



StormStation™ 5,000 - 20,000 Litres Rainwater Harvesting system

Product Data Sheet

Product Description

The Stormsaver StormStation™ has been designed to provide a self-contained, high quality Rainwater Harvesting system. The unit can be both portable or a permanent installation. The Stormsaver StormStation™ is unique because it is a complete Rainwater Harvesting system combining tank, filters, pumps and controls all in one unit. The StormStation™ is designed simply for plug and play installation. The unit can be loaded from a delivery vehicle and connected to your appliances with minimum labour requirements and there will be no costly installation for filters, tanks, control units and header tanks located around the building.

This all in one unit will save time on installation, save water by using fresh rainwater, save money on your water bills and contribute towards your sustainable goals, whilst assisting with storm water and flood control.

The system can be used in many building types and is suited to both new build and retrofit projects where the above ground StormStation™ can be located in close proximity to the building.

It is suitable for:

- Retrofit to existing sites
- Commercial vehicle forecourts - Vehicle wash
- Service station sites
- Temporary buildings
- Commercial offices or industrial units
- Permanent buildings requiring a packaged system

Applications

The StormStation™ system can provide filtered rainwater for a wide range of applications:

- Toilet and urinal flushing
- Vehicle washing
- Cleaning and wash down
- Laundry
- Plant watering and irrigation*
- As well as other applications such as industrial process use

*A drip irrigation system may require a special layout in combination with an expansion vessel

Location

Designed for installation external to a building. Ideally the system should be located close to roof water down pipes to collect water from the roof area. In certain sites the unit can be installed inside a building e.g. large warehouse units

- The unit should be installed on a suitable flat concrete base capable of supporting the tank and lid together with the weight of the water at full capacity and associated pipework
- The unit requires access for maintenance with a minimum of 1000mm above, 1000mm in front of the door and a minimum of 450mm to each side for connection of pipework.
- All tanks should be installed on to a level and flat base which must not deviate by more than 2mm under a 1000mm nominally plane straight edge
- Levelling steels are recommended for bases over 4m in length

Services

This system supplies a direct, pressurised supply of water to appliances using a booster pump. During periods of low rainfall, a supply of mainswater is used to top up the system via a compliant air break.

The unit will require services for:

- Incoming rainwater supply from the roof
- Tank overflow should be fitted to the storm drain or soakaway
- Control unit emergency warning pipe should be fitted so that the flow of water is visible if overflowing
- Mains electrical supply
- Pressurised rainwater from the system booster pump feed (to points of demand)
- mains water supply for top-up in low rainfall conditions*

*During periods of low rainfall, it is important to ensure that mains water pressure and flow rates match the demand of the system.

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Technical Information

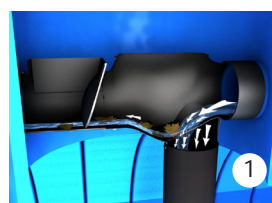
The StormStation™ system is manufactured by Stormsaver and will be delivered to site for rapid installation. The unit comes in capacities of 5000, 7500, 10,000, 15,000 & 20,000 Litres. If greater capacity is required units can be linked or Stormsaver can offer a bespoke solution.

All Stormsaver systems are manufactured and tested by Stormsaver. A full certification is given on completion for warranty purposes.

