

COMPONENTS FOR UNDERFLOOR HEATING



HOT PRESSED BRASS MANIFOLD

**Single return manifold 822MME**

Single modular brass return manifold with prefitted seal and lock nut. Built in control valves, thermostat adaptable with electrothermic actuators series 22C.

Side outlet connections: 3/4" M Eurocone. Male/female head connections: 1" - 1.1/4".

Differential pressure: 1,5 bar. Kvs of outlets: 2,28.

Article number	Size	Outlet	Unit
822MM1TME2	1"	2 - 3/4"	10
822MM1TME3	1"	3 - 3/4"	10
822MM1TME4	1"	4 - 3/4"	10
822MM54TME3	1.1/4"	3 - 3/4"	10
822MM54TME4	1.1/4"	4 - 3/4"	5

**Single delivery manifold 822MRE**

Single modular brass delivery manifold with prefitted seal and lock nut, built-in brass balancer register lockshield. Side outlet connections: 3/4" M Eurocone.

Male/female head connections: 1" - 1.1/4". Kvs of outlets: 2,61.

Article number	Size	Outlet	Unit
822MR1TME2	1"	2 - 3/4"	10
822MR1TME3	1"	3 - 3/4"	10
822MR1TME4	1"	4 - 3/4"	10
822MR54TME3	1.1/4"	3 - 3/4"	10
822MR54TME4	1.1/4"	4 - 3/4"	10

**Single delivery manifold FLMRE**

Single modular brass delivery manifold, complete with flowmeter series FLMR for control and measuring of flow in the circuits, with prefitted seal and lock nut.

Male/female head connections: 1" - 1.1/4". Side outlet connections: 3/4" M Eurocone.

Flowmeter differential pressure: min 0,1 ÷ max 0,5 bar. Setting: 0 ÷ 6 l/min. Kvs of outlets: 1,8.

Article number	Size	Outlet	Unit
FLMR1TME2	1"	2 - 3/4"	1
FLMR1TME3	1"	3 - 3/4"	1
FLMR1TME4	1"	4 - 3/4"	1
FLMR54TME3	1.1/4"	3 - 3/4"	1
FLMR54TME4	1.1/4"	4 - 3/4"	1

HOT PRESSED BRASS MANIFOLD


Preassembled manifold CPRFL

Preassembled manifold consisting of: delivery manifolds complete with flow meters series FLMR. Return manifolds series 822MM. Two ball shut-off valves series 210. Two end-pieces for manifolds series 823MP complete with drain cocks series 238, air vent valves series MVD and immersion thermometers serie TB. Centre distance between side outlet connections: 50 mm. N.B.: inspection box not included in the supply.

Article number	Size	Outlet	Unit
CPRFL54TM3	1.1/4" F	3 - 3/4" M	1
CPRFL54TM4	1.1/4" F	4 - 3/4" M	1
CPRFL54TM5	1.1/4" F	5 - 3/4" M	1
CPRFL54TM6	1.1/4" F	6 - 3/4" M	1
CPRFL54TM7	1.1/4" F	7 - 3/4" M	1
CPRFL54TM8	1.1/4" F	8 - 3/4" M	1
CPRFL54TM9	1.1/4" F	9 - 3/4" M	1
CPRFL54TM10	1.1/4" F	10 - 3/4" M	1
CPRFL54TM11	1.1/4" F	11 - 3/4" M	1
CPRFL54TM12	1.1/4" F	12 - 3/4" M	1

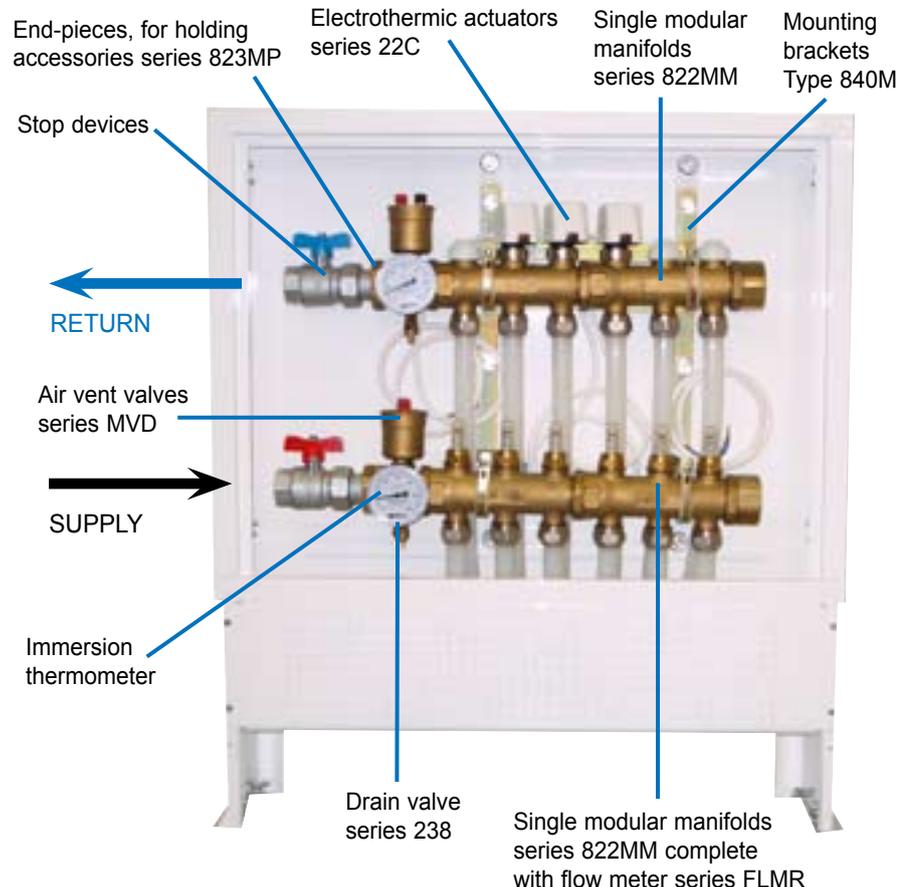
Balancing of circuits branched from manifolds series CPRFL

Reliable readjustment of flow rates from the various branches to the design valve is a performance characteristic which "makes the difference" as regards correct operation of the system, above all in radiant panel systems.

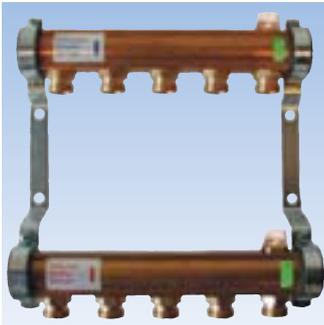
For uniform heat comfort, each circuit should give up the correct quantity of thermal energy, and from this point-of-view the flow rate parameter is a very important factor. The new modular FLMR manifolds, size 1" and 1.1/4" for building up distributors with any number of connections, provide a valid solution : in fact, a real flow meter, incorporated in the setting device, is installed in each delivery branch.

