

Алматы (7273)495-231
 Ангарск (3955)60-70-56
 Архангельск (8182)63-90-72
 Астрахань (8512)99-46-04
 Барнаул (3852)73-04-60
 Белгород (4722)40-23-64
 Благовещенск (4162)22-76-07
 Брянск (4832)59-03-52
 Владивосток (423)249-28-31
 Владикавказ (8672)28-90-48
 Владимир (4922)49-43-18
 Волгоград (844)278-03-48
 Вологда (8172)26-41-59
 Воронеж (473)204-51-73
 Екатеринбург (343)384-55-89

Иваново (4932)77-34-06
 Ижевск (3412)26-03-58
 Иркутск (395)279-98-46
 Казань (843)206-01-48
 Калининград (4012)72-03-81
 Калуга (4842)92-23-67
 Кемерово (3842)65-04-62
 Киров (8332)68-02-04
 Коломна (4966)23-41-49
 Кострома (4942)77-07-48
 Краснодар (861)203-40-90
 Красноярск (391)204-63-61
 Курск (4712)77-13-04
 Курган (3522)50-90-47
 Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13
 Москва (495)268-04-70
 Мурманск (8152)59-64-93
 Набережные Челны (8552)20-53-41
 Нижний Новгород (831)429-08-12
 Новокузнецк (3843)20-46-81
 Ноябрьск (3496)41-32-12
 Новосибирск (383)227-86-73
 Омск (3812)21-46-40
 Орел (4862)44-53-42
 Оренбург (3532)37-68-04
 Пенза (8412)22-31-16
 Петрозаводск (8142)55-98-37
 Псков (8112)59-10-37
 Пермь (342)205-81-47

Ростов-на-Дону (863)308-18-15
 Рязань (4912)46-61-64
 Самара (846)206-03-16
 Санкт-Петербург (812)309-46-40
 Саратов (845)249-38-78
 Севастополь (8692)22-31-93
 Саранск (8342)22-96-24
 Симферополь (3652)67-13-56
 Смоленск (4812)29-41-54
 Сочи (862)225-72-31
 Ставрополь (8652)20-65-13
 Сургут (3462)77-98-35
 Сыктывкар (8212)25-95-17
 Тамбов (4752)50-40-97
 Тверь (4822)63-31-35

Тольятти (8482)63-91-07
 Томск (3822)98-41-53
 Тула (4872)33-79-87
 Тюмень (3452)66-21-18
 Ульяновск (8422)24-23-59
 Улан-Удэ (3012)59-97-51
 Уфа (347)229-48-12
 Хабаровск (4212)92-98-04
 Чебоксары (8352)28-53-07
 Челябинск (351)202-03-61
 Череповец (8202)49-02-64
 Чита (3022)38-34-83
 Якутск (4112)23-90-97
 Ярославль (4852)69-52-93

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Киргизия +996(312)96-26-47

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Product Catalogue



HYDRAULICS



Hydraulic Groups

7



Hydraulic Accessories

45



Valve Sets

52

For over 45 years, PAKKENS has been a leading company in the design and manufacturing of all kinds of pressure and temperature measurement instruments, HVAC and sanitary products, hydraulic groups and customer specific precision machined parts.

With 450 highly qualified employees at two fully integrated manufacturing facilities, PAKKENS has been serving major OEMs and end users in gas

distribution, petro-chemicals, pharmaceuticals, medical, food processing, heating, machine building, hydraulics, agriculture, construction, automotive, defence and aerospace industries.

In addition to continuously strengthening its presence in the existing business lines, Pakkens continues to invest in the design and manufacturing of high value added and innovative products within the framework of its strategic growth and sustainability plans.

PAKKENS VALVES

PAKKENS designs and manufactures hydraulic groups and a complete portfolio of hydraulic accessories for well known boiler manufacturers and other customers.

As of today, PAKKENS Valves offers a wide range of plastic and brass hydraulic groups, that would fit in virtually all boiler platforms whether it is combi, CH only or storage type.

PAKKENS Valves had dedicated most of its resources to become a global solution partner



for the design and manufacture of hydraulic groups and related accessories, and became a fully integrated company able to realize all processes from conceptual design to series production in-house.

PAKKENS Valves is a customer oriented company that can offer tailor made solutions even for annual quantities as low as 1.000 sets per year, and performs all design, production and tooling studies to get a product that fulfills your requirements, completely free of charge.



PAKKENS INSTRUMENTS

PAKKENS is also a well known manufacturer of pressure and temperature instruments for over 45 years.

Our instrumentation product portfolio covers all kinds of gauges and related accessories such as General Purpose and Accurate Pressure Gauges, Pressure Transmitters, Diaphragm Seals, Diaphragm Seal Systems, Differential Pressure Gauges, Contact Type Pressure Gauges, Pressure Gauges with Output Signal, Bi-Metal and Gas Actuated Temperature Gauges, Combined Gauges, Valves and Manifolds,

Where Pressure Matters...™

Thermowells, Instrumentation Accessories, Calibration Services, etc.

PAKKENS Instruments offers more than 15.000 standard and custom products, and is the market leader -almost a monopoly- in Turkey.

As of today, the company has the first and most advanced certified instrumentation calibration laboratory in Turkey, and has very well structured design & development, quality, manufacturing, planning and logistics processes and systems to guarantee world class products with optimal prices.

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35	COMBI BITHERMIC
39	STORAGE TYPE
43	HEATING ONLY
45	HYDRAULIC ACCESSORIES
53	VALVE SETS



MAIN FEATURES

OF HYDRAULIC GROUPS

- Brass or composite hydraulic groups that fit in virtually all boiler platforms
- PAKKENS 3 way valve cartridge for on-off type or step motor applications
- Turbine type flow meter with hall effect sensor
- Filter on DW circuit
- Brass or plastic safety valve (3 bar, 1/2")
- Manual or automatic filling tap
- Internal or external by-pass function
- Flow regulator
- Back flow preventer (EN1717 Type EA. Valid for applicable models)

Customer connections for:

- Pressure sensor or switch
 - NTC sensor
 - Circulation pump
 - Plate heat exchanger
 - Pressure gauge
 - Pressure vessel
 - Safety valve
-
- Hydraulic groups are compatible with all circulation pump brands
 - All hydraulic groups are compatible with on-off type or step motor applications
 - Hydraulic groups are tested 100% for leakage and functionality prior to shipment
 - All components are WRAS certified

Hydraulic Groups

Selection Matrix

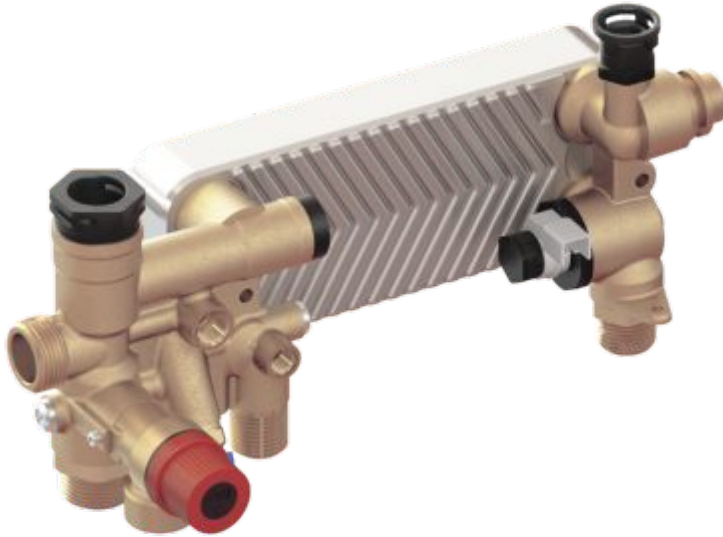
Model Nr.	Brass body	Composite body	Pressure relief valve Brass or plastic	Filling tap	DHW filter	Flow regulator	Flow sensor	Pressure port - 1 for pressure gauge / sensor switch	Pressure port - 2 for pressure gauge / sensor switch	NTC sensor connection	3 Way valve Compatible with on-off or step motors	Back flow preventer EN1717 Type EA	Temperature sensor connection
CM	HB-101	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	-	-
	HB-102	✓	-	✓	✓	✓	✓	✓	✓	-	✓	✓	-
	HB-103	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
	HB-104	✓	-	✓	✓	✓	✓	✓	✓	-	✓	✓	-
	HB-105	✓	-	✓	✓	✓	✓	✓	✓	-	✓	✓	-
	HB-106	✓	-	✓	✓	✓	✓	✓	✓	-	✓	✓	✓
	HB-107	✓	-	✓	✓	✓	✓	✓	✓	-	✓	✓	-
	HB-108	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
	HB-109	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
	HB-110	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
	HB-111	-	✓	✓	-	✓	✓	✓	✓	✓	✓	✓	-
	HB-112	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
	HB-113	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	HB-114	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
	HB-115	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
	HB-116	✓	-	✓	✓	✓	✓	✓	✓	-	-	✓	-
	HB-117	✓	-	✓	✓	✓	✓	✓	✓	-	-	✓	-
	HB-118	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
	HB-119	✓	-	✓	-	✓	✓	✓	-	-	-	✓	-
	HB-120	✓	-	✓	✓	✓	✓	✓	✓	-	-	✓	-
	HB-121	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
	HB-122	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
	HB-123	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	HB-124	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	HB-125	✓	-	✓	✓	✓	-	✓	✓	✓	-	✓	-
	HB-126	✓	-	-	✓	✓	✓	✓	-	-	✓	✓	-
	HB-127	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
CB	HB-201	✓	-	✓	✓	✓	✓	✓	✓	-	-	-	-
	HB-202	✓	-	✓	✓	✓	✓	✓	-	-	-	-	-
	HB-203	✓	-	✓	✓	✓	✓	✓	✓	-	-	-	-
ST	HB-301	✓	-	✓	-	-	-	✓	✓	-	✓	-	-
	HB-302	✓	-	✓	✓	-	-	✓	-	-	✓	-	-
CH	HB-401	✓	-	✓	✓	-	-	-	-	-	-	-	-

CM Combi Monothermic CB Combi Bithermic ST Storage Type CH Heating Only



COMBI MONOTHERMIC

Combi Monothermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

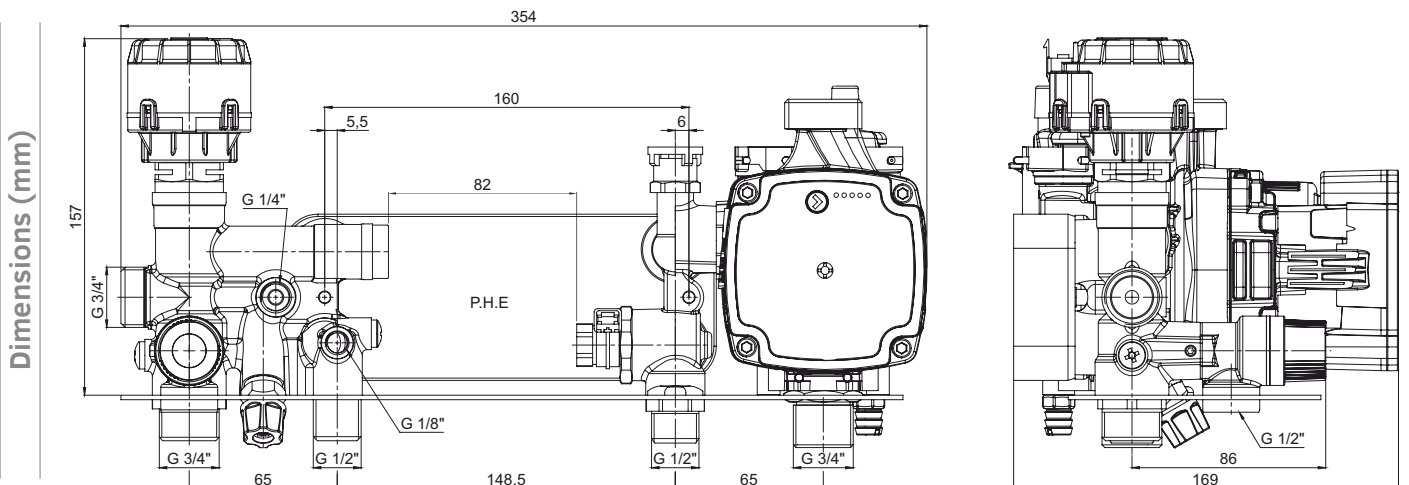
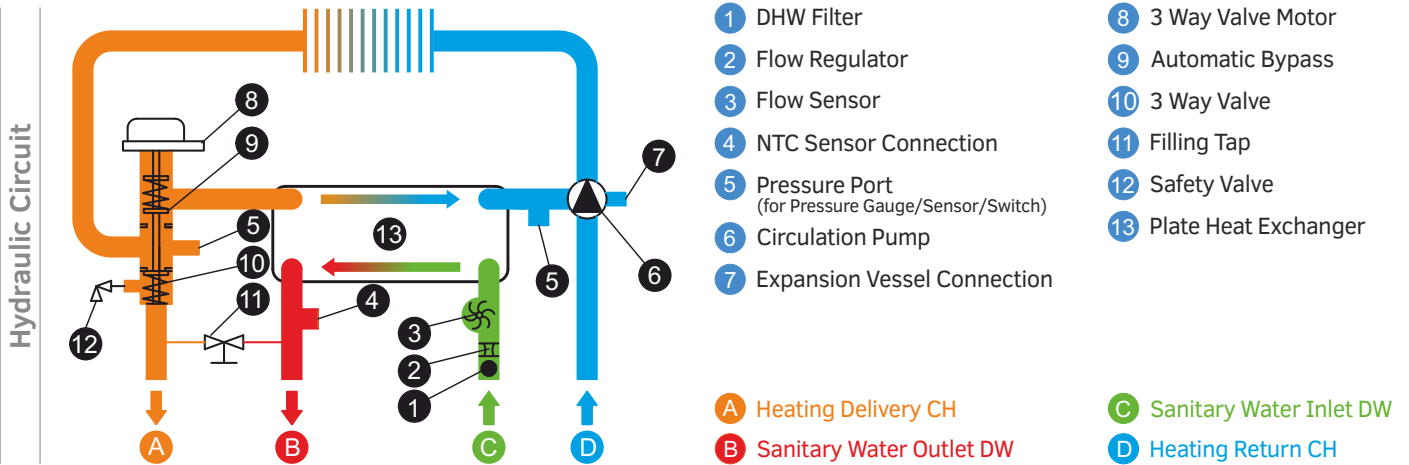
Flow Regulator :
6 to 22 (lt./min.)

Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

Pump Connection :
Side



* Dimensions valid for a PHE width of 190mm

Hydroblock HB-102

Combi Monothermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

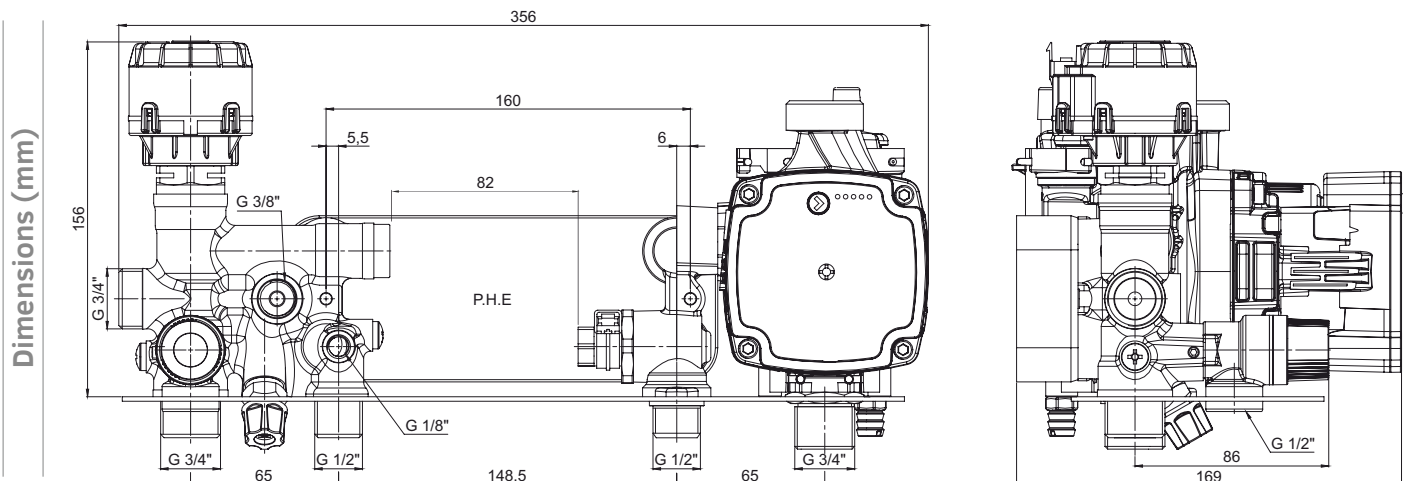
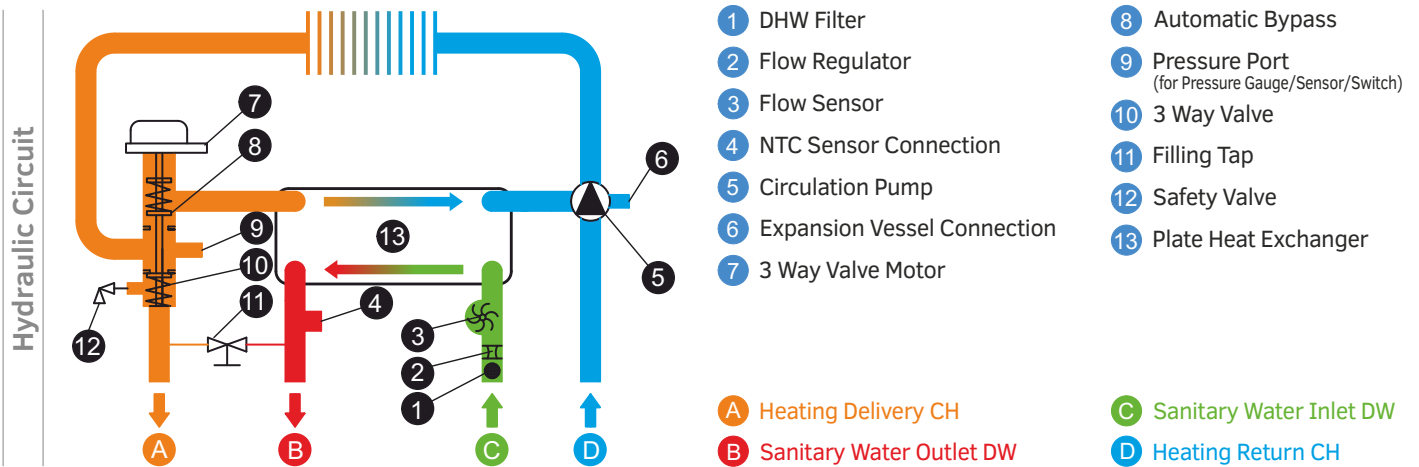
Flow Regulator :
6 to 22 (lt./min.)

Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

Pump Connection :
Side



* Dimensions valid for a PHE width of 190mm

Combi Monothermic / Composite / Side Pump Connection



Technical Features

Material :
Plastic (PA66 GF30) + Brass (CuZn40Pb2)

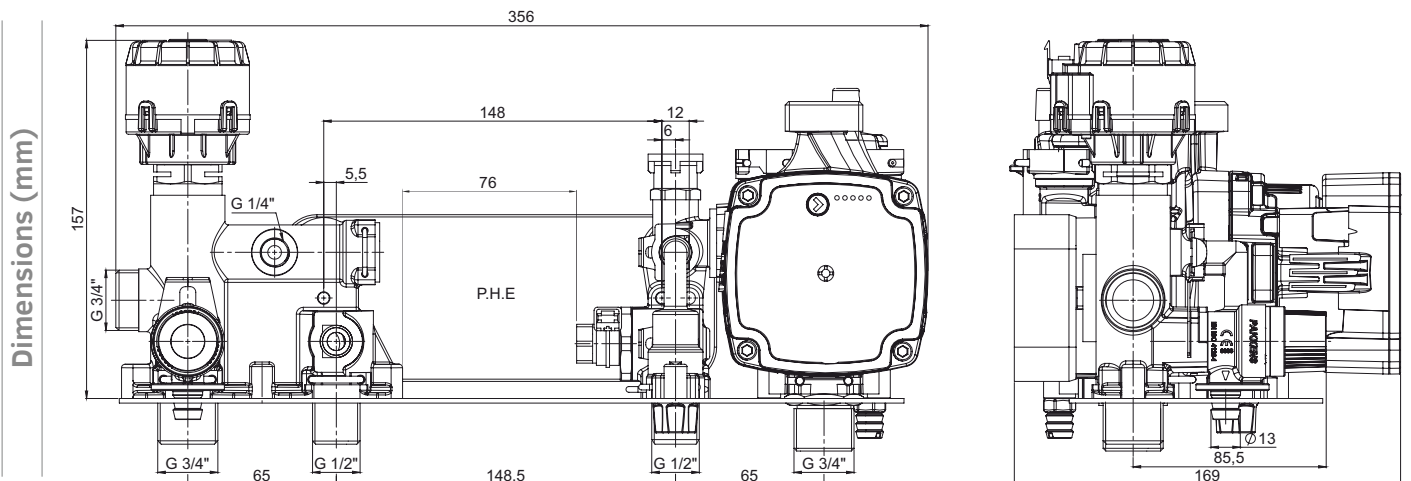
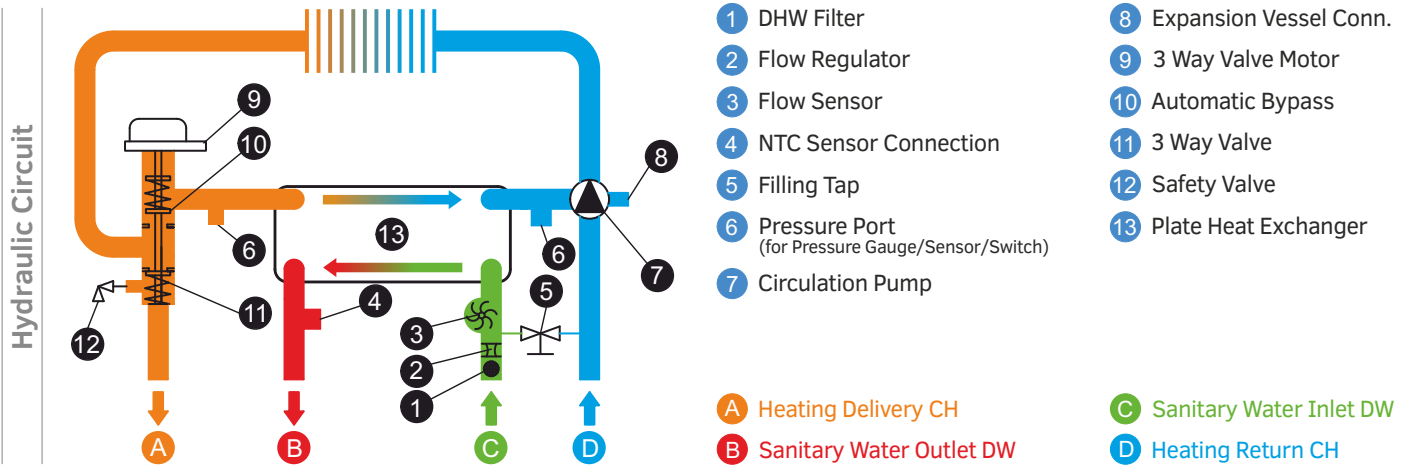
Flow Regulator :
6 to 22 (lt./min.)

Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

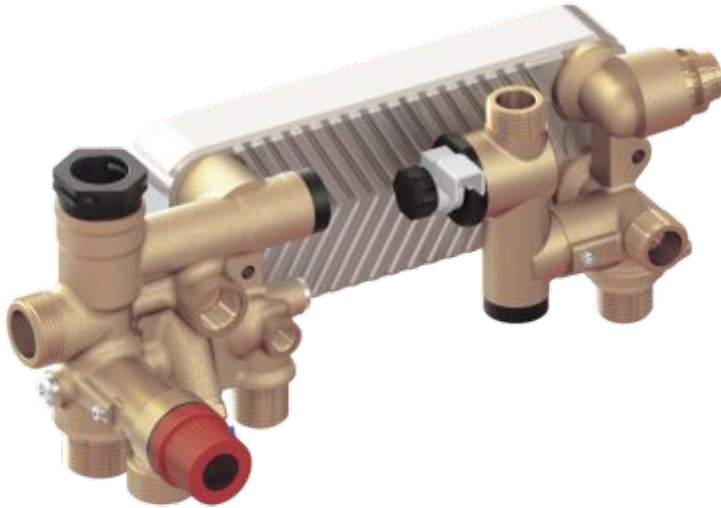
Pump Connection :
Side



* Dimensions valid for a PHE width of 190mm

Hydroblock HB-104

Combi Monothermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

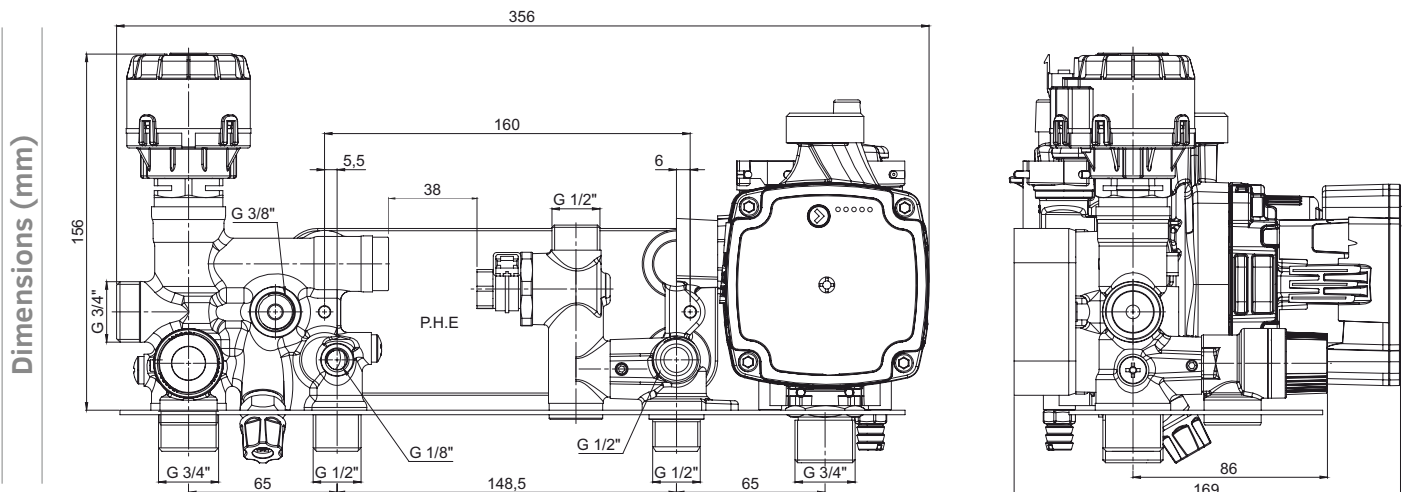
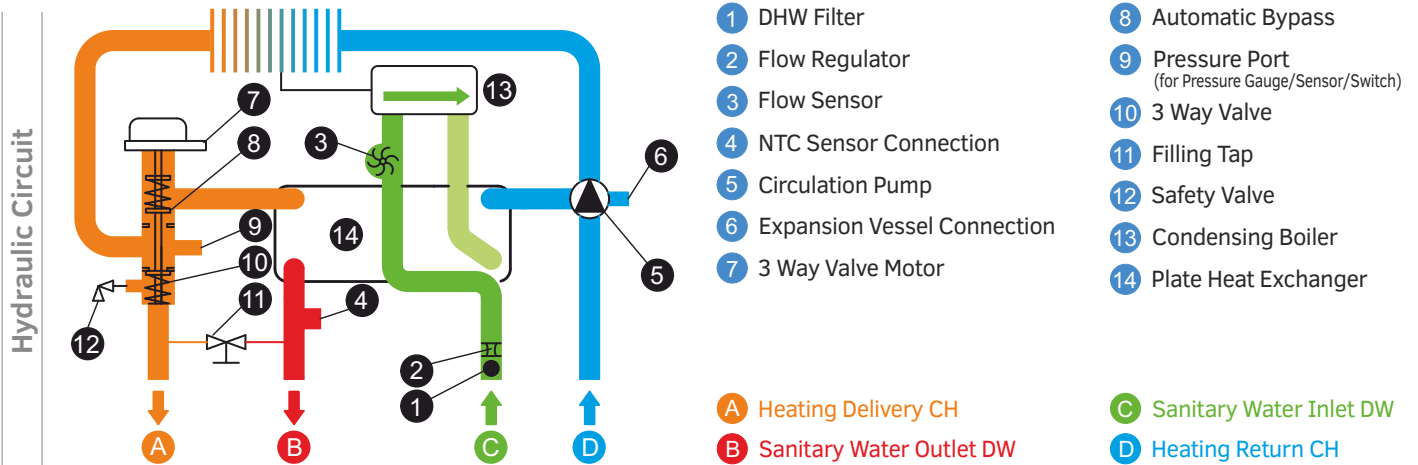
Flow Regulator :
6 to 22 (lt./min.)

Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

Pump Connection :
Side



* Dimensions valid for a PHE width of 190mm

Combi Monothermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

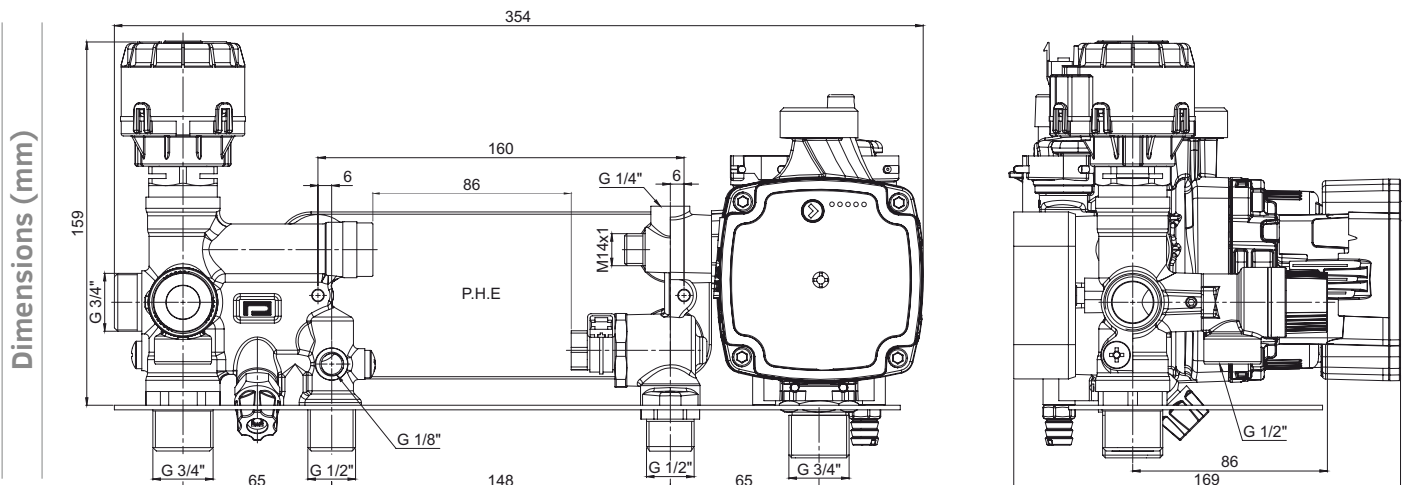
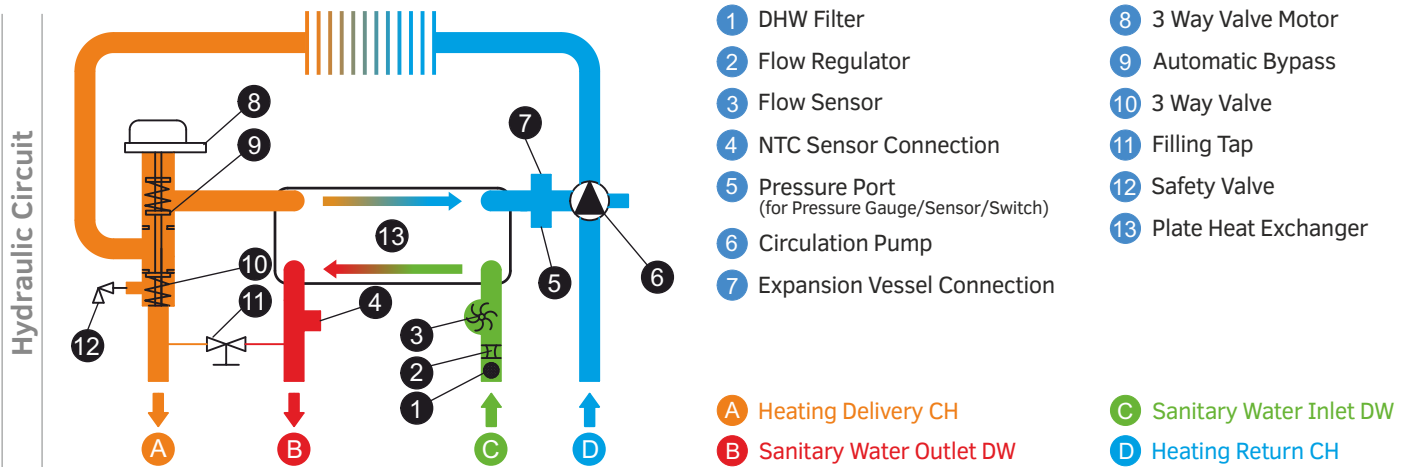
Flow Regulator :
6 to 22 (lt./min.)

Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

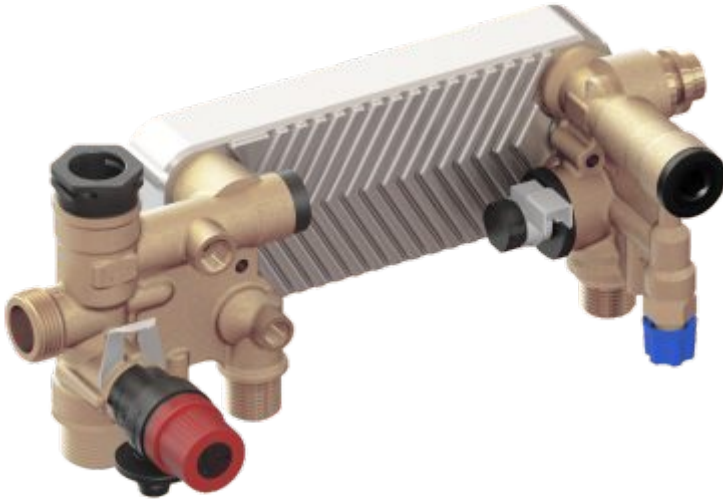
Pump Connection :
Side



* Dimensions valid for a PHE width of 190mm

Hydroblock HB-106

Combi Monothermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

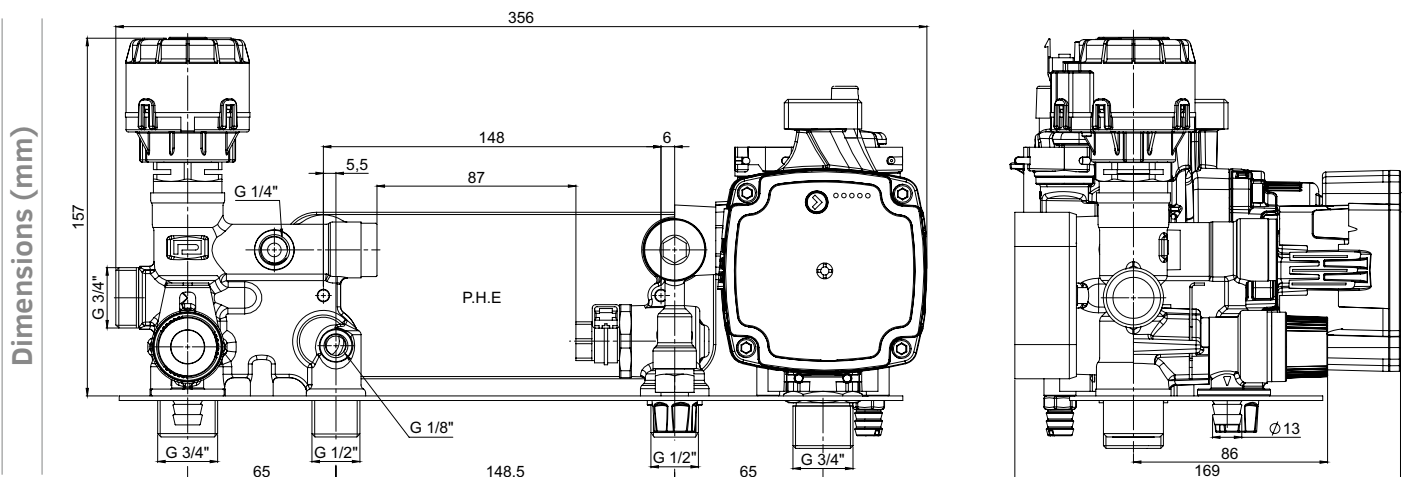
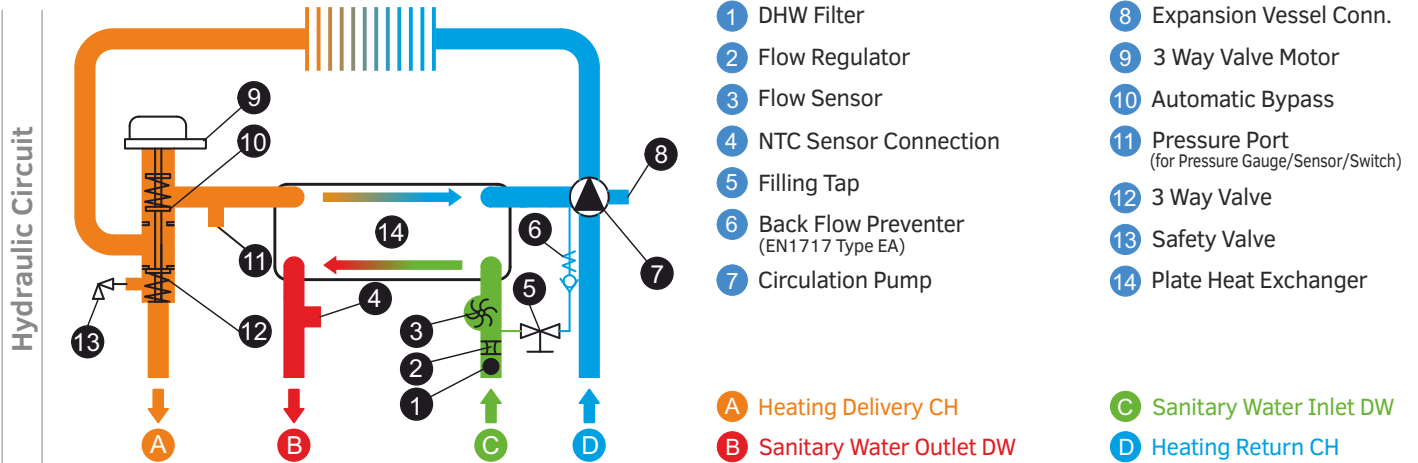
Flow Regulator :
6 to 22 (lt./min.)

Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar (Brass or Plastic)

Pump Connection :
Side



* Dimensions valid for a PHE width of 190mm

Combi Monothermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

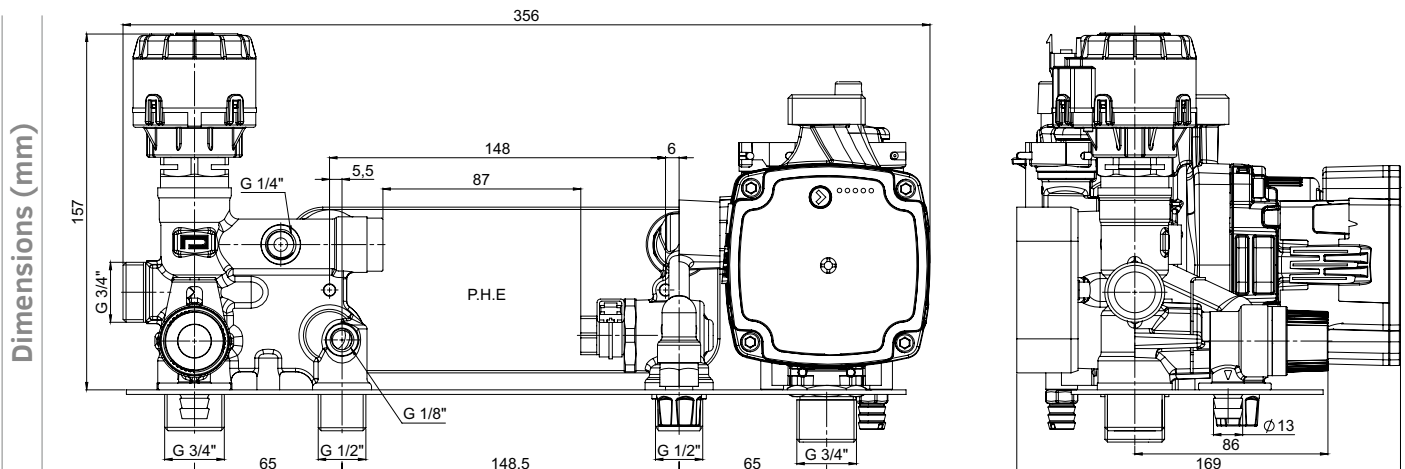
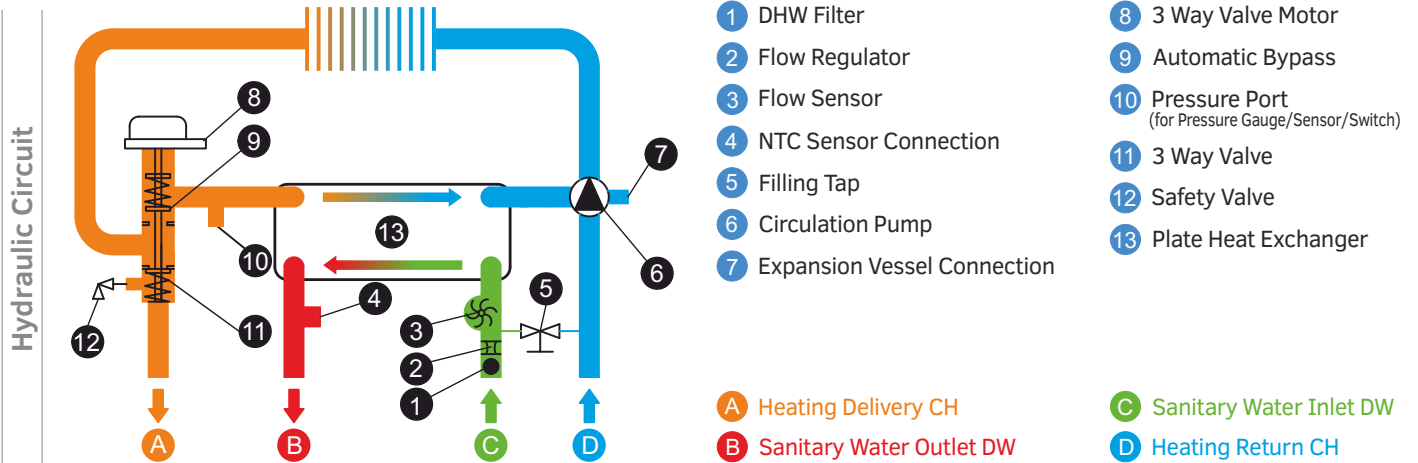
Flow Regulator :
6 to 22 (lt./min.)

Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar (Brass or Plastic)

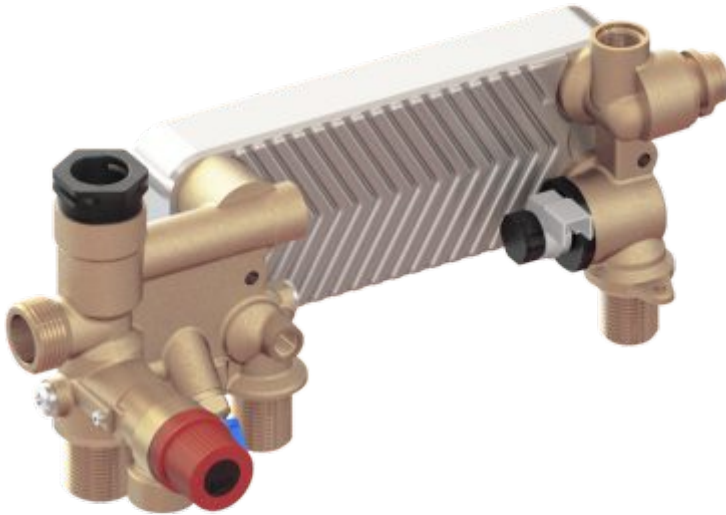
Pump Connection :
Side



* Dimensions valid for a PHE width of 190mm

Hydroblock HB-108

Combi Monothermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

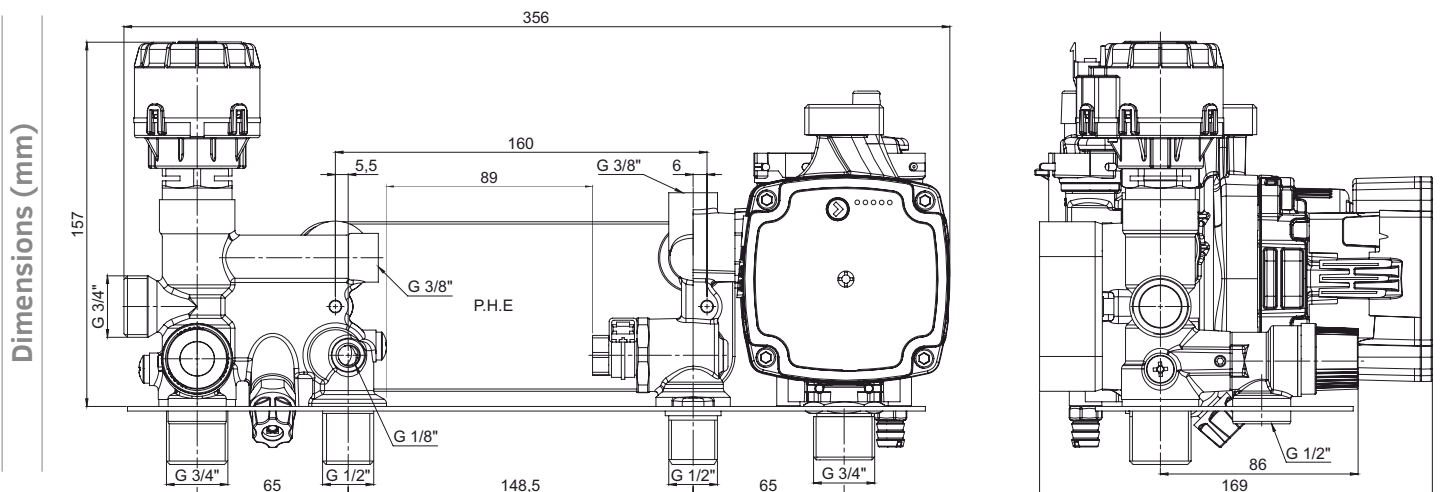
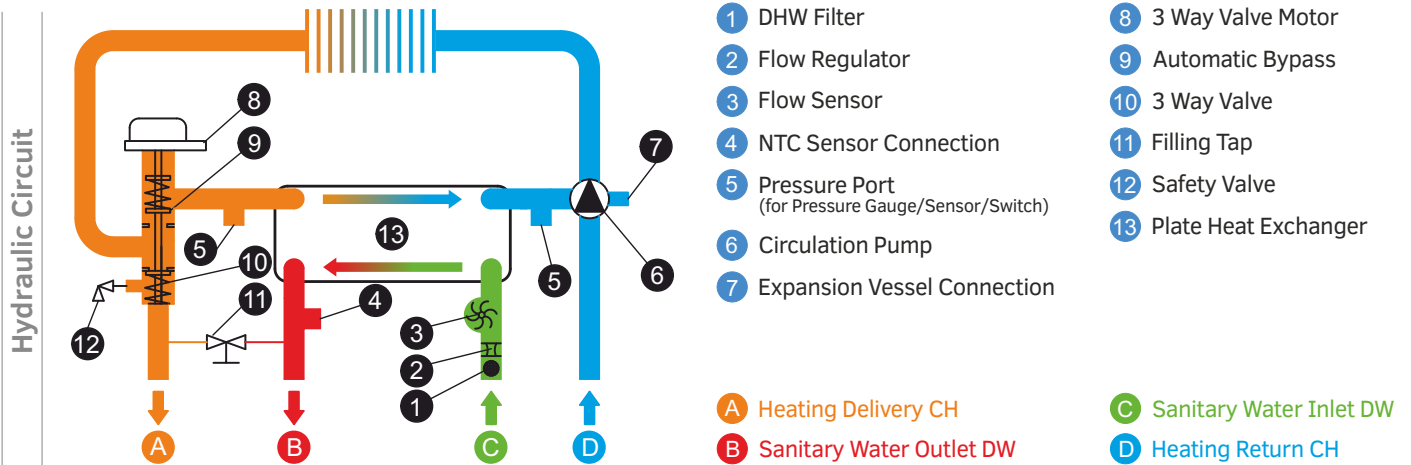
Flow Regulator :
6 to 22 (lt./min.)

Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

Pump Connection :
Side



* Dimensions valid for a PHE width of 190mm

Combi Monothermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

Flow Regulator :
6 to 22 (lt./min.)

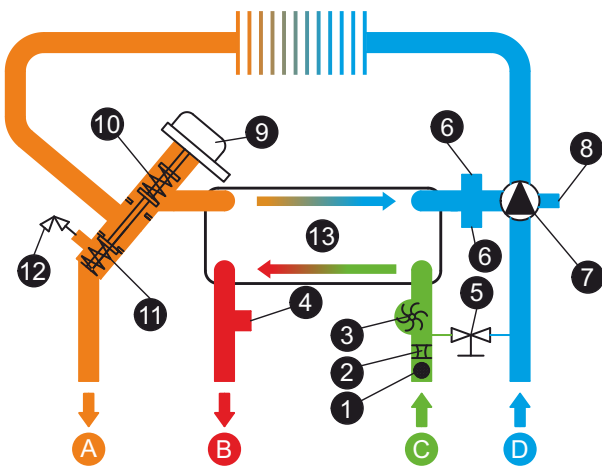
Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

Pump Connection :
Side

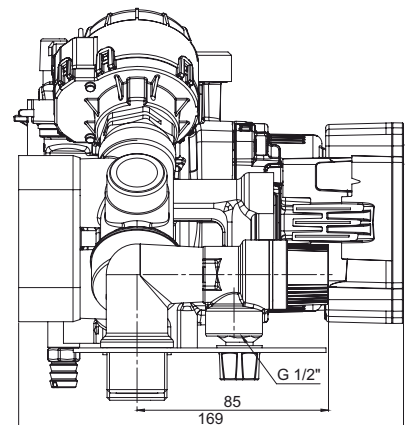
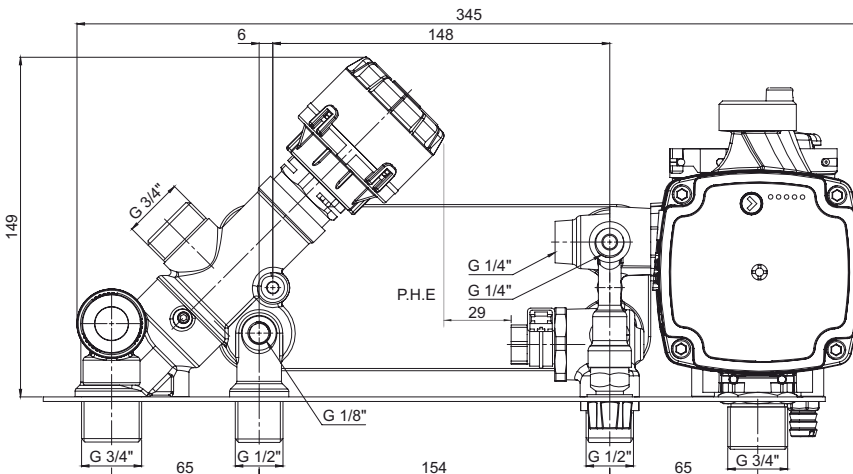
Hydraulic Circuit



- 1 DHW Filter
- 2 Flow Regulator
- 3 Flow Sensor
- 4 NTC Sensor Connection
- 5 Filling Tap
- 6 Pressure Port (for Pressure Gauge/Sensor/Switch)
- 7 Circulation Pump
- 8 Expansion Vessel Conn.
- 9 3 Way Valve Motor
- 10 Automatic Bypass
- 11 3 Way Valve
- 12 Safety Valve
- 13 Plate Heat Exchanger

- A Heating Delivery CH
- B Sanitary Water Outlet DW
- C Sanitary Water Inlet DW
- D Heating Return CH

Dimensions (mm)



* Dimensions valid for a PHE width of 190mm

Hydroblock HB-110

Combi Monothermic / Composite / Side Pump Connection



Technical Features

Material :

Plastic (PA66 GF30) + Brass (CuZn40Pb2)

Flow Regulator :

6 to 22 (lt./min.)

Flow Detection :

Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :

Through PHE

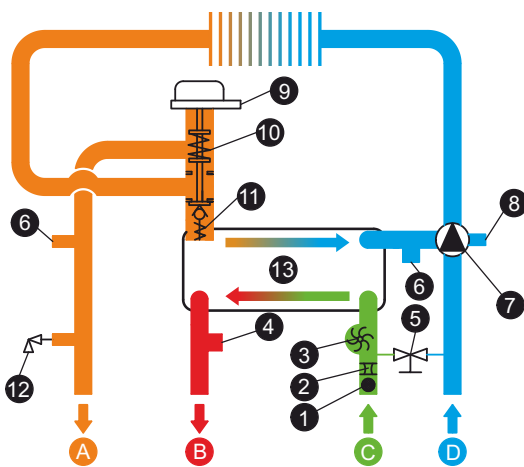
Pressure Relief Valve :

3 bar

Pump Connection :

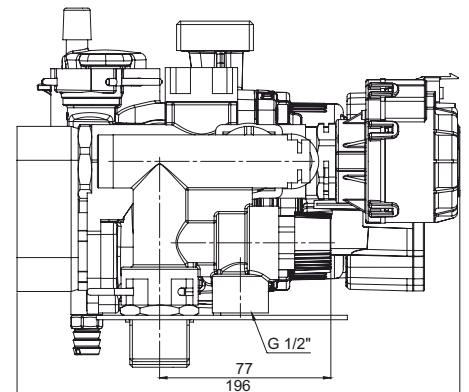
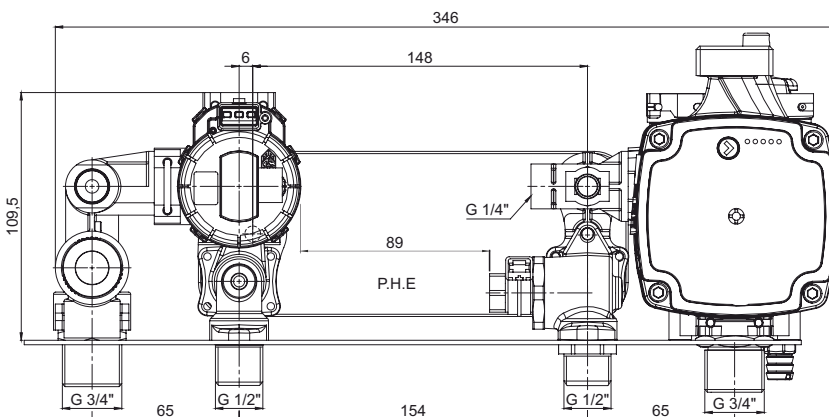
Side

Hydraulic Circuit



- 1 DHW Filter
- 2 Flow Regulator
- 3 Flow Sensor
- 4 NTC Sensor Connection
- 5 Filling Tap
- 6 Pressure Port (for Pressure Gauge/Sensor/Switch)
- 7 Circulation Pump
- 8 Expansion Vessel Conn.
- 9 3 Way Valve Motor
- 10 3 Way Valve
- 11 Automatic Bypass
- 12 Safety Valve
- 13 Plate Heat Exchanger
- A Heating Delivery CH
- B Sanitary Water Outlet DW
- C Sanitary Water Inlet DW
- D Heating Return CH

Dimensions (mm)



* Dimensions valid for a PHE width of 190mm

Combi Monothermic / Composite / Side Pump Connection



Technical Features

Material :
Plastic (PA66 GF30) + Brass (CuZn40Pb2)

Flow Regulator :
6 to 22 (lt./min.)

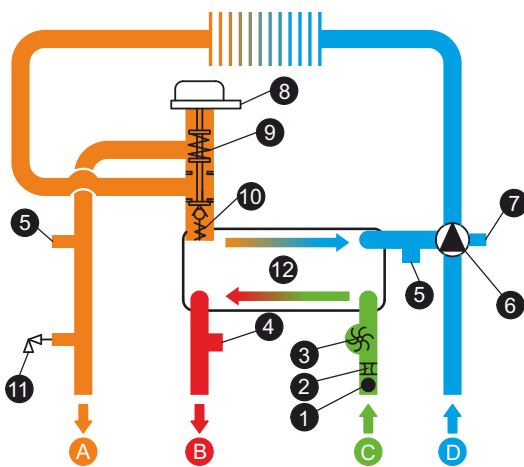
Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

Pump Connection :
Side

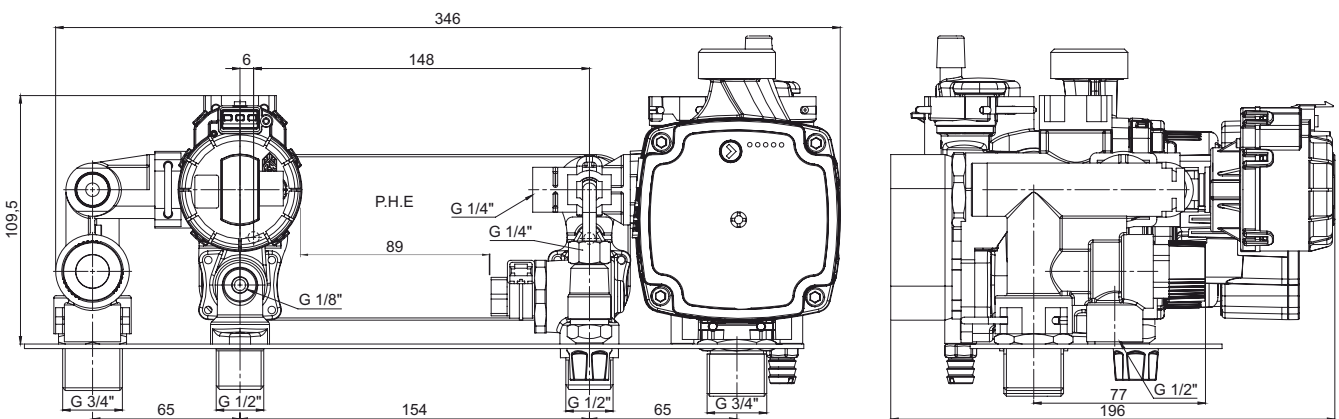
Hydraulic Circuit



- 1 DHW Filter
- 2 Flow Regulator
- 3 Flow Sensor
- 4 NTC Sensor Connection
- 5 Pressure Port (for Pressure Gauge/Sensor/Switch)
- 6 Circulation Pump
- 7 Expansion Vessel Connection
- 8 3 Way Valve Motor
- 9 3 Way Valve
- 10 Automatic Bypass
- 11 Safety Valve
- 12 Plate Heat Exchanger

- A Heating Delivery CH
- B Sanitary Water Outlet DW
- C Sanitary Water Inlet DW
- D Heating Return CH

Dimensions (mm)



* Dimensions valid for a PHE width of 190mm

Hydroblock HB-112

Combi Monothermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

Flow Regulator :
6 to 22 (lt./min.)

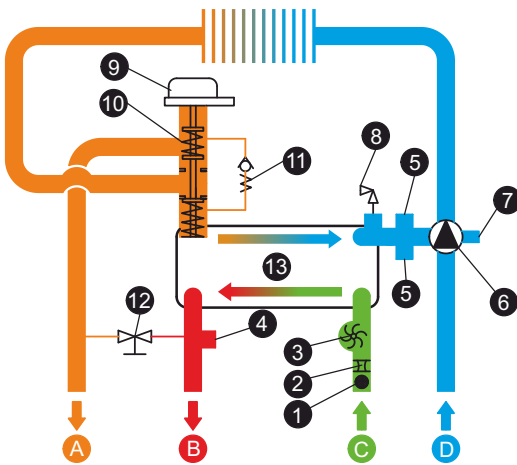
Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

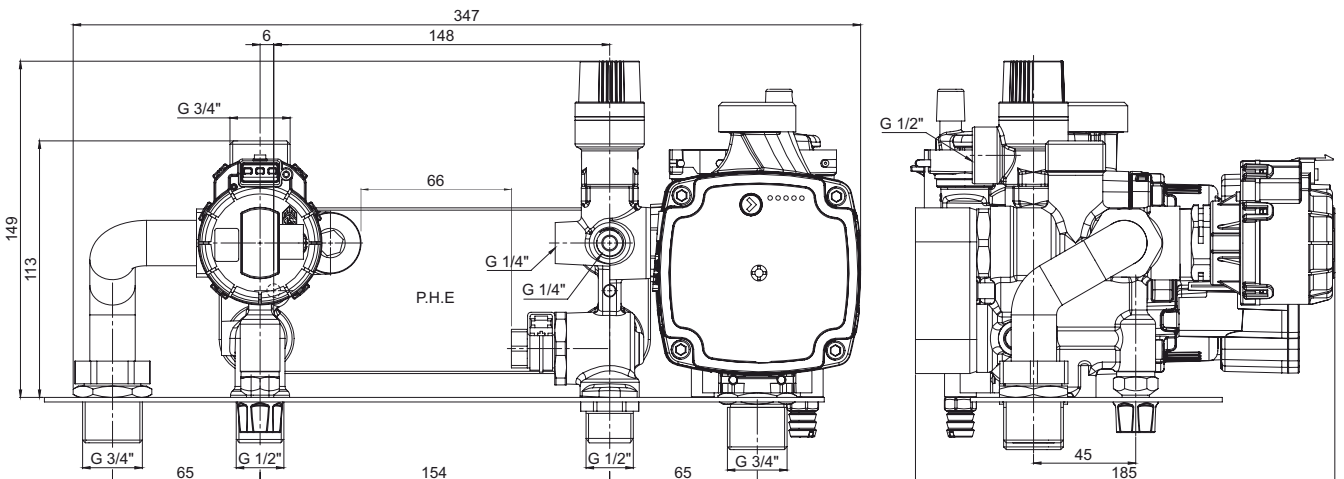
Pump Connection :
Side

Hydraulic Circuit



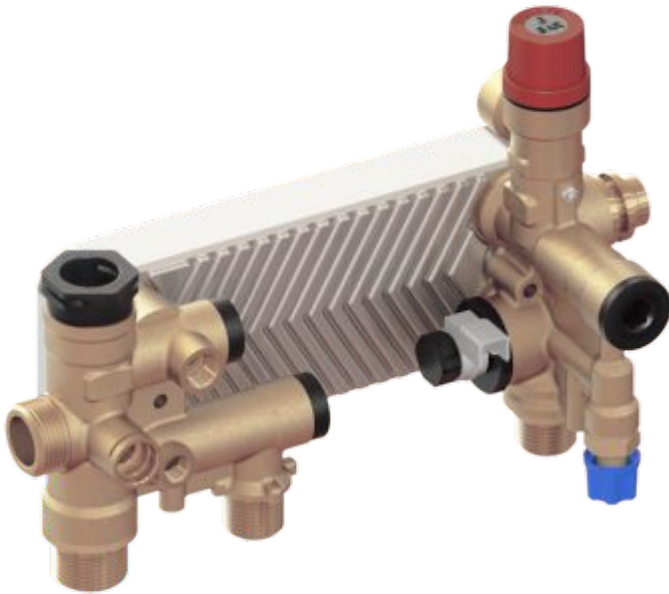
- | | |
|---|-------------------------|
| 1 DHW Filter | 8 Safety Valve |
| 2 Flow Regulator | 9 3 Way Valve Motor |
| 3 Flow Sensor | 10 3 Way Valve |
| 4 NTC Sensor Connection | 11 Automatic Bypass |
| 5 Pressure Port
(for Pressure Gauge/Sensor/Switch) | 12 Filling Tap |
| 6 Circulation Pump | 13 Plate Heat Exchanger |
| 7 Expansion Vessel Connection | |
-
- | | |
|----------------------------|---------------------------|
| A Heating Delivery CH | C Sanitary Water Inlet DW |
| B Sanitary Water Outlet DW | D Heating Return CH |

Dimensions (mm)



* Dimensions valid for a PHE width of 190mm

Combi Monothermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

Flow Regulator :
6 to 22 (lt./min.)

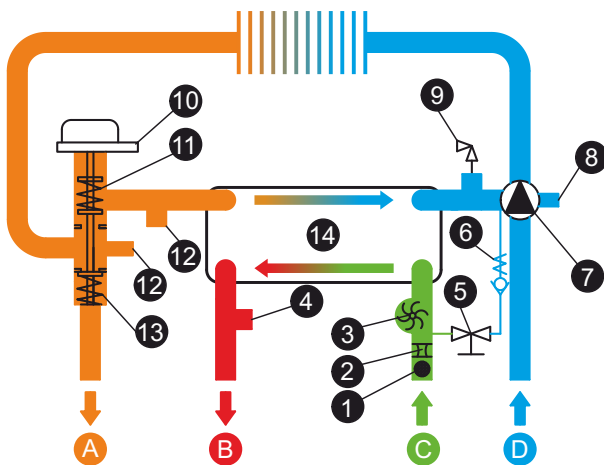
Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

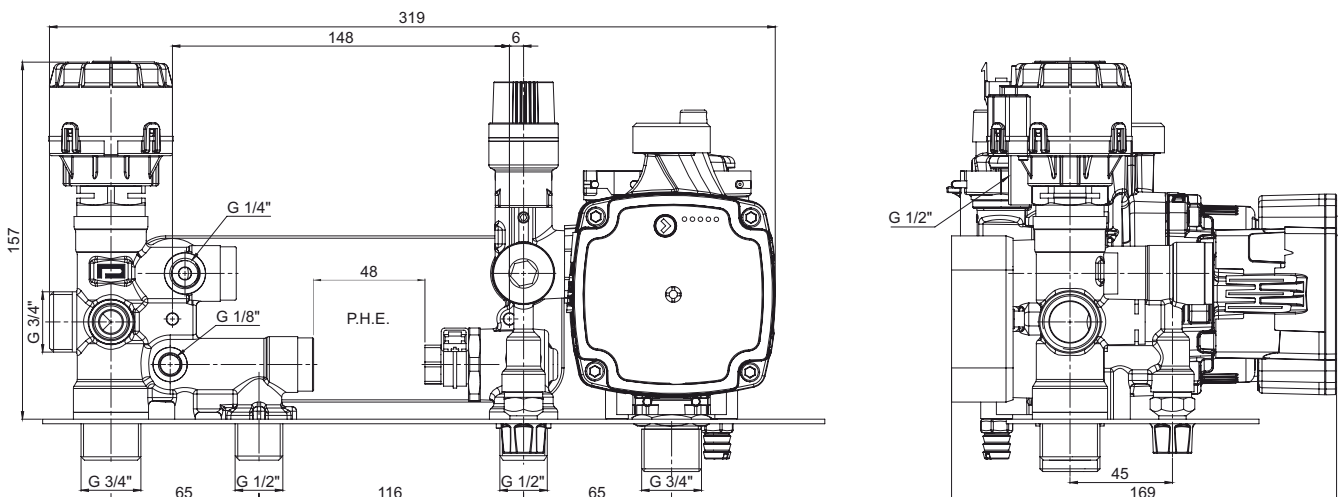
Pump Connection :
Side

Hydraulic Circuit



- | | |
|---|--|
| 1 DHW Filter | 9 Safety Valve |
| 2 Flow Regulator | 10 3 Way Valve Motor |
| 3 Flow Sensor | 11 3 Way Valve |
| 4 NTC Sensor Connection | 12 Pressure Port
(for Pressure Gauge/Sensor/Switch) |
| 5 Filling Tap | 13 Automatic Bypass |
| 6 Back Flow Preventer
(EN1717 Type EA) | 14 Plate Heat Exchanger |
| 7 Circulation Pump | |
| 8 Expansion Vessel Connection | |
-
- | | |
|----------------------------|---------------------------|
| A Heating Delivery CH | C Sanitary Water Inlet DW |
| B Sanitary Water Outlet DW | D Heating Return CH |

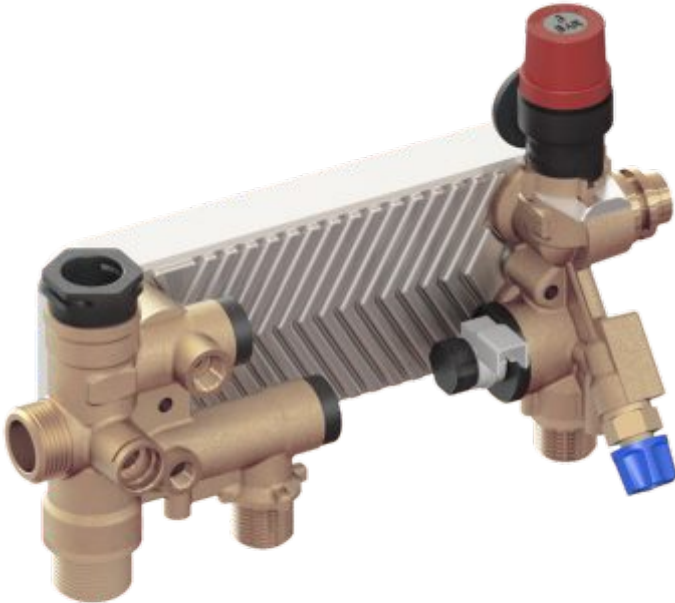
Dimensions (mm)



* Dimensions valid for a PHE width of 190mm

Hydroblock HB-114

Combi Monothermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

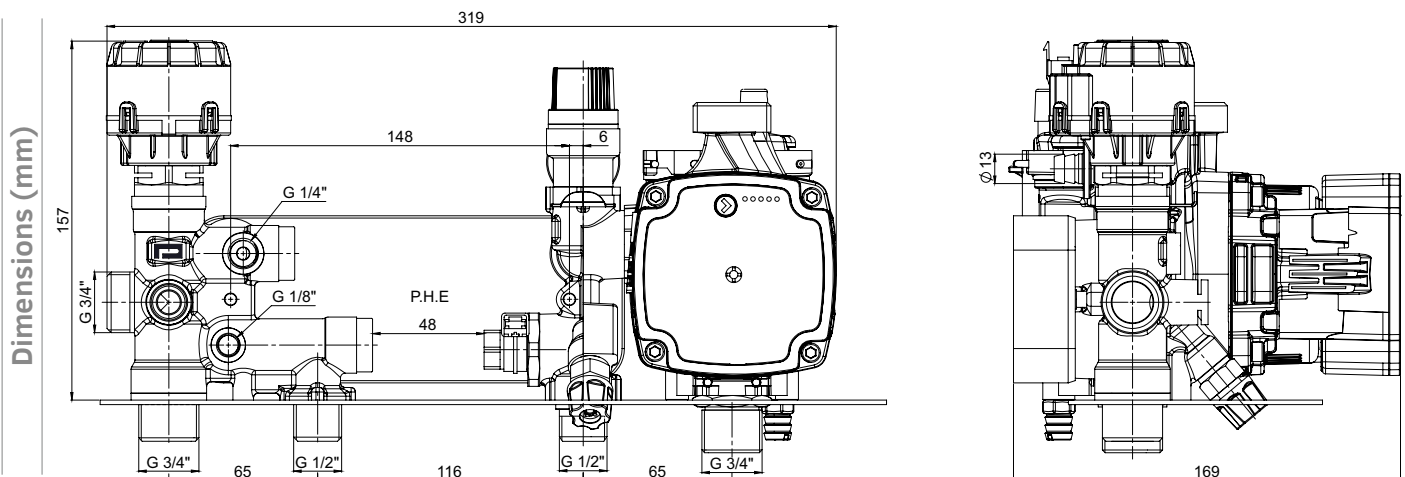
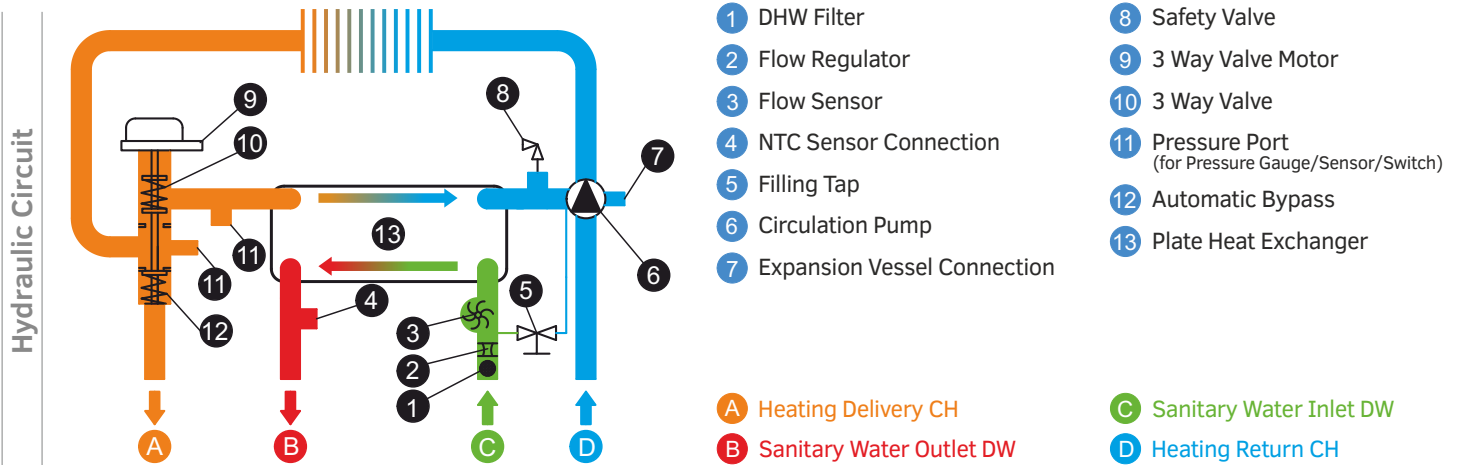
Flow Regulator :
6 to 22 (lt./min.)

Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

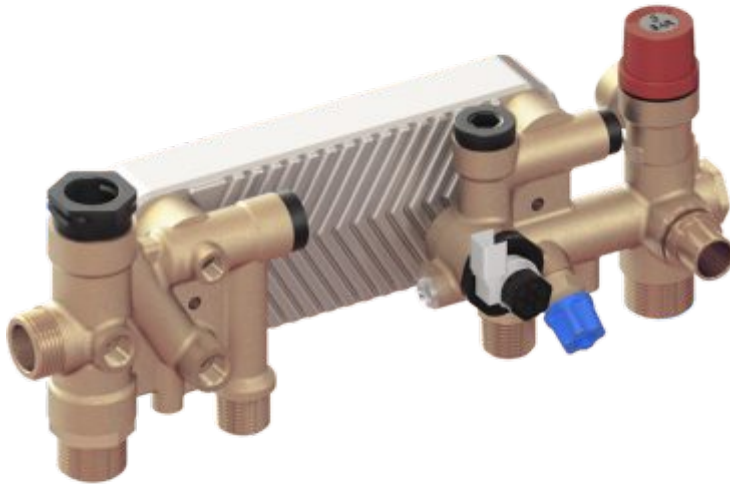
Pressure Relief Valve :
3 bar (Brass or Plastic)

Pump Connection :
Side



* Dimensions valid for a PHE width of 190mm

Combi Monothermic / Brass / Front Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

Flow Regulator :
6 to 22 (lt./min.)

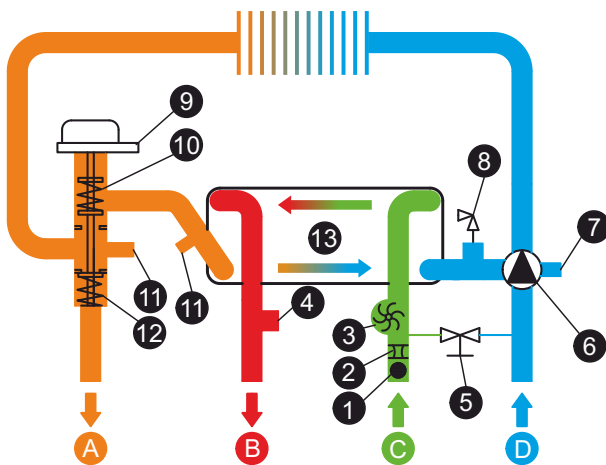
Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

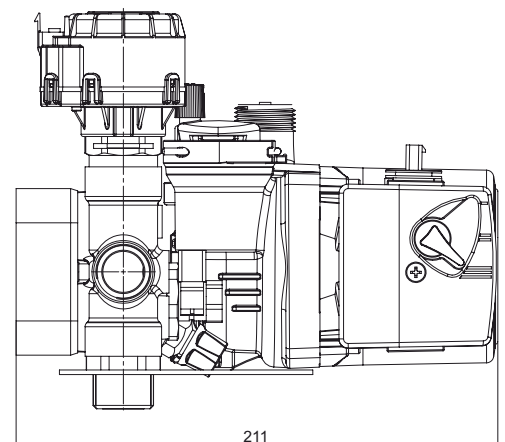
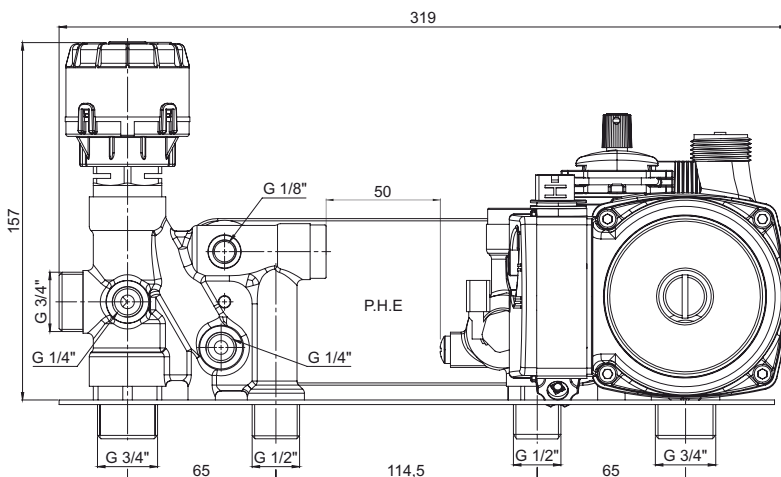
Pump Connection :
Front

Hydraulic Circuit



- 1 DHW Filter
 - 2 Flow Regulator
 - 3 Flow Sensor
 - 4 NTC Sensor Connection
 - 5 Filling Tap
 - 6 Circulation Pump
 - 7 Expansion Vessel Connection
 - 8 Safety Valve
 - 9 3 Way Valve Motor
 - 10 Automatic Bypass
 - 11 Pressure Port (for Pressure Gauge/Sensor/Switch)
 - 12 3 Way Valve
 - 13 Plate Heat Exchanger
- A Heating Delivery CH C Sanitary Water Inlet DW
B Sanitary Water Outlet DW D Heating Return CH

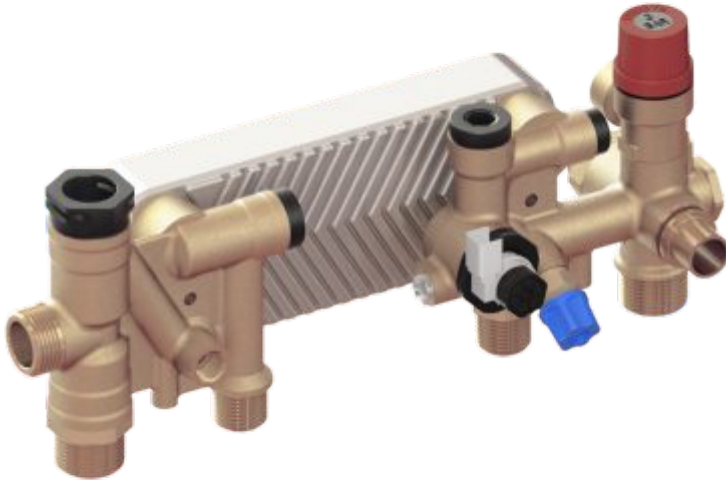
Dimensions (mm)



* Dimensions valid for a PHE width of 190mm

Hydroblock HB-116

Combi Monothermic / Brass / Front Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

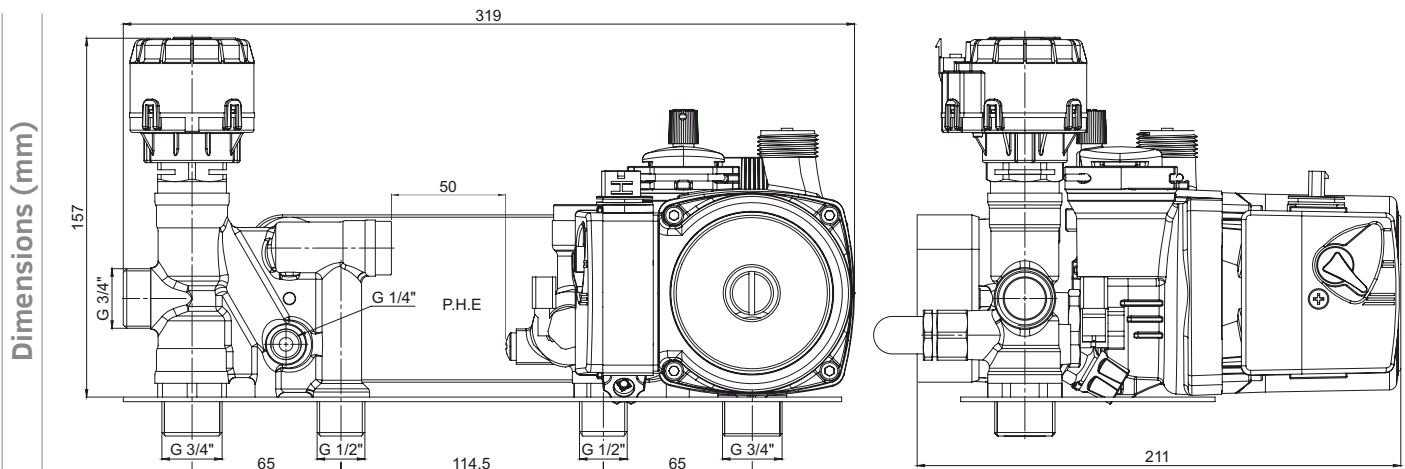
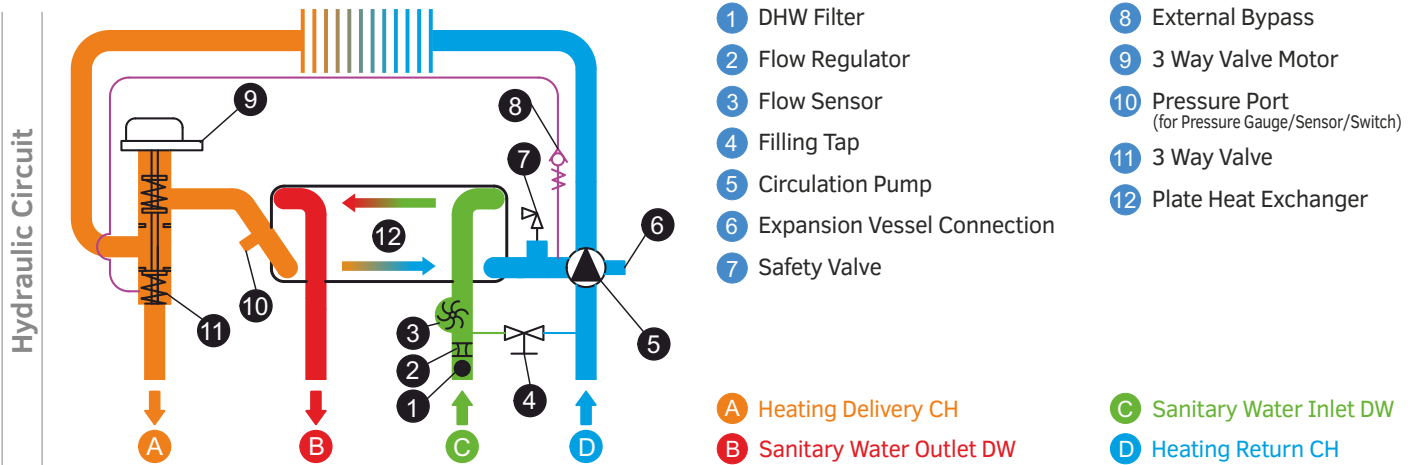
Flow Regulator :
6 to 22 (lt./min.)

Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
External

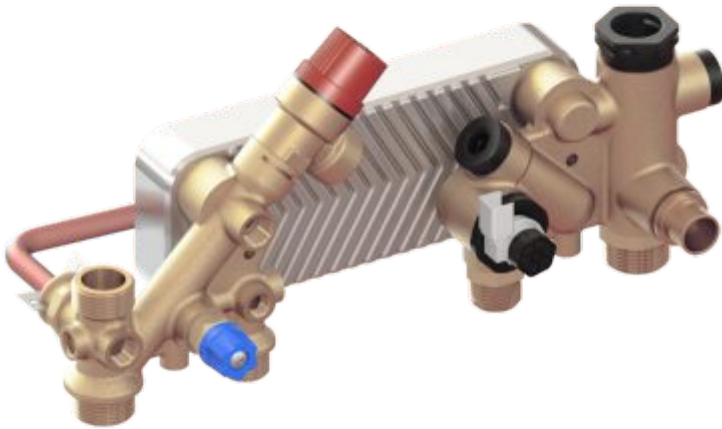
Pressure Relief Valve :
3 bar

Pump Connection :
Front



* Dimensions valid for a PHE width of 190mm

Combi Monothermic / Brass / Front Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

Flow Regulator :
6 to 22 (lt./min.)

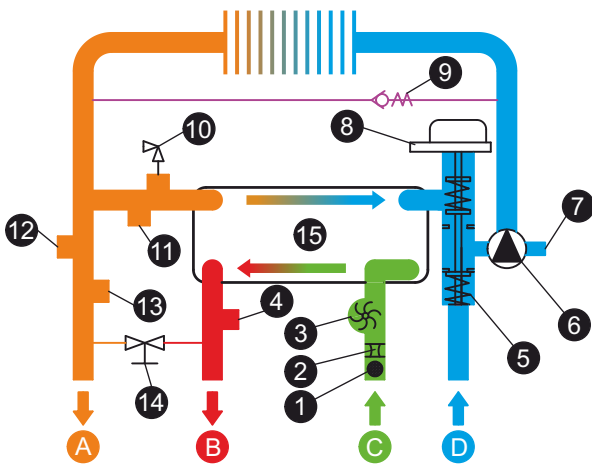
Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
External

Pressure Relief Valve :
3 bar

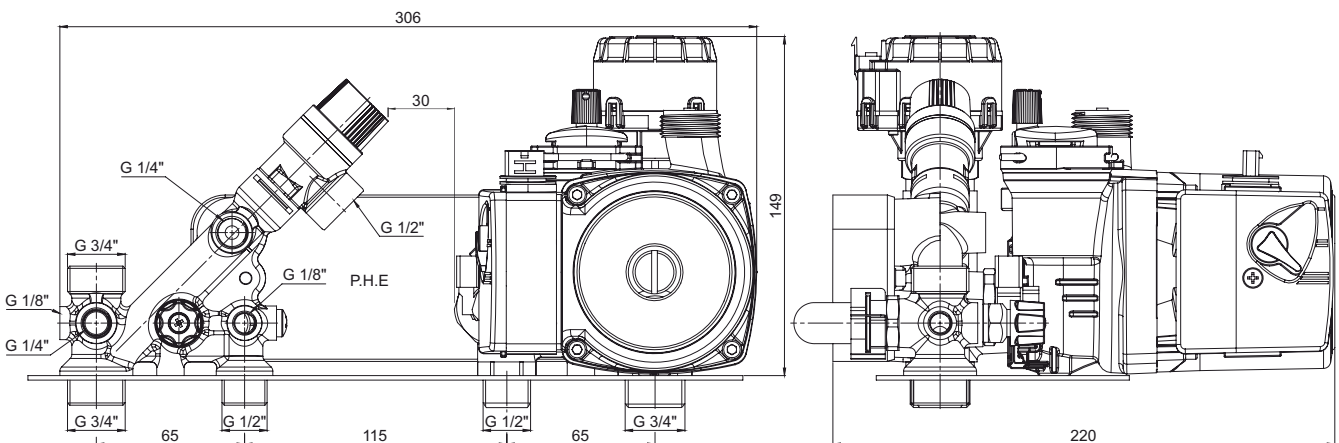
Pump Connection :
Front

Hydraulic Circuit



- 1 DHW Filter
 - 2 Flow Regulator
 - 3 Flow Sensor
 - 4 NTC Sensor Connection
 - 5 3 Way Valve
 - 6 Circulation Pump
 - 7 Expansion Vessel Connection
 - 8 3 Way Valve Motor
 - 9 External Bypass
 - 10 Safety Valve
 - 11 Pressure Port (for Pressure Gauge/Sensor/Switch)
 - 12 Heating Temp. Sensor Con.
 - 13 Drain Valve
 - 14 Filling Tap
 - 15 Plate Heat Exchanger
- A Heating Delivery CH C Sanitary Water Inlet DW
B Sanitary Water Outlet DW D Heating Return CH

Dimensions (mm)



* Dimensions valid for a PHE width of 190mm

Hydroblock HB-118

Combi Monothermic / Composite / Side Pump Connection



Technical Features

Material :

Plastic (PA66 GF30) + Brass (CuZn40Pb2)

Flow Regulator :

6 to 22 (lt./min.)

Flow Detection :

Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :

Through PHE

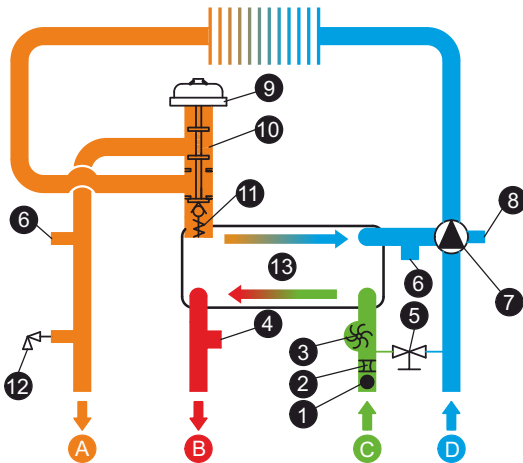
Pressure Relief Valve :

3 bar

Pump Connection :

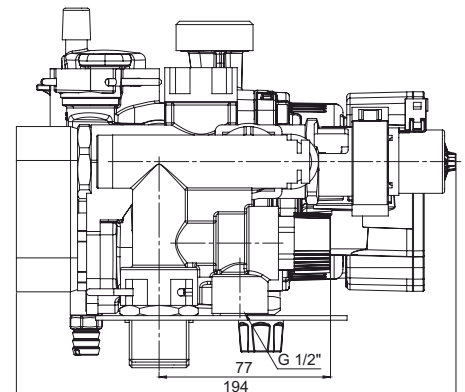
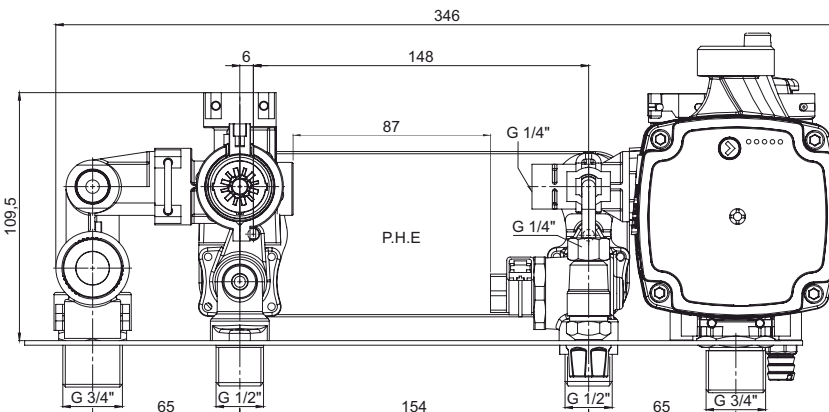
Side

Hydraulic Circuit



- | | |
|---|---------------------------|
| 1 DHW Filter | 8 Expansion Vessel Conn. |
| 2 Flow Regulator | 9 Stepper Motor |
| 3 Flow Sensor | 10 3 Way Valve |
| 4 NTC Sensor Connection | 11 Automatic Bypass |
| 5 Filling Tap | 12 Safety Valve |
| 6 Pressure Port
(for Pressure Gauge/Sensor/Switch) | 13 Plate Heat Exchanger |
| 7 Circulation Pump | |
| A Heating Delivery CH | C Sanitary Water Inlet DW |
| B Sanitary Water Outlet DW | D Heating Return CH |

Dimensions (mm)



* Dimensions valid for a PHE width of 190mm

Combi Monothermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

Flow Regulator :
6 to 22 (lt./min.)

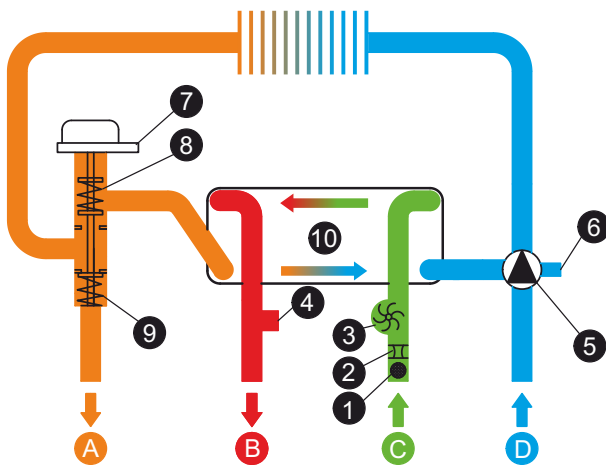
Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

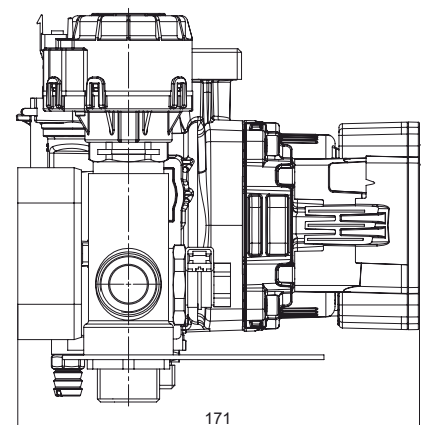
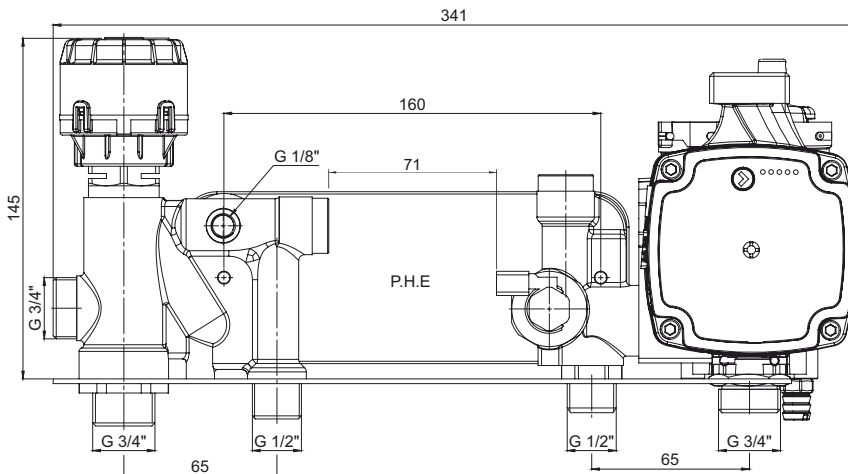
Pump Connection :
Side

Hydraulic Circuit



- 1 DHW Filter
 - 2 Flow Regulator
 - 3 Flow Sensor
 - 4 NTC Sensor Connection
 - 5 Circulation Pump
 - 6 Expansion Vessel Connection
 - 7 3 Way Valve Motor
 - 8 Automatic Bypass
 - 9 3 Way Valve
 - 10 Plate Heat Exchanger
- A Heating Delivery CH C Sanitary Water Inlet DW
 B Sanitary Water Outlet DW D Heating Return CH

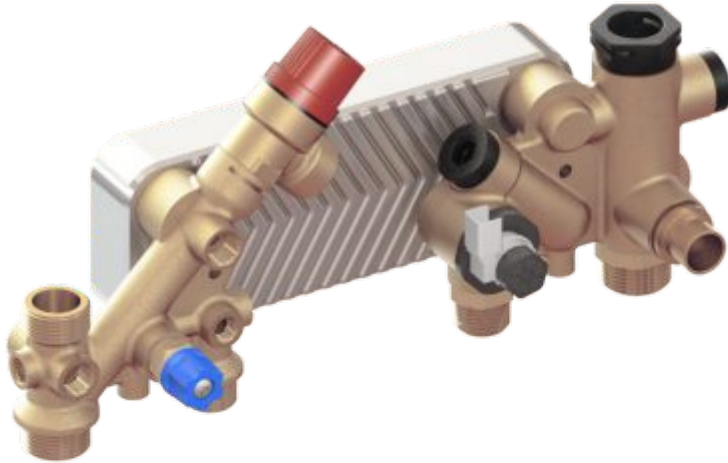
Dimensions (mm)



* Dimensions valid for a PHE width of 190mm

Hydroblock HB-120

Combi Monothermic / Brass / Front Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

Flow Regulator :
6 to 22 (lt./min.)

