Expert Solutions for Critical Applications

> BRAND Portfolio

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Where Innovation Flows

A DOVER COMPANY

www.wildenpump.com

ADVANCED™ BOLTED METAL PUMPS

ADVANCED™ BOLTED PLASTIC PUMPS

ORIGINAL™ CLAMPED METAL PUMPS

ORIGINAL™ CLAMPED PLASTIC PUMPS

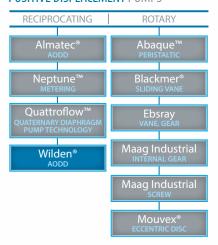
SANIFLO™ SANITARY AND HYGIENIC PUMPS

HIGH PRESSURE PUMPS





POSITIVE DISPLACEMENT PUMPS

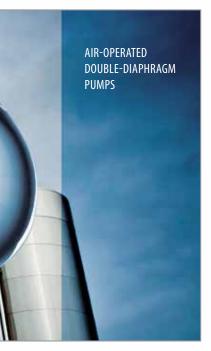


PUMPS & SYSTEMS TECHNOLOGIES

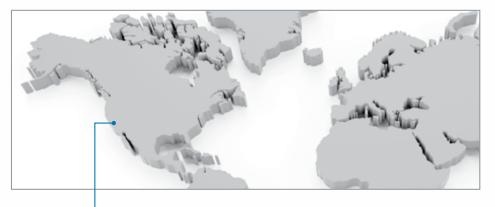








Wilden® Pump and Engineering LLC, part of Dover® Corporation's Pump Solutions Group (PSG®), Oakbrook Terrace, IL, USA, is the leading global provider of air-operated double-diaphragm (AODD) pump technology. Since 1955, Wilden has been solving the toughest pumping applications in the world through excellence in research and development, deep market knowledge and unmatched customer service. PSG features a broad array of leading pump technologies as well as world-class facilities in the U.S., Germany, China, India and France. PSG's leading infrastructure, knowledge base and intellectual capital truly make it the power behind fluid transfer.



Grand Terrace, California (USA) – Wilden is based in Grand Terrace, California, USA, where the company was conceived in Jim Wilden's backyard. Today, Wilden occupies more than 170,000 square feet (15,793 square meters), incorporating a world-class manufacturing facility. Wilden also has a fully equipped R&D laboratory, clean room, test facility, QC department, CAD department, injection molding center and customer satisfaction department. Our world-class distributor network ensures that you will have access to the latest pump technologies and fluid transfer services available when you need them. To find a distributor closest to you, go to www.wildendistributor.com.

The Power Behind Your Process – It all began with one man's innovation; an inspiration that inspired a revolution and created an entire industry over five decades ago. Wilden founder Jim Wilden was working as a foreman when a large water pipe ruptured several feet below ground at a steel factory. Amid the chaos of a flooded shop floor, Mr. Wilden's vision of a unique but reliable utilitarian pump that would pump water, slurry or any finely-divided substance was born. His will and determination to perfect a pump tough enough to handle jobs other pumps couldn't, such as creating a pump that could meet the stringent demands of the mining and heavy construction industries, lead to the invention of the air-operated double-diaphragm pump.

The company that began in a walnut grove now spans over 160 countries with over 180 distributors worldwide. Mr. Wilden's legacy of product innovation and a commitment to excellence lives on in everything Wilden does today. With leading-edge products, innovative solutions and the same determination Mr. Wilden used to build this company, Wilden is proud to truly be the power behind your process.

MARKETS SERVED

ENERGY

Wilden's pumping solutions are leading the way in energy efficiency in storage terminals, biofuels and solar cell manufacturing. Wilden pumps play a vital role as transfer points from one mode of transportation to another and as safe, secure storage locations until product transfer is needed. Wilden is also committed to helping build a clean energy economy through the use of biofuels.

Typical Applications Handled:

- Raw crude oil
- Chemicals
- Caustics
- Ethanol
- Biodiesel
- Gases
- Crude oil

- · Refined petroleum products
- Solvents
- Solar cell manufacturing
- Petroleum
- Lube oils
- Gasoline
- Diesel fuel

PROCESS

Wilden is a recognized leader in the process industries as you can find Wilden pumps in many of the top chemical, food and beverage and pharmaceutical plants around the world.

