



Note – This installation guide covers the general installation practices for APOLLOXPRESS® fittings and valves in applications listed within. It is the sole responsibility of the installing professional to insure installation meets local code requirement. Failure to observe installation instructions may result in substandard performance.

APOLLOXPRESS

YOUR SINGLE SOURCE SOLUTION FOR PRESS TECHNOLOGY

Installation Guide &
Pressing Instructions

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INSTALLATION GUIDE & PRESSING INSTRUCTIONS

Description / Approvals

APOLLOXPRESS

SYSTEM DESCRIPTION

Small Diameter Fittings ½" - 2"

APOLLOXPRESS® small diameter fittings are made from naturally lead free copper or lead free brass in the USA. EPDM O-rings are pre-installed and lubricated with ANSI/NSF 61 listed silicone oil.

Large Diameter Fittings

APOLLOXPRESS® large diameter fittings are made from naturally lead free copper in the USA. They also contain a one-piece 360 degree solid stainless steel grip ring and EPDM O-rings pre-installed and lubricated with ANSI/NSF 61 listed silicone oil.

Valves

APOLLOXPRESS® valves are offered in lead free and non-lead free brass and bronze materials. They contain pre-installed EPDM O-rings treated with a silicone-free NSF 61 listed lubricant.

EPDM Sealing Element

Ethylene-Propylene Diene Monomer or EPDM is black and shiny in appearance and has an operating temperature range of 0°F-250°F. When properly installed the EPDM seal will last as long as the copper pipe with which it is joined.

System Benefits

APOLLOXPRESS® connections are heat and flame free, contain Leak Before Press® functionality and offer a clean and professional look.

Applications

APOLLOXPRESS® fittings are ideal for commercial and residential applications and feature an EPDM sealing element making APOLLOXPRESS® the ideal solution for;

- Hot and cold potable water – 200psi at 250°F pressure rating
- Hydronic heating – a water mixture of ethylene, propylene, butylene and glycol up to 100% concentration
- Chilled water
- Compressed air – Clean, dry and oil free filtered air
- Low pressure steam, 15 psi maximum
- Vacuum
- Gray water
- Other chemicals compatible with EPDM. Please contact Elkhart Products product engineering for evaluation and approval.

LISTINGS, APPROVALS AND CODES

Fittings

- IAPMO listed to NSF 61, NSF 372, IAPMO PS-117 and CSA TIL-MSE-13 standards
- Compliant with the following plumbing codes
 - ICC International Plumbing Code
 - UPC Uniform Plumbing Code
 - National Standard Plumbing Code
- Compliant with the following State and local requirements
 - Massachusetts Commonwealth of Massachusetts Product Approval Number P1-1205-57
 - Illinois Department of Public Health, Plumbing Code Advisory Council
 - Kentucky Commonwealth of Kentucky, Office of Housing, Buildings and Construction
 - Minnesota Plumbing Code Advisory Council
 - Wisconsin Safety and Buildings Division
 - State of Michigan
 - Miami/Dade County Public School District
 - City of Los Angeles, California – General Approval RR# 5630
 - Ford Motor Company
- For the most up-to-date listing certificate please visit the IAPMO and NSF websites.
- For listings, approvals and code compliances not listed here please contact Elkhart Products product engineering for further information.

Valves

APOLLOXPRESS® valves have been designed to meet the most rigorous industry standards. Depending upon the product, numerous approvals are available including NSF 61, NSF 372, CSA, ASSE and USC. See individual product submittal sheets for specific approvals.

For additional information, submittal sheets and manuals, visit www.apollovalves.com

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APOLLO VALVES Customer Service (704) 841-6000



INSTALLATION GUIDE & PRESSING INSTRUCTIONS

General Installation Instructions

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Handling

APOLLOXPRESS® fittings and valves should remain in their packaging immediately prior to installation. This ensures the fitting remains un-damaged and clean from on-site debris. Unused fittings should be kept in the original packaging with any openings sealed to ensure fitting cleanliness is maintained. Components should be free from dirt, debris and grime that may interfere with the sealing EPDM O-ring.

