



**Suitability:**

Suitable for domestic and commercial installations to remove sediment and improve the service life of plumbing fixtures and fittings Product Approval:

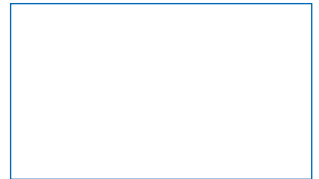
The product is certified to ATS 5200.103



Device must be installed immediately downstream of an AS/NZS 2845.1 backflow prevention valve! Please contact your plumber!

# Multipur AP

**DN 65 – DN 80  
Backwash filter**



Changes reserved!

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For You and Planet Blue.



**Thank you very much for the confidence that you have shown in us by purchasing a BWT appliance.**



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### 1.1 Validity of this documentation

This documentation is valid for the following product:

#### **Multipur AP backwash filter**

This documentation is intended for operators, end users, installation technicians not trained by BWT, installation technicians trained by BWT (e.g. “Trinkwasserprofi” or drinking water specialists) and BWT service technicians.

This documentation contains important information about how to safely and properly install the product, how to start up, operate, use, maintain and dismantle the product as well as how to remedy simple faults on your own.

Please read this documentation in its entirety before working with the product, especially section 2, Safety Instructions, on page 4.

### 1.2 Symbols used



This symbol indicates that the product can be recycled after it is decommissioned.

## 2 Safety Instructions

The product was manufactured according to all recognised regulations and technical standards and was in compliance with the relevant legal requirements when it was put into circulation. Nevertheless, it can pose a risk of personal injury or property damage if you do not observe this chapter and the safety instructions throughout this documentation.

- Carry out only those activities that are described in this operating manual, unless you have been trained by BWT.
- Carry out all activities in accordance with all applicable standards and requirements.
- Instruct the operator of the product on the product's function and how to use it.
- Inform the operator of the product about how to maintain the product.
- Inform the operator of the product about the possible hazards that may arise when operating the product.

### 2.1 General safety instructions

- Read this documentation carefully and in its entirety before working with the product.
- Store this documentation so that it is accessible to all users at all times.
- Include the complete documentation if you transfer the product to a third party.
- Follow all instructions regarding proper use of the product.
- If you notice damage to the product or the mains supply line, cease operation immediately and inform the service personnel.
- Use only accessories, spare parts and consumables that have been approved by BWT.
- Adhere to the environmental and operating conditions specified in the “Technical Data” section.
- Wear personal protective equipment. This equipment is for your own safety and will protect you from injury.

## 2.2 Product-specific safety instructions

In the following sections, you will find product-specific safety instructions whenever you must perform certain safety-relevant actions on the device.

## 2.3 Personnel qualifications

The installation activities described in this manual require basic knowledge of mechanics, hydraulics and electrical systems as well as knowledge of the technical terminology associated with those fields.

To ensure safe installation, these activities may only be carried out by a specialist or by a trained person who is under the direction of a specialist.

A specialist is defined as someone who has the technical training, knowledge and experience as well as the knowledge of applicable regulations required to properly assess the work assigned to him/her, identify possible hazards and take appropriate safety measures. Specialists must comply with applicable, industry-specific regulations.

# 3 Transport, Installation

Transport the system as a complete unit, if possible. If you must dismantle the system before transport, check that all individual parts are present.

If there is a risk of frost, drain all components that convey water.

Lift or transport the system or system components only from the intended suspension eyes or attachment points.

The system must be placed on a horizontal surface or mounted to a vertical surface that is sufficiently flat and has a sufficient load-bearing capacity. It must be secured so that it does not fall or tip over.

# 4 Performance description

## 4.1 Intended use

The Multipur backwash filters are used for filtration of drinking and industrial water to protect the water mains and the connected fittings, equipment, machinery, tanks, boilers and production facilities from malfunction and corrosion damage caused by foreign particles.

The filters can also be used for filtration of well, process, boiler feed, cooling and air conditioning water. In these cases, advice must be obtained from a specialist.

The filters are unsuitable for oils, greases, solvents, soaps and other lubricating media. Water-soluble substances also cannot be separated off.

## 4.2 Foreseeable misuse

Operating the system with parameters other than those specified in this documentation and in section 4.1.

Not adhering to the prescribed maintenance and service intervals.

