

BUILD A WORLD WITH ALUMINIUM
CONNECT IT WITH LOKRING®

NEW ALUMINIUM LOKRING® CONNECTORS

**VULKAN
LOKRING**



SUITABLE FOR
R410A

VULKAN
LOKING

THE USE OF ALUMINIUM
TUBES INSTEAD OF COPPER
TUBES IN THE INSTALLATION
OF AIR-CONDITIONING
SYSTEMS OFFERS
NUMEROUS BENEFITS...





THE RAW MATERIAL
PRICES OF ALUMINIUM
ARE ONE-QUARTER OF
THE PRICE OF COPPER.

ALUMINIUM
2.08 USD/KG
(23.01.2013)

COPPER
8.07 USD/KG
(23.01.2013)





ALUMINIUM IS THREE TIMES LIGHTER THAN COPPER.

ALUMINIUM
0.128 KG/METRE

OUTER TUBE DIAMETER: 3/4"
WALL THICKNESS: 1 MM

COPPER
0.415 KG/METRE

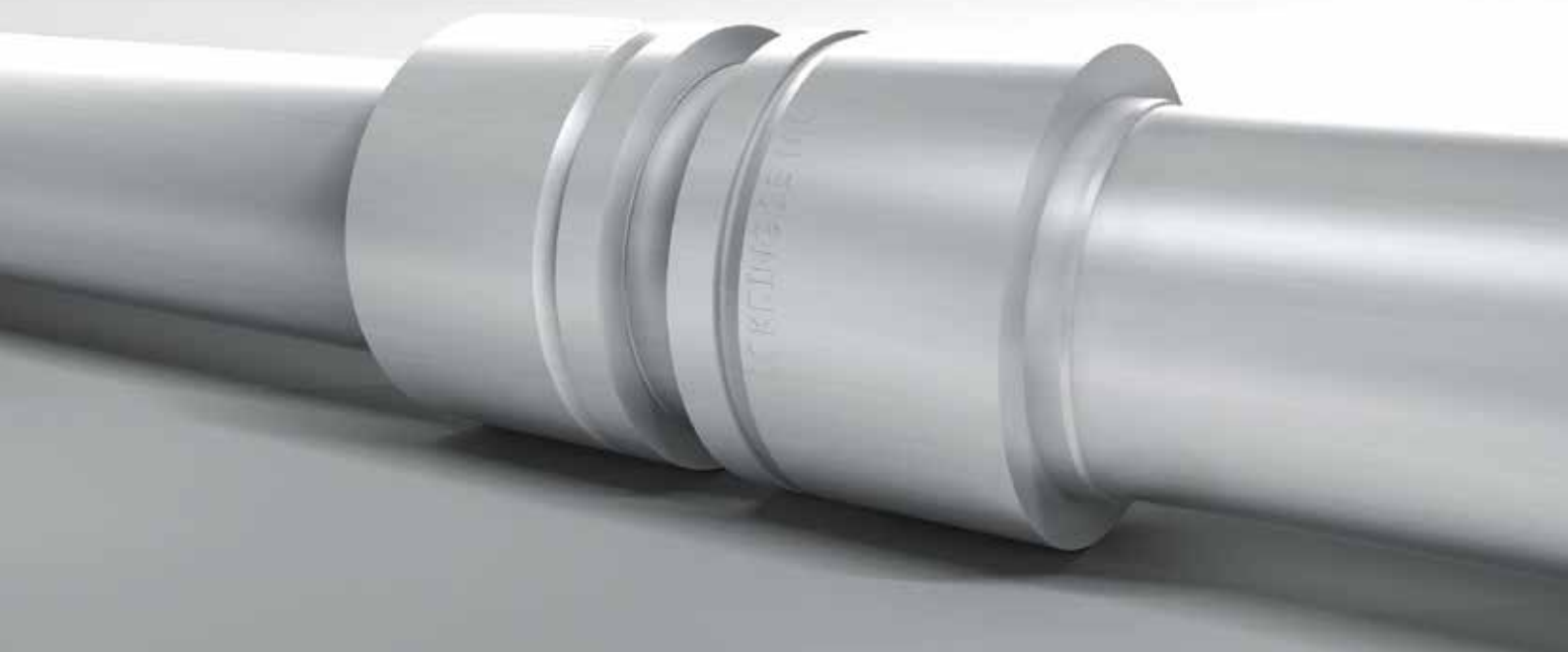
OUTER TUBE DIAMETER: 3/4"
WALL THICKNESS: 1 MM





