



Rev. 01/2023

COMPACT BRASS MODULAR MANIFOLDS (centre distance 37 mm)

Underfloor heating / radiator heating.

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Underfloor heating / radiator heating.



Super compact: e.g. 11 ways (version code 3211.06.10) in just 60 cm

Insertion in boxes 80 mm deep

Versions available in preassembled kits and individual components which can be assembled.



PRODUCTION RANGE

	Single manifold code			
No. of ways	Valves with thermostatic option with handwheel	Flowmeter and built-on control valve	Micrometric Lockshield valves with graduated hand-wheel	
1	3201.06.30	3201.06.00	3201.06.20	
2	3202.06.30	3202.06.00	3202.06.20	
3	3203.06.30	3203.06.00	3203.06.20	
4	3204.06.30	3204.06.00	3204.06.20	

NOTE: For the complete range of compositions available, refer to the instructions provided in the section "List Compositions" on page 15 of this technical data sheet.

Single manifolds

Modular manifold with several ways complete with valves with thermostatic option and handwheel.

Modular manifold with several ways with flowmeters and builton control valve. End of scale: 1÷4 l/min. Modular manifold with several ways complete with micrometric Lockshield valves and graduated hand-wheel.







DESCRIPTION

THE PURPOSE

The RBM brass modular manifolds allow for the parallel supply of terminal hydrothermal circuits with the following purposes and benefits:

- limited overall dimensions both in terms of depth and width, which means it can be inserted into boxes to be walled up also in partition walls.
- manual or automatic on-off interruption of individual circuits by applying, on the thermostatically controlled valves, electrothermal controls that can be controlled by thermostats and programmable room thermostats.
- micrometric control of the passing flow to balance the various circuits
- indication of the calibration revs performed by reading the numerical value directly on the body of the lockshield valve (version with lockshield valves).
- possibility of checking the performance of the circuits by inserting thermometers and flowmeters (if not already in place).

THE PRODUCT

Depending on the version, the RBM brass modular manifolds are supplied, depending on the versions, complete with the following pre-installed accessories:

- Shut-off valves with thermostatic option.
- micrometric lockshield regulating valves with control handwheel.

- flow meter with lockshield valve functions and flow rate indicator.
- pair of brackets for fastening inside the containment boxes (only for compositions on the price list: see the relevant section of this sheet).

USE

They are particularly suitable to feed circuits at the service of:

- radiant underfloor heating systems.
- fan coil power supply systems with two pipes, with or without seasonal fluid reversal.

The versions with micrometric control lockshield valves are also perfect for the supply of radiator heating systems.

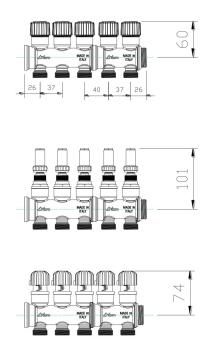
ACCESSORIES

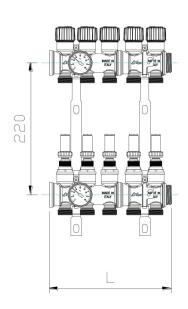
The RBM brass modular manifold versions can be equipped with a range of accessories, chosen according to circumstances, for the specific needs of the designer and the installer.

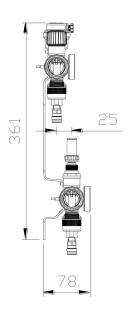
The "Accessories" paragraph reports the various connection options to the terminal circuits and the manifold inlet ones.

Please bear in mind that, at the calibration and testing phase, but especially in the case of disputes and complains about the operation of the system, the presence of accessories, such as the flowmeter and the thermometers, can be used to perform a quick check of the operating parameters specified in the project.

