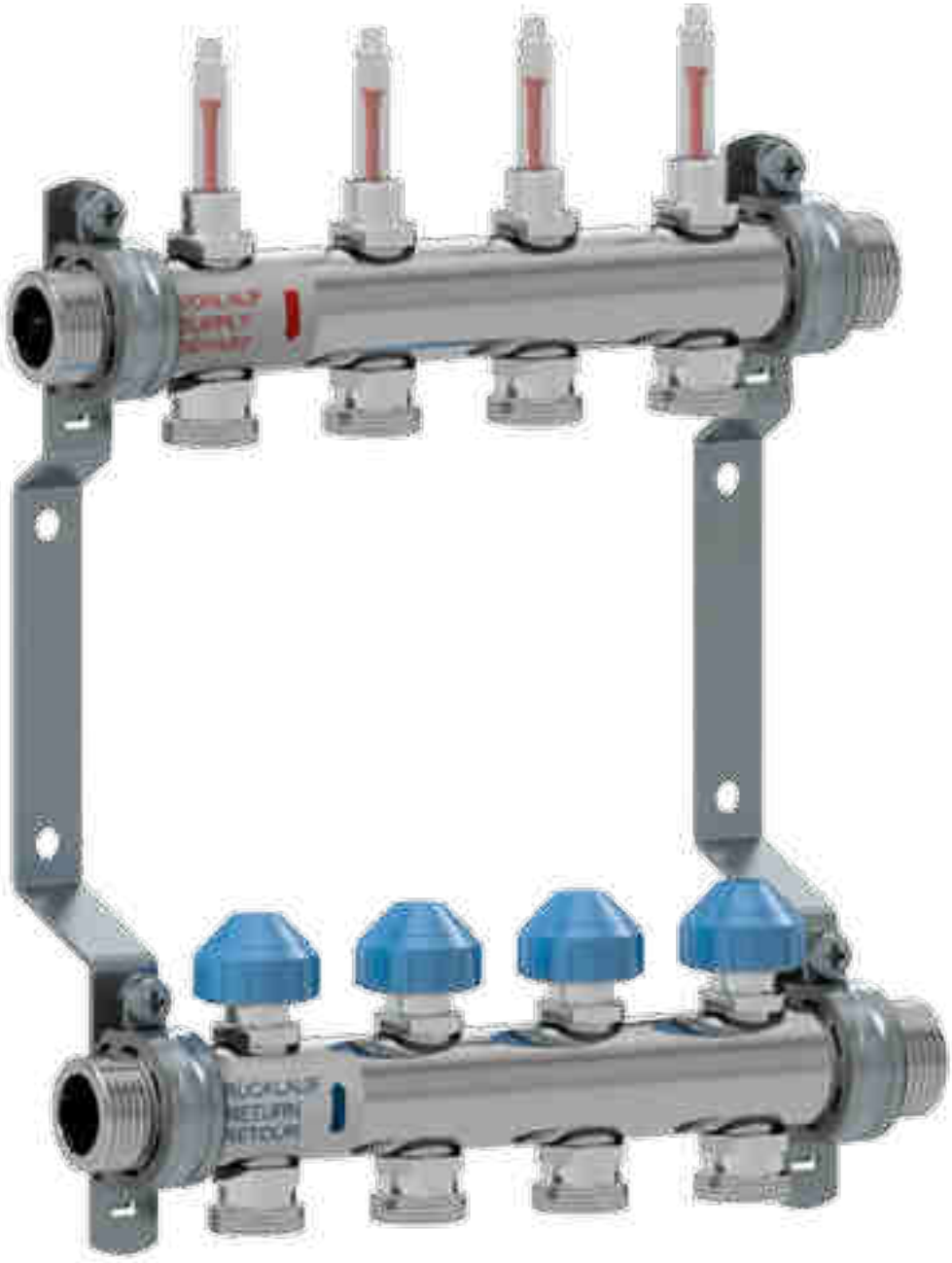
Series HKV2013AF

1" stainless steel heating manifold with flow meters

Technical Datasheet



Watts.eu

Description and Application

Stainless steel heating circuit manifolds **series HKV2013AF** are used to distribute, shut off and regulate the heating/cooling water flow of surface heating/cooling systems in accordance with DIN EN 1264-4. In addition, with these manifolds the required hydraulic balancing can be carried out very easily via the regulating valves and can be checked and read via the flow meters.