TECHNICALLY, ALUMINIUM IS
AS GOOD AS COPPER. THAT'S
WHY THE AUTOMOTIVE
INDUSTRY HAS BEEN USING
ALUMINIUM TUBE IN
AIR-CONDITIONING
SYSTEMS FOR DECADES.





...AND NOW
ALUMINIUM CAN
EASILY BE JOINED BY
LOKRING[®].

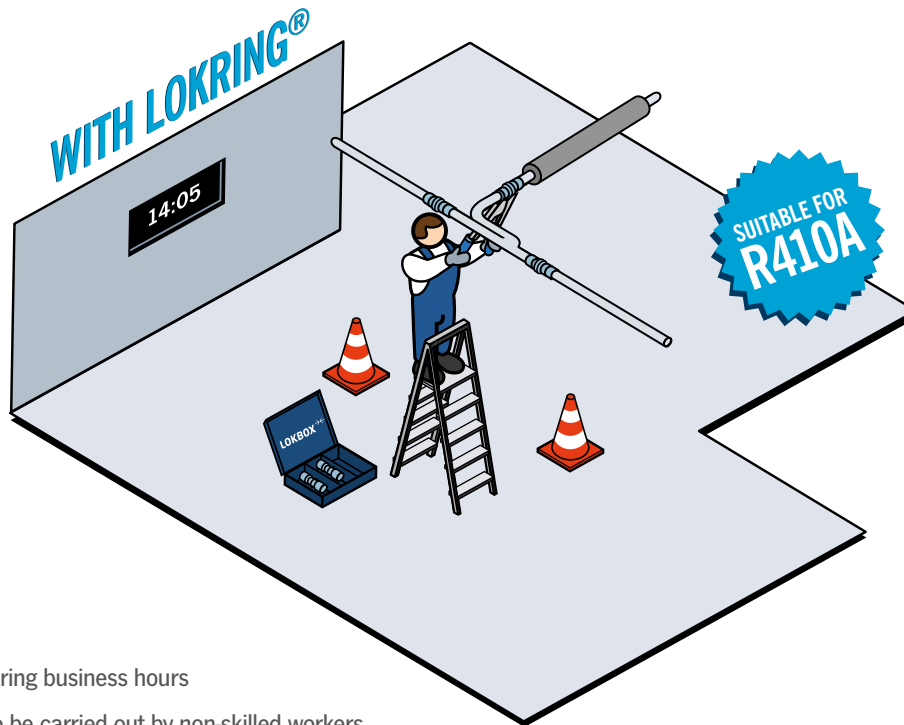


LOKRING® RATHER THAN SOLDERING

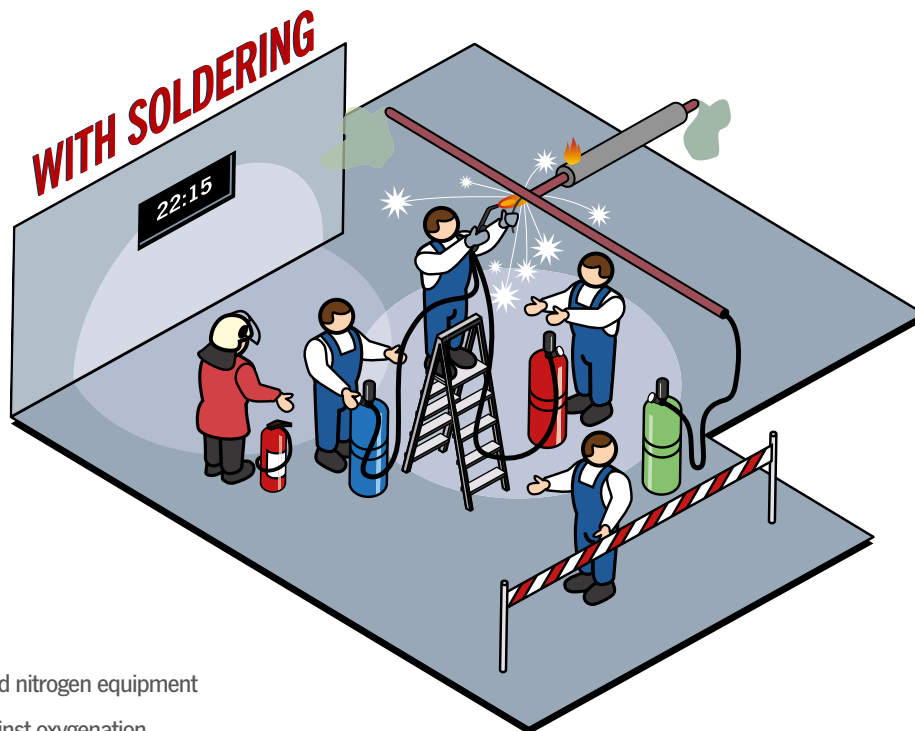
THE BEST CONNECTION FOR REASONS OF SAFETY AND ECONOMY

So far, the argument presented against the use of aluminium for tube connection in the refrigeration and air-conditioning technology was the difficulty of soldering or brazing it. **However, this argument no longer holds: With the deployment of the solder-free LOKRING®**

tube connection technology, not only can the benefits of the light metal be harnessed, but also all of the well-known benefits that the LOKRING® tube connection has compared to soldering or brazing.



- ➞ 40% time saving
- ➞ absolutely clean
- ➞ installation work during business hours