DIMENSIONAL FEATURES







No. ways	
L [mm]	

2
 89

9 354 10 391

11 428 12

465

13

505 542

14

CONSTRUCTION FEATURES

Body	Externally nickel-plated brass
Valve seals	EPDM
Handwheels and caps	ABS
Junction connections	Standard RBM (W24.5 x 19F)
Line connections	MF 1" UNI-EN-ISO 228

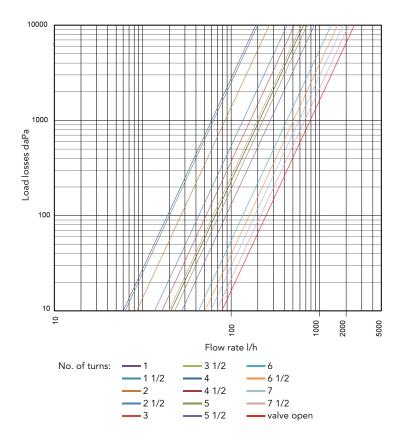
TECHNICAL FEATURES

Max. operating pressure	1000 kPa
Differential pressure $\Delta p_{\mbox{\tiny max}}$ (only for solo manifolds with a thermostatic option)	100 kPa
Max allowed temperature • Kit of manifolds with Lockshield Valves • Kit of manifolds with Flowmeters	+5 ÷ +100 °C +5 ÷ +80 °C
Allowed fluid	water; water + glycol* 50%
Flowmeter	1 ÷ 4 l/min.
Flowmeter accuracy	± 10%

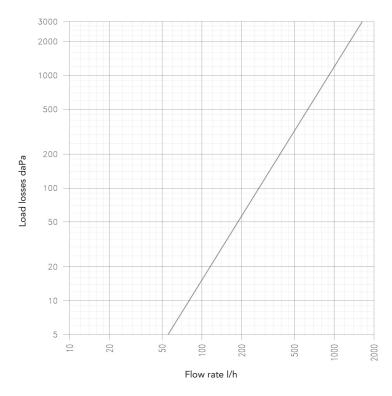
^{*} Make sure that the antifreeze fluid or glycol used is not aggressive for the O-rings, flowmeters and construction materials of the manifold.

FLUID DYNAMICS FEATURES

LOCKSHIELD VALVE PRESSURE DROP (ONE-WAY)



PRESSURE DROP OF THE VALVE WITH THERMOSTATIC OPTION WITH THE ACTUATOR INSTALLED (ONE-WAY)



Lockshield valve				
rpm	Kvs [m³/h]			
1	0,19			
1 1/2	0,20			
2	0,27			
2 1/2	0,43			
3	0,52			
3 1/2	0,63			
4	0,66			
4 1/2	0,66			
5	0,73			
5 1/2	0,88			
6	1,35			
6 1/2	1,60			
7	1,85			
7 1/2	2,15			
valva				

valve open

Analytical procedure to determine the control value of the lockshield valve for liquids with $\rho \cong 1~kg/dm^3$

$$Kvs = Q * \left(\frac{10000}{\Delta P}\right)^{0,5}$$
 valid for water with Temp. from 0 to 30 °C

 $\Delta \rho$ correction for fluids with ρ different from 1 kg/dm³

$$Kv' = \frac{Kv}{\sqrt{\rho}}$$

Analytical procedure for determining the pressure drop for liquids with $\rho = 1 \text{ kg/dm}^3$

$$\Delta P = \left(\frac{Q}{\text{Kvs}}\right)^2 \times 10.000$$
 valid for water with Temp. from 0 to 30 °C

 ΔP correction for fluids with ρ different from 1 kg/dm³

$$\Delta P' = \Delta P \times \rho'$$

Valve with thermostatic option and actuator			
ΔP _{max} kPa (bar)	Kvs [m³/h]		
400 (4)	2,85		

LEGENDA

 ΔP head loss in daPa

ΔP' correct head loss in daPa

 $\begin{array}{ll} \Delta P_{\text{max}} & \text{max pressure difference in kPa. Value within which} \\ & \text{the electrothermal actuator guarantees perfect} \\ & \text{sealing at the closing stage} \end{array}$

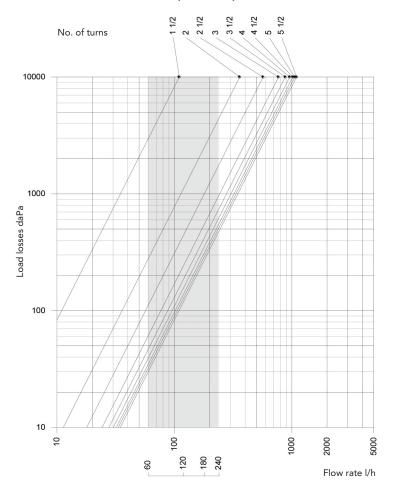
Q flow rate in m³/h

 $\begin{array}{ll} \text{Kvs} & \text{hydraulic feature in m}^3\text{/h with the valve open} \\ \text{Kv} & \text{hydraulic feature in m}^3\text{/h with single revs} \end{array}$