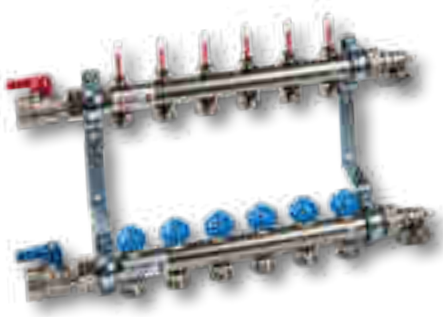
HKV2013AF and HKV2013AF+

Stainless steel round pipe manifold according to DIN EN 1264-4. Flat-sealing 1" male connection on both sides for manifold accessories and manifold control station. Heating circuit connection G ¾" with Eurocone. Centre distance of the outlets 50 mm. Ready-mounted on wall bracket, pipe clamps sound-insulated according to DIN 4109.
Supply (top): Shut-off flow meter with very low pressure loss. Flow rate display 0-4 l/min.
Return (bottom): Regulating and shut-off valves with adaptation M30 x 1.5. Closing dimension 11.8 mm.

- Type **HKV2013AF**: manifold only.
- Type **HKV2013AF**+: Manifold complete with ball valves KH-SET WMZ and end pieces KFE-90 1"(see description on page 6).



Type	Part no.		Weight
HKV2013AF-50-1" 0-4 VA02	10070000	for 2 Heating circuits	1.47 kg
HKV2013AF-50-1" 0-4 VA03	10070001	for 3 Heating circuits	1.77 kg
HKV2013AF-50-1" 0-4 VA04	10070002	for 4 Heating circuits	2.17 kg
HKV2013AF-50-1" 0-4 VA05	10070003	for 5 Heating circuits	2.47 kg
HKV2013AF-50-1" 0-4 VA06	10070004	for 6 Heating circuits	2.89 kg
HKV2013AF-50-1" 0-4 VA07	10070005	for 7 Heating circuits	3.33 kg
HKV2013AF-50-1" 0-4 VA08	10070006	for 8 Heating circuits	3.63 kg
HKV2013AF-50-1" 0-4 VA09	10070007	for 9 Heating circuits	3.89 kg
HKV2013AF-50-1" 0-4 VA10	10070008	for 10 Heating circuits	4.29 kg
HKV2013AF-50-1" 0-4 VA11	10070009	for 11 Heating circuits	4.64 kg
HKV2013AF-50-1" 0-4 VA12	10070010	for 12 Heating circuits	5.05 kg

