

# TRICORBRAUN® flex

## TRICORBRAUN FLEX ONE-WAY VALVES

### Functionality and product options

At TB Flex, our valve fabrication remains the core of our manufacturing enterprise and like other areas of our business, has grown. We have worked diligently and are constantly auditing our practices, improving our quality, expanding our valve technology and product offering. Today, TB Flex offers several different sizes and multiple styles to run on the most popular application machinery on the market.



Made in the  
United States



Multiple valve  
bodies and sizes



Patented  
valve design



Independent valves made  
to fit multiple machinery

# TRICORBRAUN FLEX

## Formerly Pacific Bag, Inc.

We have produced our patented one-way degassing valve for over 30 years, is at the heart of our offering to our core markets. We are proud to offer a world class product for the preservation of coffee all over the world.

TricorBraun Flex is GMP certified. Our Good Manufacturing Practice Certified facility is in Woodinville, WA (US), a suburb of Seattle. The valves are used by domestic and global coffee roasters in premade bags, and applied to rollstock in form, fill and seal as well as bag-making applications.

TB Flex has a unique, patented single-piece design. Our design is different than most valves on the market, using 30% less polymer so less material goes into the waste stream. This more efficient design also makes it easier to machine and allows for faster degassing flow rates.

Our valves satisfy the most stringent requirements and established testing mandated in the coffee industry. Tests performed by third party laboratories, small regional roasters and large international roasters consistently prove our valve's functionality. The TB Flex valve performs!

Over the years our valve offering has evolved. We continue to improve upon performance and add new one-way valve models (i.e. 401 and 501 valves). Our valves are designed to run on new and updated applicators used on automated bag-making equipment throughout the world. There is a TB Flex valve for every machine on the market, including yours.

Technical support is everywhere. Our technical services cover the world assisting prospective clients through initial trials, along with providing customers with quality control reporting and technical support.

We invite you to read through our brochure, and feel free to contact us to discuss our degassing valve offering in more detail.



Glenn Sacco | TricorBraun Flex (Formerly Pacific Bag, Inc.)



## GMP Certification

Good Manufacturing Practices, is a set of processes and cleanliness standards for food handling and food packaging environments. It ensures that our packaging meets the latest regulations and that products delivered to our customers arrive unadulterated and are safe for packaging our customer's products.

# Valve Functionality

One-way degassing valves allow gas to be released from packages with coffee or other off-gassing products while not allowing oxygen and moisture to enter the package. An airtight heat seal provides superior protection for product freshness. The valves can also be used for deflation of large bags (15 lbs. +) for products like pet food, agricultural products, resin, etc. where bags need to be deflated prior to stacking on a pallet and protection from oxygen and moisture is desired.

The valve adheres to the polyethylene (PE) interior of a package via heat seal and can be applied using existing equipment in the field. The versions with filter (NF) are designed for all products especially powders or ones with smaller particles, e.g. ground coffee, that may infiltrate the valve. The versions without filter (N) can be used for larger particles and allows for slightly faster degassing compared to the version with filter.

# Typical Applications



Fresh roasted coffee which generates gas inside the bag and also needs protection from oxygen and moisture.



Various specialty foods that have active ingredients such as yeast and cultures.

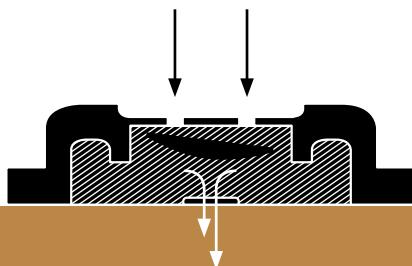


Large bulk flexible packages which require the release of excess air from packages for palletization (e.g. 33 lbs. pet food, resin, etc.)



Other flexible packages with polyethylene (PE) interior that require one-way release of pressure from inside the package.

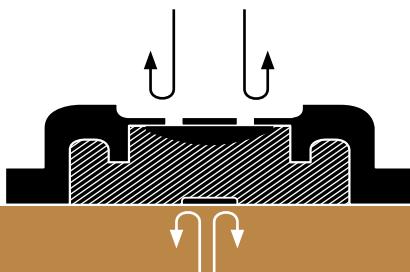
## How Does It Work?



### Open/Release Mode

(Releasing CO<sub>2</sub> emitted from coffee)

This drawing is a cross section of a premade coffee bag with a one-way valve in the open/release mode. When pressure inside a sealed package increases beyond the valve opening pressure, the seal between the rubber disc and the valve body is momentarily interrupted and pressure can escape out of the package.

