



ZOOMLOCK® PUSH

Push-to-Connect Refrigerant Fittings

Catalog K-2, Engineering Submittal, January 2025



ZOOMLOCK PUSH

Push-to-Connect Refrigerant Fittings

Table of Contents

Introduction	4
Push-to-Connect Refrigerant Fittings	
Couplings	6
Elbows	7
SAE Flares	8
Installation Parts and Accessories	9
Push-to-Connect Ball Valves, Type PZKP-BV	10
Installation of Fitting	11
Removal of Fitting	12
Terms of Sale with Warranty Limitations	13



ATTENTION!

WARRANTY COULD BE VOID IF
ZOOMLOCK PUSH IS NOT APPLIED
PER INSTRUCTIONS! CAREFULLY
READ ALL INSTALLATION
INSTRUCTIONS (SEE PAGE 11)
AND WATCH VIDEOS.



ZoomLockPUSH.com

Compatible Components

To make a system convenient to install,
ODM x ODM ZoomLock compatible
components are available including:

- Ball Valves
- Moisture and Liquid Indicators
- Solenoid Valves
- Filter-Driers



If you have questions about the
products contained in this catalog,
or their applications, please contact:

Parker Sporlan Division

phone 636 239 1111

www.zoomlockpush.com

Extra care is taken in the preparation
of this literature, but Parker is not
responsible for any inadvertent
typographical errors or omissions.
Information in this catalog is only
accurate as of the date of publication.
For a more current information base,
please consult the division web site at
discover.parker.com/sporlanliterature.

ZOOMLOCK PUSH

Push-to-Connect Refrigerant Fittings

PARKER SAFETY GUIDE FOR SELECTING AND USING ZOOMLOCK FITTINGS AND RELATED ACCESSORIES



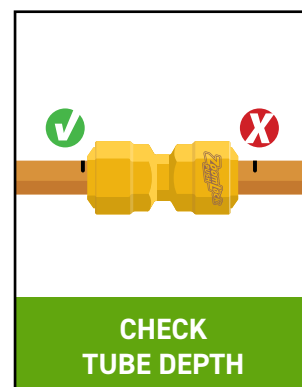
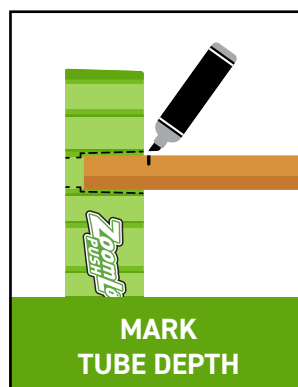
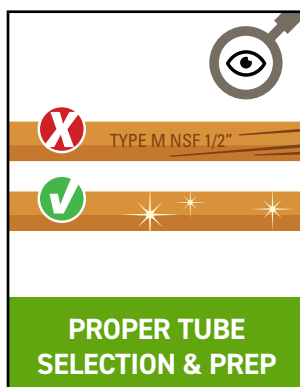
WARNING

FAILURE TO FOLLOW INSTALLATION INSTRUCTIONS, IMPROPER SELECTION OR IMPROPER USE OF ZOOMLOCK FITTINGS AND RELATED ACCESSORIES (“PRODUCTS”) CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE. POSSIBLE CONSEQUENCES OF FAILURE, IMPROPER SELECTION OR IMPROPER USE OF THESE PRODUCTS INCLUDE BUT ARE NOT LIMITED TO:

- Fittings thrown off at high speed.
- High velocity fluid discharge.
- Explosion or burning of the conveyed fluid.
- Electrocutation from high voltage electric power lines.
- Contact with suddenly moving or falling objects that are controlled by the conveyed fluid.
- Injections by high-pressure fluid discharge.
- Dangerously whipping copper line.
- Contact with conveyed fluids that may be hot, cold, toxic or otherwise injurious.
- Sparking or explosion caused by static electricity buildup or other sources of electricity.
- Sparking or explosion from flammable liquids.

BEFORE SELECTING OR USING ANY OF THESE PRODUCTS, IT IS IMPORTANT THAT YOU READ AND FOLLOW THE INSTALLATION INSTRUCTIONS.