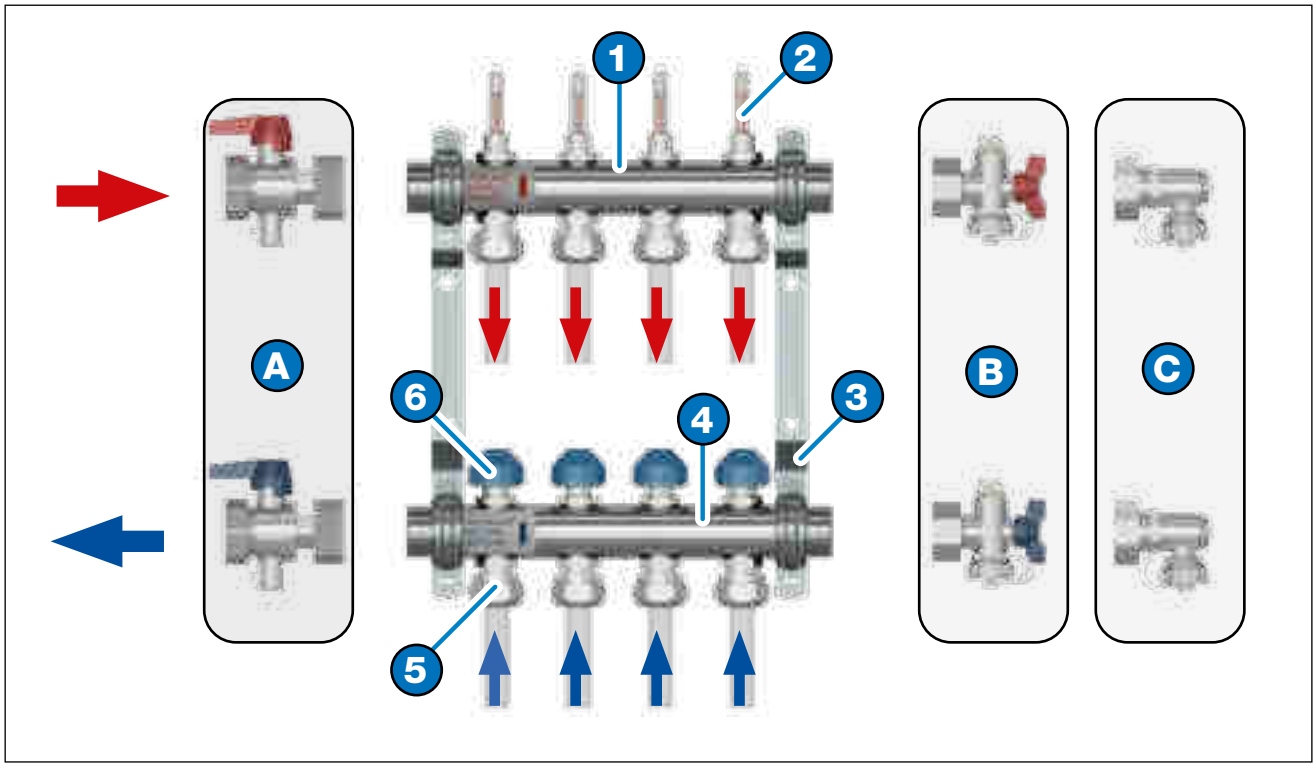


HKV2013AF+-50-1" 0-4 VA02	10070249	for 2 Heating circuits	2.54 kg
HKV2013AF+-50-1" 0-4 VA03	10070250	for 3 Heating circuits	2.84 kg
HKV2013AF+-50-1" 0-4 VA04	10070251	for 4 Heating circuits	3.24 kg
HKV2013AF+-50-1" 0-4 VA05	10070252	for 5 Heating circuits	3.59 kg
HKV2013AF+-50-1" 0-4 VA06	10070253	for 6 Heating circuits	4.00 kg
HKV2013AF+-50-1" 0-4 VA07	10070254	for 7 Heating circuits	4.45 kg
HKV2013AF+-50-1" 0-4 VA08	10070255	for 8 Heating circuits	4.75 kg
HKV2013AF+-50-1" 0-4 VA09	10070256	for 9 Heating circuits	5.01 kg
HKV2013AF+-50-1" 0-4 VA10	10070257	for 10 Heating circuits	5.41 kg
HKV2013AF+-50-1" 0-4 VA11	10070258	for 11 Heating circuits	5.81 kg
HKV2013AF+-50-1" 0-4 VA12	10070259	for 12 Heating circuits	6.21 kg

Technical Data

Hydraulic data	
Max. operating pressure	10 bar (see Pressure-Temperature Diagram)
Medium temperature	-10 to 80 °C (see Pressure-Temperature Diagram)
Media	Water or water with glycol as per VDI 2035
Connections	
Primary circuit and end set	G 1" male thread
Heating circuit	G ¾" male thread with Eurocone
Tightening torque	¾" screw fittings 25-30 Nm; 1" screw fittings 55 Nm
Connection for actuator	M30 x 1,5 / closing point 11.8 mm / stroke 2.5 mm
Materials	
Manifold	Stainless steel 1.4301
Flow meters	Brass CW617N, PPS
O-rings	EPDM
Flat seals	AFM/2
End set (optional)	Brass CW617N

