

Prefab

LK Armatur





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We have been developing the HVAC industry for over 35 years, so why not let us develop a prefabricated solution to meet your specific needs.

We use state-of-the-art machinery and engineering expertise to prefabricate piping, develop pipe systems and create components for complete units, all according to your wishes.

Our customised solutions are used in applications such as hot water and tap water systems, hospital appliances and commercial dishwashers. etc. In our prefabrication department, we process pipes and assemble components into complete units.

This means that we can offer you many benefits, such as fully customised solutions that optimise installation times, a wide choice of materials and just-in-time delivery.

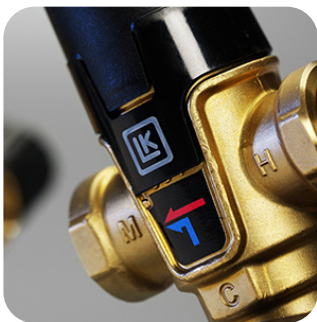


LK Armatur – A Complete Supplier

Founded in 1910, LK is a family business, working internationally in the HVAC industry. A market leader in Sweden, the group currently employs approximately 400 people and is enjoying increasing sales of products, systems and solutions in the Nordic region, Europe and the United States.

LK Armatur was founded in 1985 when the LK Group decided to increase focus on supplying valves and other components to manufacturers of heating appliances and water heaters. Today, LK Armatur manufactures around one million valves every year, from simple standard models to advanced and customised specialist components.

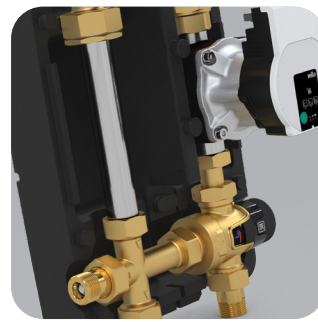
In order to provide our customers with a wide range of goods, our business is divided into four product areas: valves, electronic temperature control, prefabricated customised HVAC products and a supplementary range of carefully selected accessories.



Valves



Electronic temperature control



Prefabrication



Accessories

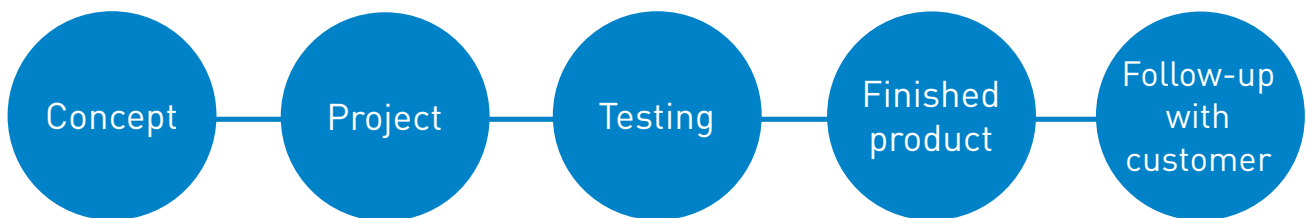
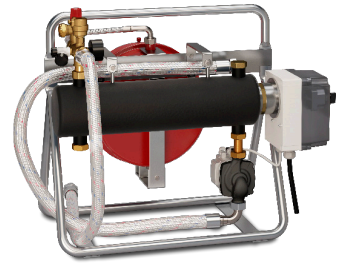
From concept to finished product

At LK Armatur, we believe that there is always a better way of doing things. We have a wealth of knowledge of our markets and our customers' needs.

We are more than happy to apply all of this knowledge together with you to meet your challenges, including in the area of prefabricated products.

In collaboration with you, our R&D department can develop product concepts and customised products that solve your specific problems. Why not book a no-obligation meeting with one of our salespeople where we can look at your solutions to see if we can suggest any improvements.

Naturally, our entire team of developers, salespeople and product specialists will be with you throughout the project, from concept to finished solution.



We help you to construct and develop

Machinery and technology are fine, but what makes a company successful is people. Competence and know-how are the secret to our success. Training and personal and professional development are a natural part of LK Armatur's corporate culture.