Therefore the use of a measuring instrument is not required nor it is necessary to determine analytically the setting position on diagrams. It is merely necessary to open or close until the flow meter shows the required flow rate.

Automatic temperature control is possible on manifolds of the return line by using silent running electro-thermic units (Type. 22C).

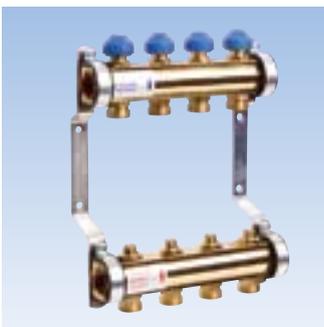


HOLLOW BAR MANIFOLD BRASS/NICKEL-PLATED

**Radiator manifold HLV500**

Preassembled manifolds designed for radiator systems, consisting of: delivery/return manifolds with anti-dezincification brass bar (MS 63), head connections: 1" F. Complete with built-in manual air vent valve. Nickel-plated steel mounting brackets DIN 4109. Side outlet connections from 2 - 12: 3/4" Eurocone with centre distance 50 mm.

Article number	Size	Outlet	Material	Unit
3804702	1" F	2 - 3/4"	Brass	1
3804703	1" F	3 - 3/4"	Brass	1
3804704	1" F	4 - 3/4"	Brass	1
3804705	1" F	5 - 3/4"	Brass	1
3804706	1" F	6 - 3/4"	Brass	1
3804707	1" F	7 - 3/4"	Brass	1
3804708	1" F	8 - 3/4"	Brass	1
3804709	1" F	9 - 3/4"	Brass	1
3804710	1" F	10 - 3/4"	Brass	1
3804711	1" F	11 - 3/4"	Brass	1
3804712	1" F	12 - 3/4"	Brass	1
On request	1" F	2 - 3/4"	Nickel-plated brass	1
On request	1" F	3 - 3/4"	Nickel-plated brass	1
On request	1" F	4 - 3/4"	Nickel-plated brass	1
On request	1" F	5 - 3/4"	Nickel-plated brass	1
On request	1" F	6 - 3/4"	Nickel-plated brass	1
On request	1" F	7 - 3/4"	Nickel-plated brass	1
On request	1" F	8 - 3/4"	Nickel-plated brass	1
On request	1" F	9 - 3/4"	Nickel-plated brass	1
On request	1" F	10 - 3/4"	Nickel-plated brass	1
On request	1" F	11 - 3/4"	Nickel-plated brass	1
On request	1" F	12 - 3/4"	Nickel-plated brass	1

**Heating circuit manifold HKV510**

Preassembled manifolds with brass bar for radiant panel heating systems, consisting of: delivery manifold with side outlet connections and lockshields: Kvs 1,39, return manifold with side outlet connections and thermostat adaptable valves suitable for electrothermic actuator (on request Type 22C 220 V or 24 VAC). Head connections: 1" F. Nickel-plated steel mounting brackets DIN 4109. Side outlet connections: 3/4" Eurocone with centre distance 50 mm.

Article number	Size	Outlet	Material	Unit
3803102	1" F	2 - 3/4"	Brass	1
3803103	1" F	3 - 3/4"	Brass	1
3803104	1" F	4 - 3/4"	Brass	1
3803105	1" F	5 - 3/4"	Brass	1
3803106	1" F	6 - 3/4"	Brass	1
3803107	1" F	7 - 3/4"	Brass	1
3803108	1" F	8 - 3/4"	Brass	1
3803109	1" F	9 - 3/4"	Brass	1
3803110	1" F	10 - 3/4"	Brass	1
3803111	1" F	11 - 3/4"	Brass	1
3803112	1" F	12 - 3/4"	Brass	1
On request	1" F	2 - 3/4"	Nickel-plated brass	1
On request	1" F	3 - 3/4"	Nickel-plated brass	1
On request	1" F	4 - 3/4"	Nickel-plated brass	1
On request	1" F	5 - 3/4"	Nickel-plated brass	1
On request	1" F	6 - 3/4"	Nickel-plated brass	1
On request	1" F	7 - 3/4"	Nickel-plated brass	1
On request	1" F	8 - 3/4"	Nickel-plated brass	1
On request	1" F	9 - 3/4"	Nickel-plated brass	1
On request	1" F	10 - 3/4"	Nickel-plated brass	1
On request	1" F	11 - 3/4"	Nickel-plated brass	1
On request	1" F	12 - 3/4"	Nickel-plated brass	1

HOLLOW BAR MANIFOLD BRASS/NICKEL-PLATED

Heat circuit manifold HKV513

Preassembled manifolds with brass bar for radiant panel heating systems, consisting of: delivery manifold with side outlet connections and lockshields: Kvs 1,39, return manifold with side outlet connections and thermostat adaptable valves suitable for electrothermic actuator (on request Type 22C 220 V or 24 VAC). Head connections: 1" F. Complete with: Flowmeter (0 - 4 l/min) incorporated in the delivery manifold. Nickel-plated steel mounting brackets DIN 4109. Side outlet connections: 3/4" Eurocone with centre distance 50 mm.

Article number	Size	Outlet	Material	Unit
3803202	1" F	2 - 3/4"	Brass	1
3803203	1" F	3 - 3/4"	Brass	1
3803204	1" F	4 - 3/4"	Brass	1
3803205	1" F	5 - 3/4"	Brass	1
3803206	1" F	6 - 3/4"	Brass	1
3803207	1" F	7 - 3/4"	Brass	1
3803208	1" F	8 - 3/4"	Brass	1
3803209	1" F	9 - 3/4"	Brass	1
3803210	1" F	10 - 3/4"	Brass	1
3803211	1" F	11 - 3/4"	Brass	1
3803212	1" F	12 - 3/4"	Brass	1
On request	1" F	2 - 3/4"	Nickel-plated brass	1
On request	1" F	3 - 3/4"	Nickel-plated brass	1
On request	1" F	4 - 3/4"	Nickel-plated brass	1
On request	1" F	5 - 3/4"	Nickel-plated brass	1
On request	1" F	6 - 3/4"	Nickel-plated brass	1
On request	1" F	7 - 3/4"	Nickel-plated brass	1
On request	1" F	8 - 3/4"	Nickel-plated brass	1
On request	1" F	9 - 3/4"	Nickel-plated brass	1
On request	1" F	10 - 3/4"	Nickel-plated brass	1
On request	1" F	11 - 3/4"	Nickel-plated brass	1
On request	1" F	12 - 3/4"	Nickel-plated brass	1

ROUND PIPE MANIFOLD BRASS/STAINLESS STEEL

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**Radiator manifold HLV 2000**

Made of precision circular tube, mounted on noiseless and galvanized brackets DIN 4109, easy connection through flat sealing male threads on both sides, connection nipple G 3/4" with Eurocone, all joints are flat sealing, low installation depth enables installation in walls with a thickness of 90 mm, pressure-tested via differential pressure test procedure, with mounting parts, packed in a box.

