



**BLUEONE**

SMART, HIGHLY EFFICIENT  
DOMESTIC HOT WATER PUMPS BY VORTEX

# THE NEW SERIES BWO 155



**PUMPS  
UNIVERSAL MOTORS  
REPLACING OLD WITH NEW**

**MADE IN  
GERMANY**



English

# BLUEONE BWO 155 – THE UNIVERSAL MOTOR

## UNIVERSAL – SIMPLE – HIGHLY EFFICIENT

The universal motor in the new BWO 155 series by VORTEX is a highly efficient, electronically commutated DC motor (ECM technology), compatible with all commercially available pump housings (shown below: R pump housings).

All of our BlueOne universal motors are equipped with a permanent magnet spherical motor, built according to the original spherical motor principle by VORTEX.

The BlueOne universal motor is available with all VORTEX BlueOne control modules.



## AUTOlearn TECHNOLOGY

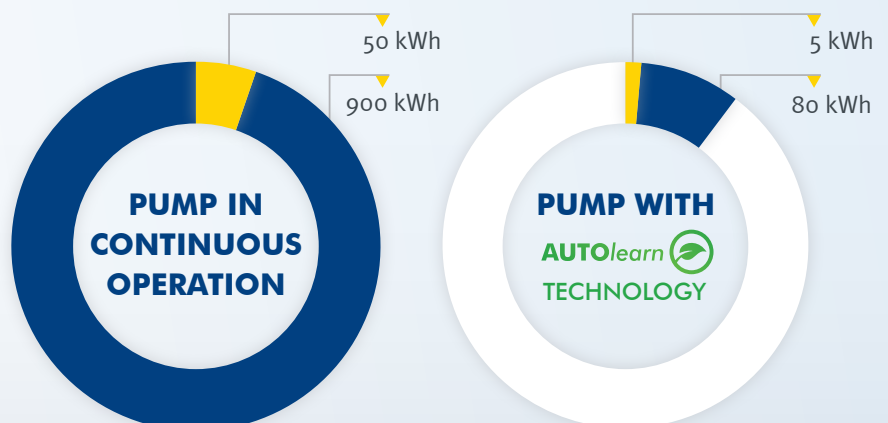
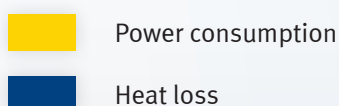
BWO 155 SL pumps and motors with AUTOlearn technology automatically and quickly learn the times at which consumers tend to need hot water. The pump will automatically adapt to any change in usage patterns.

Through a temperature sensor on the flow side, the BWO 155 SL detects when the consumer requires hot water. The system notes this and predictively provides hot water at these times each day. When hot water is not needed, the pump does not run. This creates huge potential for savings in terms of heat loss and water and power consumption.

## EXTREMELY ECONOMICAL: BWO 155 SL

### ENERGY SAVINGS OF OVER 90 %

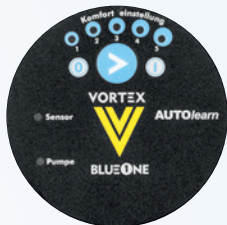
Reduction in energy loss in a typical detached house of over 90 % per year with AUTOlearn technology, compared to a domestic hot water pump in continuous operation.



# THE NEW CONTROL MODULES

## BLUEONE BWO 155 SERIES

### SL MODULE



### Z MODULE



### ZM MODULE



## AUTOlearn TECHNOLOGY

#### Self-learning module with AUTOlearn technology

- ▼ AUTOlearn technology
- ▼ Autostart function
- ▼ Weekend/holiday detection
- ▼ 5 comfort settings
- ▼ Operating display
- ▼ Continuous operation and permanently off functions
- ▼ Anti-legionella function

#### Digital Timer

- ▼ 24-hour clock face
- ▼ Smallest increment – 30 minutes
- ▼ Adjustable via pushbuttons
- ▼ Operating display
- ▼ Continuous operation and permanently off functions

#### Mechanical Timer

- ▼ 24-hour clock face
- ▼ Smallest increment – 15 minutes
- ▼ Adjustable via mechanical sliders
- ▼ Continuous operation and permanently off functions
- ▼ Optional: KT version with anti-scaling thermostat (switch-off temp. 55 °C / switch-on temp. 45 °C)