Application knowledge in:

- Heat pumps
- District heating
- Biofuels
- Solar heating
- Boilers

Cutting-edge competence in:

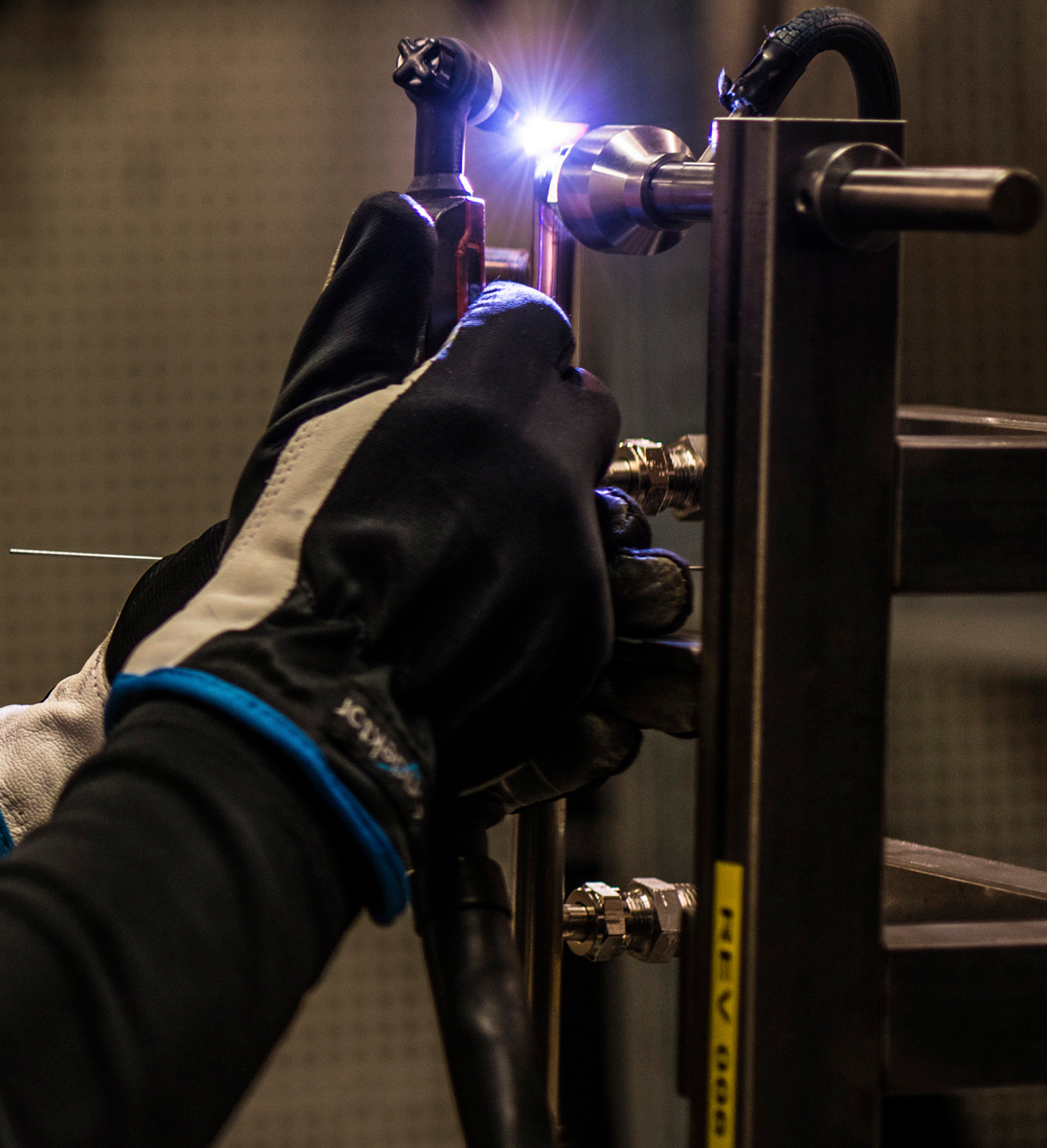
- Polymers
- Legislation and directives
- Mechanical engineering



PRODUCT EVALUATION

Our test laboratories in Helsingborg are equipped to perform validation testing of long-term properties and performance on components and finished products alike.

Prefabrication is growing year by year. The benefits for you as a customer include increased efficiency and higher quality.



Pipe types

TECHNICAL DATA

Working temperature Max. 120°C
Max. working pressure 1.6 MPa

COPPER

Copper is strong and easy to work, and systems can be assembled in advance or on site. The popularity of copper is down to the metal's unique combination of outstanding properties. It can withstand extreme heat without any loss of quality.

