

C L E A N E R F A S T E R S A F E R S M A R T E R

PRODUCT LINE OVERVIEW
Colder, first choice in couplings



How to Choose the Right Connector

Introduction

With so many connection options, it can often be an overwhelming task to decide which connector is best suited for an application. By understanding your application requirements and selecting the correct connection type, you will have better performance and sealing results.

Assessing the Application

Understanding your application is the key to proper selection of a connection. Use the following checklist to simplify your selection.

Flow	What is your required flow and pressure drop? Be sure to allow for the effect of shutoff valves and tubing connections on your calculations.
Tubing	What size tubing, both inner and outer diameter, are you using? Double check media compatibility.
Media	The viscosity and corrosiveness of the fluid going through the connection needs to be considered. Make sure the media is chemically compatible with ALL coupling materials - including the seals or "O-rings."
Temperature	Know your minimum and maximum temperature range. Standard temperature tolerances range from -40° to 200° F (-40° to 93° C) depending on connection material.
Pressure	What is the maximum pressure your connection will need to withstand during operation? Quick disconnects rated to 250 psi (17 bar) will handle most low pressure applications.
Tubing Connections	Type: Hose barb, compression fittings, and push-to-connect are the most common termination styles. Size: You will need to know ID for hose barbs, OD for push-in-fittings, and tube ID and OD for compression.
Shutoff Options	Do you need automatic or integral shutoff valves? Shutoff options are single, double and non-spill.
Mounting Options	How is the connection going to be configured into your application? Common mounting options include pipe thread, panel mount, in-line or elbow.
Special Requirements	Sterilization, NSF listed, USP Class VI approved materials, special packaging, color coding, keying, lot traceability, etc.



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Material Options

The type of media flowing through a connection can affect the strength, surface appearance, color and performance of the connection. Some guidelines for the different types of material:

Thermoplastics

ABS	Economical medical-grade thermoplastic that withstands gamma and e-beam sterilization. It is commonly used in medical devices. ABS is an amorphous material with good physical properties and high resistance to chemical attack.
Acetal	Strong, lightweight and economical used for a wide variety of chemical and mechanical components. Acetal offers high strength and rigidity over a broad temperature range, low wear, toughness and resistance to repeated use.
Polyamide (Nylon)	Very resistant to wear and abrasion, good mechanical properties even at elevated temperatures, low permeability to gases and good chemical resistance.
PEEK (Polyetheretherketon)	Highly temperature resistant, engineered thermoplastic with excellent chemical and fatigue resistance. It exhibits superior mechanical and electrical properties.
Polycarbonate	Resistant to some chemicals, withstands sterilization and is transparent. It is commonly used in medical devices and offers impact resistance, outstanding dimensional stability and good optical properties.
Polyethylene	Low-cost, chemically resistant thermoplastic. It is opaque and can withstand reasonably high temperature. Polyethylene, unlike polypropylene, cannot withstand normally required autoclaving conditions.
Polypropylene	Excellent general purpose resin that is highly resistant to chemical attack from solvents and chemicals in harsh environments. In general, polypropylene is resistant to environmental stress cracking and it can be exposed to challenging environments.
Polysulfone	Rigid material with excellent strength, good chemical resistance, withstands repeated sterilization and higher temperatures than other thermoplastics. Its high hydrolytic stability allows its use in medical applications requiring autoclave and steam sterilization.
PPS (Polyethylene Sulfide)	Broadest resistance to chemicals for its market as an advanced engineering plastic. (PEEK and PTFE have better resistance, but are not considered engineering resins.)

Fluoropolymers

PTFE	Chemically resistant to all chemicals and solvents with the exception of some molten metals, molten sodium hydroxide, elemental fluorine, and certain fluorinating agents. PTFE offers chemical resistance and stability at high temperature.
PVDF	Tough engineering thermoplastic with a balance of physical and chemical properties that qualify it for high performance in a wide range of applications. It is mechanically strong and tough, has good ductility and has a broad, useful temperature range.

Don't forget:
you can always visit
www.colder.com
for more product
information.

Alloys

Aluminum	Lightweight metal with an available hard anodized finish for durability. Aluminum is non-toxic, non-magnetic and non-sparking and is known for its high strength to weight ratio.
Chrome-plated Brass	Rugged metallic material with an attractive appearance, chrome-plated brass is excellent for higher pressure and temperature.
Die-cast Zinc	Durable and lightweight (about 20% less than comparable brass) material that withstands high pressure and temperature.

