

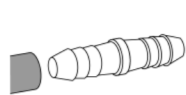
# McMASTER-CARR.

## How to Identify and Measure Fittings

Close

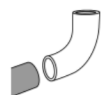
Before making a connection you'll need to know the Connection Style, Thread Type, and the Pipe Size or Thread Size. The thread types must be compatible, and the sizes must be the same in order for two components to mate properly.

### Connection Style



#### Barbed

Barbs grip onto tubing or hose, providing a secure hold.



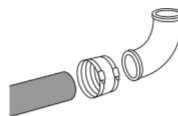
#### Butt Weld

Weld fittings for a flush, smooth connection that permits maximum flow. They are for use in medium- to high-pressure applications.



#### Cam and Groove

Insert the plug into the socket and press the levers down for quick access to medium- and large-diameter lines. Use in low-pressure applications.



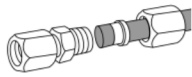
#### Clamp On

Fittings connect with a clamp for an easy way to install and maintain medium-pressure systems.



#### Claw

To connect, push the claw-style heads together with a quarter twist. Use in low-pressure applications.



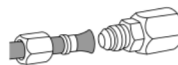
#### Compression

Compression fittings bite into hard metal and plastic tubing in low- to medium-pressure applications. They are also known as flareless fittings.



#### Flanged

Flanges bolt together with a gasket to create an access point within a line. They can withstand low, medium, or high pressures.



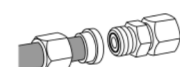
#### Flared

Mate the fitting to a flared metal end and tighten the nut for an extra-tight seal that withstands high pressure. They are often used in hydraulic applications.



#### Gasket

These fittings have a rubber or metal gasket, which creates a strong seal in medium- to high-pressure applications.



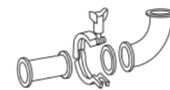
#### O-Ring Face Seal

A tube adapter sits flush against the rubber O-ring so you can slide the tubing and fitting sideways to disconnect in cramped spaces. Also known as zero-clearance and flat-face fittings. Use in high-pressure hydraulic applications.



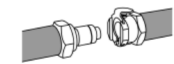
#### Push to Connect

Insert plastic and metal tubing against the fitting- an internal gripping ring holds the fitting secure. Use in low-pressure applications. They are also known as instant fittings.



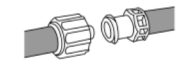
#### Quick Clamp

Join the flanged ends of these fittings with a gasket and secure with a clamp for a connection that permits easy access to your line. They withstand low, medium, or high pressure depending on the clamp you use.



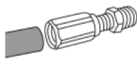
#### Quick Disconnect

Quick-disconnect couplings consist of a plug and socket that join with a latch. Use in low-pressure applications to frequently connect and disconnect your line.



#### Quick Turn

Also known as luer lock couplings, these consist of a plug and socket that connect with a half turn. Use at very low pressures.



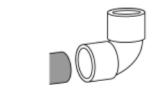
#### Screw On

These two-piece fittings screw directly onto hose without the need for a separate adapter. Use in medium- to high-pressure hydraulic applications.



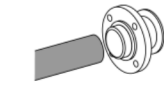
#### Slip-On Weld

Slip-on weld connections work like a flanged connection, but the flange slides all the way over the pipe and welds on both sides.



#### Socket Connect

Socket-connect fittings are easier to weld than butt-weld fittings because they don't need to align perfectly. Use in medium- to high-pressure applications.



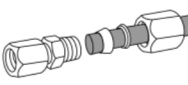
#### Stub End

Stub-end connections work just like a flanged connection, but the stub end welds to pipe (not the flange). Since the flange isn't welded to the pipe, it can be disconnected easily, which creates an access point for frequent cleaning and inspecting.



#### Threaded

Threaded connections can be taken apart as needed for maintenance and repair.



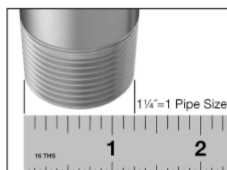
#### Yor-Lok

A double sleeve on these fittings creates extra grip on metal tubing in medium- to high-pressure applications. They are also known as instrumentation fittings.

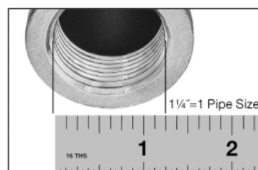
### Pipe Size and Thread Size

**To Determine Threaded Pipe Size:** See [How to Measure Pipe Size for NPT \(National Pipe Taper\) or BSP \(British Standard Pipe\) Threads.](#)

**To Determine Unthreaded Pipe Size:** See [How to Measure Pipe Size for Unthreaded Pipe and Pipe Fittings.](#)

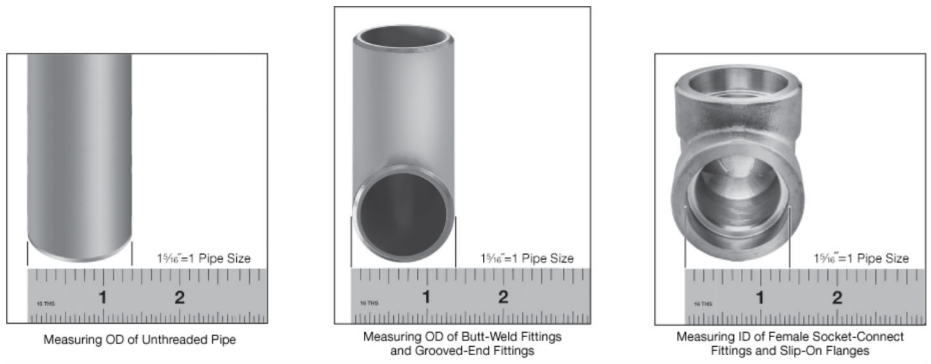


Measuring OD of Male Threads



Measuring ID of Female Threads

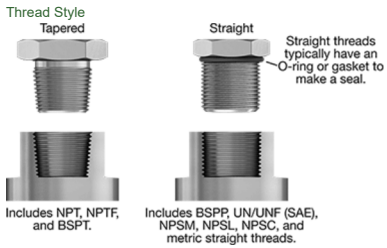
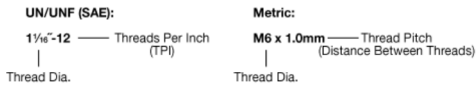
Threaded OD or ID	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	1 3/4"	2"	2 1/2"	3"	4"	5"	6"	8"
Pipe Size	1/16	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8



