

reflex

Thinking solutions.

Competence in water make-up & water treatment

Fillcontrol – The new standard



For
medium sized
systems
**between 300
& 1,000 kW**



Fillcontrol Auto Plus & Fillcontrol Auto Max

Be safe with our controlled water make-up technology

Maintaining the correct system pressure is crucial for the reliable and efficient operation of systems. This is the only way to ensure consistency for heat transfer and storage, as well as the proper interaction of all other system components.

Reflex offers automated water make-up technology for all common system configurations in heating, cooling and solar systems—using the advanced products of the Fillcontrol series.

Advantages of the Fillcontrol Auto range

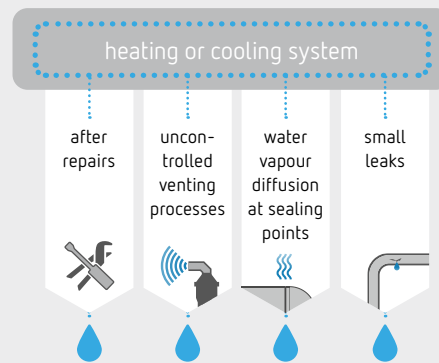
With our Fillcontrol Auto range, we supply the optimum automatic make-up system for every system requirement and size. Easy to install and maintain, Fillcontrol Auto products guarantee the compensation of system-related water losses and thus ensure a continuously safe and efficient system operation. They offer a full range of functions and, if required, can even be equipped with integrated vacuum spray tube degassing for maximum water quality and optimal heat transfer.

The Fillcontrol Auto range ensures maximum planning flexibility as well as seamless integration across the entire system from the pressurisation unit to the softening solution. In addition to automated water make-up, the other necessary components – from diaphragm expansion vessels and softening or demineralisation systems to ball valves and other system-related elements – are perfectly matched and ensure maximum safety and compatibility throughout the entire system. All from a single source.



Why do water losses occur?

There are many reasons why even regularly maintained and technically flawless systems lose water. This can be caused by small leaks, water vapour diffusion at sealing points, uncontrolled venting processes or even repairs.



Reflex Winkelmann GmbH is a leading solution provider for the professional operation of water-carrying systems in supply engineering.

With decades of experience, exceptional competence in delivering solutions, highest product quality as well as state-of-the-art technology and innovative functionality, we have continuously expanded our position

in this increasingly important and technically demanding market.

As a reliable partner in the HVAC industry, we think in solutions and focus on taking care of our environment and fossil energy resources to support your business in realizing energy-efficient, comfortable and sustainable systems.



- Easy installation and time-saving maintenance
- Flexible planning
- Seamless system integration
- Error handling assistance and protection modes with smart control
- Full compliance with UK regulations and WRAS approved ball valve
- Specifically designed for systems between 300 & 1,000 kW



Built for efficiency and safety

Fillcontrol Auto Plus



Fillcontrol Auto Plus is a compact, fully integrated solution for the safe and reliable replenishment of system water in sealed heating and cooling systems.

The unit offers a stable pressurisation mode with a backflow prevention through a physical system separation using a break tank and ball valve. One or dual-pump units provide consistent water make-up, ensuring reliable, long-term functionality.

- state-of-the-art water make-up
- compact , space-saving design ideal for all situations with space limitations
- high reliability with a 2-pump version and alternating mode of operation



Technical features

- system for water make-up in sealed heating and chilling systems
- 18 l breaktank with AB Air gap
- user-friendly controller with clear LCD display
- automatic protection against dry running and flooding
- wall and floor mounting
- 7 volt free contacts which include:
 - minimum & maximum pressure
 - low water cut out & pressure level detection
 - pump failure & time out
 - common fault contact
- suitable for systems up to 300 m³
- for systems with max. pressure of 10 bar and max. temperature of up to 80 °C, max. ambient temperature 50 °C

Type	Art. No.	Connection inlet/outlet	Max. height h [mm]	Width w [mm]	Depth D [mm]	Weight [kg]	Pump working pressure [bar]	Max. electrical rated power [kW]
Auto Plus 1/30	8813010	½" / 15 mm	628	460	303	27.50	3.5	0.667
Auto Plus 1/60	8813020	½" / 15 mm	628	460	303	35.50	6.5	0.713
Auto Plus 2/30	8813030	½" / 15 mm	628	460	303	29.50	3.5	0.667
Auto Plus 2/60	8813040	½" / 15 mm	628	460	303	37.50	6.5	0.713

The WRAS Approved Product Certification Mark is owned by WRAS.

