



Controls and valves for heating systems

COMPANY PROFILE

LK Armatur is one of Scandinavia's leading manufacturers of valves, components and prefabricated products for the heating market. We produce more than one million valves a year, ranging from simple standard valves to sophisticated, customized special products.

LK Armatur products are sold in more than 40 countries all over the world where energy saving and environmental awareness have become a matter of course.

Our capabilities

- Technical competence
- Continuous product development
- High-tech quality products
- Just in time delivery
- Competitive prices



LK 520 Multifill®

Combination valve with insulation, for filling, mixing and filtering with refrigerant fluid.

TECHNICAL DATA

Working temperature	4°F - +180°F
Max. working pressure	150 psi
Glycol and ethanol mixture	Max 50%
Material valves	Brass EN 12165 CW617N
Material filter element	Stainless steel EN 10088 1.4310
Mesh opening	1.0 mm
Material insulation	Expanded polystyrene (EPS)
Connections	2 connections with male thread G ³ /4 for refilling with refrigerant fluid and 2 pipe connections with male thread as per part list

FITTING/INSTALLATION

The arrow on the valve body indicates the direction of the flow. The male thread has to be sealed in the usual manner.

To avoid condensation and possible icing, the filling unit should be insulated with the enclosed insulation.

OPERATION AND MAINTENANCE

Filling with refrigerant

Close valve 1. Connect the refrigerant fill to valve 3 according to the flow arrow. Connect the refrigerant return to valve 4. After filling, close the filling valves 3 and 4, open valve 1.

Cleaning the filter

Close valves 1 and 2, unscrew the filter cover 5, clean the filter. When refitting, the tap below the filter holder should be fitted in the hole provided in the filter housing. Fill with a few centiliters of refrigerant to prevent air entering the system.

Apart from cleaning the filter, no maintenance is required. The installation should be checked regularly.

Article Type	Art. no.	Dim.	CV
LK 520-G25	091043	G1 male x G1 male	11.5
LK 520-G32	091193	G1¼ male x G1¼ male	25.3





Insulation

Dim.	L (mm)	W (mm)	H (mm)
25	213	170	83
32	231	200	90

LK 520-25







Zone valve LK 525

Zone valve for combined heating and tap water systems.

TECHNICAL DATA

3-way valve	Motorised 3-way valve for on/off control
Actuator	7 VA, 115 VAC, 60 Hz
Working temperature	+41°F - +180°F (+190°F briefly)
Ambient temperature	$+34^{\circ}F - +140^{\circ}F$
Max. working pressure	150 psi
Max. differential pressure	15 psi
Leakage	< 0,1% of CV
Operation time	Approx. 8 seconds
Material valve housing	Brass EN 12165 CW617N
Pipe connections	Compression fitting or male thread
Electrical connection	3-wire or Molex® connector
Signal connector	Single pole SPST
Protection class	IP 40
Cable specification connection cable	R03VV, 3x0.75 mm ²
Wire colours	Blue, brown, black
External insulation	PVC, black
Connector	Molex® or Molex® compatible connector, 6-circuit
Type approval certificates:	
TÜV (only the actuator)	

CE

FITTING/INSTALLATION

The zone valve must not be installed with the motor underneath the valve unit. The motor is installed by pressing it on and snapping the linch pin in place. The motor is removed by pulling the pin out and pulling the motor straight out.

It is easier to fit the compression fitting if a lubricant is applied to the thread and bevel. Tighten first by hand and then with a box spanner. Soft pipes are to be fitted with a support sleeve. The thread has to be sealed in the usual manner. Alternatively, a flat connection with captive nut and flat gasket.

OPERATION AND MAINTENANCE

In case of a power failure, the valve cone stays in its current position. When the power is switched off, the valve can be manually set to the centre position, which distributes the flow between the heating and tap





LK 525 with compression fitting



LK 525 with male thread



Wiring diagram



water circuits. Remove the motor and turn the spindle about 30°, or turn until hot water flows through both valve ports. When the power is restored, turn the valve back to its original position and re-install the motor. Please note that the motor can only be installed in one position.