Unthreaded OD or ID	3/8"	1/2"	5/8"	3/4"	1 1/16"	1 1/8"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10 3/4"	12 3/4"
Pipe Size	3/8"	1/2"	3/4"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"

**Pipe size** is not an actual measured size, but rather an industry designation. When people refer to pipe size, they sometimes call it IPS or nominal size. Thread types that are measured by pipe size include NPT, BSP, and NPSM threads. Unthreaded pipe and fittings are also measured by pipe size. **Thread size** is the actual measured diameter of the threads and the threads per inch (TPI) or thread pitch. Thread types that are measured by thread size include UN/UNF (SAE) and Metric threads.

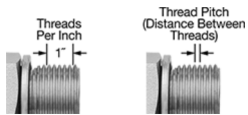
Thread size is listed in the following format:



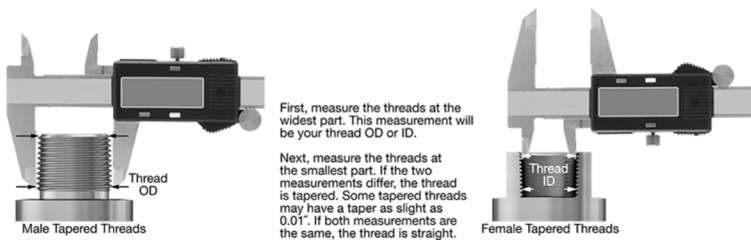
**Threads per Inch (TPI) and Thread Pitch**

**Threads per inch (TPI)** is the number of threads within a one inch measurement. Thread types such as NPT, BSP, and UN/UNF (SAE) are specified by threads per inch.

**Thread pitch** is the distance in millimeters between two threads. Metric sizes are specified by thread pitch.



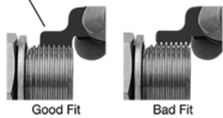
Use a **caliper** to measure the OD of the male threads or the ID of the female threads.



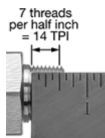
**Measure Your Threads Per Inch (TPI) or Thread Pitch**

Place a **thread gauge** on your threads until you've found the best fit. The number on the gauge indicates the threads per inch or thread pitch.

You'll know you've found the right size when the gauge lines up with the threads without any movement or space.



If you're unable to find a good fit using a thread gauge, you can also measure the threads per inch (TPI) using a ruler: Place the edge of the ruler in the valley of the first thread and count the number of threads within a 1/4" or 1/2" measurement, then multiply to get the threads per inch. For example, if there are 7 threads in a 1/2" measurement, the fitting has a TPI of 14.



**Identify Your Thread Type and Your Pipe Size or Thread Size**

With your thread OD or ID and your threads per inch (TPI) or thread pitch, use the guide below to find your thread type and your pipe size or thread size. If your thread OD or ID does not exactly match the measurements listed in the table, round to the nearest OD or ID.

Tapered Threads				
Actual OD (Male)	Actual ID (Female)	Threads Per Inch	Thread Type	Pipe Size
0.304"	0.258"	28	BSPT	1/16
0.308"	0.244"	27	NPT/NPTF	
0.383"	0.337"	28	BSPT	1/8
0.401"	0.336"	27	NPT/NPTF	
0.518"	0.451"	19	BSPT	1/4
0.533"	0.436"	18	NPT/NPTF	
0.656"	0.589"	19	BSPT	3/8
0.668"	0.571"	18	NPT/NPTF	
0.821"	0.718"	14	NPT/NPTF	1/2
0.835"	0.741"	14	BSPT	
0.902"	0.811"	14	BSPT	5/8
1.041"	0.949"	14	BSPT	
1.043"	0.914"	14	NPT/NPTF	3/4
1.305"	1.148"	11.5	NPT/NPTF	
1.309"	1.193"	11	BSPT	1
1.649"	1.491"	11.5	NPT/NPTF	
1.650"	1.534"	11	BSPT	1 1/4
1.822"	1.766"	11	BSPT	
1.888"	1.730"	11.5	NPT/NPTF	1 1/2
2.347"	2.260"	11	BSPT	
2.362"	2.300"	11.5	NPT/NPTF	2
2.875"	2.720"	8	NPT/NPTF	2 1/2
3.500"	3.340"	8	NPT/NPTF	3
4.500"	4.250"	8	NPT/NPTF	4
6.625"	6.425"	8	NPT/NPTF	6
8.625"	8.425"	8	NPT/NPTF	8

Example: If you have tapered male threads with an OD of 1.290" and 11.5 threads per inch, the closest OD in the table would be 1.305". Your pipe size is 1 NPT.

