



4 / PREASSEMBLED GROUPS

REGULATION SYSTEMS FOR RADIANT PANELS HEATING WITH PUMP GROUP GP 1190



20 kW

TECHNICAL DATA

Maximum working pressure 10 bar
 Maximum differential pressure 1 bar
 Maximum working temperature 120 °C

TECHNICAL DATA WITH GP 1190

Maximum working pressure 6 bar
 Maximum differential pressure 1 bar
 Maximum working temperature 70 °C
 Temperature range on secondary circuit 20 °C ÷ 65 °C
 Maximum thermal power 20kW with Δt 10 °C and temperature on the primary circuit ≥70 °C

CONSTRUCTIVE FEATURES

Press-forged parts consist of brass with limited lead content in compliance with the current regulations: CW617N UNI EN 12165:2016. All o-rings are produced in peroxide cured EPDM. Stainless steel components in AISI 316. All components are provided with soft o-rings and do not require any intermediate sealing element (PTFE, hemp, etc.). Side connections W24x19 or G 3/4 EK with 50 mm interaxis.

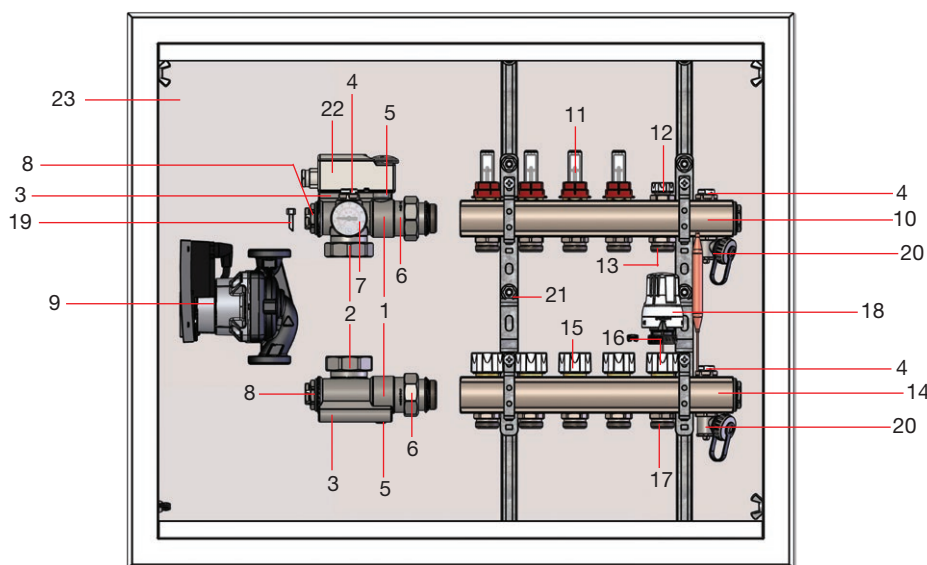
The pump group GP 1190 has a Ø 23 mm internal passage.

APPLICATIONS

The system for fixed point heating has the advantage of being particularly compact and to employ all series components of Luxor manifolds, which are already available on the market, with the only addition of two specific items:

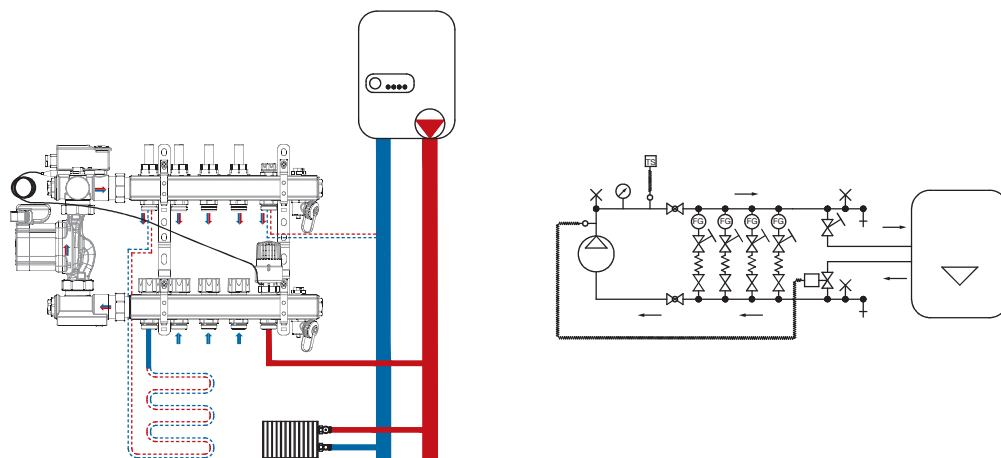
- art. GP 1190;
- art. TT 3051.

This system enables to easily and economically obtain a mixed heating system in households where both high temperature heating bodies (60°C÷70°C) and low temperature radiant panels (20°C÷50°C) are installed.



COMPONENTS

- | | |
|--|---|
| <ol style="list-style-type: none"> 1 Pump group 2 Connections to circulation pump with swivel nut G 1”1/2 3 Seat for regulation probe of the thermostatic head and arrangement for seat for the safety thermostat sensor. 4 Manual air vent valve 5 Ball valves for pump interception 6 G 1” connections with soft seal 7 Thermometer 8 G 1/2 female connections for further devices 9 Circulation pump with synchronous motor 25/60, interaxis 130mm, energy class A 10 Delivery manifold for radiant panels 11 Regulators and flow meters, from 0,5l/min to 5l/min. It is possible to open the glass for cleaning while the system is operating | <ol style="list-style-type: none"> 12 Low temperature circuit check valve 13 Connection for boiler return 14 Radiant panels return manifold 15 Valves for electrothermal regulation, with protection caps 16 Thermostatic adjustment valve 17 Connection to boiler flow 18 Thermostatic head with remote sensor 19 Spring to fix the remote sensor of the thermostatic head 20 Water load/drain tap 21 Brackets 22 Contact bimetallic safety thermostat 23 Cabinet with adjustable ends, RAL 9016 white frame and door. |
|--|---|



HYDRAULIC SCHEME LEGEND

	check valve		water load/drain tap		circulation pump
	ball valve		thermometer		user: radiant panels, radiators etc.
	non-return valve, the arrow indicates the direction of flow		maunal air vent device		filter
	safety valve (bypass valve)		automatic air vent device		3-way valve
	check valve, regulation and balancing		flow meter		
	ball check valve regulation and balancing		immersion safety thermostat		
	injection valve with remote sensor		contact safety thermostat		

FUNCTION

Fixed point heating systems keep the water in the radiant panels at a constant pre-set temperature by mixing hot water coming from the boiler with the one circulating in the panels. A thermostatic valve with remote sensor measures the temperature and adds hot water to the circuit accordingly, so as to compensate the heat output of the radiant panels. It is advisable to install a security thermostat on the pump inlet valve in order to avoid damages caused by a sudden temperature rise. The intervention of the thermostat must block the functioning of the pump.

The system can be complemented with a bypass valve. In case of excessive differential pressure, the bypass valve releases the exceeding pressure, thus protecting the components and, if thermoelectric heads are employed to intercept the circuits, avoiding noise and wear on the circulation pump. This type of system can supply a max thermal power of 20 kW with a Δt of 10°C and a temperature of $\geq 70^\circ\text{C}$ on the primary side.

REGULATION SYSTEMS FOR RADIANT PANELS HEATING WITH PUMP GROUP GP 1190



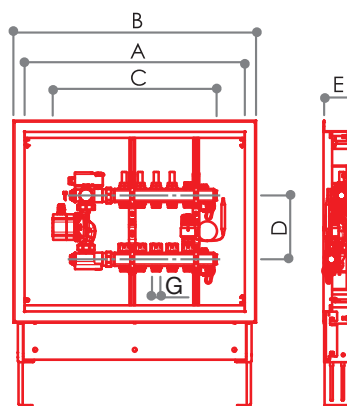
GP 1190

G 1" valve with pump connection for mixed heating system, max thermometer temperature 80 °C.

CODE	SIZE			
72000030	G 1"	2107	1	8



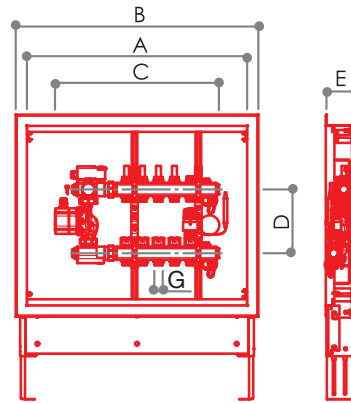
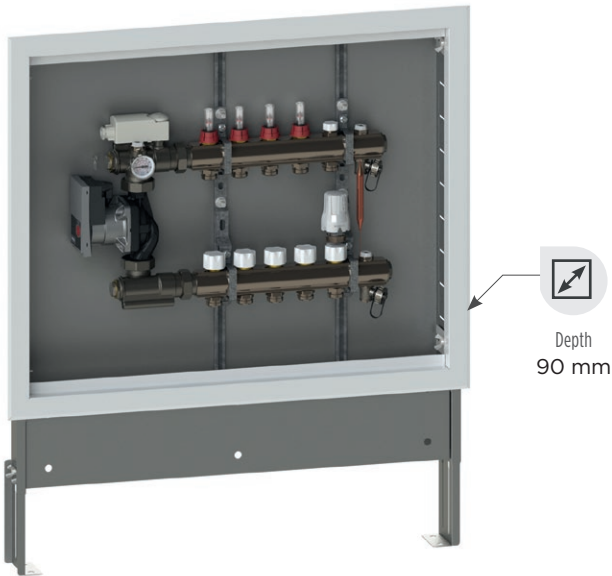
Depth 90 mm



CCBP 4022

Fixed point distribution system for low temperature heating (W24x19).

ARTICLE	CODE	SIZE	N. PANEL CONNECTIONS	A	B	C	D	E	F	G	H	L		
CCBP4022/2	17402202N	G 1" x (W24x19)	2	500	560	420	200	90	-	W24x19	-	-	17,312	1
CCBP4022/3	17402203N		3	700	760	470			-		-	19,906	1	
CCBP4022/4	17402204N		4	700	760	520			-		-	20,500	1	
CCBP4022/5	17402205N		5	700	760	570			-		-	21,094	1	
CCBP4022/6	17402206N		6	700	760	620			-		-	21,688	1	
CCBP4022/7	17402207N		7	850	910	670			-		-	24,282	1	
CCBP4022/8	17402208N		8	850	910	720			-		-	24,876	1	
CCBP4022/9	17402209N		9	850	910	770			-		-	25,470	1	
CCBP4022/10	17402210N		10	1000	1060	820			-		-	28,064	1	
CCBP4022/11	17402211N		11	1000	1060	870			-		-	28,658	1	

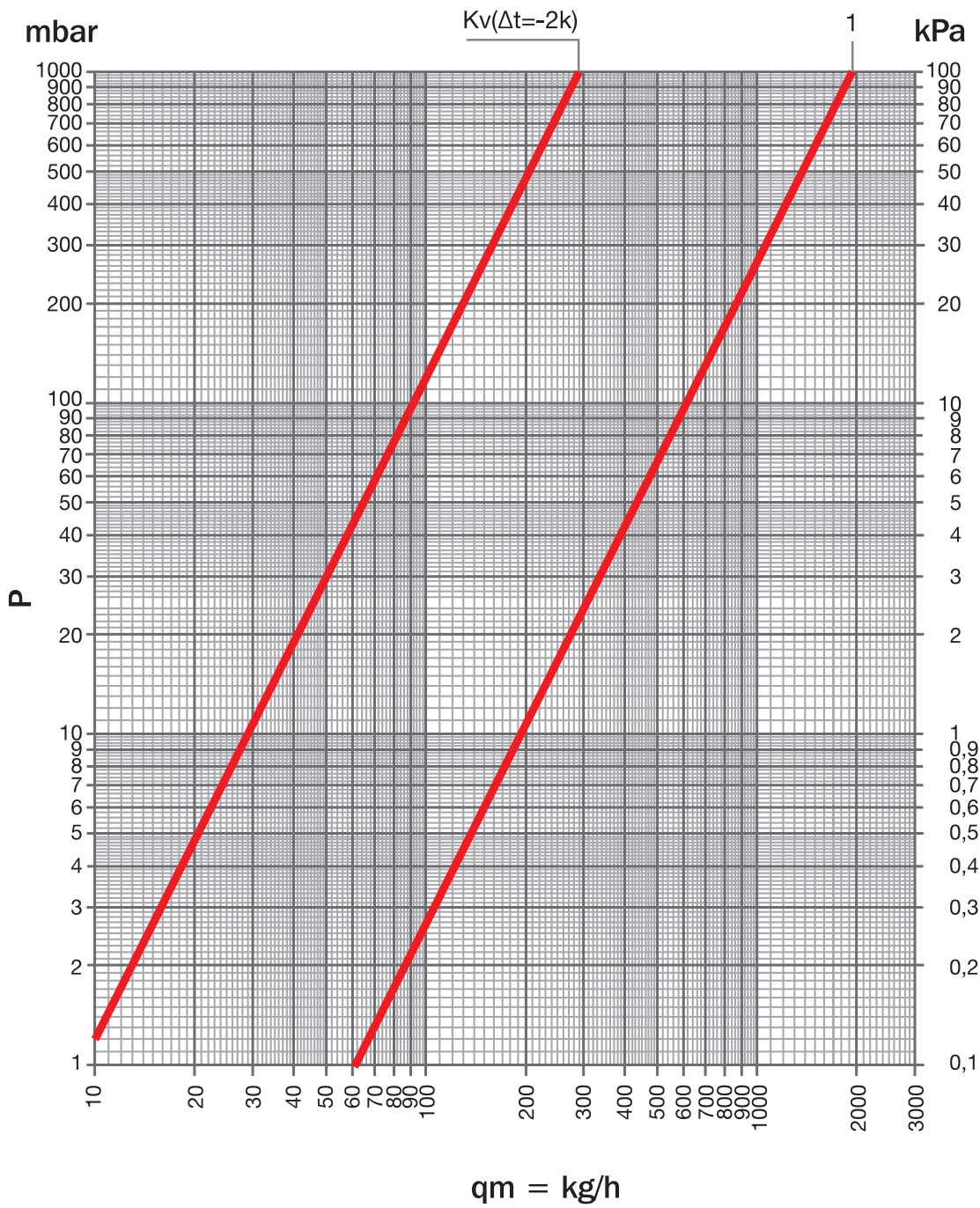


CCBP 4032

Fixed point distribution system for low temperature heating G 3/4 EK.