Fillcontrol Auto Max

Fillcontrol Auto Max combines fully automatic pressure control with efficient vacuum spray tube degassing for sealed heating and cooling systems.

The pre-assembled, space-saving skid includes reliable backflow prevention through a physical system separation using a break tank and ball valve. Its dual-pump make-up and water treatment unit ensures consistent water quality and a stable long-term operation – ideal for demanding HVAC applications.

- state-of-the-art water make-up and water treatment
- integrated automatic degassing process with vacuum spray tube to improve system efficiency and protect against corrosion
- fully automated operation with data interface for seamless integration into modern building management systems



Technical features

- combined water make-up unit which includes Servitec module for automatic vacuum spray tube degassing
- commissioning via digital controller and in conjunction with static expansion vessel(s)
- system pressure sensor
- 18 l breaktank with AB Air gap
- WRAS approved ball valve
- user-friendly controller with BMS-connection
- clear LCD display
- 7 volt free contacts which include:
 - minimum & maximum pressure
 - low water cut out & pressure level detection
 - pump failure & time out
 - common fault contact
- suitable for systems up to 300 m³
- for systems with max. pressure of 10 bar and max. temperature of up to 90 °C

Type	Art. No.	Connection inlet/outlet	Max. height h [mm]	Width w [mm]	Depth D [mm]	Weight [kg]	Pump working pressure [bar]	Max. electrical rated power [kW]
Auto Max 2/25	8813305	½" / 1"	170	236	128	57.00	2.5	0.51
Auto Max 2/50	8813503	½" / 1"	170	314	150	60.00	4.5	0.53

The WRAS Approved Product Certification Mark is owned by WRAS.



Perfect compatibility

The Fillcontrol range is easily compatible with other Reflex products, such as membrane pressure expansion vessels, which are required for the installation of Fillcontrol Auto Plus and Auto Max (see examples on [page 7](#)).

Reflex N vessel range

	N 8 – 25 l	N 35 – 140 l	N 200 – 1.000 l
Technical Features	<ul style="list-style-type: none"> for closed heating and cooling systems with threaded connections vertical from 35 litres, wall mounting up to size N 80 non-replaceable diaphragm according to DIN EN 13831 max. permissible operating temperature 70 °C for antifreeze additive of at least 25 – 50 % approval according to Pressure Equipment Directive 2014/68/EU durable epoxy resin coating with factory-pressurised gas chamber max. permissible system temperature 120 °C 		

Reflex N accessories

AG connection set

- for rapid assembly and maintenance of membrane expansion vessels
- incl. secured shut-off and connecting bend with screw connection
- with drainage cock (G 1/2") and hose nozzle
- according to DIN EN 12828
- 10 bar/100 °C



Cap valve

- secured shut-off for maintenance and disassembly of expansion vessels
- with drainage
- according to DIN EN 12828
- 10 bar/120 °C



Digital pressure gauge

- inlet pressure tester up to about 9 bar



Wall-hung console with multi-connections

- console with multi-connections for Reflex 8 – 25 litres
- With vessel connection