KEY STEPS FOR SAFETY



WARNING

Failure or improper selection or improper use of the products described herein or related items can cause death, personal injury and property damage.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.

The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.

To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

For safety information see the Safety Guide at www.parker.com/safety or call 1-800-CParker.

OFFER OF SALE

The items described in this document are hereby offered for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated in the detailed “Offer of Sale” that you can refer to at : **US:** www.parker.com/salesterms **International:** www.parker.com/termsandconditions
Catalog K-2, January 2025 supersedes Catalog K-2, June 2022 and all prior publications.



Connect Copper with a Simple PUSH!



PUSH-TO-CONNECT REFRIGERANT FITTINGS

HVAC/R pros know that time is money. ZoomLock® PUSH push-to-connect refrigerant fittings allow contractors to successfully make clean, leak-free



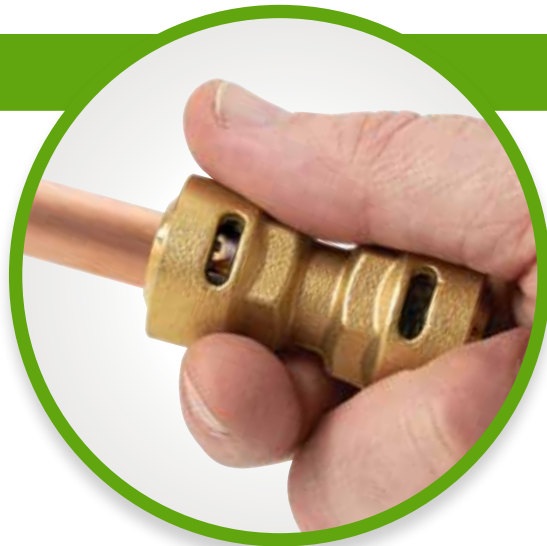
connections on HVAC/R systems in seconds, without the use of a brazing torch or press tool and jaw.

ZoomLock PUSH fittings eliminate brazing, flames, fire spotters, and the risks associated with installation of traditional HVAC/R fittings.

ZoomLock PUSH fittings offer a way for contractors to connect refrigerant lines in seconds, boosting efficiency while providing the safety and reliability you expect from Parker.

The ZoomLock PUSH Advantage

- No press tool or jaws needed
- Fast and easy install
- Cleaner system installs
- Secure, leak-free connections
- Safer conditions, no fire hazards
- No hot-work permits
- No need to nitrogen-purge
- Flexible access to job sites



ZOOMLOCK PUSH

Push-to-Connect Refrigerant Fittings



Applications

- » High Pressure HVAC/R

Product Parameters

- » **Continuous Operating Temperature:**
250°F / 121°C
- » **O-Ring Temperature Rating:**
-40°F to +300°F
-40°C to +149°C
- » **Maximum Rated Pressure (MRP):**
870 psig / 60 bar
- » **Minimum Burst Pressure (UL 207):**
4,355 psig / 300 bar
- » **Vacuum Pressure Capability:**
200 Microns
- » **External Leak Rate:**
<0.1 Ounces of Helium per Year at Operating Pressure Range
- » **Vibration Resistance:**
Conforms to UL109
- » **Size Availability (Inches):**
1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1-1/8

Fitting Materials

- » **Fitting Body:**
Brass
- » **O-Ring:**
Optimized: HNBR
Removable: Chloroprene

Compatibility

- » **Approved Lubricants:** POE, PVE
- » **Approved Tubing Materials:**
Copper to Copper Connections
- » **Approved Tubing Tolerance:**
ASTM B280, UNI EN 12735
- » **Approved Copper Tubing Types:**
Hard Copper (Drawn)
1/4" – 1-1/8" Type ACR, M, L, K
Soft Copper (Annealed)
1/4" – 7/8" Type ACR, L, K

Agency Approvals and Certifications

- » UL 207 - File SA7511
- » ASHRAE-15, ANSI 15, ASME B31.5, ANSI 31.5

Fitting Warranty

- » **Optimized** - 10 years
 - » **Removable** - 5 years
- ### Approved Refrigerants

Refrigerant	Optimized Fittings	Removable Fittings
R22	--	✓
R32	✓	✓
R134a	✓	✓
R290	✓	✓
R404A	✓	✓
R407A	✓	✓
R407C	✓	✓
R407F	✓	✓
R410A	✓	✓
R448A	✓	✓
R449A	✓	✓
R454B	✓	✓
R500	✓	✓
R507	✓	✓
R600a	✓	✓

Refer to ZoomLockPUSH.com for the latest approved refrigerants list.