Article Type	Art. no	Note / Dimension	сv	A mm	B mm	C mm
LK 525	066070	Valve / 22 mm	8	138	56	25
LK 525	066071	Valve / 28 mm	9.2	142	56	30
LK 525	066072	Valve / G1 male	8	125	31	-
LK 525	066073	Valve / G1¼ male	9.2	127	37	-
EMV 110-M SPST	066063	Motor 24 VAC with Molex®				
Cable-M	066083	3x0,75 L=1000 mm with Molex ®				



LK 810 Loading unit

Compact loading unit for all types of solid fuel boiler/storage tank installations.

TECHNICAL DATA

Voltage	115 VAC 60 Hz
Power consumption	65-95 W depending on pump speed
Max. boiler capacity	90 kW/130 000 BTU with 86°F ΔT
Max. operating temperature	230°F
Max. operating pressure	150 psi
Max. flow	12.3 US GPM
Return temperatures	131°F, 140°F, 149°F or 158°F
Loading pump	Grundfos UPSO 65 Low Energy
Sizes	Rp 1", Rp 1¼" or 28 mm compression fittings. NPT threads available.
Material	Body of brass EN 1982 CB752S
Dimensions WxDxH	215 x 130 x 270 mm
Weight	10.6 lb
Delivered with EPP-insulatio	n



Loading unit with isolation



Design

The LK 810 loading unit ensures a minimum return-water temperature into the solid fuel boiler, which increases boiler efficiency, prevents tarring and considerably prolongs the lifetime of the boiler. L810 eliminates the risk of destructive thermal shock caused by surges of cold water and renders a more effective burning. The boiler quickly reaches the right working temperature. In the end phase of the firing an automatic balancing valve closes the by-pass loop. This results in a maximum supply from boiler to storage tank. LK 810 is for boilers with a capacity up to 90 kW/130 000 BTU.

LK 810 loading unit comes in two versions, with or without backflow preventer. With the backflow preventer the LK 810 automatically allows self-circulation of the remaining hot water to the storage tank, as soon as the fire has gone out or in case of power failure. Back flow from storage tank to heating boiler is prevented.

MOUNTING/INSTALLATION

LK 810 is mounted upright on the return pipe. The loading unit is reversible and can be installed on the right- or left-hand side of the heating boiler.

OPERATION AND MAINTENANCE

LK 810 normally requires no maintenance. The loading unit has three ball valves. Any part can be changed without draining the system.

Article Type	Art. no.	Dim.	Temperature
LK 810 with backflow preventer	180593	NPT 1¼"	131°F
LK 810 with backflow preventer		NPT 1¼"	140°F
LK 810 with backflow preventer		NPT 1¼"	149°F
LK 810 with backflow preventer		NPT 1¼"	158°F



Example of installation





LK 820 Thermic Loading Valve

Automatic thermally operated 3-way loading valve for solid-fuel boiler/ storage tank installations.

TECHNICAL DATA

13°F, 131°F, 142°F, 151°F, 162°F or 176°F
142°F, 151°F, 162°F, 176°F) 230°F 113°F, 131°F) 203°F
50 psi
Brass EN 12165 CW617N

Design

LK 820 ensures a minimum return-water temperature in the heating boiler, which increases the efficiency, prevents tarring and considerably prolongs the lifetime of the solid-fuel boiler. LK 820 eliminates the risk of destructive thermal shock to both steel and cast iron boilers. LK 820 thermally operated loading valve renders a more effective burning and is therefore a necessary part of a solid fuel installation with a storage tank. LK 820 loading valves have 113°F, 131°F, 142°F, 151°F, 162°F or 176°F opening temperatures.

FITTING/INSTALLATION

The valve can be mounted in any position.

LK 820 loading valves can be adapted for right- and left-hand mounting.

OPERATION AND MAINTENANCE

Article Type	Art. no.	CV	Α	B mm	C mm	D mm	E mm	F mm	Weight Ib
LK 820 113°F	180495	4.6	G ¾"	80	21	35	66	40	1.6
LK 820 113°F	180496	6.9	G 1"	80	21	35	66	40	1.6
LK 820 113°F	180497	10.4	G 1¼"	84	21	35	68	42	1.6
LK 820 113°F	180498	13.8	G 1½"	84	21	35	68	42	1.8
LK 820 131°F	180503	4.6	G ¾"	80	21	35	66	40	1.6
LK 820 131°F	180504	6.9	G 1"	80	21	35	66	40	1.6
LK 820 131°F	180505	10.4	G 1¼"	84	21	35	68	42	1.6
LK 820 131°F	180506	13.8	G 1½"	84	21	35	68	42	1.8
LK 820 142°F	180511	4.6	G ¾"	80	21	35	66	40	1.6
LK 820 142°F	180512	6.9	G 1"	80	21	35	66	40	1.6
LK 820 142°F	180513	10.4	G 1¼"	84	21	35	68	42	1.6
LK 820 142°F	180514	13.8	G 1½"	84	21	35	68	42	1.8