 ρ' liquid density in kg/dm³

FLUID DYNAMICS FEATURES

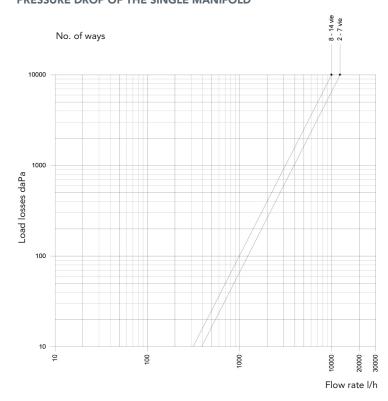
FLOWMETER PRESSURE DROP (ONE-WAY)



Flowmeter				
rpm	Kvs [m³/h]			
1/2	-			
1	-			
1 1/2	0,11			
2	0,36			
2 1/2	0,57			
3	0,77			
3 1/2	0,88			
4	0,96			
4 1/2	1,02			
5	1,06			
5 1/2	1,10			
5 1/2 v	alve open			

operating field

PRESSURE DROP OF THE SINGLE MANIFOLD



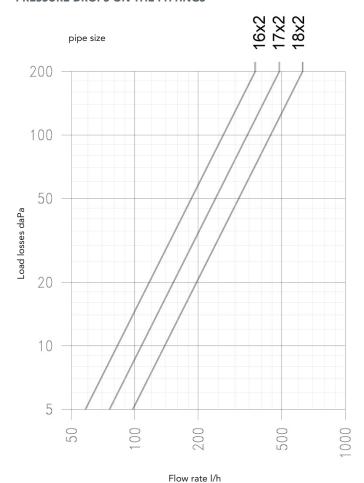
Manifold				
no. of ways of the manifold	Kv [m³/h]			
2 ÷ 7	12,37			
8 ÷ 14	9,98			

NOTE: The indicated Kv value is the same for the manifold with flow meters, with lockshield valves and with valves with a thermostatic option.

To determine the pressure drop generated by the manifold kit, add the load losses induced by the delivery manifold to those of the return manifold.

FLUID DYNAMICS FEATURES

PRESSURE DROPS ON THE FITTINGS



Pressure drop of a pair of PE pipe fittings. (Do not consider for annealed copper pipes. The fittings for this pipe do not generate significant pressure drops.

NOTES: When balancing the circuits, avoid excessively narrow passages of the lockshield regulating valves and flowmeters.

The turbulence generated in this condition can indeed cause annoying noise and vibration, as well as excessive gas dissolution in water, the main cause of occlusion of particularly winding circuits (radiant underfloor systems).

In these cases, reduce the gap between the most favoured circuits from a hydraulic point of view and the most disadvantaged one by dividing the flow rate on the latter over two or more circuits, if possible.

To determine the total pressure drop of the manifold (excluding the circuits derived from it), add the load losses generated by the lockshield valve, the valve, the flowmeter and fittings to the flow rate of the single circuit. The pressure drop generated by the manifold at the total flow rate can be considered negligible compared to the pressure drops generated by the lockshield valves, flowmeters and valves.

INSTALLATION TIPS

When installing the **RBM brass modular manifold**, we recommend complying with the following requirements:

- Before collecting the Manifold, thoroughly wash all the pipes upstream and downstream in order to eliminate residues of threads, welds, lubricating oil and solvents there may be in the various components of the heating circuit.
- Follow the flow direction stamped on the individual accessories.
- Pay special attention to the filling operations of the circuits. Fill and deaerate only one circuit at a time. For underfloor systems, follow the instructions of the manufacturers.
- The circulating fluid must be clear and free of suspensions and impurities that could deteriorate the sealing seats of the shutters and/or settle inside the manifolds and floor pipes. If possible, ensure the manifold is preceded by a suitable removable basket filter. The water quality must meet the minimum requirements set by current legislation.
- We recommend applying the production of the inspection door of the containment box to avoid the deterioration of the surface coating at the time of plastering.
- Install the thermo-electric actuators turned towards the bottom of the box, with the electric wiring cable facing the front, as shown in the photograph on the side.
- If using thermo-electric actuators, we recommend providing for the terminal bypass unit.