### ERT MODULE



### MODULE CAP



### MODULE CAP 12V



#### Electronic control thermostat

- ▼ Shutdown temperature adjustable from 35 °C to 75 °C
- ▼ Start point 7 K below the shutdown temperature
- ▼ Operating display
- ▼ Continuous operation and permanently off functions

#### Without control module (continuous operation)

- ▼ Continuous operation function

#### Without control module (continuous operation)

- ▼ Continuous operation function
- ▼ 12V DC version

# REPLACING OLD WITH NEW

## THE NEW DOMESTIC HOT WATER PUMPS IN THE BLUEONE BWO 155 SERIES

Pumps in the 152 and 153 series can be easily replaced with the new, highly efficient BlueOne pumps or with the BlueOne universal motors. The pumps are available with "V" or "R" pump housing (pumps below shown with V pump housing).

### 152 - 153 SERIES – OLD

### NEW: 155 SERIES – BLUEONE



#### BWZ 152 OT/KT

Mechanical timer  
with or without anti-scaling thermostat

BWZ 152 V oT/KT

BWZ 152 R 1/2" oT/KT

BWZ 152 oT/KT motor



#### BW 153 ERT

Electronic control thermostat

BW 153 V ERT

BW 153 R 1/2" ERT

BW 153 ERT motor



#### BW 152 OT/KT

Continuous operation  
with or without anti-scaling thermostat

BW 152 V oT/KT

BW 152 R 1/2" oT/KT

BW 152 oT/KT motor



#### BWO 155 SL

AUTOlearn TECHNOLOGY

BWO 155 V SL

BWO 155 R SL

BWO 155 SL universal motor



#### BWO 155 Z

Digital timer

BWO 155 V Z

BWO 155 R Z

BWO 155 Z universal motor



#### BWO 155 ZM/ZM KT

Mechanical timer  
with or without anti-scaling thermostat

BWO 155 V ZM/ZM KT

BWO 155 R ZM/ZM KT

BWO 155 ZM/ZM KT universal motor



#### BWO 155 ERT

Electronic control thermostat

BWO 155 V ERT

BWO 155 R ERT

BWO 155 ERT universal motor



#### BWO 155

Continuous operation

BWO 155 V

BWO 155 R

BWO 155 universal motor



#### BWO 155 12 V

Continuous operation for 12 V DC

BWO 155 V 12 V

BWO 155 R 12 V

BWO 155 12 V universal motor

oT = without thermostat

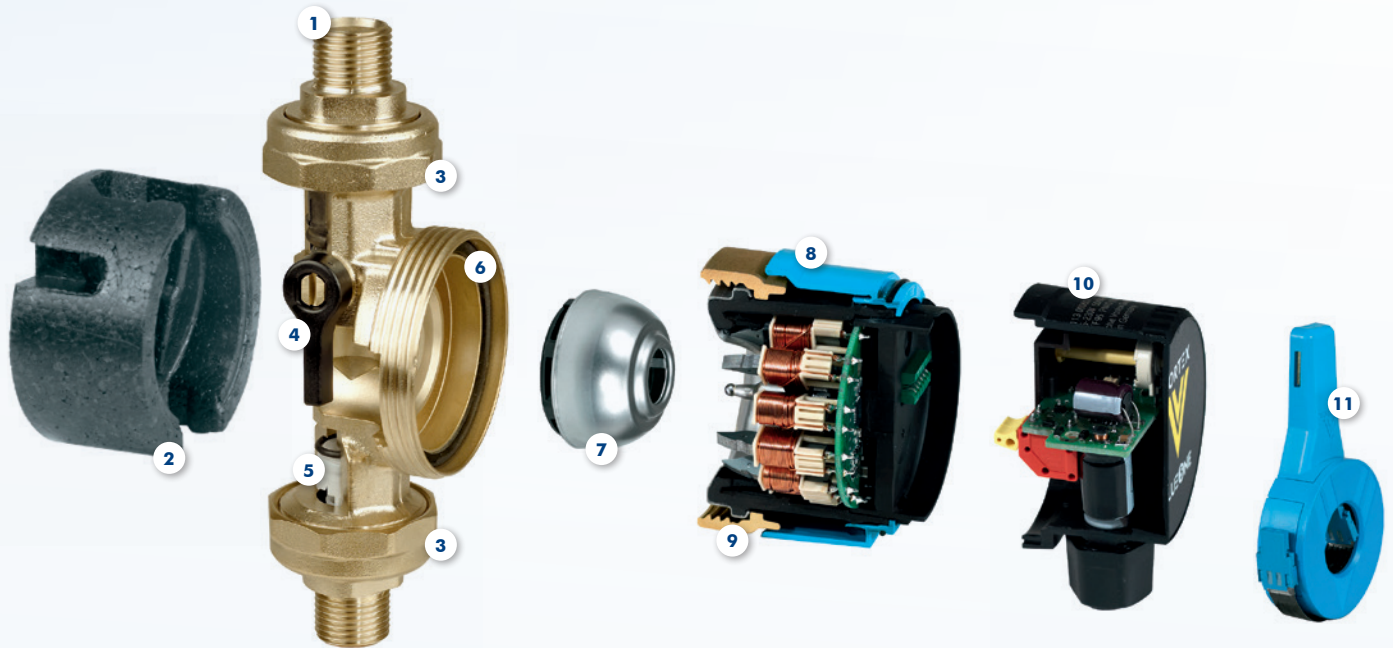
KT = with anti-scaling thermostat

# BLUE ONE DOMESTIC HOT WATER PUMPS

## OVERVIEW OF COMPONENTS



VORTEX pumps are mainly intended for installations in domestic pressurised hot water circulation systems suitable for single and two family houses. Depending on the layout of the pipe system, the pumps can even be deployed in multi-family houses if auto-balancing circulation controllers are installed for circuit regulation. Special versions for other applications and media are available on request.