Article Type	Art. no.	CV	Α	B mm	C mm	D mm	E mm	F mm	Weight Ib
LK 820 151°F	180519	4.6	G ¾"	80	21	35	66	40	1.6
LK 820 151°F	180520	6.9	G 1"	80	21	35	66	40	1.6
LK 820 151°F	180521	10.4	G 1¼"	84	21	35	68	42	1.6
LK 820 151°F	180522	13.8	G 1½"	84	21	35	68	42	1.8
LK 820 162°F	180527	4.6	G ¾"	80	21	35	66	40	1.6
LK 820 162°F	180528	6.9	G 1"	80	21	35	66	40	1.6
LK 820 162°F	180529	10.4	G 1¼"	84	21	35	68	42	1.6
LK 820 162°F	180530	13.8	G 1½"	84	21	35	68	42	1.8
LK 820 176°F	180535	4.6	G ¾"	80	21	35	66	40	1.6
LK 820 176°F	180536	6.9	G 1"	80	21	35	66	40	1.6
LK 820 176°F	180537	10.4	G 1¼"	84	21	35	68	42	1.6
LK 820 176°F	180538	13.8	G 1½"	84	21	35	68	42	1.8



LK 821 Thermic Bypass Valve

Thermic 3-way bypass valves designed to change the direction of flow in hydronic heating applications.



TECHNICAL DATA

Opening temperature	113°F, 131°F, 142°F, 151°F, 162°F or 176°F
Max. operating temperature	(142°F, 151°F, 162°F, 176°F) 230°F (113°F, 131°F) 203°F
Max. operating pressure	150 psi
Material valve body	Brass EN12165 CW617N

Design

LK 821 is an automatic valve operated by a self-contained thermostatic element. The valves may be selected with 113°F, 131°F, 142°F, 151°F, 162°F or 176°F opening temperatures. The valve works without additional energy. LK 821 bypass valves have a wide range of application. In a solarsystem the valve ensures an optimum stratification of temperature in the storage tank.

FITTING/INSTALLATION

LK 821 bypass valves can be adapted for right- and left-hand mounting. The valve can be mounted in any position.

OPERATION AND MAINTENANCE

Article Type	Art. no.	CV	Α	B mm	C mm	D mm	E mm	F mm	Weight Ib
LK 821 113°F	180543	4.6	G ¾"	80	21	35	66	40	1.6
LK 821 113°F	180544	6.9	G 1"	80	21	35	66	40	1.8
LK 821 113°F	180545	10.4	G 1¼"	84	21	35	68	42	2
LK 821 113°F	180546	13.8	G 1½"	84	21	35	68	42	2.2
LK 821 131°F	180551	4.6	G ¾"	80	21	35	66	40	1.6
LK 821 131°F	180552	6.9	G 1"	80	21	35	66	40	1.8
LK 821 131°F	180553	10.4	G 1¼"	84	21	35	68	42	2
LK 821 131°F	180554	13.8	G 1½"	84	21	35	68	42	2.2
LK 821 142°F	180559	4.6	G ¾"	80	21	35	66	40	1.6
LK 821 142°F	180560	6.9	G 1"	80	21	35	66	40	1.8
LK 821 142°F	180561	10.4	G 1¼"	84	21	35	68	42	2
LK 821 142°F	180562	13.8	G 1½"	84	21	35	68	42	2.2