Article number	Zones	Dimension	Material	Unit
3801302	2	1"	Brass	1
3801303	3	1"	Brass	1
3801304	4	1"	Brass	1
3801305	5	1"	Brass	1
3801306	6	1"	Brass	1
3801307	7	1"	Brass	1
3801308	8	1"	Brass	1
3801309	9	1"	Brass	1
3801310	10	1"	Brass	1
3801311	11	1"	Brass	1
3801312	12	1"	Brass	1
On request	2	1"	Stainless steel	1
On request	3	1"	Stainless steel	1
On request	4	1"	Stainless steel	1
On request	5	1"	Stainless steel	1
On request	6	1"	Stainless steel	1
On request	7	1"	Stainless steel	1
On request	8	1"	Stainless steel	1
On request	9	1"	Stainless steel	1
On request	10	1"	Stainless steel	1
On request	11	1"	Stainless steel	1
On request	12	1"	Stainless steel	1

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ROUND PIPE MANIFOLD BRASS/STAINLESS STEEL

Heating circuit manifold HKV 2010

Made of precision circular tube, mounted on noiseless and galvanized brackets DIN 4109, easy connection through flat sealing male threads on both sides, connection nipple G 3/4" with Eurocone, 55 mm distance, fine-control valve in the supply to control the flow rate of the heating circuits, shut-off valve for return pipe with connection thread M30 x 1,5, correct approaching flow of supply and return valves, offset supply and return, all joints are flat sealing, low installation depth enables installation in walls with a thickness of 90 mm, function and pressure-tested via differential pressure test procedure, with mounting parts, packed in a box.

Article number	Zones	Dimension	Material	Unit
3801202	2	1"	Brass	1
3801203	3	1"	Brass	1
3801204	4	1"	Brass	1
3801205	5	1"	Brass	1
3801206	6	1"	Brass	1
3801207	7	1"	Brass	1
3801208	8	1"	Brass	1
3801209	9	1"	Brass	1
3801210	10	1"	Brass	1
3801211	11	1"	Brass	1
3801212	12	1"	Brass	1
3017402	2	1.1/4"	Brass	1
3017403	3	1.1/4"	Brass	1
3017404	4	1.1/4"	Brass	1
3017405	5	1.1/4"	Brass	1
3017406	6	1.1/4"	Brass	1
3017407	7	1.1/4"	Brass	1
3017408	8	1.1/4"	Brass	1
3017409	9	1.1/4"	Brass	1
3017410	10	1.1/4"	Brass	1
3017411	11	1.1/4"	Brass	1
3017412	12	1.1/4"	Brass	1
3017413	13	1.1/4"	Brass	1
3017414	14	1.1/4"	Brass	1
On request	2	1"	Stainless steel	1
On request	3	1"	Stainless steel	1
On request	4	1"	Stainless steel	1
On request	5	1"	Stainless steel	1
On request	6	1"	Stainless steel	1
On request	7	1"	Stainless steel	1
On request	8	1"	Stainless steel	1
On request	9	1"	Stainless steel	1
On request	10	1"	Stainless steel	1
On request	11	1"	Stainless steel	1
On request	12	1"	Stainless steel	1

ROUND PIPE MANIFOLD BRASS/STAINLESS STEEL

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**Heating circuit manifold HKV 2013**

Made of precision circular tube, mounted on noiseless and galvanized brackets DIN 4109, easy connection through flat sealing male threads on both sides, connection nipple G 3/4" with Eurocone, 55 mm distance, flowmeter in the supply, control and shut-off valve for return pipe with connection thread M30 x 1,5, correct approaching flow of return valves, offset supply and return, all joints are flat sealing, low installation depth enables installation in walls with a thickness of 90 mm, function and pressure-tested via differential pressure test procedure, with mounting parts, packed in a box. Lockable flowmeters 0 - 2,5 l/min, 0 - 4 l/min, 0 - 8 l/min or in GPM on request.

Article number	Zones	Dimension	Material	Unit
3800902	2	1"	Brass	1
3800903	3	1"	Brass	1
3800904	4	1"	Brass	1
3800905	5	1"	Brass	1
3800906	6	1"	Brass	1
3800907	7	1"	Brass	1
3800908	8	1"	Brass	1
3800909	9	1"	Brass	1
3800910	10	1"	Brass	1
3800911	11	1"	Brass	1
3800912	12	1"	Brass	1
3804302	2	1.1/4"	Brass	1
3804303	3	1.1/4"	Brass	1
3804304	4	1.1/4"	Brass	1
3804305	5	1.1/4"	Brass	1
3804306	6	1.1/4"	Brass	1
3804307	7	1.1/4"	Brass	1
3804308	8	1.1/4"	Brass	1
3804309	9	1.1/4"	Brass	1
3804310	10	1.1/4"	Brass	1
3804311	11	1.1/4"	Brass	1
3804312	12	1.1/4"	Brass	1
3804313	13	1.1/4"	Brass	1
3804314	14	1.1/4"	Brass	1
On request	2	1"	Stainless steel	1
On request	3	1"	Stainless steel	1
On request	4	1"	Stainless steel	1
On request	5	1"	Stainless steel	1
On request	6	1"	Stainless steel	1
On request	7	1"	Stainless steel	1
On request	8	1"	Stainless steel	1
On request	9	1"	Stainless steel	1
On request	10	1"	Stainless steel	1
On request	11	1"	Stainless steel	1
On request	12	1"	Stainless steel	1

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ROUND PIPE MANIFOLD BRASS/STAINLESS STEEL

Heating circuit manifold HKV 2013-QS

Made of precision circular tube, mounted on noiseless and galvanized brackets DIN 4109, easy connection through flat sealing male threads on both sides, connection nipple G 3/4" with Eurocone, 55 mm distance, flowmeter in the supply with "QuickStop" shut-off, control and shut-off valve for return pipe with connection thread M30 x 1,5, correct approaching flow of return valves, offset supply and return, all joints are flat sealing, low installation depth enables installation in walls with a thickness of 90 mm, function and pressure-tested via differential pressure test procedure, with mounting parts, packed in a box. Lockable flowmeters 0 - 2,5 l/min, 0 - 4 l/min, 0 - 8 l/min or in GPM on request.