ARTICLE	CODE	SIZE	N. PANEL CONNECTIONS	A	B	C	D	E	F	G	H	L	kg	⊞
CCBP4032/2	17403202N	G 1" x G 3/4 EK	2	500	560	420	200	90	-	G 3/4 EK	-	-	17,312	1
CCBP4032/3	17403203N		3	700	760	470			-		-	19,906	1	
CCBP4032/4	17403204N		4	700	760	520			-		-	20,500	1	
CCBP4032/5	17403205N		5	700	760	570			-		-	21,094	1	
CCBP4032/6	17403206N		6	700	760	620			-		-	21,688	1	
CCBP4032/7	17403207N		7	850	910	670			-		-	24,282	1	
CCBP4032/8	17403208N		8	850	910	720			-		-	24,876	1	
CCBP4032/9	17403209N		9	850	910	770			-		-	25,470	1	
CCBP4032/10	17403210N		10	1000	1060	820			-		-	28,064	1	
CCBP4032/11	17403211N		11	1000	1060	870			-		-	28,658	1	

FLOW RATE CHART



Kv	Kv Δt 2 °C	POS
1,92	00.29	1

REGULATION SYSTEM FOR RADIANT PANELS HEATING WITH PUMP GROUP GP 1190 AND KIT FOR HIGH TEMPERATURE KA 1191



14 kW

TECHNICAL DATA

Maximum working pressure 10 bar
Maximum differential pressure 1 bar
Maximum working temperature 80 °C

TECHNICAL DATA SISTEMA CON GP 1190 + KA 1191

Maximum working pressure 6 bar
Maximum differential pressure 1 bar
Maximum working temperature on primary side 80 °C
Maximum working temperature on secondary side 70 °C
Temperature range on secondary side 20 °C ÷ 65 °C
Maximum thermal power 14 kW with Δt 10 °C and temperature on the primary side ≥ 70 °C

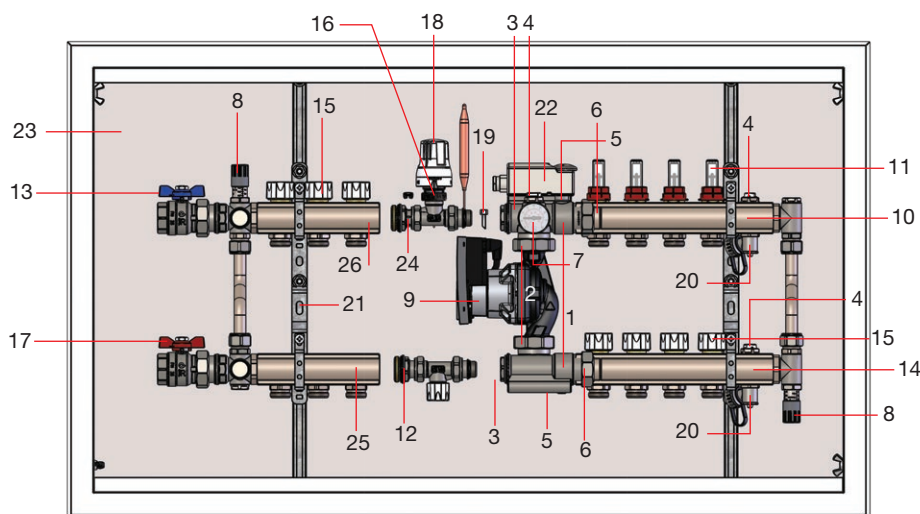
APPLICATIONS

When combined with pump group GP 1190, the kit for high temperature KA 1191 allows to install a hot water distribution for traditional radiator systems and a water distribution system for radiant panels in one single cabinet.

CONSTRUCTIVE FEATURES

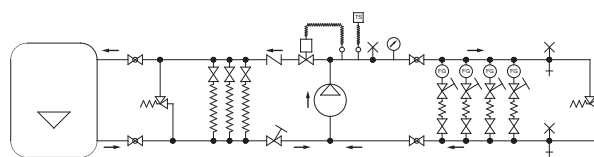
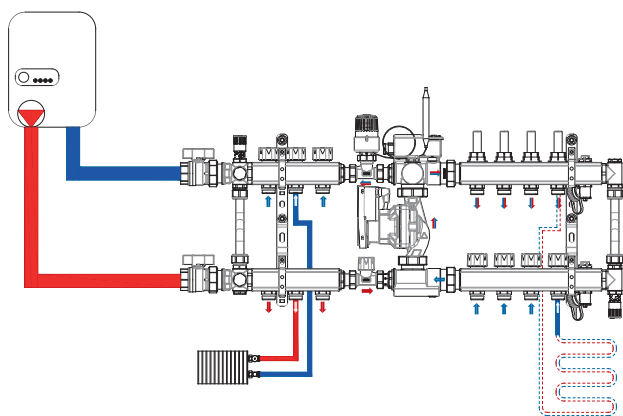
Press-forged parts consist of brass with limited lead content in compliance with the current regulations: CW617N UNI EN 12165:2016. All o-rings are produced in peroxide cured EPDM. Stainless steel components in AISI 316.

All components are provided with soft o-rings and do not require any intermediate sealing element (PTFE, hemp, etc.). Side connections W24x19 or G 3/4 EK with 50 mm interaxis. The pump group GP 1190 has a \varnothing 23 mm internal passage.



COMPONENTS

- | | |
|---|--|
| 1 Pump group | 14 Radiant panels return manifold |
| 2 Connections to circulation pump with swivel nut G 1 1/2 | 15 Valves for electrothermal regulation, with protection caps |
| 3 Seat for regulation probe of the thermostatic head | 16 Thermostatic adjustment valve |
| 4 Manual air vent valve | 17 Delivery ball valve from boiler |
| 5 Ball valves for pump interception | 18 Thermostatic head with remote sensor |
| 6 G 1" connections with soft seal | 19 Spring to fix the remote sensor of the thermostatic head |
| 7 Thermometer | 20 Water load/drain tap |
| 8 Differential bypass valve | 21 Brackets |
| 9 Circulation pump with synchronous motor 25/60 interaxis 130 mm, energy class A | 22 Contact bimetallic safety thermostat |
| 10 Delivery manifold for radiant panels | 23 Cabinet with adjustable ends, RAL 9016 white frame and door |
| 11 Regulators and flow meters, from 0,5 l/min to 5 l/min. It is possible to open the glass for cleaning while the system is operating | 24 Check valve |
| 12 Low temperature circuit check valve | 25 Delivery manifold for primary side |
| 13 Boiler return ball valve | 26 Return manifold from primary circuit |



HYDRAULIC SCHEME LEGEND

	check valve		water load/drain tap		circulation pump
	ball valve		thermometer		user: radiant panels, radiators etc.
	non-return valve, the arrow indicates the direction of flow		maunal air vent device		filter
	safety valve (bypass valve)		automatic air vent device		3-way valve
	check valve, regulation and balancing		flow meter		
	ball check valve regulation and balancing		immersion safety thermostat		
	injection valve with remote sensor		contact safety thermostat		

FUNCTION

The hot water coming from the boiler and the primary circuit enters the pump group GP 1190 through the lockshield valve of the kit KA 1191, which regulates the maximum quantity of medium inside the secondary circuit, thus balancing the primary one.

The outflowing water is regulated by the thermostatic adjustment valve. This valve is controlled by a thermostatic head with remote sensor which keeps the delivery water in the radiant panels at a constant pre-set temperature by mixing hot water coming from the boiler with the one circulating in the panels.

The system is complemented with a bypass valve both on the primary and the secondary circuit. In case of excessive differential pressure, the bypass valve releases the exceeding pressure, thus protecting the components and, if thermoelectric heads are employed to intercept the circuits, avoiding noise and wear on the circulation pump.

The intervention of the thermostat must block the functioning of the pump.

This type of system can supply a max thermal power of 14 kW with a Δt of 10°C and a temperature of ≥ 70 °C on the primary circuit.

REGULATION SYSTEM FOR RADIANT PANELS HEATING WITH PUMP GROUP GP 1190 AND KIT FOR HIGH TEMPERATURE KA 1191



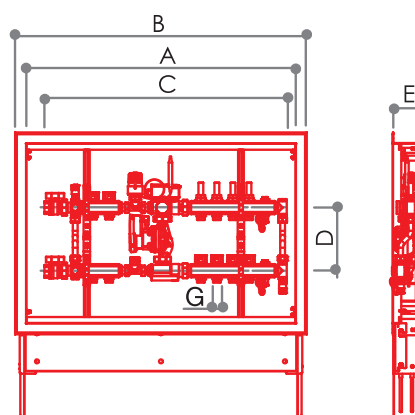
KA 1191

Kit for high temperature heating system. To combine with pump set GP 1190.

CODE	SIZE				€
72000040	G 1"	787	1	8	87,29



Depth 90 mm

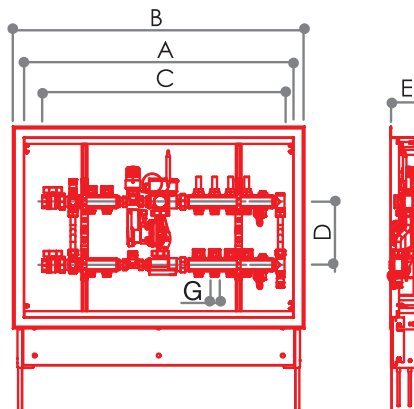
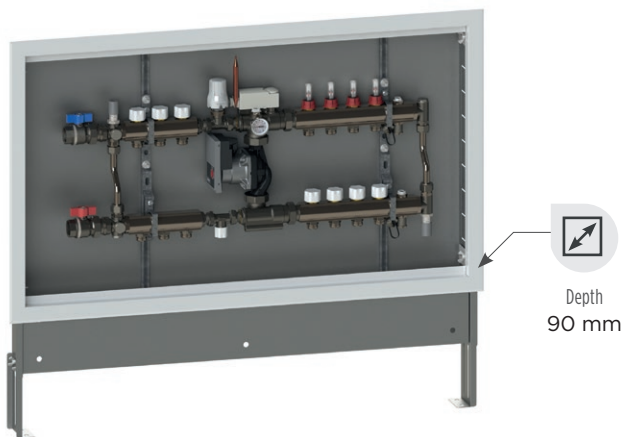


CCBAP 4024

Distribution system for low temperature heating + 2 connections for high temperature (W24x19).