Typical Applications Handled:

- Acids
- Solvents
- · General chemicals
- · Pulp and paper
- · Low solvent coating
- Caustics

- Soap and detergents
- Paints, inks and coatings
- Cosmetics
- · Solvent-less coating
- Alcohols

HYGIENIC

Wilden offers a wide range of hygienic and biopharmaceutical pumps for various food, beverage, dairy, personal care and pharmaceutical applications. When it comes to safety, performance and gentle transfer solutions, trust Wilden: the evolution of clean.

Typical Applications Handled:

- Personal care
- Confectionary
- Fruits and vegetables
- Poultry, fish and meat
- · Filling/batching
- Dairy

- Pharmaceutical/biopharm
- Sauces, purees and beverages
- · High purity product transfer
- Ingredient receiving and unloading

WATER/WASTEWATER

Wilden plays a critical role in handling and transferring fluids used in municipal and industrial water and wastewater plants.

Typical Applications Handled:

- Wastewater systems
- · Rehabilitation systems
- Distribution
- Metal fabrication
- Potable water systems
- · Water treatment supply
- Collection and disposal







SHIFTING PERFORMANCE TO A WHOLE NEW LEVEL.



Market Position:

- Variable control (discharge flow rates & air consumption)
- Superior flow rate
- · Superior anti-freezing
- · Single-point exhaust option
- Lube-free operation
- ON/OFF reliability
- ATEX models available

Features:

- Efficiency Management System (EMS™)
- Metal and plastic material options
- Non-stalling unbalanced spool
- Simple and durable design

Application Traits:

- · Maximize performance and efficiency
- Process applications
- Max. Mean Time Between Repair (MTBR)

Availability:

- 13 mm (1/2")
- 25 mm (1")
- 38 mm (1-1/2")
- 51 mm (2")
- 76 mm (3")
- 102 mm (4")



Market Position:

- · Anti-freezing
- ON/OFF reliability
- Longest-lasting wear parts
- · Lube-free operation

Features:

- Plastic center block
- Non-stalling unbalanced spool
- Simple and durable design



- · Maximum reliability
- · Process applications
- Max. Mean Time Between Repairs (MTBR)



• 6 mm (1/4"), 13 mm (1/2"), 25 mm (1"), 38 mm (1-1/2"), 51 mm (2"), 76 mm (3")*



Market Position:

- · Direct electrical interface
- Superior ON/OFF reliability
- · Reduced systems costs
- Lube-free operation

- · Externally controlled
- · Various voltage options
- · Nema 4, Nema 7 or ATEX
- · Simple installation

Application Traits:

- System automation
- · 4-20 mA pH adjusting
- Batching applications
- OEM accounts

Availability:

• 6 mm (1/4"), 13 mm (1/2"), 25 mm (1")



GPM

SCFN



Market Position:

- · Low initial cost
- Largest installed base
- Proven technology
- · Originated the AODD pump

Features:

- · Metal air distribution system
- Durable
- Fewest replaceable parts
- Ease of maintenance

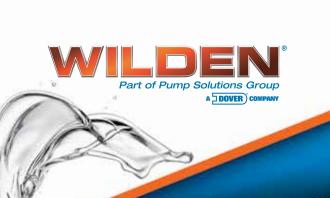
Application Traits:

- Utilitarian type applications
- · Robust design
- · Single-point exhaust option
- Portable

Availability:

• 13 mm (1/2"), 25 mm (1"), 38 mm (1-1/2"), 51 mm (2"), 76 mm (3")

*Advanced Plastic model only



Progressive Diaphragm Technology

Thermoplastic Elastomer (TPE)

• Polyurethane is an outstanding general-purpose diaphragm for nonaggressive chemical applications such as water, wastewater and seawater. It provides excellent flex life, abrasion resistance and durability at an economical price.

 Wil-Flex™ provides a low-cost alternative to PTFE with a cost comparable to neoprene. Made of Santoprene™, Wil-Flex is ideal for use with acidic and caustic fluids such as sodium hydroxide, sulfuric or hydrochloric acids. Exhibiting excellent flex life, abrasion resistance, temperature range and durability, it is widely used in the chemical process, food, pharmaceutical and wastewater industries. Versions of Wil-Flex are available that comply with FDA 21 CFR 177 standards for food and beverage applications.

