

# mainsboost

**Eliminate poor mains water pressure and flow problems with Mainsboost.**

Designed for use with unvented (mains pressure) systems to provide a simple to install, cost effective solution to the increasingly common problem of low mains water pressure and flow.



**without mainsboost**

**with mainsboost**

**Performance on demand**

# mains water boosting

## Boosting mains water performance.

In many homes, the traditional hot water immersion heater and central heating boiler fed by a cold water tank installed in the loft has been replaced by a combi-boiler or pressurised hot water cylinder. These system types can often suffer from low water pressure at the outlet.

## Mainsboost offers a solution...

### Boosting mains water without a break tank.



In many properties the traditional hot water cylinder and conventional central heating boiler has been replaced by a combi boiler or pressurised hot water system. These system types are connected directly to

the incoming mains water supply. However, whilst these modern heating and hot water systems tend to be more efficient and offer advantages over traditional boiler and cylinder systems, there is one potential drawback. They are reliant on the incoming mains water pressure and flow to operate effectively. In some instances the ability of the mains supply to deliver the flow of water required at pressure can be lacking and deliver a disappointing performance.

### A range of solutions for a range of properties

Mainsboost water performance systems are specifically designed to address the lack of mains water performance and stabilise water pressure to dramatically improve water flow to all direct on mains appliances; delivering improved performance from unvented cylinders, combination boilers and high performance shower heads for example, allowing the possibility to run multiple outlets simultaneously! Imagine filling a bath, running a shower and flushing a toilet all at the same time, with no reduction in water flow!

The increase in water performance is achieved by the Mainsboost water performance system's patented pressure vessel technology, which uses 'green energy' to capture a volume of water ready to use at pressure in a sealed hygienic vessel. When a tap is opened or a shower is turned on, water is released under pressure to meet the demand, even if multiple outlets are in use simultaneously.

Additionally, if both pressure and flow are poor from the mains supply, the Mainsboost vessel can be aided by a specifically designed pump. Mainsboost Plus, Charger and Flomate systems supplement the unrestricted performance of the Mainsboost vessel to provide the facility to store water at pressure to meet peak demand and deliver an enhanced flow of water at increased pressure to multiple outlets at the same time. The range includes a compact pump for smaller properties and variants designed to sit neatly within any standard kitchen cupboard, or horizontal alternatives for where space is restricted. The options are limitless!



mainsboost

Full technical data sheets are available to download:  
[www.stuart-turner.co.uk](http://www.stuart-turner.co.uk)

For further advice on selecting the correct product call:

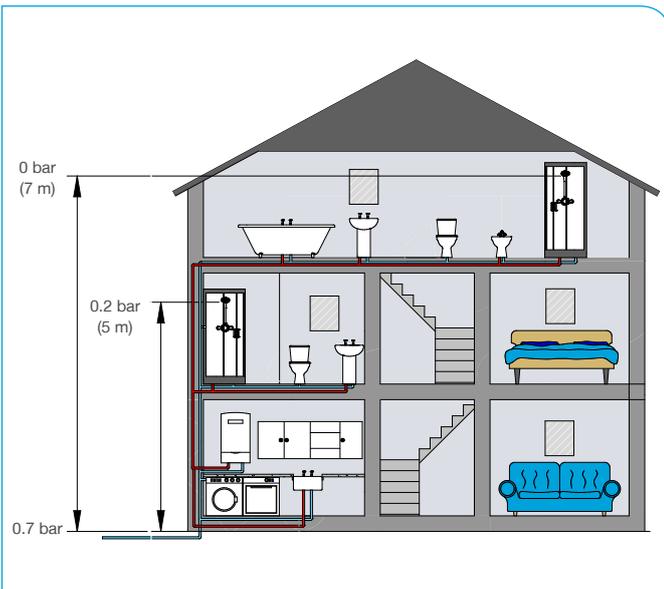
**pumpassist**

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# Unvented systems explained

## Unvented System (Mains Pressure)

More common in newer properties, this system uses the mains water supply to directly feed cold water services, a combination boiler or pressurised hot water cylinder. The system performance is dependent on the incoming mains pressure to the property, which may be low or intermittent. Unvented systems typically require 1.5 bar working pressure and 20 litres per minute flow to operate effectively.