Soft copper pipe in compliance with EN 12735, for bending diameter × wall thickness (mm)

12 × 1.0
15 × 1.0
18 × 1.0
22 × 1.0
22 × 1.5
28 × 1.2
34.94 × 1.45
42 × 1.5

Hard copper pipe in compliance with EN 1057, for bending diameter × wall thickness (mm)

8 × 0.8
10 × 1.0

Hard copper pipe in compliance with EN 1057, not for bending diameter × wall thickness (mm)

8 × 0.8
10 × 1.0
12 × 1.0
15 × 1.0
18 × 1.0
22 × 1.0
22 × 1.5
28 × 1.2
28 × 1.5
35 × 1.5
42 × 1.5
42 × 2.0
54 × 1.5



STAINLESS STEEL

Stainless steel is a material well-suited to applications such as tap water installations. It has high strength and durability. Its hard, smooth surface makes it difficult for bacteria to attach and grow.

Stainless steel pipe in compliance with EN 10088-3-1.4404 (AISI 316L), for bending diameter × wall thickness (mm)

6 × 1.0
8 × 1.0
10 × 1.0
12 × 1.0
15 × 1.0
18 × 1.0
22 × 1.0
22 × 1.5
28 × 1.0
28 × 1.2
28 × 1.5
35 × 1.0

Stainless steel pipe in compliance with EN 10088-3-1.4404 (AISI 316L), not for bending diameter × wall thickness (mm)

35 × 1.5
42 × 1.5
54 × 1.5

Stainless steel pipes in compliance with EN 10088-3-1.4306 (AISI 304L) diameter × wall thickness (mm), for bending

18 × 1.0
22 × 1.0

We also stock a range of copper pipes for refrigeration applications, as well as black steel pipes. For further information on these pipe types, please contact one of our salespeople. Contact details for sales staff can be easily found at lkarmatur.se

Cutting

Among other processes, cutting is performed by automatic cutting machines that cut soft copper pipe from coils and stainless steel pipe from straight lengths. Cutting is performed by a cutting wheel rather than a blade, making the cut more exact and avoiding swarf build-up and the need to deburr.



SOFT COPPER PIPE ON ROLL

Automatic cutting machine

- Minimum cut length 50 mm

HARD COPPER PIPE

Half-automatic cutting machine for hard copper pipe

- Minimum cut length 15 mm

STAINLESS STEEL

Automatic cutting machine

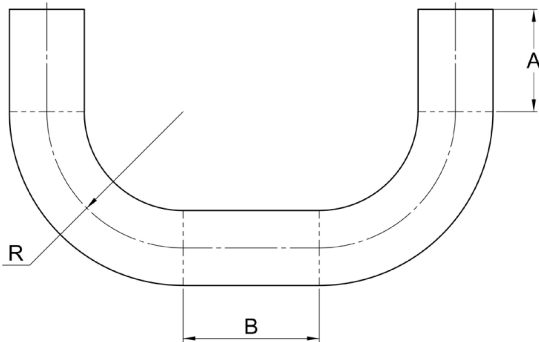
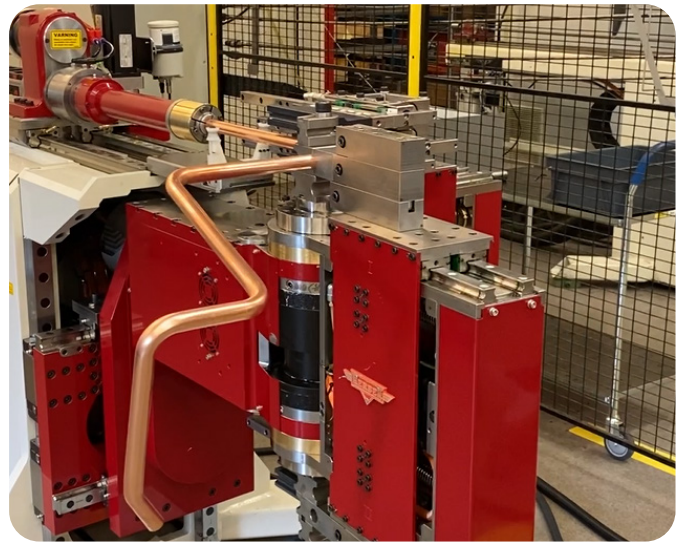
- Minimum cut length 50 mm

Manual saw

- Minimum cut length 15 mm

Bending

We use high-quality CNC machines to bend copper and stainless steel in diameters from 6 mm up to 42 mm.