APOLLOXPRESS® copper, brass and bronze fittings and valves may be used with ½" – 1 ¼" soft copper tube and ½" – 4" and hard copper tube, type K, L and M and complies with ASTM B88 standards. Installing contractor shall be sure tube surface is free of imperfections and stamped print strings that will interfere with the sealing of the EPDM O-ring.

Underground Installations

When permitted by state and local codes APOLLOXPRESS® fittings are approved for use in underground installations. When buried in an area with corrosive soil conditions the fitting must be protected.

Expansion

Thermal expansion and contraction of installed joints can cause undue stress. Installing contractors shall compensate for thermal expansion and contraction with expansion joints or mechanical expansion compensator may be used to reduce or remove these stresses.

Freezing Conditions

APOLLOXPRESS® fittings and valves may be installed in ambient temperatures down to 0°F. Installed tubing systems exposed to freezing conditions must be protected per state and local code requirements and good installation practice.

Tube Hangers and Supports

APOLLOXPRESS® tube hangers and supports do not require special consideration. Tube hangers and supports should be made of a material suitable for copper tube and conform to local code requirements. Care should be taken to insure piping system is isolated from shock and vibration.

Re-Pressing a Pressed Fitting

If a fitting is required to be re-pressed, reposition the crimping tool 90 degrees from the previous pressed position, then re-press.

System Sizing

APOLLOXPRESS® systems should be sized and designed in accordance with standard wrought copper fitting systems. The deformation caused by the press joint is not a proven source of turbulence. Properly sized and installed systems with the proper design flow velocities will minimize the risk of erosion corrosion.

Electrical Bonding

The mechanical press formed provides a continuous metal-to-metal contact between the fitting and the pipe. When properly installation APOLLOXPRESS® fittings and valves comply with section 1211.15 - Electrical Bonding and Grounding, of the Uniform Plumbing Code.

Material Compatibility

APOLLOXPRESS® fittings and valves shall not come in contact with chemicals or solvents that may compromise the integrity of the EPDM sealing element before or after installation. Chemicals and solvents include household cleaning products, oil based paints, non-EPC approved lubricants, flux, mineral oils, adhesives, ammonia and nitrates.

Pressure Testing

Installed systems should be pressure tested in accordance with local code requirements. With Leak Before Press® functionally, un-pressed APOLLOXPRESS® joints will be easily identified. When local code requirements do not exist or refer to the manufacturer, please pressure test as follows;

Water – Recommend pressure testing between 15-85psi

Air – Recommend between ½ - 45psi but as high as 200psi is acceptable if required by project specification or local code.

For safety reasons we recommend on initial pressure test no higher than 25psi. A low pressure test will safely identify any un-pressed joints.

Fittings and valves may not pass a pressure test for one of the following reasons;

- The joint was never pressed → press fitting following our instruction
- The tube was not fully inserted → replace
- The jaw, sling, ring, chain was not properly aligned → replace
- The joint may have rotated → re-press; rotate jaw, sling, ring, chain 90 degrees from 1st press preferred but not necessary.



INSTALLATION GUIDE & PRESSING INSTRUCTIONS

Minimum Spacing

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Between APOLLOXPRESS® Joints

To prevent distortion of the pipe, fittings require a minimum distance between fittings (refer to chart below). Failure to provide this distance may result in an improper seal.

Fitting Size	Minimum Spacing	Fitting Size	Minimum Spacing
½"	0"	2"	¾"
¾"	0"	2 ½"	⅝"
1"	0"	3"	⅝"
1 ¼"	½"	4"	⅝"
1 ½"	⅝"		

Between an APOLLOXPRESS® Joint and Existing Solder Joint

The minimum distance when making an APOLLOXPRESS® joint near a solder joint is in the table below. No residual solder, flux, or debris should be on the tubing.

Tube Dia.	Minimum Distance	Tube Dia.	Minimum Distance
½"	1 ½"	2"	6"
¾"	2 ¼"	2 ½"	7 ½"
1"	3"	3"	9"
1 ¼"	3 ¾"	4"	12"
1 ½"	4 ½"		

Between an APOLLOXPRESS® Joint and Existing Brazed Joint

The minimum distance when making an APOLLOXPRESS® joint near a brazed joint is 2 pipe diameters of the tube being pressed.