Straight Threads					
Actual OD (Male)	Actual ID (Female)	Thread Pitch/Threads Per Inch	Thread Type	Thread Size	Pipe or Trade Size
0.180"	0.160"	0.5 mm	Metric	M3 x 0.5 mm	
0.190"	0.180"	32	UN/UNF (SAE)		10-32
0.220"	0.180"	0.8 mm	Metric	M5 x 0.8 mm	
0.250"	0.230"	28	UN/UNF (SAE)		1/4"-28
0.260"	0.220"	1 mm	Metric	M6 x 1.0 mm	
0.304"	0.258"	28	BSPP		1/16
0.310"	0.286"	1 mm	Metric	M8 x 1.0 mm	
0.313"	0.277"	24	UN/UNF (SAE)		5/16"-24
0.375"	0.340"	24	UN/UNF (SAE)		3/8"-24
0.383"	0.337"	28	BSPP		1/8
0.389"	0.356"	1 mm	Metric	M10 x 1.0 mm	
0.394"	0.361"	27	NPSM		1/8
0.436"	0.395"	20	UN/UNF (SAE)		7/16"-20
0.467"	0.430"	1.5 mm	Metric	M12 x 1.5 mm	
0.468"	0.440"	32	UN/UNF (SAE)		15/32"-32
0.500"	0.457"	20	UN/UNF (SAE)		1/2"-20
0.518"	0.451"	19	BSPP		1/4
0.522"	0.474"	18	NPSM		1/4
0.545"	0.509"	1.5 mm	Metric	M14 x 1.5 mm	
0.563"	0.515"	18	UN/UNF (SAE)		9/16"-18
0.624"	0.587"	1.5 mm	Metric	M16 x 1.5 mm	
0.625"	0.578"	18	UN/UNF (SAE)		5/8"-18
0.656"	0.589"	19	BSPP		3/8
0.658"	0.608"	18	NPSM		3/8
0.703"	0.666"	1.5 mm	Metric	M18 x 1.5 mm	
0.750"	0.707"	16	UN/UNF (SAE)		3/4"-16
0.781"	0.745"	1.5 mm	Metric	M20 x 1.5 mm	
0.818"	0.753"	14	NPSM		1/2
0.835"	0.741"	14	BSPP		1/2
0.860"	0.824"	1.5 mm	Metric	M22 x 1.5 mm	
0.875"	0.814"	14	UN/UNF (SAE)		7/8"-14
0.902"	0.811"	14	BSPP		5/8
1.000"	0.914"	14	UN/UNF (SAE)		1"-14
1.000"	1.000"	14	NPSH		3/4
1.018"	0.966"	1.5 mm	Metric	M26 x 1.5 mm	
1.029"	0.964"	14	NPSM		3/4
1.041"	0.949"	14	BSPP		3/4
1.056"	1.005"	2.0 mm	Metric	M27 x 2.0 mm	
1.062"	0.937"	11.5	GHT		3/4
1.063"	0.990"	12	UN/UNF (SAE)		1 1/16"-12
1.125"	1.100"	14	UN/UNF (SAE)		1 1/8"-14
1.188"	1.115"	12	UN/UNF (SAE)		1 3/16"-12
1.250"	1.125"	11.5	NPSH		1
1.287"	1.206"	11.5	NPSM		1
1.292"	1.241"	2.0 mm	Metric	M33 x 2.0 mm	
1.309"	1.193"	11	BSPP		1
1.313"	1.212"	12	UN/UNF (SAE)		1 5/16"-12
1.375"	1.250"	8	NH/NST		3/4 or 1
1.411"	1.359"	1.5 mm	Metric	M36 x 1.5 mm	
1.625"	1.582"	12	UN/UNF (SAE)		1 5/8"-12
1.647"	1.598"	2.0 mm	Metric	M42 x 2.0 mm	
1.875"	1.750"	11.5	NPSH		1 1/2
1.875"	1.803"	12	UN/UNF (SAE)		1 7/8"-12
2.000"	1.875"	9	NH/NST		1 1/2
2.500"	2.428"	12	UN/UNF (SAE)		2 1/2"-12
2.875"	2.625"	8	NPSH		2 1/2
3.000"	3.062"	7.5	NH/NST		2 1/2
3.625"	3.500"	6	NH/NST		3

Use this thread compatibility chart to see which threads will mate together. Metric threads, UN/UNF (SAE) threads, GHT (Garden Hose) threads, and NH/NST (National Hose/National Standard) threads are not compatible with any other thread types.

Thread Type	NPT		NPTF		BSPT		JIS Taper		BSPP		JIS Straight		NPSM		NPSL		NPSC		NPSH	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
<b>Tapered Threads</b>	NPT—National Pipe Taper (Also known as MPT and FPT threads)																			
	M	✓		✓										✓		✓		✓		✓
NPTF—National Pipe Taper Fuel (Also known as Dryseal threads)																				
M		✓		✓										✓						✓
BSPT—British Standard Pipe Taper (Also known as R threads and 55 Whitworth)																				
M					✓		✓		✓											
JIS Taper—Japanese Industrial Standard (Also known as PT threads)																				
M					✓		✓													
<b>Straight Threads</b>																				
BSPP—British Standard Pipe Parallel (Also known as G threads and 55 Whitworth)																				
M					✓				✓		✓									
JIS Straight—Japanese Industrial Standard (Also known as PF threads)																				
M									✓		✓									
NPSM—National Pipe Straight Mechanical																				
M	✓		✓										✓							✓
NPSL—National Pipe Straight Locknut																				
M	✓																			
NPSC—National Pipe Straight Coupling																				
M	✓																			
NPSH—National Pipe Straight Hose																				
M	✓												✓							✓

Unthreaded Pipe Dimensions and Schedule

Metal pipe, plastic pipe, and plastic pipe fittings are generally rated by schedule, which refers to the wall thickness. As the schedule increases, the walls get thicker, but the OD stays the same for each pipe size. Metal pipe fittings are not usually rated by schedule; they are instead rated by the amount of pressure (psi) they can withstand.