Components and Accessories Overview



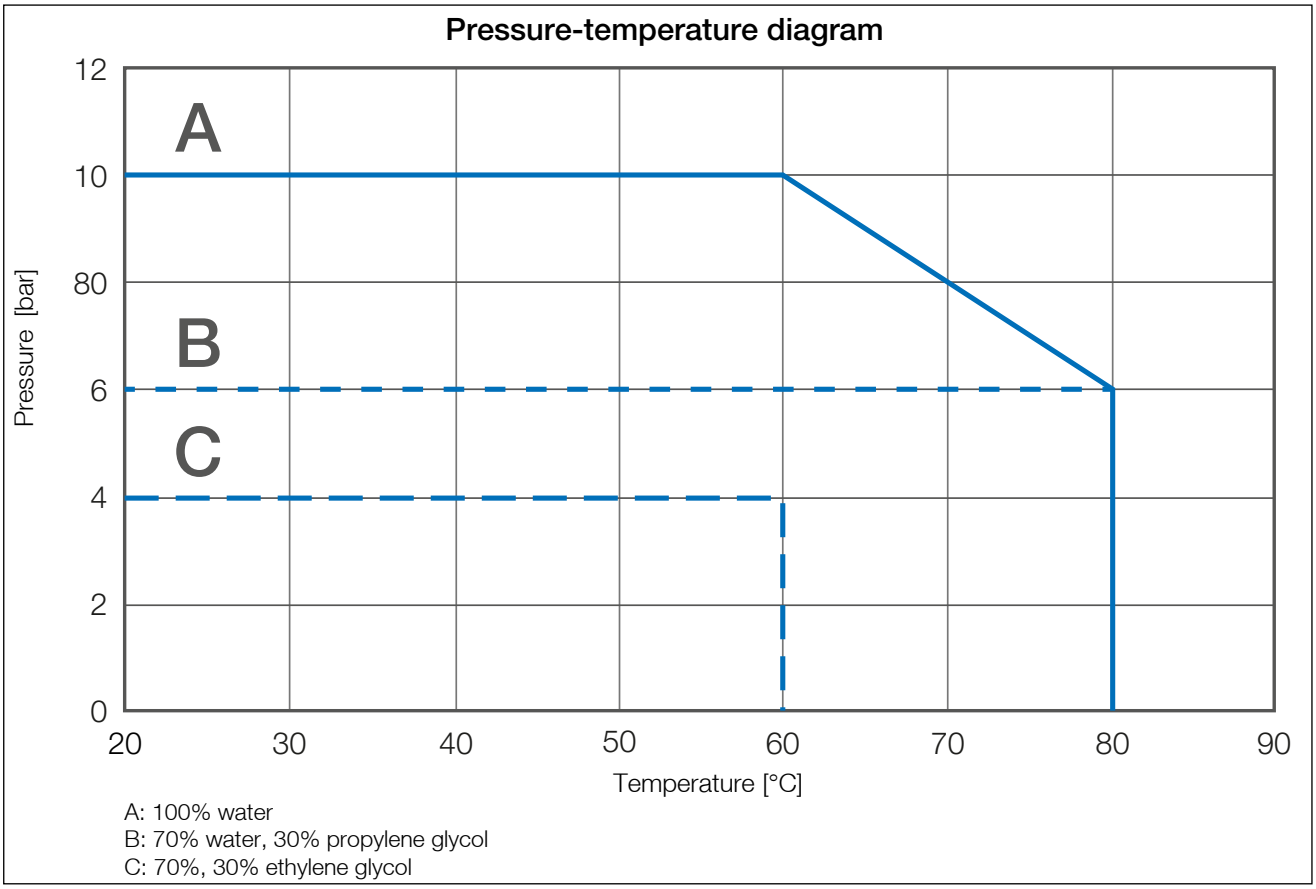
Components

1 Manifold supply
2 Flow meter with shut-off function
3 Wall brackets
4 Manifold return
5 Heating circuit connection
6 Control valve with protective cap

