typical airflow at 12 mbar	Typical WEP ²
F38		924 025 924 026 – LOCK ¹			72.8 L/h	0.8 bar
F38 HP with increased WEP ²		924 027 924 028 – LOCK ¹	2,000 pcs.	Ø A = 38.2 mm / 1.504 in. Ø B = 13.0 mm / 0.512 in. Ø C = 12.6 mm / 0.496 in.	21.1 L/h	3.0 bar
F38 HF with increased airflow		924 065 924 066 – LOCK ¹		\$\frac{12.6 \text{ mm / 0.496 in.}}{\pmu}\$ \tag{H1} = 22.0 \text{ mm / 0.866 in.}\$ \$\pm\$ H2 = 12.0 \text{ mm / 0.472 in.}\$	139 L/h	0.4 bar
F38 EHF with highest airflow		924 067 924 068 – LOCK ¹			225 L/h	0.3 bar
		F38: 924 036			72.8 L/h	0.8 bar
All products are also available		F38 HP: 924 038	2,000 pcs.	Ø A = 38.2 mm / 1.504 in. Ø B = 13.0 mm / 0.512 in.	21.1 L/h	3.0 bar
with LOCK¹ SN (Shortened Neck)		F38 HF: 924 033		Ø C = 12.6 mm / 0.496 in. \ddagger H1 = 15.8 mm / 0.622 in.	139 L/h	0.4 bar
		F38 EHF: 924 034		‡ H2 = 5.8 mm / 0.228 in.	225 L/h	0.3 bar

Customizations (especially alternative membranes) upon request. ${}^{1}\textbf{LOCK} = \text{With catch/snap-fit}$

²**WEP** = Water Entry Pressure

Vented Caps Series KSE

The SAVE-System

Caps with venting function



Scope of application

Our unique FLUXX® Vented Caps are equipped with the SAVE-System and are available for common thread sizes with DIN 45, 51 and 61. For the venting system we are using high-quality membranes, which enable a continuous pressure compensation with gaseous liquids, to prevent containers from swelling and collapsing. The membranes are hydrophobic as well as oleophobic, and as a result, they are not saturated even by liquids with a low surface tension.

SAVE Venting System

The SAVE (SAfety VEnt) has a wedge-like design and the membrane is welded on at a 60° angle. This enables the liquids to drain off immediately, leaving the membrane unobstructed



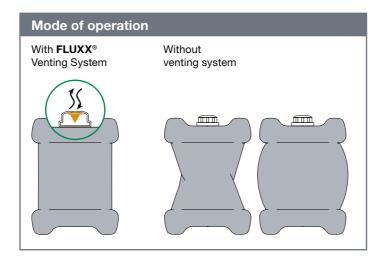
and air permeable. In addition, no splash protection is needed as the liquid flows past the beveled membrane, should a canister fall over, rather than hitting it head-on.

Suitability for hazardous goods

Because of the construction and performance values, our FLUXX® Vented Caps can meet all requirements for authorization with various containers - especially in accordance with the test specifications set forth in the ADR regulations. As a standard feature, the Caps are equipped with a molded on tamperevidence ring as well as an EPE sealing ring.

Declaration of food conformity

Our listed products comply with regulations EU no. 10/2011, EC no. 1935/2004, LFGB, FDA as well as Mercosur and are fit for human consumption under the food law as well as from a physiological point of view - inspected and approved by certified testing institutes.

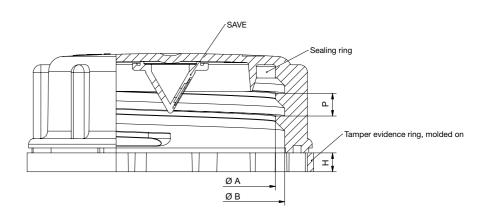


Benefits

- Continuous pressure compensation
- Prevent containers from swelling and collapsing
- Reliable protection against leaks
- Drip-off edge for a rapid re-ventilation after contact with liquids
- Ready to use venting component combined (welded) with the cap
- Declaration of food conformity

Application examples

- Liquid food
- Agrochemicals
- Hazardous substances and other chemicals
- Cleaners
- Hygiene and care products