Tube Dia.	Minimum Distance	Tube Dia.	Minimum Distance
½"	1"	2"	4"
¾"	1½"	2 ½"	5"
1"	2"	3"	6"
1 ¼"	2½"	4"	8"
1 ½"	3"		

When Soldering near an APOLLOXPRESS® Joint

Minimum distance is found in the table below. The installer shall take proper precautions to protect and keep cool the APOLLOXPRESS® joint using one of the following methods.

- Wrap joint in a cold wet rag.
- Use a spray type spot freezing product. The product should NOT come into contact with the joint.
- Prefabricate the solder connection, waiting for it to cool and then make the press connection.

Tube Dia.	Minimum Distance	Tube Dia.	Minimum Distance
½"	1 ½"	2"	6"
¾"	2 ¼"	2 ½"	7 ½"
1"	3"	3"	9"
1 ¼"	3 ¾"	4"	12"
1 ½"	4 ½"		

When Brazing near an APOLLOXPRESS® Joint

Stay at least 12 inches away from the pressed connection. The installer shall take proper precautions to protect and keep cool the APOLLOXPRESS® joint using one of the following methods.

- Wrap joint in a cold wet rag.
- Use a spray type spot freezing product. The product should NOT come into contact with the joint.
- Prefabricate the brazed connection, waiting for it to cool and then make the press connection.

For additional information, submittal sheets and manuals, visit www.apollovalves.com



INSTALLATION GUIDE & PRESSING INSTRUCTIONS

APOLLOXPRESS

TOOLS

APOLLOXPRESS® products are tested and approved for use with multiple tool manufacturers. Please see our "Jaw Compatibility" on page 65 for specific approvals. Like other tools and equipment pressing tools and their accessories require servicing. Please follow tool manufacturer instruction.

Pressing Instructions



1

Cut the tube square using a rotary tube cutter or fine toothed steel saw.



2

Remove internal and external burrs at tube ends using fine tooth file or commercially available de-burring tools.

3

Inspect fitting or valve to insure bead O-ring is present, un-damaged and free from dirt and debris.



WARNING:

It is the responsibility of the end-user to follow all instructions for installing APOLLOXPRESS® press fittings. Failure to follow these instructions and safe plumbing practices may result in extensive property damage, serious injury or death.

4



Mark insertion depth by inserting tube into the fitting or valve with twisting motion until it meets tube stop OR tape measure and insertion depth chart.

Nominal Pipe Size	Insertion Depth (in)
1/2"	3/4" (0.75")
3/4"	15/16" (0.94")
1"	15/16" (0.94")
1 1/4"	1-1/16" (1.06")
1 1/2"	1-7/16" (1.44")
2"	1-9/16" (1.56")
2 1/2"	1-7/8" (1.9")
3"	2-1/8" (2.1")
4"	2-1/2" (2.5")

APOLLOXPRESS INSTALLATION VIDEO



SCAN QR CODE BELOW TO



WATCH INSTALLATION VIDEO

For additional information, submittal sheets and manuals, visit www.elkhartproducts.com



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ELKHART PRODUCTS CORPORATION Customer Service (574) 264-3181

Jaw Pressing Instructions Typically for 1/2" Through 2" Sizes



1

Insert the tube into the fitting or valve with twisting motion until it meets tube stop AND insertion depth mark. Wetting the tube, fitting or valve with clean water may reduce insertion force.



2

Using approved press tool and jaw of the correct size, open the jaw and place over the bead of the fitting or valve at a 90 degree angle to the tube centerline.



3

Press. Please refer to the specific tool manufacturer instruction.

Ring, Sling, Chain Pressing Instructions Typically for 2 1/2" Through 4" Sizes



1

Insert the tube into the fitting or valve with twisting motion until it meets tube stop AND insertion depth mark. Wetting the tube, fitting or valve with clean water may reduce insertion force.



2

Using approved press tool and ring, sling, chain of the correct size, open the ring, sling or chain and place over the bead of the fitting or valve at a 90 degree angle to the tube centerline.



3

Press. Please refer to the specific tool manufacturer instruction.

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