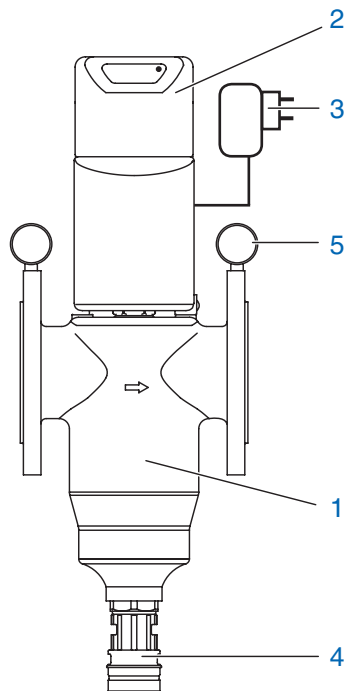
Using spare parts and consumables not approved by BWT.

## 4.3 Disclaimer

The manufacturer is released from any liability if the customer intentionally or forcibly removes guards or safety devices, if the customer wilfully modifies or circumvents the same, or if the customer does not follow the instructions in this operating manual or on the system.

## 4.4 Other applicable documentation

Observe all documents from suppliers that were included with delivery. These are considered part of this documentation and must not be changed or removed.



## 5 Scope of supply

**Backwash filter Multipur AP, consisting of:**

1	Filter housing made of red brass
2	Electronic controller and backwashing device with hydraulic drive, CIC connection
3	Power supply unit
4	Water outlet for pipe / water outlet for hose (20 mm Ø)
5	Manometer
	CIC connection cable

### Accessories

Interlock cable for parallel operation 2 m, with plug	Order no. 10908
---	-----------------

## 6 Function

The untreated water flows through a stainless steel filter element in the Multipur. Foreign particles > 100 µm are thus retained. Depending on their size and weight, these particles either fall directly into the lower part of the filter housing, or adhere to the filter element.

During backwashing, the seal at the rinsing water outlet opens. The suction ring segments of the backwashing element move from the bottom to the top and back again over the entire filter surface and thus clean the filter fabric by suction with clean water at an extremely high flow rate.

Backwashing is carried out automatically at the end of the set interval.

The pressure difference between the untreated water inlet and the treated water outlet of the filter is measured.

The backwashing process is triggered primarily by differential pressure.

If heavy soiling of the filter element causes the pressure difference to exceed the preset value (approx. 0.8 bar) within the preset backwash interval, the differential pressure generator causes the unit to backwash. The preset backwash interval starts again.

The filter is equipped with a central instrumentation and control (CIC) connection (contact closes in the event of malfunction or power failure).

## 7 Preliminary installation conditions

Local plumbing codes, general guidelines and the technical data must be observed.

The system must be installed by the water supply utility or a plumbing company approved by the water supply utility in accordance with these installation and operating instructions and the applicable regulations.

The installation site must be frostproof and ensure that the filter is protected from solvent vapours, heating oil, lees, acidic cleaners, chemicals of all kinds, direct UV radiation and heat over 40 °C.

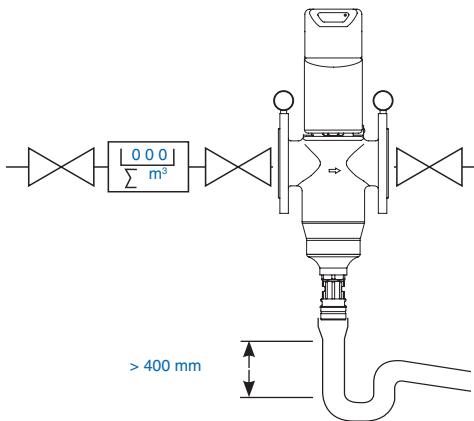
A separate power socket (230 V AC, 50 Hz) within a distance of approx. 1.2 m is required. The power supply must be permanently ensured. Voltage peaks over 1 kV must be avoided.

If the water contains dirt particles > 2 mm, a coarse dirt trap must be installed upstream from the filter.

A flushing water quantity of at least 1.4 l/s (5 m<sup>3</sup>/h) must be available for backwashing.

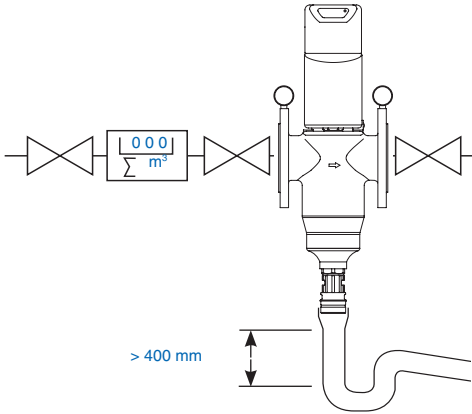
A drainage connection (min. DN 50) must be available for discharge of the rinsing water.