O-Ring Selection

Selecting the correct o-ring material can offer you better chemical resistance while others can offer better heat resistance or cold flexibility within your application. Some guidelines for the different types of o-rings:

Buna-N	The most common o-ring material is Buna-N due to its solvent, oil and water resistance. It has a temperature range of -30° to 250° F (-34° to 121° C).
EPDM	Ethylene-propylene-diene rubber (EPDM, also sometimes referred to as EPR) is a chemically resistant family of compounds. Colder uses high quality peroxide cured EPDMs that provide exceptional resistance to temperatures with a wide range of chemicals.
FFKM (Chemraz®, Simriz®, Kalrez®)	Broadest range of chemical resistance of any elastomeric material, combining the resilience and sealing force of an elastomer with chemical resistance approaching that of PTFE.
FKM	Well known for its outstanding resistance to heat, oxidation, weathering and ozone. The temperature range is -15° to 400° F (-26° to 204° C).
Food-grade	Commonly used when food, beverages or potable water is going through the coupling.
PFA & FEP Encapsulated Seals	Encapsulated seals combine the resiliency of the elastomer with the superior chemical resistance of the fluoropolymer to achieve a seal that is lower cost than a pure fluoroelastomer FFKM seal.
Silicone	Seals have good temperature resistance. The temperature range is -70° to 400° F (-56° to 204° C) with special compounds that can reach 175° to 450° F (79° to 232° C). Silicone can also be supplied with Class VI requirements for life sciences applications.

Elastomers

TPE	Thermoplastic Elastomer (TPE) is a blend of additives and copolymers in a special formulation that forms extremely durable bonds to a substrate, while offering the traditional properties of soft-touch overmold.
TPV	Thermoplastic Vulcanizate (TPV) is an alloy of polypropylene thermoplastic and fully vulcanized EPDM rubber. TPV is typically resistant to water, acids and bases.



The Right Number of Barbs

There are many things that work together to determine the quality of the connection between a hose barb and the tubing it connects. The sharpness of the barb, surface finish and the barb angle all contribute to the overall quality of the connection. Failing to optimize these technical aspects will result in a poor connection, regardless of the number of hose barbs used.



Colder offers a variety of different hose barb styles and connection options for tubing ranging from 1/16" to 3/4" ID.



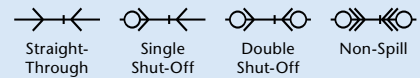
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All couplings are shown connected and in actual size unless otherwise noted. For additional terminations and configurations, see individual product pages.

LEGEND



General Purpose Couplings

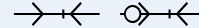


IdentiQuik® RFID available

SMC & SMF1: Twist-to-connect design provides reliable and secure alternative to luer-type connections.

Material: Acetal, polypropylene, ABS, chrome-plated brass

Tubing ID Sizes: 1/16" to 1/8" (1.6mm to 3.2mm)



PMC: Features one-hand connection and disconnection and integral terminations; easier to use than ball-and-sleeve designs.

Material: Acetal

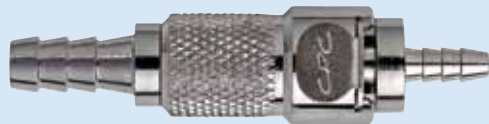
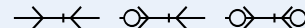
Tubing ID Sizes: 1/16" to 1/4" (1.6mm to 6.4mm)



PMC12: Offered with a variety of configurations and chemical resistance for demanding applications; gamma sterilizable.

Material: Polypropylene

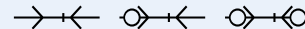
Tubing ID Sizes: Microbore to 1/4" (Microbore to 6.4mm)



MC: Durable and able to withstand higher pressure and temperature; easy one-hand connection and disconnection.

Material: Chrome-plated brass

Tubing ID Sizes: 1/8" to 1/4" (3.2mm to 6.4mm)



NS2: Twist-to-connect design features non-spill valves designed to provide fast, safe and virtually leak-free fluid line connections.

Material: Glass-filled polypropylene

Tubing ID Sizes: 1/8" to 1/4" (3.2mm to 6.4mm)

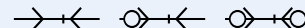


IdentiQuik RFID available

PLC: Widest selection of sizes and configurations offered; resistant to most mild chemical solutions.