## Water Pressure

OFWAT stipulates that water companies must maintain a minimum pressure in the supply pipe of seven metres static head (0.7 bar pressure) at pavement level. The majority of UK water authorities typically quote a standard of service which specifies that water pressure should not normally fall below ten metres head (1 bar pressure).

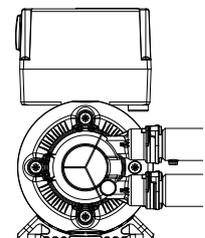
At this pressure, the pressure available on the second or third floor might be extremely low or even non-existent.

## UK Water Regulations

A pump may be fitted directly to the incoming mains water supply, as long as it has been approved by WRAS – The Water Regulations Advisory Scheme ([www.wras.co.uk](http://www.wras.co.uk)) and has been designed to limit the water flow drawn from the mains to a maximum 12 litres per minute.

## Mainsboost

Suitable for unvented systems and designed to be connected directly to the incoming mains water supply where there is low or intermittent mains water pressure. Mainsboost systems provide additional pressure and flow to multiple outlets simultaneously within a property, including unvented boilers.



Properties within the UK generally use two types of plumbing systems, understanding these is the first step to ensuring you select the correct pump solution for your property.



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# mainsboost

**Designed to stabilise water pressure and increase flow to combination boilers and unvented systems allowing multiple taps and showers to be used at the same time.**

It's wide range offers the solution to low or intermittent mains water supply for any sized property using simple and effective patented technology to ensure that when an outlet is opened, water is unrestricted and delivered at pressure to boost the incoming mains water supply. Delivering water where you want it, exactly when you want it, without losing performance.



The premium quality construction of the Mainsboost range is designed to provide quality, reliability and ensure performance on demand.

Mainsboost systems are available in a wide range of sizes to suit every application and will deliver pressure and flow to multiple outlets.

Whole house  
Bathroom  
En-suite  
Cloakroom  
Kitchen  
Utility room

## Performance on demand

## Features and benefits

### Performance

- Up to 80 litres/minute per vessel
- 100 - 1000 litre capacity vessel options
- Silent operation
- Maintenance free
- Consumes no electricity

### Quality

- UK water regulations compliant
- WRAS Approved
- ISO 9001:2015
- CE compliant

### Reliability

- 5 year guarantee
- Robust construction
- Long life butyl diaphragm
- Integral strainer

Mainsboost products are supplied with a comprehensive Upstream Line-in Kit for ease of installation



**Leak Free Diaphragm**

- Long life virgin butyl diaphragm
- Non porous
- Pressure efficient



**Schrader Valve**

- Simple installation
- Easy commissioning



**Access Aperture**

- Ease of installation and maintenance



**Elbow Joint**

- High quality stainless steel construction



**Integrated Non-return Valve**

- Stabilises water pressure
- Reliability built-in



**ULK Kit**

- Comprehensive installation kit included



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## Mainsboost

Designed for unvented systems where the mains pressure is greater than 2.0 bar but water flow is inadequate. Mainsboost is installed directly onto the incoming water supply and under mains pressure fills with water. The CAD2 water chamber is surrounded by positive pre-charged air pressure sealed within the vessel. When the chamber is full the unit reaches a state of pressure equilibrium, meaning the water pressure and pre-charge pressure are balanced. The Mainsboost system now has a volume of pressurised water ready for distribution throughout the property and where required can be supplied with multiple vessels options. Where space is an issue, Mainsboost is also available in a range of horizontal sizes to suit the application requirements and are supplied with an additional mounting cradle.