Avoid extreme pressure surges (caused, for example, by downstream solenoid valves or similar).



Multipur DN 65 and Multipur DN 80  
Drainage connection min. DN 50

# 8 Installation



Multipur DN 65 and Multipur DN 80  
Drainage connection min. DN 50

Install the backwash filter horizontally in the cold water line in the flow direction. (Observe the flow direction arrow on the filter casing.)

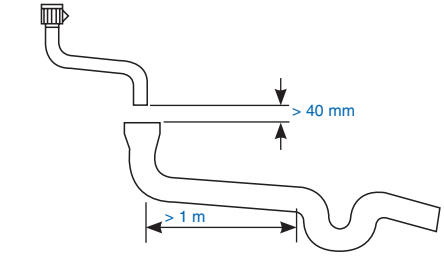
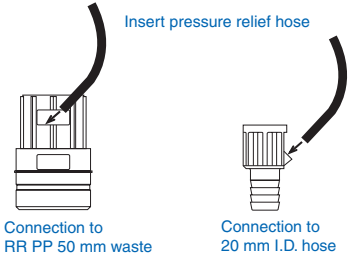
Screw on the waste water connection, either for pipe or for hose. Connect the drain line.

According to AS/NZS 3500.2 pipes discharging over a tundish shall have an airgap of a size at least twice the internal diameter of the discharging pipe.

If desired, an external fault signal issued by a potential-free contact can be connected to the building automation system terminals.

Put in pressure relief hose from the solenoid valve in the upper cutout of the drain connection respectively in the sloping drill hole of the hose liner.

A mains power outlet must be available in the immediate vicinity (max. 1.2 m away). The power supply unit is rated at IP40.



Multipur DN 65 and Multipur DN 80  
Drainage connection min. DN 50

# 9 Commissioning

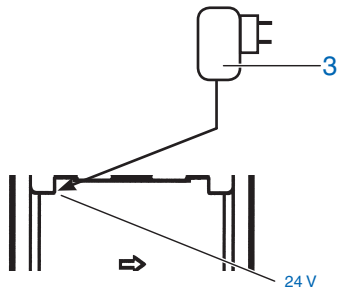
Check that the filter and flushing water pipe have been properly installed.

Slowly open the stop valves up- and downstream of the filter. Deaerate the pipework at the next bleed point downstream of the filter, and drain water briefly.

Check the seals of the installation and filter for leaks.

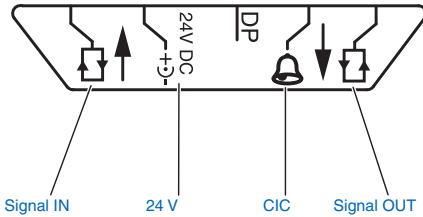
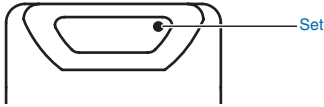
Insert the cable plug connector of the power supply unit into the socket (24 V).

Plug in power supply unit with plug (3). The first backwashing cycle is performed automatically (during backwashing the illuminated segments on the display turn).



The factory setting  $\overline{7} \text{ d}$  (7 days) appears.





The required backwash interval must be set on the filter.

Press Set to set the interval.

Key	Display
Press Set for 5 seconds	SL 0
Display dots flash - device is in programming mode	
Press Set	SL 1
Press Set	SL 2
Press Set	SL 3
Press Set	1 h

Pressing the Set key again steps up the number of **h** (hours) or **d** (days).

The hours **h** run from 1 – 24, followed by days **d** from 2 – 56, followed by the hours again etc.

Press the Set key until the desired value has been set. The value is saved 10 seconds after the last input. The display dots fade out. The unit backwashes.

The time until the next backwashing and the pressure difference appear alternately in the display. The pressure difference is only displayed for large volumes of water.

The filter is ready for use.

When 2, 3 or a maximum of 4 filters are operated in parallel, they must be electrically interlocked to prevent simultaneous backwashing.

Insert an interlocking cable into the output of any one filter, representing filter 1, and run the cable to the input of filter 2. Insert the next interlocking cable into the output of filter 2, and run it to the input of filter 3. The output of the last filter is returned to the input of filter 1.

The required backwash interval must be set at the filter to be backwashed first (master) (see above).

The second filter (slave) must be set as follows:

Key	Display
Press Set for 5 seconds	SL 0
Display dots flash - device is in programming mode	
Press Set	SL 1
Wait 10 seconds, dots stop flashing.	
The pressure appears in the display (0.0 P, when no water is used).	