Material: Acetal

Tubing ID Sizes: 1/4" to 3/8" (6.4mm to 9.5mm)

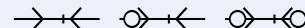


IdentiQuik RFID available

PLC12: Materials of construction offer broad chemical resistance for demanding applications; gamma sterilizable.

Material: Polypropylene

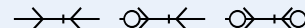
Tubing ID Sizes: 1/4" to 3/8" (6.4mm to 9.5mm)



LC: Durable and able to withstand higher pressure and temperature; easy one-hand connection and disconnection.

Material: Chrome-plated brass

Tubing ID Sizes: 1/4" to 3/8" (6.4mm to 9.5mm)



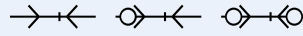
General Purpose Couplings



ZLC: Durable and economic solution for meeting price expectations in high volume; interchangeable with many existing Colder coupling series.

Material: Die-cast zinc

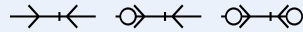
Tubing ID Sizes: 1/4" to 3/8" (6.4mm to 9.5mm)



APC: Features plastic thumb latch, fewer moving parts and a smooth contoured design to deliver ease-of-use and excellent flow.

Material: Acetal

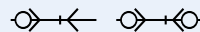
Tubing ID Sizes: 1/4" to 3/8" (6.4mm to 9.5mm)



BreakAway™: Provides safe and easy fluid transfer with protection from costly product loss and equipment damage.

Material: Acetal

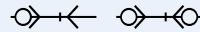
Tubing ID Sizes: 1/4" and 3/8" (6.4mm and 9.5mm)



EFC12: High efficiency valve design provides high flow capability; bulkhead panel mount option facilitates tight seals against tank walls and drums.

Material: Polypropylene

Tubing ID Sizes: 1/4" and 3/8" (6.4mm and 9.5mm)



IdentiQuik RFID available

NS4: Non-spill coupling that virtually eliminates spills, minimizes downtime and enhances operator safety.

Material: Glass-filled polypropylene, ABS

Tubing ID Sizes: 1/8" and 3/8" (3.2mm to 9.5mm)



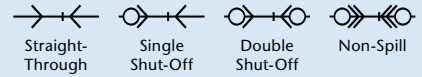
NS6: Durable, yet lightweight construction that features non-spill valves and is compatible with many chemicals.

Material: Glass-filled polypropylene

Tubing ID Sizes: 3/8" and 1/2" (9.5mm and 12.7mm)



LEGEND



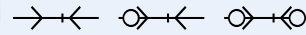
General Purpose Couplings



NSH: Pressure-balanced non-spill design with 100% metal-free, spring-free flow path.
Material: Glass-filled polypropylene
Tubing ID Sizes: 3/8" to 3/4" (9.5mm to 19.0mm)

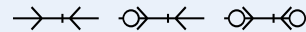


HFC12: Efficient valve design leads to high flow and exceptionally low spillage; shrouded thumb latch is easy to grip and simple to operate.
Material: Polypropylene
Tubing ID Sizes: 3/8" to 3/4" (9.5mm to 19.0mm)



Pictured: HFC57

HFC35 & 57: Withstand harsh environments and offered with or without UV-resistant materials to withstand harmful rays without affecting performance.
Material: Polysulfone (white), UV-resistant polysulfone (black)
Tubing ID Sizes: 3/8" to 3/4" (9.5mm to 19.0mm)



FFC35: Features non-valved and unobstructed flow path to increase flow and minimize turbulence.
Material: Polysulfone
Tubing ID Sizes: 3/4" (19.0mm)



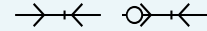
Specialty Products



Tentube™: Allows connection and disconnection of up to ten lines with one slide latch; tubing orientation ensured by physical keying.

Material: Nylon, acetal, polypropylene

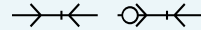
Tubing ID Sizes: 1/16" to 1/8" (1.6mm to 3.2mm)



Sixtube™: Snap-in panel mount design and flexibility to connect and disconnect six separate lines with or without valves.

