



# Quick Disconnect Couplings & Hydraulic Valves



# Introduction

## Performance without Compromise on a Global Scale

Since 1935, the Quick Disconnect and Valve Division of Snap-tite Inc., has offered more combinations, sizes, and types of quick disconnect couplings than any other manufacturer in the world today.

Hundreds of markets and industries depend on our couplings' ability to perform under the most demanding conditions.

From the ocean floor to the very edges of our solar system, and everywhere in between,

Snap-tite quick disconnects set the industry standard.

Our strength is providing expert solutions matched to the needs of each customer... highly consistent quality in exactly the right product, delivered on time, at the right price.

Performance without compromise is Snap-tite's promise. It means doing whatever it takes to make your business more profitable. It's a commitment our people make every day.

### **PRODUCT TYPES:**

#### ***Drybreak Coupling***

***Drybreak:*** A term given to a sliding sleeve style hydraulic quick disconnect with features that include an ability to connect with virtually no air inclusion or disconnect with little or no spillage. Also commonly referred to as Non-Spill, Flat Face, and Clean Break.

#### ***Poppet Style Coupling***

***Poppet:*** Refers to the type of valve used to stop fluids from flowing when the two mating parts of a quick disconnect are separated. Chosen for its simplicity in both function and manufacturability, the poppet style quick disconnect is the most common type available today.



## 71 series

**Applications:** Hydraulic, chemical service, ideal for test stands and applications where endurance and cleanliness is a requirement.



- Ball-locking, push-to-connect construction
- Flush face design allows for easier contaminant inspection and cleaning
- Flush valve virtually eliminates fluid loss and air inclusion
- Dirt tolerant, heavy duty construction withstands abusive treatment
- Superior flow characteristics and low pressure drop
- Det Norske Veritas approved
- Plated steel or 316 stainless steel construction †
- Working pressures to 10,000 psi (690 bar)
- Sizes from 1/8" to 2"

## 74 series

**Applications:** Construction & mobile equipment, hydraulic hand tools, in-plant hydraulics – anywhere a drybreak is required for cleanliness or where thermal expansion exists.



- Meets requirements of ISO 16028 specification
- Connect under pressure capability available
- 3/8" size also meets or exceeds the requirements of HTMA ANSI/NFPA T3.20.15-1991
- Ball-locking design with push-to-connect feature
- Minimal air inclusion and spillage
- Plated steel construction †
- Working pressures to 4,600 psi (317 bar)
- Sizes 1/4" to 1" (6.3 mm to 25 mm)

## 23 series

**Applications:** Mobile equipment, hydraulic tools, in-plant hydraulics, restaurant equipment, and fluid reclamation equipment.



- General purpose drybreak coupling
- Ball-locking design with push-to-connect feature
- Safety sleeve/lock as standard
- Connects against static pressures up to 200 psi (14 bar)
- Plated steel construction †
- Working pressures to 3,000 psi (207 bar)
- Sizes are 3/8" and 1/2"

## 78 series

**Applications:** Oil well equipment, sand and salt spreaders, dump and demolition trailers, live bed trailers and other heavy duty applications.



- Heavy duty wing nut or hex nut for easy connection of threaded units
- Interchangeable with Aeroquip FD51 and others
- Minimal spillage and air inclusion
- Bonded valve seal permits connecting and disconnecting without seal washout
- Brass construction
- Working pressures to 3,000 psi (207 bar)
- Sizes 3/4" to 1-1/2"

## 28-1 series

**Applications:** Low pressure hydraulic systems, high purity systems, fuel systems, electronic coolant and high reliability systems.



- Lightweight drybreak coupling
- Compact ball-lock design with push-to-connect feature
- Color coded lock indicator
- Performance meets or exceeds MIL-C-7413B and MIL-C-25427A specifications
- Aluminum or 316 stainless steel construction
- Working pressures to 1000 psi (69 bar)
- Sizes 1/4" to 2"

## 29 series

**Applications:** High reliability military, aerospace, and medical applications as well as chemicals and other corrosive materials.