NOTE: The brass manifold equipped with a flowmeter must be fitted on the delivery of the hydraulic circuit.





Correct installation of the manifold fitted with the flowmeter



NOTE: For more information, refer to the technical data sheets of the optional accessories and follow the installation, use and maintenance instructions reported in the instructions enclosed with the supplied components.

HOW TO USE THE FLOWMETER

The brass modular manifold is available in the version with built-in flow control flowmeters. The flowmeter fitted on the manifold can perform the following operations:

- Measure the flow rate it reads the flow rate value directly.
- Flow rate interception and control thanks to the built-in control valve.

HOW TO USE IT

By using the control valve built into the flowmeter, the flow to the individual circuits can be controlled by the operator to the desired value, read directly on the flowmeter rod, by acting directly on it.

The operating range of the flowmeter is $1 \div 4$ l/min. (60 \div 240 l/h). The same valve allows for the closure of the junction involved.

The modular brass manifold fitted with the flowmeter must always be positioned on the delivery side of the hydraulic system connected. If the manifold is not positioned correctly, this will result in a malfunction of the flowmeter.

The flowmeter can be removed and replaced with a spare part (code **2250.00.12**).

SYSTEM LOADING / UNLOADING

The terminal units and the by-pass unit are equipped with a filling unit with threaded pressure gauge holder connection F G 1/8" and "Gardena" system quick connection





Use a manometer \emptyset 40 with a 16 bar G1/8" radial connection code **7469.005** for the connection to the manual / automatic terminal units.





Use a \varnothing 40 pressure gauge with a 10 bar G1/8" axial connection code **832.005** for the connection to the by-pass unit.



By-pass unit with rotatable elbow fittings to facilitate loading / unloading the system.

STEPS TO CONNECT THE "GARDENA" SYSTEM QUICK-COUPLING FITTING TO THE COCK:



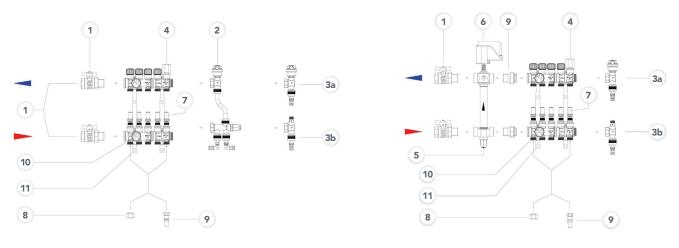






Open the cock with some turns of spanner CH18. The step can be carried out even if the filling pipe is installed.

MAIN ACCESSORIES



Pos.	Product	Code	Accessory
1		67.06.12 (B) 67.06.02 (R)	Full bore ball valve, FM 1" union connection. B = Blue butterfly valve / R = Red butterfly valve
1		3386 A2NI	Full bore square ball valve, FM 1" union connection.
2	1	3217.06.00	Fixed bypass unit. F 1" connection.
3a		3215.06.50	Air and water automatic discharge terminal. F 1" connection.
3b		3216.06.50	Air and water manual discharge terminal. F 1" connection.
4		3189.00.X2	Thermo-electrically controlled actuator for valves with a thermostatic option, with or without a micro limit switch. Normally Closed valve position when power missing. 230 and 24 V AC power supply.
5		114.06.30	4-way motorised zone valve Normally Closed. with adjustable bypass and FF 1" line connections, centre distance of the connections 220 mm.
6		373.00.X0	Electromechanical actuator for zone valve with auxiliary micro switch. On-off three-wire control, IP42 protection, 230 and 24 V AC power supply.
6		360.00.X0	Thermo-electric actuator for zone valve with auxiliary micro switch. On-off two-wire control, 230 and 24 V AC power supply.