### 1 PUMP HOUSING

- ▼ V-pump housing with R 1 1/4" external thread for cap fittings, non-return valve and ball shut-off valve.
- ▼ Optional:  
R-pump housing with R 1/2" internal thread.



### 2 INSULATION SHELL

- ▼ Prevents unnecessary heat losses

### 3 CAP FITTINGS

- ▼ For screwing, soldering or pressfitting.

### 4 BALL SHUT-OFF VALVE

### 5 NON-RETURN VALVE

- ▼ Defines direction of flow.
- ▼ Prevents gravity circulation.

### 6 SEALING RING

### 7 PERMANENT MAGNET ROTOR

- ▼ Can be cleaned and replaced.

### 8 PERMANENT MAGNET MOTOR

- ▼ Electronically commutated DC motor (ECM technology), voltage transformer for 230 V~.
- ▼ Also available as a 12V DC pump.
- ▼ Built according to Vortex' original spherical motor principle.
- ▼ Dry run protection – Interrupts rotor run automatically.

### 9 CAP NUT

- ▼ Enables quick demounting of the motor from the pump housing.
- ▼ Cleaning or descaling of the wetted parts is made easy.

### 10 CAP OR CONTROL MODULE

- ▼ With speed control.
- ▼ Hexagon socket screws.
- ▼ Pumps BWO 155 without a control module can be retrofitted with a control module (ERT, Z, SL) by just replacing the cap.

### 11 CABLE BOX

- ▼ For BWO 155 SL.
- ▼ With temperature contact sensor for the supply line.

# BENEFITS OF THE NEW BLUEONE BWO 155 SERIES

- ▼ Extremely quiet
- ▼ Minimal power consumption – as low as 1 watt on average (based on the power-on time)
- ▼ High pump rate as required
- ▼ Compact design
- ▼ Simple connection – cables connected without tools
- ▼ Extremely versatile – many control modules to choose from
- ▼ BWO 155 universal motor – compatible with all commercially available pump housings

## BLUEONE PUMPS MADE IN GERMANY UNIVERSAL – SIMPLE – HIGHLY EFFICIENT



Brochures, as well as operating and installation instructions, can be downloaded from:  
[www.deutsche-vortex.com](http://www.deutsche-vortex.com)



More than 50 years of experience in the development and production of domestic hot water pumps.

All models with shaftless, blocking current resistant spherical motor with ECM technology

Max. delivery head: 1.3 mWC

Max. pump rate: 950 l/h

Electrical connection: 1~115-230 V/50-60 Hz or 12 V =

Pumped medium: domestic hot water (unrestricted water hardness), 2 °C - 95 °C



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