ARTICLE	CODE	SIZE	N. PANEL CONNECTIONS	A	B	C	D	E	F	G		
CCBAP4024/2	17402402N	G 1" x (W24x19)	2	850	910	670	200	90		W24x19	24,648	1
CCBAP4024/3	17402403N		3	850	910	720					25,242	1
CCBAP4024/4	17402404N		4	850	910	770					25,836	1
CCBAP4024/5	17402405N		5	1000	1060	820					28,430	1
CCBAP4024/6	17402406N		6	1000	1060	870					29,024	1
CCBAP4024/7	17402407N		7	1000	1060	920					29,618	1
CCBAP4024/8	17402408N		8	1200	1260	970					32,212	1
CCBAP4024/9	17402409N		9	1200	1260	1020					32,806	1
CCBAP4024/10	17402410N		10	1200	1260	1070					33,400	1
CCBAP4024/11	17402411N		11	1200	1260	1120					33,994	1
CCBAP4024/12	17402412N		12	1300	1360	1170					36,588	1

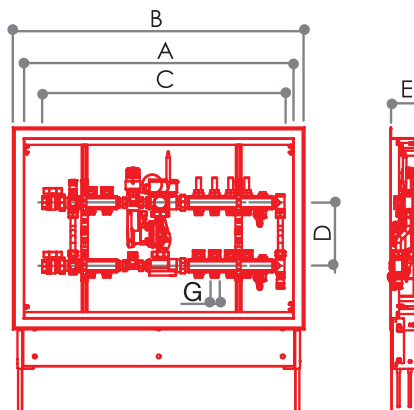
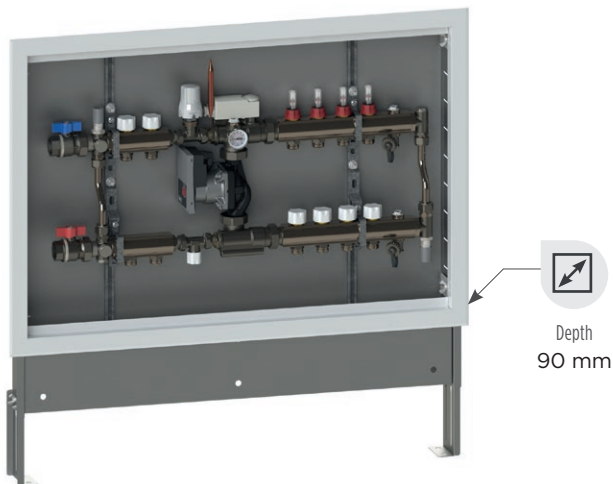
PREASSEMBLED GROUPS



CCBAP 4023

Distribution system for low temperature heating + 3 connections for high temperature (W24x19).

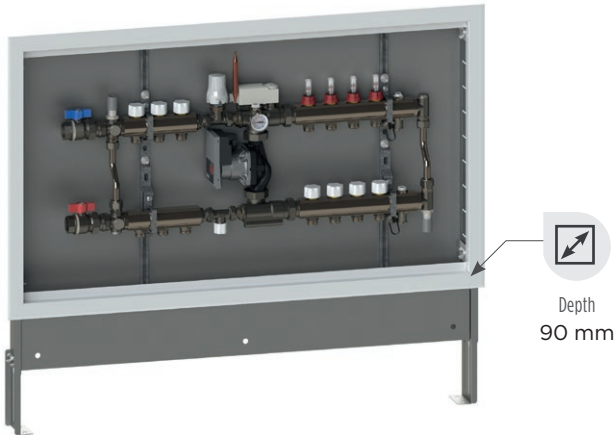
ARTICLE	CODE	SIZE	N. PANEL CONNECTIONS	A	B	C	D	E	F	G	⚖️	📦
CCBAP4023/2	17402302N	G 1" x (W24x19)	2	850	910	720	200	90	-	W24x19	25,218	1
CCBAP4023/3	17402303N		3	850	910	770			-		25,812	1
CCBAP4023/4	17402304N		4	1000	1060	820			-		28,406	1
CCBAP4023/5	17402305N		5	1000	1060	870			-		29,000	1
CCBAP4023/6	17402306N		6	1000	1060	920			-		29,594	1
CCBAP4023/7	17402307N		7	1200	1260	970			-		32,188	1
CCBAP4023/8	17402308N		8	1200	1260	1020			-		32,782	1
CCBAP4023/9	17402309N		9	1200	1260	1070			-		33,376	1
CCBAP4023/10	17402310N		10	1200	1260	1120			-		33,970	1
CCBAP4023/11	17402311N		11	1300	1360	1170			-		36,564	1
CCBAP4023/12	17402312N		12	1300	1360	1220			-		37,158	1



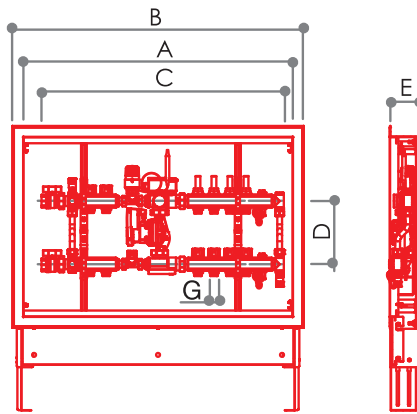
CCBAP 4034

Distribution system for low temperature heating + 2 connections for high temperature (G 3/4 EK).

ARTICLE	CODE	SIZE	N. PANEL CONNECTIONS	A	B	C	D	E	F	G	⚖️	📦
CCBAP4034/2	17403402N	G 1" x G 3/4 EK	2	850	910	670	200	90	-	G 3/4 EK	24,648	1
CCBAP4034/3	17403403N		3	850	910	720			-		25,242	1
CCBAP4034/4	17403404N		4	850	910	770			-		25,836	1
CCBAP4034/5	17403405N		5	1000	1060	820			-		28,430	1
CCBAP4034/6	17403406N		6	1000	1060	870			-		29,024	1
CCBAP4034/7	17403407N		7	1000	1060	920			-		29,618	1
CCBAP4034/8	17403408N		8	1200	1260	970			-		32,212	1
CCBAP4034/9	17403409N		9	1200	1260	1020			-		32,806	1
CCBAP4034/10	17403410N		10	1200	1260	1070			-		33,400	1
CCBAP4034/11	17403411N		11	1200	1260	1120			-		33,994	1
CCBAP4034/12	17403412N		12	1300	1360	1170			-		36,588	1



Depth
90 mm

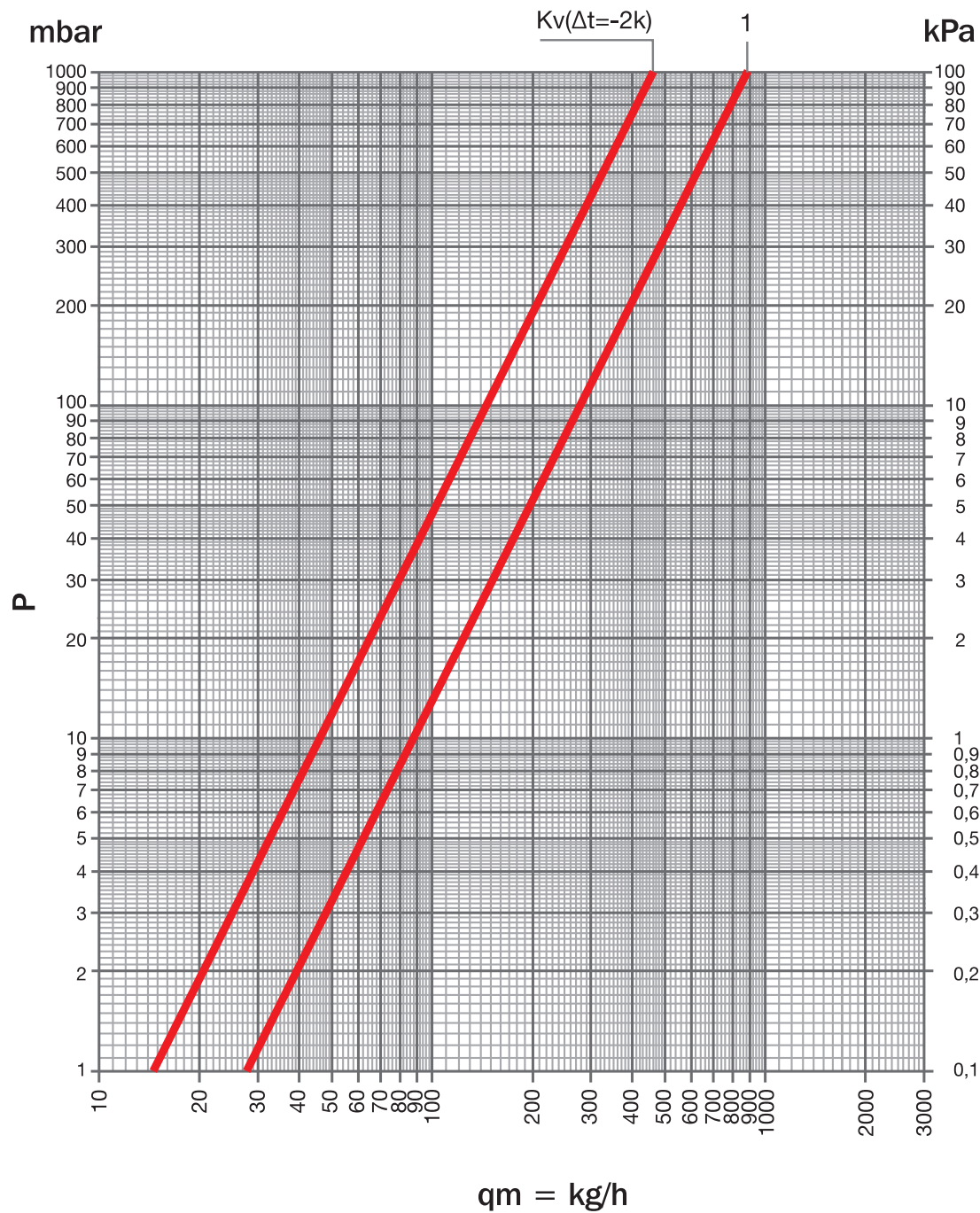


CCBAP 4033

Distribution system for low temperature heating + 3 connections for high temperature (G 3/4 EK).

ARTICLE	CODE	SIZE	N. PANEL CONNECTIONS	A	B	C	D	E	F	G		
CCBAP4033/2	17403302N	G 1" x G 3/4 EK	2	850	910	720	200	90	-		25,218	1
CCBAP4033/3	17403303N		3	850	910	770			-		25,812	1
CCBAP4033/4	17403304N		4	1000	1060	820			-		28,406	1
CCBAP4033/5	17403305N		5	1000	1060	870			-		29,000	1
CCBAP4033/6	17403306N		6	1000	1060	920			-		29,594	1
CCBAP4033/7	17403307N		7	1200	1260	970			-		32,188	1
CCBAP4033/8	17403308N		8	1200	1260	1020			-		32,782	1
CCBAP4033/9	17403309N		9	1200	1260	1070			-		33,376	1
CCBAP4033/10	17403310N		10	1200	1260	1120			-		33,970	1
CCBAP4033/11	17403311N		11	1300	1360	1170			-		36,564	1
CCBAP4033/12	17403312N		12	1300	1360	1220			-		37,158	1

FLOW RATE CHART



Kv	Kv Δt 2 °C	POS
0.88	0.46	1

REGULATION SYSTEMS FOR RADIANT PANELS HEATING WITH PUMP GROUP GP 1190 AND KIT FOR HIGH TEMPERATURE FM 750



20 kW

TECHNICAL DATA

Maximum working pressure 6 bar
 Maximum differential pressure 1 bar
 Maximum working temperature on primary circuit 80 °C
 Maximum working temperature on secondary circuit 70 °C
 Temperature range on secondary circuit 20 °C ÷ 65 °C
 Max thermal power 20 kW with Δt 10 °C
 and temperature on the primary circuit ≥ 70 °C

CONSTRUCTIVE FEATURES

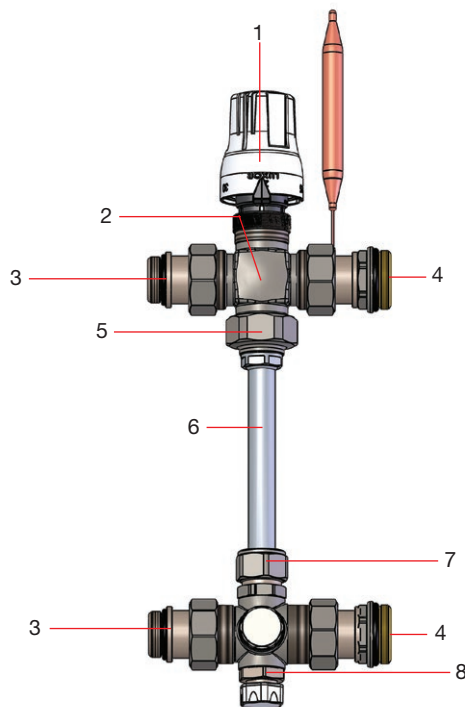
Press-forged parts consist of brass with limited lead content in compliance with the current regulations: CW617N UNI EN 12165:2016. All o-rings are produced in peroxide cured EPDM. Stainless steel components in AISI 316. All components are provided with soft o-rings and do not require any intermediate sealing element (PTFE, hemp, etc.).