Mainsboost		Mainsboost Composite		Mainsboost Horizontal	
Part No	Model	Part No	Model	Part No	Model
44452	MB 100SV-1-22	44512	MB 100CV-1-22	44747	MB 200SH-1-22
44453	MB 100SV-2-22	44513	MB 100CV-2-22	44748	MB 200SH-2-22
44454	MB 100SV-3-22	44514	MB 100CV-3-22	44749	MB 200SH-3-22
44455	MB 130SV-1-22	44515	MB 130CV-1-22	44750	MB 250SH-1-22
44456	MB 130SV-2-22	44516	MB 130CV-2-22	44751	MB 250SH-2-22
44457	MB 130SV-3-22	44517	MB 130CV-3-22	44752	MB 250SH-3-22
44458	MB 200SV-1-22	44518	MB 200CV-1-22		
44459	MB 200SV-2-22	44519	MB 200CV-2-22		
44460	MB 200SV-3-22	44520	MB 200CV-3-22		
44461	MB 250SV-1-22	44521	MB 250CV-1-22		
44462	MB 250SV-2-22	44522	MB 250CV-2-22		
44463	MB 250SV-3-22	44523	MB 250CV-3-22		
44464	MB 300SV-1-22	44524	MB 350CV-1-22		
44465	MB 300SV-2-22	44525	MB 350CV-2-22		
44466	MB 300SV-3-22	44526	MB 350CV-3-22		
44467	MB 450SV-1-22	44527	MB 450CV-1-22		
44468	MB 450SV-2-22	44528	MB 450CV-2-22		
44469	MB 450SV-3-22	44529	MB 450CV-3-22		
44470	MB 450SV-1-28	44530	MB 450CV-1-28		
44471	MB 450SV-2-28	44531	MB 450CV-2-28		
44472	MB 450SV-3-28	44532	MB 450CV-3-28		
44744	MB 600SV-1-35				
44745	MB 800SV-1-35				
44746	MB 1000SV-1-35				

To help identify the correct product an example is highlighted below:

### MB 300SV-1-22

- MB = Mainsboost
- 300 = Vessel Size
- S = Material: Steel or C for Composite
- V = Orientation: Vertical or H for Horizontal
- 1 = Number of vessels included
- 22 = ULK connection size (mm)



# mains water boosting

"A cost effective, energy efficient and popular solution for both residential and commercial properties. The Mainsboost range of water performance systems are designed to deliver exactly the water performance customers expect when taking a shower or running a bath".

mainsboost



Bespoke options are available.  
For further information contact: [info@stpumps.co.uk](mailto:info@stpumps.co.uk).

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# mainsboost plus and charger

**Mainsboost Plus and Charger systems combine all the efficiency of the patented Mainsboost vessel with an innovative direct on mains pump to offer both increased water pressure and flow.**

Designed to deliver up to 3.5 bar pressure and increased flow rates throughout the property, Mainsboost Plus and Charger systems will provide a consistent and much improved water performance to all direct on mains appliances.



The premium quality Mainsboost Plus and Charger systems provide additional water pressure and flow to ensure performance on demand.

Mainsboost Plus and Charger are available in a wide range of sizes to suit every application.

Whole house  
Bathroom  
En-suite  
Cloakroom  
Kitchen  
Utility room

## Performance on demand

## Features and benefits

### Performance

- Up to 80 litres/minute per vessel
- Up to 3.5 bar pressure
- 100 - 450 litre capacity vessel options
- Built in green energy bypass
- Quiet operation
- Dry run protection
- Continuously rated

### Quality

- UK water regulations compliant
- WRAS Approved
- ISO 9001:2015
- BS EN 60335 compliant
- CE compliant

### Reliability

- 5 year guarantee\*
- Robust construction
- Long life butyl diaphragm
- Integral strainer

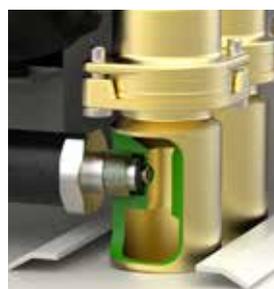
Mainsboost Plus and Mainsboost Charger systems are supplied with a comprehensive Upstream Line-in Kit for ease of installation.

\* 3 year guarantee on pump and fittings



#### Peripheral Design

Pressure efficient  
system friendly  
Compact size  
  
Charger option  
allows for remote  
installation



#### Pressure Transducer

Continuous  
system pressure  
monitoring



#### Green Energy Bypass

Manual operation  
for unrestricted  
system output



#### Flow Restrictor

Integrated flow  
restrictor  
ensures  
compliance with  
UK water  
regulations



#### Control Panel

Simple user  
control interface  
provides pump  
control and  
operating  
options.



