AQA total Energy

For vitality, limescale and corrosion protection in drinking water

Typ: 1500, 2500, 4500

Product data sheet

7.05

AQA total Energy 1500 wall-hung device and AQA total Energy 2500 floor-standing device

AQA total Energy 4500 wall-hung device

AQA total Energy with the internationally tested bi-polar technology for guaranteed limescale protection without salt

- DVGW test symbol for AQA total Energy 1500, 2500 and 4500

Purpose

AQA total Energy - with the new 3-phase technology to reduce limescale deposits and avoid corrosive damage in drinking water pipes (up to 40° German hardness) and in the downstream closed water heaters (up to 80°C hot water temperature).

AQA total Energy significantly minimises the surface corrosion in galvanised pipes and iron wires. It is also possible to minimise corrosion for copper pipes. AQA total Energy promotes the formation of the surface layer.

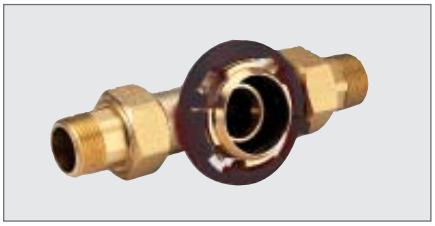
Scope of Delivery

AQA total Energy 1500 and 4500
Ready-to-use wall device with:
- Brass connecting module with backflow preventer and flow sensor
- Control unit with network connection
- **1 work unit** (cartridge refill) for **AQA total Energy 1500** with HydroModul quick connection system and transport cap
- **2 work units** (cartridge refill) for **AQA total Energy 4500** with HydroModul quick connection system and transport cap
- Brass connecting screws
- Fittings
- Device cladding
- Hexagonal socket wrench

AQA total Energy 2500
Ready-to-use floor-mounted device with:
- Brass connecting casing with backflow preventer and flow sensor
- Pre-cabled electronic control unit which is integrated into the device
- 1 work unit with HydroModul quick connection system and transport cap including cartridge refill
- 2 flexible corrugated tube hoses DN 25
- Installation wrench

Accessories only for AQA total Energy 2500
Connection module
For installation into horizontal and vertical pipes (only in connection with the Multiblock A).

Type 3/4“	Order no. 30012
Type 1“	Order no. 30014
Type 1 1/4“	Order no. 30020



Accessories only for AQA total Energy 2500
Multiblock A
With integrated bypass for time-saving and cost-saving connection of the water treatment system to the connecting module.
Replaces the assembly of a bypass pipe with stop valve (only in connection with the connecting module).Order no. 51966

Consumables for all AQA total Energy
- Cartridge refill (work unit)

Single-use cartridge refill
In comparison to systems which do not replace the cartridges and accept hygienic risks (formation of sludge and bacteria in the container), the single-use cartridge refill system of AQA total Energy guarantees a consistent maximum level of hygiene in your drinking water system.
The single-use compact cartridge refill is simply replaced after its capacity has been used up. The used-up cartridge refill can be disposed of.

Function

The AQA total Energy device is installed into the drinking water pipe, directly after the water meter and the drinking water filter; preferably this is carried out in an anti-corrosive and functional HydroMODUL domestic water distributor.
AQA total Energy works both in cold water and in the downstream hot water system: environmentally-friendly, economic and without the need to add regenerating salt.