APPLICATIONS

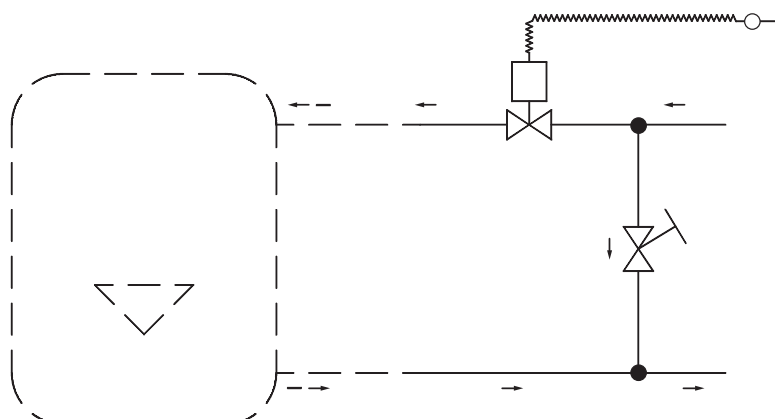
When combined with pump group GP 1190, the kit for high temperature FM 750 allows to install a hot water distribution for traditional radiator systems and a water distribution system for radiant panels in one single cabinet.

COMPONENTS

- 1 Thermostatic head with remote sensor
- 2 Thermostatic mixing valve with third way in bypass
- 3 G 3/4 fitting with soft seal
- 4 G 1" fitting with soft seal
- 5 Female connection with flat gasket
- 6 Copper pipe for bypass
- 7 Compression fitting
- 8 Balancing valve



HYDRAULIC SCHEME



FUNCTION

The FM 750 system keeps the water in the radiant panels at a constant, pre-set temperature by mixing the hot water coming from the boiler with the one recirculating through the bypass circuit.

A thermostatic valve with remote sensor measures the temperature and adds hot water to the circuit accordingly, so as to compensate the heat output of the radiant panels.

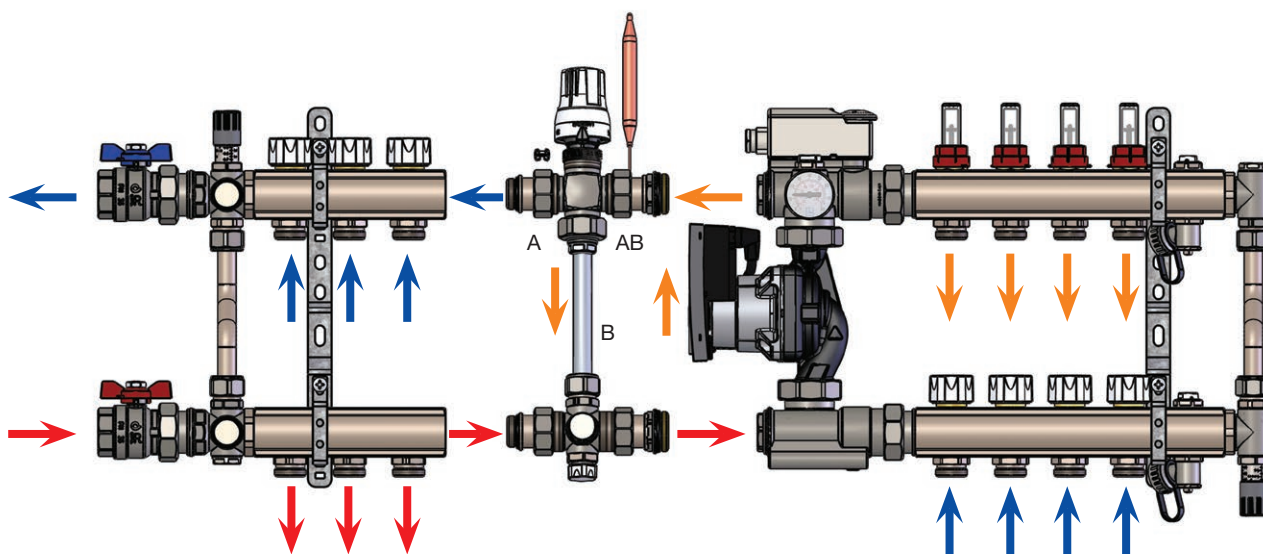
The "Flow Mix" thermostatic mixer consists of a thermostatic mixing valve and a balancing valve. By means of a lockshield, the latter regulates the quantity of water returning from the radiant panels circuit to be sent to the low temperature connection of the mixer.

It is advisable to install a safety thermostat on the pump inlet valve, so as to avoid possible damage caused by a sudden temperature rise.

The intervention of the thermostat must block the functioning of the pump.

This type of system can supply a maximum thermal power of 20 kW with a Δt of 10°C and a temperature of $\geq 70^\circ\text{C}$ on the primary circuit.

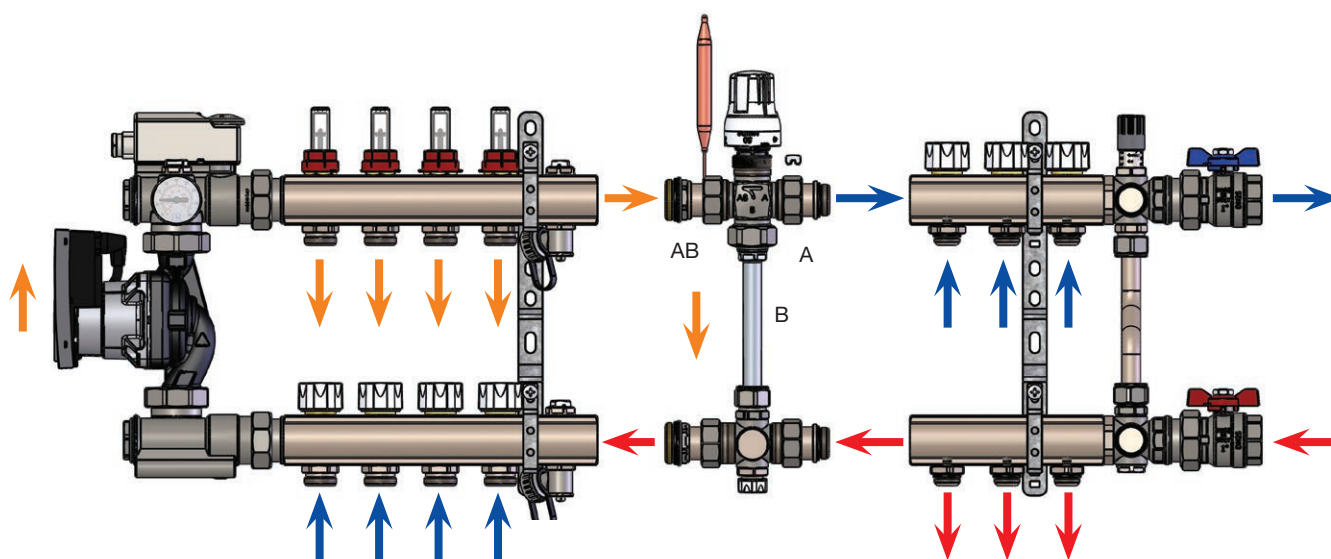
The "Flow Mix" can be installed both on the left or right side of the Pump Group GP 1190.



IN THE FIRST CASE

- The mixing valve AB way must be connected to the end part of the pump;
- The A way must be connected to the manifold of the high temperature zone;

- The B way is the bypass;
- The probe of the thermostatic head must be inserted in the top part of the pump group before installing the **Flow Mix**.

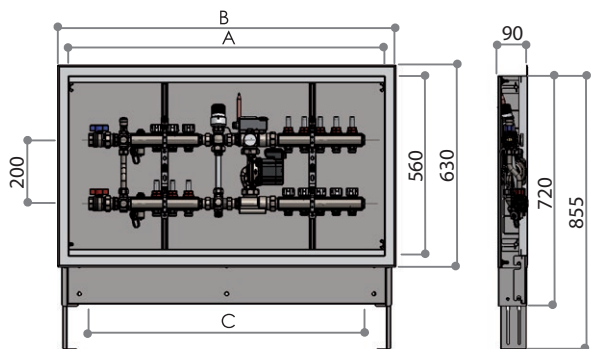


IN THE SECOND CASE

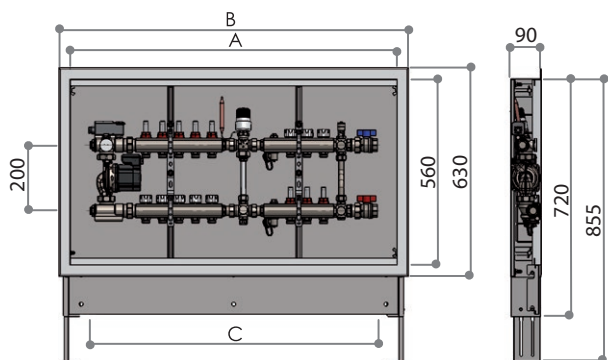
- The mixing valve AB must be connected to the end part of the inlet manifold of the low temperature zone;
- The A way must be connected to the return manifold of the high temperature zone;

- The B way is the bypass;
- The probe of the thermostatic head must be inserted in the top part of the pump group before installing the **Flow Mix**.

DIMENSIONAL DRAWING

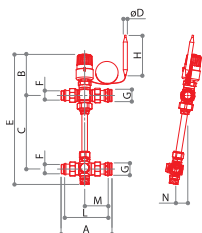


N. PANEL CONNECTIONS	A	B	C
WITH 2 WAYS FOR HIGH TEMPERATURE			
2	910	850	670
3	910	850	720
4	910	850	770
5	1060	1000	820
6	1060	1000	870
7	1060	1000	920
8	1260	1200	970
9	1260	1200	1020
10	1260	1200	1070
11	1260	1200	1120
12	1360	1300	1170
WITH 3 WAYS FOR HIGH TEMPERATURE			
2	910	850	720
3	910	850	770
4	1060	1000	820
5	1060	1000	870
6	1060	1000	920
7	1260	1200	970
8	1260	1200	1020
9	1260	1200	1070
10	1260	1200	1120
11	1360	1300	1170
12	1360	1300	1220



N. PANEL CONNECTIONS	A	B	C
WITH 2 WAYS FOR HIGH TEMPERATURE			
2	910	850	670
3	910	850	720
4	910	850	770
5	1060	1000	820
6	1060	1000	870
7	1060	1000	920
8	1260	1200	970
9	1260	1200	1020
10	1260	1200	1070
11	1260	1200	1120
12	1360	1300	1170
WITH 3 WAYS FOR HIGH TEMPERATURE			
2	910	850	720
3	910	850	770
4	1060	1000	820
5	1060	1000	870
6	1060	1000	920
7	1260	1200	970
8	1260	1200	1020
9	1260	1200	1070
10	1260	1200	1120
11	1360	1300	1170
12	1360	1300	1220