Pos.	Product	Code	Accessory
6		313.00.02	Auxiliary switch for thermo-electric actuator.
7		2250.00.12	Flow meter with lockshield valve function and flow rate indicator. Adjustment 1 ÷ 4 l/min.
8		41.1X.20 41.18.40	Chrome plated compression fitting for annealed copper pipe ø $10 \div 18$ mm thickness 1 mm Standard RBM threaded connection.
8		1944.16.00	Compression fitting for multilayer polyethylene pipe ø16 mm thickness 2 mm. Standard RBM F threaded connection. Technopolymer core and ogive.
8		3597.1X.00	Compression fitting for polyethylene pipe ø16 ÷ 17 mm thickness 2 mm. Standard RBM – int. 37 mm F threaded connection.
8		826.XX.00	Press fitting for multilayer polyethylene pipe ø14 ÷ 20 mm thickness 2 mm. Standard RBM threaded connection.
9		72.06.00	Manifold union fitting in three pieces, MM 1" connections.
10		8647.005	Thermometer 0÷80°C.
11		3248.06.00	Pair of steel brackets for fixing the manifolds, complete with collar. Centre distance 220 mm.

THERMAL INSULATION FOR BRASS MODULAR MANIFOLD WITH FLOW METER OR MANIFOLD WITH MICROMETRIC LOCKSHIELD VALVES SERIES 3201

Product	Code	Description	Ways	Pack	Outer
	3674.10.02	Thermal insulation for automatic air and water discharge terminal unit made from expanded polyethylene half-bearings with external anti-scratch coating. Half-bearings fixed with double-sided adhesive tape already applied. • Max temperature application -40°C ÷ +90°C • Fire behaviour class I • Density 33 Kg/m³	1	1	1
	3674.20.02		2	1	1
	3674.30.02		3	1	1
	3674.40.02		4	1	1
	3674.50.02		5	1	1

AIR AND WATER MANUAL DISCHARGE TERMINAL THERMAL INSULATION SERIES 3216

Product	Code	Description	Pack	Outer
	3672.10.02	Thermal insulation for automatic air and water discharge terminal unit made from expanded polyethylene half-bearings with external anti-scratch coating. Half-bearings fixed with double-sided adhesive tape already applied. • Max temperature application -40°C ÷ +90°C • Fire behaviour class I • Density 33 Kg/m³	1	1

AIR AND WATER AUTOMATIC DISCHARGE TERMINAL THERMAL INSULATION SERIES 3215

Prodotto	Codice	Descrizione	Conf.	Imballo
	3672.00.02	Thermal insulation for automatic air and water discharge terminal unit made from expanded polyethylene half-bearings with external anti-scratch coating. Half-bearings fixed with double-sided adhesive tape already applied. • Max temperature application -40°C ÷ +90°C • Fire behaviour class I • Density 33 Kg/m³	1	1

3202 SERIES MANIFOLD KIT INSULATION SHELLS SELECTION GUIDE

The choice of insulating casings to insulate the manifold kit must be carried out according to the precise configuration of the single modules that comprise the delivery and return manifold kit. Refer to the table below for the correct codes to order:

No. of manifold kit branches	Module composition	Supply and return manifold insulation codes	Drain units insulation codes
3	3	3674.30.02 (2 pcs)	3672.00.02 + 3672.10.02
4	4	3674.40.02 (2 pcs)	3672.00.02 + 3672.10.02
5	5	3674.50.02 (2 pcs)	3672.00.02 + 3672.10.02
6	3+3	3674.30.02 (4 pcs)	3672.00.02 + 3672.10.02
7	3+4	3674.30.02 (2 pz) + 3674.40.02 (2 pcs)	3672.00.02 + 3672.10.02
8	4+4	3674.40.02 (4 pcs)	3672.00.02 + 3672.10.02
9	5+4	3674.50.02 (2 pz) + 3674.40.02 (2 pcs)	3672.00.02 + 3672.10.02
10	5+5	3674.50.02 (4 pcs)	3672.00.02 + 3672.10.02
11	3+4+4	3674.30.02 (2 pz) + 3674.40.02 (4 pcs)	3672.00.02 + 3672.10.02
12	4+4+4	3674.40.02 (6 pcs)	3672.00.02 + 3672.10.02
13	5+4+4	3674.50.02 (2 pz) + 3674.40.02 (4 pcs)	3672.00.02 + 3672.10.02
14	5+5+4	3674.50.02 (4 pz) + 3674.40.02 (2 pcs)	3672.00.02 + 3672.10.02