Material: Acetal, polypropylene

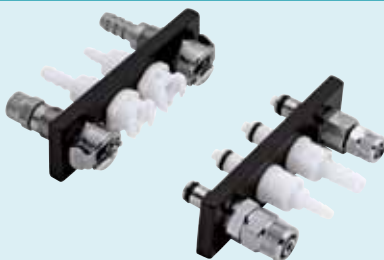
Tubing ID Sizes: 1/16" to 1/8" (1.6mm to 3.2mm)



Twin Tube™: One easy-to-use quick disconnect for two separate non-valved flow paths.

Material: Acetal, ABS

Tubing ID Sizes: 1/16" to 1/8" (1.6mm to 3.2mm)

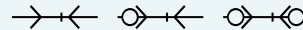


Not to scale

Multi-Mount: Connects three to five lines at once; keyed to prevent mismatched connections.

Material: Acetal, chrome-plated brass

Tubing ID Sizes: 1/8" to 3/8" (3.2mm to 9.5mm)



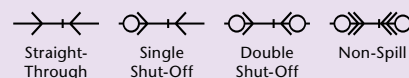
Not to scale

Hybrid Connector: Eliminates the need for multiple connections and simplifies the user interface between remote tools and a device.

Material: Glass-filled polypropylene.



LEGEND



Life Sciences - Medical & Bioprocessing



SMC: Twist-to-connect design manufactured and packaged in a cleanroom.

Material: Medical-grade polycarbonate

Tubing ID Sizes: 1/16" to 1/8" (1.6mm to 3.2mm)



SRC: A unique small bore connector that eliminates the potential for misconnections with luer fittings.

Material: Medical-grade polypropylene

Tubing ID Sizes: Sizes: 1/8" to 3/16" (3.2mm to 4.8mm)



MPC: Easy-to-use and secure connection for critical fluid applications; includes pressure sealing caps and plugs and optional locking sleeves.

Material: Medical-grade ABS, polycarbonate, polysulfone

Tubing ID Sizes: 1/4" and 3/8" (6.4mm and 9.5mm)



MPX: Larger flow easy-to-use and secure connection for critical fluid applications; includes pressure sealing caps and plugs and optional locking sleeves. Higher flow rate than the MPC.

Material: Medical-grade polycarbonate, polysulfone

Tubing ID Sizes: 3/8" and 1/2" (9.5mm and 12.7mm)



SaniQuik™: Integral sanitary termination attaches to hard-plumbed systems with tri-clover clamps; permits quick and easy connection to single-use bag systems, manifolds or tube sets with MPC or MPX bodies.

Material: 316L stainless steel

Termination Sizes: 3/4" and 1-1/2" sanitary



Sanitary: Attaches directly to popular 3/4" mini and 1" maxi size sanitary connections to ease the transition between stainless equipment and single-use assemblies.

Material: Medical-grade polysulfone

Termination Sizes: 3/4" and 1" sanitary

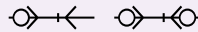


Life Sciences - Medical & Bioprocessing



HFC39: Features aseptic disconnect functionality with automatic shutoff valves, preventing external organisms from entering the media flowpath upon disconnection.

Material: Medical-grade polysulfone
Tubing ID Sizes: 1/4", 3/8" and 1/2" (6.4mm, 9.5mm and 12.7mm)



MPU: Larger flow twist-to-connect design features easy-to-use locking mechanism that guards against accidental disconnects.

Material: Medical-grade polysulfone
Tubing ID Sizes: 3/4" (19.0mm)



Not to scale

AseptiQuik® Connector: Provides a quick and easy sterile connection, even in non-sterile environments.

Material: Medical-grade polycarbonate
Termination Sizes: 1/2" (12.7mm) HB, 3/8" (9.5mm) HB and 3/4" sanitary



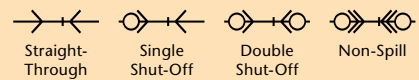
Not to scale

Steam-Thru® Connections: Allow quick and easy sterile connection between biopharmaceutical processing equipment and disposable bag and tube assemblies.