Dimension A on the drawing refers to the minimum straight distance, which is 20 mm when soldering and 30 mm when connecting with a compression fitting. To avoid subsequent cutting, a straight length of 40 mm is preferable.

Dimension B refers to the minimum distance between two bends.

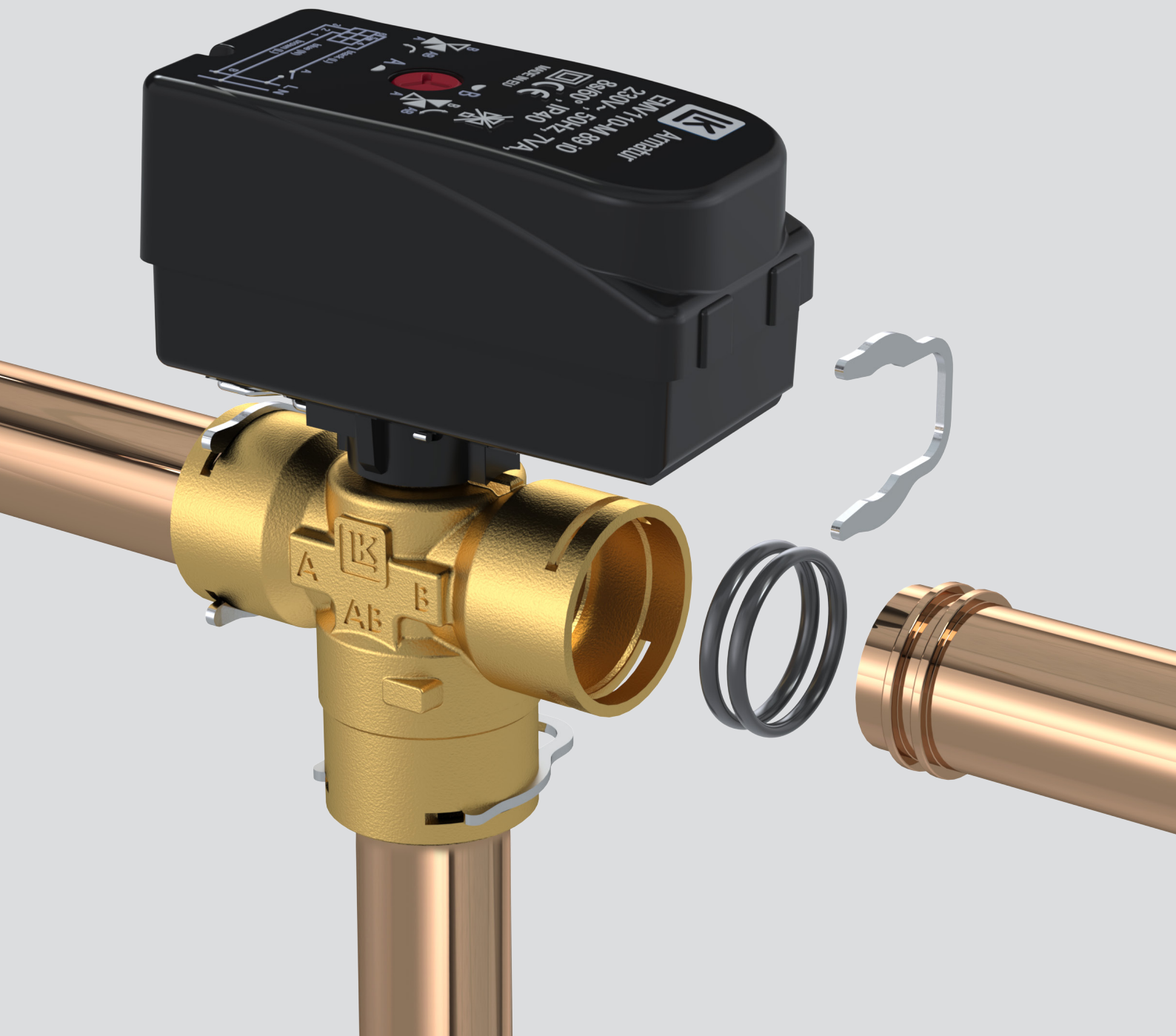
Dimension R is the bend radius.

THE FOLLOWING APPLIES TO BENDING MACHINES

Pipe diameter (mm)	Radius R (mm)	Clamp distance B (mm)
6	16	40
8	24	30
10	30	40
12	21.6	40
15	22.5/30	30/40
18	27	30/40
22	33/40	40
28	40/55	40
35	52.5/70	80/60
42	60	60

SEE ONE OF OUR BENDING MACHINES IN ACTION:





Connect quickly and securely

Quick-coupling solutions save assembly time and ensure correct installation – every time.