Pipe Size	Actual Unthreaded Pipe OD	Thin Wall (Schedule 10)		Standard Wall (Schedule 40)		Thick Wall (Schedule 80)		Extra-Thick Wall (Schedule 120)		Extra-Thick Wall (Schedule 160)		Super-Thick Wall (Schedule XXH)	
		Pipe ID	Wall Thick.	Pipe ID	Wall Thick.	Pipe ID	Wall Thick.	Pipe ID	Wall Thick.	Pipe ID	Wall Thick.	Pipe ID	Wall Thick.
1/8	0.405"	0.307"	0.049"	0.269"	0.068"	0.215"	0.095"	—	—	—	—	—	—
1/4	0.540"	0.410"	0.065"	0.364"	0.088"	0.302"	0.119"	—	—	—	—	—	—
3/8	0.675"	0.545"	0.065"	0.493"	0.091"	0.423"	0.126"	—	—	—	—	—	—
1/2	0.840"	0.674"	0.083"	0.622"	0.109"	0.546"	0.147"	0.480"	0.170"	0.464"	0.188"	0.252"	0.294"
3/4	1.050"	0.884"	0.083"	0.824"	0.113"	0.742"	0.154"	0.690"	0.170"	0.612"	0.219"	0.434"	0.308"
1	1.315"	1.097"	0.109"	1.049"	0.133"	0.957"	0.179"	0.891"	0.200"	0.815"	0.250"	0.599"	0.358"
1 1/4	1.660"	1.442"	0.109"	1.380"	0.140"	1.278"	0.191"	1.204"	0.215"	1.160"	0.250"	—	—
1 1/2	1.900"	1.682"	0.109"	1.610"	0.145"	1.500"	0.200"	1.423"	0.225"	1.338"	0.281"	1.100"	0.400"
2	2.375"	2.157"	0.109"	2.067"	0.154"	1.939"	0.218"	1.845"	0.250"	1.687"	0.344"	1.503"	0.436"
2 1/2	2.875"	2.635"	0.120"	2.469"	0.203"	2.323"	0.276"	2.239"	0.300"	2.125"	0.375"	—	—
3	3.500"	3.260"	0.120"	3.068"	0.216"	2.900"	0.300"	2.758"	0.350"	2.624"	0.438"	—	—
4	4.500"	4.260"	0.120"	4.026"	0.237"	3.826"	0.337"	3.574"	0.473"	3.438"	0.531"	—	—
5	5.563"	5.295"	0.134"	5.047"	0.258"	4.813"	0.375"	—	—	4.313"	0.625"	—	—
6	6.625"	6.357"	0.134"	6.065"	0.280"	5.761"	0.432"	—	—	5.187"	0.719"	—	—
8	8.625"	8.329"	0.148"	7.981"	0.322"	7.625"	0.500"	—	—	6.813"	0.906"	—	—

For a measuring guide for unthreaded pipe and fittings, see [How to Measure Pipe Size for Unthreaded Pipe and Pipe Fittings](#).

## Push-to-Connect Fittings for Plastic and Rubber Tubing—Air and Water

### Push-to-Connect Tube Fittings for Air



### Push-to-Connect Tube Fittings with Shut-Off for Air



A built-in shut-off valve stops airflow when the fittings are disconnected from tubing.

### Universal-Thread Push-to-Connect Tube Fittings for Air and Water



Make lightweight connections without the hassle of matching the exact thread type—these fittings connect to NPT, NPTF, BSPP, BSPT, and other universal threads.

### Universal-Thread Nickel-Plated Brass

#### Push-to-Connect Tube Fittings for Air and Water



Made of nickel-plated brass, these tube fittings resist corrosion better than plain brass fittings. The male threaded ends connect to NPT, NPTF, BSPP, BSPT, and other universal threads, so you don't have to bother matching exact thread types.

### Universal-Thread Stainless Steel

#### Push-to-Connect Tube Fittings for Air and Water



Often used in outdoor, damp, and washdown environments, these 316 stainless steel fittings will not corrode from water, salt, or chemicals. The male threaded ends mate with NPT, NPTF, BSPT, BSPP, and other universal threads, so you won't have to worry about matching exact threads when you're on the job.

### Nickel-Plated Brass Push-to-Connect Tube Fittings for Air



Made of nickel-plated brass, these fittings have better corrosion resistance than unplated brass fittings.

### Brass Push-to-Connect Tube Fittings for Air



Made of brass, these fittings have good corrosion resistance.

### Stainless Steel Push-to-Connect Tube Fittings for Air and Water



A 316 stainless steel body gives these fittings the best corrosion resistance of all our metal push-to-connect tube fittings.

### Moisture-Resistant Push-to-Connect Tube Fittings for Air and Water



These fittings won't absorb moisture, so they're good for water and high-humidity air applications.

#### Universal-Thread Moisture-Resistant Push-to-Connect Tube Fittings for Air and Water



The threads on these fittings mate with NPT, NPTF, BSPT, and BSPP threads.

#### Low-Temperature/High-Pressure D.O.T. Push-to-Connect Tube Fittings for Air



Connect high-pressure brake lines with fittings that won't crack in frigid temperatures. Often used on commercial trucks and trailers, these fittings meet Department of Transportation FMVSS 571 safety standards.

#### Low-Temperature D.O.T. Push-to-Connect Tube Fittings for Air



Connect air brake lines with fittings that won't crack in sub-zero temperatures. They meet Department of Transportation FMVSS 571 safety standards, so they're often used in commercial trucks and trailers.