EXAMPLES OF MANIFOLDS AND CONTAINMENT BOXES COUPLING

Product	Description	Code	LxH
F P	METAL CASE WITH PLASTIC COVER "Box1" Manifold galvanised steel sheet containment and	2606.40.02	400x500
univers plastic • Adju consid	inspection case with bottom and side closures, complete with universal mobile bracket guides and removable cover in paintable plastic.	2606.60.02	600x500
	 Adjustable depth 80÷130 mm (overall depth 80 ÷ 150 mm if considering the useful stroke of the screws used for fixing the plastic cover to the metal frame). 	2606.80.02	800×500
	• Flush mount installation, even in to walls with 80 mm box plastered on both sides.	2606.10.02	1000x500

MANIFOLDS WITH VENT VALVES – NUMBER OF MANIFOLD WAYS												
	3	4	5	6	7	8	9	10	11	12	13	14
	L1 * (mm) 170	L1 * (mm) 207	L1 * (mm) 247	L1 * (mm) 284	L1 * (mm) 321	L1 * (mm) 358	L1 * (mm) 398	L1 * (mm) 435	L1 * (mm) 472	L1 * (mm) 509	L1 * (mm) 549	L1 * (mm) 586
	L=400 Code 2606.40.02			L=600 Code 2606.60.02					Code	L=800 e 2606.8	30.02	

MANIFOLDS WITH BYPASS – NUMBER OF MANIFOLD WAYS												
	3	4	5	6	7	8	9	10	11	12	13	14
	L1 * (mm) 245 L=400 Code 2606.40.02	L1 * (mm) 282	L1 * (mm) 322	L1 * (mm) 359 L=600	L1 * (mm) 396	L1 * (mm) 433	L1 * (mm) 473	L1 * (mm) 510	L1 * (mm) 547 L=8 Code 26	L1 * (mm) 584 300 06.80.0	L1 * (mm) 624	L1 * (mm) 661

All sizes, where not indicated, must be considered in mm.

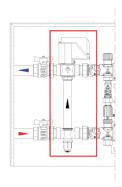
NOTES: A clearance space was considered for the coupling of manifolds/containment boxes:

- 30 mm discharge units/bypass side to allow for the required adjustments:
- 50 mm on the ball valves side, required to allow for the installation of the multilayer pipe and fitting.

If these requirements are not met, the coupling is pushed to the next

An 80 mm clearance for the installation of an accessory shut-off valve was already considered to define the coupling of the manifolds/containment boxes kit.

Here below are some useful measurements for the overall dimensions of non-standard compositions.



Composition of the manifold kit with the zone valve: L1 + 110 mm

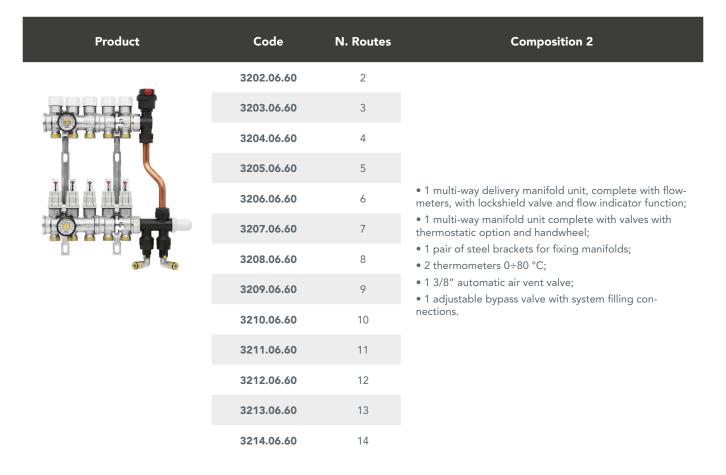
For the dimensions of non-standard compositions, please contact the RBM Office.

The compositions for the distribution with an independent circuit control can be carried out either with a delivery manifold positioned above the return one and vice versa (if using the bypass valve, ensure the installation is carried out correctly).

The compositions with the zone valve must only be made with the return manifold positioned on top of the delivery one, as the electric actuator of the valve cannot be installed upside down.