#### ULK Kit

Comprehensive  
installation kit  
included



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# mainsboost plus and charger



## Mainsboost Plus

Suitable for unvented systems where pressure is less than 2.0 bar and water flow is insufficient. The WRAS approved Mainsboost Plus water performance system utilises the Mainsboost system's accumulator technology, supported by an innovative direct on mains Charger pump to provide up to 744 litres of water stored at pressure. Mainsboost Plus improves water performance throughout the property by increasing water pressure up to 3.5 bar and flow rates up to 80 litres per minute (per vessel) allowing unvented systems and combination boilers to perform as intended and offers the capability to run baths and showers at the same time with no reduction in pressure or flow. Mainsboost Plus can be supplied with multiple vessels and is also available in a horizontal orientation for where space is restricted.

Mainsboost Plus		Mainsboost Plus Continued		Mainsboost Plus Horizontal	
Part No	Model	Part No	Model	Part No	Model
44494	MBP 100SV-1-22	44503	MBP 250SV-1-22	44536	MBP 200SH-1-22
44495	MBP 100SV-2-22	44504	MBP 250SV-2-22	44537	MBP 200SH-2-22
44496	MBP 100SV-3-22	44505	MBP 250SV-3-22	44538	MBP 200SH-3-22
44497	MBP 130SV-1-22	44506	MBP 300SV-1-22	44539	MBP 250SH-1-22
44498	MBP 130SV-2-22	44507	MBP 300SV-2-22	44540	MBP 250SH-2-22
44499	MBP 130SV-3-22	44508	MBP 300SV-3-22	44541	MBP 250SH-3-22
44500	MBP 200SV-1-22	44509	MBP 450SV-1-22		
44501	MBP 200SV-2-22	44510	MBP 450SV-2-22		
44502	MBP 200SV-3-22	44511	MBP 450SV-3-22		



## Mainsboost Charger

The Mainsboost Charger water performance system is designed to overcome the issue of low or poor mains water pressure and is specifically designed for properties with minimal water pressure and where space may be an issue. Mainsboost Charger has the unique ability to locate the pump, which is supplied within a noise reducing enclosure, remotely from the Mainsboost vessel without restricting performance. The unique Mainsboost Charger system will deliver increased water pressure up to 3.5 bar and provide flow rates of at least 80 litres per minute (per vessel) guaranteeing both pressure and flow to multiple outlets, whilst able to store more than 744 litres of water at pressure. Available with multiple vessels options.

Mainsboost Charger		Mainsboost Charger Continued	
Part No	Model	Part No	Model
44473	MBC 100SV-1-22	44485	MBC 300SV-1-22
44474	MBC 100SV-2-22	44486	MBC 300SV-2-22
44475	MBC 100SV-3-22	44487	MBC 300SV-3-22
44476	MBC 130SV-1-22	44488	MBC 450SV-1-22
44477	MBC 130SV-2-22	44489	MBC 450SV-2-22
44478	MBC 130SV-3-22	44490	MBC 450SV-3-22
44479	MBC 200SV-1-22	44491	MBC 450SV-1-28
44480	MBC 200SV-2-22	44492	MBC 450SV-2-28
44481	MBC 200SV-3-22	44493	MBC 450SV-3-28
44482	MBC 250SV-1-22		
44483	MBC 250SV-2-22		
44484	MBC 250SV-3-22		



# mains water boosting

"Mainsboost offers an extensive range of water boosting solutions for any sized property, from a one bedroom apartment to properties with multiple bathrooms, outlets and household appliances. Whatever the problem, you'll find a solution".



Bespoke options are available.  
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mainsboost  
plus and charger

# mainsboost flomate

**Mainsboost Flomate systems offer a simple, patented solution to the problem of low or intermittent mains water pressure and flow without the need for a cold water break tank.**

Designed to be connected directly to the incoming mains, Mainsboost Flomate provides a regulated flow of water, are WRAS Approved and fully compliant with UK water regulations. Designed to be compact and simple to install with no on-site commissioning required, Mainsboost Flomate can be installed discreetly within a standard kitchen cupboard unit.