Article number	Zones	Dimension	Material	Unit
3762902	2	1"	Brass	1
3762903	3	1"	Brass	1
3762904	4	1"	Brass	1
3762905	5	1"	Brass	1
3762906	6	1"	Brass	1
3762907	7	1"	Brass	1
3762908	8	1"	Brass	1
3762909	9	1"	Brass	1
3762910	10	1"	Brass	1
3762911	11	1"	Brass	1
3762912	12	1"	Brass	1
On request	2	1"	Stainless steel	1
On request	3	1"	Stainless steel	1
On request	4	1"	Stainless steel	1
On request	5	1"	Stainless steel	1
On request	6	1"	Stainless steel	1
On request	7	1"	Stainless steel	1
On request	8	1"	Stainless steel	1
On request	9	1"	Stainless steel	1
On request	10	1"	Stainless steel	1
On request	11	1"	Stainless steel	1
On request	12	1"	Stainless steel	1

ACCESSORIES - MANIFOLD

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Flowmeter FL

Device for controlling and measuring flow in the individual circuits for manifolds series FLMR.

Article number	Type	Unit
FL	Flowmeter	10
226	Control cap	10
5050075	Red knob	100
5050080	Grey knob	100



Manifold extension 823MP

End fitting for manifolds, with preassembled seal and lock nut. Provided with:
Two 1/2" connections for mounting immersion thermometer.

Two 3/8" connections for mounting drain cock series 238 and the air vent valve.

* Version 823MP112 with only two 1/2" connections.

Article number	Size	Outlet	Unit
823MP13812	1"	1/2" and 3/8"	10
823MP543812	1.1/4"	1/2" and 3/8"	10
823MP112	1"	1/2"	10



Manifold extension 823MT

End piece for brass manifolds. Connections for air discharge and drain valve: 3/8" F.

Connections for further outlet: 1/2" F.

Article number	Size	Unit
823MT1	1" M	10
823MT114	1.1/4" M	10



Mounting bracket 840M

Mounting bracket for modular manifolds series 822MM - 822MR DN 1" and DN 1.1/4" and series 805M, DN 1.1/4".

Complete with heat-shrink sheath.

Article number	Unit
840M170	1



Connection set for hollow bar manifold

For flat sealing connection of control units and accessories for pipe manifolds to hollow bar manifolds with 1" female thread.

Article number	Type	Unit
5261425	2 double nipples 1" male	1



Overflow valve set

Ready-to-mount, compact design, differential pressure overflow valve for differential pressure compensation between supply and return manifold lines, coupling nut for flat-sealing connection with the manifold pipe including seal, pressure-tested, packed in a box, suitable for manifold with 1" male thread, Adjustment range 0,03 - 0,5 bar.

Article number	Unit
4402050	1
4254160	1



Manifold insulation

Snap-fit EPP heat insulation for manifolds with 1" male thread and 55 mm distance of connection nipples, suitable for manifolds with 6 zones. Excess modules can be cut off when used for smaller manifolds. Use two 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.

Article number	Type	Unit
5250371	HKV 2010/2013/2015 1"	1
5250366	HLV 2002 1"	1



Ball valve set

Pair of 1" ball shut-off valves, designed for manifolds of series HKV with 1" swivel nut and flat seal. Red and blue operating levers.

Article number	Size	Material	Unit
3114060	3/4"	Brass	1
3114060N	3/4"	Nickel-plated brass	1
3114049	1"	Brass	1
3114049N	1"	Nickel-plated brass	1



Ball valve set incl. thermometer

Pair of 1" ball shut-off valves with precision thermometer (scale 0 - 60°C), designed for manifolds of series HKV with 1" swivel nut and flat seal. Red and blue operating levers.

Article number	Size	Material	Unit
3114055	3/4"	Brass	1
3114065	1"	Brass	1
3114065N	1"	Nickel-plated brass	1



Manifold end set Quattro

Brass body, with coupling nut and gaskets. Ball valve with handle for easy filling, rinsing and draining.

Article number	Material	Unit
3036115	Brass	1
3036120N	Nickel-plated brass	1
3036130	Brass	1
3036130N	Nickel-plated brass	1
3036125	Brass	1
3036125N	Nickel-plated brass	1



Accessories for heating circuit manifolds

Article number	Type	Unit
3114020	Thermometer T-piece 0 - 50°C	1
3517180	Thermometer T-piece 0 - 60°C	1
3444105	Ball valve to shut off individual heating circuit, L = 44 mm	1
On request	Nickel-plated ball valve to shut off individual heating circuit, L = 44 mm	1
3114030	Ball valve to shut off individual heating circuit, L = 61 mm	1
3114030N	Nickel-plated ball valve to shut off individual heating circuit, L = 61 mm	1
2160700	End cap 3/4" with seal	1
063064	End cap 1" with seal	1
3198035	Repair plug for permanent shut off of individual heating circuit	1



Accessories for heating circuit manifolds

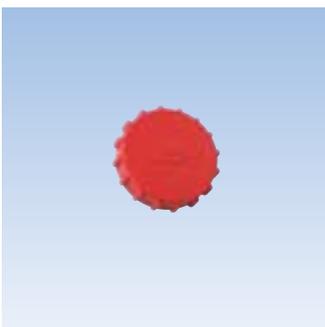
Article number	Type	Unit
402178	1" F x 1" coupling nut with gasket	1
3509000	1" F x 3/4" coupling nut with gasket	1
3290010	1.1/4" F x 1.1/4" coupling nut with gasket	1
3517020	Elbow 1" x 1" with gasket	1
3114145	Ball valve 1" x 1" for connection with immersion sensor M10 with gasket	1



Flowmeter FLMR

To determine and display the flow rate of heating circuit manifolds in panel heatings. Max. operating temperature 80°C, max. operating pressure 6 bar. Corresponding valve base part, different adjustment range or color available on request.

Article number	Scale	Unit
On request	0 - 3 l/min, 1/2"	1
On request	0 - 6 l/min, 1/2"	1



Handle for Flowmeter FLMR

For easy operation of the Flowmeter FLMR.

Article number	Colour	Unit
5050075	Red	1
5050080	Gray	1



Control valve RVE

To adjust the flow rate for heating circuit manifolds in panel heatings. The flow rate is adjusted through a pressure-loss diagram. Available with different valve characteristic curves. Corresponding valve base part available on request.

Article number	Size	Unit
On request	3/8"	1
On request	1/2"	1



Valve insert VE

Valve insert for heating circuit manifolds. Connection thread M30 x 1,5 for thermo regulator or actuator. Customized adaptation of the closing point on request. Control function can be integrated. Adaptation on request.

Article number	Size	Unit
On request	3/8"	1
On request	1/2"	1



Valve base parts for FLMR / RVE / VE

Valve base parts suited for Flowmeter, control valve or valve insert. Customized adaptation to the manifold pipe. Male thread 3/4" Eurocone or customized connection (e.g. plug connection or similar) available on request.