- ➞ installation can also be carried out by non-skilled workers
- ➞ installation work in areas where there is a fire hazard
- ➞ light hand assembly tool without energy exertion
- ➞ no solder-related quality problems
- ➞ no purge gas necessary



- ⊖ heavy soldering- and nitrogen equipment
- ⊖ use of nitrogen against oxygenation
- ⊖ noxious odors and toxic gases are produced
- ⊖ ignition hazard from flammable refrigerants
- ⊖ surface damage caused during welding
- ⊖ cost-intensive, labor-intensive, and not customer-friendly

INTO THE FUTURE OF REFRIGERATION AND AIR-CONDITIONING TECHNOLOGY WITH LOKRING®

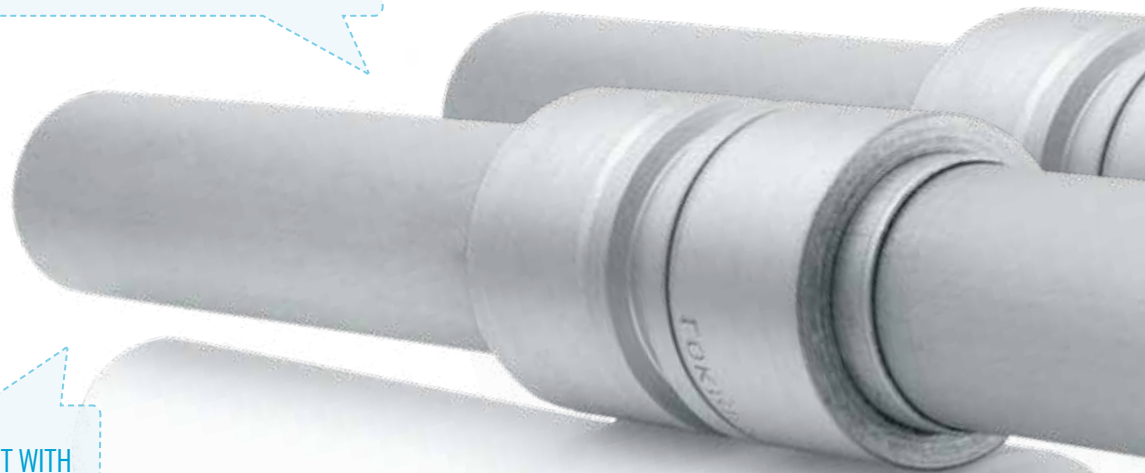
For more than 30 years now, VULKAN LOKRING's success has been founded on worldwide patented, unique connecting elements for refrigerant lines. In the meantime, more than 1,500,000,000 LOKRING®

tube connections have been successfully used. Never before has a LOKRING® tube connection undergone more rigorous tests than our new aluminium connectors.