Product portfolio

Description	Picture	Item number	Quantity	Dimensions
KSE 45 SAVE OV with molded on tamper-evidence ring for DIN 45 thread	9	332 93x	18,000 pcs. (20 cartons)	Ø A = 41.1 mm / 1.618 in. Ø B = 44.8 mm / 1.764 in. P (Thread pitch) = 4 mm / 0.157 in. H = 5 mm / 0.197 in.
KSE 51 SAVE OV with molded on tamper-evidence ring for DIN 51 thread	9	357 13x	10,000 pcs. (20 cartons)	Ø A = 50.2 mm / 1.976 in. Ø B = 54.8 mm / 2.157 in. P (Thread pitch) = 5 mm / 0.197 in. H = 5 mm / 0.197 in.
KSE 61 SAVE OV with molded on tamper-evidence ring for DIN 61 thread	9	367 13x	7,000 pcs. (20 cartons)	Ø A = 55.6 mm / 2.189 in. Ø B = 60.5 mm / 2.382 in. P (Thread pitch) = 6 mm / 0.236 in. H = 5 mm / 0.197 in.

Customizations (especially alternative membranes) upon request.

Materials	
Cap:	Polyethylene (PE)
SAVE:	Polyethylene (PE)
Membrane: Backing:	Polytetrafluorethylene (PTFE) Polypropylene (PP)
Sealing ring:	Expanded Polyethylene (EPE)

Performance values	
Typical airflow at 12 mbar:	5.0 L / h
Typical water entry pressure (WEP):	0.8 bar

Colors					
Black	Red	White	Blue	Yellow	Green

Other colors upon request.



Our products achieve a high chemical resistance to many liquids. However, we cannot quarantee comprehensive chemical resistance of specific applications. Therefore, we recommend individual testing of customer applications prior to use - with the support of our experts.

Secure, tight, reliable

Caps for a variety of applications



Scope of application

The versatile FLUXX® Screw Caps are made of impact-resistant polyethylene (PE) and are available for common thread sizes with DIN 45, 51 and 61. Our Caps are especially suitable for hazardous goods because of high chemical resistance against aggressive liquids.

Suitability for hazardous goods

Because of the construction, our FLUXX® Screw Caps can meet all requirements for authorization with various containers especially in accordance with the test specifications set forth in the ADR regulations. As a standard feature, the Caps are equipped with a molded on tamper-evidence ring as well as an EPE sealing ring.

Declaration of food conformity

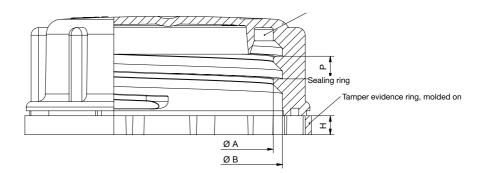
Our listed products comply with regulations EU no. 10/2011, EC no. 1935/2004, LFGB, FDA as well as Mercosur and are fit for human consumption under the food law as well as from a physiological point of view - inspected and approved by certified testing institutes.

Benefits

- Secure closing
- Reliable protection against leaks
- Suitability for hazardous goods packaging
- High chemical resistance
- Declaration of food conformity

Application example





Product portfolio

Description	Picture	Item number	Quantity	Dimensions
KS 45 OV with molded on tamper-evidence ring for DIN 45 thread	0	332 92x	18,000 pcs. (20 cartons)	Ø A = 41.1 mm / 1.618 in. Ø B = 44.8 mm / 1.764 in. P (Thread pitch) = 4 mm / 0.157 in. H = 5 mm / 0.197 in.
KS 51 OV with molded on tamper-evidence ring for DIN 51 thread	0	M4050x	10,000 pcs. (20 cartons)	Ø A = 50.2 mm / 1.976 in. Ø B = 54.8 mm / 2.157 in. P (Thread pitch) = 5 mm / 0.197 in. H = 5 mm / 0.197 in.
KS 61 OV with molded on tamper-evidence ring for DIN 61 thread	0	M4060x	7,000 pcs. (20 cartons)	Ø A = 55.6 mm / 2.189 in. Ø B = 60.5 mm / 2.382 in P (Thread pitch) = 6 mm / 0.236 in. H = 5 mm / 0.197 in.

Customizations upon request.

Materials		Colors					
Cap:	Polyethylene (PE)						
Sealing ring:	Expanded Polyethylene (EPE)	Black	Red	White	Blue	Yellow	Green

Other colors upon request.