ZOOMLOCK PUSH

Push-to-Connect Refrigerant Fittings

COUPLINGS

OPTIMIZED



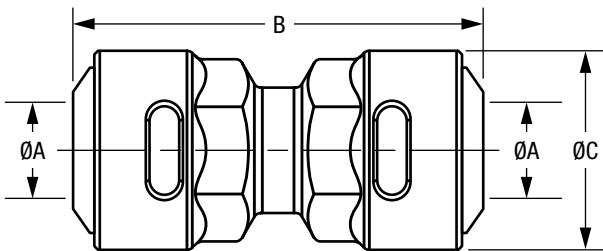
REMOVABLE



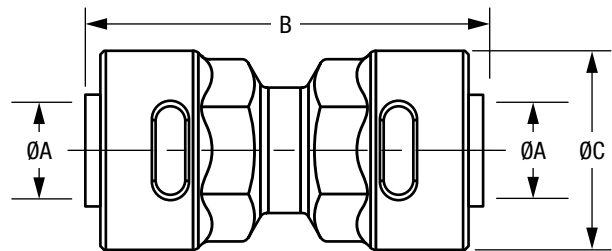
Size (Inches)	Part Number	Description	Dimensions					
			A		B		C	
			Inch	mm	Inch	mm	Inch	mm
1/4	777100	PZKP-C4-HNBR	0.26	6.65	1.89	48	0.79	20
3/8	777101	PZKP-C6-HNBR	0.38	9.70	1.97	50	0.95	24
1/2	777102	PZKP-C8-HNBR	0.51	13.0	2.13	54	1.06	27
5/8	777103	PZKP-C10-HNBR	0.64	16.2	2.24	57	1.18	30
3/4	777104	PZKP-C12-HNBR	0.76	19.3	2.58	65.5	1.46	37
7/8	777105	PZKP-C14-HNBR	0.89	22.5	2.62	66.5	1.57	40
1-1/8	777156	PZKP-C18-HNBR	1.14	29.0	2.95	75	1.89	48

Size (Inches)	Part Number	Description	Dimensions					
			A		B		C	
			Inch	mm	Inch	mm	Inch	mm
1/4	777133	PZKPR-C4	0.26	6.65	1.89	48	0.79	20
3/8	777134	PZKPR-C6	0.38	9.70	1.97	50	0.95	24
1/2	777135	PZKPR-C8	0.51	13.0	2.13	54	1.06	27
5/8	777136	PZKPR-C10	0.64	16.2	2.24	57	1.18	30
3/4	777137	PZKPR-C12	0.77	19.5	2.58	65.5	1.46	37
7/8	777138	PZKPR-C14	0.89	22.6	2.62	66.5	1.57	40
1-1/8	777157	PZKPR-C18	1.14	29.0	2.95	75	1.89	48