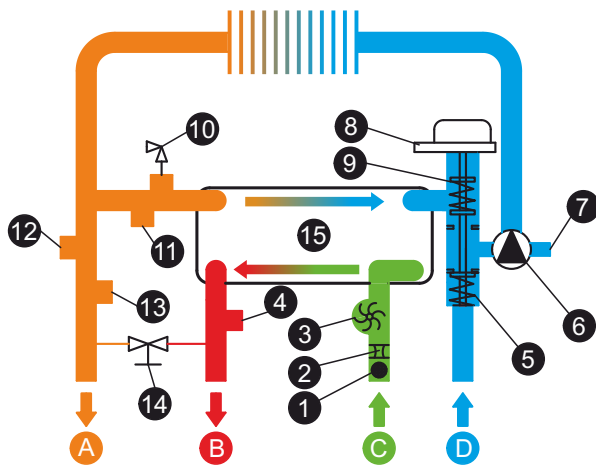
Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

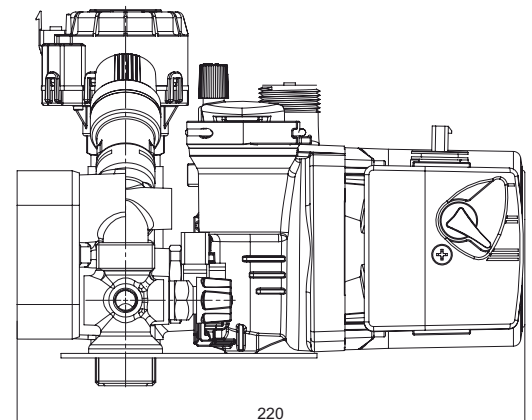
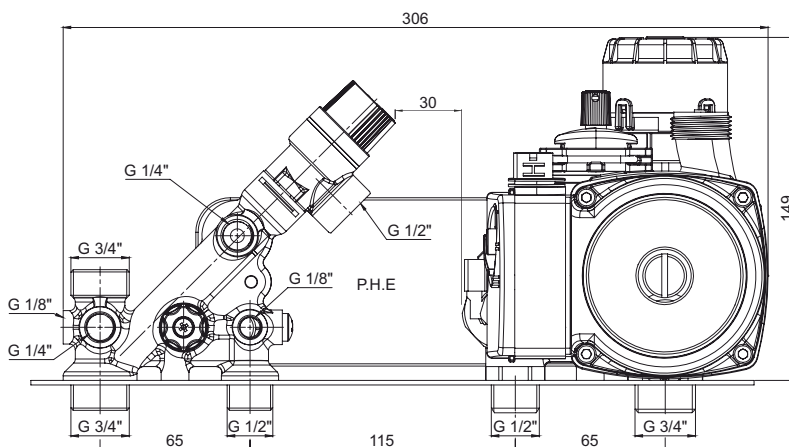
Pump Connection :
Front

Hydraulic Circuit



- | | |
|-------------------------------|--|
| 1 DHW Filter | 9 Automatic Bypass |
| 2 Flow Regulator | 10 Safety Valve |
| 3 Flow Sensor | 11 Pressure Port
(for Pressure Gauge/Sensor/Switch) |
| 4 NTC Sensor Connection | 12 Heating Temp. Sensor Con. |
| 5 3 Way Valve | 13 Drain Valve |
| 6 Circulation Pump | 14 Filling Tap |
| 7 Expansion Vessel Connection | 15 Plate Heat Exchanger |
| 8 3 Way Valve Motor | |
-
- | | |
|----------------------------|---------------------------|
| A Heating Delivery CH | C Sanitary Water Inlet DW |
| B Sanitary Water Outlet DW | D Heating Return CH |

Dimensions (mm)



* Dimensions valid for a PHE width of 190mm

Combi Monothermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

Flow Regulator :
6 to 22 (lt./min.)

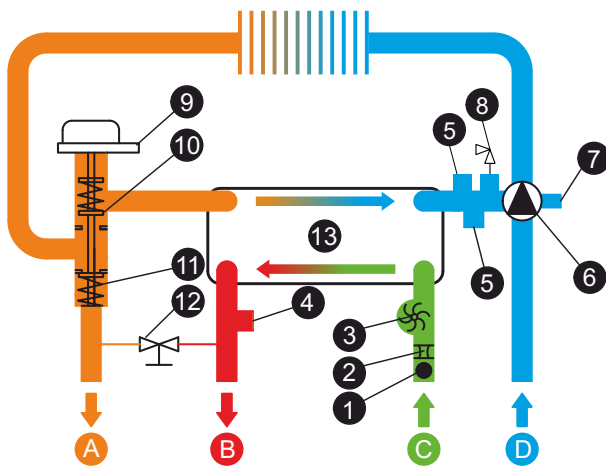
Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

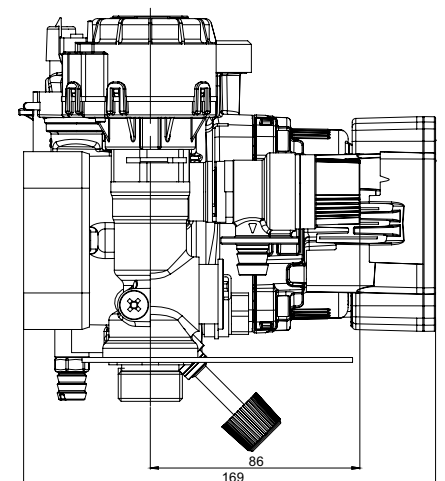
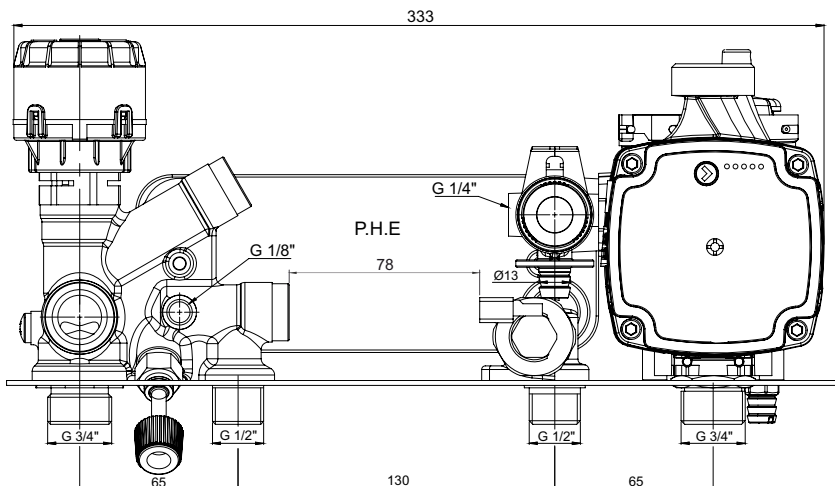
Pump Connection :
Side

Hydraulic Circuit



- 1 DHW Filter
 - 2 Flow Regulator
 - 3 Flow Sensor
 - 4 NTC Sensor Connection
 - 5 Pressure Port (for Pressure Gauge/Sensor/Switch)
 - 6 Circulation Pump
 - 7 Expansion Vessel Conn.
 - 8 Safety Valve
 - 9 3 Way Valve Motor
 - 10 Automatic Bypass
 - 11 3 Way Valve
 - 12 Filling Tap
 - 13 Plate Heat Exchanger
- A Heating Delivery CH C Sanitary Water Inlet DW
 B Sanitary Water Outlet DW D Heating Return CH

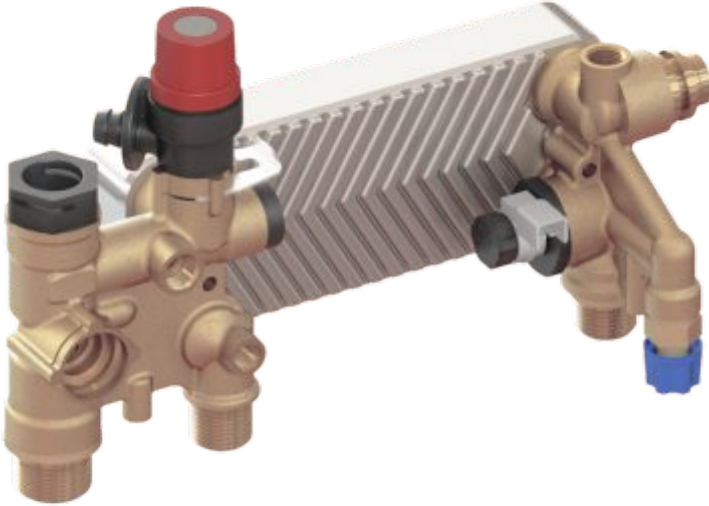
Dimensions (mm)



* Dimensions valid for a PHE width of 190mm

Hydroblock HB-122

Combi Monothermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

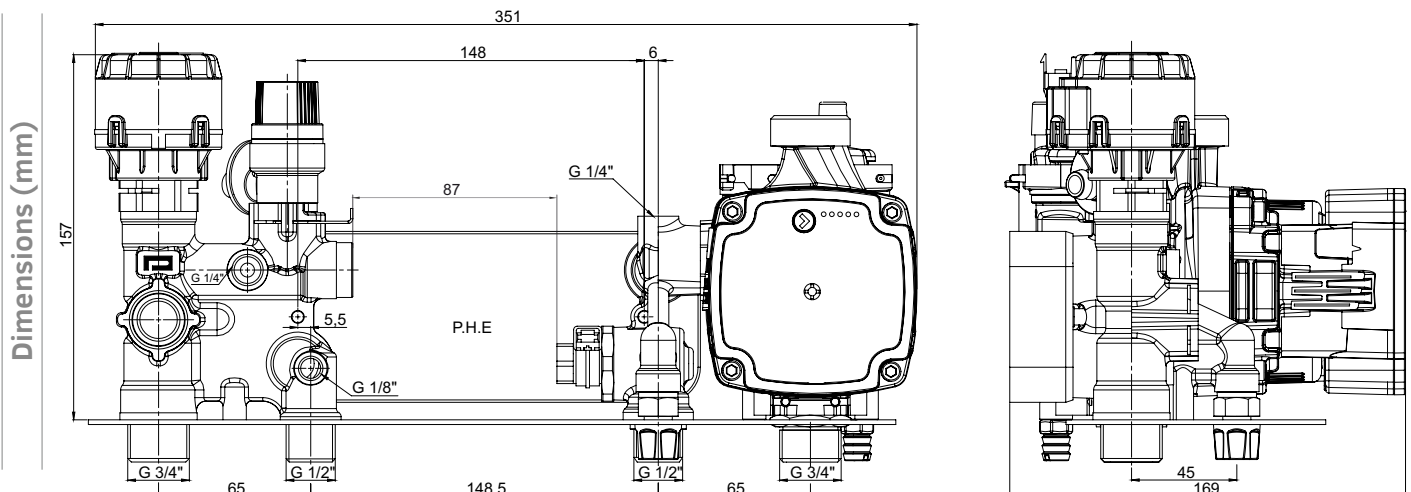
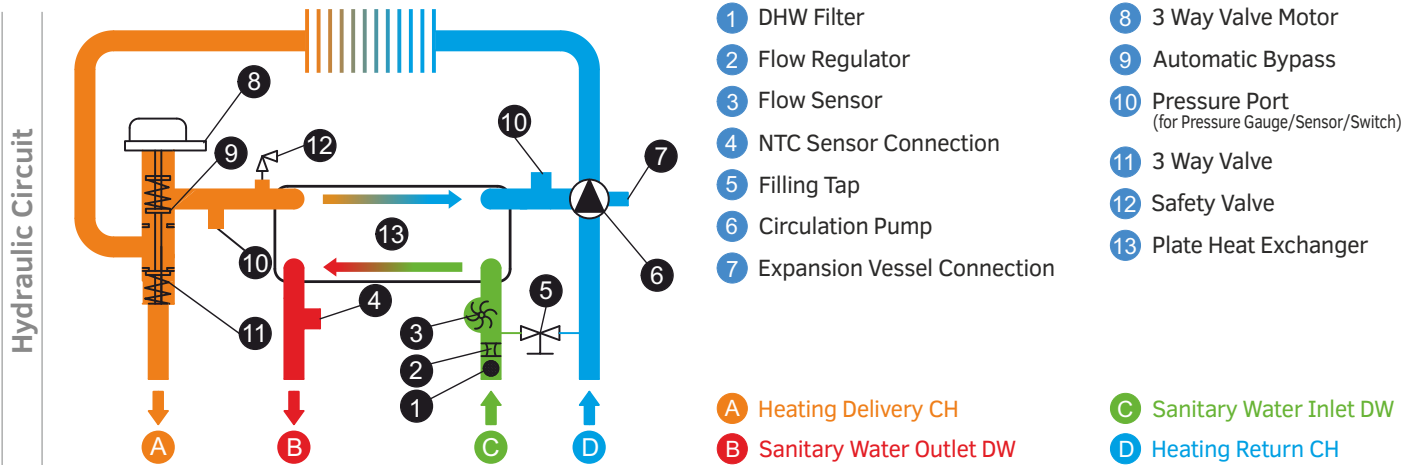
Flow Regulator :
6 to 22 (lt./min.)

Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

Pump Connection :
Side



* Dimensions valid for a PHE width of 190mm

Combi Monothermic / Composite / Side Pump Connection



Technical Features

Material :
Plastic (PA66 GF30) + Brass (CuZn40Pb2)

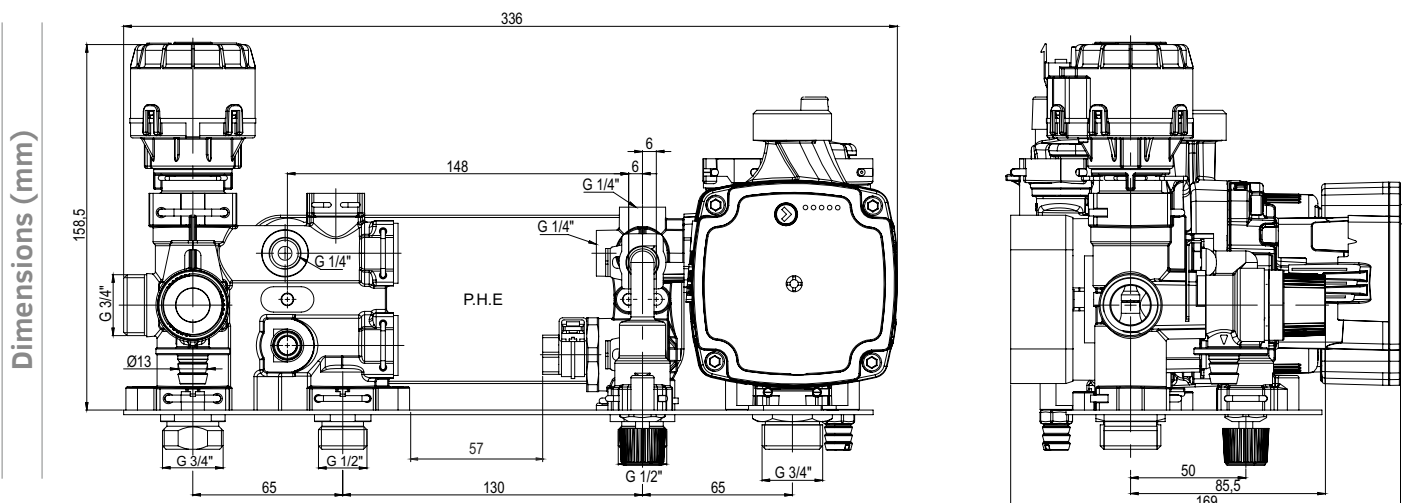
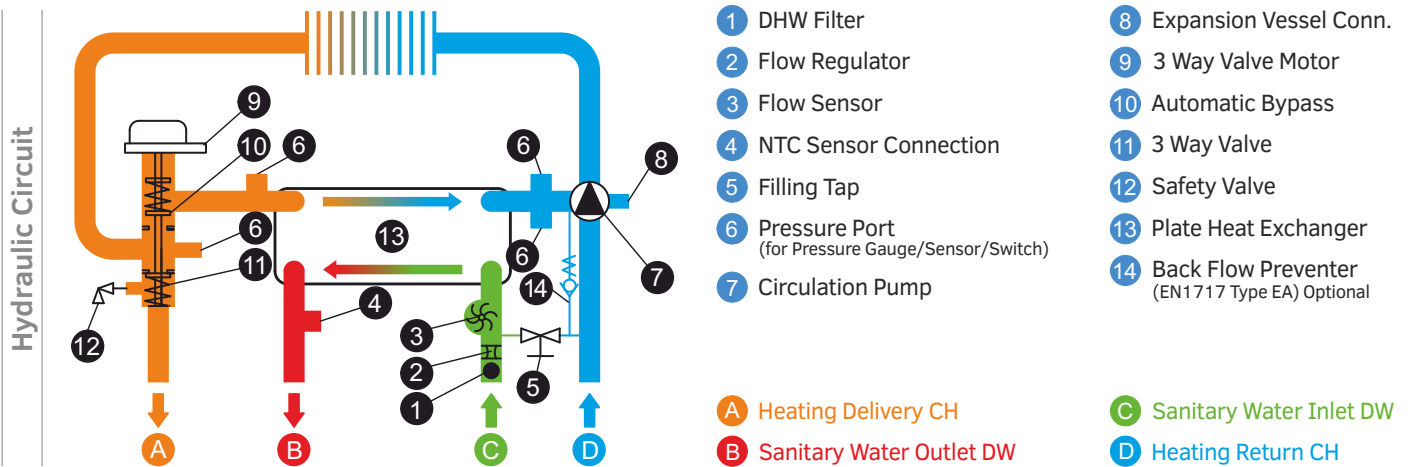
Flow Regulator :
6 to 22 (lt./min.)

Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

Pump Connection :
Side



* Dimensions valid for a PHE width of 190mm

Hydroblock HB-124

Combi Monothermic / Composite / Side Pump Connection



Technical Features

Material :
Plastic (PA66 GF30) + Brass (CuZn40Pb2)

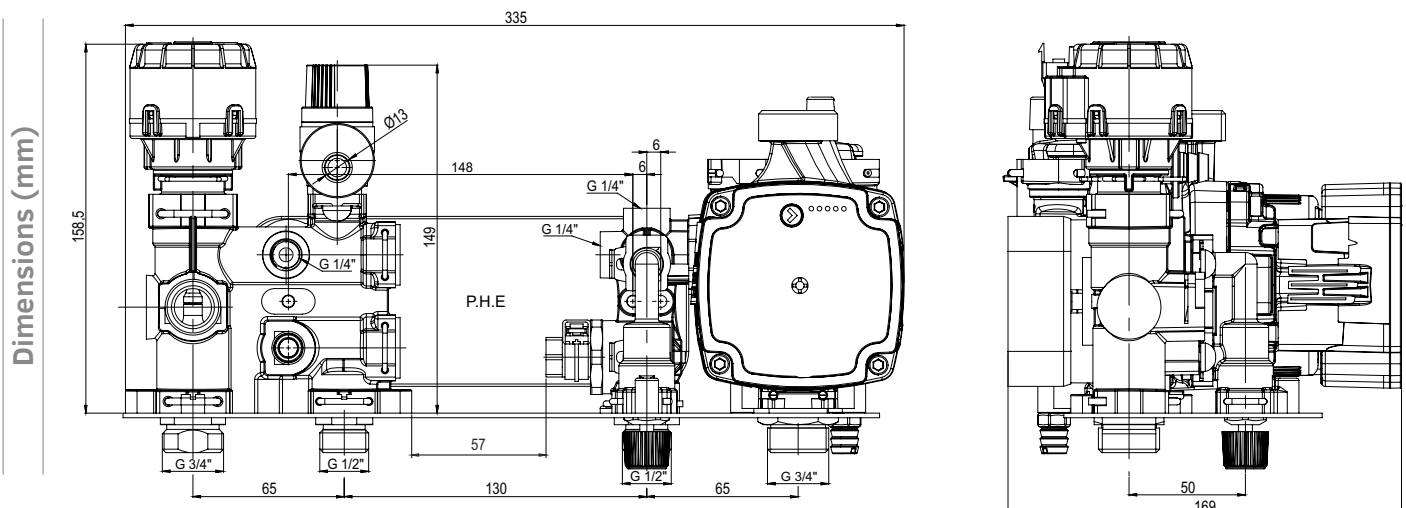
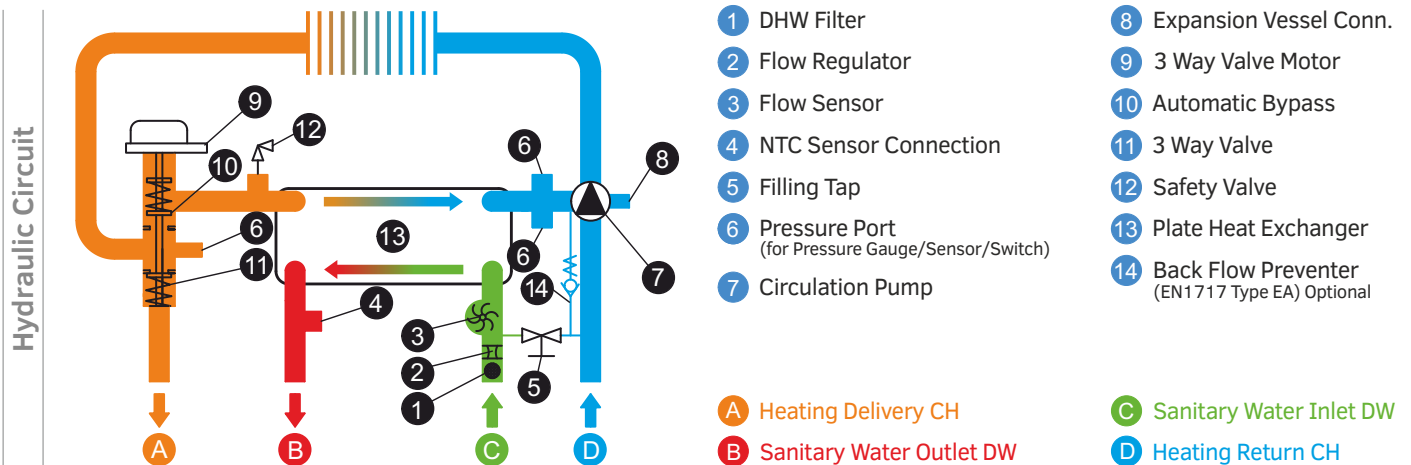
Flow Regulator :
6 to 22 (lt./min.)

Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

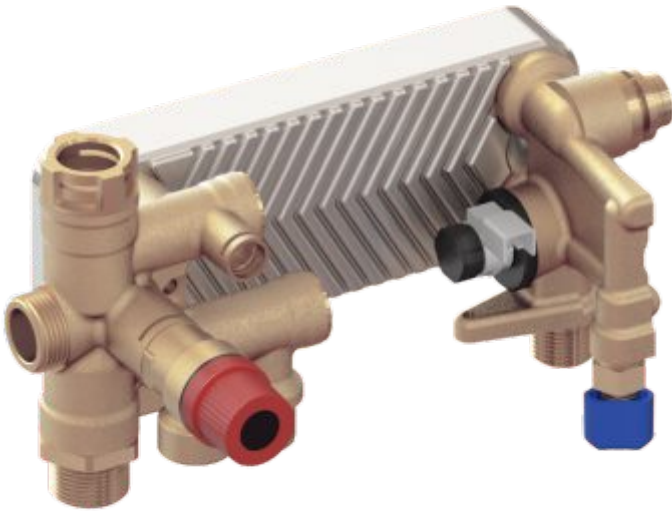
Pressure Relief Valve :
3 bar

Pump Connection :
Side



* Dimensions valid for a PHE width of 190mm

Combi Monothermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

Flow Regulator :
-

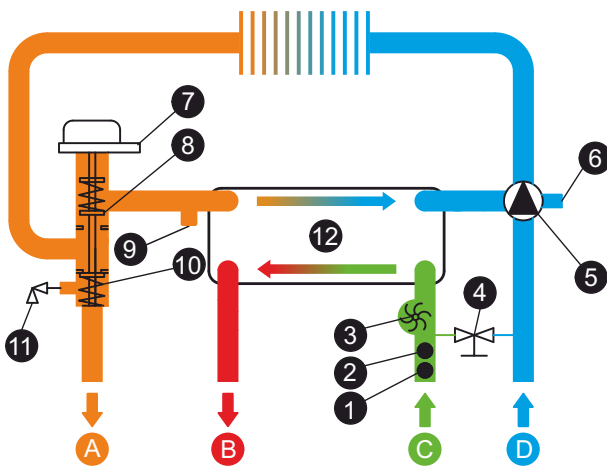
Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

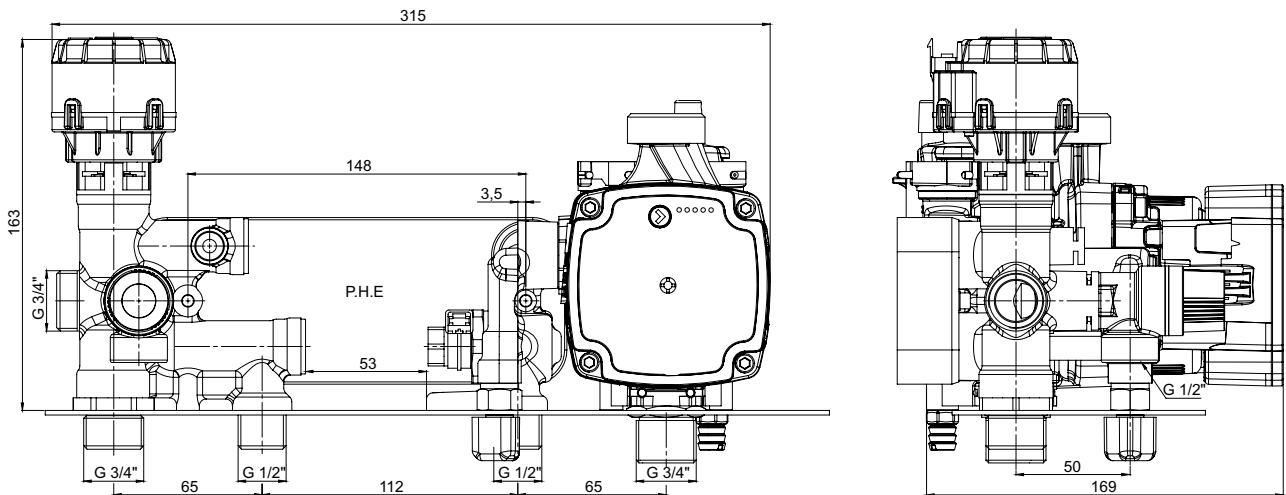
Pump Connection :
Side

Hydraulic Circuit



- 1 Plastic DHW Filter
 - 2 Metal DHW Filter
 - 3 Flow Sensor
 - 4 Filling Tap
 - 5 Circulation Pump
 - 6 Expansion Vessel Conn.
 - 7 3 Way Valve Motor
 - 8 Automatic Bypass
 - 9 Pressure Port (for Pressure Gauge/Sensor/Switch)
 - 10 3 Way Valve
 - 11 Safety Valve
 - 12 Plate Heat Exchanger
- A Heating Delivery CH C Sanitary Water Inlet DW
B Sanitary Water Outlet DW D Heating Return CH

Dimensions (mm)



* Dimensions valid for a PHE width of 190mm

Hydroblock HB-126

Combi Monothermic / Composite / Side Pump Connection



Technical Features

Material :

Plastic (PA66 GF30) + Brass (CuZn40Pb2)

Flow Regulator :

6 to 22 (lt./min.)

Flow Detection :

Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :

Through PHE

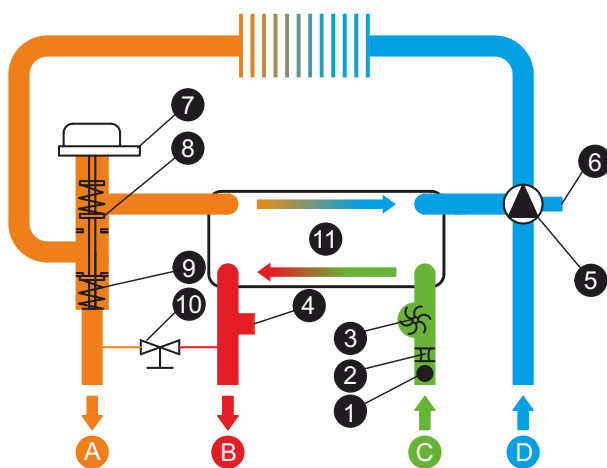
Pressure Relief Valve :

3 bar

Pump Connection :

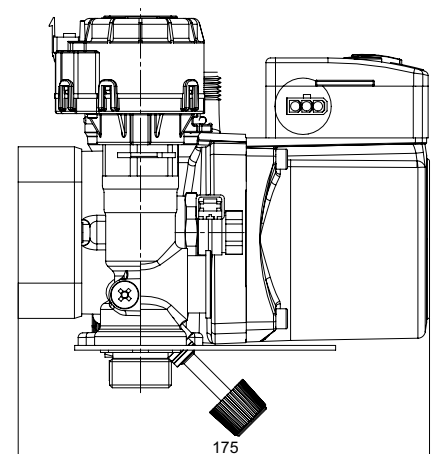
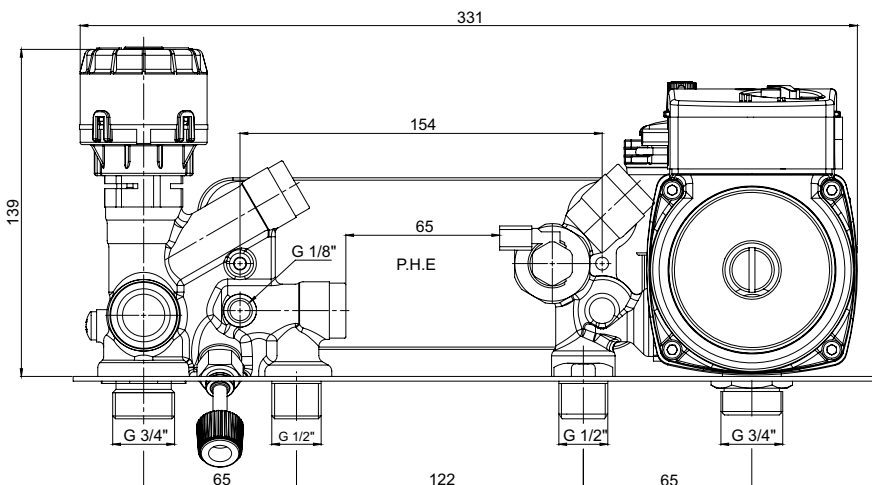
Side

Hydraulic Circuit



- 1 DHW Filter
 - 2 Flow Regulator
 - 3 Flow Sensor
 - 4 NTC Sensor Connection
 - 5 Circulation Pump
 - 6 Expansion Vessel Conn.
 - 7 3 Way Valve Motor
 - 8 Automatic Bypass
 - 9 3 Way Valve
 - 10 Filling Tap
 - 11 Plate Heat Exchanger
- A Heating Delivery CH C Sanitary Water Inlet DW
B Sanitary Water Outlet DW D Heating Return CH

Dimensions (mm)



* Dimensions valid for a PHE width of 190mm

Combi Monothermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

Flow Regulator :
6 to 22 (lt./min.)

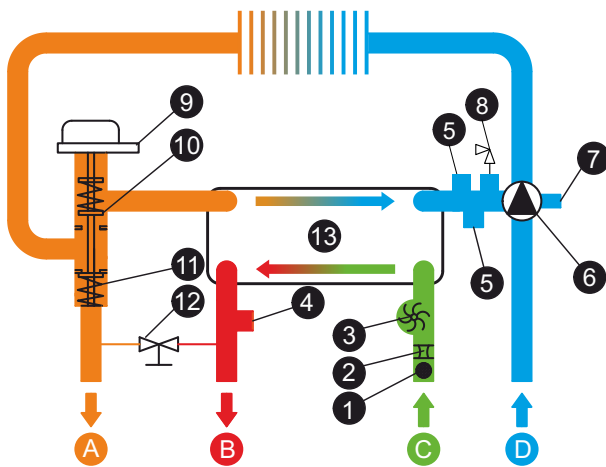
Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
Through PHE

Pressure Relief Valve :
3 bar

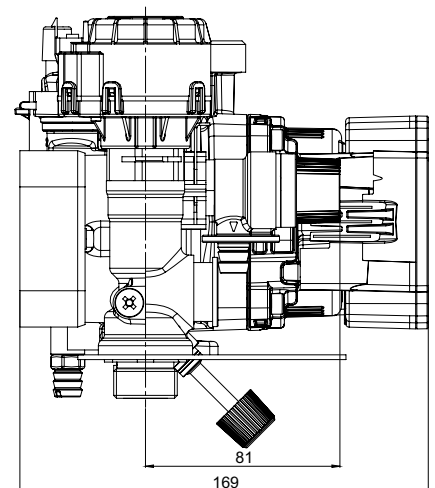
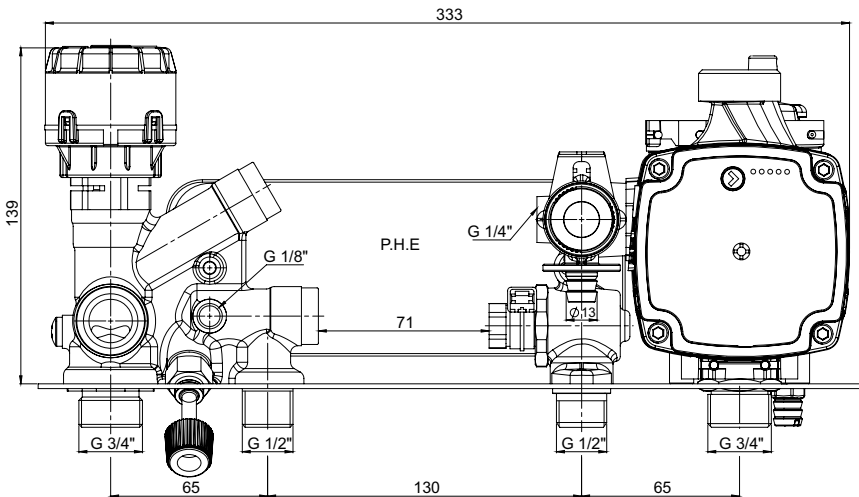
Pump Connection :
Side

Hydraulic Circuit



- 1 DHW Filter
- 2 Flow Regulator
- 3 Flow Sensor
- 4 NTC Sensor Connection
- 5 Pressure Port (for Pressure Gauge/Sensor/Switch)
- 6 Circulation Pump
- 7 Expansion Vessel Conn.
- 8 Safety Valve
- 9 3 Way Valve Motor
- 10 Automatic Bypass
- 11 3 Way Valve
- 12 Filling Tap
- 13 Plate Heat Exchanger
- A Heating Delivery CH
- B Sanitary Water Outlet DW
- C Sanitary Water Inlet DW
- D Heating Return CH

Dimensions (mm)



* Dimensions valid for a PHE width of 190mm



COMBI BITHERMIC

B

Combi Bithermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

Flow Regulator :
6 to 22 (lt./min.)

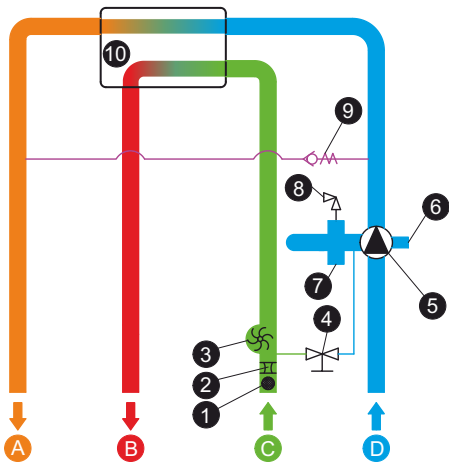
Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
External

Pressure Relief Valve :
3 bar

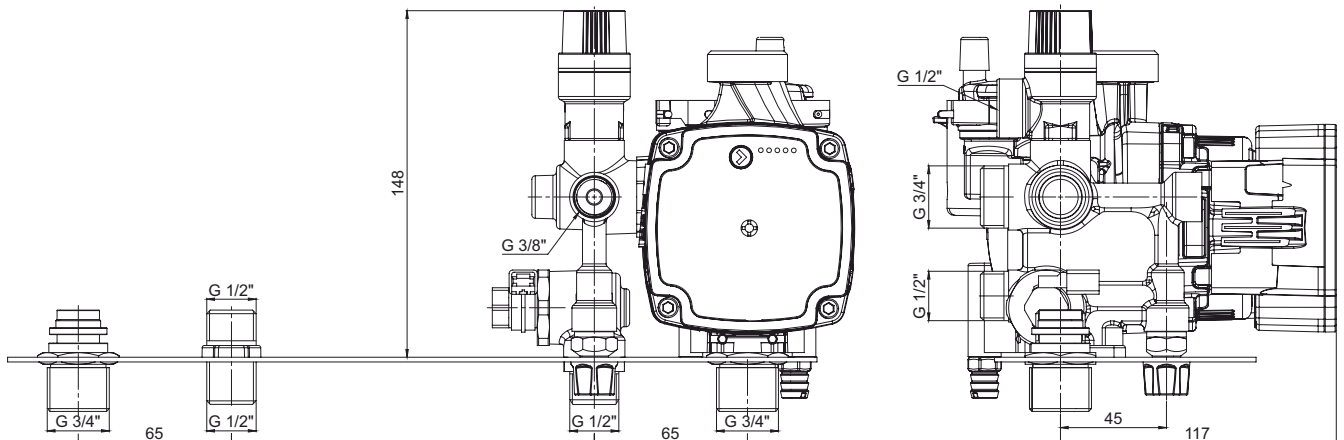
Pump Connection :
Side

Hydraulic Circuit



- 1 DHW Filter
 - 2 Flow Regulator
 - 3 Flow Sensor
 - 4 Filling Tap
 - 5 Circulation Pump
 - 6 Expansion Vessel Connection
 - 7 Pressure Port (for Pressure Gauge/Sensor/Switch)
 - 8 Safety Valve
 - 9 Bypass
 - 10 Main Exchanger
- A Heating Delivery CH
 - B Sanitary Water Outlet DW
 - C Sanitary Water Inlet DW
 - D Heating Return CH

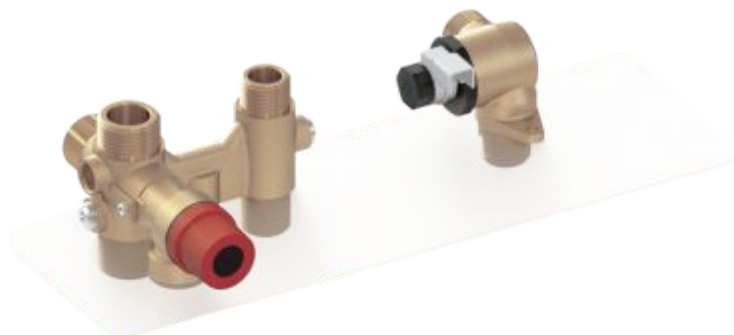
Dimensions (mm)



Hydroblock HB-202

B

Combi Bithermic / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

Flow Regulator :
6 to 22 (lt./min.)

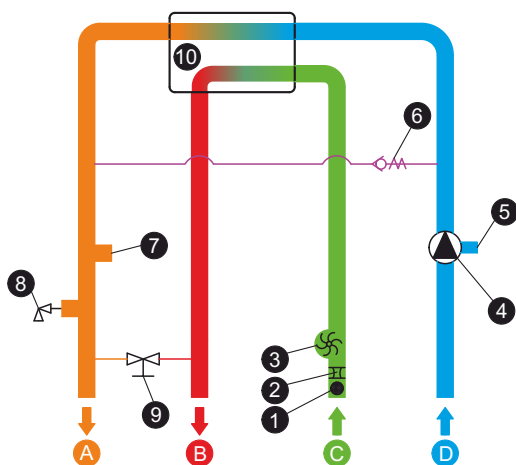
Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

By-Pass :
External

Pressure Relief Valve :
3 bar

Pump Connection :
Side

Hydraulic Circuit



- 1 DHW Filter
- 2 Flow Regulator
- 3 Flow Sensor
- 4 Circulation Pump
- 5 Expansion Vessel Connection
- 6 Bypass
- 7 Pressure Port
(for Pressure Gauge/Sensor/Switch)

- 8 Safety Valve
- 9 Filling Tap
- 10 Main Exchanger

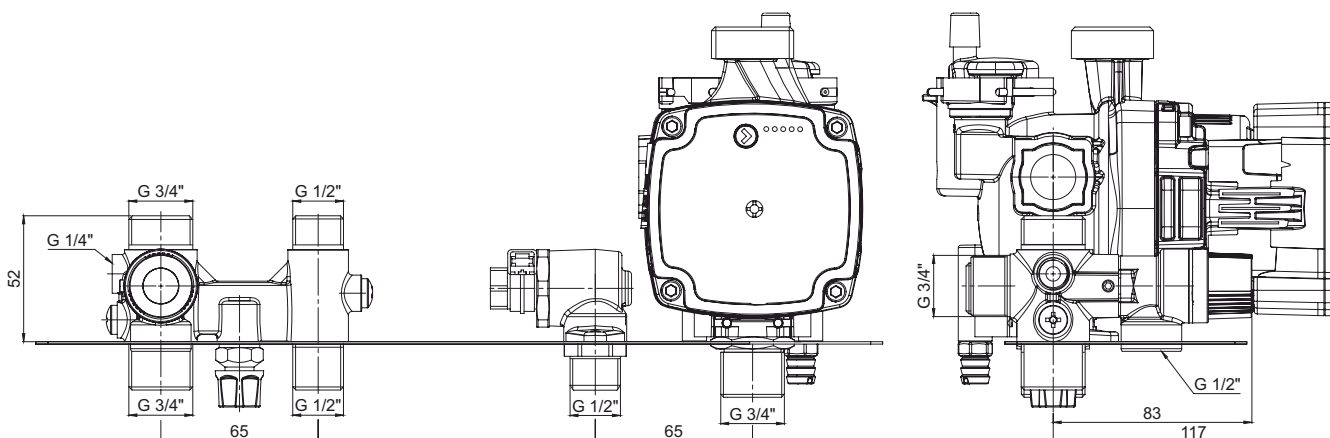
A Heating Delivery CH

B Sanitary Water Outlet DW

C Sanitary Water Inlet DW

D Heating Return CH

Dimensions (mm)



B

Combi Bithermic / Brass / Front Pump Connection

Technical Features

Material :
CuZn40Pb2 (CW617N)

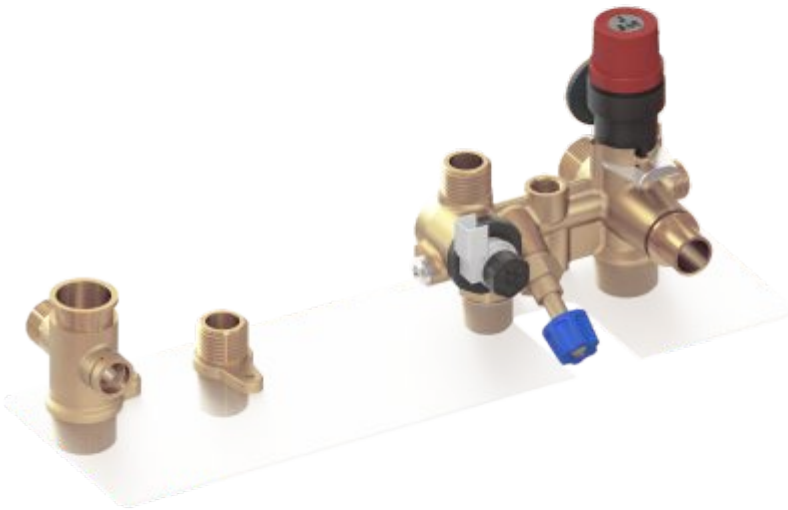
Flow Regulator :
6 to 22 (lt./min.)