- Ball-lock design with push-to-connect feature
- Lower air inclusion, spillage, and pressure drop than required by MIL-C-25427A specifications
- Performance meets or exceeds MIL-C-7413B specifications
- Aluminum or 316 stainless steel construction
- Working pressures to 5,500 psi (379 bar)
- Sizes 1/8" to 1-1/4"

# Drybreak

## 77 series

**Applications:** Hydraulic circuits, test stands, and Hydrotesting for offshore drilling and production platforms.



- Superior flow characteristics
- Internal safety sleeve-lock prevents accidental disconnection
- Heavy duty construction
- Proven dog-lock mechanism provides safe, positive connection
- Various end fittings available including Autoclave end connections
- Plated steel or stainless steel construction†
- Working pressures to 36,000 psi (2483 bar)
- Sizes 1/4" (6mm)

## Subsea Couplings

Snap-tite has designed and manufactured couplings for the Offshore Oil and Gas industry for use in a variety of applications from blowout preventors to the control modules, and distribution of chemical coolants and hydraulic fluids.



These include mono couplings (manual operation), diver mateable thread-to-connect couplings equipped with handles, complete panel assemblies, protective covers, and keyed (polarized) mono couplings to prevent cross media connections.

- Working pressures to 40,000 psi (2760 bar)
- Connect & disconnect at full operating pressure
- Available with elastomer or “PEEK” seals
- Minimum spillage and water ingress
- Balanced designs to reduce separation forces
- Fabricated from corrosion resistant metals suitable for subsea applications

## Design Versatility

Snap-tite thrives on application problem solving and design versatility. We can handle your application needs using either standard products, a modification of standard product or designing a special product to meet your requirements.

- Control drawings
- Tailored to meet specific needs
- Poppet valve designs
- Special acceptance testing
- Quality control procedures to meet your requirements
- Material, end fittings, sizes & pressures to suit the needs of your application
- Serialization
- Drybreak designs
- Balanced design



## H, IH, PH series

**Applications:** General purpose, plastic molding, machine tool, test equipment, agricultural, Department of Transportation, mobile hydraulics.



- Traditional ball-locking two-piece construction allows end fitting versatility
- Lowest pressure drop for size
- Smallest envelope size for size
- Det Norske Veritas approved
- Smooth jet stream valve design
- **IH Option** for reciprocating, pulsating and rotary motion air tools (single shut-off combination)
- **PH Option** for connection against static hydraulic pressure (one side only)
- Plated steel, brass, aluminum or 316 stainless steel construction†
- Working pressures to 11,000 psi (759 bar)
- Sizes: **H** 1/4" – 6", **IH** 1/4"– 3/4", **PH** 3/8" – 1"
- Double and single shut-off, or straight through combination

## E, EA series

**Applications:** Vacuum pumps, autoclaves, steam applications, hydraulic return lines, gravity flows.



- Excellent high temperature sealing
- For hard vacuums down to 29.72" Hg
- Smooth jet stream valve design
- Ball-locking two piece construction allows for end fitting versatility
- Plated steel, brass, aluminum, or 316 stainless steel construction†
- Working pressures to 3,000 psi (207 bar)
- Sizes: **EA** 1/4" – 3/4", **E** 1"– 4"
- Double and single shut-off, or straight through combination

## 72 series

**Applications:** *General purpose, plastic molding, machine tool, test equipment, Department of Transportation, mobile hydraulics*



- Interchangeable with other standard ISO 7241-1 Series B couplings
- Proven ball-lock mechanism for positive connection
- Meets or exceeds ISO 7241-1 Series B performance
- Exceeds pressure and flow characteristics of competition
- Plated steel, brass, 303 or 316 stainless steel construction<sup>†</sup>
- Working pressures to 7,500 psi (517 bar)
- Sizes 1/8" - 1"
- Double shut-off

## 76 series

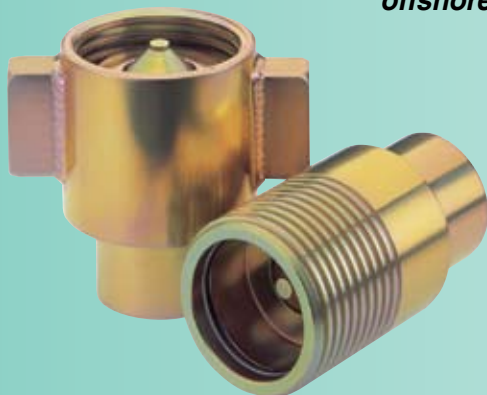
**Applications:** *Hydraulic tools and rescue equipment.*