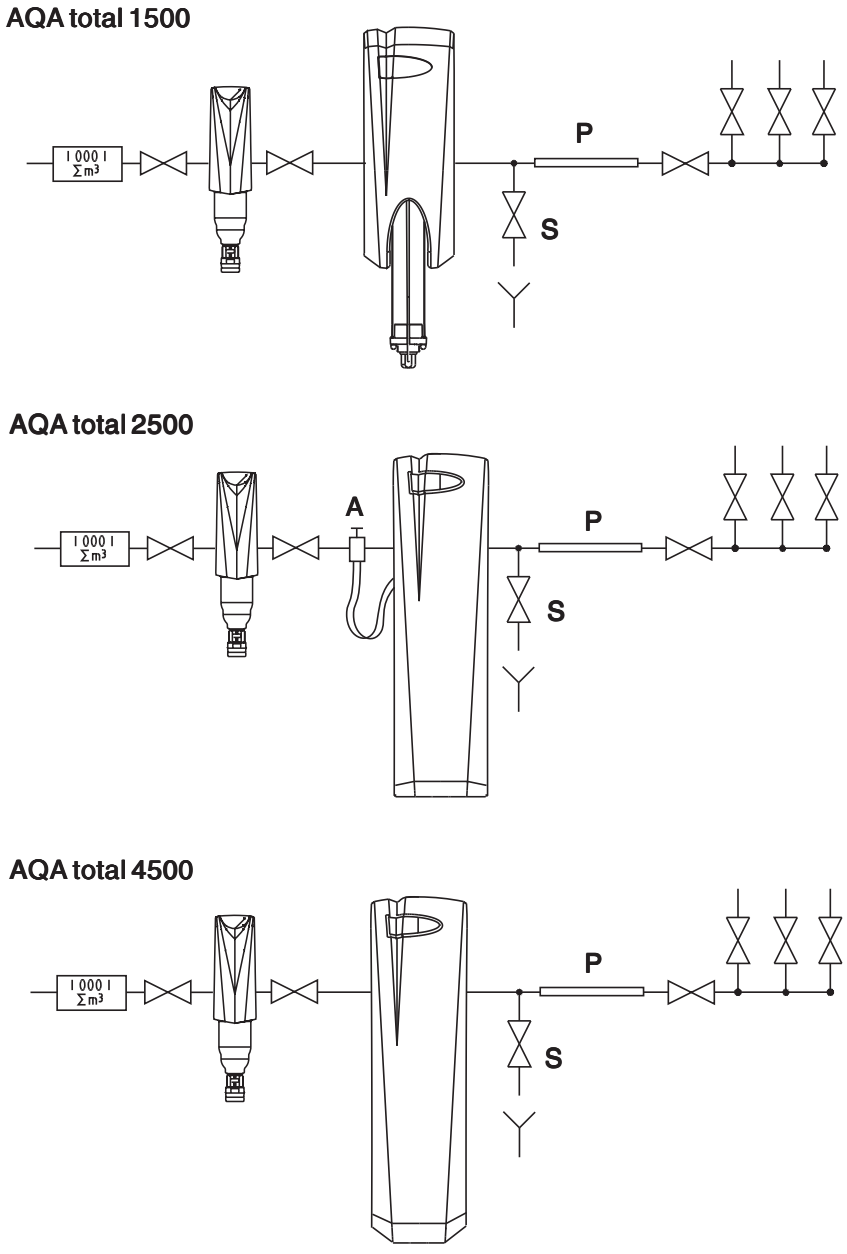
AQA total Energy with 3-phase Technology:

Phase 1: Drinking enjoyment rich in vital substances
In comparison with water softening carried out on the basis of ion exchange, all the important mineral nutrients, such as magnesium and calcium, are completely retained with the gently limescale protection technology of AQA total Energy.

Phase 2: Limescale protection
AQA total Energy has a work unit in the form of a multiple electrode structure. It consists of electrically conductive and non-conductive particles.
Depending on the water quality and the flow speed, precisely defined energy/voltage impulses are applied to the work unit when water is extracted.
From each electrically conductive particle, a bi-pole is formed which has a positive and a negative end.
By switching the poles, these bi-poles change their signs.
Furthermore, a local shift of the limescale/ carbon dioxide balance occurs in the electrically conductive particles and tiny calcium carbonate crystals form, so-called nanocrystals.

Due to the slight size (less than 100 nanometres), these nanocrystals carry an electrical charge, which prevents a merger among them. All the nanocrystals, in turn, are able to catch limescale, which occurs in the water due to turbulence or water heating. The limescale is stabilised, it remains in the water and not in the pipe and boiler.

Phase 3: Corrosion Protection
To protect against surface corrosion, the work unit has a modification, which stimulates the structure of a protective cover layer in an electro-chemical manner. In cooperation with Phase 2, a unique homogeneous and fine, protective cover layer is created with a minimum quantity of the mineral nutrient volume needed to date.



A Connection module with multiblock A
P Test piece
S Flush valve

The test piece is an easily installable piece of new pipe and should have a length to diameter ratio of about 6 to 1. Most easily realised in the Hydro MODUL distributor with 2 HM extension. It should be installed immediately downstream from the AQA total Energy unit.

Installation conditions

Local installation regulations, general guidelines, general hygiene requirements and technical data shall be followed.

The installation location must be protected against frost and provide protection against chemicals, dyes, solvents, vapours and environmental influences.

The ambient temperature must not exceed 40°C. Protect the unit from direct sunshine and UV light.

The area from the water meter to 1 m after the AQA nano device shall have a corrosion-resistant finish. We recommend the use of a HydroMODUL domestic water distributor, which also enables a rapid and cost-effective installation.

The unit must have an upstream DIN/DVGW (or ÖVGW) certified drinking water filter to protect against foreign material.

For community water supplies, we recommend a backwash filter (automatic or manual), and a BWT filter with changeable cartridges for spring water. Both can be easily docked on to a DR pressure reducer module.

At high inlet pressures (e.g.: 10 bar or more) it may be necessary to install a calming section downstream of the pressure reducer.

A testing line is required for the function check of the AQA nano. This can be done simply with 2 HM-extensions (= 244 mm) in the HydroMODUL system.

To protect the whole installation and the system, a pressure reducer should be added at a mains pressure greater than 4 bar.

