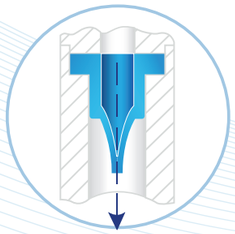
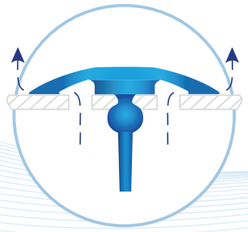
vernay | flow control solutions

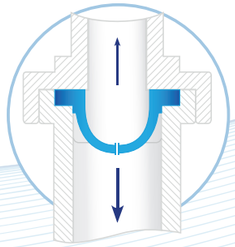
Check Valves for Medical Applications



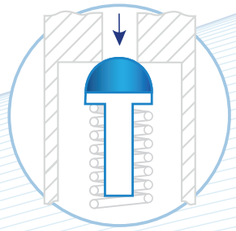
Duckbill Check Valves
Precision-molded, one-piece elastomeric valves designed to provide forward flow rates at low pressures and are non-position sensitive.



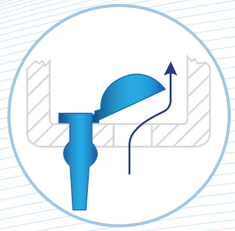
Umbrella Check Valves
Designed to be normally closed when there is no pressure differential across the valve. Designed to open and allow flow at predefined pressure differential. We have a wide range performance available from our family of umbrella products, each with a specific opening and closing pressure.



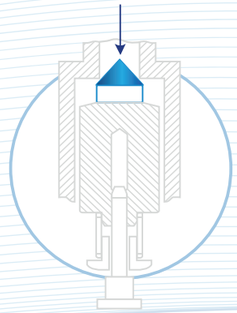
Bi-directional Check Valves
All-rubber valves with dome or spherical shapes that open more easily in one direction than the other. They can be engineered to have two specific opening pressures based on their shape and thickness. They are normally closed.



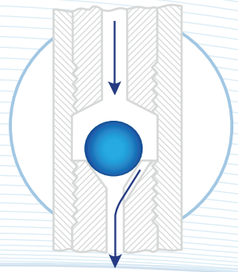
Poppet Valves
Feature rounded, flat or truncated tip designs and are bonded to either metal or plastic substrates; designed to provide "macro" flow.



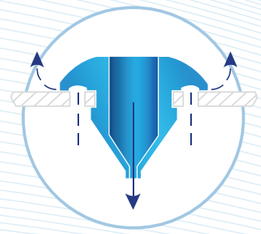
Flapper Valves
Ultra-sensitive to pressure differentials, flapper valves provide high, instant forward flow rates at low pressures.



V-Tip® Needle Valves
Feature patented conical tip design bonded to either metal or plastic substrates; designed to provide "micro" flow.



V-Ball® Spheres
Small, versatile resilient spheres used in applications such as simple check valve components with spring support, indicators or as a shuttling valve.



Combination Valves
The most common combination valve is the umbrella-duckbill style, but other combinations include bidirectional-umbrella, duckbill-diaphragm, etc.

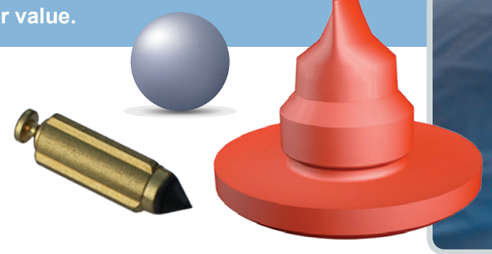
Vernay, Trusted Innovation Partner

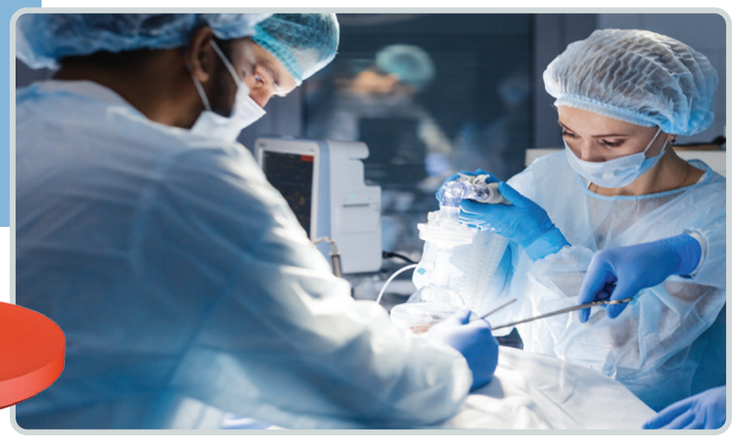
Backed by more than 75 years of fluid control development, Vernay is a trusted innovation partner for established and emerging medical OEMs around the world. Our elastomeric components and assemblies for flow control are driven by R&D, material science, rigorous quality standards and industry expertise; all working together to uniquely address the complex and demanding needs of the medical market.