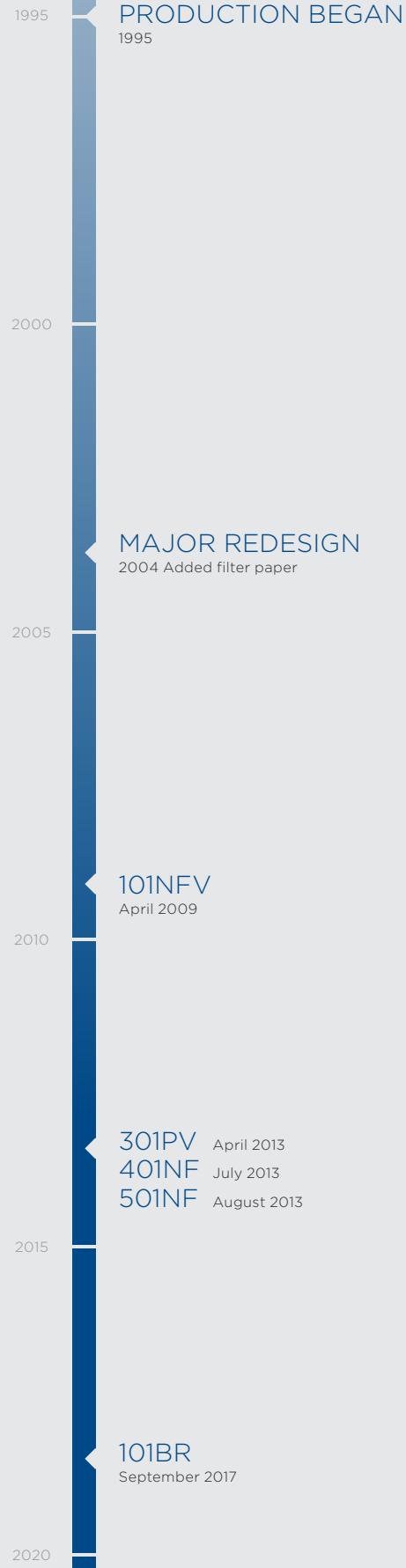


### Air-Tight Closed Position

The CO<sub>2</sub> pressure released from the fresh roasted coffee beans is low; therefore the valve is closed with an air-tight seal.

# VALVE TIMELINE

At TricorBraun Flex, our valve fabrication remains the core of our manufacturing enterprise and like other areas of our business, has grown. We have worked diligently and are constantly auditing our practices, improving our quality, expanding our valve technology and product offering.



# HEAT SEALING VALVES

## VÁLVULAS DE SELLADO A CALOR

可熱封單向透氣閥

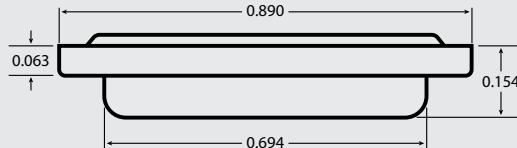
## VALVOLE TERMOSALDANTI

## Specifications

Material	Material	材質	Materiale
PE	Presión de apertura	開關閥壓力	Pressione di apertura
<b>Open/Close Pressure</b>	<b>Presión de apertura</b>	<b>聚乙烯</b>	<b>Pressione di apertura</b>
20-70/5-45 mm H <sub>2</sub> O	cierre 20-70 / 5-45 mm H <sub>2</sub> O	20-70/5-45 mm H <sub>2</sub> O	chiusura 20-70 / 5-45 mm H <sub>2</sub> O

## 101N / 101NF

For manual and automatic equipment that runs **Wipf** / **Sig** valves and TB Flex stock and custom bags. Supplied with filter (101NF) and without filter (101N). The 101 models have a focusing ring that aids in ultrasonic sealing for application at higher speeds.



Para equipos manuales y automáticos que corren válvulas Wipf / Sig y bolsas de stock de TB Flex y personalizadas. Se suministra con filtro (101NF) y sin filtro (101N). Los modelos 101 tienen un anillo de enfoque que ayuda en el sellado ultrasónico para aplicación a velocidades más altas.

無論是使用安裝Wipf / Sig透氣閥的手動或自動封閥機或是TB Flex客製或通用/公版袋的封閥機，101N與101NF皆可適用。101系列透氣閥外圍有一環形設計，是專為高週波快速熱封設備所設計的。

Per applicatori manuali e automatici che utilizzano valvole Wipf / Sig e per confezioni TB Flex classiche e personalizzate. Fornite con filtro (101NF) e senza filtro (101N). I modelli 101 hanno un anello in rilievo che favorisce la saldatura ad ultrasuoni per applicazioni a velocità più elevate.

