

FlowBox HK, HKM

Pump and pump mixer groups DN40, DN50

VB 40/50

Boiler manifold DN40/DN50

Technical Data Sheet



Description and Application

The FlowBox HK40/50 and HKM40/50 pump groups represent a complete ready-to-install assembly with thermal insulation, containing all necessary components (pump, shut-off and mixing valves, thermometers, check valves, pipes) for installation in a heating system. For models supplied without the pump unit, the pump is to be selected by the installer or heating engineer(s).

The Watts FlowBox HK/HKM DN40/50 is used to connect boilers either to mixed (HKM) or direct heating circuits (HK) in heating installations. The distribution manifold VB40/50 allows additionally for the installation of several pump groups side by side.

FlowBox HK40 and HK50

Compact pump group DN40 and DN50 for direct heating circuits. EPP insulation shell.

Supply (right): shut-off valve 2" F with thermometer 0-120 °C, circulation pump 220 mm (HK40) or 280 mm (HK50).

Return (left): shut-off valve 2" F with gravity brake and integrated thermometer 0-120 °C.



Type	Part no.	DN	Version	Weight
HK40	10087155	40	Wilo Yonos Maxo Plus 40/0.5-8	20.50 kg
HK40	10026871	40	Grundfos Magna3 40-100F	29.80 kg
HK40	10027651	40	without pump	11.75 kg
HK50	10087156	50	Wilo Yonos Maxo Plus 50/0.5-9	24.55 kg
HK50	10026872	50	Grundfos Magna3 50-100F	29.75 kg
HK50	10027652	50	without pump	13.50 kg

FlowBox HKM40 and HKM50

Compact pump-mixing group DN40 and DN50 for mixed heating circuits. EPP insulation shell.

Supply (right): shut-off valve 2" F with thermometer 0-120 °C, circulation pump 220 mm (HK40) or 280 mm (HK50), 3-way mixer with motor.

Return (left): shut-off valve 2" F with gravity brake and integrated thermometer 0-120 °C.



Type	Part no.	DN	Kvs	Version	Weight
HKM40	10087157	40	25	Wilo Yonos Maxo Plus 40/0.5-8	23.70 kg
HKM40	10026873	40	25	Grundfos Magna3 40-100F	33.10 kg
HKM40	10027653	40	25	without pump	16.70 kg
HKM50	10087158	50	40	Wilo Yonos Maxo Plus 50/0.5-9	32.70 kg
HKM50	10026874	50	40	Grundfos Magna3 50-100F	34.50 kg
HKM50	10027650	50	40	without pump	17.70 kg

VB40/50

Boiler manifold for the connection of 2 to 3 pump groups FlowBox DN40 and/or DN50.

Connection to pump groups: 2" UN; connection to the installation: flange DN80 PN6 (incl. 2 blind flanges). EPP insulation shell.



Type	Part no.	Version	Weight
VB40/50-2	10011282	for connection of 2 Pump groups	38.90 kg
VB40/50-3	10011283	for connection of 3 Pump groups	52.00 kg

Pedestal Set

Set consists of 2 pedestals, 8 bolts and nuts for connection with heating circuit distributor VB40/50.



Type	Part no.	Weight
VB40/50-FUSS	10011285	10.30 kg



Angle Connector Set VB40/50-ECK

The set consists of 2 insulated elbow pieces with flange connections for corner installation of the heating circuit distributors VB40/50. EPP insulation shell.

Type	Part no.	Weight
VB40/50-ECK	10011284	18.20 kg



Wall Bracket

Wall bracket for wall mounting for pump groups HK/HKM DN40/50.