Article Type	Art. no.	cv	A	B mm	C mm	D mm	E mm	F mm	Weight Ib
LK 821 151°F	180567	4.6	G ¾"	80	21	35	66	40	1.6
LK 821 151°F	180568	6.9	G 1"	80	21	35	66	40	1.8
LK 821 151°F	180569	10.4	G 1¼"	84	21	35	68	42	2
LK 821 151°F	180570	13.8	G 1½"	84	21	35	68	42	2.2
LK 821 162°F	180575	4.6	G ¾"	80	21	35	66	40	1.6
LK 821 162°F	180576	6.9	G 1"	80	21	35	66	40	1.8
LK 821 162°F	180577	10.4	G 1¼"	84	21	35	68	42	2
LK 821 162°F	180578	13.8	G 1½"	84	21	35	68	42	2.2
LK 821 176°F	180583	4.6	G ¾"	80	21	35	66	40	1.6
LK 821 176°F	180584	6.9	G 1"	80	21	35	66	40	1.8
LK 821 176°F	180585	10.4	G 1¼"	84	21	35	68	42	2
LK 821 176°F	180586	13.8	G 1½"	84	21	35	68	42	2.2







LK 830 Bivalent mixing valve

4-way bivalent mixing valves for heating and storage tank systems.

TECHNICAL DATA

Max. working temp	230°F
Max. working pressure	150 psi
Max. pressure difference	7.3 psi
Leakage	< 0.5% of CV at 7.3 psi
Angle of rotation	90°
Torque	< 8.8 lb.in
Material valve body	Brass EN 12165 CW617N
Material slide/spindle	Brass EN 12164 CW614N
Material cover	Brass EN 12165 CW617N
Pipe unions	Compression fittings, male or female thread
Spindle sealing	Two o-rings
Material o-rings	EPDM

Design

LK 830 4-way bivalent valves are used as mixing valves in heating systems, where energy is taken from two heating units connected in series or parallel. The valve is also designed for storage tank systems where energy is extracted from two levels. With an automatic control unit the most favourable heat source will always be selected.

FITTING/INSTALLATION

LK 830 can be installed in any position. Union ports are marked 1-4. The valve can be adapted for right- or left-hand installation.

Threads are sealed in the usual way.

LK 830 bivalent valves are suitable for motorizing when needed.

OPERATION AND MAINTENANCE

Article Type	Art. no.	Dim.	CV	A mm	B mm	C mm	D mm	E mm
LK 830	180002	G¾" male	4.6	36	72	-	26	80
LK 830	180004	G¾" male	7.3	36	72	-	26	80
LK 830	180588	G1" male	7.3	36	72	-	26	80
LK 830	180590	G1¼" male	11.5	41	82	-	30	85













LK 840 Mixing valve

3-way mixing valves with female/male threads or compression fittings have been developed especially for hydronic heating systems.

TECHNICAL DATA

Max. operating temperature	230°F
Max. operating pressure	150 psi
Angle of rotation	90°
Torque	< 8.8 lb.in
Material valve body	Brass EN12165 CW617N
Material slide/spindle	Brass EN12165 CW617N
Material internal cover	PPS Composite
Material external cover	Aluminium EN 1706 EN AC-46100
Spindle sealing	Two O-rings
Material O-rings	EPDM

Design

The valve can be used as a mixing valve or as a diverting valve. LK 840 has excellent control characteristics.

FITTING/INSTALLATION

The valve can be mounted in any position. LK 840 can easily be adapted for right- and left-hand mounting.

LK 840 is very suitable for motorizing because of it's low torque.

OPERATION AND MAINTENANCE

Article Type	Art. no.	CV	Α	B mm	C mm	D mm	E mm	Weight Ib
LK 840	180851	2.9	G ¾"	80	21	61	74	1.6
LK 840	180852	4.6	G 1"	80	21	61	74	1.6
LK 840	180853	7.3	G 1"	80	21	61	74	1.6
LK 840	180854	9.2	G 1¼"	82	21	62	75	1.7
LK 840	180855	13.8	G 1¼"	82	21	62	75	1.7
LK 840	180856	17.3	G 1½"	84	25	65	75	1.9













LK 841 Mixing valve

4-way mixing valves with female/male threads or compression fittings have been developed especially for hydronic heating systems.