#### Weld-Spatter-Resistant Push-to-Connect Tube Fittings for Air and Water



Designed for use in welding applications, these fittings are flame retardant.

#### High-Temperature Brass Push-to-Connect Tube Fittings for Air and Water



Withstanding up to 300° F, these fittings have the highest temperature rating of all our brass push-to-connect tube fittings for air and water.

#### Rotating Push-to-Connect Tube Fittings for Air



Ball bearings allow these fittings to rotate 360°, even after they are tightened. They have a special seal that reduces friction to allow for continuous rotation.

#### High-Pressure Push-to-Connect Tube Fittings for Air and Water



An all-metal body and built-in tube support or dual seals allow these fittings to handle the highest pressure ratings of all our push-to-connect tube fittings.

#### Push-to-Connect Tube Fittings for Cooling Systems



Made of EPDM, the gasket on these fittings stands up to the hot water found in heat exchangers and cooling systems. These fittings have stainless steel pipe threads, which are more durable than the plastic pipe threads found on other push-to-connect tube fittings.

## Barbed Fittings for Plastic and Rubber Tubing—Air and Water

#### Plastic Barbed Tube Fittings for Air and Water



Barbs grip onto tubing.

#### Tight-Seal Plastic Barbed Tube Fittings for Air and Water



Minimize leaks in your line—these fittings have a single barb that creates a smooth clamping surface for extra-tight connections.

#### Tight-Seal Moisture-Resistant Plastic Barbed Tube Fittings for Air and Water



Minimize leaks in your line—these fittings have a single barb that creates a smooth clamping surface for extra-tight connections.

[Moisture-Resistant Plastic Barbed Tube Fittings for Air and Water](#)



Barbs grip onto tubing.

[Easy-View Plastic Barbed Tube Fittings for Air and Water](#)



Monitor flow with these clear fittings.

[Brass Low-Pressure Barbed Tube Fittings for Air and Water](#)



Fittings have good corrosion resistance.

[Aluminum Low-Pressure Barbed Tube Fittings for Air and Water](#)



Aluminum fittings have good corrosion resistance, but are lighter in weight than brass.

[Nickel-Plated Brass Low-Pressure Barbed Tube Fittings for Air and Water](#)



The nickel plating on these fittings provides better corrosion resistance than unplated brass fittings.

[Choose-a-Color Aluminum Low-Pressure Barbed Tube Fittings for Air and Water](#)



Color-code fittings for easy identification. These aluminum fittings have good corrosion resistance, but are lighter in weight than brass.

[Stainless Steel High-Pressure Barbed Tube Fittings for Air and Water](#)



Made of stainless steel, these fittings have better corrosion resistance than brass fittings.

[Brass High-Pressure Barbed Tube Fittings for Air and Water](#)



Fittings have good corrosion resistance.

[Screw-On Nut Barbed Tube Fittings for Air](#)



You don't need a clamp to secure these fittings to tubing. They have a nut on the barbed end that tightens to hold the tubing in place.

**Quick-Turn Couplings for Plastic and Rubber Tubing—Air and Water**

[Plastic Quick-Turn Tube Couplings for Air and Water](#)



Made of plastic, these couplings are lighter in weight than metal quick-turn couplings.

[Stainless Steel Quick-Turn Tube Couplings for Air](#)



Made of stainless steel, these couplings stand up to wet environments.

[Brass Quick-Turn Tube Couplings for Air](#)



These brass couplings have good corrosion resistance.

[Plastic Quick-Turn Tube Couplings with Shut-Off for Air and Water](#)

A built-in shut-off valve stops the flow when the coupling is separated, so there's no need to worry about air or water spilling from your line. Couplings are plastic, which is lighter in weight than metal couplings.

**Compression Fittings for Plastic and Rubber Tubing—Air and Water**[Brass Compression Tube Fittings for Air and Water](#)

A single sleeve (ferrule) compresses the tubing as you tighten the nut on these fittings, creating a strong seal. They are brass for good corrosion resistance.

[Tight-Seal Brass Compression Tube Fittings for Air and Water](#)

A built-in tube support slips inside the tubing to prevent collapsing and provides a sturdy connection for an extra-tight seal.

[D.O.T. Brass Compression Tube Fittings for Air](#)

These compression tube fittings meet Department of Transportation FMVSS 571 safety standards for air brake lines.

[Quick-Assembly Brass Compression Tube Fittings for Air and Water](#)

These fittings include a nut with a built-in sleeve (ferrule), so there's no need to remove the nut for assembly.

[Plastic Compression Tube Fittings for Water](#)

Made of acetal, these compression fittings are lighter in weight than metal compression fittings and won't absorb moisture when used in wet environments.

[Plastic Compression Tube Fittings for Air](#)

Lighter in weight than their metal counterparts, these compression fittings are polypropylene.

**Quick-Disconnect Couplings for Plastic and Rubber Tubing—Air and Water**[Plastic Quick-Disconnect Tube Couplings for Air and Water](#)

Lighter in weight than metal quick-disconnect couplings, these couplings are plastic.

[Brass Quick-Disconnect Tube Couplings for Air](#)

Made of brass, these couplings are more durable than plastic couplings.

[High-Pressure Quick-Disconnect Tube Couplings for Air](#)

Couplings can handle pressures up to 250 psi.

[Low-Profile High-Pressure Quick-Disconnect Tube Couplings for Air](#)

With no latch, these couplings have a compact design to fit in small spaces. They can handle pressures up to 700 psi.

**Socket-Connect Fittings for Plastic Tubing—Air and Water**[Socket-Connect Fittings for Plastic Tubing—Air and Water](#)



Slide tubing into these fittings and secure with a clamp. Use at low pressures up to 80 psi.