Article number	Type	Unit
On request	VUT-FLMR	1
On request	VUT-RVE	1
On request	VUT-VE	1



Balancing valve set

For hydraulic balancing of the manifolds. Balancing valve WattFlow BP with flowmeter, ball valve, coupling nut for flat-sealing connection with the manifold pipe including washers, packed in a box, suitable for manifold with 1" male thread. Further flow ranges on request.

Article number	Type	Unit
4254050	4 - 36 l/min, 1" coupling nut x 3/4" F	1



Manifold extension HLV / HKV

To expand manifolds with 1" male thread with one heating circuit each.

Article number	Type	Unit
4254210	HLV 2000 - 1"	1
4254205	HKV 2010 - 1"	1
4254205N	HKV 2010 - 1" nickel-plated	1
4254200	HKV 2013 - 1" 0 - 4 l/min	1
4254200N	HKV 2013 - 1" 0 - 4 l/min nickel-plated	1
4254202	HKV 2013QS - 1" (QuickStop) 0 - 4 l/min	1
4254202N	HKV 2013QS - 1" (QuickStop) 0 - 4 l/min nickel-plated	1
4254160	Overflow valve set	1

RADIANT PANEL MANIFOLD FOR INDUSTRIAL AREAS

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**Industrial surfaces manifold INDU 2054**

Made of high-quality brass MS 63, dezincification resistant, flat sealing two-way connection through 1.1/2" male thread, plastic pipe compression fittings 25 x 2,3, 100 mm distance, fill and drain-cock in supply and return collector, end caps for unilateral closure of the collectors, ball shut-off valve in the supply, control valve with pre-setting for return pipe, offset supply and return, pressure-tested via differential pressure test procedure, packed in a box. 2" design available on request. Consoles are not included in the delivery.

Article number	Zones	Dimension	Connection	Unit
3420702	2	1.1/2"	KVSR 25 x 2,3	1
3420703	3	1.1/2"	KVSR 25 x 2,3	1
3420704	4	1.1/2"	KVSR 25 x 2,3	1
3420705	5	1.1/2"	KVSR 25 x 2,3	1
3420706	6	1.1/2"	KVSR 25 x 2,3	1
3420707	7	1.1/2"	KVSR 25 x 2,3	1
3420708	8	1.1/2"	KVSR 25 x 2,3	1
3420709	9	1.1/2"	KVSR 25 x 2,3	1
3420710	10	1.1/2"	KVSR 25 x 2,3	1
3420711	11	1.1/2"	KVSR 25 x 2,3	1
3420712	12	1.1/2"	KVSR 25 x 2,3	1
3420713	13	1.1/2"	KVSR 25 x 2,3	1
3420714	14	1.1/2"	KVSR 25 x 2,3	1
3420715	15	1.1/2"	KVSR 25 x 2,3	1
3420716	16	1.1/2"	KVSR 25 x 2,3	1
3420717	17	1.1/2"	KVSR 25 x 2,3	1
3420718	18	1.1/2"	KVSR 25 x 2,3	1
3420719	19	1.1/2"	KVSR 25 x 2,3	1
3420720	20	1.1/2"	KVSR 25 x 2,3	1
3420802	2	1.1/2"	3/4" Eurocone	1
3420803	3	1.1/2"	3/4" Eurocone	1
3420804	4	1.1/2"	3/4" Eurocone	1
3420805	5	1.1/2"	3/4" Eurocone	1
3420806	6	1.1/2"	3/4" Eurocone	1
3420807	7	1.1/2"	3/4" Eurocone	1
3420808	8	1.1/2"	3/4" Eurocone	1
3420809	9	1.1/2"	3/4" Eurocone	1
3420810	10	1.1/2"	3/4" Eurocone	1
3420811	11	1.1/2"	3/4" Eurocone	1
3420812	12	1.1/2"	3/4" Eurocone	1
3420813	13	1.1/2"	3/4" Eurocone	1
3420814	14	1.1/2"	3/4" Eurocone	1
3420815	15	1.1/2"	3/4" Eurocone	1
3420816	16	1.1/2"	3/4" Eurocone	1
3420817	17	1.1/2"	3/4" Eurocone	1
3420818	18	1.1/2"	3/4" Eurocone	1
3420819	19	1.1/2"	3/4" Eurocone	1
3420820	20	1.1/2"	3/4" Eurocone	1

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RADIANT PANEL MANIFOLD FOR INDUSTRIAL AREAS

Industrial surfaces manifold INDU 2055

Made of high-quality brass MS 63, dezincification resistant, flat sealing two-way connection through 1.1/2" male thread, plastic pipe compression fittings 25 x 2,3, 100 mm distance, fill and drain-cock in supply and return collector, end caps for unilateral closure of the collectors, ball shut-off valve in the supply, blancing valve SRV with flowmeter in the return, offset supply and return, pressure-tested via differential pressure test procedure, packed in a box. 2" design available on request. Consoles are not included in the delivery.

Article number	Zones	Dimension	Connection	Unit
3420402	2	1.1/2"	KVSR 25 x 2,3	1
3420403	3	1.1/2"	KVSR 25 x 2,3	1
3420404	4	1.1/2"	KVSR 25 x 2,3	1
3420405	5	1.1/2"	KVSR 25 x 2,3	1
3420406	6	1.1/2"	KVSR 25 x 2,3	1
3420407	7	1.1/2"	KVSR 25 x 2,3	1
3420408	8	1.1/2"	KVSR 25 x 2,3	1
3420409	9	1.1/2"	KVSR 25 x 2,3	1
3420410	10	1.1/2"	KVSR 25 x 2,3	1
3420411	11	1.1/2"	KVSR 25 x 2,3	1
3420412	12	1.1/2"	KVSR 25 x 2,3	1
3420413	13	1.1/2"	KVSR 25 x 2,3	1
3420414	14	1.1/2"	KVSR 25 x 2,3	1
3420415	15	1.1/2"	KVSR 25 x 2,3	1
3420416	16	1.1/2"	KVSR 25 x 2,3	1
3420417	17	1.1/2"	KVSR 25 x 2,3	1
3420418	18	1.1/2"	KVSR 25 x 2,3	1
3420419	19	1.1/2"	KVSR 25 x 2,3	1
3420420	20	1.1/2"	KVSR 25 x 2,3	1
On request	2	1.1/2"	3/4" Eurocone	1
On request	3	1.1/2"	3/4" Eurocone	1
On request	4	1.1/2"	3/4" Eurocone	1
On request	5	1.1/2"	3/4" Eurocone	1
On request	6	1.1/2"	3/4" Eurocone	1
On request	7	1.1/2"	3/4" Eurocone	1
On request	8	1.1/2"	3/4" Eurocone	1
On request	9	1.1/2"	3/4" Eurocone	1
On request	10	1.1/2"	3/4" Eurocone	1
On request	11	1.1/2"	3/4" Eurocone	1
On request	12	1.1/2"	3/4" Eurocone	1
On request	13	1.1/2"	3/4" Eurocone	1
On request	14	1.1/2"	3/4" Eurocone	1
On request	15	1.1/2"	3/4" Eurocone	1
On request	16	1.1/2"	3/4" Eurocone	1
On request	17	1.1/2"	3/4" Eurocone	1
On request	18	1.1/2"	3/4" Eurocone	1
On request	19	1.1/2"	3/4" Eurocone	1
On request	20	1.1/2"	3/4" Eurocone	1

ACCESSORIES - RADIANT PANEL MANIFOLD FOR INDUSTRIAL AREAS

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**Brackets for industrial surfaces manifolds**

To mount industrial surfaces manifolds on the floor or a wall. Galvanized and noiseless brackets in accordance with DIN 4109.

