REFRIGERANT BRASS PUSH FITTINGS FOR USE IN AIR CONDITIONING AND MECHANICAL APPLICATIONS

JOB NAME	**CONTRACTOR**
JOB LOCATION	**WHOLESALER**
ENGINEER	**STREAMLINE® REP**

PRODUCT DESCRIPTION:

Streamline® Refrigerant Brass Push Fittings for use in air conditioning and mechanical applications. Available sizes ranging from 1/4" to 7/8" in outside diameter. The non-removable product is designed to permanently join ASTM B280 and ASTM B88 hard-drawn copper tube (Types ACR, K, L) as well as ASTM B280 and ASTM B1003 soft (annealed) copper tube.

10–Year Limited Warranty

MATERIAL:

Streamline® Refrigerant Brass Push Fittings are comprised of a forged brass fitting, a stainless steel grip ring, dual HNBR O-rings, and patented technology.

KEY SPECIFICATIONS:

Streamline® Refrigerant Push Fittings shall conform to certain aspects of UL 207. Seals for push fittings shall be HNBR and factory installed. Mechanical joints of Streamline® Refrigerant Push Fittings shall be non-removable. Product is rated for a maximum operating pressure of 700 PSI.

INSTALLATION:

Streamline® Refrigerant Push Fittings shall be installed by trained professionals. Installers shall follow all manufacturer approved steps. Fittings shall be installed in compliance with the latest applicable building codes for the local jurisdiction and manufacturer instructions. Proper tube preparation and inspection is critical to attain reliable connections.

APPROVALS & CERTIFICATES:

UL 207	Standard for Refrigerant-Containing Components and Accessories UL Listed Refrigerant Fitting SA45895 - United States and Canada Approved use for field and factory installations
UL 1963	Standard for Refrigerant Recovery/Recycling Equipment
UL 109	7 Pull Test
	8 Vibration Test
ISO 5149-2	5.3.2.2.3 Strength Pressure Test
ISO 14903	Maximum Helium Leak Rate of 0.1 oz. Per Year
	7.4 Tightness Test
	7.6 Pressure Temperature Vibration Tests (PTV)
	7.8 Freezing Test
IMC	International Mechanical Code certified, ICC-ES, PMG-1625
	2021, 2018, 2015, 2012, 2009, and 2006
IRC	International Residential Code certified, ICC-ES, PMG-1625

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	2021, 2018, 2015, 2012, 2009 and 2006
UMC	Uniform Mechanical Code certified, ICC-ES, PMG-1625
	2021, 2018, 2015, 2012, 2009, and 2006
ASHRAE 15	Safety Standard for Refrigeration Systems
ASME B31.5	Refrigeration Piping and Heat Transfer Components
CSA C22.2	No. 140.3-15 Standard for Refrigerant-Containing Components for Use in Electrical Equipment

REFERENCES:

HNBR	
ASTM B88	Hydrogenated Acrylonitrile Butadiene Rubber
ASTM B280	Seamless Copper Water and Gas Tube (Types K and L)
ASTM B1003	Seamless Copper Tube for Air Conditioning and Refrigeration Seamless Copper Tube for Linesets

APPROVED APPLICATIONS:

Air Conditioning
Heat Pump
Mini Split Systems
VRF / VRV
Non-Potable Water
Technical Gases: Nitrogen, Oxygen, Argon, Carbon Dioxide, Hydrogen, Compressed Air, Inert Gases

OPERATING PARAMETERS:

Maximum Rated Pressure (MRP):	700 PSI / 48 BAR Max
Temperature:	-40°F / -40°C to 250°F / 121°C
Sealing Ring Temperature Rating:	-40°F / -40°C to 300°F / 149°C

BURST PRESSURE:

>3x MAX OPERATING PRESSURE, 2100 PSI / 14400kPa / 144 BAR

VACUUM CAPABILITY:

200 microns

LEAK TIGHTNESS:

Helium ≥7.5 x10-7 Pa · m^3/s at 20°C and 10 BAR

APPROVED REFRIGERANTS:

R-125, R-134a, R-32, R-404A, R-407A, R-407C, R-407F, R-407H, R-410A, R-417A, R-421A, R-422B, R-422D, R-427A, R-438A, R-444A, R-447A, R-447B, R-448A, R-449A, R-450A, R-452A, R-452B, R-452C, R-454A, R-454B, R-454C, R-457A, R-459A, R-507A, R-513A, R-513B, R-718, R-1234ze, R-1234yf

Not approved for R-22.