Flow Detection :
Turbine Type Flowmeter with Hall Effect Sensor

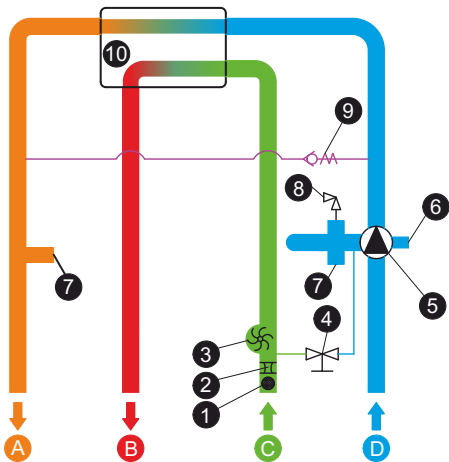
By-Pass :
External

Pressure Relief Valve :
3 bar

Pump Connection :
Front

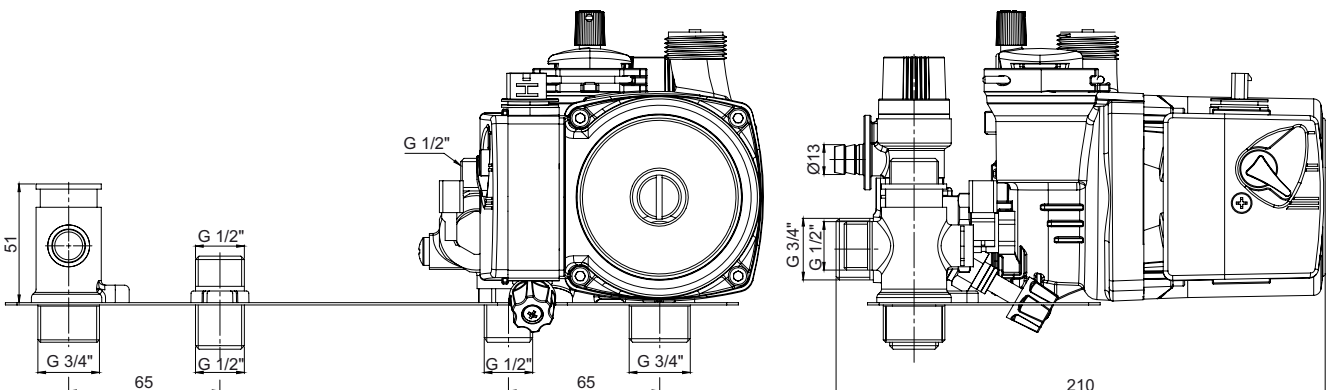


Hydraulic Circuit



- 1 DHW Filter
 - 2 Flow Regulator
 - 3 Flow Sensor
 - 4 Filling Tap
 - 5 Circulation Pump
 - 6 Expansion Vessel Connection
 - 7 Pressure Port (for Pressure Gauge/Sensor/Switch)
 - 8 Safety Valve
 - 9 Bypass
 - 10 Main Exchanger
- A Heating Delivery CH
 - B Sanitary Water Outlet DW
 - C Sanitary Water Inlet DW
 - D Heating Return CH

Dimensions (mm)





STORAGE TYPE



Storage Type / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

Flow Regulator :
-

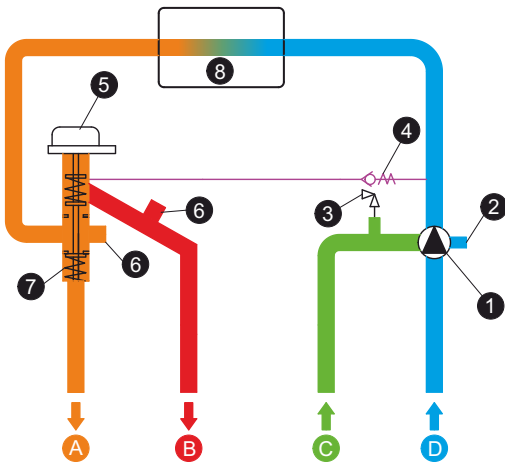
Flow Detection :
-

By-Pass :
External

Pressure Relief Valve :
3 bar (Brass or Plastic)

Pump Connection :
Side

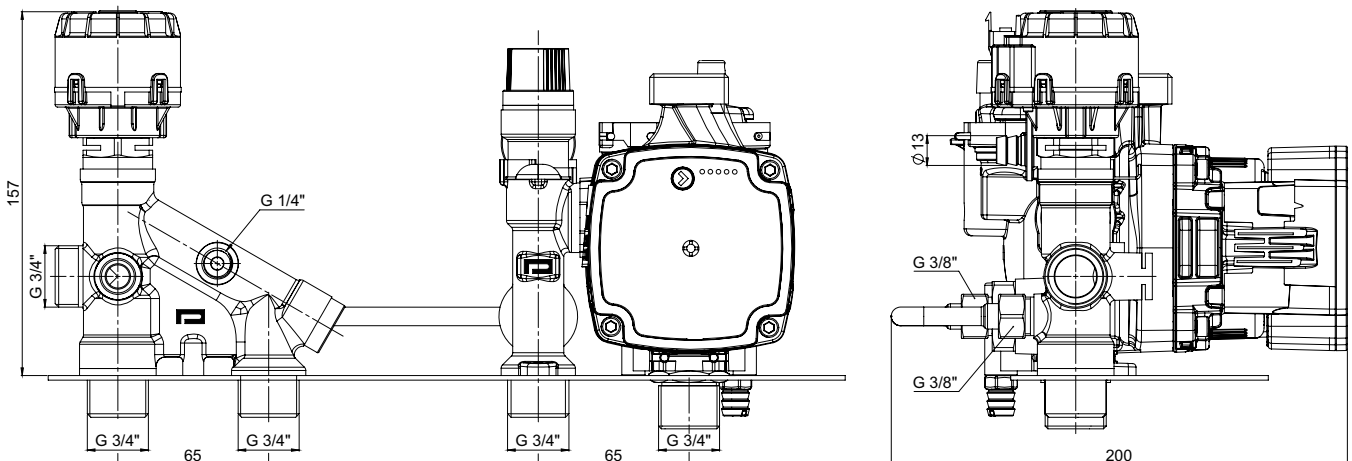
Hydraulic Circuit



- 1 Circulation Pump
- 2 Expansion Vessel Connection
- 3 Safety Valve
- 4 Bypass
- 5 3 Way Valve Motor
- 6 Pressure Port (for Pressure Gauge/Sensor/Switch)
- 7 3 Way Valve
- 8 Main Exchanger

- A Heating Delivery CH
- B Storage Delivery
- C Storage Return
- D Heating Return CH

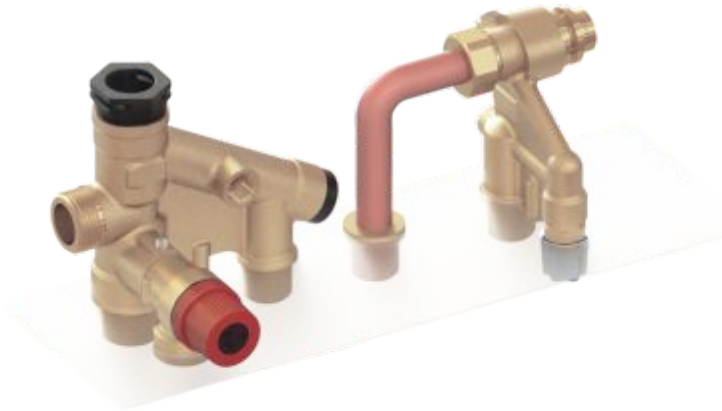
Dimensions (mm)



Hydroblock HB-302

S

Storage Type / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

Flow Regulator :
-

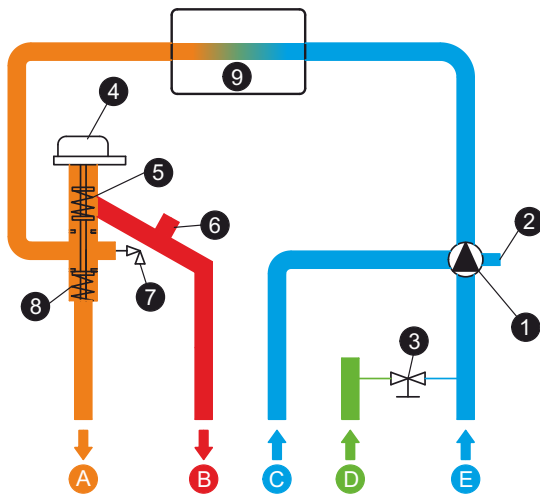
Flow Detection :
-

By-Pass :
-

Pressure Relief Valve :
3 bar

Pump Connection :
Side

Hydraulic Circuit

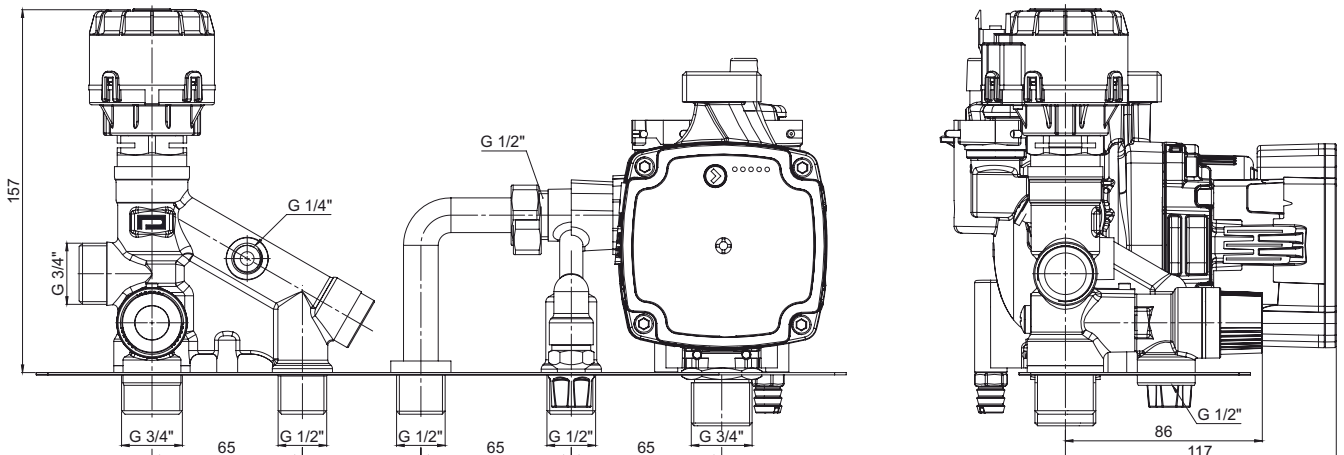


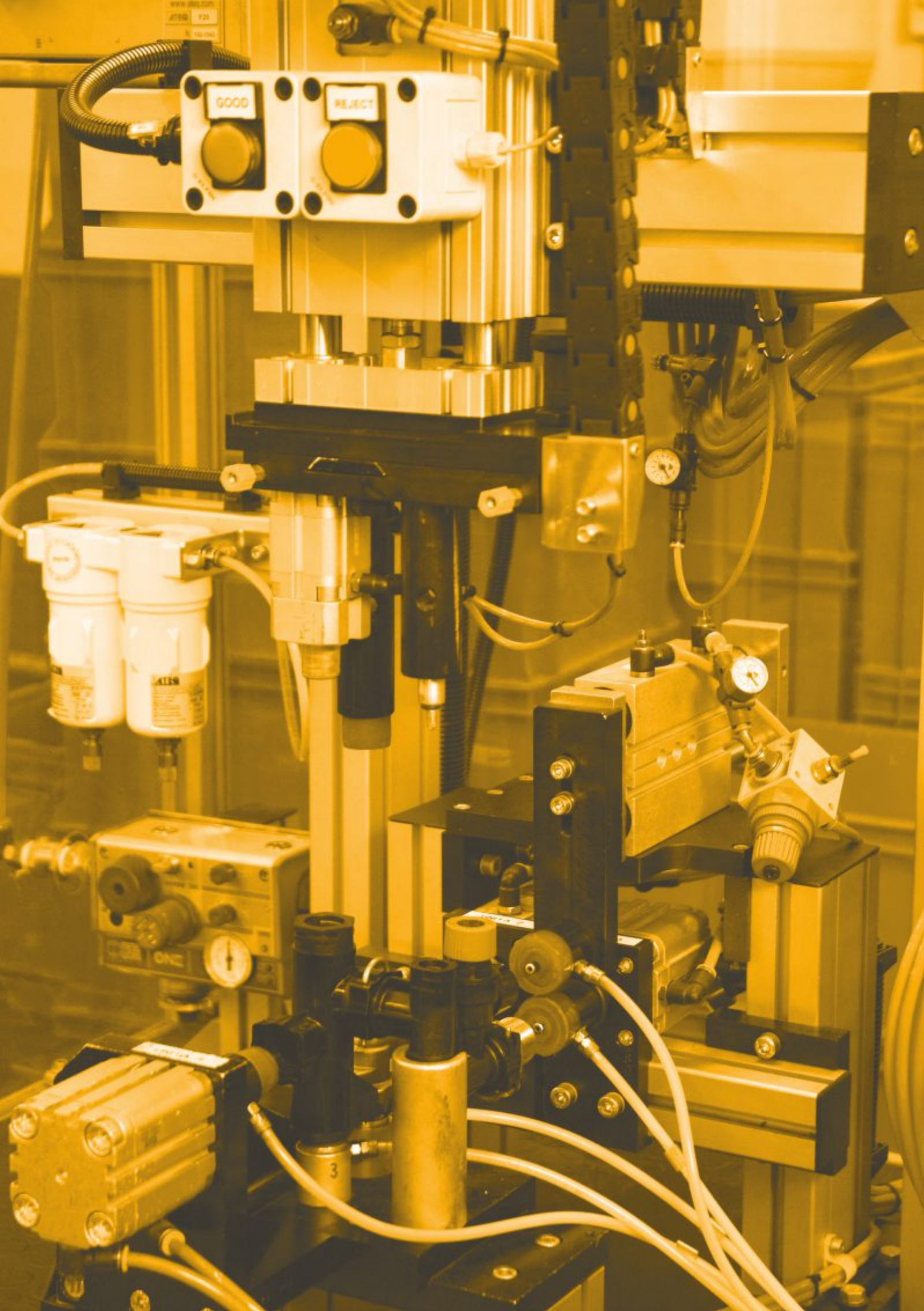
- 1 Circulation Pump
- 2 Expansion Vessel Connection
- 3 Filling Tap
- 4 3 Way Valve Motor
- 5 Automatic Bypass
- 6 Pressure Port (for Pressure Gauge/Sensor/Switch)
- 7 Safety Valve
- 8 3 Way Valve
- 9 Main Exchanger

- A Heating Delivery CH
- B Storage Delivery
- C Storage Return

- D Domestic Water Inlet
- E Heating Return CH

Dimensions (mm)







HEATING ONLY

Heating Only / Brass / Side Pump Connection



Technical Features

Material :
CuZn40Pb2 (CW617N)

Flow Regulator :
-

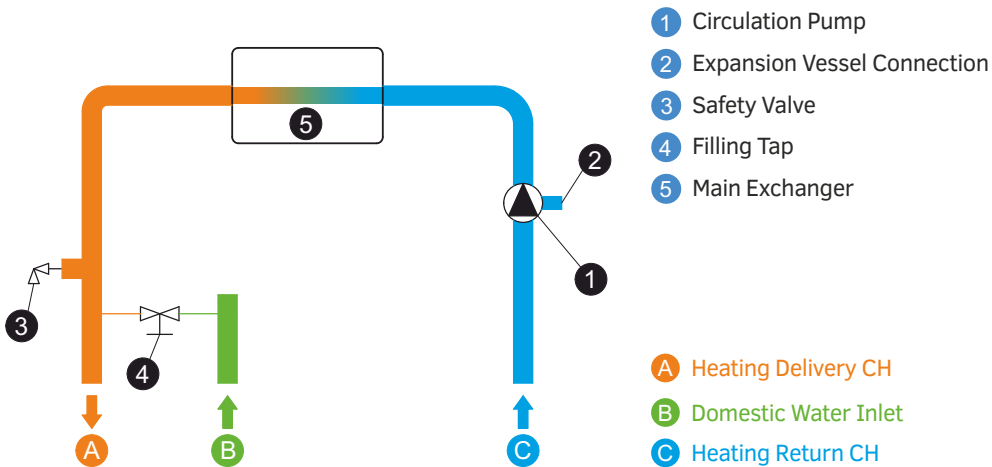
Flow Detection :
-

By-Pass :
-

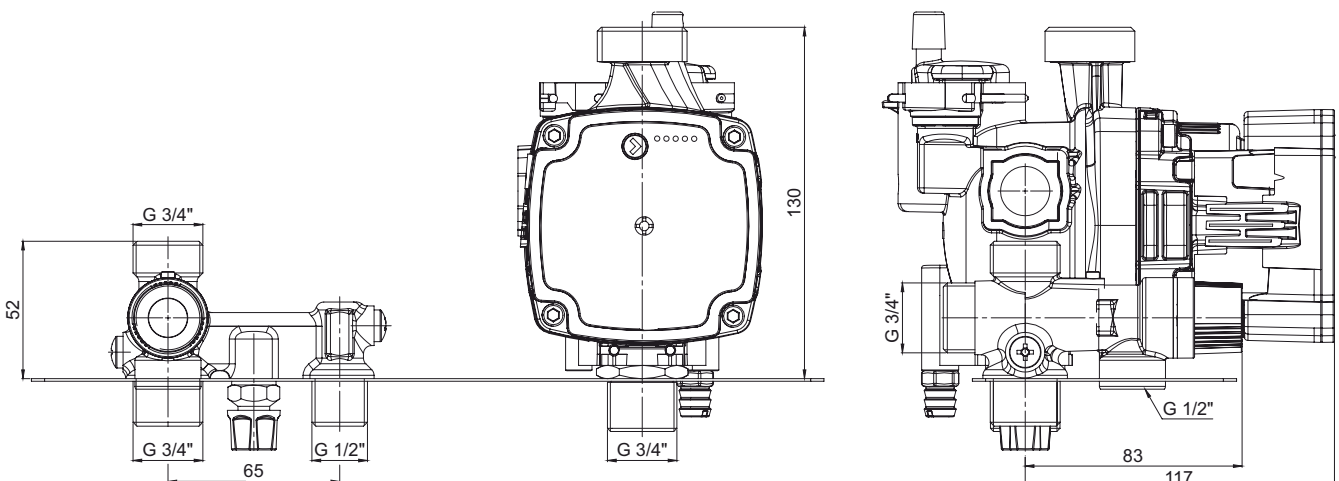
Pressure Relief Valve :
3 bar

Pump Connection :
Side

Hydraulic Circuit



Dimensions (mm)





HYDRAULIC ACCESSORIES

Radial Turbine Type with Hall Effect Sensor



Technical Features

Ambient Temperature : 2°C to 70°C

Water Temperature : 2°C to +70°C, peak 85°C

Water Pressure : 0 bar to 10 bar

Hydraulic Interfaces : G 1/2"

Flow Detection : Hall Effect Sensor

Pressure Drop @ 10 L/min : 184 mbar [Kv Factor ~1.4]

Working Position : Vertical / Horizontal

Power Supply : 12 VDC, 3÷6mA

Electric Connections : Rast 2.5 (3 Way)

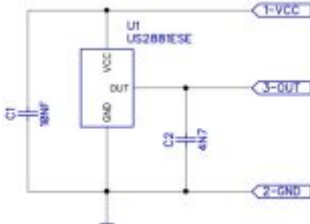
Approvals : WRAS Compliant

Others :

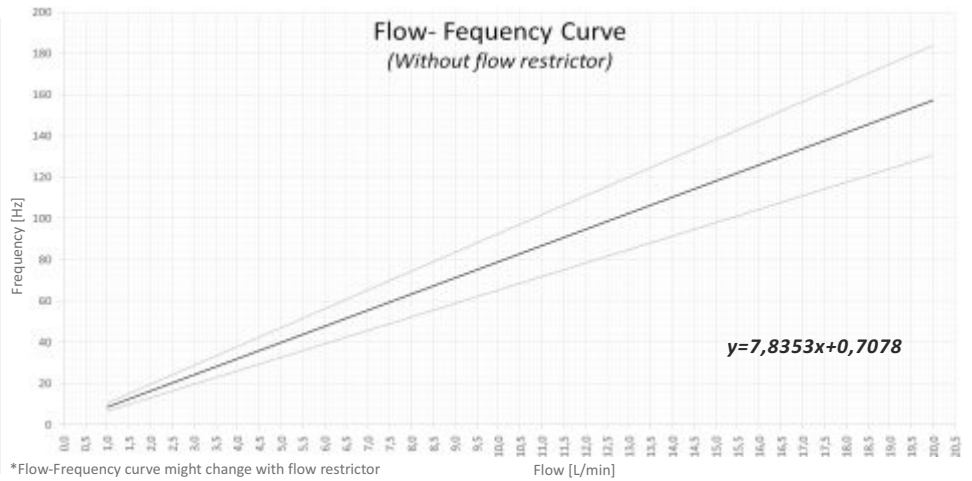
Flow Restrictor (6 to 22 l/min on request)

Integrated Plastic Filter as standard Optional: metallic filter

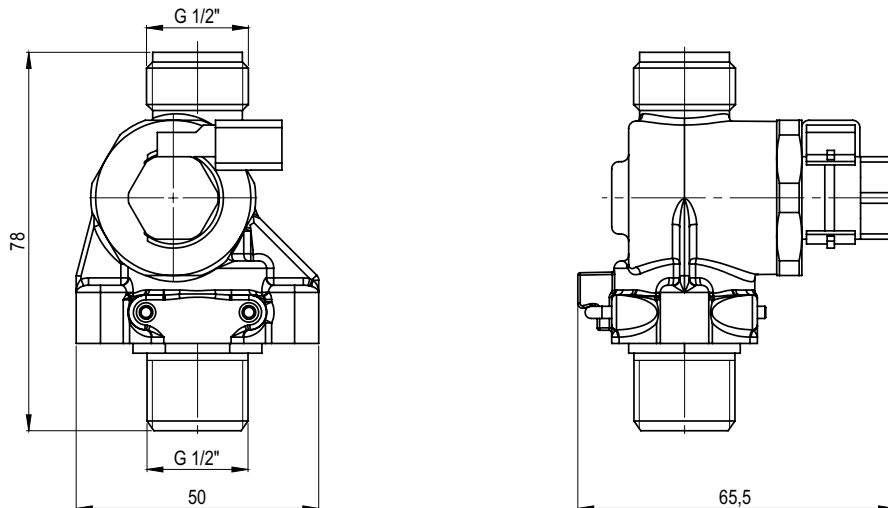
Electric Scheme



Flowmeter Output Curves



Dimensions (mm)



Pressure Relief Valve PRV-100 & 200 Series

Knob Type PRV with Brass or Plastic Body



Technical Features

Body Material :

PRV-100 : CuZn40Pb2 (CW617N)

PRV-200 : Plastic (PA66 GF30)

Nominal Size :

PRV-100 : DN15






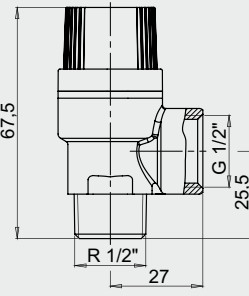
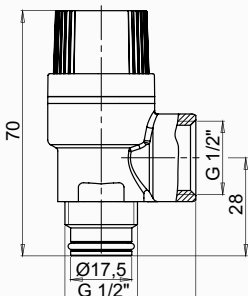
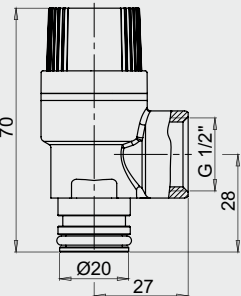
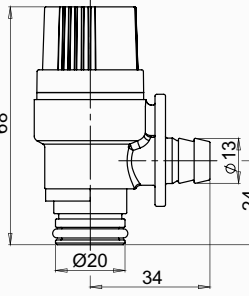
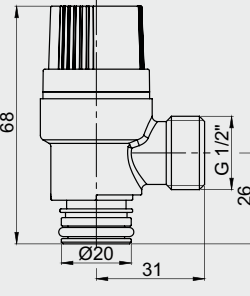
PRV-200 : DN8

Pressure Class : PN10

Pressure Range : 2-6 bar

Sealing Material : EPDM

Approvals : EN4126-1

PRV-101 Male Thread Type	PRV-102 Thread & Oring Type	PRV-103 Quick Connection Type	PRV-201 Quick Connection Type with Hose Connection	PRV-202 Quick Connection Type
				
 <p>67.5 R 1/2" 27 G 1/2" 25.5</p>	 <p>70 Ø17.5 G 1/2" 27 G 1/2" 28</p>	 <p>70 Ø20 27 G 1/2" 28</p>	 <p>68 Ø20 34 Ø13 24</p>	 <p>68 Ø20 31 G 1/2" 26</p>



Technical Features

Material : POM & Peroxide EPDM

Operating Pressure : 0,5-10 bar

Max. Pressure : 15 bar

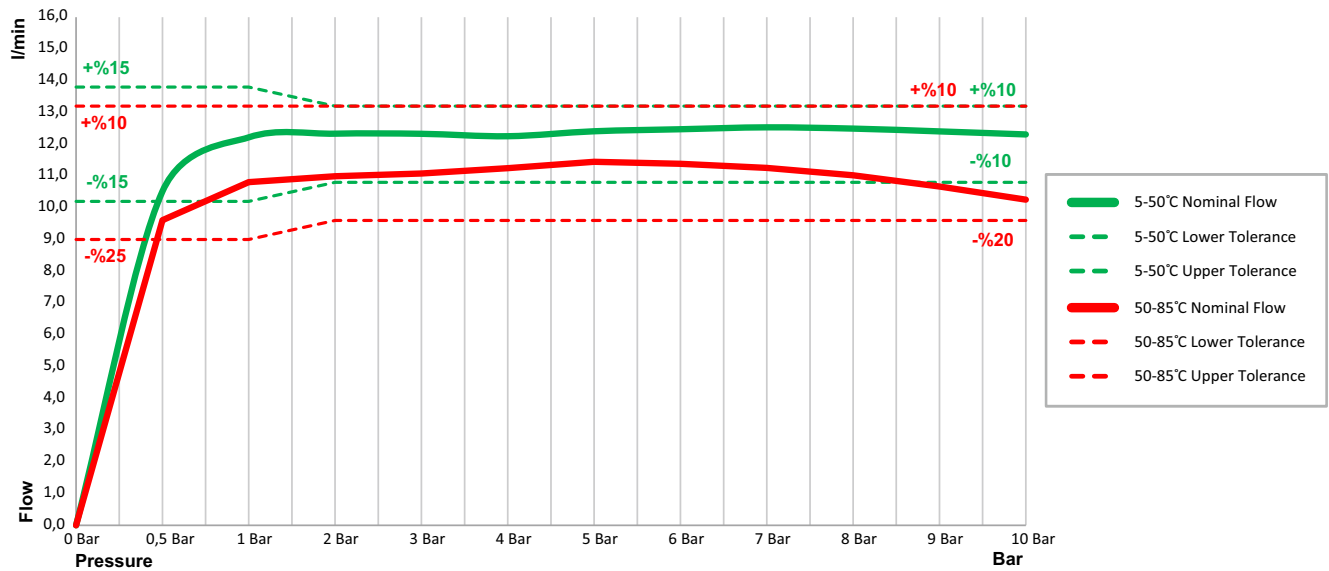
Operating Temperature : +2..85°C

Storage Temperature : -20..85°C

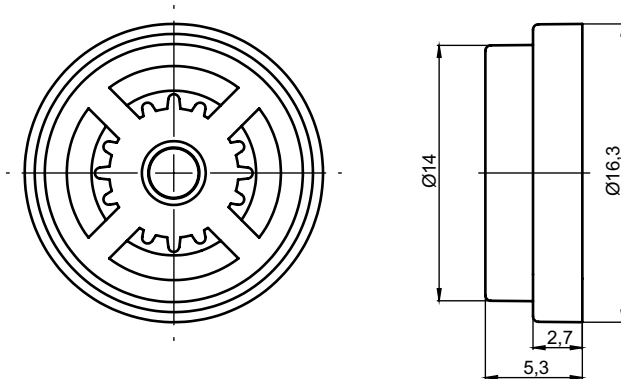
Approvals : WRAS

TYPICAL PERFORMANCE CHART (12 L)