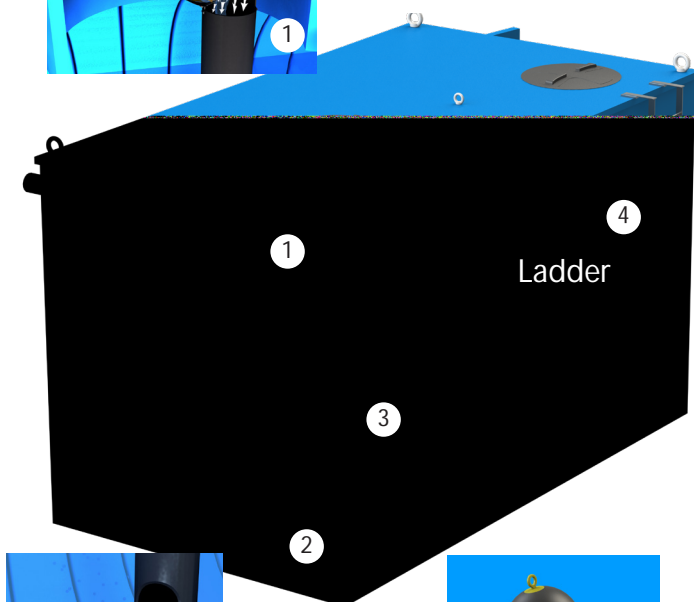
StormStation Technical Information

Capacity	5000 L	7500 L	10000 L	15000 L	20000 L
Dimensions L x W x H (mm)	3035 x 2000 x 2120	3635 x 2000 x 2120	4935 x 2000 x 2120	6135 x 2000 x 2120	7335 x 2000 x 2120
Dry weight	985kg	1100kg	1250kg	1600kg	1800kg
Wet weight	5985kg	8600kg	11250kg	16600kg	21800kg
Loading	The unit is manufactured on a GRP skid to enable the unit to be located by forklift. This enables the unit to be relocated to different sites if it is to be portable				
Colour	RAL 5005 - Royal Blue (Choice of RAL colours as an extra cost option)				
Insulation	50mm sealed within the tank, door and cabinet walls				
Rainwater Inlet	Gravity inlet feed: 150, 200, 250 or 315mm drainage sizes (fitted to suit site)				
Rainwater Overflow	Gravity overflow feed with integral skimming overflow device : 150, 200, 250 or 315mm drainage sizes (fitted to suit site)				
Ladders	External access ladders are fitted to the side of the tank to access the tank for maintenance. Ladders are steel with zinc plated external coating				
Eyebolts	Eyebolts are fitted to the top of the tank to lock-on the engineers lanyard harness at two points attaching for safety when working at heights				
Services	Services should enter the three specific pad areas designed in the service cabinet wall: base, left and right handed – do not drill any holes into the cabinet walls which could compromise the tank walls or compromise water tightness				
Service cabinet	The service cabinet is accessed via the full size insulated door (fitted with a lock). There is a lamp inside the control cabinet for maintenance				
Frost protection	Thermostatic heater fitted within control cabinet				

Pre-tank filter, Inlet calmer, floating suction filter



Pre-tank filter unit



Inlet calmer



Floating suction filter



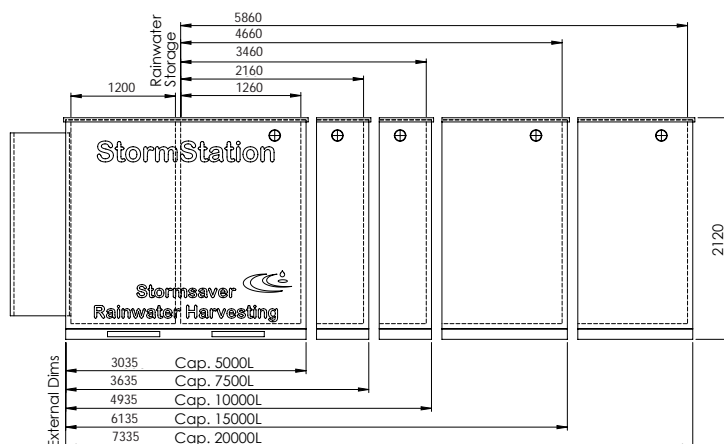
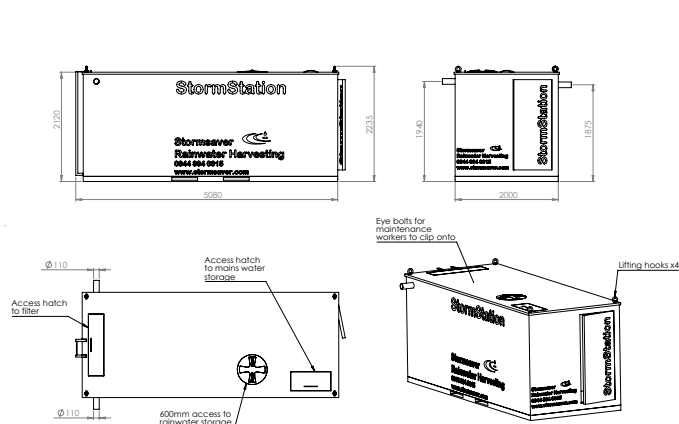
StormStation™ can be relocated by a forklift

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Technical Drawing



Pre-tank filter and inlet calmer

The pre-tank filter removes leaves and other debris and is integrated within the tank to meet BS EN 16941-1:2018. The filtered rainwater enters the tank via an inlet calmer to prevent incoming water disturbing sediment on the base of the tank. This filter is accessed via a cover in the tank lid and is designed to filter rainwater coming from building roofs. The filter comes complete with non-return valve, preventing water from flowing back up into the tank whilst also preventing small animals from entering the tank.