## Tube Fittings for Plastic Tubing—Drinking Water

### Barbed Tube Fittings for Drinking Water



Connect these fittings to tubing with a ring and a crimping tool (both sold separately). Safe to use with drinking water, these fittings meet the strict standards of NSF/ANSI 61.

### Push-to-Connect Tube Fittings for Drinking Water



These fittings keep their strength in moist environments and meet NSF/ANSI 61 for drinking water. Also known as instant fittings.

### Push-to-Connect Tube Fittings for Hot Drinking Water



Fittings can withstand temperatures up to 200° F.

### Drill-and-Install Push-to-Connect Tube Fittings for Drinking Water



Create a push-to-connect junction in equipment with these fittings. To install, drill a stepped hole in your surface, push the fitting components into place, then insert your tubing.

### Socket-Connect Fittings for Plastic Tubing—Drinking Water



Use these nuts with brass compression fittings to create a seal on plastic tubing. They meet NSF/ANSI 61 for use with drinking water.

## Tube Fittings for Plastic and Rubber Tubing—Food, Beverage, and Dairy

### Stainless Steel Barbed Tube Fittings for Food and Beverage



Made of stainless steel, these fittings are more durable than plastic barbed tube fittings for food and beverage.

### High-Temperature Plastic Barbed Tube Fittings for Food and Beverage



Fittings withstand temperatures up to 220° F.

### Plastic Barbed Tube Fittings for Food and Beverage



Made of FDA listed materials, these fittings have a single barb that creates a smooth clamping surface for extra-tight connections.

### Super-Flow Plastic Barbed Tube Fittings for Food and Beverage



A smooth interior reduces friction and prevents product buildup, ensuring an unrestricted flow.

### Push-to-Connect Fittings for Plastic Tubing—Food and Beverage



Also known as instant fittings, they connect to tubing with a push, and an internal gripping ring and O-ring hold the tubing tight. Use in applications up to 150 psi.

### High-Temperature Compression Tube Fittings for Food and Beverage





Made of PVDF (also known as Kynar), these fittings have excellent strength and can handle temperatures as high as 240° F or 270° F.

[Compression Tube Fittings for Food and Beverage](#)



These plastic compression fittings meet NSF/ANSI Standard 51 for food contact.

[Sanitary Compression Tube Fittings for Food and Beverage](#)



Connect tubing in sanitary food processing areas with frequent washdowns. They have a single sleeve (ferrule) that bites into hard metal and plastic tubing to make a seal—no heating, flaring, or soldering tools required.

[Brass Push-to-Connect Fittings for Plastic Tubing—Food, Beverage, and Dairy](#)



Made of brass, these fittings withstand frequent washdowns in food-processing applications. They also adhere to NSF/ANSI safety standards, so they're safe to use with food, beverages, and dairy.

[Quick-Disconnect Tube Couplings for Food and Beverage](#)



These quick-disconnect couplings meet NSF/ANSI 169 for food equipment.

[Quick-Disconnect Tube Couplings for Dairy](#)



These quick-disconnect couplings mate with a sanitary stainless steel quick-clamp fitting for use in dairy lines.

[Quick-Clamp Fittings for Dairy](#)



**Tube Fittings for Plastic and Rubber Tubing—Chemicals**

[Compression Fittings for Plastic Tubing—Chemicals](#)



Fittings have a sleeve that bites into tubing as you tighten the nut to form a seal in applications up to 120 psi. Also known as flareless fittings.

[Plastic Push-to-Connect Tube Fittings for Chemicals](#)



Also known as instant fittings, these chemical-resistant plastic fittings connect to tubing with a push. An internal gripping ring holds the tubing tight.

[Stainless Steel Push-to-Connect Tube Fittings for Chemicals](#)



Fittings are 316 stainless steel, which has excellent chemical resistance and is more durable than plastic.

[Barbed Fittings for Plastic and Rubber Tubing—Chemicals](#)



Fittings have a barb that grips onto tubing. Use in applications up to 120 psi.

[Quick-Disconnect Couplings for Plastic and Rubber Tubing—Chemicals](#)



Quick-disconnect couplings consist of a plug and a socket that join with a latch so you can easily connect and disconnect your line. Use in applications up to 120 psi.

## Tube Fittings for Plastic and Rubber Tubing—High-Purity

### Push-to-Connect Fittings for Plastic Tubing—High-Purity



Also known as instant fittings, they connect to tubing with a push, and an internal gripping ring and O-ring hold the tubing tight. Use in applications up to 140 psi.

### Barbed Fittings for Plastic and Rubber Tubing—High-Purity



Fittings have a barb that grips onto tubing. Use in applications up to 150 psi.

## Tube Fittings for Plastic and Rubber Tubing—Gasoline

### Barbed Fittings for Plastic and Rubber Tubing—Gasoline



Fittings have a barb that grips onto tubing. Use in applications up to 150 psi.

### Quick-Disconnect Couplings for Plastic Tubing—Gasoline



Quick-disconnect couplings consist of a plug and a socket that join with a latch so you can easily connect and disconnect your line. Use in applications up to 150 psi.

## Tube Fittings for Copper and Brass Tubing

### Solder-Connect Fittings for Copper Tubing



Solder these fittings to tubing for a permanent, leak-tight connection. They are also known as sweat fittings.

### Cleaned and Bagged Solder-Connect Fittings for Copper Tubing



When cleanliness is crucial to your application, choose these fittings that are individually cleaned and bagged to prevent contamination.

### Press-Connect Fittings for Copper Tubing



Crimp these fittings to copper tubing with a crimping tool for a leak-tight connection that doesn't require heat or soldering. They are comparable to Viega ProPress fittings.

