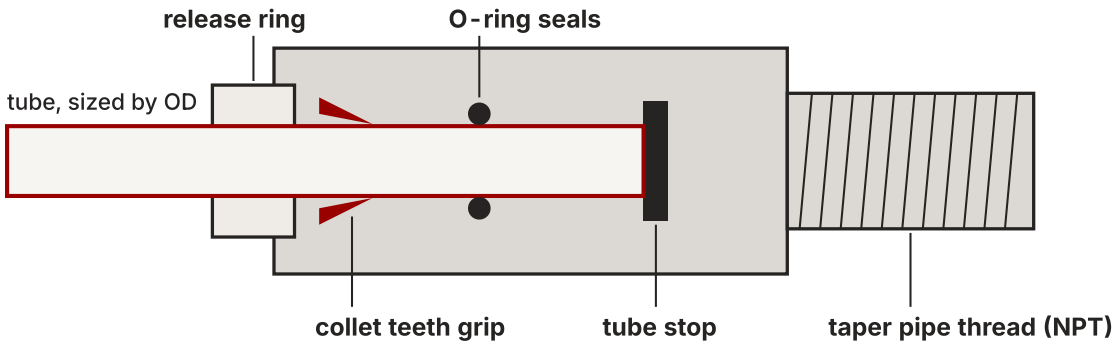
Push-to-Connect Fittings

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J & E Supply & FASTENER CO.

Push-to-connect (push-in) tube fittings: sized by tube OD, how to connect and release the tube, tube inserts, DOT air brake, and the pipe end threads.

A **push-to-connect** fitting holds a plain tube with a toothed collet and seals it with an O-ring — no nut, no flare, no tools. It is sized by the **outside diameter of the tube**, inch or metric. The tubes a fitting takes, how far the tube goes in and the ratings are in that maker's catalog. The threaded end of an adapter is a standard taper pipe thread — the table below, from our pipe thread chart.



How a push-to-connect fitting holds and seals the tube. Not to scale; the parts and their shapes vary by maker.

Good to know

Size by the tube OD. A push-to-connect fitting is sized by the **outside diameter of the tube** it takes — a 1/4″ fitting takes 1/4″ OD tube, a 6 mm fitting 6 mm OD tube. Measure across the outside of the tube. (Parker (catalog 3501E), Anderson Metals, John Guest)

To connect. Cut the tube end square. Push the tube in until it bottoms against the tube stop, then pull back on it to check it is held. (Parker (catalog 3501E), Anderson Metals, John Guest)

To release. Push the release ring (collet) toward the fitting body, hold it there and pull the tube out. (Parker (catalog 3501E), Anderson Metals, John Guest)

Soft tubing. Soft or thin-wall tubing can need a **tube insert** (tube support) inside the tube end — the maker says which tubes need one. (Parker (catalog 3501E), John Guest)

The pipe end. The threaded end of a push-to-connect adapter is a taper pipe thread (see the table below and the pipe thread chart). Many come with thread sealant already applied. (Parker (catalog 3501E), Anderson Metals)

Air brake (DOT). Push-to-connect fittings for vehicle air brake lines are covered by **SAE J2494** and are used with **SAE J844** nylon air brake tubing. Makers list their DOT push-to-connect fittings as meeting FMVSS 571.106. (SAE (J2494 titles), Parker (catalog 3501E), Anderson Metals)

Ratings come from the maker. Working pressure and temperature depend on the fitting, the tube used with it and the maker — use the maker's rating for that fitting and tube. (Parker (catalog 3501E), John Guest)

Push-to-connect pipe end threads — NPT (ASME B1.20.1)

PIPE SIZE	THREADS PER INCH	THREAD	PIPE OD
1/8″	27	1/8-27 NPT	0.405″
1/4″	18	1/4-18 NPT	0.540″
3/8″	18	3/8-18 NPT	0.675″
1/2″	14	1/2-14 NPT	0.840″
3/4″	14	3/4-14 NPT	1.050″

The male or female pipe end of the push-to-connect adapters we carry, from our NPT pipe thread chart (ASME B1.20.1). BSP and universal threads are different — give us a call.

Quick answers

How do you size a push-to-connect fitting?

By the **outside diameter of the tube** it takes: a 1/4″ push-to-connect fitting is for 1/4″ OD tube, a 6 mm fitting for 6 mm OD tube.

How do you install a push-to-connect fitting?

Cut the tube end square, push it in until it bottoms against the tube stop, then pull back on the tube to check it is held.

How do you release a push-to-connect fitting?

Push the release ring (collet) toward the fitting body, hold it there and pull the tube out.

What thread is on a push-to-connect male connector?

A taper pipe thread (NPT): 1/8″ is **1/8-27 NPT**, 1/4″ is **1/4-18 NPT**, 3/8″ is **3/8-18 NPT**, 1/2″ is **1/2-14 NPT**.

What standard covers DOT air brake push-to-connect fittings?

SAE J2494; they are used with SAE J844 nylon air brake tubing.

Do push-to-connect fittings need a tube insert?

Soft or thin-wall tubing can need a tube insert (tube support) — the fitting maker says which tubes need one.

Reference values drawn from the governing standards. For critical applications, confirm against the standard and the manufacturer's published data. Technical information disclaimer →