Article number	Type	Unit
4225100	For INDU manifold 1.1/2"	1
4225200	For INDU manifold 2"	1

**Ball valve set for industrial surfaces manifolds**

Brass casing, with coupling nut and flat seal.

Article number	Type	Unit
3126100	1.1/2" F x 1.1/2" coupling nut	1
3126110	1.1/4" F x 2" coupling nut	1

SHUNTGROUPE

**Single zone control unit FRG 3005-F**

Ready-to-mount, compact control unit to control the supply temperature for small heating surfaces of up to approx. 50 m² and 5 kW heat capacity demand. Can be expanded with 3 - 4 heating circuits of identical length, adjustment range of supply temperature 20 - 70°C with maximum limitation, pump cabling ex works, wall brackets included. The version without thermostatic head can be equipped with a single zone RF kit (page 118) or a thermostatic head 148SD2 (page 186).

Article number	Type	Unit
On request	Grundfos UPS 15 - 40 without thermostatic head	1
On request	Grundfos ALPHA 15 - 40 without thermostatic head	1
4402260	Grundfos UPS 15 - 40	1
4402265	Grundfos ALPHA 15 - 40	1

**Single zone control unit FRG 3005-R**

Ready-to-mount, compact control unit to control the supply and room temperature for small heating surfaces of up to approx. 50 m² and 5 kW heat capacity demand. Can be expanded with 3 - 4 heating circuits of identical length, adjustment range of supply temperature 20 - 70°C with maximum limitation, adjustment range for room temperature 5 - 30°C, pump cabling ex works, wall brackets included.

Article number	Type	Unit
4402280	Grundfos UPS 15 - 40	1
4402285	Grundfos ALPHA 15 - 40	1



Water floor heating control unit FRG 3015-F

Ready-to-mount, compact control unit to control the supply temperature of panel heatings with a heat capacity demand of about 14 kW. Flat-sealing installation on the left or right side of the manifold via 1" male thread. Set-point value for supply temperature can be continuously adjusted via a thermostatic head with maximum limitation. Pump and temperature limiters 20 - 90°C, cabling ex works. Pressure-tested, packed in a box.

Article number	Type	Unit
4402305	Grundfos UPS 15 - 40	1
4402310	Grundfos UPS 15 - 60	1
4402315	Grundfos ALPHA 15 - 40	1
4402320	Grundfos ALPHA 15 - 60	1



Water floor heating control unit FRG 3015-W

Ready-to-mount, compact outside temperature led control unit suited for panel heatings with a heat capacity demand of about 14 kW. Flat-sealing installation on the left or right side of the manifold via 1" male thread. Pump, controller, actuator, temperature limiter 20 - 90°C and supply temperature sensor with cabling ex works. Includes outside temperature sensor. Pressure-tested, packed in a box. The heating control also features a screed dry heating function.

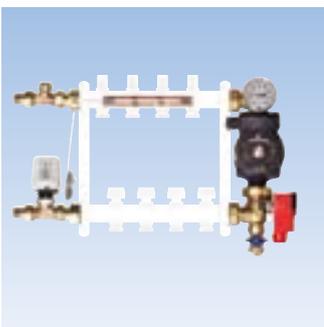
Article number	Type	Unit
4402340	Grundfos UPS 15 - 40	1
4402345	Grundfos UPS 15 - 60	1
4402350	Grundfos ALPHA 15 - 40	1
4402355	Grundfos ALPHA 15 - 60	1



Distributor control unit IsoTherm

Ready-to-mount, compact control unit for panel heatings with a maximum heat capacity demand of 10 - 15 kW. Flat-sealing installation on the left or right side of the manifold via 1" male thread. Set-point value for supply temperature can be adjusted via a thermostatic injection valve. Pump and temperature limiters 20 - 90°C, cabling ex works. Pressure-tested, packed in a box.

Article number	Type	Unit
4402075	Grundfos UPS 25 - 40, 30 - 50°C	1
On request	Grundfos UPS 25 - 60, 30 - 50°C	1
On request	Grundfos ALPHA 25 - 60, 30 - 50°C	1



Constant supply temperature control unit

Ready-to-mount, compact control set for two-way and flat-sealing installation to manifold with 1" male thread. Set-point value for supply temperature can be adjusted via thermostatic head. Pump and temperature limiters 20 - 90°C, cabling ex works, 8 - 10 kW heat capacity, pressure-tested, packed in a box.

Article number	Type	Unit
4402040	Grundfos UPS 25 - 60, 20 - 50°C	1
On request	Grundfos UPS 25 - 60, 20 - 70°C	1



Water floor heating control unit VarioTherm

Ready-to-mount, compact control unit for flat-sealing installation on the left or right side of the manifold via 1" male thread. 3-way mixing valve (Kvs 5,0) with 3-point actuator. Pump, control, acutator and temperature limiter with cabling ex works. Temperature limiter 20 - 90°C, pressure-tested, packed in a box. Functions of the heating controller: integrated clock timer with programs for weekly and yearly operation, 3 temperature levels, screed dry heating function, antifreeze, pilot clock, etc.

Article number	Type	Unit
On request	Grundfos UPS 25 - 60	1
On request	Grundfos ALPHA 25 - 60	1

SHUNTGROUP

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**Heating circuit control unit FlowBox VarioTherm**

Ready-to-mount, compact heating circuit control unit. 3-way mixing valve with servo motor, pump, control, actuator and temperature limiter 20 - 90°C with cabling ex works, flat sealing joints, EPP heat insulation, pressure-tested, includes fastening material, packed in a box. Functions of the heating control: integrated clock timer with programs for weekly and yearly operation, 3 temperature levels, screed dry heating function, antifreeze, pilot clock, etc.