Dimensions



Dimensions



ZOOMLOCK PUSH

Push-to-Connect Refrigerant Fittings

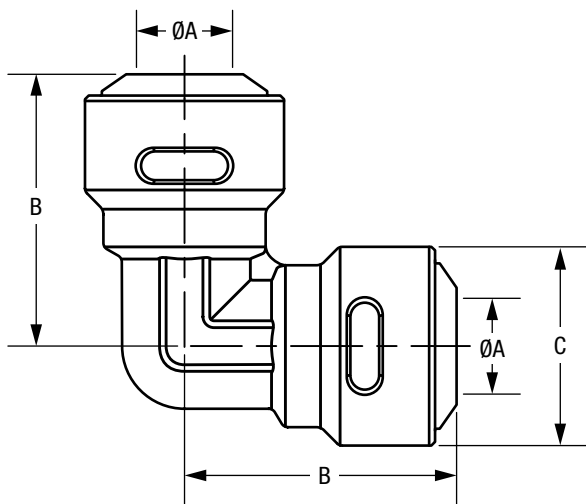
ELBOWS - 90 degree

OPTIMIZED



Size (Inches)	Part Number	Description	Dimensions					
			A		B		C	
			Inch	mm	Inch	mm	Inch	mm
1/4	777110	PZKP-90E4-HNBR	0.26	6.65	1.16	29.5	0.79	20
3/8	777111	PZKP-90E6-HNBR	0.38	9.70	1.26	32	0.95	24
1/2	777112	PZKP-90E8-HNBR	0.51	13.0	1.42	36	1.06	27
5/8	777113	PZKP-90E10-HNBR	0.64	16.2	1.54	39	1.18	30
3/4	777114	PZKP-90E12-HNBR	0.76	19.3	1.73	44	1.46	37
7/8	777115	PZKP-90E14-HNBR	0.89	22.5	1.77	45	1.57	40
1-1/8	777158	PZKP-90E18-HNBR	1.14	29.0	2.11	75	1.89	48

Dimensions

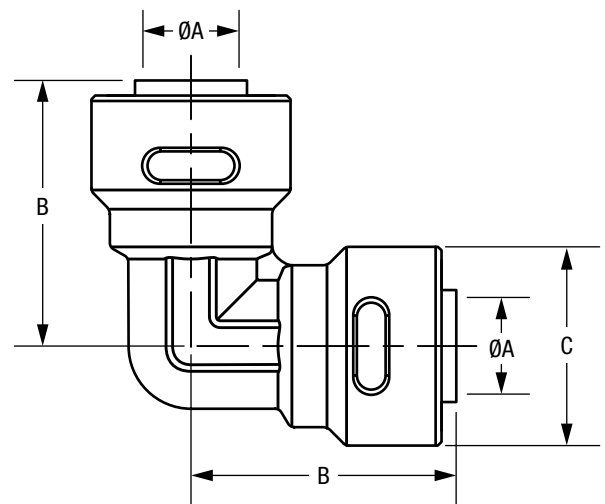


REMOVABLE



Size (Inches)	Part Number	Description	Dimensions					
			A		B		C	
			Inch	mm	Inch	mm	Inch	mm
1/4	777143	PZKPR-90E4	0.26	6.65	1.16	29.5	0.79	20
3/8	777144	PZKPR-90E6	0.38	9.70	1.26	32	0.95	24
1/2	777145	PZKPR-90E8	0.51	13.0	1.42	36	1.06	27
5/8	777146	PZKPR-90E10	0.64	16.2	1.54	39	1.18	30
3/4	777147	PZKPR-90E12	0.77	19.5	1.73	44	1.46	37
7/8	777148	PZKPR-90E14	0.89	22.6	1.77	45	1.57	40
1-1/8	777159	PZKPR-90E18	1.14	29.0	2.11	75	1.89	48

Dimensions



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Push-to-Connect Refrigerant Fittings

