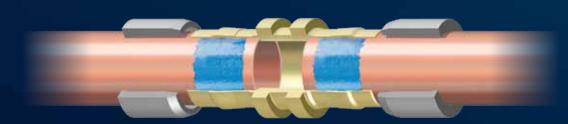


# SOLDER-FREE TUBE CONNECTIONS





**VULKAN LOKRING** patented solder-free tube connections and equipment. Get perfect joins with one of the world's most economical and reliable methods of refrigerant tube connection.

# TECHNOLOGY OVERVIEW

#### **VULKAN LOKRING**

For more than 30 years now, VULKAN LOKRING has produced solder-free tube connection technology for refrigerant lines. Originally developed for the absolute extreme conditions of space technology, these tube connections have been continually optimised for the purposes of refrigeration and air-conditioning systems.

## WELD FREE. LEAK FREE. HASSLE FREE

By eliminating welding, many overhead costs relating to safety, personnel, equipment and supplies, inspection rework, and monitoring can be eliminated or substantially reduced.

#### DURABLE

LOKRING's stainless steel tube fittings are qualified to the requirements of the ANSI/ASME B31 pressure piping codes for pressure and fatigue design, and materials of construction. Extensive mechanical and environmental testing has demonstrated the mechanical and sealing integrity of the LOKRING connection in a wide range of applications and environmental conditions.

## **ADVANTAGES OF THE LOKRING PRINCIPLE**

- Approx. 40 % time saving Absolutely clean, efficient and reliable
- Installation work feasible during business hours and public access
- Installation work feasible in situations where there is a fire hazard
- Light hand assembly tool without energy exertion
- No brazing required

- No nitrogen as purge gas No solder-related quality problems In addition, scarce ASME-certified welders are freed up for large bore pipe or pressure vessel welding.

## **AREAS OF APPLICATION**

Areas of application for LOKRINGs include all refrigerant pipes for installation, service, and original equipping of:

- Air-conditioning systems (split, multi-split, VRF, HVAC)
- Industrial and commercial refrigeration
- Heat pumps
- Solar thermal systems
- Geothermal energy

## NOT JUST FOR AIR CONDITIONERS

Originally developed for the extreme conditions of space technology, LOKRING has been implemented in industrial volume production of vehicle air-conditioning systems, and cooling and freezing units.

Not only that, LOKRING solutions can be found in many applications including the Astute Class Attack Submarine.



Applied in extreme conditions. LOKRING tube solutions can be found in the Astute Class Attack Submarine.

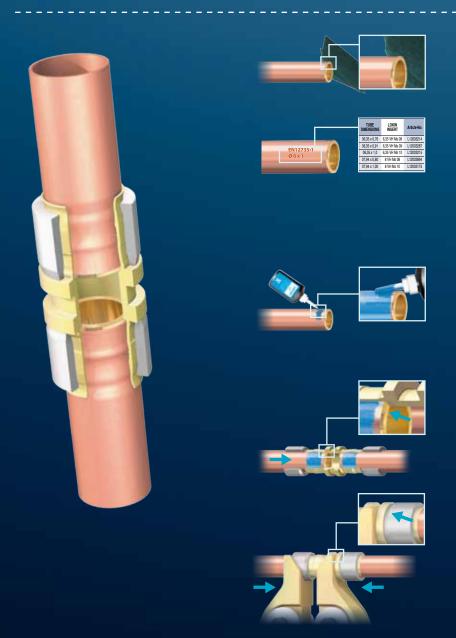
# LOKRING ASSEMBLY



#### QUICK, EASY ASSEMBLY

A LOKRING tube connection can be made without a great deal of effort. All you need is a LOKRING tube connection, a hand assembly tool and some LOKPREP. The ergonomic hand assembly tool works without energy connection, and the patented lever mechanism means extremely little strength is needed for assembly. Compare it with conventional tube connection methods for yourself, and you will see that LOKRING has the potential to become a classic.

Visit www.temperzone.biz to view our assembly video.



## **STEP 1 | TREAT THE TUBE ENDS**

Prepare the tube ends. Clean tube in a radial direction with abrasive mat or very fine emery.

# STEP 2 | SELECT & INSERT LOKIN

Select the correct LOKIN stabilisation insert from the table. LOKIN stabilisation inserts provide additional protection to tube systems that are exposed to mechanical loads or high pressure refrigerants. Hard-drawn tube with wall thicknesses greater than listed do not require an insert. Very thin walled tubes are not suitable for use with LOKRING.

# STEP 3 | APPLY LOKPREP

Apply LOKprep. LT LOKprep is suitable for use in temperatures up to 28°C. HT LOKprep is suitable for use in temperatures above 28°C. Cure time is affected outside these temperatures\*. A full 360° coverage should be applied.

# STEP 4 | INSERT TUBES

Insert the tube ends with the LOKPREP film into the LOKRING connector. Make sure that the ends of the tubes are inserted to the inner limit of the connector.

# STEP 5 | PRESS

Using the LOKRING tool, force the ring over the connector until it is pressing against the central collar.

Tube dimensions	LOKIN Insert	Temperzone Item No.
06.35 x 0.76	6.35 VH Ms 08	460-000-070
07.94 x 0.80	8.00 VH Ms 08	460-000-089
09.53 x 0.76	9.53 VH Ms 08	460-000-073
12.70 x 0.80	12.7 VH Ms 08	460-000-076
15.88 x 1.00	16 VH Ms 10	460-000-080
19.05 x 1.07	19 VH Ms 11	460-000-084
22.23 x 1.40	22.2 VH Ms 14	460-000-085
28.57 x 1.22	28.6 VH Ms 12	460-000-086

# **SELECTION CHART**

As shown in STEP 2, the selection chart relates the tube diameter to the corresponding LOKIN insert.

# **AVAILABLE PARTS**

As provider of New Zealand's most extensive range of LOKRING product, temperzone supplies the following components:



# STRAIGHT BRASS CONNECTORS

For connecting copper and/or steel tubes with identical tube outer diameters.



# **REDUCER BRASS CONNECTORS**

LOKRING brass reducing connections are designed for connecting copper and/or steel tubes with different tube outer diameters.



## **STABILISATION INSERTS**

The LOKIN stabilisation insert has been developed due to the increase in refrigerants with higher pressures.



#### **ELBOW BRASS CONNECTORS**

For connecting copper and/or steel tubes with 90° branch and identical tube outer diameters.



## LOKBOX TOOLING

Assembly tools for all sizes arranged clearly in a handy case with a firm foam insert.



#### **LOKPREP SOLUTION**

We supply 2 variants, HT and LT, depending on the ambient temperature. LOKPREP HT for high ambient temperatures in particular allows for more flexibility during assembly.

NOTE The manufacturer reserves the right to make changes in specifications at any time without notice or obligation.

Authorised LOKRING Distributor



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