What is a Check Valve?

A check valve allows fluid flow in one direction and stops, or checks, fluid flow in the opposite direction. Flow handling performance is determined by the type of check valve you select, so one type may better meet your needs than another (refer to the Typical Vernay Check Valves).

Optimal solutions are most often achieved through successful co-development. Vernay specialists are ready to work with you to provide innovative answers to your most demanding design challenges. Working with Vernay as your design partner can result in lower total cost and higher value.





Check Valves Have Two Defining Elements

- Specific flow vs. pressure characteristics (see the Typical Performance of Check Valve Performance chart).
- Engineered performance unique to their type and function: operating environment, geometric configuration, life expectancy and cost.

Selecting the Right Check Valve

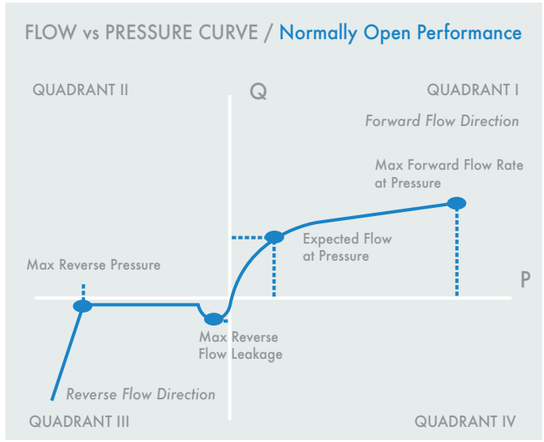
We offer a variety of existing check valve products, ready to be designed into your application or device. If we haven't already engineered the part you need, we can work with you to co-develop the component that best satisfies your particular requirements. We can assist you in integrating a check valve into an assembly or supply it in a housing.

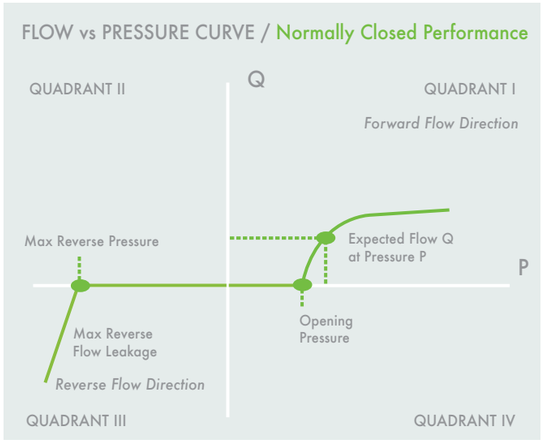
Understanding Your Application

Before a supplier can provide or design the check valve best suited to your needs, we must thoroughly understand your product's application. Analyzing issues that directly affect material selection and physical geometry are critical to developing a more effective and economical check valve. These issues include the operating environment, product life cycle and material requirements.

Physical Geometry

While Vernay check valves can vary widely in geometry, they all have one thing in common: precise design. We understand how a check valve's geometry works in conjunction with the properties of the material it is made from, and know how to adjust the design to affect fluid handling efficiency and end product function.





Materials Selection

Vernay material chemists use elastomers as "engineering materials." By taking advantage of the properties inherent to certain elastomers, we are able to maximize the function of your check valve. Hardness, elongation, tensile strength and modulus are examples of the kind of characteristics that can be "designed in" with the right combination of ingredients. With access to over 33.4k proprietary elastomeric formulations stored in our database for quick retrieval, our engineers and chemists select custom-compound materials suited to your demanding product applications. We can also formulate new custom recipes specifically for your application.

The charts (below) are tools to help you visualize the performance characteristics

Global Resources, Local Touch

Vernay is a global company with the ability to serve our customers on any continent. Our local approach provides regional design experts and local project coordination. When global resources are managed efficiently, the time from concept to launch of your product is minimized. Our goal is to provide you service where and when you need it.

Quality Certifications

The Vernay quality system is based on ISO 9001 Quality System Standards, the Automotive QS-9000, the TS-16949 System Requirements, and ISO 13485. Each Vernay facility has achieved the full degree of certifications. ISO certified locations means consistent quality processes across all sites.