TECHNICAL DATA

Max. operating temperature	230°F
Max. operating pressure	150 psi
Angle of rotation	90°
Torque	< 8.8 lb.in
Material valve body	Brass EN 12165 CW617N
Material slide/spindle	Brass EN 12165 CW617N
Material internal cover	PPS Composite
Material external cover	Aluminium EN 1706 EN AC-46100
Spindle sealing	Two O-rings
Material O-Rings	EPDM

Design

The valve can be used as a mixing valve or as a diverting valve. LK 841 has excellent control characteristics.

FITTING/INSTALLATION

The valve can be mounted in any position. LK 841 can easily be adapted for right-and left-hand mounting.

LK 841 is very suitable for motorizing because of it's low torque.

OPERATION AND MAINTENANCE

Article Type	Art. no.	CV	Α	B mm	C mm	D mm	E mm	Weight Ib
LK 841	180868	2.9	G ¾"	80	21	61	74	1.6
LK 841	180869	4.6	G 1"	80	21	61	74	1.6
LK 841	180870	7.3	G 1"	80	21	61	74	1.6
LK 841	180871	9.2	G 1¼"	82	21	62	75	1.7
LK 841	180872	13.8	G 1¼"	82	21	62	75	1.7
LK 841	180873	17.3	G 1½"	84	25	65	75	1.9















LK 950 Valve Actuator

LK 950 valve actuator is designed to control rotary mixing valves.

TECHNICAL DATA

Power supply*	230 VAC 60 Hz, 24 VAC 60 Hz, 24
	VAC/DC 60 HZ
Dimensioning*	1.5 - 3.5 VA
Power consumption*	1.5 - 3.5 W
Torque*	44 lb.in, 88 lb.in
Angle of rotation	90°, electrically limited
Running time*	35 sec, 70 sec, 140 sec or 280 sec
Direction of operation	Selectable
Sound level	Max 35 db (A)
Position indication	Reversible scale 0-10
Operation	3-point
Connection Cable*	1.5 m, 3 x 0.75 mm ²
Manual override	Yes
Protection type	IP 40
Protection class	II (Double Insulated)
Ambient temperature	+32°F - +122°F
Storage temperature	+14°F - +176°F
Safety	CE (see Declaration of Conformity)
Measurements LxWxH	80 x 90 x 93 mm







* = depending on model

Design

LK 950 is a series of compact actuators that can be used to motorize rotary mixing valves. The actuator can be operated by a controller/compensator with a 3-point output and fits most rotary valves using an adapter. LK 950 is available in several variations and can be adapted to fit customer needs. Alternative mounting kits and an additional auxiliary switch with adjustable angle can be supplied as accessories.

FITTING/INSTALLATION

The actuator can be mounted in any position except below the valve. Thanks to its small size and compact form the LK 950 fits most installations.

The actuator is mounted directly onto to the valve spindle and fixed with one screw. An anti-rotation bolt is supplied. The angle of rotation is limited to 90° . When the motor reaches either end position the voltage supply is interrupted by limit switches. The actuator can be put into manual mode by turning the button on the housing cover which will disengage the gears. The actuator can now be put in any position by turning the handle on the front.



LK 950 is delivered, if not otherwise indicated, with a standard mounting kit and a connection cable with a length of 1.5 meters.

Article Type	Art. no.	Power supply	Torque	Running Time	Note
LK 950-NR	180742	24 VAC	44 lb.in	70 s	
LK 950-NR	180744	24 VAC	44 lb.in	140 s	
LK 950-NR	180755	24 VAC	88 lb.in	280 s	
LK 950-NR	180756	230 VAC	44 lb.in	70 s	
LK 950-NR	180759	230 VAC	44 lb.in	140 s	
LK 950-NR	180760	230 VAC	44 lb.in	140 s	3m cable
LK 950-NR	180762	230 VAC	88 lb.in	280 s	
LK 950-NR	180763	230 VAC	88 lb.in	280 s	3m cable
LK 950-NR	180764	230 VAC	88 lb.in	140 s	
LK 950-NR	180972	230 VAC	44 lb.in	280 s	incl. mounting kit for ESBE valves
LK 950-NR	180765	24 VAC/DC	44 lb.in	70 s	0 - 10V with- out cable
LK 950-NR	180767	24 VAC/DC	44 lb.in	35 s	0 - 10V with- out cable



LK 961 Electronic Temperature Controller

Electronic temperature controller for hydronic radiator and underfloor heating applications.