The high quality brass construction of the Mainsboost Flomate range is designed to provide quality and reliability.

Mainsboost Flomate pumps deliver greater pressure and flow to multiple outlets to ensure performance on demand.

Whole house  
Bathroom  
En-suite  
Cloakroom  
Kitchen  
Utility room

## Performance on demand

## Features and benefits

### Performance

- Output flow rate 12 - 30 litres/minute
- 2.2 - 3.2 bar pressure
- 60 - 300 litre capacity vessel options
- Built-in bypass
- Quiet operation
- Automatic switching
- Dry run protection
- Continuously rated

### Quality

- UK water regulations compliant
- WRAS Approved
- ISO 9001:2015
- BS EN 60335 compliant
- CE compliant

### Reliability

- 3 year guarantee
- Robust brass construction
- Long life mechanical seal
- Service kit available

Mainsboost Flomate are supplied with anti-vibration feet and comprehensive Upstream Line-in Kit for ease of installation.



#### Peripheral Design

Pressure efficient  
Compact size  
System friendly,  
reduces potential  
to airlock



#### Automatic Flow Switch

Automatically  
starts the pump  
when flow  
exceeds  
0.6 litres/min



#### Built-in Bypass

If mains water  
pressure  
exceeds 1.5 bar,  
system output  
is not restricted.



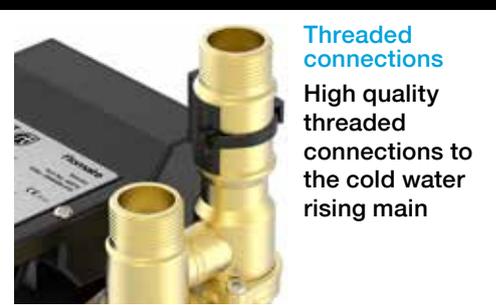
#### Flow Restrictor

Integrated flow  
restrictor  
ensures  
compliance with  
UK water  
regulations



#### Mechanical Seal

EPDM/PTFE/  
Al.Oxide seal  
Extended life



#### Threaded connections

High quality  
threaded  
connections to  
the cold water  
rising main



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# mainsboost Flomate



## Mainsboost Flomate

Suitable for low occupancy properties with typically one bathroom. The Mainsboost Flomate Pump is designed to be connected directly to the incoming mains and will deliver an additional 1.5 bar pressure to the existing mains pressure and a maximum flow rate of 12 litres per minute. The pump will start automatically when a flow rate of 0.6 litres per minute or more exists.

Part No	Model
46574	MBF 12



## Mainsboost Flomate

Designed for higher occupancy properties and to fit neatly within a standard 500 mm kitchen base unit. Mainsboost Flomate 60 and 80 products can be connected directly to the incoming mains and will deliver up to 16 litres/minute flow at 3.2 bar pressure to multiple outlets within the property, up to the preset cut-in limit of the 60 or 80 litre pressure vessel, at which time the system will deliver 12 litres/minute until demand ends and the pressure vessel recharges.

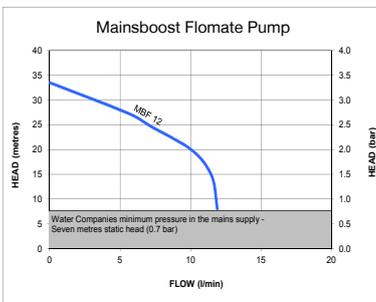
Part No	Model
46631	MBF 60-1-15
46634	MBF 80-1-15



## Mainsboost Flomate

Mainsboost Flomate 100, 200 and 300 are suitable for larger properties with multiple bathrooms and outlets. Designed to sit within a typical kitchen 600 mm larder style cupboard it will deliver up to 30 litres/minute flow at 3.2 bar pressure, dependant on the chosen pressure vessel variant, to multiple outlets within the property, up to the preset cut-in limit at which time the system will deliver 12 litres/minute until demand ends and the pressure vessel recharges.