 Saniflex[™] is an excellent material for food processing applications. Made of Hytrel®, it exhibits good flex life and excellent abrasion resistance. Hytrel also offers superior sealing or seal energizing due to its low compression set characteristics. Saniflex versions are available that comply with FDA 21 CFR 177 standards.

Geolast® exhibits enhanced oil-resistance and low oil swell making it ideal for petroleum industry applications. Equivalent to nitrile (Buna-N), Geolast provides moderate flex life and good abrasion resistance over a wide temperature range at a lower cost than fabric-reinforced Buna-N.

Polytetrafluoroethylene (PTFE) Elastomers

• Because it is one of the most chemically inert compounds available, PTFE can be used with an extremely wide range of fluids. Also known as Teflon®, PTFE is excellent for highly aggressive fluids such as aromatic or chlorinated hydrocarbons, acids, caustics, ketones and acetates. Its properties provide excellent flex life and moderate abrasion resistance. In addition, PTFE complies with FDA 21 CFR 177 and USP Class VI standards for food, beverage and pharmaceutical applications. Because PTFE is nonelastic, a backup diaphragm of a different material must be used to provide flexibility and memory. Material options for backup diaphragms are Neoprene, Saniflex and high temperature Buna-N.

Elastomer Temperature Limits:

	Neoprene	–18° to 93°C [0° to 200°F]
Rubber Thermoplastic (TPE)	Buna-N	-12° to 82°C [10° to 180°F]
	EPDM	-51° to 138°C [-60° to 280°F]
	Viton®	-40 to 177°C [-40 to 350°F]
	Polyurethane	–12° to 66°C [10° to 150°F]
	Wil-Flex™	-40° to 107°C [-40° to 225°F]
	Saniflex™	-29° to 104°C [-20° to 220°F]
	Geolast®	-40° to 82°C [-40° to 180°F]
PTFE	PTFE	4° to 104°C [40° to 220°F]

limits are based upon mechanical stress only. Certain chemicals will significantly reduce maximum safe operating temperatures. Please verify the chemical resistance limitations of elastomers and all other pump components prior to pump installation. Wilden's online Chemical Guide and a Wilden distributor should be consulted for specifics in elastomer selection.

Rubber Elastomers

- Neoprene is an exceptional general-purpose, low-cost diaphragm. Perfect for nonaggressive chemical applications such as water-based slurries, well water or seawater, it provides good flex life and abrasion resistance.
- Buna-N provides excellent performance in applications involving petroleum/oil-based fluids such as leaded gasoline, fuel oils, kerosene, turpentine and motor oils. In wide use throughout the fuel processing industry, Buna-N is also referred to as nitrile and provides moderate flex life and moderate abrasion resistance. For food and beverage applications, versions are available that comply with FDA 21 CFR 177 standards.
- EPDM is an excellent material for extremely cold temperatures and is an economical alternative when pumping dilute acids or caustics. EPDM diaphragms are in use in the manufacturing, food, pharmaceutical and paint/coating industries. The material exhibits good flex life and moderate abrasion resistance, and it is available in versions that comply with FDA 21 CFR 177 standards. EPDM is also a good choice where statically dissipative materials are required.

 Viton® is excellent for extremely hot temperatures and provides exceptional performance with aggressive fluids such as aromatic/chlorinated hydrocarbons and strong, aggressive acids. Viton is often the only diaphragm material suitable for applications where harsh chemicals are used because of its high temperature limit and chemical resiliency. It provides moderate flex life and moderate abrasion resistance.



Ultra -Flex™ Diaphragm Technology

- Guaranteed longer life If longer life is not experienced, Wilden will send you a new set of Ultra-Flex™ diaphragms free of charge.
- Convolute shape, altered fabric placement and unique hardware work together to decrease the unit loading on the diaphragm and distribute stress.
- MATERIAL OPTIONS: Neoprene, Buna-N, EPDM, Viton®

Visit WildenDiaphragms.com for more information on Genuine Wilden Diaphragms and to download the Wilden Chemical Compatibility Guide.

Genuine WILDEN
Accept Nothing Less



ADVANCED™ Metal & Plastic AODD Pumps

Wilden's revolutionary Advanced pumps are specifically designed for maximum performance and efficiency. The bolted configuration delivers maximum process fluid containment over traditional clamp-banded designs, while the redesigned liquid path reduces internal friction to maximize output and efficiency. A variety of elastomer options including PTFE are available to meet abrasion, temperature and chemical compatibility concerns. A variety of connection options and specialized air distribution systems are available to meet your specific application requirements. Pumps are offered in aluminum, stainless steel and Alloy C, as well as unpigmented polypropylene, PVDF, PTFE and PFA.