The filter itself uses a stainless-steel wedge wire, with a gap width of 1000 microns and reliably filters the contaminants. Its trapezoidal shape and diagonally set profile prevents the dirt from settling and clogging it. During heavy rainfall this design also means the filter is self-cleaning, which reduces maintenance requirements. The sturdy stainless steel filter is designed to last the life of the filter.

Connection sizes

A range of connection sizes are available to suit specific pipe dimensions on site. Sizes range between 110mm and 315mm. Connections are confirmed by drawing prior to manufacture.

Tank specifications and conformity

The tank is designed at optimum capacity for your roof area and demand of the building. Tank and housing are manufactured using high quality glass reinforced plastic (GRP) incorporating a Lloyds approved resin system that meets EN 14118-1:200 and ISO2599-1980-GLASS and manufactured using materials approved by WRAS. The tank housing is designed with the parameter and principles of EN13280:2001 and BS EN 16941-1:2018 GRP coated with orthophthalic BS3532 & BS2782 gel coat finish.

Tank materials are UV stabilised for external use
Internal fittings: stainless steel



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Bespoke options

Option	Details
Ladder hoops	Ladders can be fitted with hoops to gain access to the top of the tank for maintenance.
Handrails	Either part or full peripheral handrails can be added around the top of the tank.
Pump Options	A range of fixed and surface mounted pumps can be supplied to suit flow requirements
Colour / Branding	RAL 5005 - Royal Blue (Choice of RAL colours as an extra cost option)
Branding	Optional cost extra to brand the unit to suit clients site
Monitoring	Visual monitor display to fit inside the building and demonstrate water savings
Metering	Water meters to record Rainwater and Mains water consumption
BMS signals	BMS signal options to suit site specification
Auto Filters	Upgrade to include autobackwash filtration
All optional extras are available at an additional rate	



Optional handrail and ladder hoops

The StormStation™ can be manufactured to your exact requirements and we can modify our designs to meet your specific needs.

This range is available in any size or colour, with a range of finishes including; Smooth, Anti-Vandal and Textured.

Technical Details

PUMP TYPE 4L/s range	MOTOR		Twin pump set		Q = DELIVERY							
	P	TYPE	P2 kW	A	l/min 0	47	93	140	187	233	280	340
	kW	1x230 V			m³/hr	2.4	5.6	8.4	11.2	14	16.8	20.4
H = TOTAL HEAD IN METRES COLUMN OF WATER												
5HME06S11	1,1	ESM80/111 HM..	2 x 1.1	11.7	66,7	67,2	65,8	59,0	48,1	38,7	29,5	17,5
5HME08S15	1,5	ESM80/115 HM..	2 x 1.5	15.6	88,9	89,5	87,7	80,2	65,5	52,8	40,4	24,4
5HM09S22	2,2	PLM90HM../322 E3	2 x 2.2	20	97,7	93,4	89,0	83,3	76,2	67,3	56,3	43,4
PUMP TYPE 6L/s range	MOTOR		Twin pump set		Q = DELIVERY							
	P	TYPE	P2 kW	A	l/min 0	80	160	240	320	400	280	567
	kW	1x230 V			m³/hr	4.8	9.6	14.4	19.2	24	28.8	34
H = TOTAL HEAD IN METRES COLUMN OF WATER												
10HME03S15	1,5	ESM80/115 HM..	2 x 1.5	15.6	52,4	51,8	50,6	46,9	39,2	32,2	25,3	17,8
10HM04S30	3	PLM90HM../330 E3	2 x 3.0	18	68,8	63	62	61	56	51	50	33,4
10HM06S40	4	PLM100HM../340 E3	2 x 4.0	18	104	101	100	93	85	76	71	55
PUMP TYPE 10L/s range	MOTOR		Twin pump set		Q = DELIVERY							
	P	TYPE	P2 kW	A	l/min 0	80	160	240	320	400	280	567
	kW	1x230 V			m³/hr	4.8	9.6	14.4	19.2	24	28.8	34
H = TOTAL HEAD IN METRES COLUMN OF WATER												
15HM02S30	3	PLM100HM../340 E3	2 x 3.0	18	42	41	39	36	33	31	26	18
15HM03S40	4	PLM90HM../330 E3	2 x 4.0	18	63	60	54	51	48	46	38	30
15HM04S55	5.5	PLM112HM../355 E3	2 x 5.5	24	84	80	76	68	64	60	48	38
PUMP TYPE 12L/s range	MOTOR		Twin pump set		Q = DELIVERY							
	P	TYPE	P2 kW	A	l/min 0	320	460	600	740	880	1020	1180
	kW	1x230 V			m³/hr	25.6	36.8	48	59.2	70.4	81.6	94.4
H = TOTAL HEAD IN METRES COLUMN OF WATER												
22SV02F40	4	PLM112../340 E3	2 x 4.0	18	45	42	41	40	37	32	22	20