Description	Picture	tem number	Quantity	Dimensions
r-KS 51 OV with 50% PCR-Material with molded on tamper-evidence ring for DIN 51 thread	0	M40542	10,000 pcs. (20 cartons)	Ø A = 50.2 mm / 1.976 in. Ø B = 54.8 mm / 2.157 in. P (Thread pitch) = 5 mm / 0.197 in. H = 5 mm / 0.197 in.
r-KS 61 OV with 50% PCR-Material with molded on tamper-evidence ring for DIN 61 thread	0	M40642	7,000 pcs. (20 cartons)	Ø A = 55.6 mm / 2.189 in. Ø B = 60.5 mm / 2.382 in P (Thread pitch) = 6 mm / 0.236 in. H = 5 mm / 0.197 in.

Customizations upon request.

Materials		Colors		
Сар:	Polyethylene (PE) with 50% PCR- Material (Post-Consumer-Recyclate) from recycled PE closures	Black		
Sealing ring:	Expanded Polyethylene (EPE)	-	Other colors upon reque	



Our products achieve a high chemical resistance to many liquids. However, we cannot quarantee comprehensive chemical resistance of specific applications. Therefore, we recommend individual testing of customer applications prior to use – with the support of our experts.

Customized plastic solutions



Sealing Caps For tamper-resistance and safety

Our FLUXX® Sealing Caps for plastic and aluminum containers ensure an increased diffusion-density which is achieved with special multi-layered sealing discs. They comprise a barrier layer made of aluminum, are highfrequency sealable, thereby ensuring a qualified tamperresistance.

In particular, we are offering our Sealing Caps with DIN 50 thread size - especially used for applications with agrochemicals. This ready-to-use solution is also available with a special venting insert upon request.



Drum Closures For industrial applications

FLUXX® Drum Closures are suitable for several plastic and steel drums.

Shaker Cans and Caps

One shape, many possibilities

The FLUXX® Shaker Cans and Caps are particularly suitable for packaging of spreadable food powders. Various Shaker Caps with several hole pattern variations are available for a multitude of applications. The plastic parts can be dyed upon request.



Tube Tips and Nozzles Working like professionals

Our FLUXX® Tube Tips and Nozzles are ultra-resistant to various types of liquids. Because of the nonpolar and hydrophobic surface, our Tube Tips are especially suitable for the use with plastic adhesives, jointing cement and sealing materials. The Tube Tips and Nozzles are available with a metric thread and fit with cartridges made of plastic as well as aluminum.



Accessories

Ring nuts and diffusion-resistant closures

Accessories we manufacture include in particular ring nuts as well as diffusionresistant knurled, toggle and vent plugs for different technical applications.



Customized membrane solutions

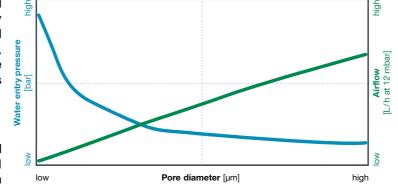


Membrane technology made by SABEU

As a specialist in the development of custom-manufactured membranes, we are one of the world's very few in the industry with such expertise. We are offering microporous PTFE as well as ion-track membranes under the brand TRAKETCH® – on rolls, as sheets or discs and combined with plastic components. The membranes can also be further refined by special processes to create hydrophobic and oleophobic surfaces.

Versatile applications

Our high-performance membranes are generally characterized by an excellent chemical resistance and thus suitable for several applications. Typical applications are pressure compensation elements for packaging - including liquid foods, hygiene and care products, cleaners, agrochemicals as well as other hazardous materials.

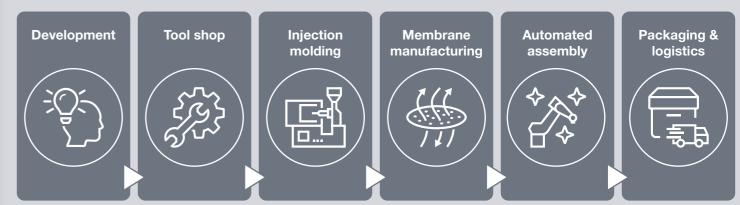


In comparison – PTFE and TRAKETCH®

In the case that very aggressive chemicals are involved especially in packaging products - PTFE (expanded Polytetrafluoroethylene) membranes become the membrane of choice. They are chemically inert and also surface-treated to become highly oleophobic. As usual, the PTFE membranes are supported with a PP or PET backing for improved stability. Being able to determine an exact pore size sets TRAKETCH® membranes in an unique position compared to stretched PTFE membranes. For the manufacturing of TRAKETCH® membranes, ultra-thin plastic films are bombarded with accelerated heavy ions and then chemically etched. The diameter of the resulting pore channels can be determined with micrometer accuracy.