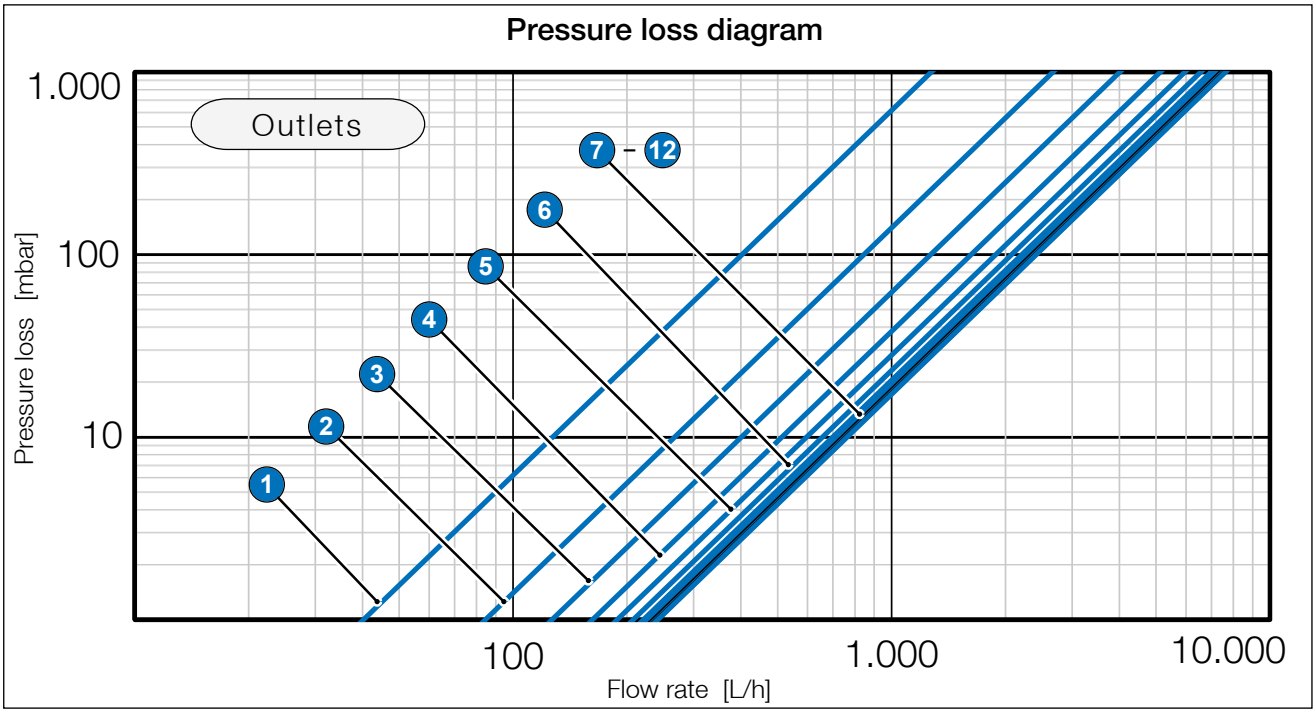
Accessories

A Ball valves set KH-SET WMZ
B End set ES-SET Quattro 1"
C End set KFE90 1"