Type	Part no.	Weight
WH-HK/HKM	10083722	5.26 kg



Reducer

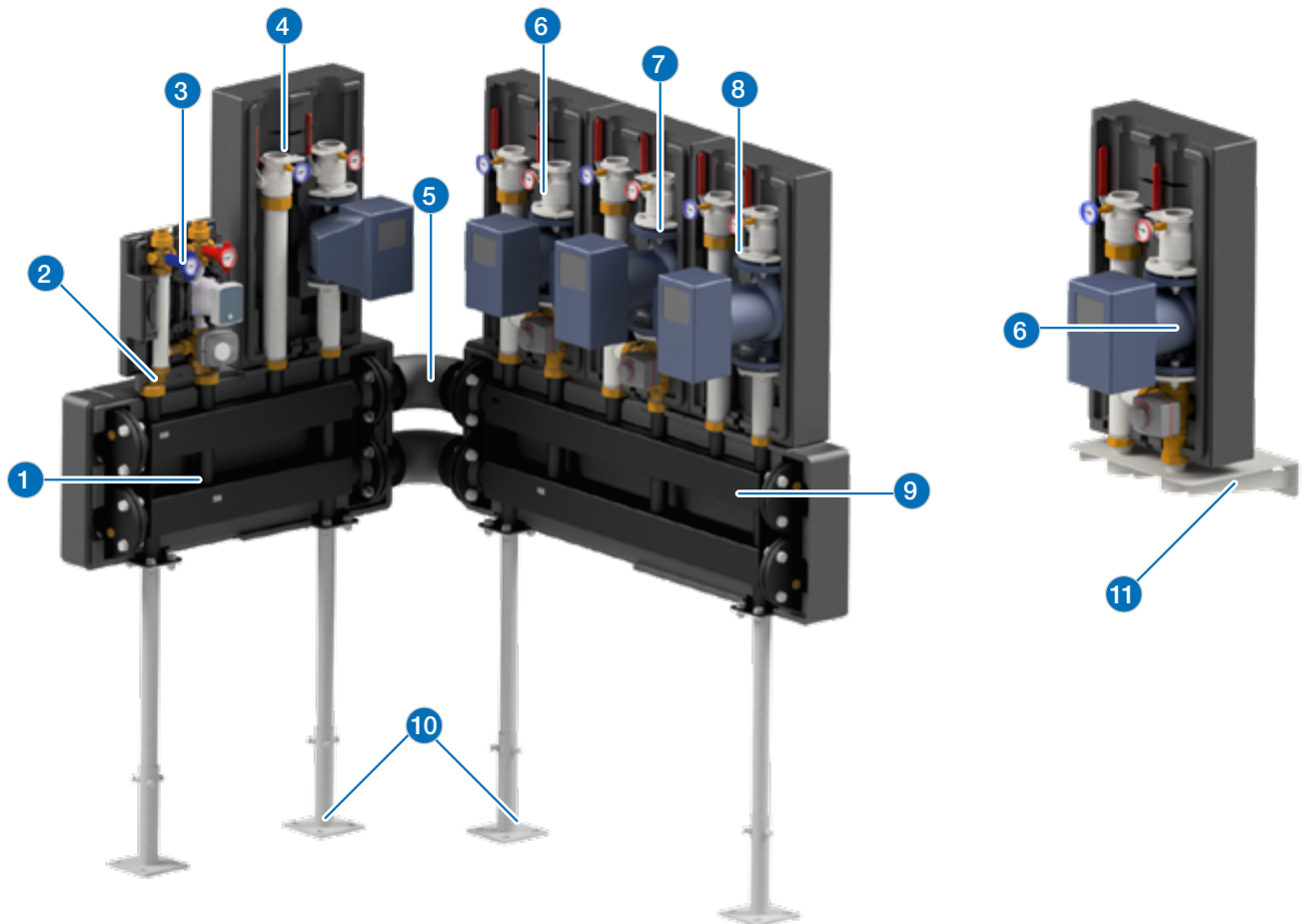
Reducer DN40/50 to DN25/32 for connection of pump groups FlowBox HK/HKM DN25/32 to heating circuit distributor VB40/50. EPP heat insulation.

Type	Part no.	Weight
VB40/50-REDU	10011286	1.30 kg

Installation variants

Two boiler manifolds VB40/50 can be combined with each other either linearly or over the corner connector set (5), which makes it possible to connect centrally up to 6 heating circuits (pump groups). Smaller pump groups FlowBox DN25/32 can be connected to the manifold VB40/50 via the reducer VB40/50-REDU (3).

The connection of a single heating circuit can be carried out by the wall bracket (11) WH-HK.