APPROVED OILS:

Mineral Oil, POE, PVE, PAO, PAG, and AB

INSTALLATION GUIDELINES

DISTANCE BETWEEN JOINTS PUSH NEAR AN EXISTING PUSH CONNECTION

TUBE DIAMETER	MINIMUM DISTANCE REQUIRED	
OD INCH	INCH	MM
1/4″	1/4″	7
3/8″	1/4″	7
1/2″	1/4″	7
5/8″	1/4″	7
3/4″	1/4″	7
7/8″	1/4″	7

SOLDERING OR BRAZING NEAR AN EXISTING PUSH CONNECTION

Brazing near Streamline® Refrigerant Push Fittings should be avoided. The installer should take precautions to keep the push connection cool. These methods may include:

1. Wrapping the push connection with a cold wet cloth.
2. Fabricating braze connections prior to installing the push fitting.
3. Applying heat barrier spray, gels, or putty to avoid heat transfer to the push fitting.

TUBE DIAMETER	SOLDERING	BRAZING	
	MINIMUM DISTANCE	MINIMUM DISTANCE WET WRAPPED	MINIMUM DISTANCE UNPROTECTED
OD INCH	INCH	INCH	INCH
1/4″	1-1/2″	5″	10″
3/8″	1-1/2″	5″	10″
1/2″	1-1/2″	5″	10″
5/8″	1-1/2″	6″	12″
3/4″	2-1/4″	7″	14″
7/8″	3″	8″	16″

PUSHING NEAR AN EXISTING SOLDERED OR BRAZED CONNECTION

It is important that there is no foreign debris or residual brazing on the tubing to be inserted into Streamline® Refrigerant Push Fittings. The surface condition on the area of push joint should be clean and free from debris and comply with ASTM B280, ASTM B88, or ASTM B1003.

The area of the brazed joint shall be cooled down before insertion.

TUBE DIAMETER	MINIMUM DISTANCE REQUIRED	
OD INCH	INCH	MM
1/4″	3″	76
3/8″	3″	76
1/2″	3″	76
5/8″	3″	76
3/4″	3″	76
7/8″	3″	76

ELECTRICAL CONTINUITY

Streamline® Refrigerant Push Fittings maintain ground continuity without the need for additional ground continuity straps. The fittings must not be used as a source of electrical ground.

FLARE ADAPTER TIGHTENING TORQUE

Streamline® Refrigerant Push Flare Adapters utilize a flare nut that is made to comply with SAE standards in the US as well as JIS B 8607 and is suitable for connecting to minisplit and VRV/VRF equipment.

TUBE DIAMETER	FLARE TIGHTENING TORQUE (DO NOT OVERTIGHTEN)	
OD INCH	TORQUE FT-LBS	TORQUE N-M
1/4″	10-13	14-18
3/8″	25-30	34-42
1/2″	35-44	49-61
5/8″	49-59	68-82
3/4″	67-81	90-110

For best results, apply a small amount of refrigerant oil to the flare face during installation.

TESTING INSTRUCTIONS FOR STREAMLINE® REFRIGERANT PUSH FITTINGS:

After installing Streamline® Refrigerant Push Fittings, the system shall be tested for leaks. This can be done by pressurizing the system with dry nitrogen to a minimum of 50% of the system maximum operating pressure, up to 700 PSI. If holding pressure for extended periods (up to 24 hours), then temperature impacts may need to be taken into account. System leaks can be detected by using a soapy water spray or by utilizing a tracer gas and electronic leak detector.

Any leaks that are identified will need to be cut out and replaced. When replacing a fitting, installers should carefully inspect the surface of that tube before using another fitting to ensure a longitudinal scratch or other surface defect will not result in another leak. It is not allowable to braze the end of a leaking fitting. Always conduct a subsequent pressure test after any repairs are made.

Federal, state, and local codes and regulations governing installation and testing must always be followed.

SPECIFICATION LANGUAGE:

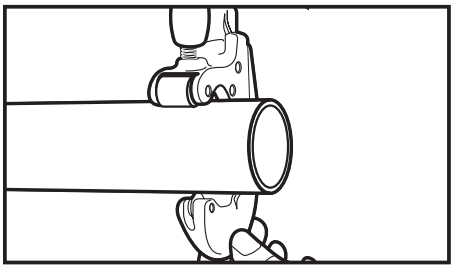
Mechanical Refrigerant Push Fitting: Shall conform to the applicable requirements of UL 207.

a. Continuous Operating Pressure: 700 PSI / 48 BAR Max
b. Continuous Operating Temperature: -40°F / -40°C to 250°F / 121°C
c. Dual Factory Installed HNBR O-rings
d. Sealing Ring Temperature Rating: -40°F / -40°C to 300°F / 149°C

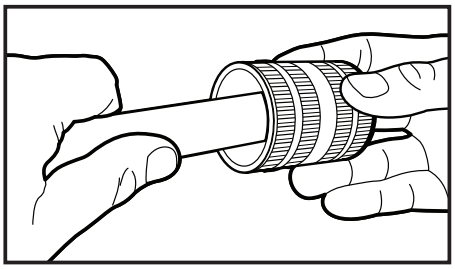
-OR-

Mechanical refrigerant push copper fittings shall be non-removable and contain two seals per cup and shall conform to the approved jointing manufacturers listed below.