TECHNICAL DATA

Type of control	PI-control with micro processor
Voltage	115 VAC 60 Hz
Power consumption	3 VA
Torque	44 lb.in
Angle of rotation	90°, electrically limited
Heating curve	1 - 9, stepless
Parallel displacement	±20°F supply water temperature, stepless
Supply water limiter min.	+60°F - +95°F (Freeze protection)
Supply water limiter max.	+105°F - +195°F
Room sensor (LK 961 RB)	+54°F - +81°F
Remote control (LK 961 RC)	-18°F - +12°F
Manual Override	Yes
Protection class, actuator	IP 40
Protection class, remote control	IP 20
Dimensions actuator WxDxH	80 x 90 x 93 mm
Weight	1.3 lb





Design

LK 961 fits directly onto a mixing valve and acts as a weather compensated heating controller. The LK 961 automatically adjusts the supply water temperature as the outdoor temperature changes. LK 961 includes a freeze protection feature and an adjustable minimum and maximum temperature limiter for the supply water temperature.

LK 961 includes:

- Valve actuator with built-in electronics
- Mounting kit
- Adapter 115/18 VAC 200 mA with 1.7 m cable
- Supply water sensor T1 with 1 m cable
- Outdoor sensor T2 with 15 m cable
- Room temperature sensor LK 961 RB with 15 m cable (optional)
- Temperature remote control LK 961 RC with 15 m cable (optional)

FITTING/INSTALLATION

LK 961 is very easy to install as all cables are ready to connect without tools. The plug-in adapter provides quick and easy do-it-yourself installation saving on labor costs.

Article Type	Art. no.
LK 961 weather compensated controller	180813
LK 961 RB room temperature sensor (accessory)	180814
LK 961 RC remote control (accessory)	180815





LK 962 Electronic temperature controller

Electronic temperature controller for radiator and underfloor heating applications.

TECHNICAL DATA

Type of control	PI-control with micro processor
Voltage	115 VAC 60 Hz
Power consumption	3 VA
Torque	44 lb.in
Angle of rotation	90°, electrically limited
Supply water limiter, min.	+41°F – +86°F, (Freeze protection)
Supply water limiter, max.	$+68^{\circ}F - +176^{\circ}F$
Room temperature setting	$+41^{\circ}F - +79^{\circ}F$
Night setback	7 or 9 hours
Temperature setback	2°F, 4°F or 6°F (room temperature)
Indication	Four LED indicators
Manual Override	Yes
Protection class, room thermostat	IP 20
Protection class, actuator	IP 40
Dimensions, room thermostat WxDxH	70 x 30 x 70 mm
Weight	1.8 lb





Design

LK 962 includes an electronic timer with night and day program, adjustments for minimum and maximum supply water temperatures and a freeze protection feature. All essential settings are adjustable at the room thermostat.

LK 962 actuator fits directly onto the mixing valve and can easily be integrated into existing heating systems. LK 962 needs no outdoor sensor. It responds to all kinds of temperature changes in the house caused by e.g. solar heat through windows, strong winds etc. The micro processor compensates for such changes in temperature which a system with an outdoor sensor cannot do.

LK 962 is an advanced electronic temperature controller. Through impulses from the room sensor, changes in room temperatures are forwarded to a micro processor which directs the actuator to set the mixing valve in the position that corresponds to the heat required in the building.



LK 962 includes:

- Room thermostat with micro processor, electronic timer with daily program facility, four LEDs for indication
- Valve actuator
- Mounting kit
- Adapter 115/18 VAC 200 mA with 1.7 m cable
- Supply water sensor T1 with 1 m cable
- Actuator cable 15 m
- Actuator cable 23 m (optional)
- Actuator cable 40 m (optional)
- Actuator cable 60 m (optional)

FITTING/INSTALLATION

LK 962 is very easy to install as all cables are ready to connect without tools. The plug-in adapter provides quick and easy do-it-yourself installation saving on labor costs. LK 962 is easy to program and use.

Article Type	Art. no.
LK 962 room temperature controller	180626
Actuator cable 23 m (accessory)	180095
Actuator cable 40 m (accessory)	180096
Actuator cable 60 m (accessory)	180097



LK 964 & LK 965 Electronic constant temperature controller

Compact electronic constant temperature controller designed to operate 3- and 4-way mixing valves in underfloor heating, solid fuel and industrial applications.