BURST PRESSURE TEST UP TO
250 BAR (3750 PSI)

ALTERNATING PRESSURE TEST WITH
250,000 CYCLES

TEMPERATURE CHANGE
CYCLE TEST



CORROSION TEST ACCORDING TO
ISO 9227 NSS

TENSILE TEST ACCORDING TO
EN 10 204

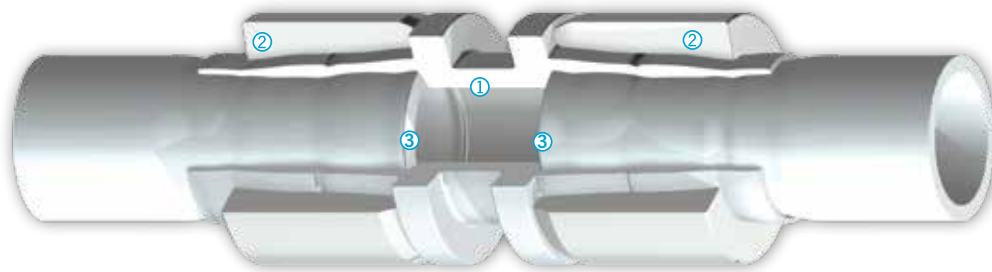


Also suitable for connections from aluminium tube to copper tube.
For the copper tube it is necessary to use a brass stabilisation insert.
Furthermore, a heat shrink sleeve must be used (see page 23).

THE LOKRING® TECHNOLOGY COMPONENTS

THE COMPONENTS OF A LOKRING® CONNECTION

The following illustration is only showing the principle of a LOKRING® assembly. Always respect the detailed assembly instructions on www.vulkan.com.



JOINT



The shape of the joint to be used is defined by one of the many types, sizes and repair situations.

LOKRINGS



When assembled, LOKRINGS guarantee a permanent tube connection.

STABILISATION INSERT



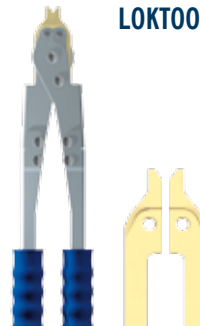
The stabilisation insert must be inserted into the tube ends before the LOKRING® assembly. It brings additional safety into the connection.

LOKPREP



Thanks to its specially developed properties, LOKPREP secures the airtight seal of the tube connection for a lifetime.

LOKTOOL

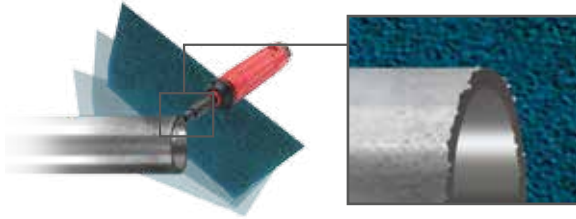


The hand assembly tool reduces the manual force needed during assembly. The assembly jaws are easy to replace to match the size of the LOKRING® to be fitted.

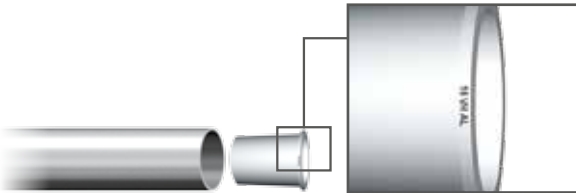
LOKRING® ASSEMBLY

SO EASY, SO FAST

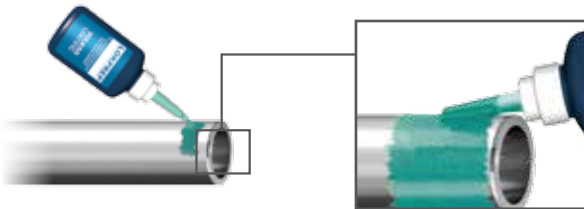
STEP 01 | CLEAN AND DEBURR THE TUBE.



