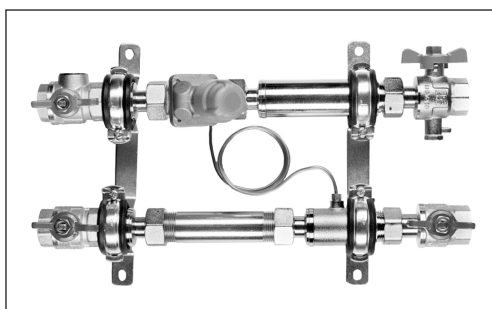


Data sheet

Preassembled automatic balancing valve set

AB-PM Rack set DN 15-20, PN10

Description



AB-PM Rack set is preassembled automatic balancing solution for manifolds. The rack set is installed in front of manifold in either radiator or floor heating systems.

Benefits:

Automatic manifold balancing solution

*Reliable heating system

-Proper heat distribution even at partial load

-Filter to remove dirt before manifold

*Faster and simple installation

*Prepared for heat meter installation

Ordering

Type	DN	Connection ball-valves (ISO228/1)	Code No.
AB-PM Rack set	15	F/F 3/4"	003Z3171
	20		003Z3173

Type	Power supply	Cable length	Code No.
TWA-Z NO ¹⁾	24 V AC	1.2 m	082F1260
	230 V AC		082F1264

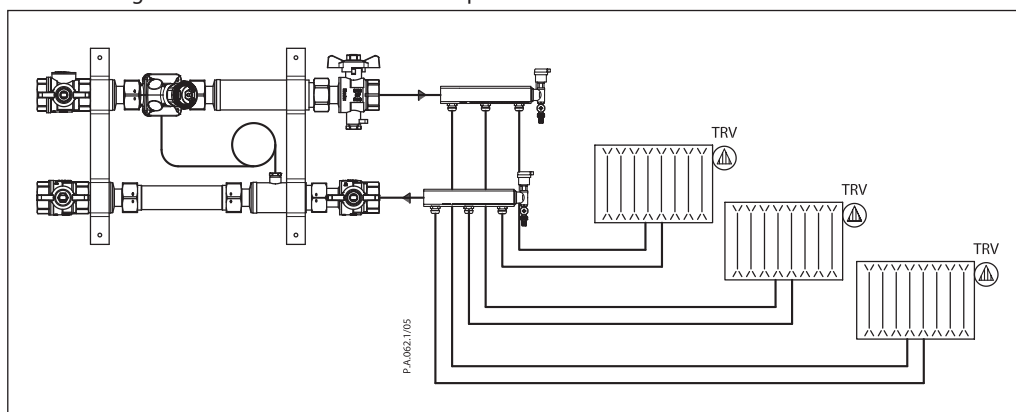
Technical data

AB-PM specification	DN	15	20
Qnom (at 100% setting)	l/h	300	600
Max. pressure at zero load	kPa	22	
Max differential pressure (Δp_a)		400	
Min. differential pressure (Δp_a)		18	
Nominal maximal pressure	bar	10 (PN10)	
Medium temperature	°C	-10 ... +120	

Materials in water	
AB-PM	
Valve body	DZR Brass (CuZn36Pb2As - CW 602N)
Membrane and O-ring	EPDM
Spring	W.Nr. 1.4568, W.Nr. 1.4310
Cone (PC)	W.Nr. 1.4305
Seat (PC)	EPDM
Cone (CV)	CuZn40Pb3 - CW 614N
Seat (CV)	DZR Brass (CuZn36Pb2As - CW 602N)
Flat gasket	NBR
Screw	Stainless Steel (A2)
Sealing agent	Dimethacrylate Ester
Ball valve	Brass (CW617N)
Pipe	Steel (P235GH)
Gasket	PTFE
Sealing agent: Connections	AFM34

Application

AB-PM rack set should be mounted in front of manifold with AB-PM in the flow direction. The mounting bracket to be screwed onto back plate or wall.