- Interchangeable with Parker 3000 Series and others
- Zero leak soft seat poppet valves
- Exceeds flow and pressure characteristics of competitors ball designs
- Thread-to-connect sleeve accommodates hand or wrench connection
- Rugged plated steel construction<sup>†</sup>
- Connect under pressure capability
- Working pressure 14,500 psi (1,000 bar)
- 1/4" & 3/8" size
- Double shut-off

## 75 series

**Applications:** *Rugged hydraulic applications...oil fields, offshore drilling, cranes, power tools.*



- Acme thread-to-connect design
- High flow capacity
- Low pressure drop
- Connect under pressure up to 3,000 psi (207 bar)
- Det Norske Veritas approved
- Plated steel or 316 stainless steel construction<sup>†</sup>
- Working pressures to 5,000 psi (345 bar)
- Sizes 3/4" - 4"
- Double shut-off

## 60 series

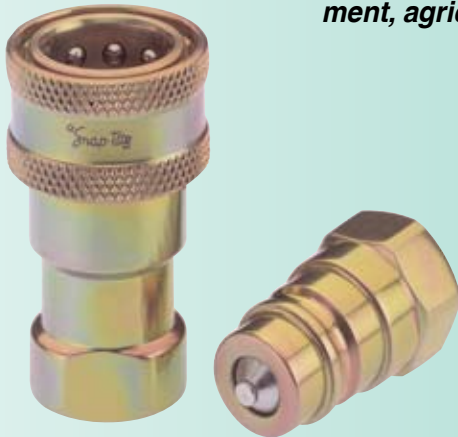
**Applications:** Snow plows, agriculture, forestry, construction equipment, oil tools, steel mills.



- Interchangeable with Parker 4000 Series and others
- Proven ball-lock mechanism for positive connection
- Superior pressure and flow characteristics
- Choice of seal materials to handle a variety of fluids
- Plated steel construction†
- Working pressure to 3,000 psi (207 bar)
- Sizes 1/4" & 3/8"
- Double shut-off

## 61 series

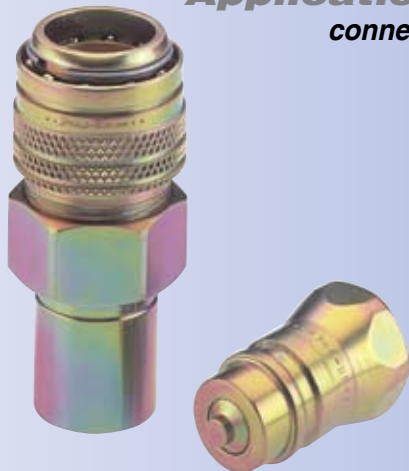
**Applications:** General purpose, plastic molding, machine tool, test equipment, agriculture, Department of Transportation, mobile hydraulics.



- Dimension and performance requirements conform to ISO 7241-1 Series A
- Dimension requirements conform to ISO 5675
- Proven ball-lock mechanism for positive connection
- Connects with other competitive ISO 7241-1 Series A couplings
- Superior pressure and flow characteristics
- Plated steel construction†
- Working pressures to 4,600 psi (317 bar)
- Sizes 1/4" - 1"
- Double shut-off

## 68 & 63 series

**Applications:** Mobile equipment requiring bracket mounting and connect/disconnect under pressure capability.



- Coupler is push-to-connect and capable of breakaway under pressure when bracket mounted
- Interchangeable with other 1/2" standard ISO 7241-1 Series A couplings
- Nipple conforms to dimensional and performance requirements of ISO 5675
- Shielded valve in 63N8 nipple prevents reverse flow checking
- Heavy duty plated steel construction†
- Working pressures to 3,000 psi (207 bar)
- 1/2" size
- Double shut-off



## K series

**Applications:** Used with a wide variety of chemicals and cryogenic fluids. For frozen food processing, liquid nitrogen and fueling applications.