Article number	Type	Kvs	Unit
On request	Grundfos UPS 25 - 60	2,5	1
On request	Grundfos UPE 25 - 60	2,5	1
On request	Grundfos UPS 25 - 60	4,0	1
On request	Grundfos UPE 25 - 60	4,0	1
On request	Grundfos UPS 25 - 60	6,3	1
On request	Grundfos UPE 25 - 60	6,3	1
On request	Grundfos UPS 25 - 60	8,0	1
On request	Grundfos UPE 25 - 60	8,0	1

HEAT METER SET

**Universal heat meter installation set**

Ready-to-mount, compact design, installation arrangement for heat meter:

G 3/4" - installation length 110 mm and G 1" - installation length 130 mm, can be mounted to the right/left of manifold with 1" male thread, lead-sealable coupling nut, shut-off and flow rate limitation in return pipe via control valve, plug 3/8" for immersion sleeve in supply and return pipe, pressure-tested, packed in a box. Installation at right angle to the manifold.

Article number	Type	Unit
3517000	WMZ 2025	1
3517020	Winkel 1" for horizontal connection	1

**Vertical heat meter installation set**

Ready-to-mount, compact design, installation arrangement for heat meter:

G 3/4" - installation length 110 mm and G 1" - installation length 130 mm, can be mounted to the right/left of manifold with 1" male thread, lead-sealable coupling nut for heat meter, immersion sleeve 1/2" - d = 6,5 mm with lock screw, pressure-tested, packed in a box.

Article number	Type	Unit
08097	WMZ 2026	1
On request	WMZ 2026-V with flow rate limitation	1
On request	WMZ 2026-SRV with pipe control valve	1


Horizontal heat meter installation set

Ready-to-mount, compact design, installation arrangement for heat meter:

G 3/4" - installation length 110 mm and G 1" - installation length 130 mm, can be mounted to the right/left of manifold with 1" male thread, lead-sealable coupling nut for heat meter, immersion sleeve 1/2" - d = 6,5 mm with lock screw, pressure-tested, packed in a box.

Article number	Type	Unit
08197	WMZ 2027	1


Horizontal heat meter installation set

Ready-to-mount, compact design, installation arrangement for heat meter:

G 3/4" - installation length 110 mm and G 1" - installation length 130 mm, can be mounted to the right/left of manifold with 1" male thread, lead-sealable coupling nut for heat meter, immersion sleeve 1/2" - d = 6,5 mm with lock screw, pressure-tested, packed in a box. Identical installation length for supply and return.

Article number	Type	Unit
3517005	WMZ 2028	1


Electrothermic actuator 22C

Electrothermic actuator compact design with on/off action, compatible with thermostat adaptable radiator valves, valve for fan-coils and manifolds series 822MM. Cap made of flame retardant plastic. Chrome-plated brass threaded ring nut M30 x 1,5. Normally closed (NC). Normally open (NO). Stroke: 3,5 mm. With power cable: dia. 5,5 mm. Exempt from ENEC marking. Opening time: version 230 VAC 90 sec (start) - 3 min (end), version 24 VAC 3 min (start) - 5 min (end). Plug thrust: 140N (NC version) - 80N (NO version). Power consumption: 2,5 W. Inalterability range: 0°C / +50°C. Auxiliary contact load capacity: 700 mA. According to EEC 89/336, EEC 73/23, Italian Law 100/91. CEI-EN 55104/95, CEI-EN 55014/93C. Marking CE EN 60730-214. ENEC marking pending.

Article number	Power supply	Protection	Unit
22C230NC2-5	230 VAC	IP44	10
22C24NC2-5	24 VAC	IP44	10
22C230NA2-5	230 VAC	IP44	10
22C24NA2-5	24 VAC	IP44	10

ELECTRONIC CONTROLS

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**Electronic thermostat**

Electronic thermostat to be used on water floor heating systems controlled by actuators. Low cost, silent (triac output), to be connected directly to actuators or to our modular connecting system. Regulating on internal room sensor. Operating voltage: 24 VAC or 230 VAC. Operating temp.: 0°C to 50°C. Setting temp.: 5°C to 30°C. Output: max. 15 W. Differential temp.: 0,5°K. Protection class: IP30.

Article number	Type	Unit
P-2060	Electronic thermostat 24 VAC NO	1
P-2061	Electronic thermostat 24 VAC NC	1
P-2062	Electronic thermostat 230 VAC NO	1
P-2063	Electronic thermostat 230 VAC NC	1

**Electronic thermostat with night reduction**

Electronic thermostat with night reduction mode to be used on water floor heating systems controlled by actuators. External pilot wire for night reduction, equipped with a switch to select comfort, reduction or clock mode. Regulation on internal or external sensor. Silent (triac output), to be connected directly to actuators or to our modular connecting system. Operating voltage: 24 VAC or 230 VAC. Operating temp.: 0°C to 50°C. Setting temp.: 5°C to 30°C. Output: max. 15 W. Differential temp.: 0,5°K. Protection class: IP30.

Article number	Type	Unit
P-2064	Electronic thermostat NR 24 VAC NO	1
P-2065	Electronic thermostat NR 24 VAC NC	1
P-2066	Electronic thermostat NR 230 VAC NO	1
P-2067	Electronic thermostat NR 230 VAC NC	1

**Electronic thermostat for public area**

Adjustment range 5 - 30°C, differential gap 0,5 K, operating temperature 0 - 50°C, noiseless triac contact, NTC temperature sensor, breaking capacity 15 W, IP30. Switch for normal or reduction mode via external clock timer. Floor sensor with adjustable temperature limit 10 - 40°C, 3 m sensor cable. 3 control modes: 1) via internal room sensor, 2) via external room sensor (floor sensor), 3) via internal room sensor and floor temperature limitation.

Article number	Type	Unit
P-2072	Public area thermostat 24 VAC NO	1
P-2073	Public area thermostat 24 VAC NC	1
P-2074	Public area thermostat 230 VAC NO	1
P-2075	Public area thermostat 230 VAC NC	1

**Electronic thermostat with floor sensor**

Electronic thermostat with night reduction mode to be used on water floor heating systems controlled by actuators. External pilot wire for night reduction, equipped with a switch to select comfort, reduction or clock mode. Possibility to regulate either the floor or the room temperature or combined (in that case, the floor sensor is used as a temperature limiter). Silent (triac output), to be connected directly to actuators or to our modular connecting system. Operating voltage: 24 VAC or 230 VAC. Operating temp.: 0°C to 50°C. Setting temp.: 5°C to 30°C. Output: max. 15 W. Differential temp.: 0,5°K. Protection class: IP30.

Article number	Type	Unit
P-2068	Electronic thermostat with floor sensor 24 VAC NO	1
P-2069	Electronic thermostat with floor sensor 24 VAC NC	1
P-2070	Electronic thermostat with floor sensor 230 VAC NO	1
P-2071	Electronic thermostat with floor sensor 230 VAC NC	1



Mechanical clock thermostat

Electronic clock thermostat with mechanical clock timer. Normal and reduction temperature adjustable via individual turning knob, temperature range 5 - 35°C. Day and weekly program. Operating temperature 0 - 50°C, breaking capacity 8 A - 250 VAC, operating voltage 2 batteries with 1,5 V (AA), protection class IP30.