REGULATION SYSTEMS FOR RADIANT PANELS HEATING WITH PUMP GROUP GP 1190 AND KIT FOR HIGH TEMPERATURE

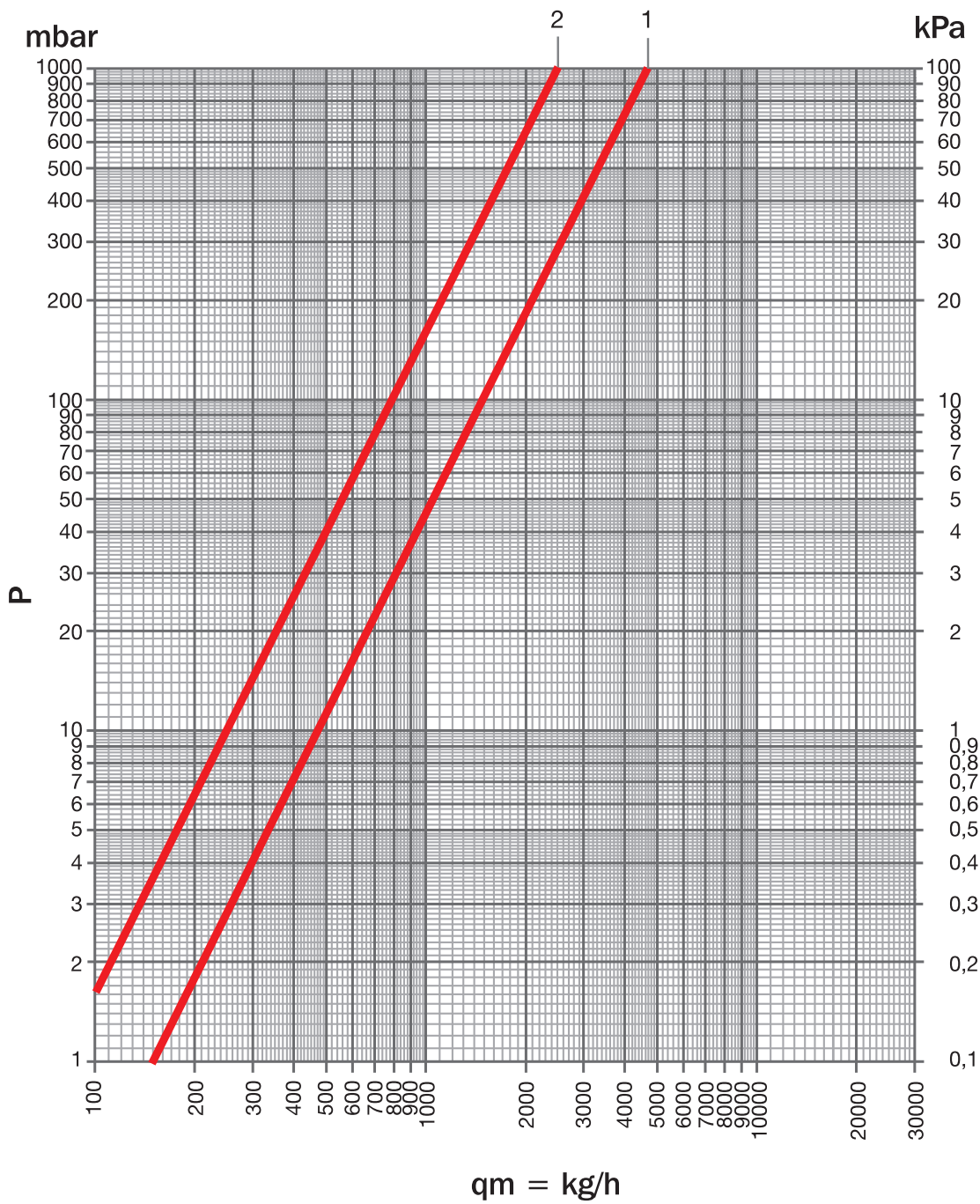


FM 750

Flow mix kit with bypass for mixed heating systems.

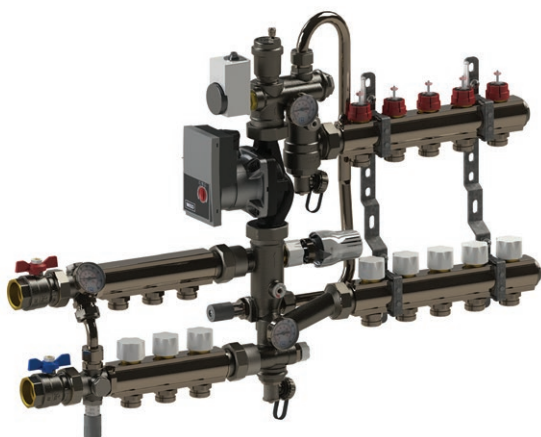
CODE	SIZE	A	B	C	D	E	F	G	H	L	M	N			
68763602	G 1"	138	115	200	11	365	G 3/4	G 1"	110	118	64	32	1442	1	8

FLOW RATE CHART



Kv	Kv Δt 2 °C		POS
4.70	0.36	A - AB way	1
2.50	-	B - AB way always open	2

REGULATION SYSTEMS FOR RADIANT PANELS HEATING WITH MIXING GROUP GM 1192



20 kW

TECHNICAL DATA

Maximum working pressure 6 bar
 Maximum differential pressure 1 bar
 Regulation range on the bypass 0.2 ÷ 0.7 bar
 Maximum working temperature on primary circuit 80 °C
 Maximum working temperature on secondary circuit 70 °C
 Temperature range on secondary circuit 20 °C ÷ 65 °C
 Maximum thermal power 20 kW with Δt 10 °C
 and temperature on the primary circuit ≥ 70 °C

CONSTRUCTIVE FEATURES

Press-forged parts consist of brass with limited lead content in compliance with the current regulations: CW617N UNI EN 12165:2016. All o-rings are produced in peroxide cured EPDM. Stainless steel components in AISI 316.

All components are provided with soft o-rings and do not require any intermediate sealing element (PTFE, hemp, etc.). Side connections W24x19 or G 3/4 EK with 50 mm interaxis. The pump group GM 1192 as a \varnothing 23 mm internal passage.

APPLICATIONS

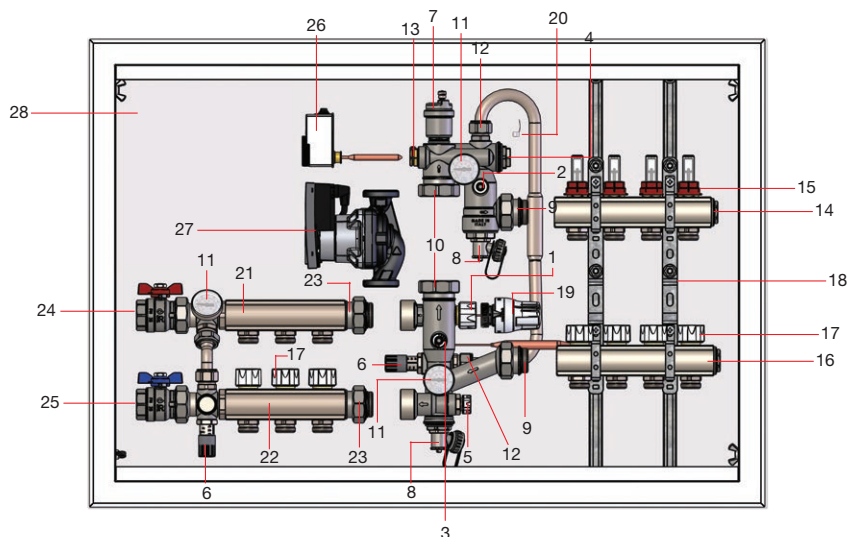
The mixing group GM 1192 is a regulation group which combines a number of components in a single device able to maintain a pre-set temperature in the radiant panels circuit of mixed heating systems. The temperature in the panels is kept constant by a regulating valve which mixes hot water coming from the boiler with the low temperature one circulating in the panels. The GM 1192 can be connected directly to Luxor manifolds for radiant panels by means of a G 1" male fitting

with soft seal. This makes the GM 1192 particularly convenient, since it can be kept in stock as a modular component.

Moreover, the GM 1192 makes mixed heating systems extremely flexible, since the regulation group can be adjusted to meet the future requirements of the secondary circuit. It is therefore possible to expand the radiant panels system simply by adding outlets, without temperature or pressure issues downstream of the group.

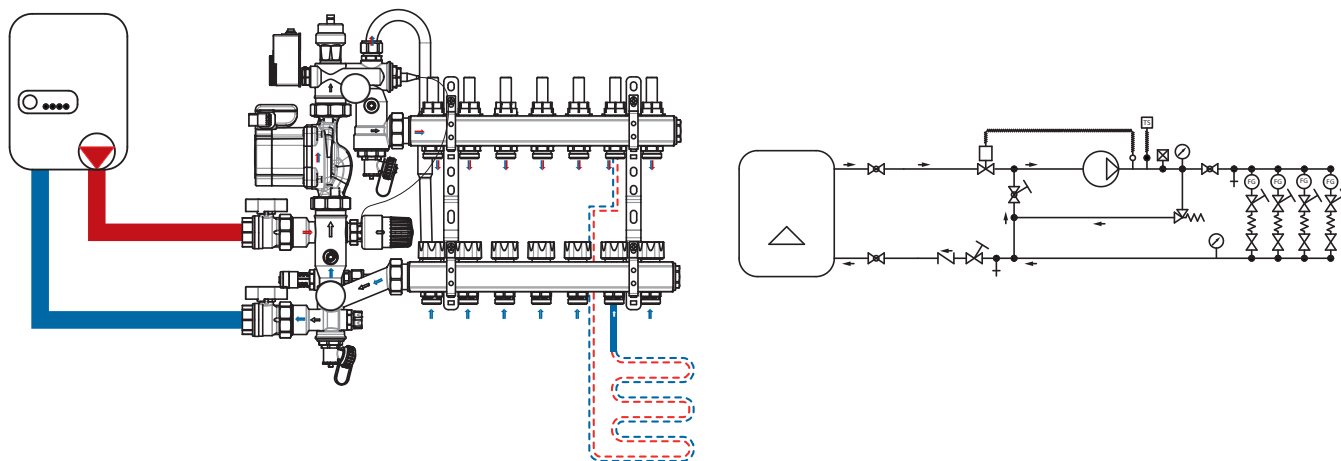
The GM 1192 can be set both to increase the heating capacity and to balance pressure drops.

Finally, thanks to its great regulation capacity, the GM 1192 allows to make the secondary circuit independent from the primary in case of replacement of important parts of the system, for example when a new boiler with a different operating principle is installed. By means of the bypass circuit, the circulation pump can keep on operating at design conditions. This type of system can supply a max thermal power of 20 kW with a temperature of the primary circuit of ≥ 70 °C.



COMPONENTS

- 1 Regulating valve.
With piston-like screw; fits both thermostatic heads for fixed points and 0-10 Volt thermoelectric heads.
- 2 Pump shut-off valve.
Allows for interception in case of maintenance and re placement of the circulation pump without draining the system.
- 3 Ball valve for pump interception and balancing of the secondary circuit.
Allows to intercept the pump and balance pressure drops in the radiant panels secondary circuit and those caused by regulating valve "1" in the primary circuit. The regula tion group GM 1192 is supplied with a balancing valve set Kv=7 for applications up to 11 Kw/h, if a higher capacity is required, set the valve to a lower Kv.
- 4 Probe seat.
- 5 Low temperature circuit shut-off valve.
Only set at first start-up to adjust the pressure drop of the water coming from the secondary circuit. To separate the primary and the secondary circuit for maintenance on the primary, the lockshield must be fully closed. A non-return valve inside the seat prevents the water in the primary circuit from heating up the mixing group when the pump is off and the thermostatic head is closed. This valve should usually be completely open.
- 6 Differential bypass valve.
Bypass valves are essential in all distribution systems with 2-way zone valves or heating bodies with adjust ment valves, which enable, under certain circumstances, to by pass a circuit.
The recirculation guaranteed by the valve prevents the pump from working under improper conditions, thus avoiding imbalances among circuits operating in parallel and noise caused by the increased speed of the medium flowing through the adjustment devices.
- 7 Automatic air vent valve (1/2 connections).
Operates during the loading phase by discharging the air out of the group.
- 8 Load / drain taps with adjustable 3/4 connection and safety cap.
- 9 Three-pieces G 1" union fitting with soft sealing art. CR 498.
- 10 G 1" 1/2 adapters to connect the circulation pump.
- 11 Thermometers, measurement range 0°C to 80°C.
Allow to check water temperature in the delivery and re turn manifolds of the radiant panels in the secondary circuit.
- 12 Union fittings for bypass pipe.
- 13 Safety thermostat seat.
- 14 Delivery manifold (radiant panels).
- 15 Regulators and flow meters, capacity 0.5 l/m to 5 l/m.
The glass can be removed for cleaning while the system is operating.
- 16 Return manifold (radiant panels).
- 17 Valves for electrothermal regulation, with protection caps.
- 18 Brackets.
- 19 Thermostatic head with remote sensor.
- 20 Spring to fix the remote sensor to the thermostatic head.
- 21 Delivery manifold (primary circuit).
- 22 Return manifold (primary circuit).
- 23 Three-pieces G 1" union fitting with soft sealing.
- 24 Delivery ball valve (boiler).
- 25 Return ball valve (boiler).
- 26 Contact safety thermostat.
- 27 Circulation pump with 25/60 synchronous motor, interaxis 130 mm, energy class A.
25/60 wheelbase 130 mm energy class A.
- 28 Cabinet with adjustable ends, RAL 9016 white frame and door.



HYDRAULIC SCHEME LEGEND

	check valve		water load/drain tap		circulation pump
	ball valve		thermometer		user: radiant panels, radiators etc.
	non-return valve, the arrow indicates the direction of flow		maunal air vent device		filter
	safety valve (bypass valve)		automatic air vent device		3-way valve
	check valve, regulation and balancing		flow meter		
	ball check valve regulation and balancing		immersion safety thermostat		
	injection valve with remote sensor		contact safety thermostat		

FUNCTION

Fixed point heating systems keep the water in the radiant panels at a constant pre-set temperature by mixing hot water coming from the boiler with the one circulating in the panels. A thermostatic valve with remote sensor measures the temperature and adds hot water to the circuit accordingly, so as to compensate the heat output of the radiant panels. It is advisable to install a security thermostat on the pump inlet valve in order to avoid damages caused by a sudden temperature rise. The intervention of the thermostat must block the functioning of the pump.