## HEAT SEALING VALVES

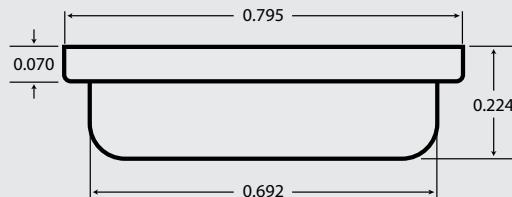
VÁLVULAS DE SELLADO A CALOR

可熱封單向透氣閥

VALVOLE TERMOSALDANTI

### 201N / 201NF

For Goglio and Fres-co equipment that has a u-shaped profile, horizontal valve track (most pre-2005 machines). Supplied with filter (201NF) and without filter (201N).



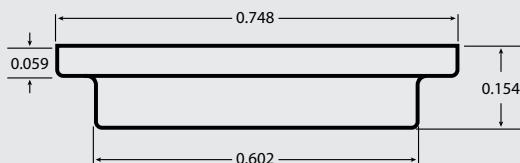
Para equipos Goglio y Fres-co que tienen una pista de válvula en forma de u (la mayoría de las máquinas anteriores a 2005). Se suministra con filtro (201NF) y sin filtro (201N).

市場上 使用於Goglio/Fres-co U型軌道打閥機(2005前的機型), 201N與201NF皆可使用在該型設備上。

Per applicatori Goglio e Fres-co che hanno un percorso valvola a U (la maggior parte delle macchine pre-2005). Fornite con filtro (201NF) e senza filtro (201N).

### 401NF

For equipment that runs **ICA** small valves.  
Supplied with filter.



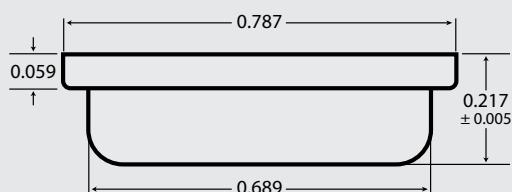
Para equipos que funcionan con válvulas pequeñas ICA. Se suministra con filtro.

市面上如ICA較小型透氣閥適用的打閥機, 可使用401NF, 但目前此透氣閥僅有濾紙款。

Per applicatori che utilizzano valvole ICA sottili. Fornite con filtro.

### 501NF

For **Goglio, Fres-co, Opem, TME, ICA Universal**, and similar equipment with a fixed profile valve track. Supplied with filter.



Para equipos Goglio, Fres-co, Opem, TME, ICA Universal y equipos similares con una pista de válvula de perfil fijo. Se suministra con filtro.

市場上使用於Goglio, Fres-co, Opem, TME, ICA Universal或有固定軌道的打閥機, 501NF皆可適用在該型設備上。目前僅提供濾紙款

Per applicatori Goglio, Fres-co, Opem, TME, ICA, Universal e simili con un percorso valvola a profilo fisso. Fornita con filtro.

## HEAT SEALING VALVES

VÁLVULAS DE SELLADO A CALOR

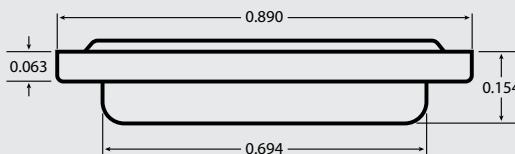
可熱封單向透氣閥

VALVOLE TERMOSALDANTI

### 101BR

The **Biotre™ RENEW Valve** is made from 100% renewable, plant-based material completely eliminating the use of fossil fuel based plastic in the valve body. It allows the same off-gassing as our standard Heat Sealing Valves and provides the same superior freshness protection.

The valve adheres to the polyethylene (PE) interior of a package via heat seal, just like our standard Heat Sealing Valves, and can be applied using existing equipment in the field. Supplied with filter.



La válvula RENEW Biotre™ está hecha de material 100% renovable a base de plantas, eliminando completamente el uso de plástico a base de combustibles fósiles en el cuerpo de la válvula. Permite la misma descarga de gases que nuestras válvulas de sellado térmico estándar y proporciona la misma protección superior de frescura. La válvula se adhiere al interior de polietileno (PE) de un paquete a través del sellado térmico, al igual que nuestras válvulas de sellado térmico estándar, y se puede aplicar utilizando el equipo existente en el mercado. Se suministra con filtro.