SABEU

Everything from a single source



Everything from a single source – from the very first manual sketch to the serial production! Do you have a product idea you would like to turn into reality?

Development

We have decades worth of experience with the development of items that are compatible with plastics and the design of injection molding tools as well as peripheral equipment. In close dialog with our clients, we develop customer-specific complete solutions. We are committed to create innovative and highquality marketable products - always in compliance with the regulatory requirements. A balanced cooperation of human engineering, optical appearance, functionality, technology and economics is of utmost importance. A systematically designed, modular product development process generates transparency, enabling our clients to get on board during any phase of the product development.

Tool shop

In our state-of-the-art mold making department, equipped with CNC-controlled machines, we take care of both the new construction of injection molding tools as well as the maintenance, upkeep and repairs of all molds currently in use. Ultra-precise tools enable the reproducible and validatable production of complex component parts with high unit numbers. We manufacture a variety of molds – in particular high-cavitation injection molds, hot runner molds, tiered molds and rotary table tools.

Injection molding

The reproducible manufacture of component parts using the injection molding process is one of our core competencies. Using state-of-the-art machinery, we produce injection molded component parts with a high degree of process capability and precision which are subsequently assembled, customized and packaged in an integrated process.

Injection molding machines with clamping forces between 100 and 2,750 kN are available for the processing of plastics. For the economical as well as gentle removal of the parts, we use the most efficient solutions in line with the respective requirements - ranging from simple handling tools to triple-axis CNC linear robots.

Membrane manufacturing

We develop and produce membranes - especially ion-track membranes under the brand TRAKETCH®. Typical applications for TRAKETCH® membranes are pressure compensation elements for electronic component parts as well as for packaging of special agrochemicals. Additionally, we offer PTFE membranes with various performance values for several applications of packaging.

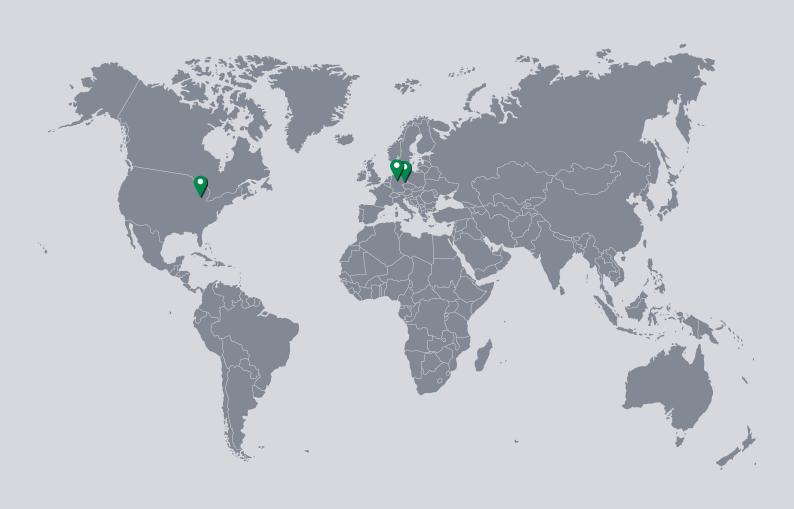
Automated assembly

We generate customized manufacturing concepts for the assembly and packaging of products on the basis of customer specifications. They guarantee a high availability as well as a secure and economical production of the items, especially in clean rooms and controlled areas.

We design assembly equipment, rotary table equipment, linear systems and automated testing tools for you. Depending on the product, different production steps can be integrated into the automation, such as welding, gluing, screwing, edge over-molding and in-line testing. In addition, we refine finished parts by adding an imprint, laser engraving, a metal coat and by means of other processes.







▶ Further product information:





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