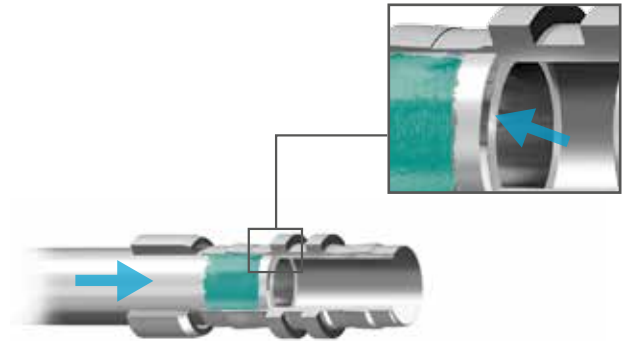
STEP 02 | PLACE THE INSERT INTO THE TUBE.



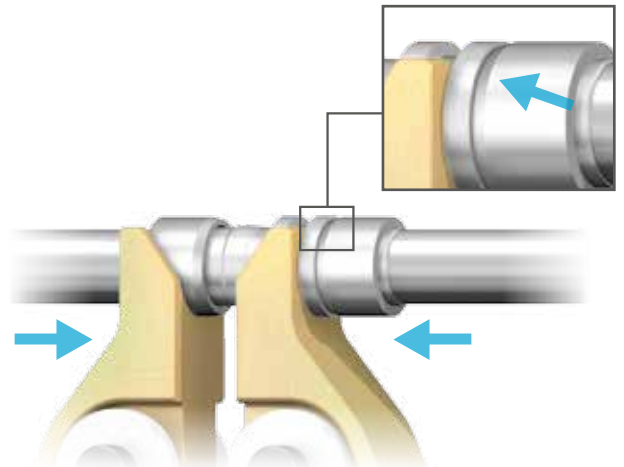
STEP 03 | APPLY LOKPREP 65G ALL AROUND THE TUBE.



STEP 04 | INSERT THE TUBE TO THE STOP.



STEP 05 | ASSEMBLE THE RINGS TO THE STOP.



ASSEMBLY TOOLS FOR LOKRING® CONNECTIONS

LOKRING Split/Multi-split kit MZ | LOKRING tool kit



LOKRING Split/Multi-split kit MZ

Complete LOKRING tool kit for assembling LOKRING® connectors up to 1/2" (13 mm).

The kit includes the classic hand assembly tool MZ and 3 pairs of assembly jaws which can be exchanged quickly and easily.

Scope of supply

- ⊕ Hand assembly tool MZ
- ⊕ 3 pairs of assembly jaws
MB 8 EVP, MB 10 EVP, MB 12 EVP

Article no.	Article name	Description
L13005504	LOKRING Split/Multi-split kit MZ	LOKRING tool kit
L13002095	LOKTOOL MZ	Hand assembly tool

LOKRING Split/Multi-split kit MZ-V | LOKRING tool kit



LOKRING Split/Multi-split kit MZ-V

Complete LOKRING tool kit for assembling LOKRING® connectors up to 1/2" (13 mm). The kit includes the flexible hand assembly tool MZ-V and 3 pairs of assembly jaws which can be exchanged quickly and easily. The handles of the MZ-V are offset on both sides, allowing full use in places difficult to access.

Scope of supply

- ⊕ Hand assembly tool MZ-V
- ⊕ 3 pairs of assembly jaws
MB 8 EVP, MB 10 EVP, MB 12 EVP

Article no.	Article name	Description
L13005505	LOKRING Split/Multi-split kit MZ-V	LOKRING tool kit
L13002811	LOKTOOL MZ-V	Hand assembly tool

LOKTOOL x MB EVP PU | Assembly jaws



Assembly jaws for LOKTOOL MZ and MZ-V

The assembly jaws fit the hand assembly tools LOKTOOL MZ and LOKTOOL MZ-V. They can be replaced easily and quickly, thus enabling LOKRING® assembly on different tube diameters using only one tool.