TECHNICAL DATA

Type of control	PI-control with micro processor
Voltage	115 VAC 60 Hz
Power consumption	3 VA
Angle of rotation	90°, electrically limited
Torque	44 lb.in
Temperature range	LK 964: +32°F- +194°F, stepless
	LK 965: +50°F - +176°F, stepless
Running time	140 seconds
Max. temperature of sensor	+230°F
Manual override	Yes
Indication	Two LEDs indicators
Protection class, actuator	IP 40
Protection class, remote control (LK 965)	IP 20
Dimensions actuator WxDxH	80 x 90 x 93 mm
Weight	LK 964 1.3 lb / LK 965 1.8 lb







LK 964 in an underfloor heating



LK 964 in a solid fuel system



Design

The supply water temperature can be selected steplessly from 32°F to +194°F with LK 964 and from +50°F to +176°F with LK 965.

LK 964 includes:

- LK 964 valve actuator with built-in electronics
- Mounting kit
- Adapter 115/18 VAC 200 mA with 1.7 m cable
- Supply temperature sensor T1 with 1 m cable

LK 965 includes:

- LK 965 valve actuator with built-in electronics
- Mounting kit
- Adapter 115/18 VAC 200 mA with 1.7 m cable
- Supply temperature sensor T1 with 1 m cable
- Remote control with 15 m cable

FITTING/INSTALLATION

LK 964 and LK 965 fit directly on mixing valves in new as well as existing installations. Both versions are very easy to install as all cables are ready to connect without tools. The plug-in adapter provides quick and easy do-it-yourself installation saving on labor costs.

Article Type	Art. no.
LK 964 constant temperature controller	180816
LK 965 constant temperature controller with remote control	180817



LK Sweat Transition Kit

Sweat transition for heating and domestic water applications.

TECHNICAL DATA

Max. operating temperature	230°F
Max. operating pressure	150 psi
Material	Copper acccording to DIN 1787

Design

This transition is used to convert standard European "G" male thread, to standard US copper sweat connection for $\frac{34}{7}$ through 1 $\frac{12}{7}$ copper pipes. Designed for a flat gasket union connection.





Article Type	Art. no.	Thread size (A)	Copper pipe size (B)	Length (C)	Gasket Art. no.
Sweat transition	297220	G 3/4"	3/4"	1.6"	013032
Sweat transition	297221	G 1"	1"	1.6"	013035
Sweat transition	297222	G 1 1/4"	1 1/4"	1.6"	013043
Sweat transition	297223	G 1 1/2"	1 1/2"	1.6"	013038
Sweat transition	297224	G 2"	2"	1.6"	013044



The LK Group

- four business areas



Heating & Plumbing

LK Systems is one of Scandinavia's leading heating and plumbing suppliers and provides systems developed by the company itself for water heating, underfloor heating, tap water and radiator heating. The company is a market leader in several of these areas. LK Systems AS, LK Systems OY and LK Systems Ltd. are independent companies in Norway, Finland and the UK.

LK Prefab designs and manufactures prefabricated constructions for drains as well as piping for heating and tap water. The products are used primarily in new constructions where they save time and labour during installations.

PEX-Pipes

LK Pex – High-tech manufacturing of plastic pipes in PEXa-quality. The pipes are provided to the heating and plumbing industry throughout the world. LK Pex also supplies sister companies with PEXa-pipes for their production of underfloor heating and water installations.

Industrial & Marine Valves and Strainers

LK Valves develops and manufactures industrial valves, filters and actuators for the global marine industry. A production plant, LK Valves Co.Ltd., has been established in Changzhou, China as well as a sales office, LK Valves Asia Pte.Ltd., in Singapore.

Technical Armature

LK Armatur is Scandinavia's leading manufacturer of valves, components and prefabricated heating, water and sanitation products for the European OEM market. In addition to designing and manufacturing its own products the company also markets a complementary range of trade products. LK Armatur's products are mainly used for water heating systems, heating installations and equipment for hospitals and large kitchens. There is also an energy-saving range that is used in all kinds of hydronic heating systems. A production facility for the prefabrication of pipes, LK Armatur d.o.o., has been established in Zrenjanin, Serbia.