Industries

vernay MEDICAL

vernay AUTOMOTIVE

vernay SPECIALTY

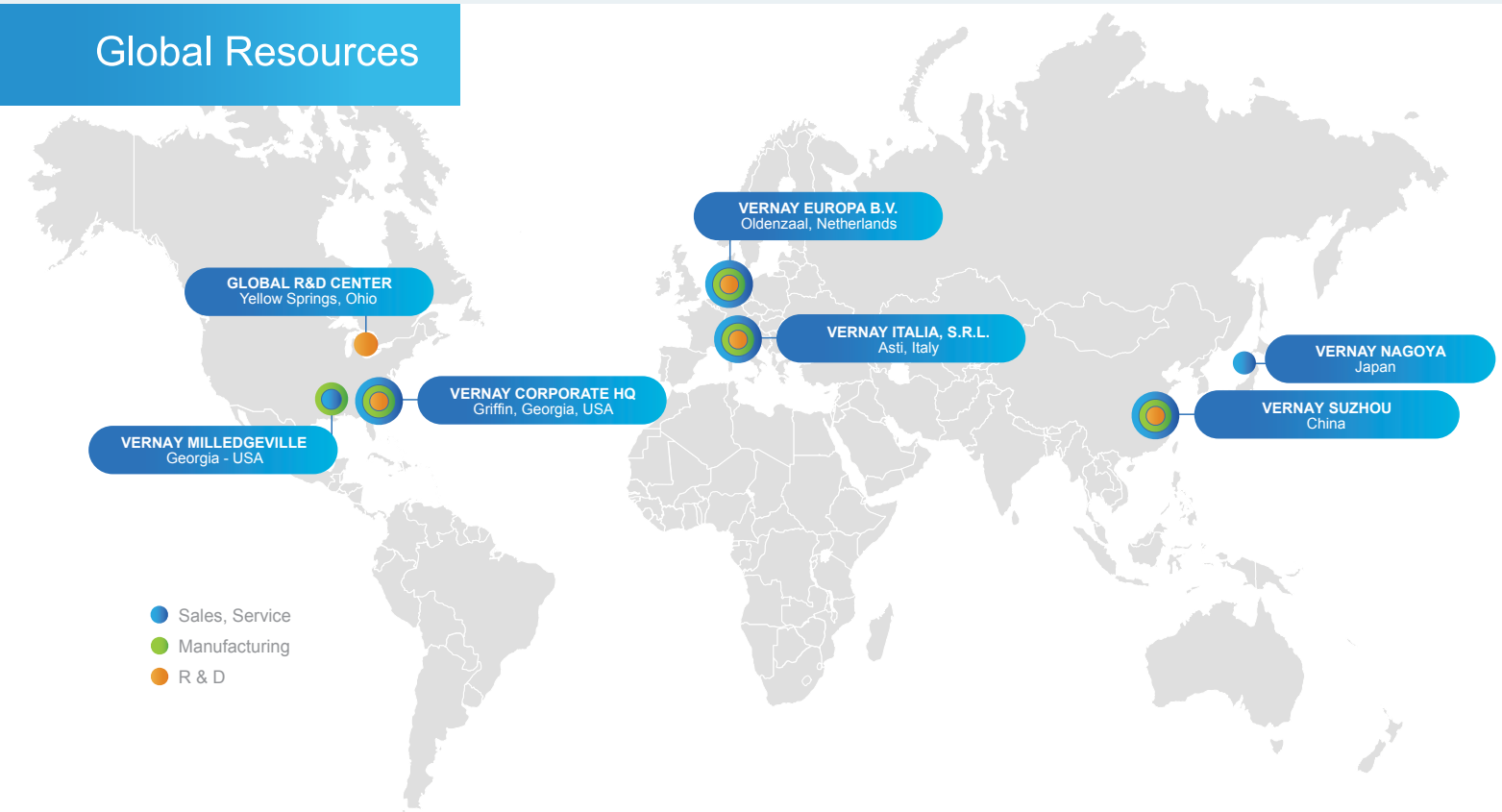
Product Categories

Bi-Directional Valves
Combination Valves
Diaphragms
Duckbill Check Valves
Flow Controls
Medical Assemblies
Molded Strip / Gaskets
Umbrella Check Valves
V-Balls

Applications

Blood Handling
Cardiovascular
Drug Delivery
Enteral Feeding
Fluid Delivery
Gastrostomy
Hemo-Dialysis
In Vitro Diagnostics
IV-Therapy
Pharmaceutical
Respiratory
Surgery
Tracheal
Urology
Veterinary
Wound Care

Global Resources



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