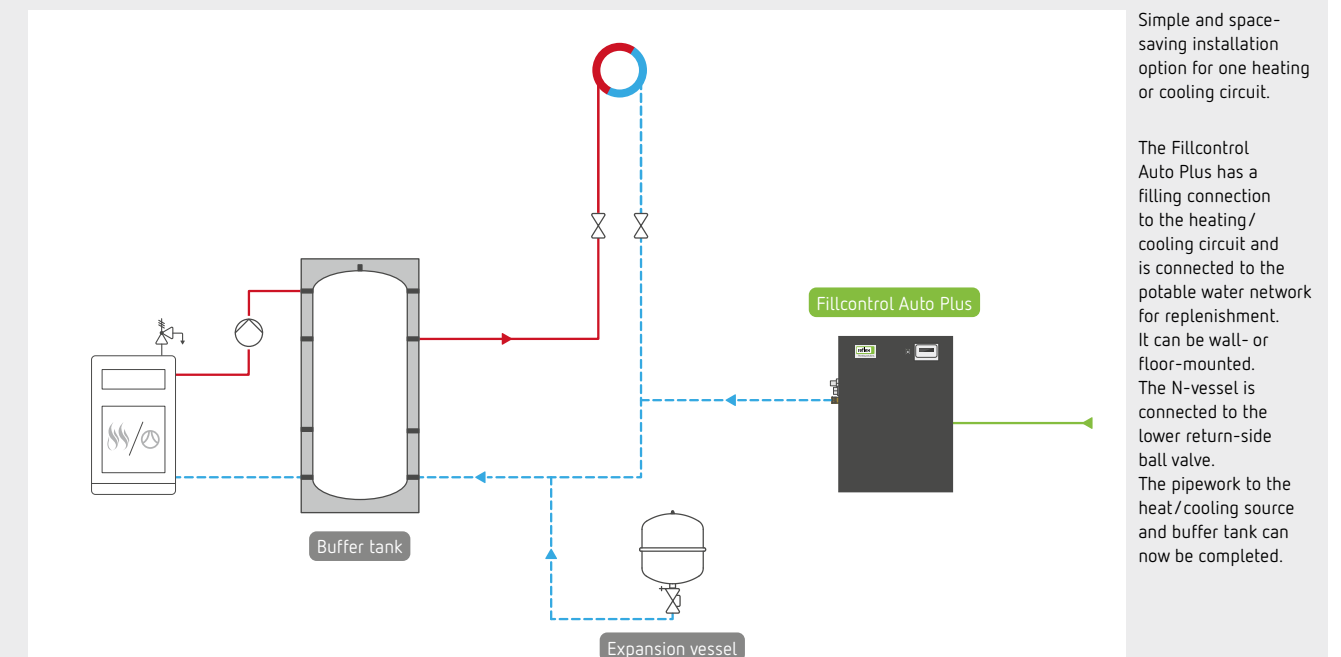
Wall mounting bracket with clamping strap