SAE FLARE ADAPTERS

OPTIMIZED



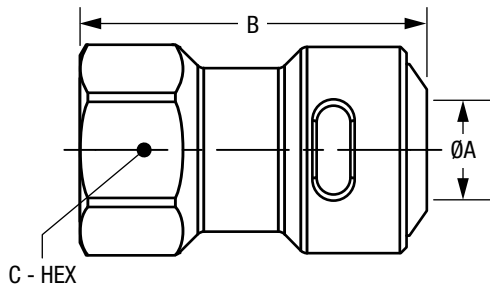
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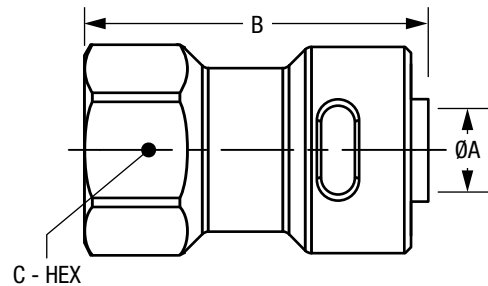
Size (Inches)	Part Number	Description	Dimensions						
			A		B		C		SAE Threads (UNF)
			Inch	mm	Inch	mm	Inch	mm	
1/4	777106	PZKP-F4-HNBR	0.26	6.65	1.52	38.5	0.67	17	7/16-20
3/8	777107	PZKP-F6-HNBR	0.38	9.70	1.63	41.5	0.87	22	5/8-18
1/2	777108	PZKP-F8-HNBR	0.51	13.0	1.83	46.5	0.95	24	3/4-16
5/8	777109	PZKP-F10-HNBR	0.64	16.2	2.09	53	1.06	27	7/8-14

Size (Inches)	Part Number	Description	Dimensions						
			A		B		C		SAE Threads (UNF)
			Inch	mm	Inch	mm	Inch	mm	
1/4	777139	PZKPR-F4	0.26	6.65	1.52	38.5	0.67	17	7/16-20
3/8	777140	PZKPR-F6	0.38	9.70	1.63	41.5	0.87	22	5/8-18
1/2	777141	PZKPR-F8	0.51	13.0	1.83	46.5	0.95	24	3/4-16
5/8	777142	PZKPR-F10	0.64	16.2	2.09	53	1.06	27	7/8-14

Dimensions



Dimensions



ZOOMLOCK PUSH

Push-to-Connect Refrigerant Fittings

BALL VALVES

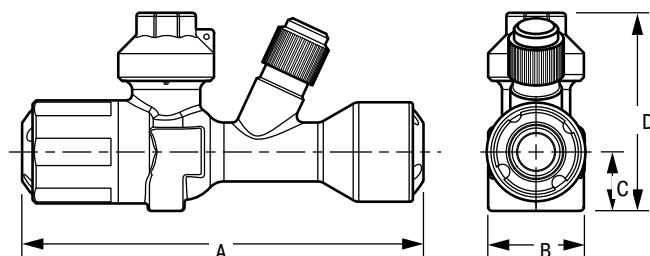
OPTIMIZED

The Type **PZKP-BV** ball valve has forged brass body construction with integrated ZoomLock PUSH connections and an access fitting.

- » Factory tested to ensure positive, leak-free performance.
- » Full size ports for unrestricted flow on all sizes – 1/4" through 7/8".
- » Dual Teflon seals surround the polished, brass ball to prevent leakage. Stem seal and stem washer provide the primary stem seal. Bottom load stem for safety.
- » Stainless steel stop plate ensures fully open to fully closed with a 1/4 turn.
- » Ball internal relief port design ensures positive shut-off in either flow direction, even during system evacuation.
- » All PZKP-BV ball valves are bi-directional and may be installed in any position.
- » Continuous temperature range: -40°F to +248°F (-40°C to +120°C)
- » Installation temperature (15 minutes max) limit: 300°F (149°C)
- » Design working pressure: 870 psig (60 bar)
- » U.L. Listed File No. SA5460
- » Date code stamped into valve body YYMMDD.
- » See page 5 for approved refrigerants list.



Dimensions



Charge port flare thread: 1/2-20UNF

Size (Inches)	Part Number	Description (With Access Port)	Dimensions							
			A		B		C		D	
			Inch	mm	Inch	mm	Inch	mm	Inch	mm
1/4	777170	PZKP-BV4-HNBR	3.74	95	1.02	26	0.63	16	2.17	55
3/8	777171	PZKP-BV6-HNBR	3.97	101	1.02	26	0.63	16	2.17	55
1/2	777172	PZKP-BV8-HNBR	4.21	107	1.02	26	0.63	16	2.17	55
5/8	777173	PZKP-BV10-HNBR	4.17	106	1.10	28	0.75	19	2.36	60
3/4	777174	PZKP-BV12-HNBR	4.61	117	1.10	28	0.75	19	2.36	60
7/8	777175	PZKP-BV14-HNBR	5.00	127	1.61	41	0.83	21	2.64	67

ZOOMLOCK PUSH

Push-to-Connect Refrigerant Fittings

INSTALLATION PARTS and ACCESSORIES



Installation Kit

3 piece ZoomLock PUSH installation kit includes depth gauge for use with 1/4" through 7/8" size fittings, permanent marker, and Scotch-Brite® general purpose hand pad. Tubing cutter and deburring tool sold separately.