### 45° Flared Fittings for Copper and Brass Tubing



No sleeve is required to assemble these fittings, which makes for a faster, more convenient installation compared to 37° flared fittings. They are also known as refrigeration and SAE fittings.

### Supported 45° Flared Fittings for Copper and Brass Tubing



The flared end of the fitting nests inside the fitting body, providing extra support to the tubing. Fittings are also known as inverted 45° flared fittings.

### 37° Flared Fittings for Copper Tubing



Also known as JIC (Joint Industrial Council) fittings, these connect to tubing that is flared to 37°. They can handle higher pressures than 45° flared fittings.

### Compression Fittings for Copper Tubing



#### Nickel-Plated Brass Compression Fittings for Copper Tubing



With a nickel-plated finish, these compression fittings resist corrosion better than plain brass fittings.

#### Precision Compression Fittings for Copper Tubing



Also known as instrumentation fittings, these are made to tighter tolerances than standard compression fittings. They are compatible with Parker CPI fittings.

#### Quick-Assembly Compression Fittings for Copper Tubing



These fittings include a nut with a built-in sleeve, so there's no need to remove the nut for assembly.

#### Vibration-Resistant Compression Fittings for Copper Tubing



The sleeve in these fittings is rubber instead of metal, so it cushions the tubing and absorbs vibration while creating a tight seal.

#### Brass Push-to-Connect Fittings for Copper Tubing



Choose these metal fittings when you need better durability than our plastic push-to-connect fittings.

#### Plastic Push-to-Connect Fittings for Copper Tubing



Made of plastic, these fittings are lightweight compared to our brass push-to-connect fittings.

#### Drill-and-Install Push-to-Connect Fittings for Copper and Brass Tubing



Add a push-to-connect junction to unthreaded ports for easy connections with tubing. To install, drill a stepped hole in your surface, push the fitting components into place, and insert your tubing.

#### Yor-Lok Fittings for Copper Tubing



#### Clamp-On Fittings for Copper Tubing



Use these fittings to make leak-resistant connections without threading or soldering. Slide them over tubing and turn the end nuts to compress the gasket.

## Tube Fittings for Stainless Steel Tubing

#### 37° Flared Fittings for Stainless Steel Tubing



Also known as JIC (Joint Industrial Council) fittings, these provide a tight metal-to-metal seal on stainless steel tubing that is flared to 37°.

#### 37° Flared Fittings with Thread Sealant for Stainless Steel Tubing



The male pipe threads on these fittings have a sealant applied for extra protection against leaks.

#### Cleaned and Bagged 37° Flared Fittings for Stainless Steel Tubing



Individually bagged to prevent contamination, these fittings are suitable for applications that require a high level of cleanliness.

Precision AN 37° Flared Fittings for Stainless Steel Tubing



The threads on the tube end of these fittings are Class 3A or 3B and adhere to tighter tolerances than other 37° flared fittings.

Vibration-Resistant Precision AN 37° Flared Fittings for Stainless Steel Tubing



A PTFE seal on the tube end of these fittings allows for an extra-strong connection in high-vibration applications.

Yor-Lok Fittings for Stainless Steel Tubing



Use these fittings at pressures up to 9,700 psi. Also known as instrumentation fittings, they are made to tight tolerances for use in high-precision applications. They are compatible with Swagelok®, Let-Lok, and Parker A-Lok fittings.

Cleaned and Bagged Yor-Lok Fittings for Stainless Steel Tubing



For applications that require an extra level of cleanliness, these fittings are individually bagged to prevent contamination.

Extreme-Pressure Yor-Lok Fittings for Stainless Steel Tubing



These fittings have the highest pressure rating of all the Yor-Lok tube fittings we offer.

High-Polish Metal Quick-Clamp Sanitary Tube Fittings



The smooth finish inside these stainless steel quick-clamp fittings makes it easy to remove product residue.

Extra-Support High-Polish Metal Quick-Clamp Sanitary Tube Fittings



Also known as I-line fittings, these fittings have a male adapter that interlocks with a female adapter for more support than standard quick-clamp fittings.

Extra-High-Polish Metal Quick-Clamp Sanitary Tube Fittings



Polished to a 20 Ra finish, these fittings have an extra-smooth interior that prevents product buildup and inhibits bacteria growth.

Plastic Quick-Clamp Sanitary Fittings for Stainless Steel Tubing



Quick-Clamp High-Vacuum Fittings for Stainless Steel Tubing



Also known as KF, QF, and NW fittings, these fittings are for high-vacuum applications, such as vacuum coating and heat treating, leak testing, and analyzing gases.

#### Compression Fittings for Stainless Steel Tubing



A single sleeve (ferrule) bites into tubing as you tighten the nut, creating a strong seal. The nut and sleeve are included.

#### Precision Compression Fittings for Stainless Steel Tubing



#### Vibration-Resistant Compression Fittings for Stainless Steel Tubing



Instead of a metal sleeve (ferrule), these fittings have a rubber sleeve that cushions tubing and absorbs vibration to maintain a tight seal, even when connected to large pumps.

#### High-Pressure Compression Fittings for Stainless Steel Tubing



The thick walls of these fittings can withstand more than twice the pressure of standard compression fittings.

#### Butt-Weld Fittings for Stainless Steel Tubing



Butt-weld fittings allow for a smooth, flush connection that provides maximum flow.

#### High-Pressure Socket-Connect Fittings for Stainless Steel Tubing



Use at pressures up to 4,300 psi.

#### Socket-Connect Fittings for Stainless Steel Tubing



Use at pressures up to 1,500 psi.