Operating Characteristic



Dimensions (mm)



Product Table

Flow Rate	Colour
6 l/min	Black
7 l/min	Green
8 l/min	White
9 l/min	Orange
10 l/min	Light Blue
11 l/min	Yellow
12 l/min	Red
13 l/min	Olive
14 l/min	Pink
15 l/min	Lime
16 l/min	Dark Blue
17 l/min	Brown
18 l/min	Grey
19 l/min	Black
22 l/min	Lilac

Check Valve CV-100 Series



Technical Features

Body Material : POM

Sealing Material : Peroxide EPDM

Spring Material : SS 302

Pressure Range : 0,1-480 mbar

Max. Operating Temperature : 65°C

Peak Temperature: 1h at 95 °C

Applications :

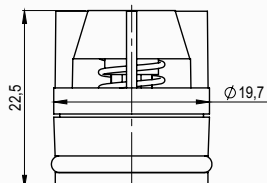
Bypass

Back Flow Preventer (EN 1717 Type EA)

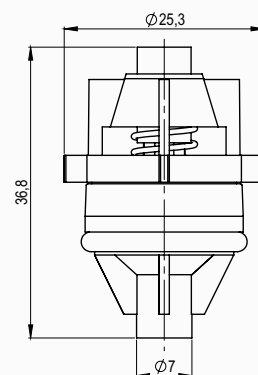
Approvals :  WRAS

Dimensions (mm)

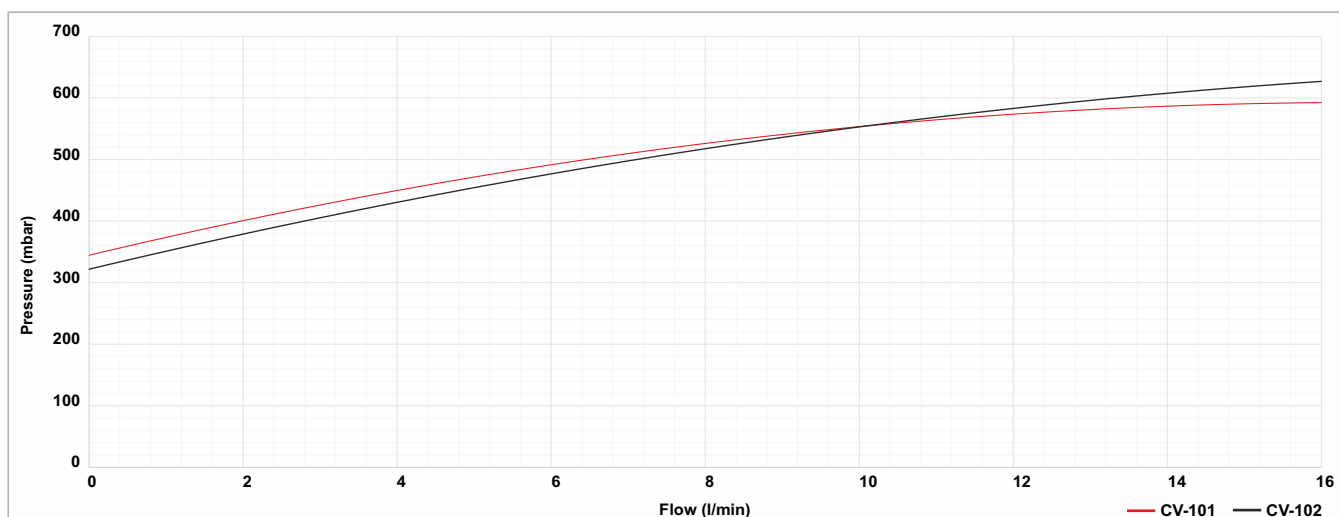
CV-101



CV-102



Flow Performance





Technical Features

Body Material : PA66 GF30

Sealing Material : Peroxide EPDM

Operating Pressure : 2 bar

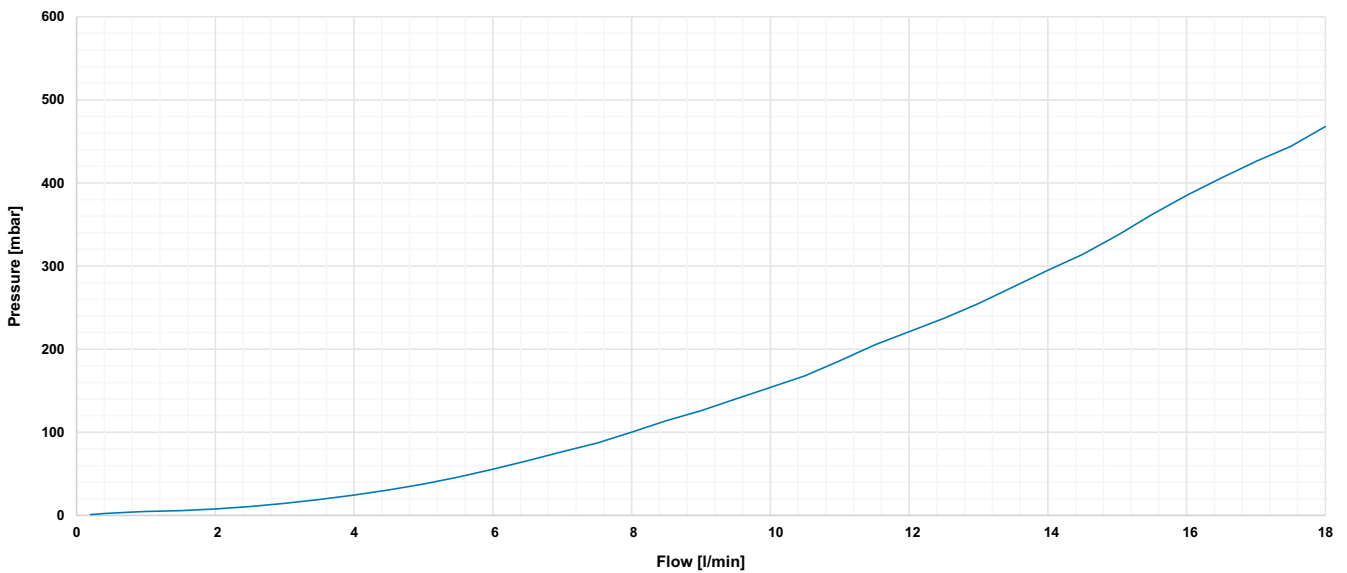
Max. Pressure : 5 bar

Operating Temperature : +2..85°C

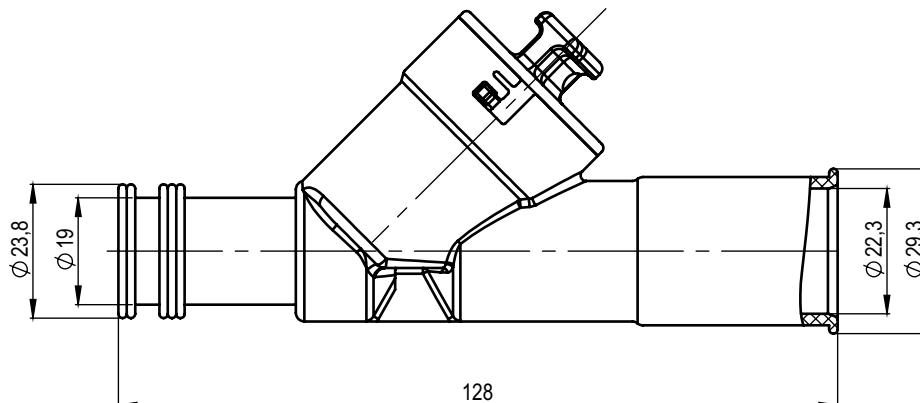
Storage Temperature : -20..85°C

Approvals : WRAS

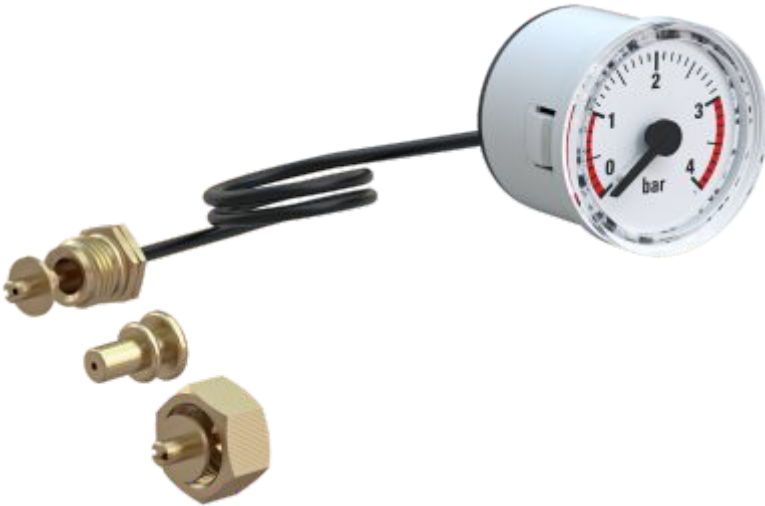
Pressure Drops Characteristic



Dimensions (mm)



Pressure Gauge PG-100 Series



Technical Features

Body Material: Plastic (ABS)

Window Material: Plastic (PMMA)

Dial Material: Plastic (ABS)

Pointer Material: Plastic (ABS)

Capillary: PVC coated copper

Process Connection: Brass (CW617N)

Gauge Size: Ø40

Measurement Ranges : 0/4....0/6....0/10 bar

Accuracy Class: CI 2.5

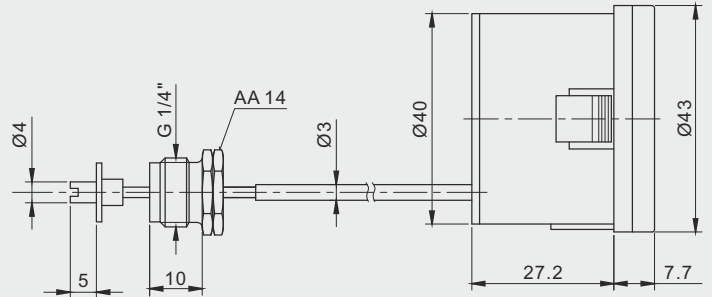
Working Temperature Range: -20°C....60°C

Ingress Protection Rate: IP31

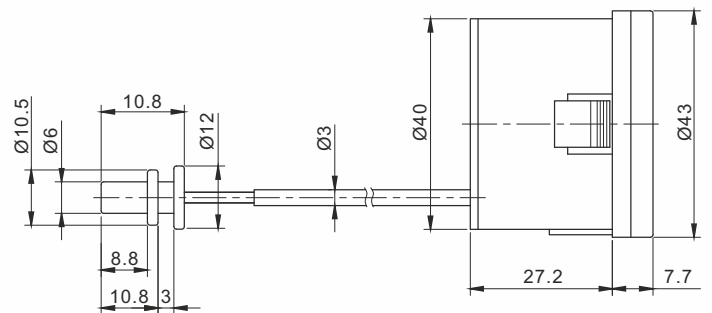
Approvals: EN 837-1

Dimensions (mm)

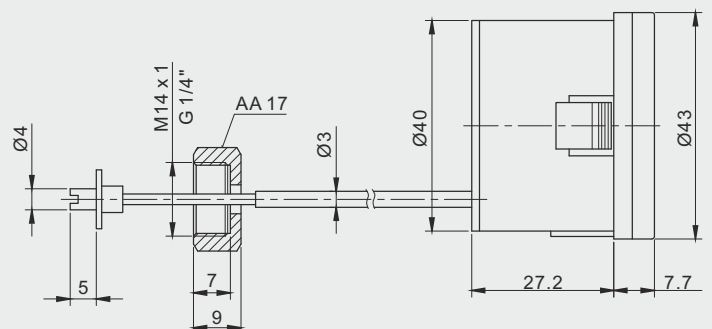
PG-101



PG-102



PG-103





Technical Features

Body Material : CW625N or Stainless Steel

Sealing Material : Peroxide EPDM

Temperature Range: -40...+125°C

Ambient Temperature: -20...+70°C

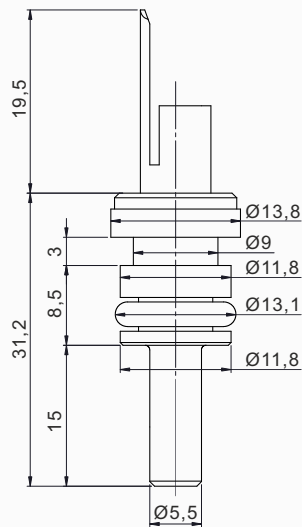
2 Type of β Options: 3435 & 3975 $\pm 1\%$ K

Resistance at 25°C: 10kOHM $\pm 1\%$

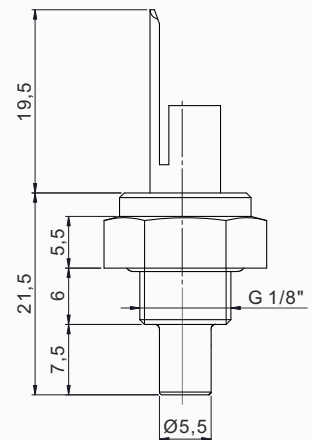
Approvals : WRAS

Dimensions (mm)

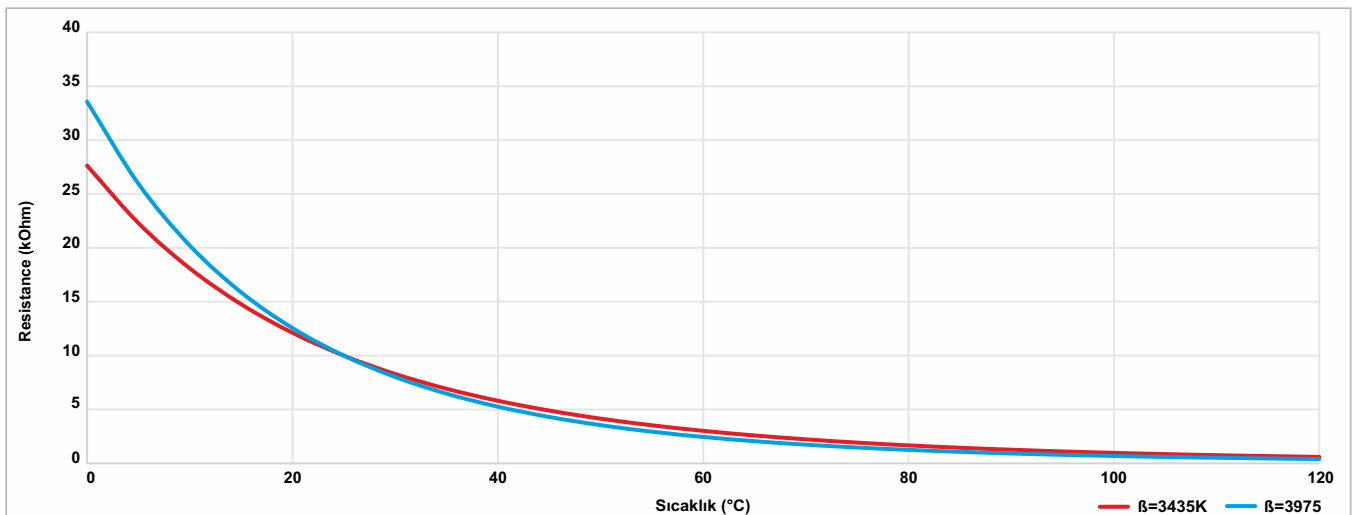
NTC-100
Quick Connection Type



NTC-200
Threaded Type



Resistance Diagram





VALVE SETS

Straight Valve Set / External Filling System Compatible








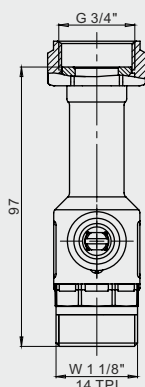
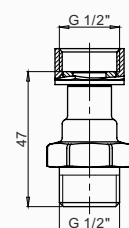
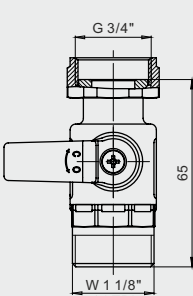
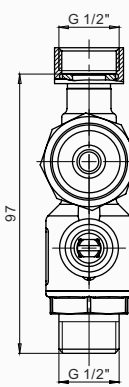
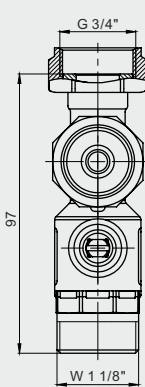
Technical Features

Material :
CuZn40Pb2 (CW617N)

Nominal Size :
DN15

Connection Type :
Nut-Thread

Other :
External Filling System Compatible

CH Valve (Inlet)	DHW Adaptor	Gas Valve	DHW Valve	CH Valve (Outlet)
				
<ul style="list-style-type: none"> • Designed Acc. to EN13828 • Temperature Resistance up to 110°C • Uncoated Brass Ball • PTFE and NBR Sealing 		<p>NF CE</p> <ul style="list-style-type: none"> • CE Certified Acc. to EN331 • Uncoated Brass Ball • PTFE and FKM Sealing • MOP 0.5 	<p>WRAS</p> <ul style="list-style-type: none"> • Designed Acc. to EN13828 • WRAS Approved • Uncoated Brass Ball • PTFE and NBR Sealing 	<ul style="list-style-type: none"> • Designed Acc. to EN13828 • Temperature Resistance up to 110°C • Uncoated Brass Ball • PTFE and NBR Sealing
				

Valve Set VS-102

Corner Valve Set / External Filling System Compatible

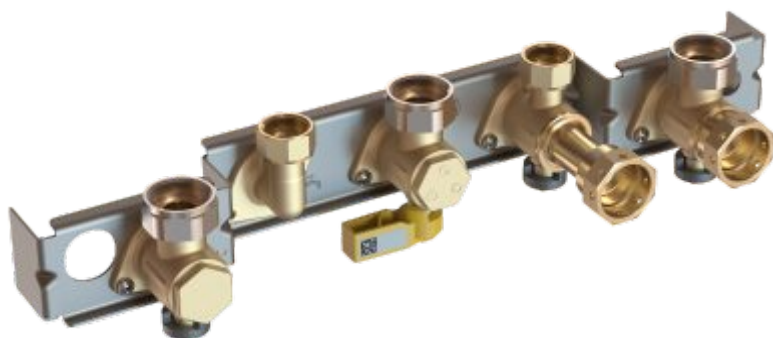
Technical Features

Material :
CuZn40Pb2 (CW617N)

Nominal Size :
DN15

Connection Type :
Nut-Thread

Other :
External Filling System Compatible



CH Valve (Inlet)	DHW Elbow	Gas Valve	DHW Valve	CH Valve (Outlet)
<ul style="list-style-type: none"> • Designed Acc. to EN13828 • Temperature Resistance up to 110°C • Uncoated Brass Ball • PTFE and NBR Sealing 		<p>NF CE</p> <ul style="list-style-type: none"> • CE Certified Acc. to EN331 • Uncoated Brass Ball • PTFE and FKM Sealing • MOP 0.5 	<ul style="list-style-type: none"> • Designed Acc. to EN13828 • Uncoated Brass Ball • PTFE and NBR Sealing 	<ul style="list-style-type: none"> • Designed Acc. to EN13828 • Temperature Resistance up to 110°C • Uncoated Brass Ball • PTFE and NBR Sealing

Corner Valve Set

Technical Features

Material :
CuZn40Pb2 (CW617N)

Nominal Size :
DN15

Connection Type :
Nut-Thread



CH Valve (Inlet)	DHW Elbow	Gas Valve	DHW Valve	CH Valve (Outlet)
<ul style="list-style-type: none"> • Designed Acc. to EN13828 • Temperature Resistance up to 110°C • Uncoated Brass Ball • PTFE and NBR Sealing 		<p>NF CE</p> <ul style="list-style-type: none"> • CE Certified Acc. to EN331 • Uncoated Brass Ball • PTFE and FKM Sealing • MOP 0.5 	<p>WRAS</p> <ul style="list-style-type: none"> • Designed Acc. to EN13828 • WRAS Approved • Uncoated Brass Ball • PTFE and NBR Sealing 	<ul style="list-style-type: none"> • Designed Acc. to EN13828 • Temperature Resistance up to 110°C • Uncoated Brass Ball • PTFE and NBR Sealing

Valve Set VS-104

Corner Valve Set / Nickel Coated








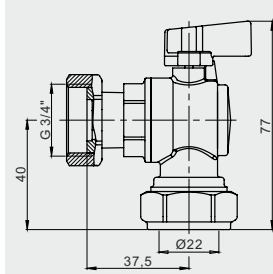
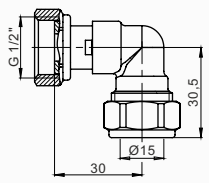
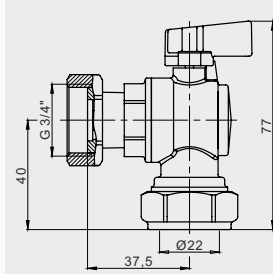
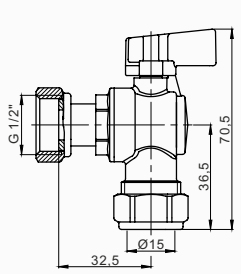
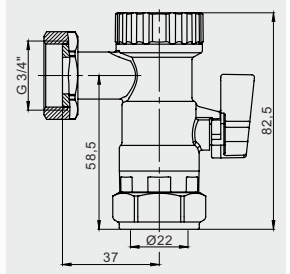
Technical Features

Material :
CuZn40Pb2 (CW617N)

Nominal Size :
DN15

Connection Type :
Nut-Thread

Other :
Nickel Coated
With CH Filter

CH Valve (Inlet)	DHW Elbow	Gas Valve	DHW Valve	CH Valve (Outlet)
 <ul style="list-style-type: none"> • Designed Acc. to EN13828 • Temperature Resistance up to 110°C • Chrome Coated Brass Ball • PTFE and NBR Sealing 		 <ul style="list-style-type: none"> • Designed Acc. to EN331 • Chrome Coated Brass Ball • PTFE and FKM Sealing • MOP 0.5 	 <ul style="list-style-type: none"> • Designed Acc. to EN13828 • Chrome Coated Brass Ball • PTFE and NBR Sealing 	 <ul style="list-style-type: none"> • Designed Acc. to EN13828 • Temperature Resistance up to 110°C • Chrome Coated Brass Ball • PTFE and NBR Sealing
				



Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
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Екатеринбург (343)384-55-89

Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47

Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Саранск (8342)22-96-24
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35

Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
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Чебоксары (8352)28-53-07
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Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
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