- | | | |
|--------------------------------------|--|--|
| 1 Boiler manifold VB40/50-2 | 5 Angle Connector Set VB40/50-ECK | 9 Boiler manifold VB40/50-3 |
| 2 Reducer VB40/50-REDU | 6 Pump - mixing group HKM40 | 10 Pedestal Set VB40/50-FUSS |
| 3 Pump - mixer group HKM25/32 | 7 Pump - mixing group HKM50 | 11 Wall Bracket WH-HK/HKM 40/50 |
| 4 Pump group HK40 | 8 Pump group HK50 | |

Technical Data FlowBox HK/HKM40 and HK/HKM50

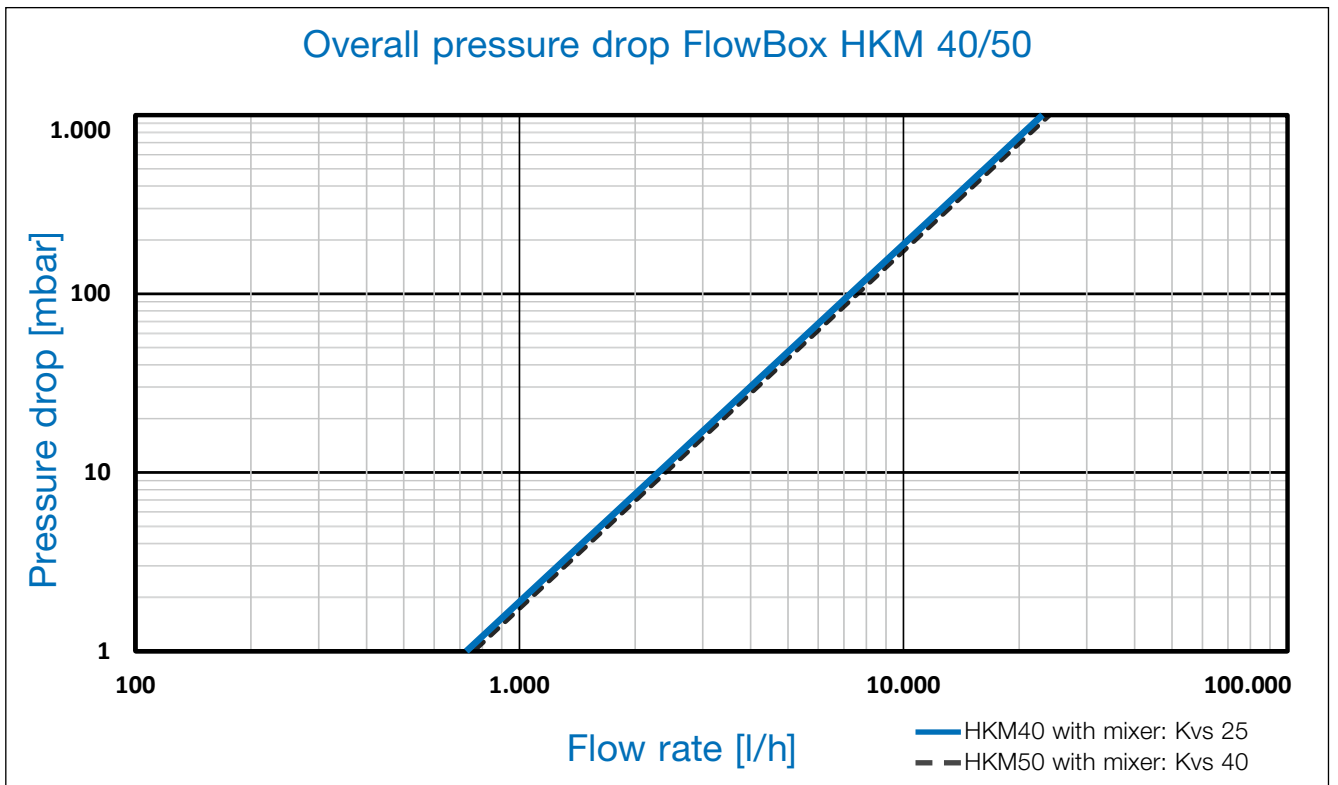
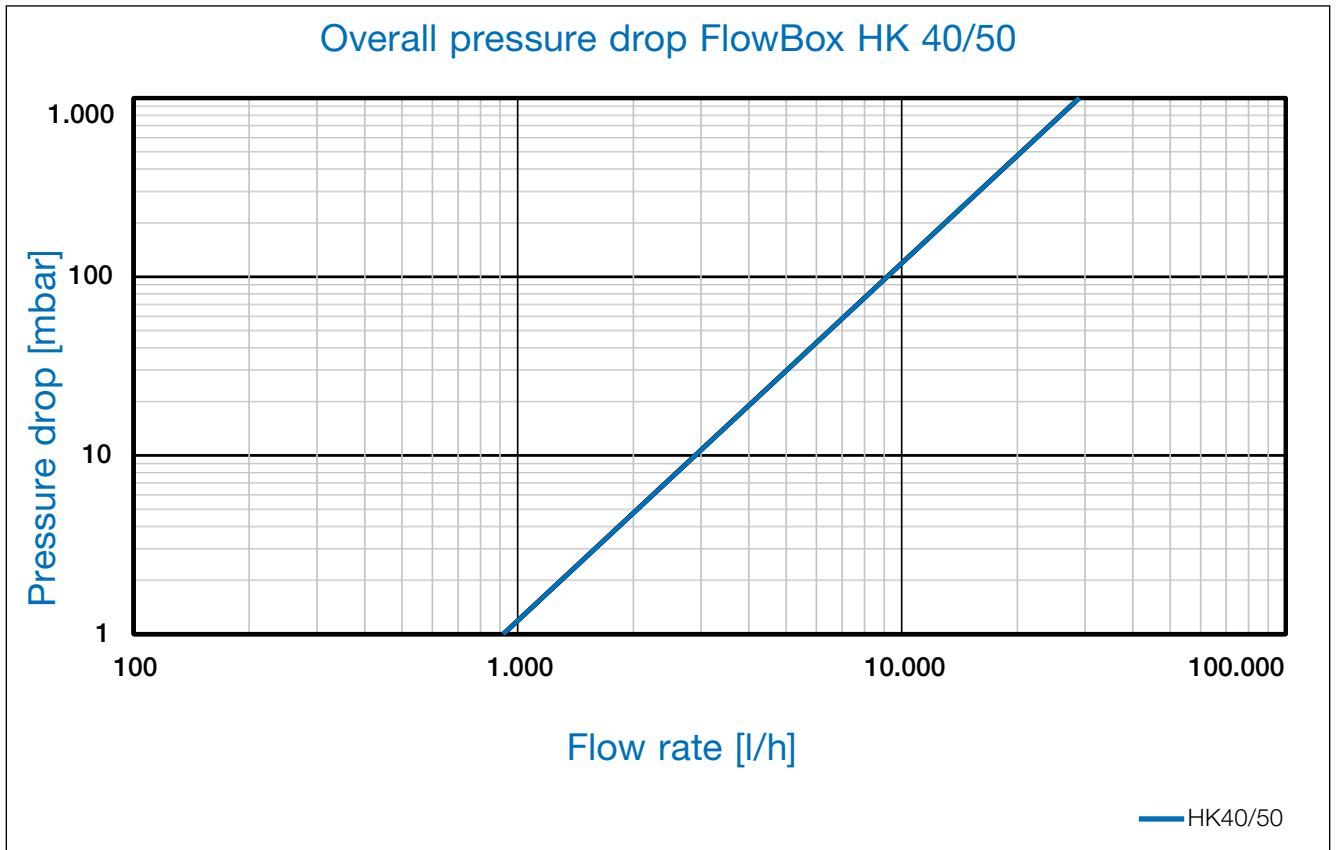
Hydraulic performance data				
Max. operating pressure	6 bar			
Opening pressure of gravity brake	10 mbar			
Ambient temperature	-10 °C to +40 °C (note pump specification!)			
Operating temperature	+2 °C to +90 °C (note pump specification!)			
Media	Water or water-glycol mixes as per VDI (Association of German Engineers) 2035 / ÖNORM (Austrian standard) H 5195			
Connection to heating circuits (top)	2" F			
Connections to boiler (bottom)	2" M with flat sealing			
Axial distance	180 mm			
Hydraulic performance data	HK40	HKM40	HK50	HKM50
Nominal diameter	DN40	DN40	DN50	DN50
Kvs - value of 3-way mixer	-	25 m³/h	-	40 m³/h
Power (at DT=20 K, Dp=100 mbar)	224 kW	204 kW	224 kW	207 kW
Size dimensions and weights				
B x H x T with EPP-shell	720 mm x 410 mm x 260 mm			
Weight without packing	See product descriptions (page 2)			
Weight with packing	Approx. 1.5 kg higher than the weight without packing			
Circulation pumps and motors	HK/HKM40		HK/HKM50	
Circulation pump Installation height	220 mm		280 mm	
	See separate pump documentation			
Motor	See separate motor documentation			
Materials				
Pipe	Steel pipe			
Valves and fittings	Brass CW617N			
Flat gaskets	AFM34/2			
Insulation	Polypropylen EPP			
Gravity brake	POM, NBR, stainless steel			
Plastics	Impact- and temperature resistant			
O-Rings	EPDM			