- console with clamping strap for Reflex 6 – 25 litres
- upright assembly

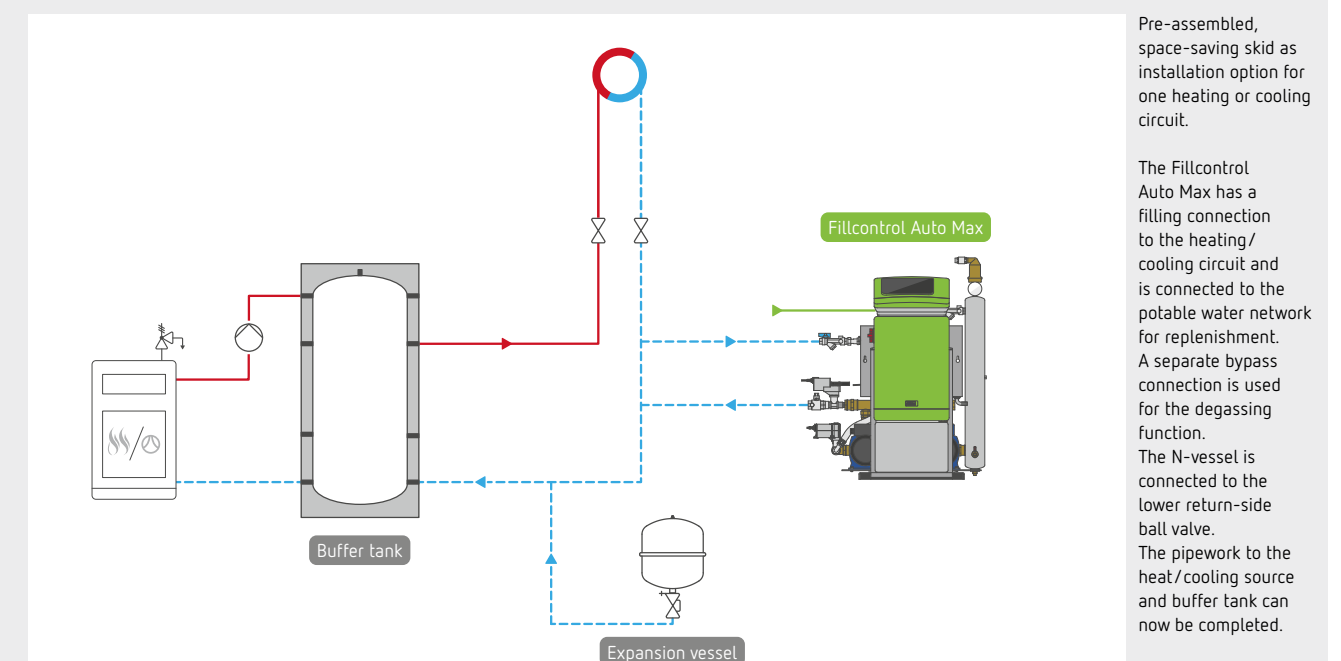


Installation examples

Fillcontrol Auto Plus in one heating or cooling circuit



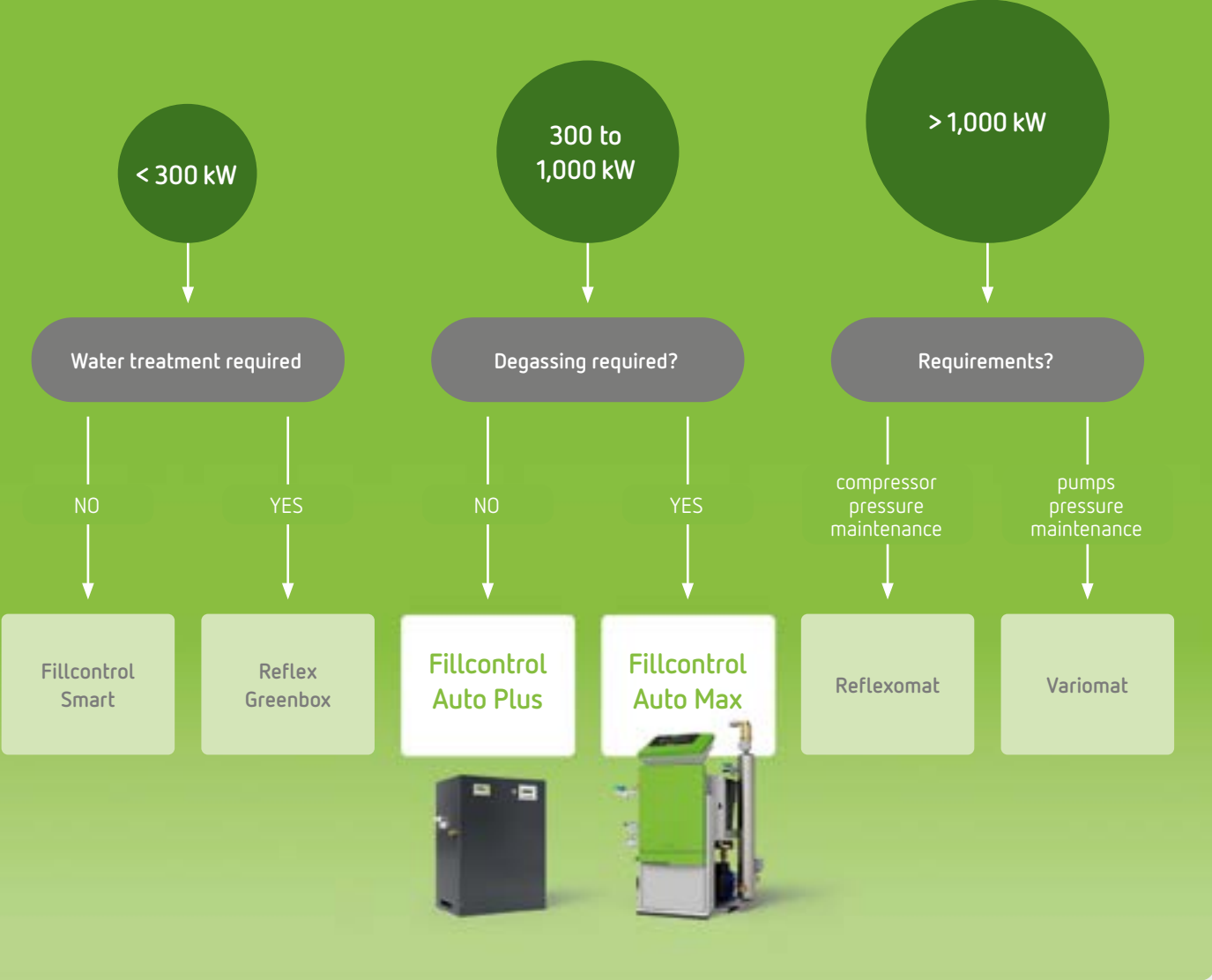
Fillcontrol Auto Max in one heating or cooling circuit



The diagrams merely illustrate the different connections. They have to be adapted to local conditions and detail added.