Part No	Model
46635	MBF 100-1-15
46636	MBF 200-1-15
46637	MBF 300-1-15



DESCRIPTION	TYPICAL RUN TIME IN MINUTES		
	12 ltr/min	16 ltr/min	18 ltr/min
MBF 12	Constant	-	-
MBF 60	Constant	8	-
MBF 80	Constant	12	-

DESCRIPTION	TYPICAL RUN TIME IN MINUTES				
	12 ltr/min	16 ltr/min	18 ltr/min	24 ltr/min	30 ltr/min
MBF 100	Constant	16	8	-	-
MBF 200	Constant	24	18	8	-
MBF 300	Constant	40	24	16	8



# mains water boosting

"mainsboost pumps provide a simple to install solution to the problem of low mains water pressure ensuring a boosted supply exactly when it's needed"



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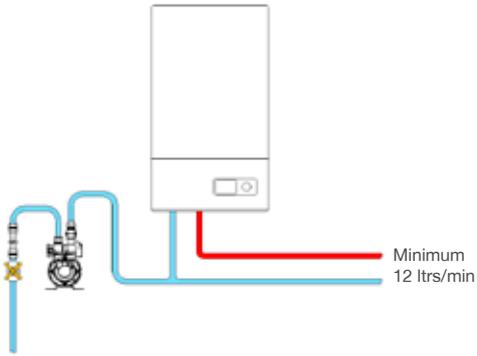
# mainsboost

## Low mains water pressure?

A typical shower delivers between 9-12 litres of water per minute, which means that for homes in low water pressure areas the mains supply often cannot meet the demand.

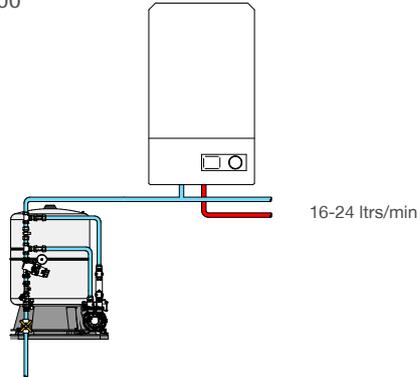
### Combi Boiler

Typical application: Mainsboost Flomate Pump



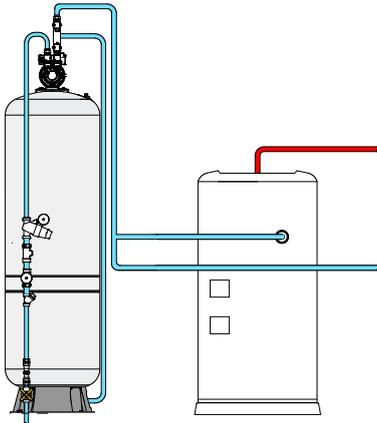
### Combi Boiler

Typical application: Mainsboost Flomate 60, 80, 100, 200



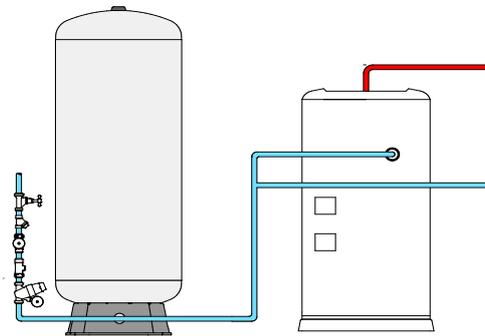
### Unvented Hot Water Cylinder

Typical application: Mainsboost Plus or Mainsboost Flomate 200, 300



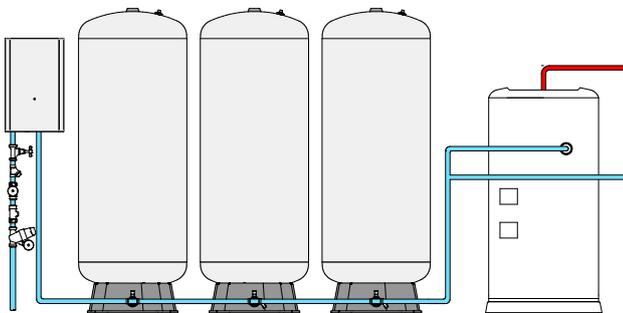
### Unvented Hot Water Cylinder Unlimited supply