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Automatic UV recirculation

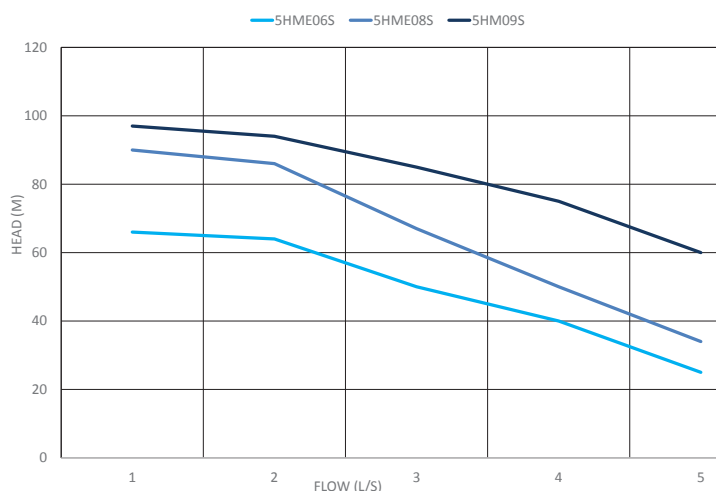
All 5,000L - 20,000L StormStation™ systems come with automatic UV recirculation pre-installed as standard. The UV disinfection unit and recirculation equipment is designed to help prevent potential illness caused by water born organisms and stagnant water.

Typically UV disinfection is placed prior to points of use, however in this arrangement it utilizes less energy and continually treats the rainwater chamber even when the system is in low level and running on mainswater.

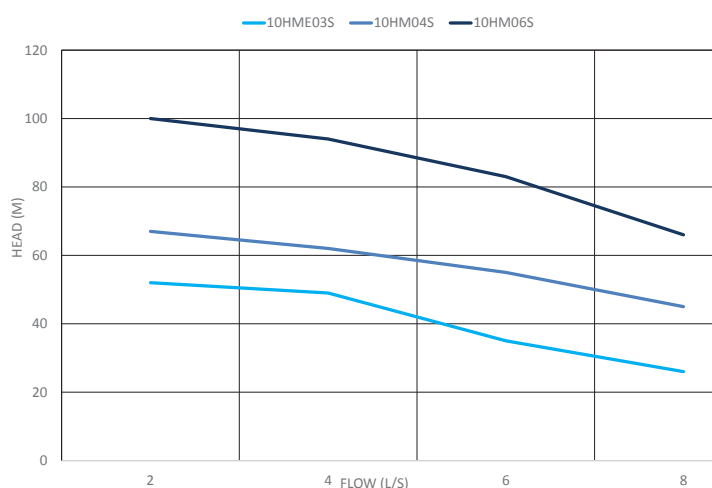
At midnight the UV bulb is energized for 5 minutes to ensure it reaches 100% operating efficiency. This allows the recirculation pump to activate, which draws water from the rainwater chamber passing water through the UV unit and back into the top of the rainwater chamber. The water is continually treated for a total of 45 minutes a day at 2.5m³/h, which treats around 1800L every recirculation cycle. This can be customised to suit customer requirements. The UV unit and recirculation pump are then powered down ready for the next treatment cycle. A volt free UV BMS contact is available as an optional extra, please contact Stormsaver on 01636 815 254 for more details.

For more technical information on the UV disinfection unit please refer to the Stormsaver - UV Disinfection product data sheet.

4L/s range



6L/s range



Bespoke Pump Options

Should you require pumps or flow rates outside those detailed in the data sheet, please contact the Stormsaver technical team for a suitable alternative.

*A drip irrigation system may require a special layout in combination with an expansion vessel. Please ensure that you select the correct booster unit for your flow requirement. Any queries please contact Stormsaver Technical support 01636 815 254.

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