A mains connection (230V/50 Hz fuse contact socket) must be available nearby.

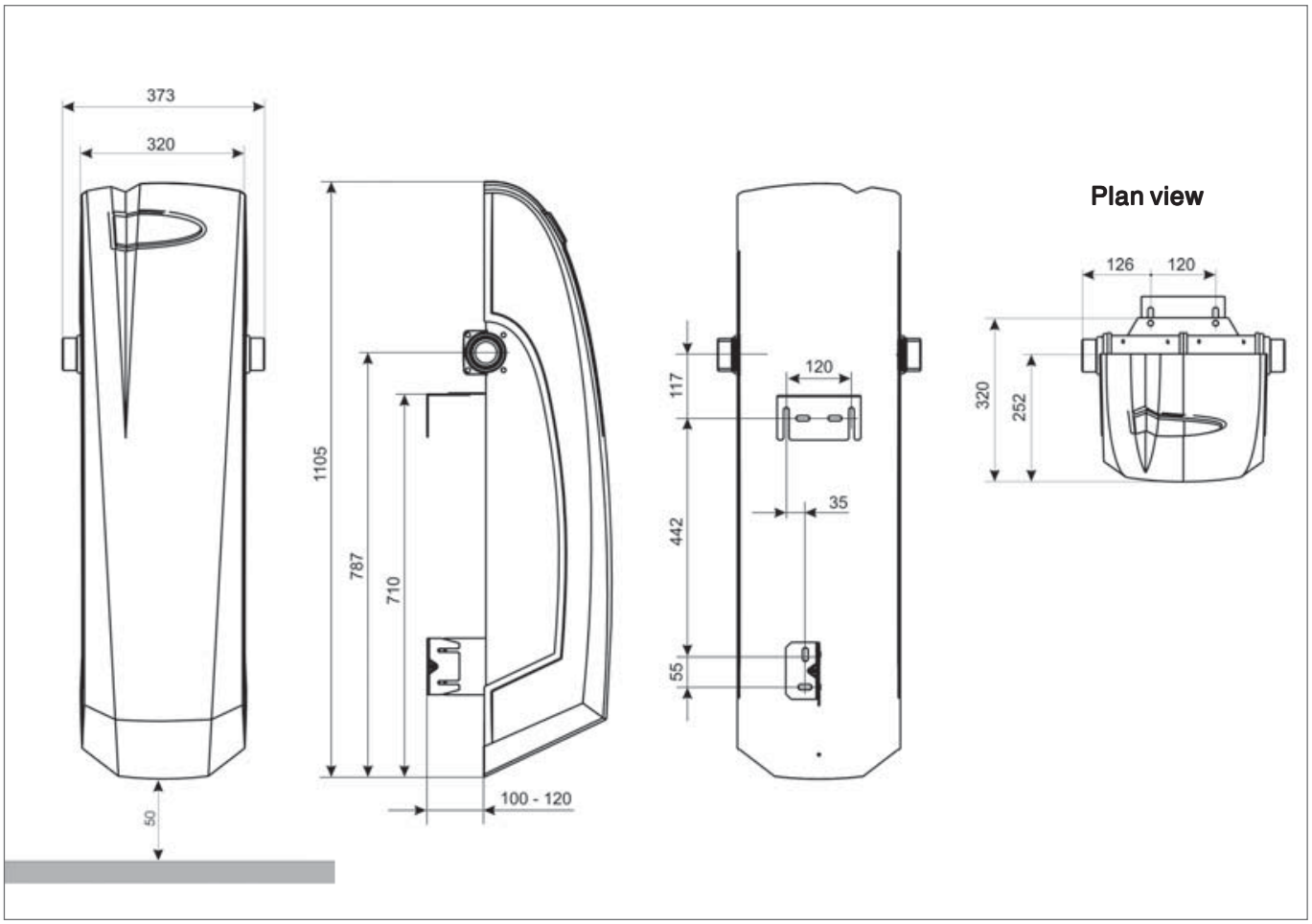
Caution: With pressure fluctuations and surges, the sum of pressure surge and pressure at rest must not exceed the nominal pressure.
The positive pressure surge must not exceed 2 bar and the negative pressure surge must not exceed 50% of the working pressure that is set (see DIN 1988, Part 2.2.4).

If pressure surges from neighbouring pipe systems that exceed the actual test pressure of the unit cannot be excluded, a suitable water surge damper must be installed to protect the unit in compliance with applicable national standards and regulations.