- Pressure capability to 1,000 psi (69 bar)
- Sizes 3/8" – 2"
- Temperature range of -400° to 400°F (-240° to 205°C)
- Kel F® or Teflon® seals available
- Stainless steel or optional exotic alloy construction
- Valve configurations - available with double or single shut-off valving or straight through as required

## 25 series

**Applications:** Aromatic hydrocarbons, esters, ketones, ethers, strong caustics, sulfuric acid, hydrofluoric acid and many other highly corrosive materials as well as cryogenic service.



- Teflon or Kel F seals
- Minimal pressure drop
- Tubular valve design
- Dependable ball-locking operation
- Optional sleeve lock aids in preventing accidental disconnection
- 316 stainless steel construction
- Working pressure to 1,000 psi (69 bar)
- Sizes 1/4" – 1/2"
- Double shutoff or straight through

## GF series

**Applications:** For plug-in convenience for all gas grills, ovens, small appliances and caster-mounted restaurant equipment.



- Certified by Canadian Standards Association (CSA) formerly known as American Gas Association and Canadian Gas Association (IAS) - Specification ANSI Z21.41
- Permits easy movement of caster mounted appliances
- Thermal shut-off for safety
- Ball-locking mechanism
- Brass construction
- Working pressure to 0.5 psi (0.04 bar)
- Sizes 1/4" – 1-1/4"
- Single shut-off

## 73 series

**Applications:** *Water jetting, water blasting systems.*



- Heavy duty construction
- Positive locking collar prevents accidental disconnection
- Various end fittings available including Autoclave end connections
- Proven ball-locking mechanism provides positive connection
- Stainless steel construction
- Working pressures to 43,500 psi (3000 bar)
- 1/4" (6mm) size
- Double shut-off or straight through

## 56 series

**Applications:** *Rugged, high pressure equipment used for removal of mill scale or paint, cleaning of maritime vessels and equipment.*



- Proven dog-lock mechanism provides safe, positive connection & eliminates ball brinnelling
- Safety sleeve lock protects against accidental disconnection
- Interchangeable with Parker WB and Aeroquip FD69 Series
- High strength plated steel construction<sup>†</sup>
- Working pressures to 12,000 psi (828 bar) with 4:1 safety factor
- 1/2" size
- Straight through configuration

# NGV Fueling Products

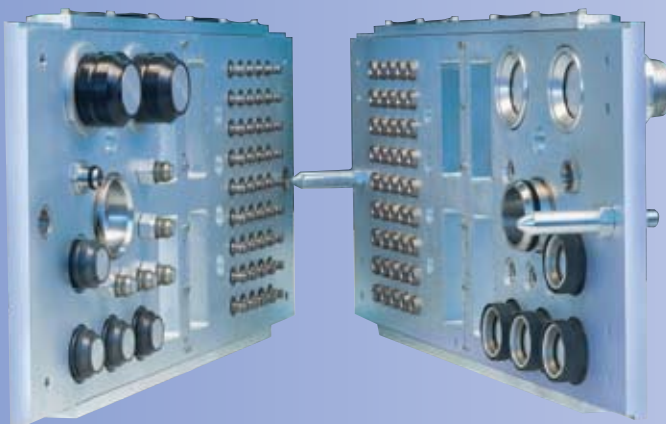


*Snap-tite continues to introduce to the CNG industry the latest innovative designs including our newest release, the Dispenser Hose Breakaway, which helps to protect the CNG dispenser and the vehicle in the event of a drive-away. Snap-tite is also an AGA/CGA NGV-1 supplier of certified Receptacles, Nozzles and Check Valves.*

- Balanced design of dispenser hose breakaway maintains a positive connection until a breakaway cycle is initiated
- Breakaway nipple is equipped with a durable polyethylene bumper to protect the nipple form in the event of a breakaway
- Rugged, corrosion resistant construction of all CNG products
- Patented safety feature in nozzle prevents disconnection while pressurized at 350 psi (24 bar) or higher
- Superior poppet check valve design enhances flow characteristics

## Multi-coupling Panels

**Applications:** Any application requiring the connection of more than one coupling, machine tools, automotive, plastic injection molding, aircraft engine testing, offshore drilling, and test stands.