End forming for double O-ring seal

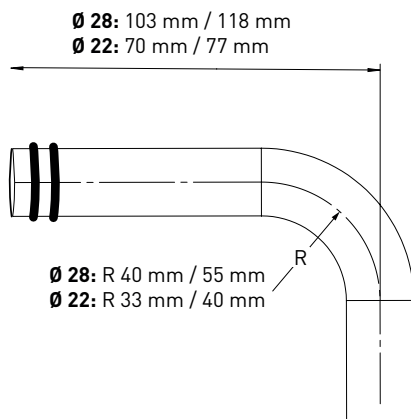
To meet a growing trend for products that can be installed quickly and easily, we have developed a quick-coupling solution.

A specially designed end form with two O-rings to seal the joint between the two elements. By using double O-rings, we create a more secure, guaranteed sealed connection. The pipe is held in place in the valve by a locking pin.

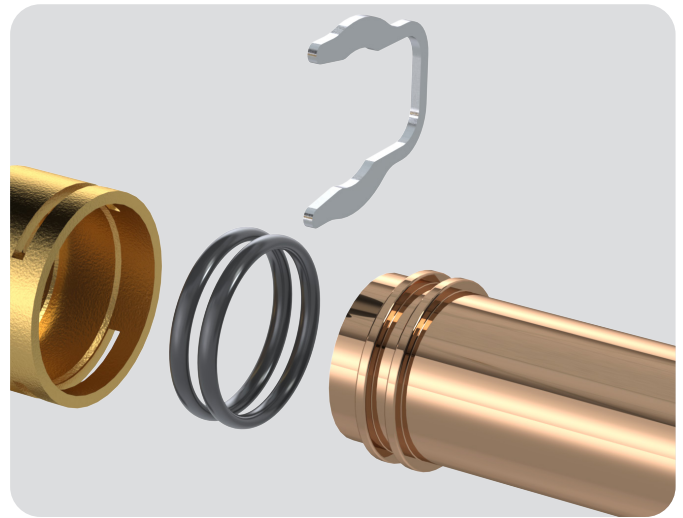
End forming can be performed on copper or stainless steel pipes with dimensions $\varnothing 22$ mm and $\varnothing 28$ mm.

END FORMING FOR DOUBLE O-RINGS TAKES INSTALLATION TO A NEW LEVEL

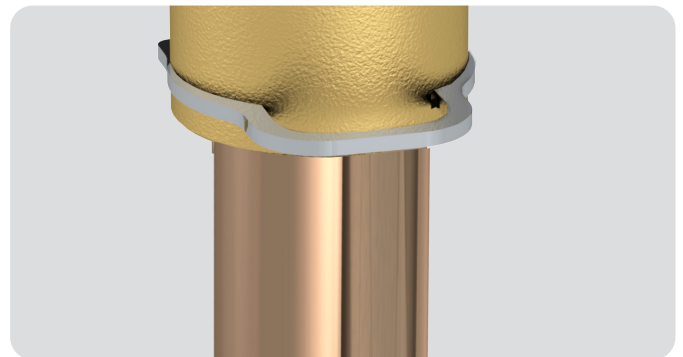
- Quick installation
- Exactly the same assembly procedure every time
- Allows for any tolerances
- Double O-rings for a guaranteed sealed connection



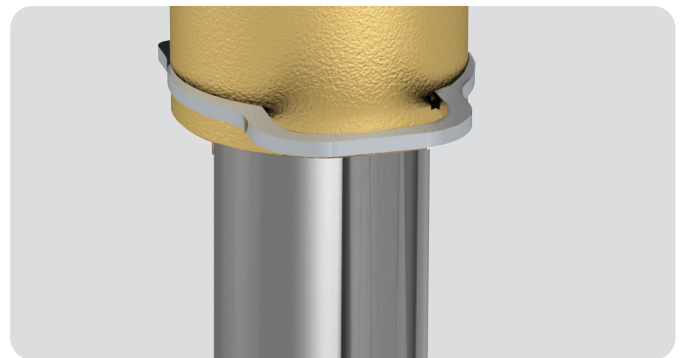
End forming machine on our production line.



Double O-rings for guaranteed sealed connections that allow for tolerances.



Quick and secure fastening with locking pin.