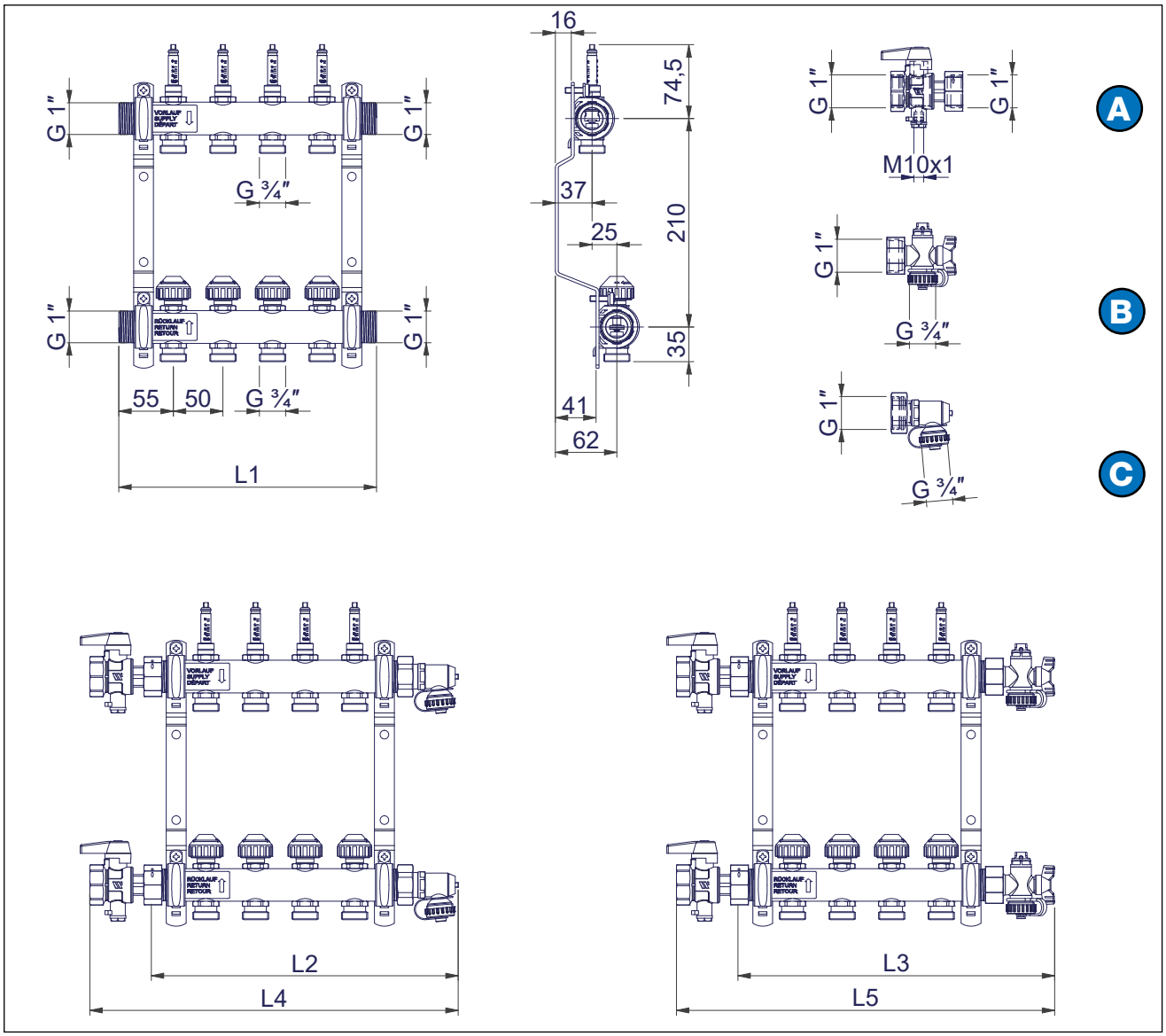
Diagrams



A: 100% water
B: 70% water, 30% propylene glycol
C: 70%, 30% ethylene glycol



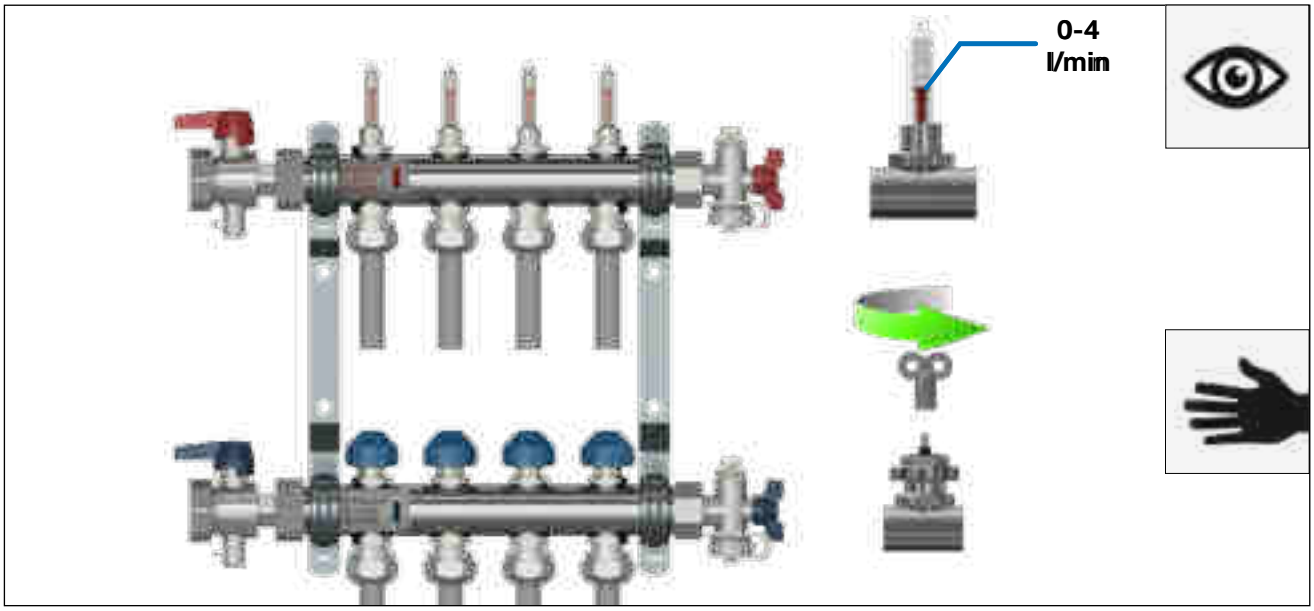
Dimensions [mm]



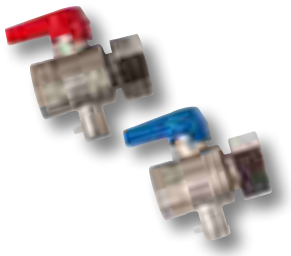
Combinations	Outlets										
Heating manifold + accessories	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
L1 = HKV2013AF	160	210	260	310	360	410	460	510	560	610	660
L2 = HKV2013AF + ES-SET KFE90 (**C**)	209	259	309	359	409	459	509	559	609	659	709
L3 = HKV2013AF + ES-SET Quattro 1" (**B**)	219	269	319	369	419	469	519	569	619	669	719
L4 = KH-SET WMZ (**A**) + HKV2013AF + ES-SET KFE90 (**C**)	271	321	371	421	471	521	571	621	671	721	771
L5 = KH-SET WMZ (**A**) + HKV2013AF + ES-SET Quattro 1" (**B**)	281	331	381	431	481	531	581	631	681	731	781

Flow adjustment

The flow rate for each heating circuit is set on the return control valve and visually checked on the corresponding flow meter.