Technical Data VB40/50

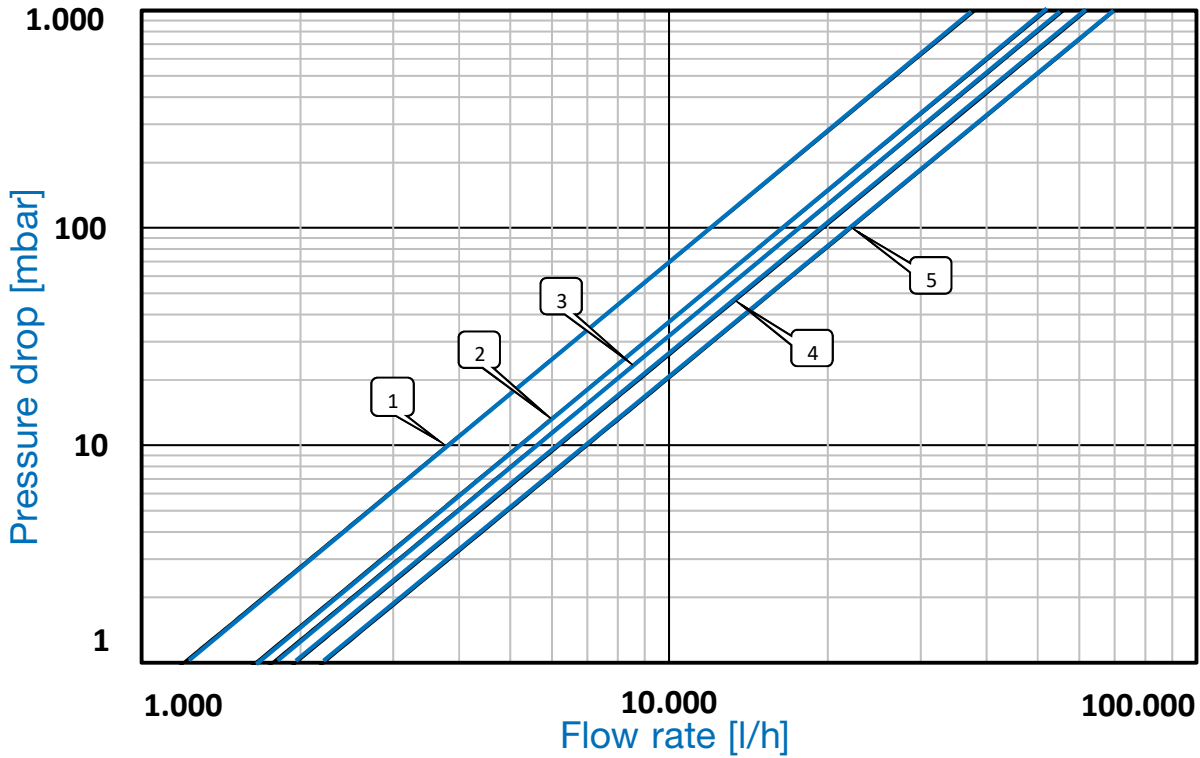
Hydraulic performance data					
Max. operating pressure	6 bar				
Operating temperature	2 °C to 110 °C				
Media	Water or water-glycol mixes as per VDI (Association of German Engineers) 2035 / ÖNORM (Austrian standard) H 5195				
Kvs-values					
Number of open outlets	1 outlet	2 outlets	3 outlets	4 outlets ¹⁾	5 outlets ¹⁾
	38 m³/h	52 m³/h	56 m³/h	62 m³/h	70 m³/h
Connection to heating circuits (top)	2" UN with flat sealing				
Connections to boiler (left or right side)	DN80 flange (PN6)				
Dimensions and weights	VB40/50-2			VB40/50-3	
B x H x T with EPP-insulation	1000 mm x 450 mm x 250 mm			1410 mm x 450 mm x 250 mm	
Weight without packing	See product descriptions (page 2)				
Weight with packing	Approx. 1.5 kg higher than the weight without packing				
Materials					
Manifold	Steel pipe				
Union nut	Brass CW617N				
Flat gaskets	AFM 34/2				
Insulation shell	EPP				