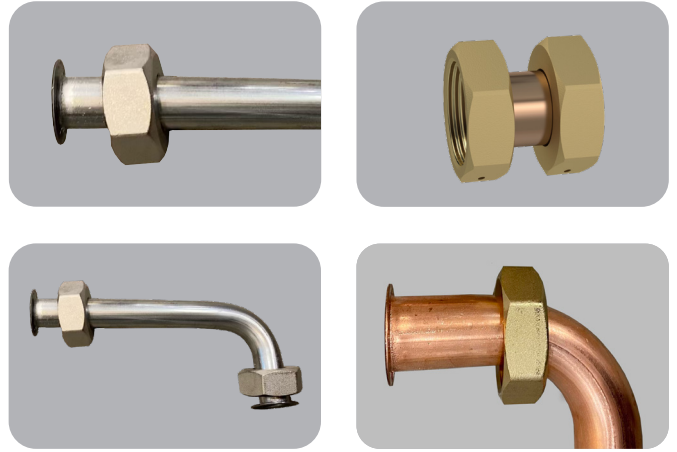
End forming can be performed on copper or stainless steel pipes.



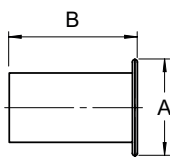
Multi-zone valve installed using quick-coupling solution.

Flanging

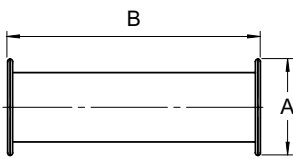
Flanging is an efficient and relatively simple method for creating sealing joints on a pipe. By flanging the end of the pipe, a secure seal can be performed using a washer and nut.



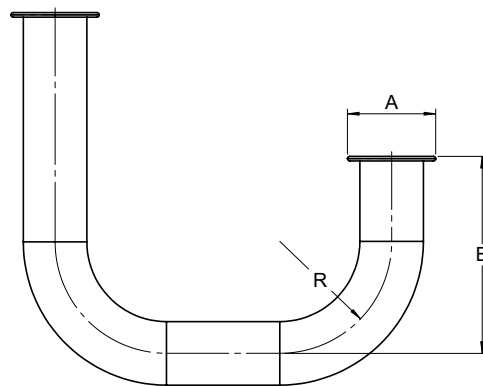
STRAIGHT PIPE WITH FLANGE FOR ONE NUT



STRAIGHT PIPE WITH FLANGES FOR TWO NUTS



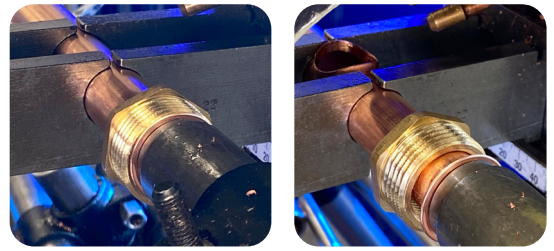
BENT PIPE WITH FLANGE



Pipe dimension (mm)	A Flange dimension for nuts	STRAIGHT PIPE WITH FLANGE FOR ONE NUT	STRAIGHT PIPE WITH FLANGES FOR TWO NUTS	BENT PIPE WITH FLANGE	
		B Min. length for flanging (mm)	B Min. length for flanging (mm)	B Min. length for flanging (mm)	R Bend radius (mm)
12	1/2"	20	45	48	21.6
15	1/2"	20	45	50	22.5
15	3/4"	20	55	56	30
18	3/4"	20	55	53	27
18	1"	20	55	53	27
22	3/4"	20	42	53	33
22	3/4"	20	42	60	40
22	1"	20	42	53	33
22	1"	20	42	60	40
22	1 1/4"	20	110	53	33
22	1 1/4"	20	110	60	40
28	1"	30	110	75	55
28	1 1/4"	30	110	75	55
28	1 1/2"	30	110	75	55
35	1 1/2"	30	110	93	52.5
42	2"	40	110	100	60