The system can be complemented with a bypass valve. In case of excessive differential pressure, the bypass valve releases the exceeding pressure, thus protecting the components and, if thermoelectric heads are employed to intercept the circuits, avoiding noise and wear on the circulation pump. This type of system can supply a max thermal power of 20 kW with a Δt of 10°C and a temperature of $\geq 70^\circ\text{C}$ on the primary side.

REGULATION SYSTEMS FOR RADIANT PANELS HEATING WITH MIXING GROUP GM 1192



GM 1192

Fixed point regulation group for floor heating systems, with connection for pump with thermostatic head.

CODE	SIZE			
72000050	CD G 1" x 130 mm	4580	-	1
72000050X	CX G 1" X 130 mm	4744	-	1
72000055	CD G 1" x 180 mm	4610	-	1



GM 1193

Regulation group for floor heating systems, with pump connection.

CODE	SIZE			
72000052	G 1" x 130 mm	4434	-	1
72000057	G 1" x 180 mm	4464	-	1



CB 1200

Insulation for regulation group GM 1192, with 130 mm pump connection.

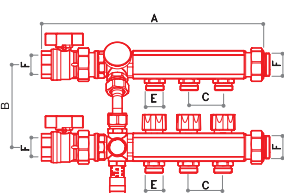
CODE	SIZE			
72000060	-	192	2	-



CB 1205

Insulation for manifolds series CD, for 12 ways.

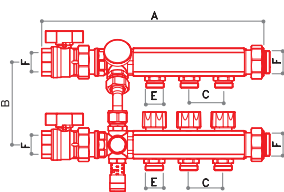
CODE	SIZE			
72000064	CD G 1"	156	-	6
72000066	CX G 1"	149	-	6
72000065	CD G 1"1/4	180	-	6



CD 4071

Kit for high temperature for mixing group art. GM 1192.

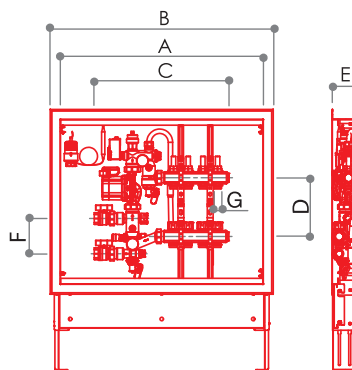
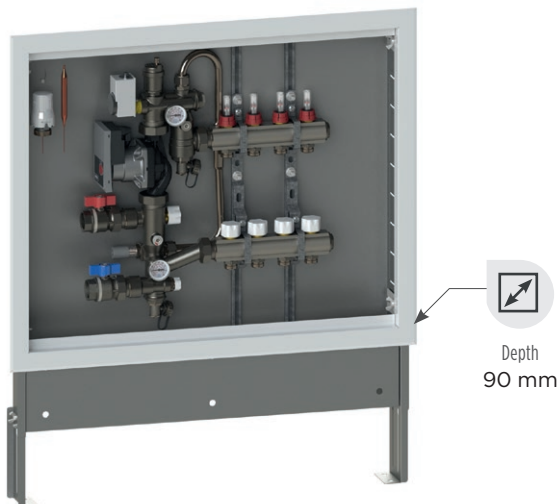
CODE	ARTICLE	SIZE	A	B	C	D	E	F	G	H			
17407102N	CD4071/2	G 1" x (W24x19)	275	120	25	-	W24x19	G 1"	-	-	3490	1	-
17407103N	CD4071/3		325	120	25	-	W24x19	G 1"	-	-	4050	1	-
17407104N	CD4071/4		375	120	25	-	W24x19	G 1"	-	-	4610	1	-



CD 4072

Kit for high temperature for mixing group art. GM 1192.

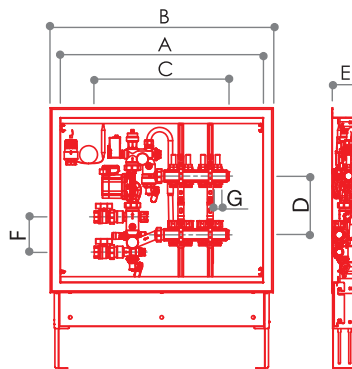
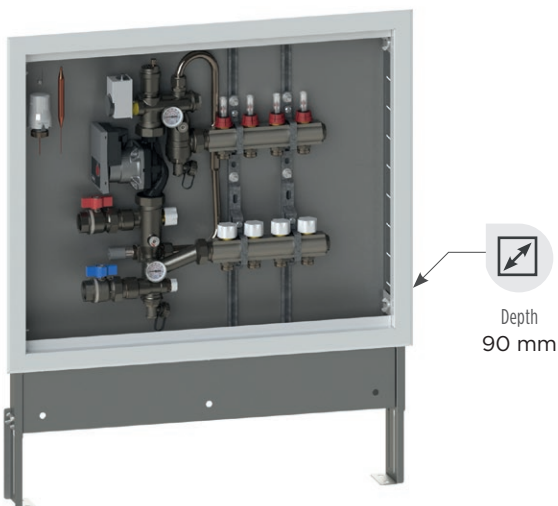
CODE	ARTICLE	SIZE	A	B	C	D	E	F	G	H			
17407202N	CD4072/2	G 1" x G 3/4 EK	275	120	25	-	G 3/4 EK	G 1"	-	-	3534	1	-
17407203N	CD4072/3		325	120	25	-	G 3/4 EK	G 1"	-	-	4116	1	-
17407204N	CD4072/4		375	120	25	-	G 3/4 EK	G 1"	-	-	4698	1	-



CCBP 4026

Fixed point heating system for low temperature (W24x19).

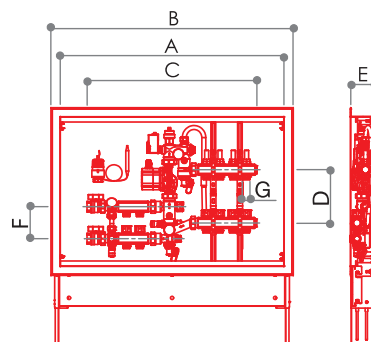
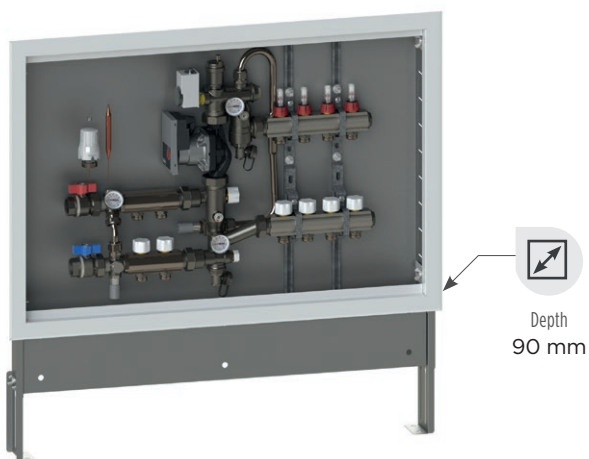
ARTICLE	CODE	SIZE	N. PANEL CONNECTIONS	A	B	C	D	E	F	G	H	L	kg	⊞
CCBP4026/2	17402602N	G 1" x (W24x19)	2	500	560	360	200	90	120	W24x19	-	-	19,218	1
CCBP4026/3	17402603N		3	700	760	410					-	-	21,812	1
CCBP4026/4	17402604N		4	700	760	460					-	-	22,406	1
CCBP4026/5	17402605N		5	700	760	510					-	-	23,00	1
CCBP4026/6	17402606N		6	700	760	560					-	-	23,594	1
CCBP4026/7	17402607N		7	850	910	610					-	-	26,188	1
CCBP4026/8	17402608N		8	850	910	660					-	-	26,782	1
CCBP4026/9	17402609N		9	850	910	710					-	-	27,376	1
CCBP4026/10	17402610N		10	1000	1060	760					-	-	29,970	1
CCBP4026/11	17402611N		11	1000	1060	810					-	-	30,564	1
CCBP4026/12	17402612N		12	1000	1060	860					-	-	31,158	1
CCBP4026/13	17402613N		13	1200	1260	910					-	-	33,758	1



CCBP 4036

Fixed point heating system for low temperature G 3/4 EK.

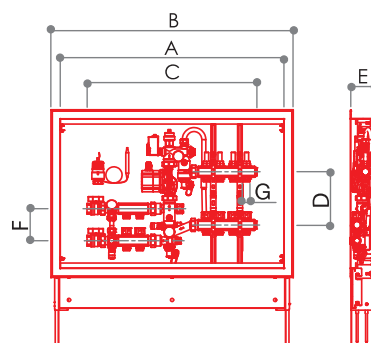
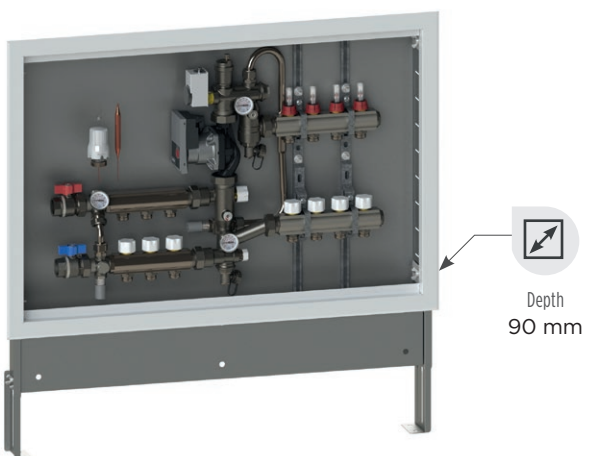
ARTICLE	CODE	SIZE	N. PANEL CONNECTIONS	A	B	C	D	E	F	G	H	L	kg	⊞
CCBP4036/2	17403602N	G 1" x G 3/4 EK	2	500	560	360	200	90	120	G 3/4 EK	-	-	19,218	1
CCBP4036/3	17403603N		3	700	760	410					-	-	21,812	1
CCBP4036/4	17403604N		4	700	760	460					-	-	22,406	1
CCBP4036/5	17403605N		5	700	760	510					-	-	23,000	1
CCBP4036/6	17403606N		6	700	760	560					-	-	23,594	1
CCBP4036/7	17403607N		7	850	910	610					-	-	26,188	1
CCBP4036/8	17403608N		8	850	910	660					-	-	26,782	1
CCBP4036/9	17403609N		9	850	910	710					-	-	27,376	1
CCBP4036/10	17403610N		10	1000	1060	760					-	-	29,970	1
CCBP4036/11	17403611N		11	1000	1060	810					-	-	30,564	1
CCBP4036/12	17403612N		12	1000	1060	860					-	-	31,158	1
CCBP4036/13	17403613N		13	1200	1260	910					-	-	33,758	1



CCBAP 4025

Low temperature distribution system
+ 2 connections for high temperature
(W24x19).

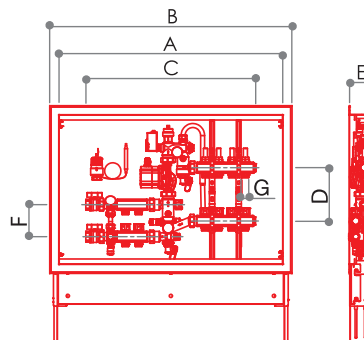
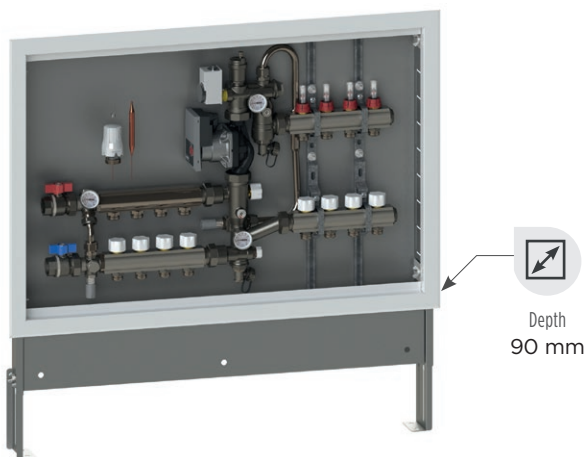
ARTICLE	CODE	SIZE	N. PANEL CONNECTIONS	A	B	C	D	E	F	G	H	L		
CCBAP4025/2	17402502N	G 1" x (W24x19)	2	700	760	540	200	90	120	W24x19	-	-	23,648	1
CCBAP4025/3	17402503N		3	700	760	590					-	-	24,242	1
CCBAP4025/4	17402504N		4	850	910	640					-	-	26,836	1
CCBAP4025/5	17402505N		5	850	910	690					-	-	27,430	1
CCBAP4025/6	17402506N		6	850	910	740					-	-	28,024	1
CCBAP4025/7	17402507N		7	1000	1060	790					-	-	30,618	1
CCBAP4025/8	17402508N		8	1000	1060	840					-	-	31,212	1
CCBAP4025/9	17402509N		9	1000	1060	890					-	-	31,806	1
CCBAP4025/10	17402510N		10	1200	1260	940					-	-	34,400	1
CCBAP4025/11	17402511N		11	1200	1260	990					-	-	34,994	1
CCBAP4025/12	17402512N		12	1200	1260	1040					-	-	35,588	1
CCBAP4025/13	17402513N		13	1200	1260	1090					-	-	36,182	1



CCBAP 4027

Low temperature distribution system
+ 3 connections for high temperature
(W24x19).