- » **Description:** PZKP-IK
- » **Part Number:** 777091

Removal Tools

Removal tools for 1/4" - 7/8" sizes of ZoomLock PUSH removable fittings.

- » **Description:** PZKPR-RT
- » **Part Number:** 777090

1-1/8" Depth Gauge

Plastic depth gauge confirms the proper insertion depth of the tubing. For use with 1-1/8" size fittings only.

- » **Description:** PZKP-DG18
- » **Part Number:** 777180

INSTALLATION OF FITTING

EQUIVALENT LENGTH*

Table 1		
Tube Diameter	Equivalent Length	
	Feet	cm
1/4"	1.4	42.7
3/8"	1.4	42.7
1/2"	1.6	48.8
5/8"	1.8	54.9
3/4"	2.0	61.0
7/8"	2.3	70.1
1-1/8"	2.6	79.2

ZoomLock PUSH elbows have an internal profile such that the pressure drop is less than a standard ACR short radius elbow ($R/D = 1$), but more than a standard ACR long radius elbow ($R/D = 1.5$).

For installations where pressure drop is of particular concern, use the standard equivalent length for a short radius elbow for a conservative calculation (reference table 1).

* ASHRAE Handbook Refrigeration, Chapter 1, 2018, American Society of Heating, Refrigerating, and Air-Conditioning Engineers, www.ashrae.org

INSERTION DEPTHS

For both Optimized and Removable Fittings

Table 2

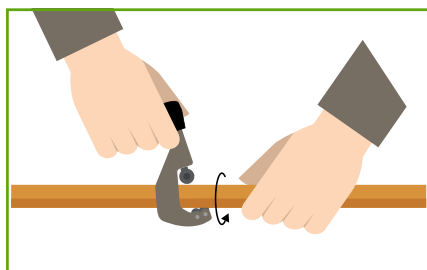
Tube Diameter	Insertion Depth	
	Inches	mm
1/4"	0.87	22.1
3/8"	0.91	23.1
1/2"	0.99	25.1
5/8"	1.06	26.9
3/4"	1.19	30.2
7/8"	1.25	31.8
1-1/8"	1.41	35.8

ZOOMLOCK PUSH

Push-to-Connect Refrigerant Fittings

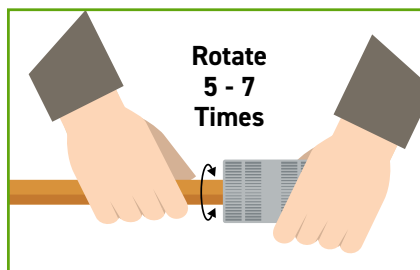
INSTALLATION OF FITTING (Continued)

⚠ CAUTION: Do not insert fingers in to the grip ring inside the fitting. Immediate emergency medical attention may be required for removal.



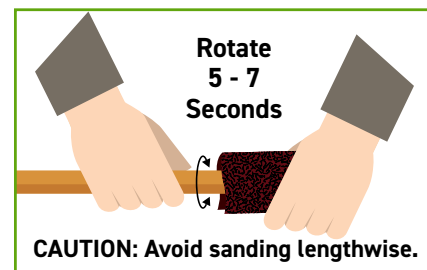
STEP 1 - CUT COPPER TUBE

Cut copper tube using a commercially available tube cutter. Verify tube cutter is properly maintained and wheel is sharp. **DO NOT** use any type of saw as this creates a sharp surface that will cut the o-ring.