Collaring

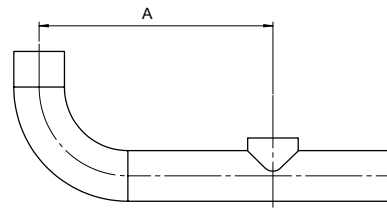
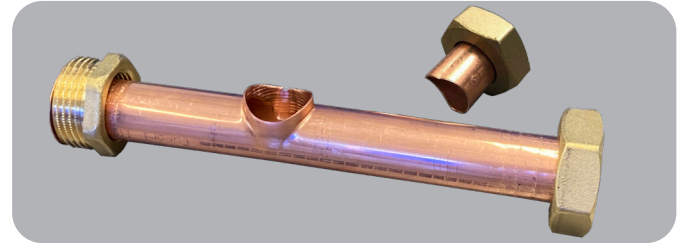
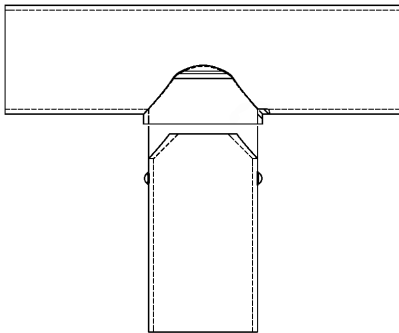
By making a collared T-junction, the need for a T-pipe is removed, thus reducing the number of soldered (copper) or welded (stainless steel) joints.



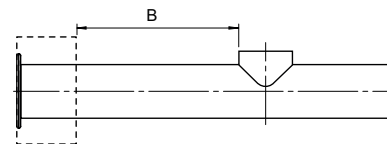
COLLARING FOR SOLDERING, INSERT PIPE NOTCHED

A radius is cut out of the connecting pipe (notching) to avoid disturbing the flow in the junction.

This method is suitable for both heating and tap water systems.



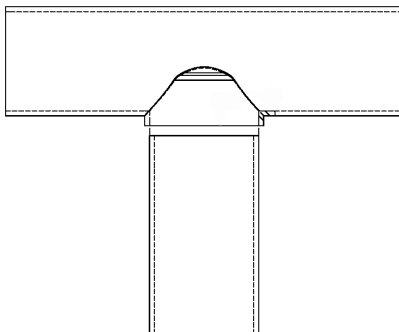
A: Minimum c/c distance between the bend and the collar is 86 mm.



B: Minimum distance between the collar and the fitting is 15 mm.

COLLARING FOR FILLET WELDING

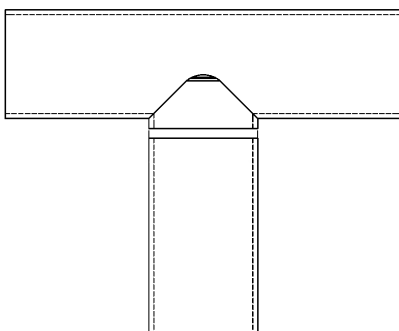
The connecting pipe is inserted in the collared pipe but without notching. This method is suitable for installations in heating systems with no special hygiene requirements.



Copper pipe		8	10	12	15	18	22	28	35
Collar's dimension Ø									
Pipe dimension Ø	12	1.0	1.0	1.0					
	15	1.0	1.0	1.0					
	18	1.0	1.0	1.0					
	22	1.0			1.5	1.5	1.5		
	28	1.0	1.2	1.2	1.5	1.5		1.5	
35	1.0			1.5	1.5			1.5	
42	1.0	1.2	1.2	1.5	1.5				
(mm)		Wall thickness							

COLLARING FOR BUTT WELDING

The connecting pipe is not inserted in the collared pipe but welded along the joint after it has been filed down. This method is suitable for installations in tap water systems, as these demand a high level of hygiene.



Stainless steel pipe		10	12	15	18	22	28
Collar's dimension Ø							
Pipe dimension Ø	12	1.0	1.0				
	15	1.0	1.0	1.0			
	18	1.0			1.0		
	22	1.0					
	28	1.0	1.0	1.0	1.0	1.0	1.0
	35	1.0	1.0	1.0	1.0		
	42	1.0	1.2	1.2	1.2		
(mm)		Wall thickness					

Soldering and welding

TECHNICAL DATA

Soldering	Complies with standard EN ISO 12799, EN ISO 12797. All brazers are certified according to EN ISO 13585.
Welding	Welding managers are IWS certified.
Manual welding	Complies with standard EN ISO 5817. All welders are certified according to EN ISO 6906-1.
Orbital welding	Complies with standard EN ISO 288-5. All welders are certified according to EN ISO 14732.