Material: Medical-grade polysulfone
Termination Sizes: 3/8" (9.5mm) HB, 1/2" (12.7mm) HB and 3/4" (19.0mm) sanitary



LEGEND



High Purity Couplings

ChemQuik® CQH06/CQV06: All plastic design for ultra-pure media and high chemical resistance.
Material: Natural, virgin polypropylene and PVDF
Tubing Sizes: 1/4" to 1/2" flare; 3/8" to 3/4" NPT



Pictured: CQV06

ChemQuik CQG06: Spring-free and metal-free flow path for high flow capacity and non-spill, high purity connections.
Material: Natural, virgin polypropylene
Tubing Sizes: 3/8" to 3/4" flare; 3/8" to 3/4" NPT



Shown at 50% scale

ChemQuik Dual Containment System: Flare nuts and panel mount fittings that facilitate double containment of critical chemical lines.
Material: Natural, virgin polypropylene



Not to scale

Dispensing Connectors

DrumQuik® PRO & DrumQuik PUR: Closed chemical dispensing system with a reusable coupler and a recyclable dip-tube assembly for chemical extraction from drums, jerry cans and IBCs.
Material: Food grade, virgin polypropylene and polyethylene
Thread Sizes:
Drum Inserts: 2" American buttress, BCS 56x4 and 2" NPS (G8)
Couplers: 1/2" NPT, 3/4" hose barb and 3/4" BSPP



DrumQuik Adaptors and Accessories: Colder offers many accessories intended for use with DrumQuik® PRO and DrumQuik PUR systems. These include vent check valves, foot valves, fittings and more.

Dispensing Connectors



DrumQuik® 3-Port UDA: Used with 3/4" male NPT coupling terminations to adapt dip-tubes to standard drum closures for closed system dispensing.

Material: Food grade, virgin polypropylene

Thread Sizes: UDA 3-Port: 3/4" male NPT; UDA: none

Bottle Adaptor Kits: Intended for use on reagent bottles with SP400-38mm threads.

Material: Natural, virgin polypropylene

Thread Sizes: SP400-38mm

DrumQuik Asian Drum Adaptors, Plugs and Caps



UDC: Provides closed connection to bag-in-box packaging with 38mm threaded and snap-in necks.

Material: Polypropylene and acetal

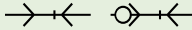
Tubing ID Sizes: 3/8" to 3/4" (9.5mm to 19mm)



Puncture Seal: Provides closed connection to Hedwin Cubitainer® bag-in-box container systems and flexible bags or bottles with SP400 38mm threads.

Material: Polypropylene (coupling) and polyethylene (cap)

Tubing ID Sizes: 1/4" and 3/8" (6.4mm and 9.5mm)



Fittings



FitQuik™ Connectors: High quality fittings for leak-free tubing connections. These precision molded fittings are designed to eliminate tubing leak points in applications such as medical devices, analytical instrumentation or air-driven equipment.

Additional Products



Custom Capabilities: Colder works directly with our customer's design engineering team to solve the most difficult fluid and air management problems.



Accessories: Offering includes a variety of ancillary components from fittings and luers to PTF nuts and dust caps.

CUSTOM CAPABILITIES

Custom Coupling Designs

Collaborative solutions result from cooperation between Colder and its customers to develop diverse designs that improve their products' performance by leveraging our extensive design and manufacturing expertise.

Hybrid Couplings

Connect both fluid and electronics – at the same time



Smart Connections with RFID - Exclusive!

Identify misconnections, automatically identify fluid characteristics, capture connection usage data - the possibilities are endless!



Metal Non-Spill Couplings

Robust housing with high flow plastic valves



Custom Materials

A wide range of materials are available to meet application needs



CUSTOM CAPABILITIES

Multi-Tube Couplings

Connect multiple lines with one easy connection



Custom Tube Connections

Connect to a wide variety of types and sizes of tubing



Mounting Options

Application specific connections including threads, caps, snap-fits and more



Custom designed products are exclusively produced for a specific customer. These proprietary products might not be for sale. Contact your local distributor for special application couplings.

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Engineered Solutions Process

Connector solutions from Colder add value to your product by making your fluid and air connections easy to use and more reliable, increasing your product's modularity and serviceability and providing an overall cleaner, faster, safer and smarter way to make a connection. If you can't find the perfect solution from one of our thousands of standard products or you'd like to simply off-load the connector portion of your project to allow you to focus on your core technologies, Colder Engineered Solutions can help.



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Colder Patent Statement: Colder Products Company takes pride in its innovative quick disconnect coupling and fittings solutions, many of which have been awarded United States and International patents. Colder Products Company has a strong tradition of leadership in the quick disconnect market, and aggressively pursues and protects its proprietary information and intellectual property. In cases where it is practical and as a benefit to its customers, Colder Products Company has licensed its proprietary technology. Please contact Colder Products to discuss your unique needs.

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