Article no.	Article name	ø Tube		Packing unit
		[mm]	[inches]	
L13005506	LOKTOOL MB 8 EVP PU	up to 8	up to 5/16	2
L13005507	LOKTOOL MB 10 EVP PU	9 - 11	3/8	2
L13005508	LOKTOOL MB 12 EVP PU	12 - 13	1/2	2
L13005509	LOKTOOL MB 16 EVP PU	14 - 17	5/8	2
L13005510	LOKTOOL MB 19 EVP PU	18 - 20	3/4	2
L13005511	LOKTOOL MB 22 EVP PU	22	7/8	2

LOKPREP 65G PU | Anaerobic sealant



LOKPREP 65G, sealant for LOKRING® assembly

LOKPREP was developed especially for LOKRING® assembly and always has to be used wherever LOKRINGs are to be fitted. LOKPREP compensates possible unevenness in the tube surface, thus guaranteeing that every LOKRING® connection is hermetically sealed.

Article no.	Article name	Quantity	Packing
			unit
L13005512	LOKPREP 65G PU	15 ml	2

ASSEMBLY TOOLS FOR LOKRING® CONNECTIONS

LOKTOOL LOKPRESS AC 12V | Cordless assembly tool



LOKTOOL LOKPRESS AC 12V

The powerful handy cordless assembly tool enables the fast and safe processing of size 50 LOKRINGs with a diameter of 1/4" to 1 3/8" (6 to 35 mm). The assembly jaws move together when the start button is pressed. Until the force has been built up, i.e. until the start of assembling, the assembly tool switches to automatic mode until the LOKRING® connection has been pressed completely. A special hydraulics valve and an electronic monitoring system guarantee safe assembly and top-quality work. **Made in Germany!**

Features

- ⊕ High pressing force (up to max. 23 kN)
- ⊕ One-handed operation – low weight
- ⊕ Rotatable head – easy work in any position
- ⊕ Up to 40% time saving

Scope of supply

- ⊕ Cordless assembly tool
- ⊕ 4 pairs of assembly jaws
- ⊕ 2 rechargeable batteries
- ⊕ Quick-charger
- ⊕ Plastic case

Article no.	Article name	Description
L14003952	LOKTOOL LOKPRESS AC 12V	Cordless assembly tool

Technical data

Dimensions tool (L x B x H)	322 x 66 x 195 mm
Dimensions plastic case (L x B x H)	500 x 120 x 460 mm
Working temperature	-20°C to 60°C
Electric power	240 W
Pressing force	23 kN
Voltage supply	9.6V / 3.0 Ah NiMH
Recharge time	approx. 45 min.
Weight	2.4 kg

LOKRING® CONNECTORS

FOR CONNECTING TUBES

LOKRING x NK AI 50-50bar PU | Aluminium connectors



LOKRING® aluminium connectors*

For connecting tubes with identical outer diameters.

*Further diameters on request

Article no.	Article name	ø Tube		Packing unit
		[mm inches]		
L13005513	LOKRING 6,35 NK AI 50-50bar PU	6.35 1/4		10
L13005514	LOKRING 8 NK AI 50-50bar PU	8 5/16		10
L13005515	LOKRING 9,53 NK AI 50-50bar PU	9.53 3/8		10
L13005560	LOKRING 10 NK AI 50-50bar PU	10 -		10
L13005617	LOKRING 12 NK AI 50-50bar PU	12 -		8
L13005516	LOKRING 12,7 NK AI 50-50bar PU	12.7 1/2		8
L13005566	LOKRING 15 NK AI 50-50bar PU	15 -		2
L13005517	LOKRING 16 NK AI 50-50bar PU	16 5/8		2
L13005581	LOKRING 18 NK AI 50-50bar PU	18 -		2
L13005518	LOKRING 19 NK AI 50-50bar PU	19 3/4		2
L13005519	LOKRING 22 NK AI 50-50bar PU	22 7/8		2

LOKRING x/x NR AI 50-50bar PU | Aluminium reducing connectors



LOKRING® aluminium reducing connectors*

For connecting metric to imperial tubes.

