

EX-4 Expanding Tube Plug



Product Name:
EX-4 Expanding Tube Plug

Part Number:
Refer to Conco Standard Size Chart for EX-4
Expanding Tube Plugs

Application:
For temporary and/or permanent plugging of
condenser and heat exchanger tubes.

- Description:**
- Available for 5/8" O.D. through 1-1/4" O.D. tubes.
 - Two each single chloroprene cylinders, grade K2242-CF, ASTM-BC-412 at 45+/- shore(s) durometer hardness, expands to seal tube.
 - Equal size washers allow plug to be positioned in tube beyond flush of tubesheet. This allows for leak checking using varied type methods.
 - Tested under pressure and vibration to 150 psi and temperature to 200° F.

Storage Information:
Store in cool, dry area away from heat and sunlight. Can be kept in sealed plastic bags. Long, undeterminable shelf life.

Auxiliary Equipment Required:
Deep well socket wrench or open end box wrench.

Determination of Quantity:
Two per tube to be plugged (one for each end).

Ordering Information:

Contact	Conco Services Corporation 530 Jones St. Verona, PA 15147 USA
Toll free (US Only)	1-800-345-3476
Office	+1 412-828-1166
Fax	+1 412-826-8255
E-mail	info@conco.net

Example Order:

12	Type EX-4 Expanding Tube Plug 7/8" OD x 22 BWG Bronze Part No. X4B78
----	--

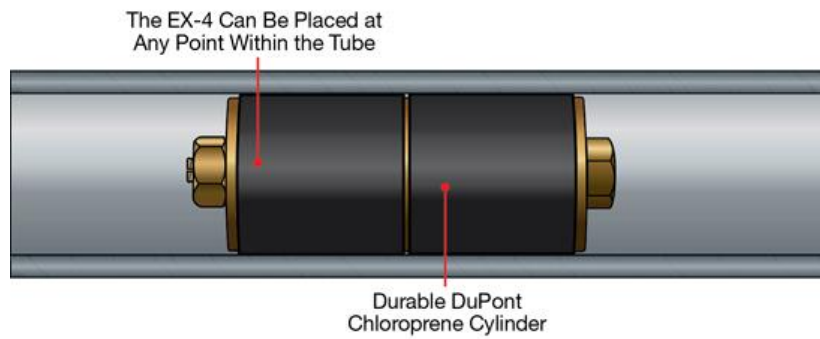
Availability:
1-2 weeks after receipt of order.

- Installation¹ Instructions:**
- Clean and wipe dry the tube end to be plugged.
 - Insert plug into tube beyond flush of tubesheet
 - Hand tighten nut finger tight, using open end of box wrench, turn nut 2-3 complete revolutions.
 - The end of the bolt is slotted. Use a screwdriver to hold the bolt in place while tightening the nut with a 1/2" (13 mm) box wrench. Tighten to desired torque.

¹See detailed EX-4 Installations on last page

**CONCO STANDARD SIZE CHART
WITH PART NUMBERS FOR EX-4 EXPANDING PLUGS**

O.D.	BWG	Brass	Bronze	Stainless	Titanium
5/8"	16	X4B58	X4Z58	X4Q58	X4T58
3/4"	16	X4B34	X4Z34	X4Q34	X4T34
7/8"	16	X4B78	X4Z78	X4Q78	X4T78
1"	16	X4B11	X4Z11	X4Q11	X4T11
1-1/8"	16	X4B98	X4Z98	X4Q98	X4T98
1-1/4"	16	X4B54	X4Z54	X4Q54	X4T54





Installation steps for Conco EX-4 (expanding) tube plugs

Make sure the tube is clean and dry before attempting to install the plug.

If the tube is dirty, use a bottle brush or a piece of scouring pad to remove the fouling, and then dry the tube. If there is residual water lying in the tube, use a piece of paper towel, foam rubber or rag to “dam up” the water before trying to dry the tube ID. Leaving the piece of paper towel, foam rubber or rag in the tube will not cause any future problems. Once the end of the tube is clean and dry, you are ready to proceed to the next step.

Tighten the nut, to manually expand the plug, until the plug fits snugly in the tube.

A snug fit means that the plug needs to be pushed into the tube because it's now slightly larger than the tube. A 7/16” box wrench will help tighten the nut. To determine whether you have expanded the plug enough, try sticking the first section into the tube... if the plug slides in easily, expand it some more. It is important to make sure the plug (EX4 only) fits snugly into the tube to keep it from being sucked down into the tube by the vacuum leak and to prevent the plug from turning in the tube during the final tightening step.

Push the plug into the tube until the end of the bolt is even with the end of the tube or slightly past the end (outlet end).

If the plug has been sufficiently expanded, it should almost be a tight fit and require some effort to push it into the tube. If it goes in too easily, continue to expand the plug until you have that snug fit.

Using a 7/16” socket, tighten the nut using three complete revolutions (turns) of the wrench, but Do Not Tighten Past This Point! You will be able to “feel” the plug tighten up. In this case, more is not better! If the plug turns in the tube, then remove it and go back to step one. If the tube is clean and dry, the rubber seals will “bite” into the tube and the tightening process will be easily accomplished. Three turns of the wrench is all that will be needed for the plug to be correctly installed. If the plug still turns in the tube... verify that you are using the correct size plug for that tube.

Summary – clean and dry is the single most important step in the whole installation process. Expand the tube until it is snug when you push it into the tube. Push the plug in until it is just past the end of the tube and tighten with 3 turns of a 7/16” wrench.

**Double nutting can be done to further insure that the plugs stay tight in the tubes, but it is not required. Simply install a second brass, stainless or titanium nut and tighten... do not over-tighten. If the plug does not “feel” tight, remove it and start over.