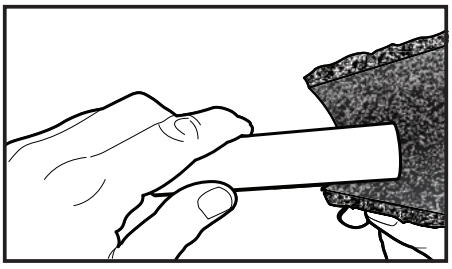
1. Mueller Streamline® Refrigerant Brass Push Fittings



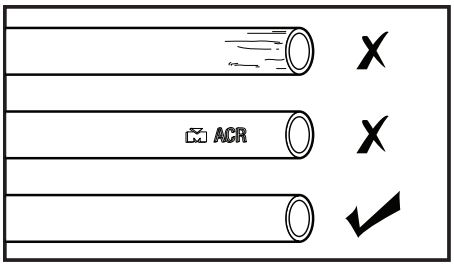
1 Cut tube square using a wheel-type tube cutter. Slowly advance tube cutter after each rotation to avoid forcing tube out of round. Never use a saw, as they leave sharp edges that will cut o-rings.



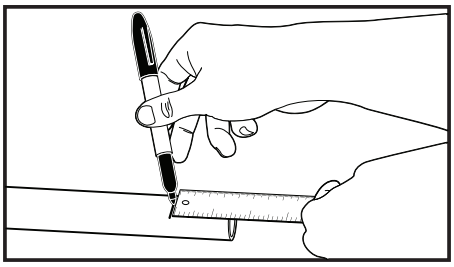
2 Deburr tube ID & OD using a deburring tool. Ensure tube ends are free of any burrs or sharp edges.



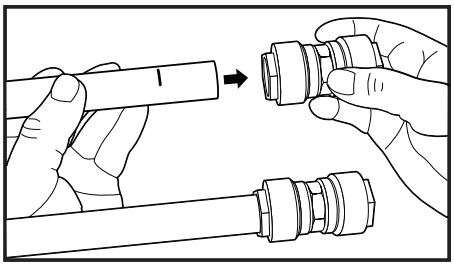
3 Clean and smooth tube surface using very fine abrasive pad.



4 Inspect tube surface. Sealing area must be free of indentations, scratches, incise marks and deformations.



5 Mark tube to proper fitting insertion depth. (See Insertion Depth Chart below.)



6 Slightly rotate fitting while pushing it onto tube. Push fitting all the way to insertion mark and make contact with stop.

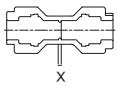
STREAMLINE® REFRIGERANT BRASS PUSH FITTING INSERTION DEPTH CHART (1/4" – 7/8")						
TUBE SIZE (OD)	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"
INSERTION DEPTH	1"	1"	1-1/8"	1-1/8"	1-1/4"	1-5/16"

⚠ WARNING

Cancer and Reproductive Harm
www.P65Warnings.ca.gov

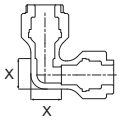
Failure to follow all instructions could affect joint/system integrity and may lead to property damage.
Call Customer Service at 1-800-FITTING if you have any questions or need assistance.

COUPLING • STAKED STOP
AC-PUSH x AC-PUSH



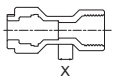
Item No.	Diameter	X	Weight	Master Quantity
ACP10141	1/4"	0.03	0.17	10
ACP10143	3/8"	0.06	0.21	10
ACP10144	1/2"	0.04	0.26	10
ACP10145	5/8"	0.07	0.29	10
ACP10157	3/4"	0.08	0.56	5
ACP10146	7/8"	0.09	0.63	5

90° ELBOW
AC-PUSH x AC-PUSH



Item No.	Diameter	X	Wt.	Master Quantity
ACP02715	1/4"	0.19	0.19	10
ACP02716	3/8"	0.32	0.24	10
ACP02717	1/2"	0.38	0.32	10
ACP02722	5/8"	0.43	0.36	10
ACP02728	3/4"	0.47	0.62	5
ACP02734	7/8"	0.46	0.65	5

SAE FLARE ADAPTER
AC-PUSH



Item No.	Diameter	X	Wt.	Master Quantity
ACP15725	1/4"	0.35	0.13	10
ACP15726	3/8"	0.35	0.17	10
ACP15727	1/2"	0.18	0.21	10
ACP15728	5/8"	0.21	0.27	10