Which automated water make-up solution best fits your system?

Already have a pressure maintenance system in place? This decision guide will help you to identify the automated water make-up unit that best suits your existing setup, based on system size.



For further information about Reflex Greenbox, Reflexomat or Variomat go to our website or scan the QR code to find our product brochures about pressurisation systems, expansion vessels and more.

www.reflex-winkelmann.com/en



Products for smaller systems

Suitable for small systems under 300 kW

For systems with static pressure maintenance and no integrated system controller, Fillcontrol Smart ensures reliable automatic water make-up. The Reflex Greenbox combines all components for water treatment, degassing and hydraulics in one box. It is available in four variants for different system requirements. Both products are designed for systems smaller than 300 kW.

Fillcontrol Smart



- compact automatic water make-up station, suitable for systems with a membrane expansion vessel according to EN 806 and EN 1717
- with multi-national certified system separator of Type BA
- Control Smart controller
- RS-485 interface, optional connection of bus and expansion modules
- capacity monitoring of a Fillsoft water treatment system possible
- controlled make-up using the Fillset Safecontrol motor ball valve
- connection voltage 230 V/50 Hz
- water make-up capacity approx. 1,6 m³/h at Δp = 1,2 bar
- minimal flow pressure p₀ + 1,5 bar
- permissible maximum inlet pressure 10 bar

	Type	Art. No.	DG	Connection inlet/outlet	Height h [mm]	Width w [mm]	Depth D [mm]	Weight [kg]
10 bar 65 °C	Smart	6813500	0079	R 1/2"/R 1/2"	299	320	194	3,20

Reflex Greenbox



- for closed heating and cooling systems
- max. volume flow 4,3 m³/h
- permissible flow/return temperature 90/70 °C
- max. working pressure 4,5 bar
- pipe diameter 39 mm
- type of protection IP X4
- power supply 230 V
- sound pressure level at max. loads ≤52 dB(A)
- thermal insulation according to EnEV
- 100 % factory-checked for leak tightness
- expansion vessel connection male thread 1"
- controlled water make-up
- optional softening or demineralization of the make-up water
- standardised 125 mm connection to manifold and pump groups with 1 1/2" union nuts, flow on the left
- Control Smart controller:
 - simplified commissioning via commissioning wizard
 - integrated p0 wizard for fault-free commissioning
 - RS-485 interface and factory-fitted Modbus RTU
 - operating wizard for troubleshooting, commissioning, service and maintenance
- stopcock connections:
 - top 1 1/2" union nut
 - bottom 1 1/2" female thread

Type	Art. No.	System volume V _A up to [m ³]	Electric connection	Height h [mm]	Width w [mm]	Depth D [mm]	Weight [kg]
S1	8311100	3.5	230 V/50 Hz	890	550	318	25.00
S2	8311200	3.5	230 V/50 Hz	890	550	318	24.00
S3	8311300	3.5	230 V/50 Hz	890	550	318	23.00
S4	8311400	–	230 V/50 Hz	890	550	318	22.00

Products for larger systems

Suitable for
large systems
> 1,000 kW

The pressurisation stations Reflexomat and Variomat are perfect for systems larger than 1,000 kW. The main difference is the type of control: either compressor- or pump-controlled.



- Compressor-controlled pressure maintenance: **Reflexomat**
- A compressor controls the pressure on the gas side of the vessel.
 - Reflexomat can be upgraded with additional make-up and degassing equipment. The option for intelligent make-up and degassing inclusion is already integrated in the control unit of Reflex Control.



- Pump-controlled pressure maintenance: **Variomat**
- Pumps are used to control the pressure on the water side.
 - Degassing is included in the performance specification of the Variomat: A timer controls a partial flow from system to pressureless expansion vessel, where it depressurises. In slight overpressure, released gases escape through a special valve.
 - Make-up is also part of the performance specification. If the water falls below the lower level, the leakage and tube fracture detection capability ensures automatic make-up.