A third filter must be set to SL 2 and a fourth to SL 3. Disconnect and reconnect all filters to the mains power supply. The filters will be backwashed in sequence: Master, SL 1, SL 2 and SL 3.

The time until the next backwashing and the pressure difference appear alternately in the master filter display. The pressure difference is only displayed for large volumes of water.

Only the pressure difference appears in the slave filter display.

The filters are ready for use.

## 10 Operation

We recommend programming the filter so that the device is backwashed at least once a month to prevent foreign particles from adhering to the filter element (more frequently for higher levels of soiling; factory setting every 7 days).

### 10.1 Setting the backwash interval

Should the local water quality (degree of contamination) change, the backwashing interval must be corrected; see commissioning.

### 10.2 Manual backwashing

Unplugging and plugging in the device can backwash it at any time.

### 10.3 Display

The time until the next backwashing and the pressure difference appear alternately in the display. The pressure difference is only displayed for large volumes of water.

### 10.4 Cleaning

Clean plastic parts with a soft, damp cloth only; do not use solvents, detergents, or acidic cleaning agents.

# 11 Maintenance

It is recommended and to assist in the longevity of your Multipur unit, that regular maintenance occurs. This should always be undertaken by specialist staff who will also replace worn parts. We advise you to conclude a maintenance contract. Maintenance must be performed once each year, and twice each year for municipal systems, by your local plumber/installer.

## 11.1 Replacement of wearing parts

Seals	every 3 years
Backwashing element	every 6 years
Filter element	every 6 years
Groove ring	every 6 years
Lock ring	every 6 years
Hose barb	every 9 years
HT-Connector	every 9 years
Hydraulic tubes	every 9 years
Difference pressure transducer	every 9 years
Pressure spring	every 12 years

## 11.2 Troubleshooting

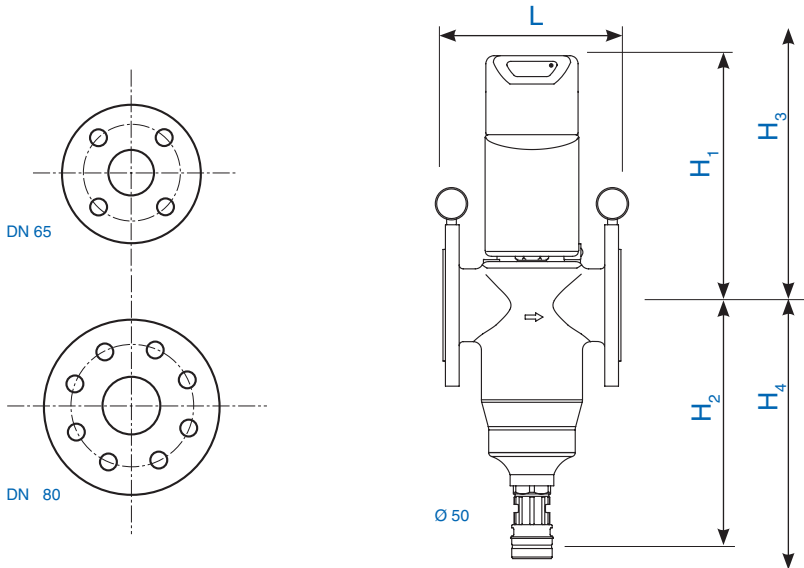
Fault	Cause	Action
Water pressure dropped considerably in network	Dirty filter element	Carry out backwash
Flushing water outlet does not close	Backwash element does not reach the end position due to large particles of dirt	Repeat backwash several times
AP only: Display shows ERR	Pressure too low	Repeat backwash several times. Increase pressure

If the fault cannot be remedied by following these tips, contact our after-sales service department.

Multipur AP	Type	65	80
Nominal connection width	DN	65	80
Connection type		Flange connection DIN 2501, Part 1	
Flange Ø	mm	145	160
Bolt hole Ø	mm	18	
Nominal flow	m <sup>3</sup> /h	58	58
Flow capacity at $\Delta p = 20$ kPa	m <sup>3</sup> /h	35	35
Flow capacity at $\Delta p = 50$ kPa	m <sup>3</sup> /h	58	58
Micron rating	µm	100	
Nominal pressure	kPa	1000 (PN 10)	
Operating pressure $p_o$ min./max.	kPa	250 - 1000	
Water temperature , min./max.	°C	5-30	
Ambient temperature, min./max.	°C	5-40	
Pressure regulator		no	
Minimum pressure behind filter (for backwashing)	kPa	–	–
Length of backwashing, approx.	s	10	
Rinsing water volume at 400 kPa	l	16	
Water flow at backwashing	l/h	5700	
Mains connection	V/Hz	230/50	
Operating voltage	V-	24	
Power consumption during backwashing, max.	W	12	
CIC - dry contact, switching capacity max.	V / A	24 V / 1 A (resistive load)	
Protection		IP40	
Drainage connection, min.	DN	50	
Operating weight, approx.	kg	15	18
Shipping weight, approx.	kg	13	16