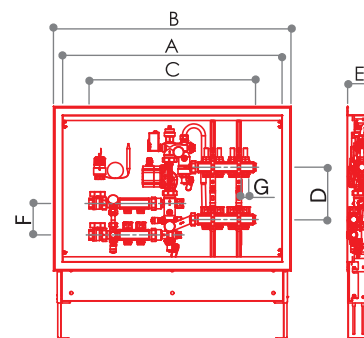
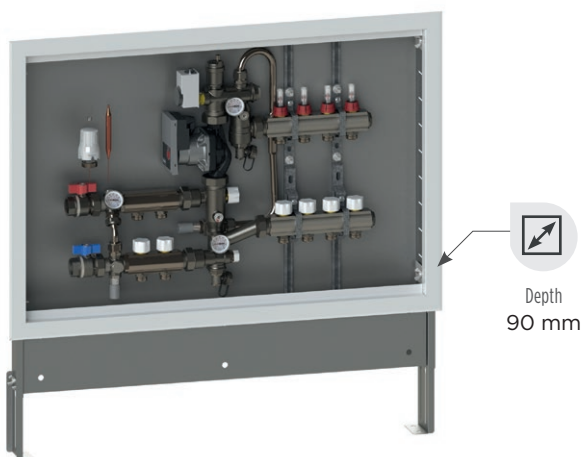
ARTICLE	CODE	SIZE	N. PANEL CONNECTIONS	A	B	C	D	E	F	G	H	L		
CCBAP4027/2	17402702N	G 1" x (W24x19)	2	700	760	590	200	90	120	W24x19	-	-	24,218	1
CCBAP4027/3	17402703N		3	850	910	640					-	-	26,812	1
CCBAP4027/4	17402704N		4	850	910	690					-	-	27,406	1
CCBAP4027/5	17402705N		5	850	910	740					-	-	28,000	1
CCBAP4027/6	17402706N		6	1000	1060	790					-	-	30,594	1
CCBAP4027/7	17402707N		7	1000	1060	840					-	-	31,188	1
CCBAP4027/8	17402708N		8	1000	1060	890					-	-	31,782	1
CCBAP4027/9	17402709N		9	1200	1260	940					-	-	34,376	1
CCBAP4027/10	17402710N		10	1200	1260	990					-	-	34,970	1
CCBAP4027/11	17402711N		11	1200	1260	1040					-	-	35,564	1
CCBAP4027/12	17402712N		12	1200	1260	1090					-	-	36,158	1
CCBAP4027/13	17402713N		13	1300	1360	1140					-	-	38,752	1



CCBAP 4079

Low temperature distribution system + 4 connections for high temperature (W24x19).

ARTICLE	CODE	SIZE	N. PANEL CONNECTIONS	A	B	C	D	E	F	G	H	L	kg	⊞
CCBAP4079/2	17407902N	G 1" x (W24x19)	2	850	910	640	200	90	120	W24x19	-	-	24,788	1
CCBAP4079/3	17407903N		3	850	910	690					-	-	27,382	1
CCBAP4079/4	17407904N		4	850	910	740					-	-	27,976	1
CCBAP4079/5	17407905N		5	1000	1060	790					-	-	28,570	1
CCBAP4079/6	17407906N		6	1000	1060	840					-	-	31,164	1
CCBAP4079/7	17407907N		7	1000	1060	890					-	-	31,758	1
CCBAP4079/8	17407908N		8	1200	1260	940					-	-	32,352	1
CCBAP4079/9	17407909N		9	1200	1260	990					-	-	34,946	1
CCBAP4079/10	17407910N		10	1200	1260	1040					-	-	35,540	1
CCBAP4079/11	17407911N		11	1200	1260	1090					-	-	36,134	1
CCBAP4079/12	17407912N		12	1300	1360	1140					-	-	36,728	1
CCBAP4079/13	17407913N		13	1300	1360	1190					-	-	39,322	1

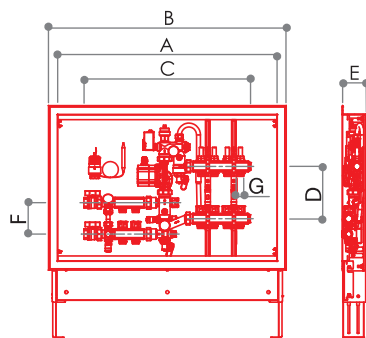
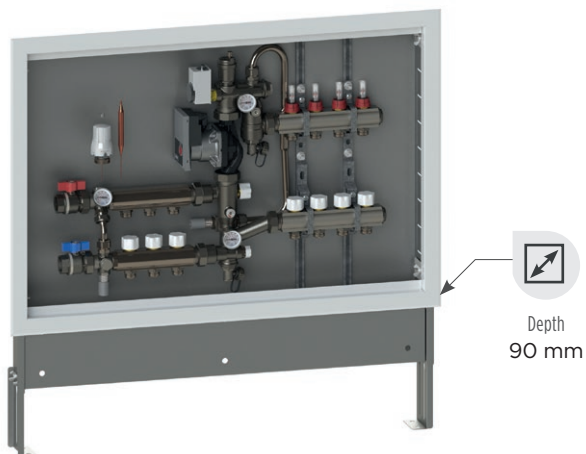


CCBAP 4035

Low temperature distribution system + 2 connections for high temperature G 3/4 EK.

ARTICLE	CODE	SIZE	N. PANEL CONNECTIONS	A	B	C	D	E	F	G	H	L	kg	⊞
CCBAP4035/2	17403502N	G 1" x G 3/4 EK	2	700	760	540	200	90	120	G 3/4 EK	-	-	23,648	1
CCBAP4035/3	17403503N		3	700	760	590					-	-	24,242	1
CCBAP4035/4	17403504N		4	850	910	640					-	-	26,836	1
CCBAP4035/5	17403505N		5	850	910	690					-	-	27,430	1
CCBAP4035/6	17403506N		6	850	910	740					-	-	28,024	1
CCBAP4035/7	17403507N		7	1000	1060	790					-	-	30,618	1
CCBAP4035/8	17403508N		8	1000	1060	840					-	-	31,212	1
CCBAP4035/9	17403509N		9	1000	1060	890					-	-	31,806	1
CCBAP4035/10	17403510N		10	1200	1260	940					-	-	34,400	1
CCBAP4035/11	17403511N		11	1200	1260	990					-	-	34,994	1
CCBAP4035/12	17403512N		12	1200	1260	1040					-	-	35,588	1
CCBAP4035/13	17403513N		13	1200	1260	1090					-	-	36,182	1

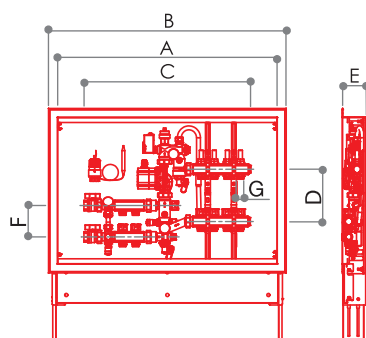
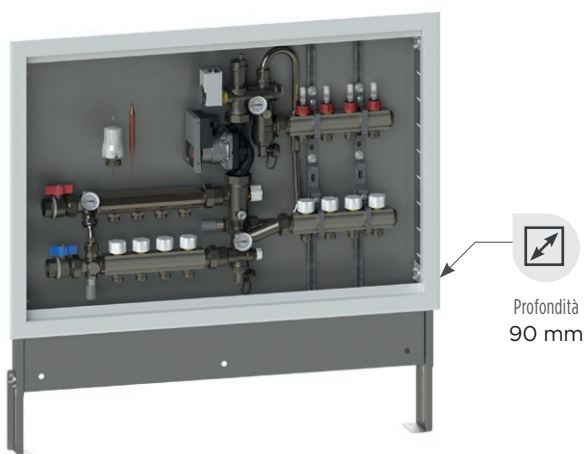
PREASSEMBLED GROUPS



CCBAP 4037

Low temperature distribution system
+ 3 connections for high temperature
G 3/4 EK.

ARTICLE	CODE	SIZE	N. PANEL CONNECTIONS	A	B	C	D	E	F	G	H	L	Weight	Volume
CCBAP4037/2	17403702N	G 1" x G 3/4 EK	2	700	760	590	200	90	120	G 3/4 EK	-	-	24,218	1
CCBAP4037/3	17403703N		3	850	910	640					-	-	26,812	1
CCBAP4037/4	17403704N		4	850	910	690					-	-	27,406	1
CCBAP4037/5	17403705N		5	850	910	740					-	-	28,000	1
CCBAP4037/6	17403706N		6	1000	1060	790					-	-	30,594	1
CCBAP4037/7	17403707N		7	1000	1060	840					-	-	31,188	1
CCBAP4037/8	17403708N		8	1000	1060	890					-	-	31,782	1
CCBAP4037/9	17403709N		9	1200	1260	940					-	-	34,376	1
CCBAP4037/10	17403710N		10	1200	1260	990					-	-	34,970	1
CCBAP4037/11	17403711N		11	1200	1260	1040					-	-	35,564	1
CCBAP4037/12	17403712N		12	1200	1260	1090					-	-	36,158	1
CCBAP4037/13	17403713N		13	1300	1360	1140					-	-	38,752	1



CCBAP 4080

Low temperature distribution system
+ 4 connections for high temperature
G 3/4 EK.

ARTICLE	CODE	SIZE	N. PANEL CONNECTIONS	A	B	C	D	E	F	G	H	L	Weight	Volume
CCBAP4080/2	17408002N	G 1" x G 3/4 EK	2	850	910	640	200	90	120	G 3/4 EK	-	-	24,788	1
CCBAP4080/3	17408003N		3	850	910	690					-	-	27,382	1
CCBAP4080/4	17408004N		4	850	910	740					-	-	27,976	1
CCBAP4080/5	17408005N		5	1000	1060	790					-	-	28,570	1
CCBAP4080/6	17408006N		6	1000	1060	840					-	-	31,164	1
CCBAP4080/7	17408007N		7	1000	1060	890					-	-	31,758	1
CCBAP4080/8	17408008N		8	1200	1260	940					-	-	32,352	1
CCBAP4080/9	17408009N		9	1200	1260	990					-	-	34,946	1
CCBAP4080/10	17408010N		10	1200	1260	1040					-	-	35,540	1
CCBAP4080/11	17408011N		11	1200	1260	1090					-	-	36,134	1
CCBAP4080/12	17408012N		12	1300	1360	1140					-	-	36,728	1
CCBAP4080/13	17408013N		13	1300	1360	1190					-	-	39,322	1

SOLAR PUMP GROUP



TECHNICAL DATA

Maximum continuous working temperature 130°C
 Flow restrictor range 0.5 ÷ 15 l/min
 Thermometer range 0 ÷ 160 °C
 Relief valve set pressure 6 bar
 Pressure gauge range 0 ÷ 16 bar
 Working medium water and glycol (max 50%)

TECHNICAL DATA OF THE CIRCULATOR

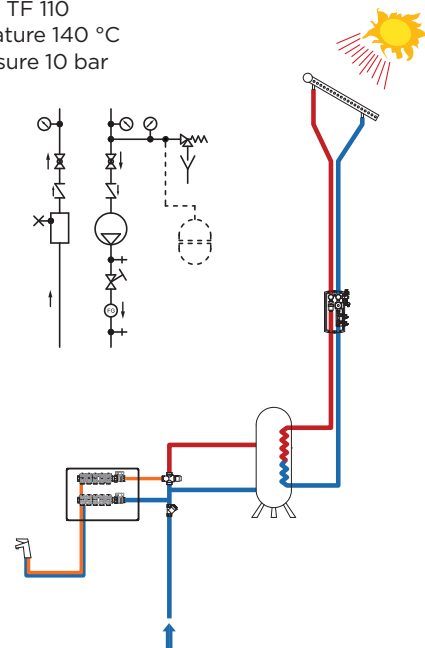
Grundfos Solar Model 15-65 130
 Connection 1" M with flat sealing
 Interaxis 130 mm
 Temperature class TF 110
 Max peak temperature 140 °C
 Max working pressure 10 bar

CONSTRUCTIVE FEATURES

Press-forged parts consist of brass with limited lead content in compliance with the current regulations: CW617N UNI EN 12165:2016.