Biotre™ RENEW系列透氣閥是由100% 可再生使用及植物性環保材質製成，透氣閥體在生產過程中無使用到塑料等石化原料。此系列透氣閥與本公司其他系列透氣閥功能皆相同，同樣能為袋內產品提供最好的鮮度維持。此系列透氣閥的安裝方式也和其他透氣閥相同，皆可使用市面上打閥機將透氣閥與袋內PE熱封黏合。目前僅提供濾紙款

La valvola RENEW di Biotre™ è realizzata con materiale rinnovabile al 100%, a base vegetale, eliminando completamente l'uso di plastica a base di combustibili fossili nel corpo valvola. Permette lo stesso degassaggio delle nostre valvole termosaldanti standard e offre la stessa protezione superiore di freschezza. La valvola aderisce al polietilene (PE) interno di una confezione tramite termosaldatura, proprio come le nostre valvole termosaldanti standard, e può essere applicata utilizzando applicatori già disponibili. Fornite con filtro.

## HEAT SEALING VALVES

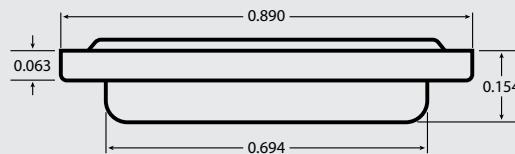
VÁLVULAS DE SELLADO A CALOR

可熱封單向透氣閥

VALVOLE TERMOSALDANTI

### 101NFV

**Filtered Vent Valves** are heat sealed valves that allow trapped air out of an airtight bag and protect products from exterior contamination. The filter on the valve prevents dirt, dust or external particulates from entering the bag. The valve allows a free flow of air and air pressure through the valve which eliminates hard / vacuum-packed bags. The valves typically are used for deflation of large bags (15 lbs. +) for products like pet food, agricultural products, resin, etc. where bags need to be deflated prior to stacking on a pallet and protection from oxygen and moisture is not necessary. It is sold as a component in our 20 and 40 lbs packages.



Las válvulas de ventilación filtradas son válvulas termoselladas que permiten que el aire atrapado salga de una bolsa hermética y protege los productos de la contaminación exterior. El filtro en la válvula evita que tierra, el polvo o las partículas externas entren en la bolsa. La válvula permite un flujo libre de aire y presión de aire a través de la válvula, lo que elimina las bolsas duras / envasadas al vacío. Las válvulas normalmente se usan para sacar el aire atrapado en bolsas grandes (15 lbs. +). Para productos como alimentos para mascotas, productos agrícolas, resina, etc. donde las bolsas deben desinflarse antes de apilarlas en una paleta y no es necesaria la protección del oxígeno y la humedad. Se vende como un componente en nuestros paquetes de 20 y 40 lbs. Se suministra con filtro.

B加強型透氣閥，除了將袋內殘餘氣體排出外，此系列透氣閥更可以隔絕外界的污染源諸如沙塵、微粒進入袋體中，同時能確保袋內與袋外的氣壓平衡不至於讓真空包裝的袋子過度壓縮，能更加保護袋內產品。此系列透氣閥適用於需要疊放於棧板上的中大型袋(15LB/7kg以上重量)，像是寵物飼料、農產品、土壤肥料或樹脂粒等類的包裝，在堆疊前須將袋內氣體排出，但不需考量到完全隔絕水氧氣，是這類型的透氣閥最適用的包裝，TB Flex 的20LB/9kg袋與40LB/18kg袋皆示採用此系列透氣閥。

Le valvole di sfiato con filtro sono valvole termosaldate che consentono la fuoriuscita di aria intrappolata in una confezione ermetica e proteggono i prodotti dalla contaminazione esterna. Il filtro sulla valvola impedisce l'ingresso di sporcizia, polvere o particelle esterne nella confezione. La valvola consente un libero flusso di aria e pressione dell'aria attraverso la valvola, eliminando le confezioni rigide o sottovuoto. Le valvole sono tipicamente utilizzate per la disareazione di sacchi di grandi dimensioni (+ di 7 Kg) per prodotti come pet food, prodotti agricoli, resine, ecc. quando i sacchi devono essere disareati prima di venire impilati su un pallet e non è necessaria protezione da ossigeno e umidità. È venduta come componente nei nostri sacchi da 10 e 20 Kg. Fornite con filtro.