Technical data

AQA total Energy		4500
Type of assembly		Wall-hung
Connection nominal width	DN	40
Connecting thread	Inch	1 1/2" AG
Treatment capacity, max	l/min	75
	m^3/h	4,5
Residential units	RU	5 - 12
Number of cartridges	Pce.	2
Treatment capacity per cartridge	m^3	380±20
Treatment capacity, total	m^3	760±40
Pressure loss at nominal pressure	bar	0,8
Nominal pressure	bar	10
Operating pressure, min/max	bar	2 / 10
Water hardness, max	°dH	40
Water-/Ambient temperature, max	°C	30 / 40
Boiler temperature, max	°C	80
Operating weight, approx.	kg	33
Mains supply	V/Hz	230/50
Protection class		IP 54
Electrical connection	W	120
Energy consumption	kWh/m^3	0,055
Capacity in standby mode	Wh	13
Order number, flow direction from left to right*		**80009**
Flow direction from right to left*		**80006**

***The flow direction can changed later with minimal effort.**



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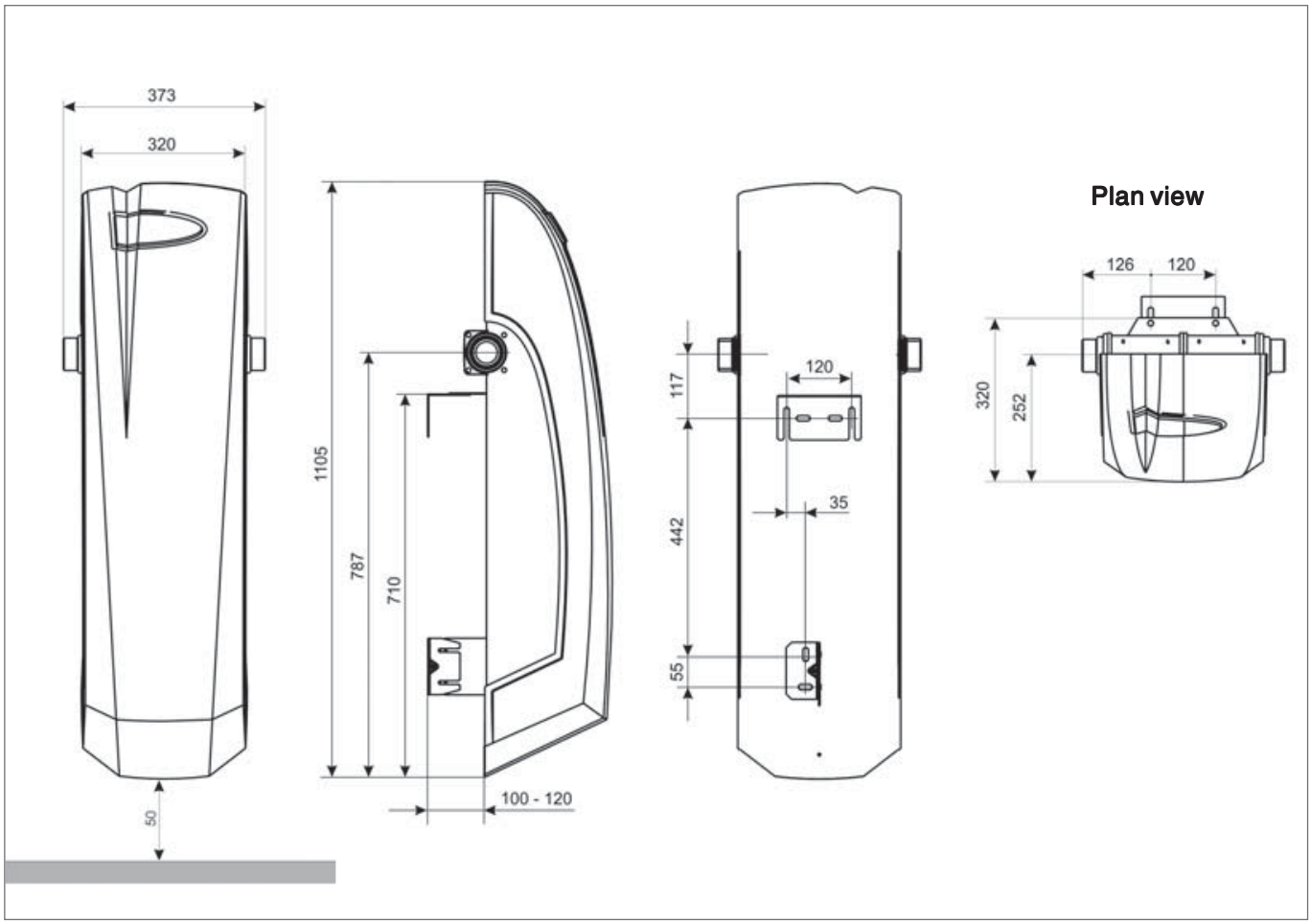

BWT
BEST WATER TECHNOLOGY

BWT UK Limited
BWT House The Gateway Centre, Cressex Business Park, Coronation Rd,
High Wycombe HP12 3SU
E-Mail: enquiries@bwt-uk.co.uk Telephone: +44 (0)1494 838100