Article number	Type	Unit
P-2650	Mechanical clock thermostat day program	1
P-2649	Mechanical clock thermostat weekly program	1



Electronic digital thermostat

Electronic thermostat with night reduction mode to be used on water floor heating systems controlled by actuators. External pilot wire for night reduction, equipped with a switch to select comfort, reduction or clock mode. Possibility to regulate either the floor or the room temperature or combined (in that case, the floor sensor is used as a temperature limiter). Silent (triac output), to be connected directly to actuators or to our modular connecting system. With a display indicating the setted temperature and the different modes via logos. Operating voltage: 24 VAC or 230 VAC. Operating temp.: 0°C to 50°C. Setting temp.: 5°C to 30°C. Output: max. 15 W. Differential temp.: 0,5°K. Protection class: IP30.

Article number	Type	Unit
P-2076	Electronic digital thermostat 24 VAC NO / NC	1
P-2077	Electronic digital thermostat 230 VAC NO / NC	1



Electronic chrono thermostat

Full digital chrono thermostat with 4 user programmes and 9 fixed programmes. Powered by 3 batteries. High accuracy. Easy to install (2 wires). Easy to programme. Operating voltage: 3 x AA LR6 1,5 V. Battery life time: 3 years. Operating temp.: 0°C to 50°C. Setting temp.: 5°C to 35°C. Output: Relay 8A. Differential temp.: 0,4°K. Protection class: IP30.

Article number	Type	Unit
P-1859	Electronic chrono thermostat weekly	1
P-1858	Electronic chrono thermostat daily	1



Modular connecting system

Connecting boxes 4 or 6 zones (4 or 6 outputs). Possibility to communicate with 4 or 6 different thermostats. The master is equipped with pump relay. The slave is equipped with plug-in connector to be added on a master connecting box. Operating voltage: 24 VAC or 230 VAC. Operating temp.: 0°C to 50°C. Protection class: IP30.

Article number	Type	Unit
P-2094	Modular master 4 zones 230 VAC	1
P-2096	Modular slave 4 zones 230 VAC	1
P-2086	Modular master 4 zones 24 VAC	1
P-2088	Modular slave 4 zones 24 VAC	1
P-2090	Modular master 6 zones 230 VAC	1
P-2092	Modular slave 6 zones 230 VAC	1
P-2082	Modular master 6 zones 24 VAC	1
P-2084	Modular slave 6 zones 24 VAC	1
P-2101	Timer module 24 / 230 VAC	1
P-2080	Transformer 230 VAC / 24 VAC 60 VA	1

ELECTRONIC RF CONTROL

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**Radio frequency thermostat**

Radio frequency thermostat to be used with our specific WFH radio frequency receiver. Specially designed for water floor heating. Personal code on each product. Controls to the radio frequency receiver by radio transmission. High accuracy 0,3°K. Switch on/off. Powered by 2 lithium batteries. Operating voltage: 2 x 3 V (CR2430). Battery lifetime: 2 years. Operating temp.: 0°C to 50°C. Setting temp.: 5°C to 30°C. Frequency: 433,92 Mhz. Open ground distance: 40 metres. Protection class: IP30.

Article number	Type	Unit
P-1857	Radio frequency thermostat	1

**Single zone kit RF thermostat**

Single zone kit including a electronic thermostat (P-1857) with its receiver 230 VAC 1 Amp and one electrothermic actuator (22C230NC2-5).

Article number	Type	Unit
P-2695	Single zone kit RF thermostat triac 230 VAC	1

**Radio frequency digital thermostat**

Radio frequency digital thermostat to be used with our specific WFH radio frequency receiver. Specially designed for water floor heating. Digital display indicates all temperatures and different modes. Personal code on each product. Controls to the radio frequency receiver by radio transmission. High accuracy 0,3°K. Switch on/off. Powered by 2 lithium batteries. Operating voltage: 2 x 3 V (CR2430). Battery lifetime: 1 year. Operating temp.: 0°C to 50°C. Setting temp.: 5°C to 30°C. Frequency: 433,92 Mhz. Open ground distance: 40 metres. Protection class: IP30.

Article number	Type	Unit
P-2079	Radio frequency digital thermostat	1

**Single zone kit RF electronic thermostat digital**

Single zone kit including a digital electronic thermostat (P-2079) with its receiver 230 VAC 1 Amp and one electrothermic actuator (22C230NC2-5).

Article number	Type	Unit
P-2696	Single zone kit RF electronic thermostat digital 230 VAC	1

D



Radio frequency digital chrono thermostat

Radio frequency digital thermostat to be used with our specific WFH radio frequency receiver. Specially designed for electrical heater. Digital display indicates all temperatures and different modes (comfort, night, antifreeze, stop) and weekly programme setting. Personal code on each product. Controls to the radio frequency receiver by radio transmission. High accuracy 0,3°K. Switch on/off. Operating voltage: 3 x AA LR6 1,5 V. Battery lifetime: 3 years. Operating temp.: 0°C to 50°C. Setting temp.: 5°C to 30°C. Frequency: 433,92 Mhz. Open ground distance: 50 metres. Protection class: IP30.

Article number	Type	Unit
P-2054	Radio frequency digital chrono thermostat weekly	1



Single zone kit RF digital chrono thermostat

Single zone kit including a RF digital chrono thermostat (P-2054) with its receiver 230 VAC 1 Amp and one electrothermic actuator (22C230NC2-5).

Article number	Type	Unit
P-2697	Single zone kit RF digital chrono thermostat 230 VAC	1



Modular connecting system RF

Connecting box 4 or 6 zones (4 or 6 outputs). Facility to communicate with 4 or 6 different thermostats through our WFH RF receiver. The master is equipped with pump relay. The slave is equipped with a plug-in connector to be added on a master connecting box. 4 leds to indicate different specifications: red = heating, green flash = RF transmission, green = zone configuration. Works only with the receiver radio frequency 24 VAC or 230 VAC.

Article number	Type	Unit
P-2442	Master 6 zones 230 VAC pack	1
P-2347	Master 6 zones 24 VAC pack	1
P-2443	Master 4 zones 230 VAC pack	1
P-2098	Master 4 zones 24 VAC pack	1
P-2348	Slave 6 zones 24 VAC / 230 VAC	1
P-2349	Slave 4 zones 24 VAC / 230 VAC	1
P-2080	Transformer 230 VAC / 24 VAC 60 VA	1



Modular connecting system basic RF

Basic receiver with 6 zones built-in system very easy to program.

Article number	Type	Unit
P-2690	Basic master 6 zones 230 VAC pack	1
P-2691	Basic slave 6 zones 230 VAC	1
P-2692	Basic slave 4 zones 230 VAC	1