COMPOSITIONS ON THE PRICE LIST

Product	Code	N. Routes	Composition 1
	3202.06.10	2	
	3203.06.10	3	
	3204.06.10	4	
	3205.06.10	5	
	3206.06.10	6	• 1 multi-way delivery manifold unit, complete with flow- meters, with lockshield valve and flow indicator function;
	3207.06.10	7	 1 multi-way manifold unit complete with valves with thermostatic option and handwheel;
	3208.06.10	8	 1 pair of steel brackets for fixing manifolds; 2 thermometers 0÷80 °C;
	3209.06.10	9	• 1 1" air / water automatic discharge terminal;
	3210.06.10	10	• 1 1" air / water manual discharge terminal;
	3211.06.10	11	
	3212.06.10	12	
	3213.06.10	13	
	3214.06.10	14	

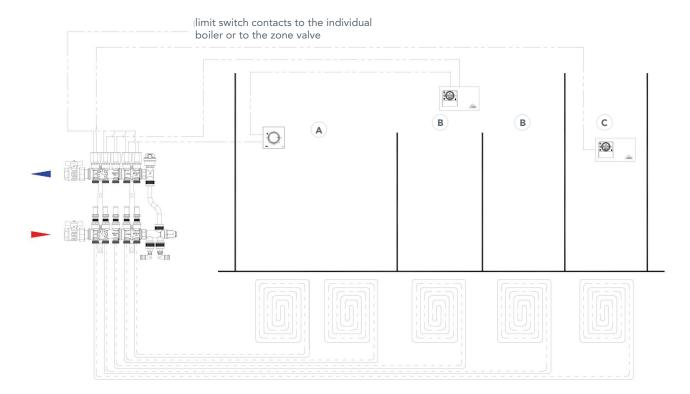


Product	Code	N. Routes	Composition 3
F3 F3 F3 F3 F3	3202.06.90	2	
1 (2)	3203.06.90	3	
	3204.06.90	4	
	3205.06.90	5	
	3206.06.90	6	and the left of th
	3207.06.90	7	 1 multi-way delivery manifold unit, complete with micrometric lockshield regulating valves with graduated handwheel;
	3208.06.90	8	• 1 multi-way manifold unit complete with valves with thermostatic option and handwheel;
	3209.06.90	9	• 1 pair of steel brackets for fixing manifolds.
	3210.06.90	10	
	3211.06.90	11	
	3212.06.90	12	
	3213.06.90	13	

3214.06.90

14

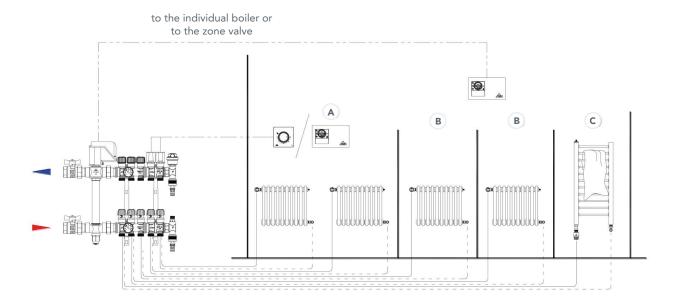
POSSIBLE APPLICATIONS



SUPPLY OF A RADIANT UNDERFLOOR SYSTEM

Thermal zone with thermally independent bathroom also during operating times (e.g. attenuated sleeping area, bathroom at the required temperature)

- A Thermally independent circuits, but bound to the operating times and attenuation of the thermal zone chronothermostat.
- B Environments controlled by the thermal zone chronothermostat.
- C Bathroom area controlled by independent chronothermostat.



SUPPLY OF A RADIATOR UNDERFLOOR SYSTEM

Thermal zone controlled by a room chronothermostat with temperature control on two levels.

- A Circuits controlled by a thermostat or room chronothermostat acting on electrothermal controls (solution for indoor and/or outdoor free thermal loads).
- B Circuits without automatic interception.
- C Bathroom furniture supply circuit with valve with thermostatic option.

SPECIFICATION ITEMS

3202.0 SERIES

Kit of compact brass modular manifolds with reduced centre distance, RBM 3202 series. Made up of flowmeter supply indicator on each supply way. Each kit consists of: (pre-assembled components)

- 1 multi-way manifold unit, complete with flowmeters, with lockshield valve and flow indicator function.
- 1 multi-way manifold unit complete with valves with thermostatic option and handwheel.
- 1 pair of steel brackets for fixing manifolds.
- 2 thermometers 0÷80 °C.
- 11" air/water automatic discharge terminal.
- 1 1" air / water manual discharge terminal.

Temperature range $0 \div 80$ °C. Max operating pressure 10 bar. Centre distance distribution way 37 mm connections -Standard RBM thread W24.5x19F. Available size 1". Available branches (no. of ways) 2+2-3+3-4+4-5+5-6+6-7+7-8+8-9+9-10+10-11+11-12+12-13+13-14+14.