# PRESSURE-SENSITIVE/ LABEL STYLE VALVES

VÁLVULAS DE ESTILO ETIQUETAS A PRESIÓN

感壓式/標籤式透氣閥

VALVOLE SENSIBILI ALLA PRESSIONE/STILE ETICHETTE

## Specifications

<b>Material</b> PET/Polystyrene	<b>Material</b> PET/Poliestireno	<b>材質</b> 開關閥壓力	<b>Materiale</b> ET/Polistirolo
<b>Open/Close Pressure</b> 75-150/25-75 mm H2O	<b>Presión de apertura</b> cierra 75-150 / 25-75 mm H2O	<b>開關閥壓力</b> 75-150/25-75 mm H2O	<b>Pressione di apertura</b> chiusura 75-150 / 25-75 mm H2O

**FUNCTION:** Pressure-Sensitive / Label Style Valves typically are used for packaging institutional coffees, e.g. O.C.S, Frac Pack, etc., and other off gassing products where the valve is applied to the exterior of the package like a label. The valve adheres to the exterior of a package via pressure-sensitive, label-type adhesive. This type of adhesive permits application at higher speeds compared to heat seal. These valves require special applicators that apply oil in line. They can be applied using existing equipment in the field including Plitek and Accraply. Supplied without filter.

**FUNCTION:** Las válvulas de estilo de etiqueta / sensibles a presión se utilizan normalmente para empaquetar cafés institucionales, por ejemplo. O.C.S, Frac Pack, etc., y otros productos de desgasificación en los que la válvula se aplica al exterior del paquete como una etiqueta. La válvula se adhiere al exterior de un paquete a través de un adhesivo de tipo etiqueta sensible a presión. Este tipo de adhesivo permite la aplicación a velocidades más altas en comparación con el sellado térmico. Estas válvulas requieren aplicadores especiales que aplican aceite en línea. Se pueden aplicar utilizando el equipo existente en el mercado, incluidos Plitek y Accraply. Se suministra sin filtro.

**功能說明:** 感壓式/標籤式透氣閥可像標籤般黏貼在包裝外側。通常使用在量產的咖啡包裝(如濾掛式咖啡、單次量試飲包等外包裝)。感壓式/標籤式透氣閥相較於熱封式的透氣閥在安裝速度上是可以比較有效率的。因為感壓式/標籤式透氣閥須透過有上油功能的打閥機來貼閥，目前市面上Plitek與Accraply有提供此類型的打閥機。此透氣閥無濾紙!

**FUNZIONE:** Le valvole sensibili alla pressione/stile etichette tipicamente vengono utilizzate per confezionare bustine di caffè, ad es. per uffici, ecc. e altre confezioni che emettono gas, dove la valvola viene applicata all'esterno della confezione, come un'etichetta. La valvola aderisce all'esterno di un pacchetto tramite un particolare adesivo sensibile alla pressione. Questo tipo di adesivo consente l'applicazione a velocità più elevate rispetto alla termosaldata. Queste valvole richiedono applicatori speciali che dispensano olio in linea. Possono essere utilizzate con applicatori già disponibili, tra cui Plitek e Accraply. Fornite senza filtro.

## PRESURE-SENSITIVE/LABEL STYLE VALVES

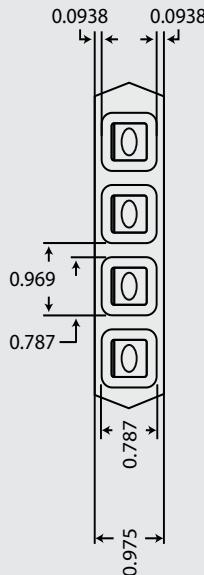
VÁLVULAS DE ESTILO ETIQUETAS A PRESIÓN

感壓式/標籤式透氣閥

VALVOLE SENSIBILI ALLA PRESSIONE/STILE ETICHETTE

### 301PV

These valves require special applicators that apply oil in line. They can be applied using existing equipment in the field including Plitek and Accraply. Supplied without filter.



Estas válvulas requieren aplicadores especiales que aplican aceite en línea. Se pueden aplicar utilizando el equipo existente en el mercado, incluyendo Plitek y Accraply. Se suministra sin filtro.

此系列透氣閥需使用特殊打閥機，目前市面上有Plitek與Accraply兩家機器供應商生產該打閥機。此閥無濾紙。

Queste valvole richiedono applicatori speciali che dispensano olio in linea. Possono essere utilizzate con applicatori già disponibili, tra cui Plitek e Accraply. Fornite senza filtro.

**TRICORBRAUN®**  
flex



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