1) In combination of VB40/50-2 and VB40/50-3

Charts



Overall pressure drop VB40/50



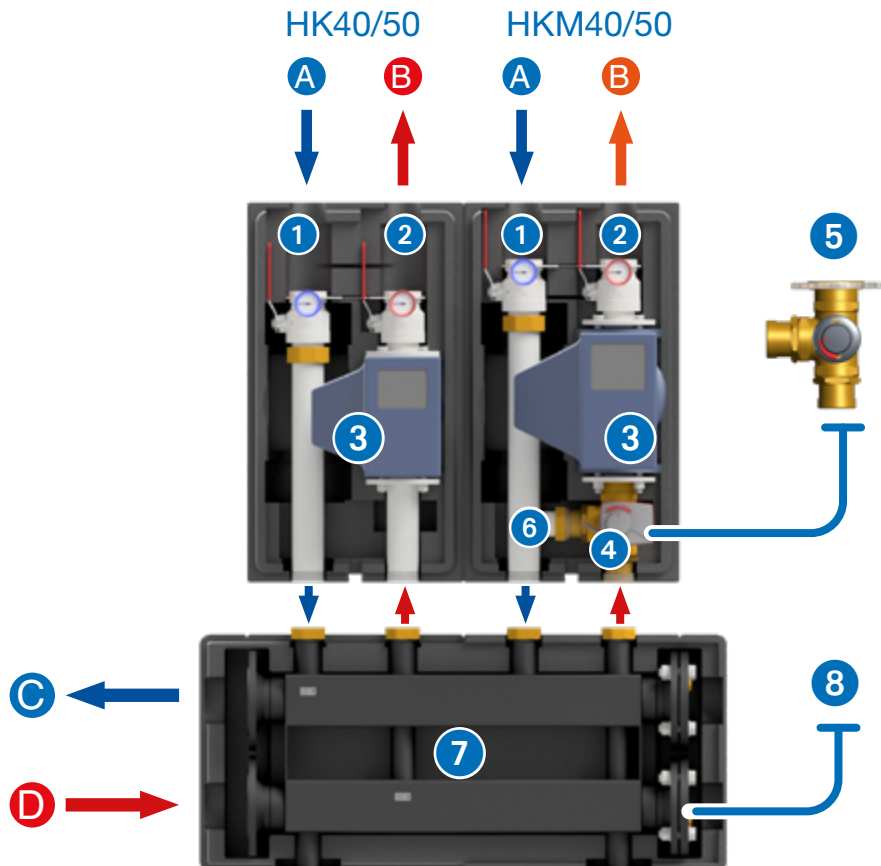
1 circuit: Kvs 38.0
2 circuits: Kvs 52.0