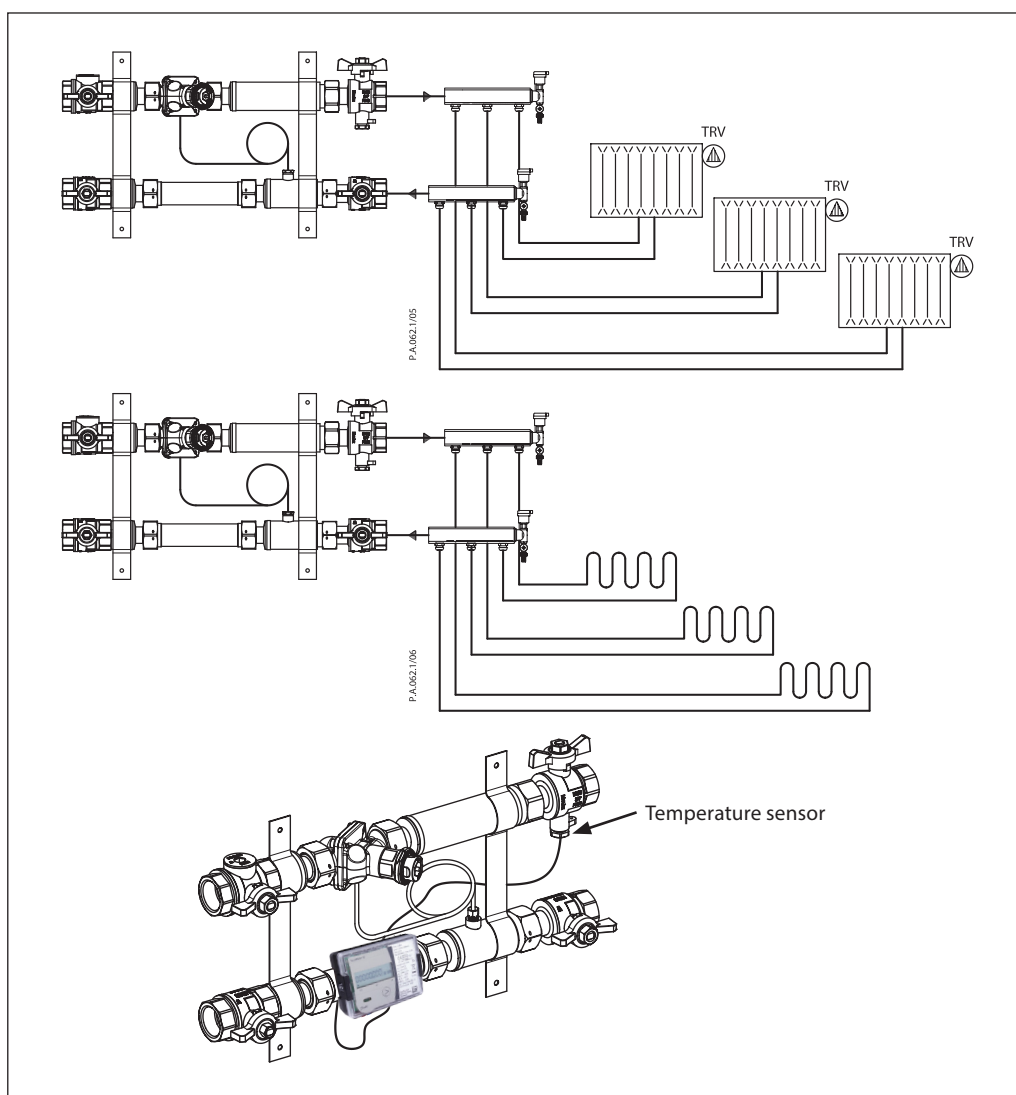


Application

AB-PM is designed to be used in heating systems in residential applications. It can be used both in radiator or floor heating systems.