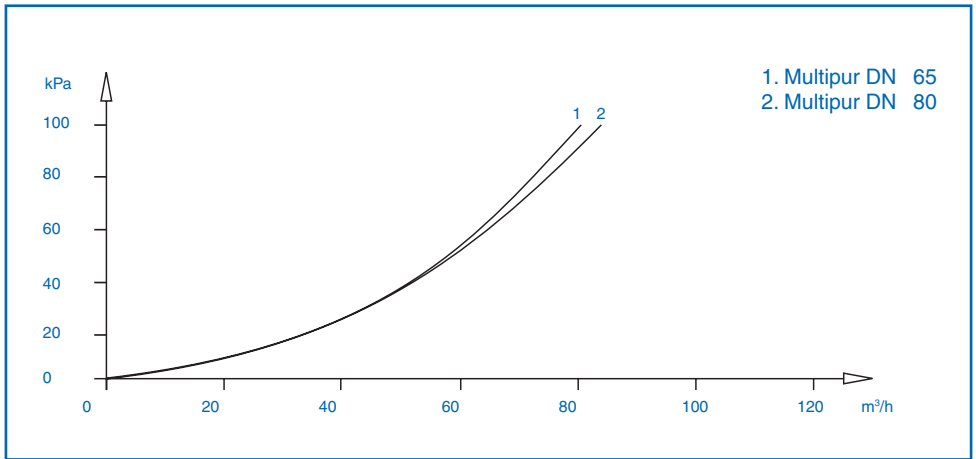
## 12.1 Overall dimensions

Multipur AP	Type	65	80
Overall height	mm	630	630
Height, top edge to centre of pipe (H1)	mm	310	310
Height, lower edge to centre of pipe (H2)	mm	320	320
Minimum distance, centre of pipe to ceiling (H3)	mm	400	400
Minimum distance, centre of pipe to floor (H4)	mm	400	400
Minimum distance, centre of pipe to wall	mm	100	105
Installation length (L)	mm	220	



## 12.2 Volume flow rate and pressure loss

Multipur AP DN 65								
Volume flow rate [m <sup>3</sup> /h]	15	22	35	44	51	58	72	81
Pressure loss $\Delta p$ [kPa]	5	10	20	30	40	50	80	100
Multipur AP DN 80								
Volume flow rate [m <sup>3</sup> /h]	15	22	35	44	51	58	75	85
Pressure loss $\Delta p$ [kPa]	5	10	20	30	40	50	80	100



### Multipur AP DN 65 Reece

#### Auto Backwash Filter Operating Specifications

Type:	65
Nominal Size:	DN65
Flow rate (m³/h):	
@ p=20 kPa	35
@ p=50 kPa	58
Nominal Pressure (kPa)	1000
Recommended Operating Pressure Range (kPa):	300-1000
Filter Efficiency (Micron):	90-110
Operating Temperature (°C):	Water 5-30    Ambient 5-40
Power Consumption During Backwashing (Watts):	12
Order Number	10463
S/N	xxxxxx



For further information please visit [www.reece.com.au](http://www.reece.com.au)

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### 12.3 Type label

The type label serves as product identifier. In case of any requests, please have the following information ready:

1. Device name
2. Order-no.
3. Serial number

**Note:** The type label is an official document and must not be altered or stripped off. Damaged or unreadable type labels have to be replaced.

## 13 Warranty

In the event of a malfunction during the warranty period, please contact our after-sales service department, stating the type of unit and the product number (PNR) (see the technical data or the type plate on the unit).

## 14 Decommissioning and disposal

### 14.1 Decommissioning

The product may only be shut down and dismantled by qualified specialists.

Observe all applicable safety regulations when dismantling the system.

### 14.2 Disposal

#### NOTICE



- ▶ At the end of the product's life cycle, ensure that it is properly disposed of or recycled.
- ▶ Observe the legal disposal guidelines for the country in which the product is used.
- ▶ The following materials are used in the product: metal, plastic

**Further information:**

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