*Further diameters on request

Article no.	Article name	ø Tube 1		→	ø Tube 2		Packing unit
		[mm inches]			[mm inches]		
L13005520	LOKRING 9,53/6,35 NR AI 50-50bar PU	9.53 3/8		→	6.35 1/4		10
L13005521	LOKRING 12,7/9,53 NR AI 50-50bar PU	12.7 1/2		→	9.53 3/8		8
L13005522	LOKRING 16/12,7 NR AI 50-50bar PU	16 5/8		→	12.7 1/2		2
L13005523	LOKRING 19/16 NR AI 50-50bar PU	19 3/4		→	16 5/8		2
L13005524	LOKRING 22/19 NR AI 50-50bar PU	22 7/8		→	19 3/4		2

ALUMINIUM STABILISATION INSERTS & FLARE NUTS FOR LOKRING® CONNECTIONS

LOKIN x VH AI y PU | Stabilisation inserts



LOKIN stabilisation inserts*

The LOKIN stabilisation inserts must be inserted into the ends of the tubes before LOKRING® assembly.

*Further diameters on request

	Article no.	Article name	ø Tube [mm inches]	Wall thickness [mm]	Packing unit
0.8	L13005525	LOKIN 6,35 VH AI 08 PU	6.35 1/4	0.8	20
	L13005527	LOKIN 8 VH AI 08 PU	8 5/16	0.8	20
	L13005529	LOKIN 9,53 VH AI 08 PU	9.53 3/8	0.8	20
	L13005531	LOKIN 12,7 VH AI 08 PU	12.7 1/2	0.8	20
1.0	L13005526	LOKIN 6,35 VH AI 10 PU	6.35 1/4	1.0	20
	L13005528	LOKIN 8 VH AI 10 PU	8 5/16	1.0	20
	L13005530	LOKIN 9,53 VH AI 10 PU	9.53 3/8	1.0	20
	L13005623	LOKIN 10 VH AI 10 PU	10 -	1.0	20
	L13005532	LOKIN 12,7 VH AI 10 PU	12.7 1/2	1.0	20
	L13005533	LOKIN 16 VH AI 10 PU	16 5/8	1.0	10
1.2	L13005534	LOKIN 19 VH AI 10 PU	19 3/4	1.0	10
	L13005582	LOKIN 12,7 VH AI 12 PU	12.7 1/2	1.2	20
	L13005583	LOKIN 16 VH AI 12 PU	16 5/8	1.2	10
1.5	L13005535	LOKIN 22 VH AI 12 PU	22 7/8	1.2	10
	L13005585	LOKIN 16 VH AI 15 PU	16 5/8	1.5	10
	L13005584	LOKIN 19 VH AI 15 PU	19 3/4	1.5	10

LOKRING x FN AI PU | Aluminium flare nuts



LOKRING® Aluminium flare nuts*

Anodised aluminium flare nuts made of a special alloy for HVAC applications.

*In combination with brass connections we recommend the use of teflon tape.

Article no.	Article name	Wrench size	Torque [Nm]	ø [mm inches]	Packing unit
L13005536	LOKRING 6,35 FN AI PU	17	20	6.35 1/4	20
L13005537	LOKRING 9,53 FN AI PU	22	30	9.53 3/8	20
L13005538	LOKRING 12,7 FN AI PU	24	40	12.7 1/2	16
L13005539	LOKRING 16 FN AI PU	27	50	16 5/8	10
L13005540	LOKRING 19 FN AI PU	36	60	19 3/4	6

TOOLS & ACCESSORIES

USEFUL AIDS

HSS x-x PU | Heat shrink sleeves with hotmelt adhesive



Heat shrink sleeves

If a connection from aluminium tube to copper tube is necessary, heat shrink tubes must be used to protect the connection against corrosion.