3202.1 SERIES

Kit of compact brass modular manifolds with reduced centre distance, RBM 3202 series. Made up of flowmeter supply indicator on each supply way. Each kit consists of: (pre-assembled components)

- 1 multi-way manifold unit, complete with flowmeters, with lockshield valve and flow indicator function.
- 1 multi-way manifold unit complete with valves with thermostatic option and handwheel.
- 1 pair of steel brackets for fixing manifolds.
- 2 thermometers 0÷80 °C.
- 1 3/8 automatic air vent valve.
- 1 adjustable bypass valve with system filling connections.

Temperature range $0 \div 80$ °C. Max operating pressure 10 bar. Centre distance distribution way 37 mm connections -Standard RBM thread W24.5x19F. Available size 1". Available branches (no. of ways) 2+2-3+3-4+4-5+5-6+6-7+7-8+8-9+9-10+10-11+11-12+12-13+13-14+14

3202.2 SERIES

Kit of compact brass modular manifolds with reduced centre distance, RBM 3202 series. Composition with adjustable lockshield valves with graduated handwheel on each delivery way. Each kit consists of: (pre-assembled components)

- 1 multi-way manifold unit, complete with micrometric lockshield regulating valves with graduated handwheel.
- 1 multi-way manifold unit complete with valves with thermostatic option and handwheel.
- 1 pair of steel brackets for fixing manifolds.

Temperature range $0 \div 100$ °C. Max operating pressure 10 bar. Centre distance distribution way 37 mm connections -Standard RBM thread W24.5x19F. Available size 1". Available branches (no. of ways) 2+2-3+3-4+4-5+5-6+6-7+7-8+8-9+9-10+10-11+11-12+12-13+13-14+14.

3201.0 SERIES

Compact brass modular manifold with reduced centre distance, with valves with a thermostatic option featuring a handwheel, RBM 3201 series. Centre distance distribution way 37 mm connections -Standard RBM thread W24.5x19F. Temperature range $0 \div 100$ °C. Max operating pressure 10 bar. Available size 1". Available branches (no. of ways) 1 - 2 - 3 - 4

3201.1 SERIES

Compact brass modular manifold with reduced centre distance, complete with flow meters, with lockshield valve and flow indicator function, RBM 3201 series. Centre distance distribution way 37 mm connections -Standard RBM thread W24.5x19F. Temperature range $0 \div 80$ °C. Max operating pressure 10 bar. Available size 1". Available branches (no. of ways) 1 - 2 - 3 - 4

3201.2 SERIES

Compact brass modular manifold with reduced centre distance, complete with micrometric Lockshield valves and graduated hand-wheel, RBM 3201 series. Centre distance distribution way 37 mm connections -Standard RBM thread W24.5x19F. Temperature range $0 \div 100$ °C. Max operating pressure 10 bar. Available size 1". Available branches (no. of ways) 1 - 2 - 3 - 4

3216 SERIES

Air and water manual discharge terminal, RBM 3216 series. Standard installation on return line of modular brass manifold kits. Pressure gauge holder connection G 1/8" (for radial pressure gauge RBM Ø 40 - scale $0 \div 16$ bar - Code 7469.005). Available size 1"

3215 SERIES

Air and water automatic discharge terminal, RBM 3215 series. Standard installation on the delivery line of modular brass manifold kits. Pressure gauge holder connection G 1/8" (for radial pressure gauge RBM \varnothing 40 - scale 0÷16 bar - Code 7469.005). Available size 1"

3217 SERIES

By-pass group with rotatable elbow fittings for the system filling, RBM 3217 series. Made up of (loose pieces): Automatic air vent valve, by-pass adjustment group, fittings and connection pipe. Pressure gauge holder connection G 1/8" (for radial pressure gauge RBM Ø 40 - scale $0 \div 10$ bar - Code 832.005). Available size 1"

3248 SERIES	
Pair of steel brackets with collar, RBM 3248 series, for aligned fixing of RBI	M brass modular manifolds (3201 and 3202 series).
8647 SERIES	
Thermometer with collar, RBM 8647 series, for RBM modular brass manifo	ld kits, 3201 and 3202 series. Thermometer scale 0÷80 °C
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