Applications:

- Mining
- · Oil and gas
- · Paints and inks
- · Plating and finishing
- Pulp and paper
- Semiconductor
- · Waste treatment
- Solvents
- Acids

- Caustics
- High viscosity
- · High pressure
- Large solids
- · Abrasive media
- · Hazardous and flammable liquids
- · Clean Room fluids
- · Flammable liquids

Features and Benefits:

- · Bolted construction for maximum containment
- ADS: Pro-Flo® SHIFT, Pro-Flo X™, Pro-Flo® or Accu-Flo™ technology
- · Higher flow rates
- Lube-free operation
- Higher yields
- Increased pump output
- · Reduced air consumption

- · Reduced internal friction
- Energy efficient
- · Largest chemical compatibilities
- Lower operational costs and downtime
- · Longest Mean Time Between Repair (MTBR)

Technical Data:

- Material Availability: Aluminum, Ductile Iron, Stainless Steel, Alloy C, Polypropylene and PVDF
- Size Availability: 6 mm (1/4") to 76 mm (3")
- Liquid Port Options: BSPT (NPT) (1-1/2", 2", and 3" only), ANSI and DIN
- Elastomer Temperatures to 177°C (350°F)
- Elastomer Options: Buna-N, Neoprene, EPDM, Viton®, Wil-Flex™, Saniflex™, Polyurethane, PTFE and Geolast®

Performance Data:

- Max. flow: 1056 lpm (279 gpm)
- Max. Suction Lift: 9.6 m (30.6') wet, 7.6 m (25.0') dry
- Max. Solids Size: 76 mm (3")

Certifications & Associations:



Advanced PX400 Plastic









Advanced PX820

Aluminum



TECHNOLOGY: AIR-OPERATED DOUBLE-DIAPHRAGM

ORIGINAL™ Metal & Plastic AODD Pumps

The Original pumps ensure reliability without sacrificing ease of maintenance. Wilden's Original pump line lends itself to various processes and waste applications, as well as construction and mining applications. Wilden pumps have the largest material and elastomer offering in the industry to meet your abrasion, temperature and chemical compatibility challenges. Original pumps are offered in aluminum, stainless steel, ductile iron, as well as unpigmented polypropylene and PVDF. A variety of elastomers, connection options, specialized air distribution systems and configurations, such as the Stallion® site dewatering and mining pump, are all available for your specific application needs.

Applications:

- Ceramics
- Chemical
- Dry powder
- Mining
- Oil and gas
- Paints and coatings
- · Plating and finishing
- · Pulp and paper
- Sanitary
- Semiconductor
- · Waste treatment

- Solvents
- Acids
- Caustics
- · High viscosity
- · High pressure
- · Large solids
- · Abrasive media
- · Hazardous and flammable liquids
- · Clean room fluids

Features and Benefits:

- · Portable and submersible
- Large solids passage
- Lube-free operation
- ADS: Pro-Flo® SHIFT, Pro-Flo X™ Pro-Flo®, Accu-Flo™ and Turbo-Flo™ technology
- · Largest chemical compatibilities
- · Longest Mean Time Between Repair (MTBR)

- · Saves money
- · Lower operational costs and downtime
- Intrinsically safe
- Superior anti-freezing
- · Ease of maintenance
- Optimized applications
- · Energy efficient

Technical Data:

- · Material availability: Aluminum, Ductile Iron, Stainless Steel, Polypropylene and PVDF
- Size availability: 6 mm (1/4") to 102 mm (4")
- · Multiple liquid port options
- Elastomer temperatures to 177°C (350° F)
- Elastomer options: Buna-N, Neoprene, EPDM, Viton®, Wil-Flex™, Saniflex™, Polyurethane, PTFE and Geolast®

Performance Data:

- Max. flow: 927 lpm (245 gpm)
- Max. Suction Lift: 9.5 m (31.2') wet, 7.4 m (24.4') dry
- Max. Solids Size: 35 mm (1-3/8")

Certifications & Associations:









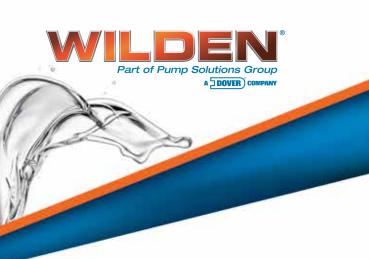






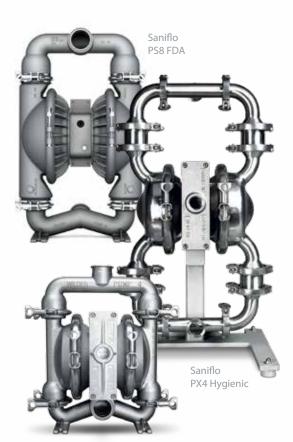
Original PX1 Aluminum

Original PS4 Aluminum



TECHNOLOGY: AIR-OPERATED DOUBLE-DIAPHRAGM SANIFLO™ AODD Pumps

The Saniflo™ pump line is specifically designed to meet the strict guidelines established for sanitary and hygienic process applications. Wilden's Saniflo solutions incorporate a full suite of products like our cast stainless steel pumps made of FDA grade materials, fabricated high polish hygienic pumps that feature straight flowthrough design, large solids passage and meet stringent 3A and EHEDG certifications. The Saniflo pump line offers various connections and surface finishes that are CIP (Clean-in-Place) or COP (clean out of place) for ease of use and maintenance. Wilden is consistently meeting and exceeding industry standards and requirements (FDA, 3A, EHEDG, Class VI USP, ATEX, 1935/2004/EC) needed to refine your process.



Saniflo PX4 FDA

Applications:

- Prepared foods
- Sauces
- Confectionary
- · Fruits and vegetables
- Beverages
- Cosmetics
- Meat
- Poultry
- Fish
- Biopharmaceutical
- · Pharmaceutical
- · Non-sanitary waste
- Waste
- CIP

Features and Benefits:

- · Delicate product handling
- · Large solids passage
- · Lube-free operation
- ADS: Pro-Flo® SHIFT, Pro-Flo X™ or Accu-Flo™ Technology
- · Clean-In-Place (CIP) capabilities
- Superior product containment

- High acid
- · High sugar
- · High-fat food
- · Low acid
- · Pasteurized and protein-based products
- · Product filler feeding
- · Batch process metering
- · Ingredient unloading
- Pressure-limiting applications
- · Handling of shear-sensitive and/or large particulates in thick/thin fluids
- · High flow rates
- Superior anti-freezing
- Ease of maintenance
- · Higher yields
- · Minimized product degradation
- · Energy efficient

Technical Data:

- Material availability: 316, 316L, or with 304 Stainless Steel fasteners
- Available in 200 Ra finish for the standard 316 Stainless Steel and up to 32 Ra finish for the HS
- Size availability: 13 mm (1/2") to 76 mm (3")
- Tri-clamp style connections
- Elastomer temperatures to 177° C (350° F)
- Elastomer options: Buna-N, EPDM, Viton®, Wil-Flex™, Saniflex[™], Polyurethane and PTFE

Performance Data:

- Max. flow: 920 lpm (245 gpm)
- Max. discharge pressure: 8.6 bar (125 psig)
- Max. suction lift: 9.5 m (31.2') wet, 7.6 m (25.0') dry
- Max. solids size (compressible): 76 mm (3")

Certifications & Associations:

















WILDEN™ HS Equalizer Surge Dampener

The Saniflo Hygienic Equalizer® was designed to remove pressure variation on the discharge end of the pump. It has a flow-through design manufactured with existing Wilden pump parts. The HS automatically sets and maintains the correct air pressure required optimizing its effectiveness.

Benefits:

- Reduces pipe vibration and shaking
- Protects in-line equipment
- · Reduces water hammer
- · Absorbs acceleration head
- Lower system maintenance cost
- · Suction stabilizer
- Helps prevent leaking at pipe fittings and joints
- Extends and improves pump performance
- · Avoids damaging pressure surges
- Wide range of material and elastomer options
- Common parts with Wilden pumps
- Self-adjusts to system pressure
- · ATEX models available







HIGH Pressure Pumps

Wilden offers a wide range of rugged high-pressure pumps with the latest technological advancements in Air Distribution Systems (ADS). Wilden's reliable high-pressure pumps are able to transfer viscous, solid-laden slurries at high discharge pressures. Wilden's premier simplex and duplex diaphragm and piston pump technologies powerfully deliver pressure up to 20.7 bar (300 psig).