Accessories



Ball valve set KH-SET WMZ

Ball valve set G 1" with connection M10 × 1 for short direct sensors for heat meters according to EN 1434. Brass body, with union nut and gasket. Nickel plated. Included in the scope of delivery of the heating circuit manifold type **HKV2013AF+**.

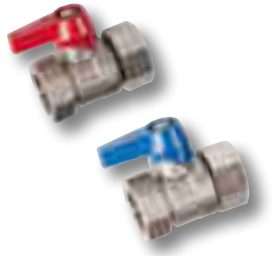
Type	Part no.		Weight
KH-SET WMZ	10028597	1" UN × 1" F	0.78 kg



End set ES-SET Quattro 1"

Ball valve with handle for easy filling, rinsing and draining. Brass body, with union and gaskets. Nickel plated.

Type	Part no.		Weight
ES-SET Q 1" Ni	10022835	1" UN	0.42 kg



Ball valve set KH-SET HKV

Brass body, with union nut and gasket. Nickel plated. Optionally available.

Type	Part no.		Weight
KH-SET HKV	10022871	1" UN × 1" F	0.66 kg



End set KFE90 1"

Ball valve for filling, rinsing and draining. Brass body, with union and gaskets. Nickel plated. Optionally available. Included in the scope of delivery of the heating circuit manifold type **HKV2013AF+**.

Type	Part no.		Weight
ES-SET KFE90 1"Ni	10028149	1" UN	0.38 kg

Clamping screw RVP-C with Eurocone ¾"

Clamping screw ¾". With Eurocone, for PE-X pipes and multilayer composite pipes. Suitable for manifolds **series HKV2013AF**, comprising: nickel-plated coupling nut ¾", support sleeve with O-ring, with molded Eurocone, with separator plate for galvanic separation. Packed in pairs.



Type	Part no.		Package	Weight
RVP-C 12x2	10000984	for PE-X 12×2	2/200	0,05 kg
RVP-C 14x2	10000985	for PE-X 14×2	2/200	0,07 kg
RVP-C 16x2	10000986	for PE-X 16×2	2/200	0,07 kg
RVP-C 17x2	10000987	for PE-X 17×2	2/200	0,06 kg
RVP-C 18x2	10000988	for PE-X 18×2	2/200	0,07 kg
RVP-C 20x2	10000989	for PE-X 20×2	2/200	0,07 kg

Actuator 22CX



Electrothermic ON/OFF actuator with position indicator. For control and shut-off valves with connection M30 x 1.5. Compatible with heating circuit manifolds **series HKV2013AF** and **HKV2013AF+**. Max. Stroke 3.5 mm / working stroke 2.5 mm. Power consumption 1.8 W. Cable length approx. 1 m. Protection class IP 54.
NA: normally open; NC: normally closed.

Type	Part no.		Weight
22CX24VNA2	10029672	24V, NA	0.17 kg
22CX24VNC2	10029673	24V, NC	0.17 kg
22CX230NA2	10029674	230V, NA	0.17 kg
22CX230NC2	10029671	230V, NC	0.17 kg

Manifold insulation



Snap-fit EPP heat insulation for manifolds with 1" male thread and 50 mm distance of connection nipples, suitable for manifolds for 6 heating circuits. Excess modules can be cut off when used for smaller manifolds. Use 2 insulations for larger manifolds. Delivery includes one insulation each for supply and return pipe as well as a knife to adapt the insulation to different manifold sizes.

Type	Part no.		Weight
HKV-ISO	10023474	HKV 1", 50 mm	0.35 kg

Control unit Isomix-F



Ready-to-mount, compact control unit to control supply temperature in radiant panel heating systems up to 14 kW heat demand.
Supply temperature setting range: 20–70 °C, temperature limiting and locking facility on thermostatic head. Pre-wired pump and temperature limiter. Can be mounted on the right or left side of the manifold. Suitable for all Watts 1" M heating circuit manifolds. Nickel plated.