Typical application: Mainsboost



### Unvented Hot Water Cylinder

Typical application: Mainsboost Charger



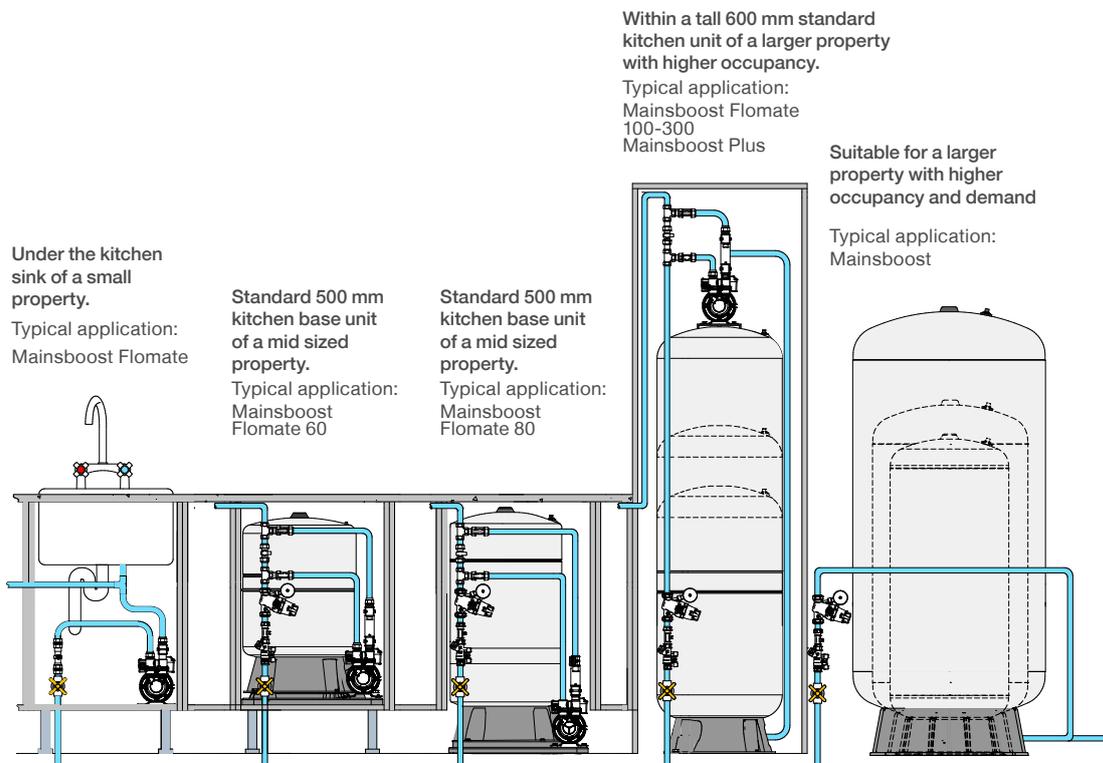
# application guide - unvented system

The following is for general guidance only. For further advice or technical assistance please contact our PumpAssist team.

The following illustrates just some of the typical applications for Stuart Turner's Mainsboost range of water performance systems.

	Water Volume Defined						Water Volume Unlimited		
	Limited Space						No Space Constraints		
	Mainsboost Flomate	Mainsboost Flomate 60	Mainsboost Flomate 80	Mainsboost Flomate 100	Mainsboost Flomate 200	Mainsboost Flomate 300	Mainsboost Range	Mainsboost Plus Range	Mainsboost Charger Range
House - 1 bathroom	●	●	●	●	●	●	●	●	●
House - 1 bathroom + cloakroom		●	●	●	●	●	●	●	●
House - 1 bathroom + 1 en-suite					●	●	●	●	●
House - 1 bathroom + 2 en-suites						●	●	●	●
Larger properties with more than 1 bathroom + 2 en-suites							●	●	●
Supply direct to a Combination Boiler	●	●	●	●	●	●	●	●	●
Unvented stored water system up to 150 litres						●	●	●	●
Larger property with stored water system greater than 150 litres							●	●	●
Hotel							●	●	●
Apartment block							●	●	●
Commercial							●	●	●

Please Note: This is a general guide only. To select the correct product to suit your application please contact PumpAssist.



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