Combination matrix

Reflexomat

RS control unit

+

RG primary vessel

Variomat

VS control unit

+

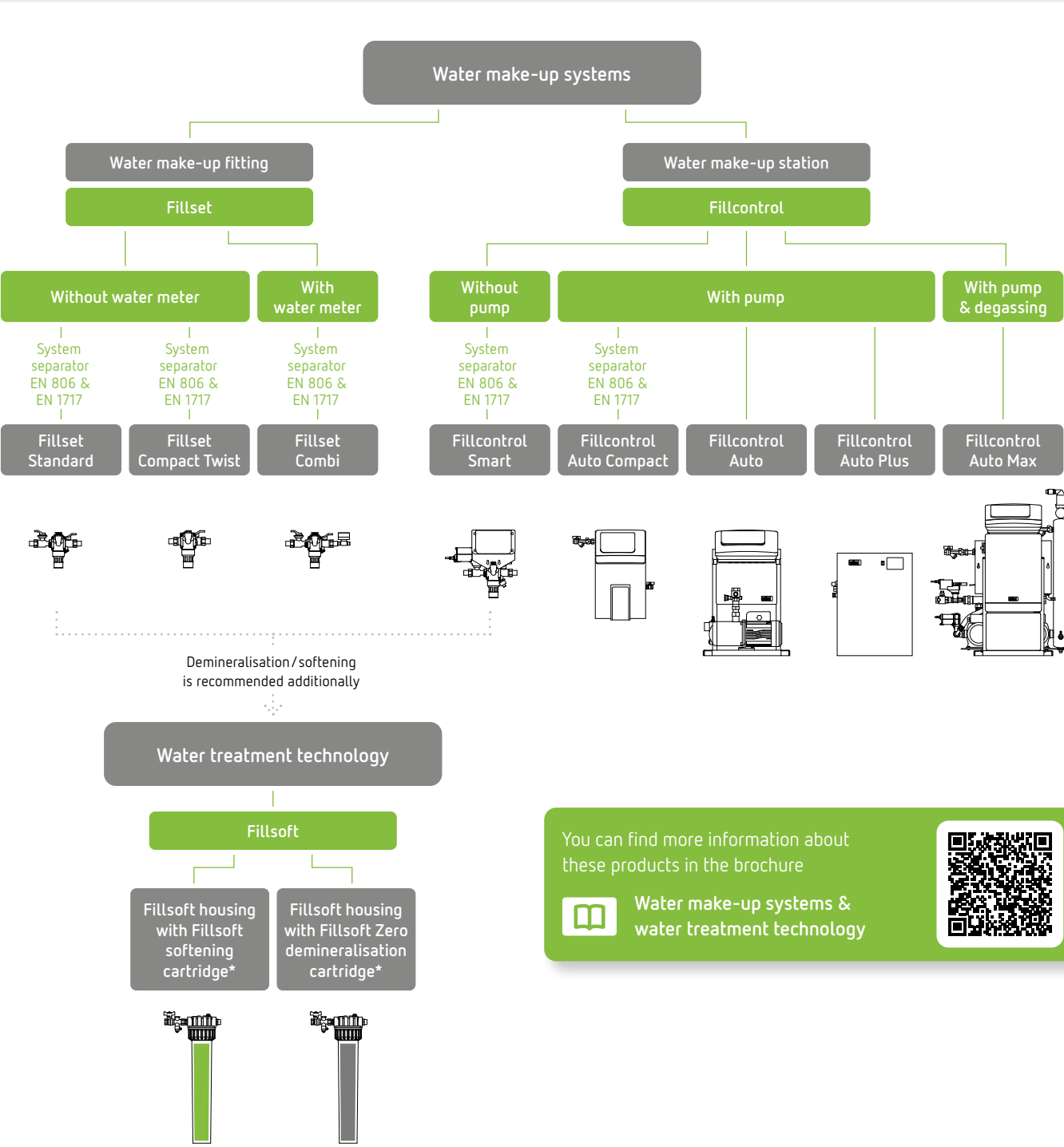
Connection set

+

VG primary vessel

Overall portfolio overview

Reflex water make-up systems & water treatment technology



*Note: The Fillsoft housing comes in two versions and can accommodate either one (Fillsoft I) or two cartridges (Fillsoft II). A combination of one softening and one demineralisation cartridge is not possible when using Fillsoft II.

Always up to date

Further product literature and materials can be
downloaded at or hard copies ordered from

www.reflex-winkelmann.com/en/services/documents-and-videos

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Subject to technical changes



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