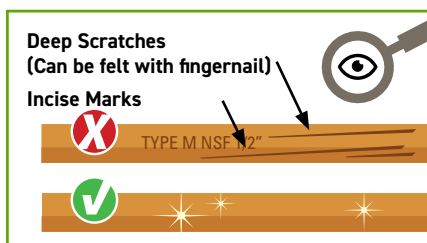
STEP 2 - DEBURR

ALL tubing MUST have the outer diameter deburred prior to ZoomLock PUSH fitting installation. Rotate tool back-and-forth 5 - 7 times to remove all sharp edges and burrs. **Perform this step BEFORE sanding.**



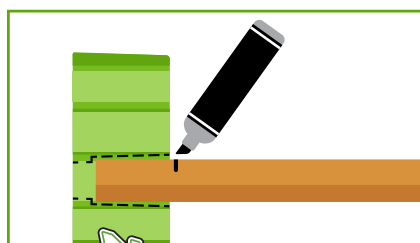
STEP 3 - SAND and CLEAN

ALL tubing must be SANDED and CLEANED. Use a general purpose hand pad or sand cloth. **SAND tube in RADIAL DIRECTION** as shown with arrows for 5 - 7 seconds or 10 - 14 times back-and-forth. Remove residual debris from tube end.



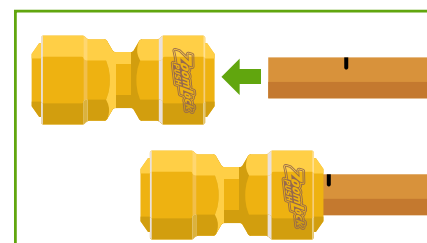
STEP 4 - INSPECT TUBE

INSPECT copper tube AFTER sanding. Assure there are **NO VISIBLE SCRATCHES, INCISE MARKS, TUBE DEFECTS OR TUBE OUT OF ROUND.** Area of importance is within 1½ inches from tube end. If scratches are present, cut off affected areas and repeat Steps 2 and 3 or sand thoroughly to remove.



STEP 5 - MARK DEPTH

Using the depth gauge (provided in the ZoomLock PUSH Installation Kit, P/N 777091) or Table 2 Insertion Depths, to determine the correct insertion depth. Mark the tubing with a permanent marker to indicate proper insertion depth on every tube.

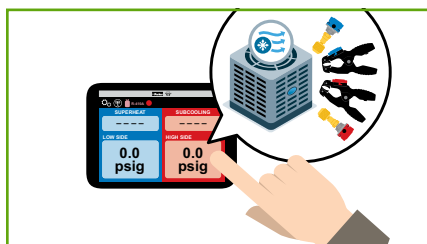


STEP 6 - PUSH INTO FITTING

Push the tube into the fitting. Use the mark to assure insertion depth and secure fit.

REMOVAL OF FITTING (Removable Fittings Only)

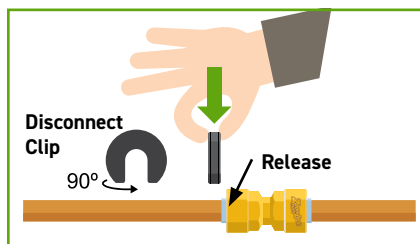
⚠ CAUTION: Removal of fittings while system is under pressure can result in serious injury.



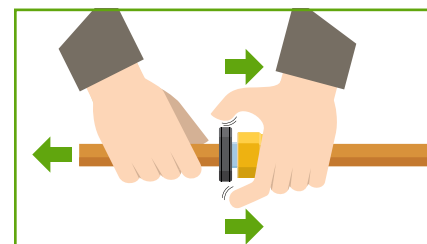
STEP 1 - ISOLATE OR REMOVE SYSTEM CHARGE

NOTE:

- ZoomLock PUSH Removable fittings are not designed for repeated reinstallations. Observing the removal instructions above, the fittings can be removed.
- Care should be taken when connecting copper tubing to avoid using damaged copper or fittings.
- Fittings and linesets should be inspected with other components during routine annual maintenance checks.



STEP 2 - INSERT CLIP



STEP 3 - PRESS RELEASE



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www.zoomlockpush.com

Catalog K2

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