- Prevents cross connection of circuits and improves labor efficiencies
- Automatic or manual locking designs to meet your individualized requirements
- All coupling sizes (1/8" - 4") can be utilized
- Panel designed to meet your specific envelope and environmental requirements
- Couplings available in high strength steel, aluminum, and stainless steel
- All valving options available; dry-break, balanced dry-break, poppet in double, single and straight-through plus electrical connections as desired
- Working pressures to 40,000 psi (2759 bar)

# Hydraulic Check Valves

## 6C & 3C series

**Applications:** Industrial, mobile and construction equipment.



- Soft seat, zero leakage poppet check valve
- Two piece construction allows for a variety of end fittings
- Various crack pressures
- Flow rates to 175 US gpm (622 l/min)
- Plated steel, 316 stainless steel or brass construction†
- Working pressures to 6,000 psi (414 bar)
- Sizes 1/4" - 2"

## CPIFF series

**Applications:** Industrial, mobile and construction equipment.



- Soft seat, zero leakage poppet check valve style
- Various crack pressure
- Compact one piece construction
- Flow rates to 30 US gpm (115 l/min)
- Plated steel or brass construction†
- Working pressures to 5,000 psi (345 bar)
- Sizes 1/4" - 1"

## CPC, CAC, CAV, CAD series

**Applications:** Industrial, mobile and construction load holding equipment.



- Cartridge, pilot, and dual pilot check valves
- Soft seat design
- 4:1 pilot ratio
- Various crack pressures
- Self-dampening action
- Flow rates to 50 US gpm (189 l/min)
- Plated steel cartridges, anodized aluminum blocks†
- Working pressures to 5,000 psi (345 bar)
- Sizes 1/4" - 1"

# Hydraulic Control Valves

## FRI series

**Applications:** Actuator speed control - industrial and mobile.



- Fixed flow control valve provides an economical means of assuring accurate, pressure compensated, flow regulation to actuators at a predetermined flow rate
- Free reverse flow feature
- Flow capability to 30 US gpm (115 l/min) with a wide range of flow settings available
- Tamper proof settings maintain system integrity
- Plated steel construction†
- Working pressures to 5,000 psi (345 bar)
- Sizes 1/4" to 1"

## FRIA series

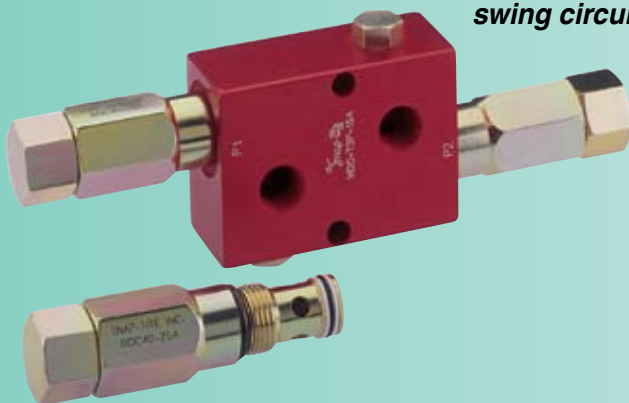
**Applications:** Industrial and Mobile Actuator speed control.



- Adjustable flow control valve provides accurate, consistent control of hydraulic motor and cylinder actuation speeds
- Pressure compensated design
- Free reverse flow feature
- Flow rate is fully adjustable under pressure
- Fingertip adjustment and locking
- Stainless steel adjustment assembly available
- Adjustable flows to 30 US gpm (115 l/min)
- Plated steel construction†
- Working pressures to 5,000 psi (345 bar)
- Sizes 1/4" - 1"

## RDC, RDV, MCD, MDD series

**Applications:** System pressure protection on fixed and variable pump systems, dynamic braking on fluid motor systems or swing circuits on hydraulic cranes.