Typ	Part no.		Weight
Isomix-F	10084161	Wilo PARA SCU/6	3.84 kg
Isomix-F	10084635	Grundfos UPM3A/7	4.05 kg
Isomix-F	10087333	Lowara Eco2/6	4,00 kg

Specification texts

Watts Heating circuits manifolds Series HKV2013AF 0-4 VA for 2 - 12 heating circuits
Stainless steel round pipe manifold for 2 to 12 heating circuits in accordance with DIN EN 1264-4. 1" M connection on both sides for manifold accessories and control unit. Shut-off flow meter with very low pressure loss on the supply. Flow rate display 0-4 l/min. Regulating and shut-off valves with adaptation M30 x 1.5 on the return. Closing dimension 11.8 mm. Pipe connection G ¾" with Eurocone. Centre distance of the outlets 50 mm. Max. operating pressure 10 bar. Flow at the top, ready-mounted on wall bracket, pipe clamps sound-insulated according to DIN 4109.

Watts Heating circuits manifolds Series HKV2013AF+ 0-4 VA for 2 - 12 heating circuits
Stainless steel round pipe manifold for 2 to 12 heating circuits in accordance with DIN EN 1264-4. 1" M connection on both sides for manifold accessories and control unit. Shut-off flow meter with very low pressure loss on the supply. Flow rate display 0-4 l/min. Regulating and shut-off valves with adaptation M30 x 1.5 on the return. Closing dimension 11.8 mm. Pipe connection G ¾" with Eurocone. Centre distance of the outlets 50 mm. Max. operating pressure 6 bar. Flow at the top, ready-mounted on wall bracket, pipe clamps sound-insulated according to DIN 4109.

WATTS Ball Valve Set Type KH-SET WMZ G 1" 1" F with sensor connection M10×1
Ball valve set G 1" with connection M10 × 1 for short direct sensors for heat meters according to EN 1434. Brass body, 1" with union nut and gasket. Internal thread 1".

WATTS End Set Quattro 1" Type ES-SET Q 1" Ni
Ball valve with handle for easy filling, rinsing and draining. Brass body, with union and flat gaskets. Nickel plated. Union nut 1".

WATTS Ball valve Type KH-SET HKV 1" UN×1" F, Ni
Brass body, with union nut and flat gaskets. Nickel plated. Union nut 1", internal thread 1".

WATTS End Set Type ES-SET KFE90 1"F Ni
Ball valve for filling, rinsing and draining. Brass body, with union and gaskets. Nickel plated.

WATTS Manifold Insulation Type: HKV-ISO, 1", 50 mm
Snap-fit EPP heat insulation for manifolds HKV2013A, HKV PnG and HKV-R PnG with 1" male thread and 50 mm distance of connection nipples, suitable for manifolds with 6 zones. Excess modules can be cut off when used for smaller manifolds. Use 2 insulations for larger manifolds. Delivery includes one insulation each for supply and return pipe as well as a knife to adapt the insulation to different manifold sizes.

WATTS Clamping screw ¾" Type: RVP-C
Clamping screw ¾". With Eurocone, for PE-X pipes and multilayer composite pipes 12 × 2, 14 × 2, 16 × 2, 17 × 2, 18 × 2, 20 × 2. Suitable for WATTS Manifolds HKV/T, HKV, HKV-A, HKV2013A, HKV2013AF, radiator elbow connectors, bodies for screw connections, comprising: nickel-plated coupling nut ¾", support sleeve with O-ring, with molded Eurocone, with separator plate for galvanic separation. Packed in pairs.

Actuators Series 22CX
Electrothermal actuator 22CX Series WATTS brand ON/OFF action, compatible with radiator valves, fan coil valves and manifolds. Hood in self-extinguishing polymeric material. Nickel-plated brass nut M30 x 1.5. Version NC or NO. Version with 230 VAC or 24VAC/DC with 2 or 4 wires with auxiliary micro-switch. Stroke: 3.5 mm. Power consumption: 1.6W / 1.8 W. Cable length approx. 1 m. Degree of protection IP54. Compliant with LVD 2014/35/UE, EMC 2014/30/UE. Approved TÜV.

Ready-to-mount, compact control unit Type ISOMIX-F
Ready-to-mount, compact control unit to control supply temperature in radiant panel heating systems up to 14 kW heat demand. Supply temperature setting range: 20–70 °C, temperature limiting and locking facility on thermostatic head. Pre-wired pump and temperature limiter. Can be mounted on the right or left side of the manifold. Suitable for all Watts 1" M heating circuit manifolds. Nickel plated.

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