Article no.	Article name	ø Tube [mm inches]	→	ø Tube [mm inches]	Packing unit
L13005541	HSS 06-10 PU	6 1/4	→	10 3/8	20
L13005542	HSS 12-16 PU	12 1/2	→	16 5/8	20
L13005543	HSS 18-22 PU	18 3/4	→	22 7/8	20

LOKTOOL SV.3 | Abrasive mat



LOKTOOL abrasive mat

- ☉ Suitable for all surfaces
- ☉ Solvent-resistant
- ☉ Dimensions:
158 x 224 mm

Article no.	Article name	Description	Packing unit
L13004251	LOKTOOL SV.3	Abrasive mat	3

TOOLS & ACCESSORIES

USEFUL AIDS

LOKTOOL TC6-38 | Tube cutter



LOKTOOL tube cutter

New and professional tube cutter using roller bearing technology, which makes quick and easy tube cutting possible. The integrated deburrer rounds this innovative tool off. Diameter range: 1/4" to 1 3/8" (6 to 38 mm).

Article no.	Article name	Description
L14003601	LOKTOOL TC6-38	Tube cutter
L14003602	LOKTOOL CW6-38	Cutting wheel for TC6-38

LOKTOOL TC3-28 | Tube cutter



LOKTOOL tube cutter

New and professional tube cutter using roller bearing technology, which makes quick and easy tube cutting possible. Diameter range: 1/8" to 1 1/8" (3 to 28 mm).

Article no.	Article name	Description
L14003600	LOKTOOL TC3-28	Tube cutter
L14003603	LOKTOOL CW3-28	Cutting wheel for TC3-28

LOKTOOL Gratfix N-E | Tube deburrer



LOKTOOL tube deburrer

For the quick and clean deburring of tubes, edges and steel plates.

Article no.	Article name	Description
L14001362	LOKTOOL Gratfix N-E	Tube deburrer
L14001363	N-E100	Universal spare blade

LOKBOX K-TWS 200 | Torque wrench set



LOKBOX Torque wrench set

The professional package for tightening flare fitting screw connections to the correct torque.

Scope of supply

- ⊗ Torque wrench
- ⊗ Insertable open-ended wrench
in the sizes 17, 22, 24, 27, 36
- ⊗ Plastic case

Article no.	Article name	Description
L13004642	LOKBOX K-TWS 200	Torque wrench set

LOKTOOL EFT-6 | Eccentric flaring tool



LOKTOOL EFT-6

Precision flaring tool for the simple and fast expansion. For flaring 6 sizes: 1/4", 5/16", 3/8", 1/2", 5/8", 3/4".

Article no.	Article name	Description
L14004193	LOKTOOL EFT-6	Flaring Tool

TOOLS & ACCESSORIES

USEFUL AIDS

LOKTOOL TB x" | Tube bender



LOKTOOL TB Tube bender

Makes smooth short radius bends up to 180° with minimum effort. Each tool bends one size.

Article no.	Article name	∅ Tube [inches]	Description
L14004194	LOKTOOL TB 1/4"	1/4	Tube bender
L14004195	LOKTOOL TB 5/16"	5/16	Tube bender
L14004196	LOKTOOL TB 3/8"	3/8	Tube bender
L14004197	LOKTOOL TB 1/2"	1/2	Tube bender

LOKTOOL TB x" | Tube bender



LOKTOOL TB Tube bender

Makes smooth short radius bends up to 180° with minimum effort. Each tool bends one size.

Article no.	Article name	∅ Tube [inches]	Description
L14004198	LOKTOOL TB 5/8"	5/8	Tube bender
L14004199	LOKTOOL TB 3/4"	3/4	Tube bender
L14004200	LOKTOOL TB 7/8"	7/8	Tube bender

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VALIDITY CLAUSE:

The LOKRING® tube connection technology represents a proven method of producing hermetically sealed metal/ metal tube connections. The LOKRING® tube connections are mainly used in the air conditioning and refrigeration industries. The use of LOKRING® tube connection technology in other fields is to be discussed with VULKAN LOKRING. VULKAN LOKRING as the supplier is responsible for the qualitative delivery of the tube connections and tools which are ordered from this catalogue.

The purchaser is responsible for the use of the LOKRING® tube connections and tools as directed. The assembly has to be done accordingly to the instructions and exclusively with original LOKRING® parts. The present catalogue shall replace all previous editions, any previous printings shall no longer be valid. The data contained in this catalogue refers to the valid state of affairs in time of the copy deadline. Any changes due to technical progress are reserved.

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