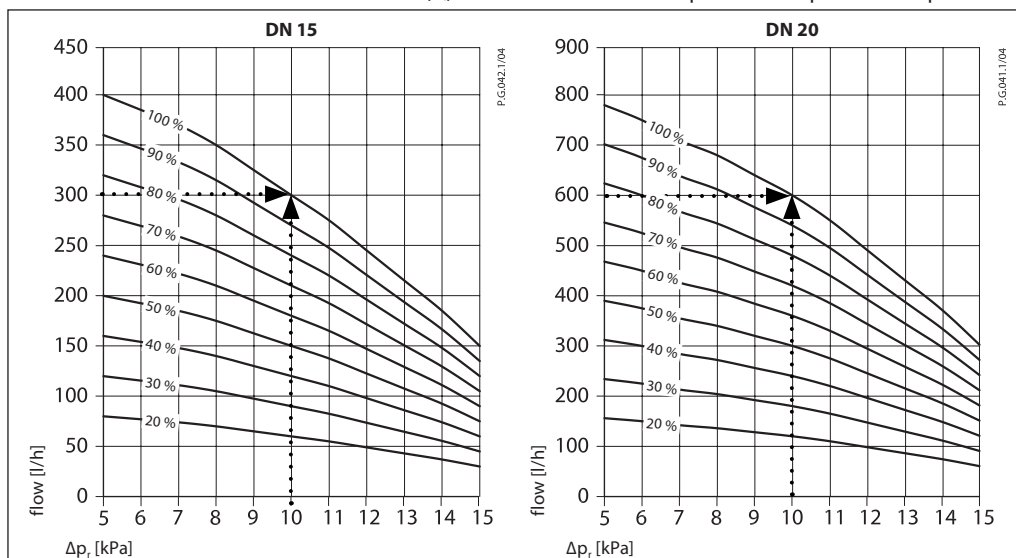
AB-PM provides proper balance even at partial loads and limitation of maximal flow is simple and fast. In addition, programmable zone control (night setback or holiday mode) is available by using On/Off actuator (TWA-Z /ABN A5), connected to a room controller (TP5001M / TPOne).

The AB-PM Rack set is prepared for heat meter installations in return flow and temperature probe connection.



Sizing

AB-PM is to be sized based on needed flow (Q) and needed differential pressure drop for the loop.



AB-PM DN 15 setting

DN 15	flow [l/h] - average								
Δp_r [kPa]	20 %	30 %	40 %	50 %	60 %	70 %	80 %	90 %	100 %
5	80	120	160	200	240	280	320	360	400
6	77	116	154	193	231	270	308	347	385
7	74	111	148	185	222	259	296	333	370
8	70	105	140	175	210	245	280	315	350
9	65	98	130	163	195	228	260	293	325
10	60	90	120	150	180	210	240	270	300
Q_{max} at ΔT 20 °C	7.0 kW								
...									
13	43	65	86	108	129	151	172	194	215
14	37	56	74	93	111	130	148	167	185
15	30	45	60	75	90	105	120	135	150

AB-PM DN 20 setting

DN 20	flow [l/h] - average								
Δp_r [kPa]	20 %	30 %	40 %	50 %	60 %	70 %	80 %	90 %	100 %
5	155	235	310	390	470	545	625	700	780
6	150	225	300	375	450	525	600	675	750
7	140	215	285	355	425	495	570	640	710
8	135	205	270	340	410	475	545	610	680
9	130	190	255	320	385	450	510	575	640
10	120	180	240	300	360	420	480	540	600
Q_{max} at ΔT 20 °C	13.9 kW								
...									
13	85	130	170	215	260	300	345	385	430
14	75	110	150	185	220	260	295	335	370
15	60	90	120	150	180	210	240	270	300

Example

Given:

Design flow through radiators loop:
420 l/h

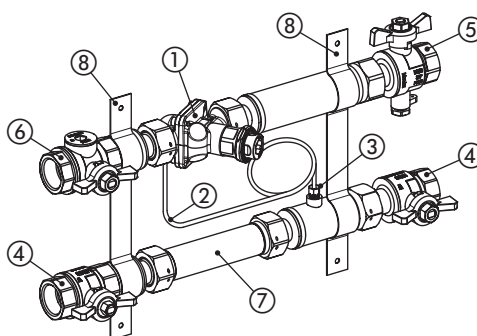
Pressure drop trough the loop at
design flow: 10 kPa

Solution:

AB-PM DN 20 is selected. Set to 70 % (= 420/600), AB-PM will control differential pressure of 10 kPa when design flow is achieved. It will at any loads including keep it under 22 kPa at zero load, while limiting the flow to radiator system to 420 l/h

Design

1. AB-PM valve
2. Impulse tube
3. Impulse tube connection piece
4. Ball valve
5. Ball valve with temp sensor
6. Ball valve with filter
7. Intermediate piece for heat meter
8. Mounting bracket



Data sheet

Preassembled automatic balancing valve set AB-PM

Dimensions