3 circuits: Kvs 56.0
4 circuits: Kvs 62.0

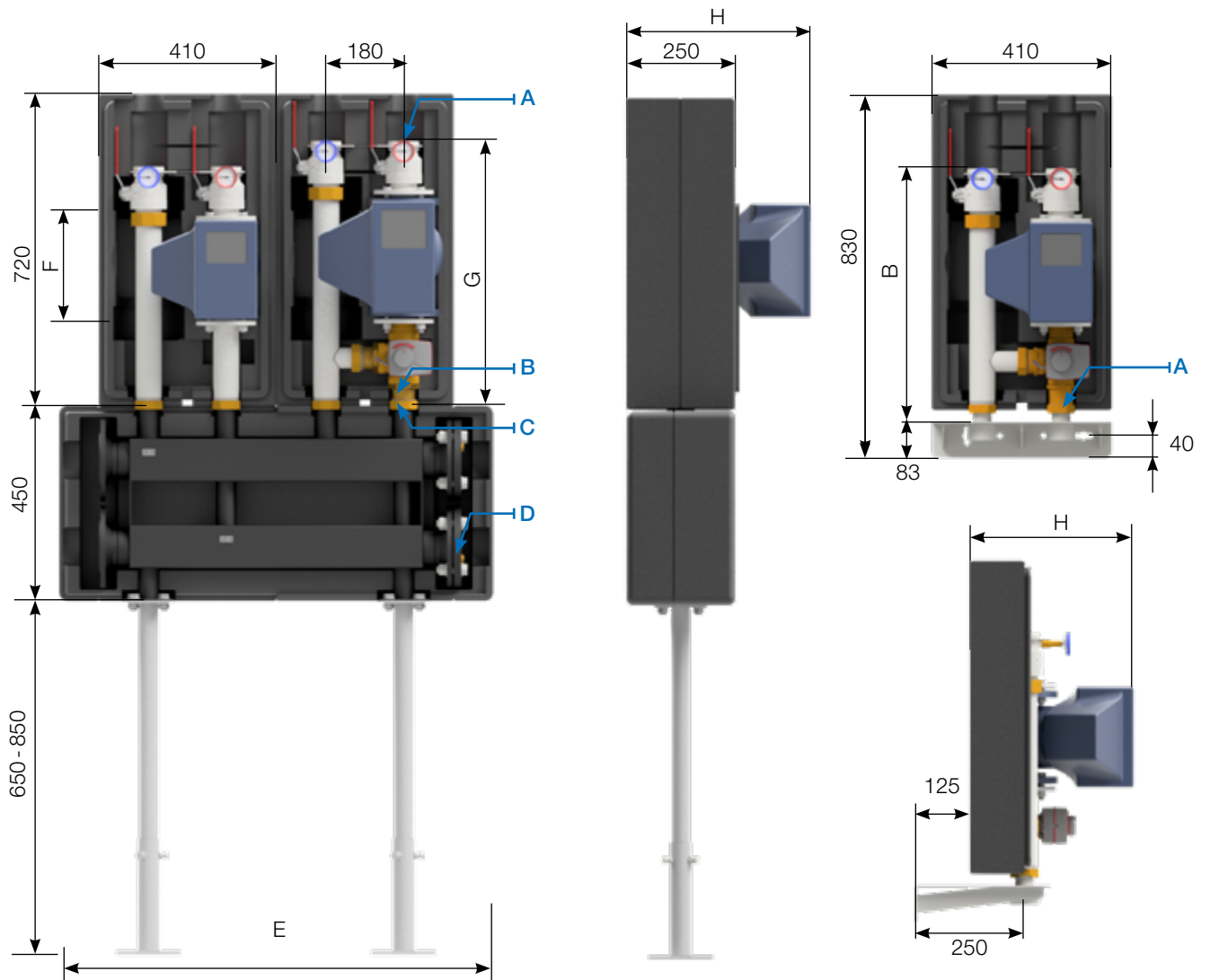
5 circuits: Kvs 70.0

Construction

- ① Shut-off valve with gravity break (Return)
- ② Shut-off valve (Supply)
- ③ Circulation pump
- ④ Motor
- ⑤ 3-way mixer
- ⑥ Bypass connection pipe
- ⑦ Boiler manifold VB40/50-2
- ⑧ Blind flange
- A Return inlet (heating circuit)
- B Supply outlet (heating circuit)
- C Return outlet (boiler circuit)
- D Supply inlet (boiler circuit)



Dimensions [mm]



Type	A	B	C	D	E	F	G	H
HK40	2" F	2" M	-	-	-	220	554	329 ¹⁾ or 462 ²⁾
HKM40	2" F	2" M	-	-	-	220	554	
HK50	2" F	2" M	-	-	-	280	614	391 ³⁾ or 462 ⁴⁾
HKM50	2" F	2" M	-	-	-	280	614	
VB40/50-2	-	-	2" UN	DN80, PN6	1000	-	-	-
VB40/50-3	-	-	2" UN	DN80, PN6	1410	-	-	-

1) Wilo Yonos Maxo Plus 40/8;

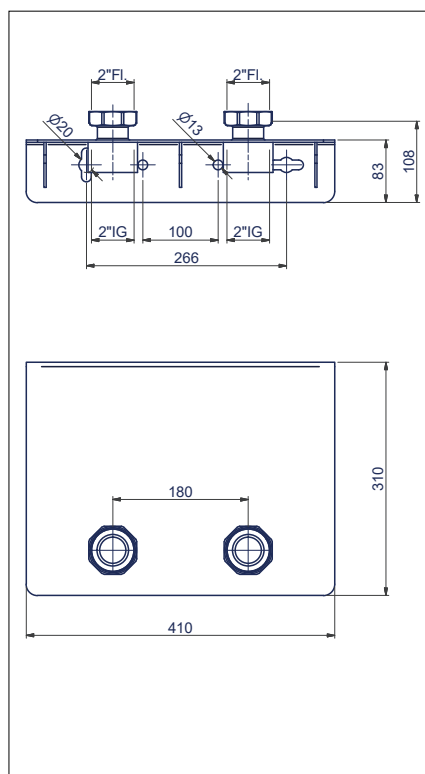
2) Grundfos Magna 3 40-100;