Wilden's high-pressure pumps do not require costly external boosters or amplifiers to achieve the pressure output needed for your application. Our highpressure pumps perform a multitude of duties including filtration, chemical sludge transfer and general industrial applications. Power. Reliability. Flexibility. These are the backbone of Wilden's high-pressure pumps.

Applications:

- · Filter press feed pump
- Well injection
- · Viscous products
- Paints and coatings
- Chemical sludge transfer
- · Pressure spraying
- Food processing
- Plating/metal finishing
- · Slurry and ceramic slip
- · Water/wastewater

Features and Benefits:

- Bolted construction for maximum containment
- · Dead-head capability
- Simplex or duplex positive displacement technology
- · Lube-free operation

- · Maximum containment
- · Maintain high discharge pressures
- · Operational flexibility
- · Energy efficient
- · Increased reliability

Technical Data:

- · Aluminum, Ductile Iron and Stainless Steel
- Sizes: 25 mm (1") to 76 mm (3")
- 1" model is available with NPT/BSPT liquid connections
- 1.5" and 2" models are available with the ANSI/DIN liquid connections
- Elastomer temperatures to 177°C (350°F)
- Elastomers: Wil-Flex[™], Polyurethane, Saniflex[™] and PTFE
- · Max. discharge/inlet air pressure ratio: 3:1

Performance Data:

- Max. flow: 360 lpm (95 gpm)
- Max. discharge pressure: 20.7 bar (300 psig)
- Max. suction lift: 9.3 m (30.6') wet, 7.8 m (25.5') dry
- Max. solids size: 13 mm (1/2")

Certifications & Associations:









High Pressure HX400S Aluminum

Accessories

Wilden's accessory products add value to your liquid process and expand the application range of Wilden pumps by augmenting the performance and/or utility of the pump. Our electronic controllers automate your Wilden pump for batching and other electronically-controlled dispensing applications. We can also create laminar process flow by eliminating pump pulsation, or control the liquid level within a system of process.



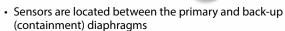
WILDEN SD Equalizer

The SD Equalizer® was designed to remove pressure variation on the discharge end of the pump. It has a flow-through design manufactured with existing Wilden pump parts. The SD series automatically sets and maintains the correct air pressure required, optimizing its effectiveness.



WILDEN Wil-Gard III

The Wil-Gard™ detects diaphragm failure at the source: the primary diaphragm, not at the air chamber or the air exhaust as other systems do.



- When the sensors detect a conductive liquid, an audible alarm, LED and an internal latching relay are activated
- Increase containment, reduce fugitive emissions and reduce downtime with 24-hour pump surveillance
- Power requirement: 110V AC or 220V AC

WILDEN Pump Cycle Monitor

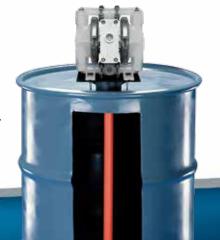
The PCMI counts pump cycles by sensing the presence of the air valve piston (Turbo-Flo™) or air valve spool (Pro-Flo®).

- The sensor, located at the air valve and cap, detects the presence of a magnet located at the end of the air valve piston/spool
- The PCMI registers a complete pump cycle when the piston/spool shifts away from the sensor and subsequently returns to the original position
- The PCMI unit has a reset switch located on the face of the PCMI module
- · PCMI has the ability to be reset from a remote location

WILDEN Drum Pump Kit

The inherent features of the Wilden air-operated pump and Accu-Flo™ pump technology allow it to excel as a utilitarian drum pump. Variable speed and pressure capability, the ability to run dry, self-prime and dead-head offers you flexibility at a low cost. The Wilden universal drum pump kit enables Wilden 6 mm (1/4") and 13 mm (1/2") pumps to adapt directly to drums for cost-effective, efficient liquid transfer.

- Universal kit for 6 mm (1/4") and 13 mm (1/2") pumps
- Fits 51 mm (2") NPT bungholes
- · Tube length can be cut to length
- · Variety of materials are available





Where Innovation Flows



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