WELDING

We weld the following materials:

- Stainless steel–Stainless steel

BUTT WELDING

- Pipe-to-pipe
- Can be performed manually or in an orbital welding machine

FILLET WELDING

- Pipe-in-pipe
- Performed manually

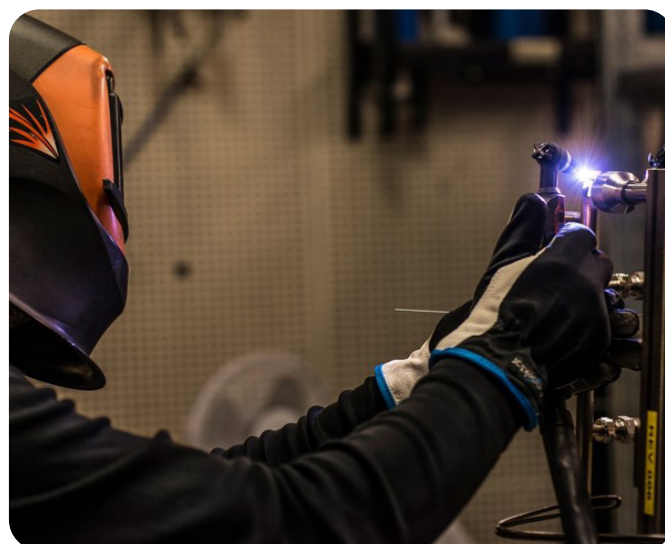
	Heating system	Tap water system
Fillet welding	Yes	
Butt welding	Yes	Yes
Orbital welding	Yes	Yes
Soldering	Yes	Yes

Insulation

TECHNICAL DATA

Material	Armaflex HT & Armaflex AF
Thickness	13 mm
Working temperature	Armaflex HT: Min. -50 °C/ Max. 150°C Armaflex AF: Min. -50°C/Max. 110°C
For pipe dimensions	Ø 12–42 mm

Insulating pipes prevents heat loss, condensation and freezing. By insulating, you both ensure operation and save money.

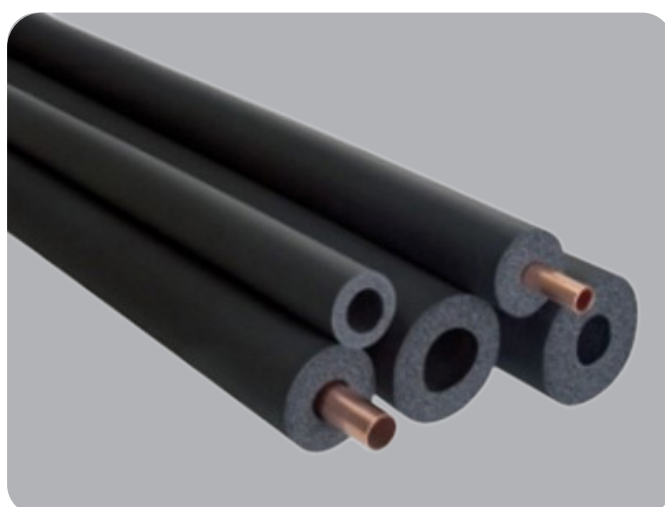


SOLDERING

We solder the following materials:

- Copper–Copper
- Copper–Brass/red brasses

SEE ONE OF OUR BRAZERS IN ACTION:



Quality



It is important to us that we offer our customers the right level of quality. To this end, we work with continuous improvement so that we constantly develop.

Simpler, smarter and more sustainable – at LK we believe there's always a better way of doing things. We prefer innovation to the status quo and simplicity to complexity in everything we do.

Armed with this conviction, here at LK we develop smart products and system solutions for heating, water and sanitation. We conduct an annual customer survey to ensure that we remain constantly updated on how you perceive us as a supplier. You and your answers are important to us in our future quality-assurance work.

Our business management system meets EN ISO 9001 and EN ISO 14001 requirements regarding the development, manufacture and sale of HVAC equipment, automated temperature control systems and prefabricated system solutions.

We work to general tolerances for pipe manufacture in compliance with EN ISO 2768-1(C).

Our brazers have passed soldering tests according to EN ISO 13585. Our welders have passed welding tests according to EN ISO 9606-1 for manual welding and EN ISO 14732 for orbital welding.

If you would like to learn more about our quality assurance management, please visit our website at lkarmatur.com.



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MAKING EVERYDAY LIFE SIMPLER AND SMARTER

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LK Armatur is one of the leading manufacturers of valves and systems in Europe, producing millions of valves for the global HVAC market each year. Our solutions are based on a holistic view of how valves, controllers, components and prefabricated products interact to provide a complete solution. In everything from standard products to advanced tailor-made solutions, we make sure that the solution you need today also equips you for tomorrow's challenges.