All o-rings are produced in peroxide cured EPDM. Gaskets are in carbon/graphite filled PTFE G415 and the insulation shells in black PPE (40 kg/m³).

All components are provided with soft o-rings and do not require any intermediate sealing element (PTFE, hemp, etc.).



HYDRAULIC SCHEME LEGEND

	check valve		water load/drain tap		circulation pump
	ball valve		thermometer		user: radiant panels, radiators etc.
	non-return valve, the arrow indicates the direction of flow		maunal air vent device		filter
	safety valve (bypass valve)		automatic air vent device		3-way valve
	check valve, regulation and balancing		flow meter		
	ball check valve regulation and balancing		immersion safety thermostat		
	injection valve with remote sensor		contact safety thermostat		

FUNCTION

The solar pump groups use the solar thermal energy and transfer this to a fluid heat carrier which then releases it to the water necessary for the system.

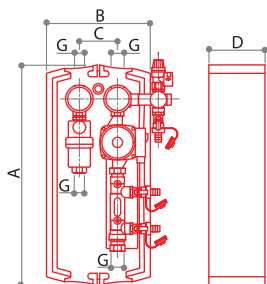
The groups are supplied with a pump which circulates the fluid inside the system. All the components of the system are produced in materials suitable to support the high temperatu-

re reached by the system.

The groups are also equipped with interception valve for the pump, loading and unloading valves, safety valves, flow-meter and protection cover.

The air separator/eliminator is only in model GSP 1180.

SOLAR PUMP GROUP

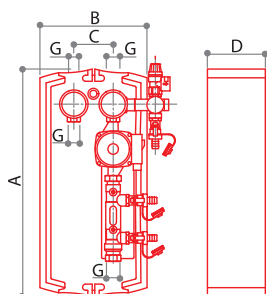


GSP 1180

Solar pump group complete with shut-off valves with built-in thermometers, deaerator, load/drain taps, check valves, 6 bar relief valve, insulation and flow meter with range 0,5 to 15 l/min.

Max working temperature 130 °C.

CODE	SIZE	A	B	C	D	E	F	G	H	L			
72000010	G 3/4	440	250	125	115	-	-	G 3/4	-	-	5028	1	-



GSP 1182

Solar pump group complete with shut-off valves with built-in thermometers, load/drain taps, check valves, 6 bar relief valve, insulation and flow meter with range 0,5 to 15 l/min.

Max working temperature 130 °C.

CODE	SIZE	A	B	C	D	E	F	G	H	L			
72000012	G 3/4	440	250	125	115	-	-	G 3/4	-	-	4478	1	-



CE 1370

Digital differential control unit for solar heating systems.

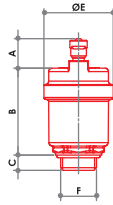
CODE	SIZE			
69011470	-	530	1	-



AC 1180

Accessories for the connection between the solar pump groups and the expansion tank, complete with bidirectional check valve and bracket for wall fixing.

CODE	SIZE			
68559880	G 3/4	1116	1	-

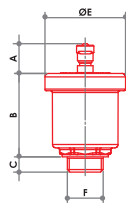


VS 604/S

Automatic air vent valve 200°C - 10 bar.



CODE	SIZE	A	B	C	D	E	F	G	H	L			
67791017	G 3/8	17	50	9	-	40	G 3/8	-	-	-	138	10	100
67791021	G 1/2	17	50	9	-	40	G 1/2	-	-	-	138	10	100

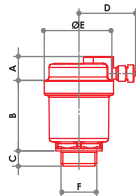


VS 601/S

Automatic air vent valve medium. 200°C - 10 bar.



CODE	SIZE	A	B	C	D	E	F	G	H	L			
67790817	G 3/8	17	50	9	-	46	G 3/8	-	-	-	154	10	100
67790821	G 1/2	17	50	9	-	46	G 1/2	-	-	-	154	10	100
67790827	G 3/4	17	50	9	-	46	G 3/4	-	-	-	154	10	100



VS 603/S

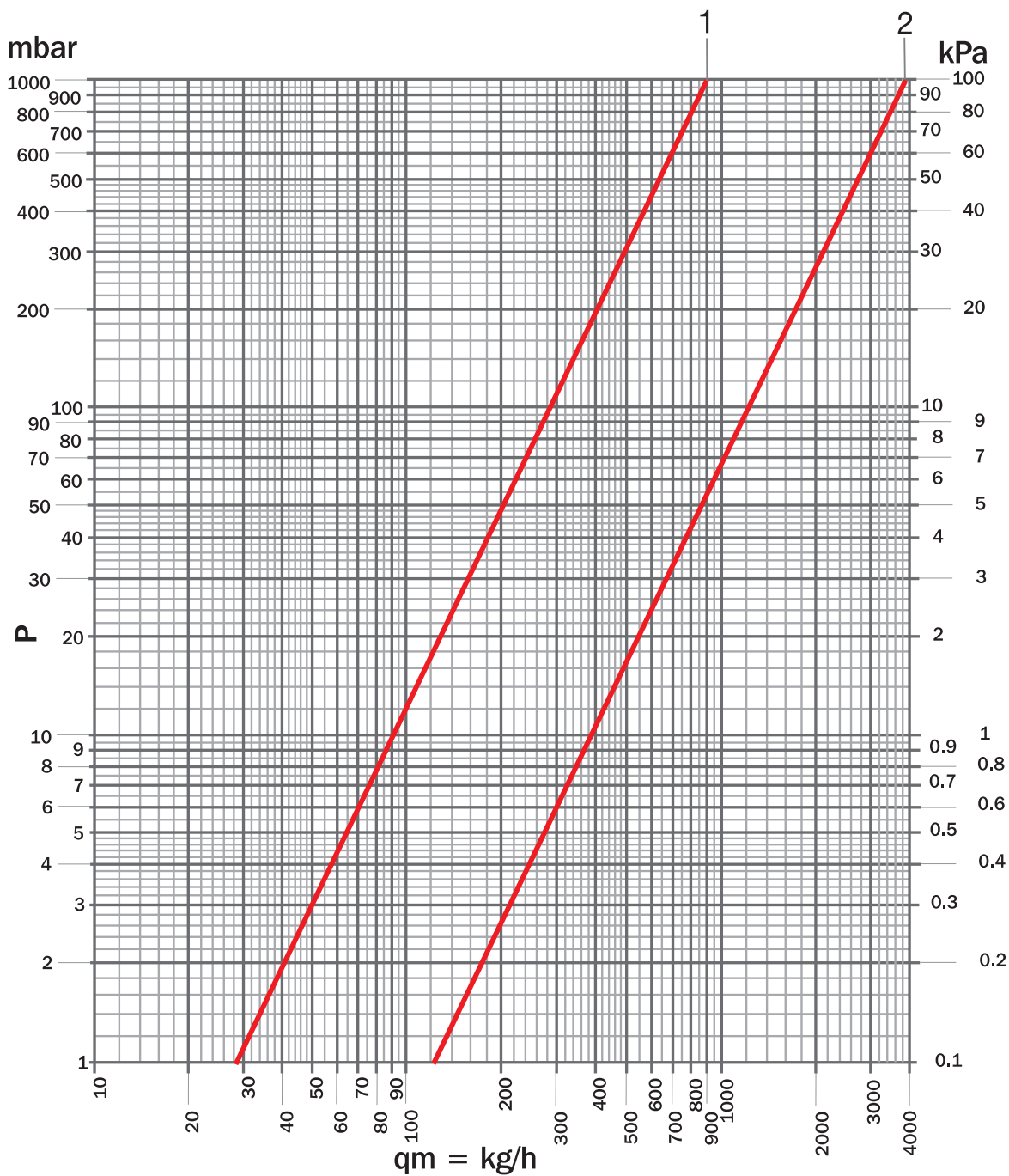
Automatic air vent valve with lateral purge 200°C - 10 bar.



CODE	SIZE	A	B	C	D	E	F	G	H	L			
67790917	G 3/8	14	41	9	34	40	G 3/8	-	-	-	160	10	100
67790921	G 1/2	14	41	9	34	40	G 1/2	-	-	-	160	10	100

FLOW RATE CHART

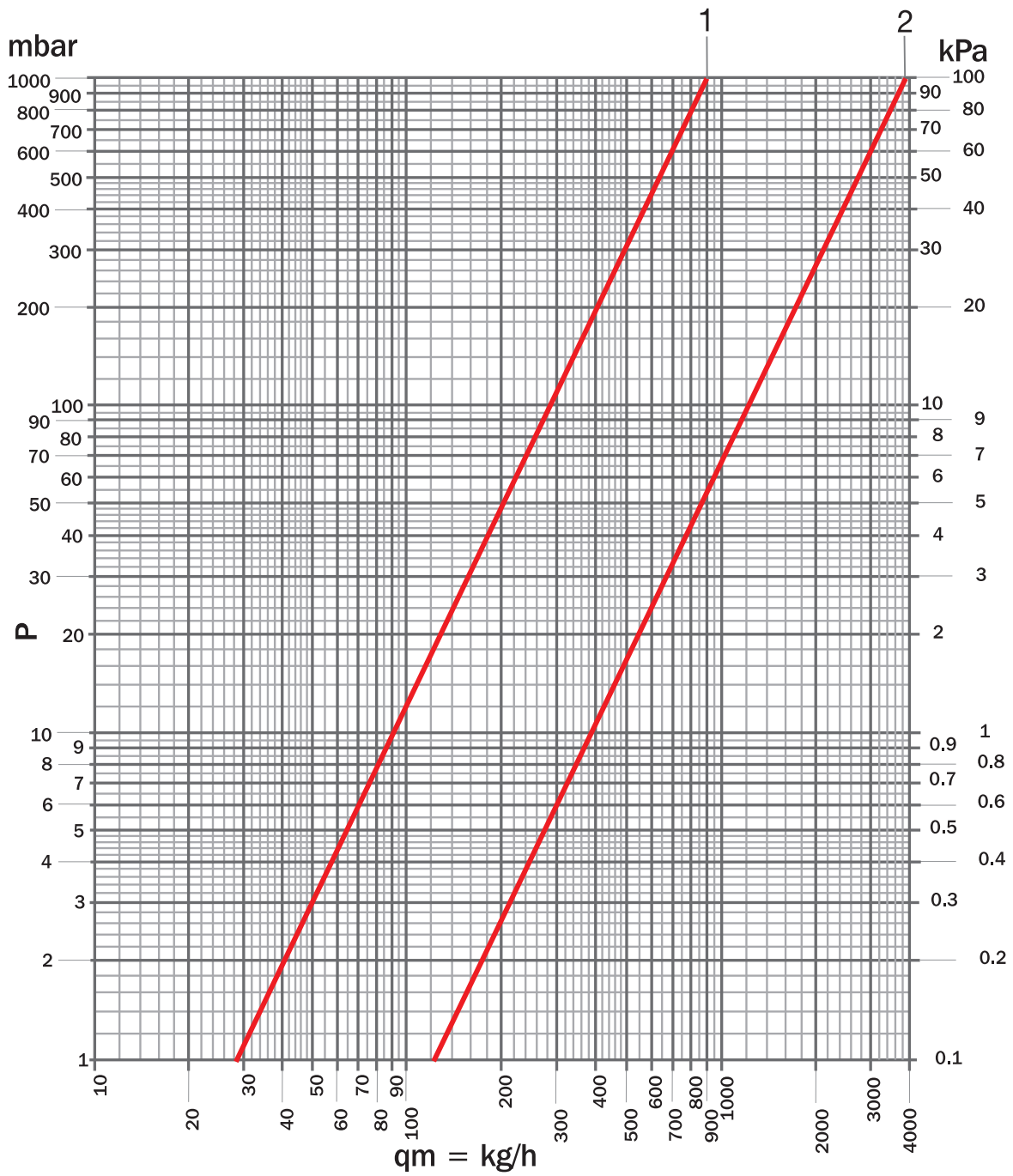
REGULATING VALVE WITH THERMOSTATIC HEAD



Kvs	REGULATION	POS
0,9	$\Delta T=2\text{ K}$	1
3,88	QM MAX	2

FLOW RATE CHART

SHUT-OFF VALVE



Kvs	REGULATION	POS
0,09	01/2	1
0,27	1	2
0,76	1+1/2	3
0,98	2	4
1,20	2+1/2	5
1,46	3	6
1,70	3+1/2	7
1,93	4	8
2,19	4+1/2	9
2,47	5	10
2,75	5+1/2	11
3,01	all open	12



Lined writing area with horizontal lines