3) Wilo Yonos Maxo Plus 50/9;

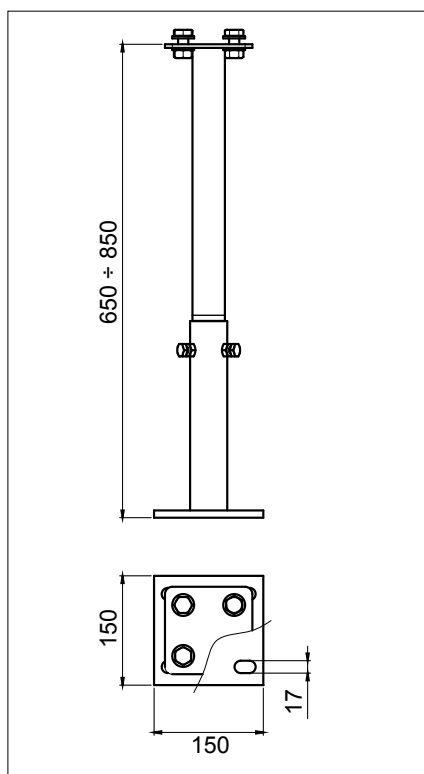
4) Grundfos Magna 3 50-100.

Dimensions accessories [mm]

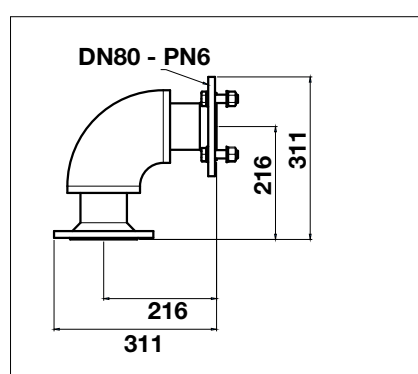
WH-HK/HKM 40/50



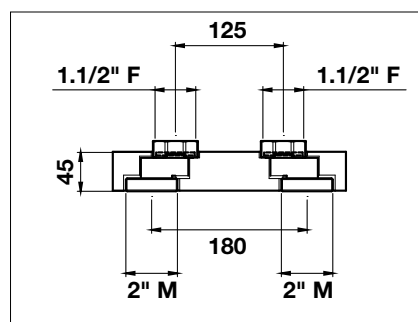
PEDESTAL SET



VB50/80-ECK



REDU



Product texts

FlowBox HK40/HK50

Ready-to mount pump group DN40/DN50 for connecting boilers to unmixed heating circuits. Shut-off valves 2" F with thermometer, gravity break. Flat-sealing connections. Up to 225 kW heat output requirement/heating circuit. EPP - insulation shell. For operation in closed heating networks with non-aggressive media, such as water or water-glycol mixes as per VDI (Association of German Engineers) 2035/ÖNORM (Austrian standard) H 5195.

FlowBox HKM40/HKM50

Ready-to mount pump-mixing group DN40/DN50 for connecting boilers to mixed heating circuits. Shut-off valves 2" F with thermometer, gravity break. Motor factory wired, 3-way mixer. Flat-sealing connections. Up to 205 kW heat output requirement/heating circuit. EPP - insulation shell. For operation in closed heating networks with non-aggressive media, such as water or water-glycol mixes as per VDI (Association of German Engineers) 2035/ÖNORM (Austrian standard) H 5195.

VB40/50

Boiler manifold VB40/50. Ready for installation unit. Connection to HK/HKM DN40/DN50 by means of 2" union nut. Modular design. EPP - insulating shell. Closed on one side with blind flange. Combination with FlowBox HK 25/32 and FlowBox HKM25/32 by means of reducer REDU25/32. Corner connection set and stable feet for safe mounting as accessories. For boilers or boiler cascades. DN80 - PN6.

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