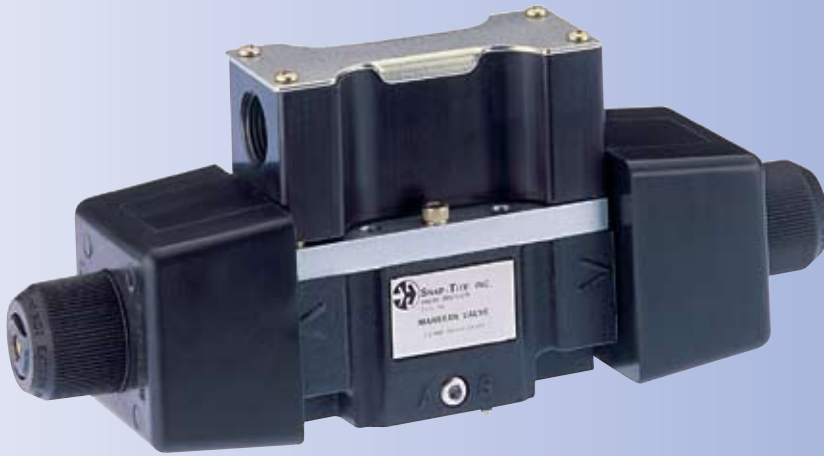


- Differential pressure relief valve with fast operating action protects against pressure surges
- Few moving parts enhance reliability
- Flow rates to 40 US gpm (155 l/min)
- Plated steel cartridges and anodized aluminum blocks†
- Working pressures from 500 to 4,000 psi (35 to 276 bar)
- Sizes 3/8" to 1"

# Directional Control Valves

## Marstan

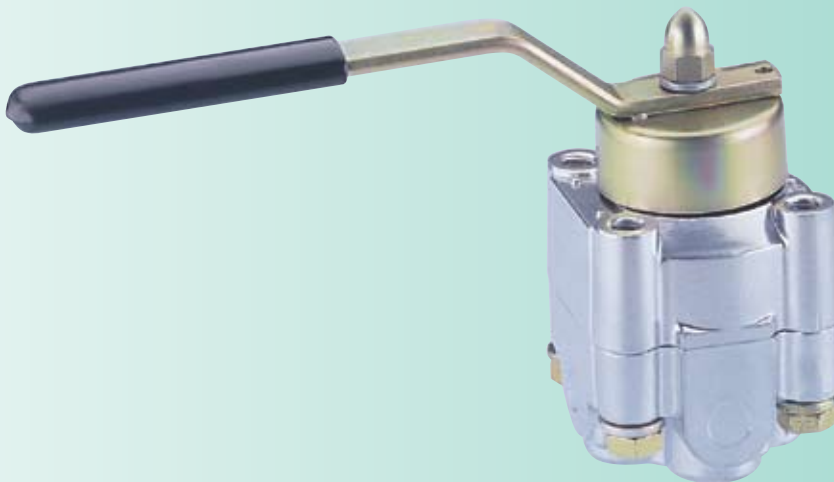
**Applications:** Directional control for test stands, accumulator circuits, high pressure clamping, and valve operators.



- Pressure loaded face seals create virtually zero internal leakage which actually improves over time
- NFPA 01 size subplate mounting permits use in retrofit applications
- Available with solenoid, manual or pneumatic operators
- Low actuating force
- Flow rates to 4 US gpm (15 l/min)
- Aluminum body, steel slide and seals
- Working pressures to 10,000 psi (690 bar)
- Subplates available with 1/4" connections

## Direc-Trol

**Applications:** Manual operation of actuators, lift gates, test stands, winches, steering circuits, offshore production controls and accumulator circuits.



- Long-life, anti-wear, metal to metal shear seal design
- Very low internal leakage enhances reliability
- Excellent metering characteristics
- Non-interflow option eliminates the need for load holding valves in most applications
- Flow rates to 83 US gpm (315 l/min)
- Aluminum, steel, 316 stainless steel or brass housings, steel internals
- Working pressures to 5,000 psi (345 bar)
- Sizes 1/4" to 1"



**Quick Disconnect & Valve Division**

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*A leading manufacturer of high quality quick disconnect couplings since 1935, Snap-tite is the innovator of the drybreak quick disconnect as well as many other standard and special drybreak and poppet designs. The hydraulic valve program concentrates on providing new designs for special applications and original equipment manufacturers.*