#### Ultra-High-Polish Gasket Fittings for Stainless Steel Tubing



Polished to a 15 Ra and under finish, these fittings have a mirror smooth interior. They are also known as ultra-high-purity fittings.

#### Ultra-High-Polish Gasket Adapters for Stainless Steel Tubing



#### Vibration-Resistant Ultra-High-Polish Gasket Fittings for Stainless Steel Tubing



Originally used on satellites, rocket propulsion systems, and even Mars rovers, these fittings will handle your most challenging industrial environments. They're designed to withstand high vibration and high vacuum without generating particles that could disrupt your operation.

#### High-Polish Gasket Fittings for Stainless Steel Tubing



Fittings are polished to a32 Ra and under finish on the interior.

#### O-Ring Face Seal Fittings for Stainless Steel Tubing



The flat face of the fitting connects to a tube adapter so you can slide the tubing and fitting sideways to disconnect in cramped spaces. They are also known zero-clearance fittings.

[O-Ring Face Seal Tube Adapters for Stainless Steel Tubing](#)



[Quick-Turn Couplings for Stainless Steel Tubing](#)



Also known as luer lock couplings, these consist of a plug and socket that connect with a half turn. Use in low-pressure applications up to 30 psi.

[Claw-Clamp High-Vacuum Fittings for Stainless Steel Tubing](#)



An alternative to bolt-together fittings, these handle larger tube OD sizes and have higher vacuum ratings than quick-clamp fittings. Also known as ISO-K high-vacuum fittings, the clamps have claws that grab hold of fittings with flanged ends.

[Push-to-Connect Fittings for Stainless Steel-to-Plastic Tubing](#)



Connect stainless steel tubing on one end and plastic tubing on the other end.

[Push-to-Connect Fittings for Stainless Steel Tubing](#)



[Quick-Connect High-Vacuum Fittings for Stainless Steel Tubing](#)



Twist these fittings onto high-vacuum tubing to quickly make sealed, high-vacuum connections without the need for clamping, welding, or tools.

[Through-Wall Fittings for High-Vacuum Chambers](#)



Transfer liquids and gasses into high-vacuum chambers with these assembled fittings, also known as feedthroughs.

[Bolt-Together High-Vacuum Fittings for Stainless Steel Tubing](#)



For high-vacuum systems with tube sizes too large for quick-clamp (KF) fittings, choose these bolt-together fittings.

[Ultra-High-Vacuum Flanges and Fittings for Stainless Steel Tubing](#)



Create access points in ultra-high-vacuum lines or chambers by bolting two same-size flanges together with a copper gasket between them. The flanges' sharp edges dig into the copper gasket and form an extremely tight seal, which means they handle higher vacuum pressures than other high-vacuum fittings with rubber gaskets.

**Tube Fittings for Steel Tubing**

[37° Flared Fittings for Steel Tubing](#)



Also known as JIC (Joint Industrial Council) fittings, these provide a tight metal-to-metal seal on steel tubing that is flared to 37°.

#### Tight-Space 37° Flared Fittings for Steel Tubing



The external hex bolt on these fittings allows for easy installation in cramped spaces.

#### 30° Flared Fittings for Steel Tubing



Also known as JIS (Japanese Industrial Standard) fittings.

#### Compression Fittings for Steel Tubing



A single sleeve (ferrule) bites into tubing as you tighten the nut, creating a strong seal.

#### High-Pressure Compression Fittings for Steel Tubing



Thicker walls make these fittings—sometimes called flareless or bite fittings—withstand about twice as much pressure as standard compression fittings, so they're good for hydraulic power applications.

#### Vibration-Resistant Compression Fittings for Steel Tubing



#### Yor-Lok Fittings for Steel Tubing



These fittings have two sleeves for extra gripping power. They bite into steel tubing as you tighten the nut to form a strong seal.

#### O-Ring Face Seal Fittings for Steel Tubing



A tube adapter sits flush against the flat face of the fitting so you can slide the steel tubing and fitting sideways to disconnect in cramped spaces. Also known as zero-clearance fittings.

#### O-Ring Face Seal Tube Adapters for Steel Tubing



#### Vacuum Fittings for Steel Tubing



Use these fittings in an air vacuum system to avoid the hassle of brazing and welding. Insert two fittings into a clamp and tighten to form a secure seal in steel tubing.

## Tube Fittings for Aluminum Tubing

#### 37° Flared Fittings for Aluminum Tubing



Also known as JIC (Joint Industrial Council) fittings, these provide a tight seal on tubing that is flared to 37°.

#### Tight-Space 37° Flared Fittings for Aluminum Tubing



The external hex bolt on these fittings allows for easy installation in cramped spaces. They are also known as banjo-style fittings and JIC (Joint Industrial Council) fittings. They provide a tight seal on tubing that is flared to 37°.

## Tube Fittings for Nickel Alloy Tubing

### [Ultra-Corrosion-Resistant Yor-Lok Fittings for Nickel Alloy Tubing](#)



With the best corrosion resistance of any metal fitting we offer, these Hastelloy fittings will stand up to aggressive chemicals and are resistant to pitting and stress cracking. Also known as instrumentation fittings, they include a nut with two sleeves.

### [Acid-Resistant Yor-Lok Fittings for Nickel Alloy Tubing](#)



These Monel fittings have the corrosion resistance to handle hydrofluoric and sulfuric acid. Also known as instrumentation fittings, they include a nut with two sleeves.

## Sanitary Sampling Stainless Steel Tube Fittings

### [Sanitary Sampling Stainless Steel Tube Fittings](#)



Take samples in sanitary environments—these tube fittings won't contaminate your lines or force you to pause them.