**Autoclave Engineers Fluid Components Division**

8325 Hessinger Road • Erie, PA 16509-4679 USA • Phone: 814-860-5700 • Fax: 814-860-5811

*The worldwide expert in design and manufacture of high pressure valves, fittings & tubing since 1945. Our product is the ultimate choice in extreme pressure and temperature conditions.*



217 Titusville Road • Union City, PA 16438-8698 USA • Phone: 814-438-7616 • Fax: 814-438-8163

*Snap-tite Hose consists of two manufacturing facilities in Union City and Erie, PA. Manufacturing hose under the names of Snap-tite, Ponn, and National Fire Hose, we have led the lay-flat hose industry since the 1970's and offer the most extensive line of water distribution valves and hardware.*



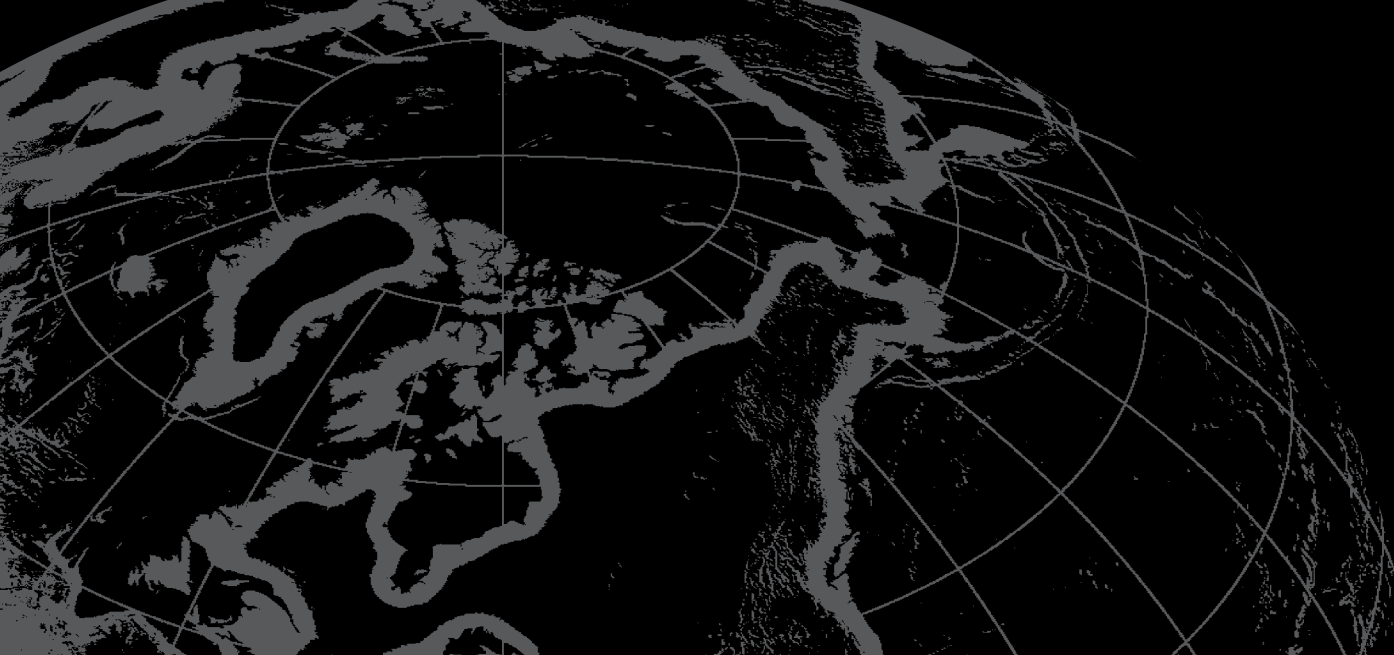
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*This division is the European operation for all of the Snap-tite products. A wide variety of product designs are manufactured at this facility. Snap-tite Europe provides engineering support for the European and Middle East markets.*



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*Autoclave Engineers is the premier supplier of research equipment to laboratories worldwide. We have pioneered research by supplying equipment for production of materials for the semiconductor, textiles, optics, and aerospace industries.*



## ISO-9001 Certified

### **! WARNING !**

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Snap-tite, Inc., its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operation conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Snap-tite, Inc. and its subsidiaries at any time without notice.



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