

Fully automated water graphics system

Allows precision control of water drops in order to produce crisp images within a wall of cascading water

Modular construction from 96 to 1152 valves (0.77 ... 9.24 m)

Can display any graphic, logo or words in any language – the user creates the bitmap

Special effects can be created using combinations of lighting and water dyes

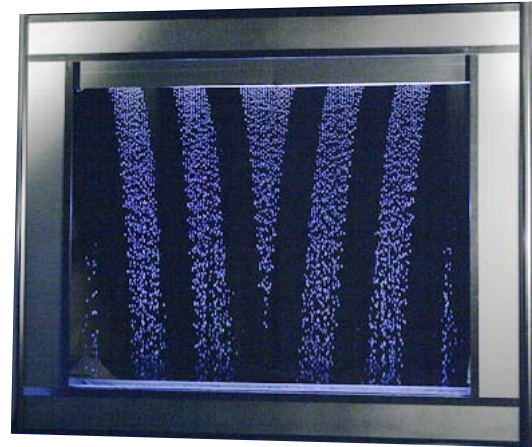
Create custom bitmap files to suit your audience

Stand-alone, self-contained unit, which can be incorporated into various applications

System using low power electronics and fresh water, resulting in safe human interface

Viewing distances of 2 to over 100 meters

Screens can be split as required



The image shows a 3 module system with frame, lighting, backdrop, etc.

Technical features

Medium:

Tap water treated and filtered to 5 µm

Note: Deionised water should not be used. Dyes can be added to the water, but please consult Norgren for compatibility.

Dimensions (without endplates):

768 x 110 x 210 mm [L*W*H]

Boxed dimensions:

1030 x 310 x 330 mm [L*W*H]

Note: The module is shipped in a reusable wheeled crate

Module weight:

Dry: approximately 13,5 kg

Filled: approximately 16 kg

Boxed: approximately 21 kg

Number of 15 mm valves:

96

Electrical supply:

24 V d.c.,

Approximately 6,5 A per module

Ambient water temperature:

5 ... 40°C

Valves mean time before failure:

20 million cycles

Also required:

- End plate kit
- 24 V power supply and cable
- Communications kit
- Laptop
- Trough, pump, filter and pipe work
- Bacterial control method
- Frame or booth

Norgren provides some of these components, see Ordering Information overleaf.

Other items, such as a backdrop and lighting, are recommended, in order to provide the best display. See table overleaf.

Notes

Access to a water supply and drain is required.

Please refer to the user manual for detailed information.

Water must be filtered to 5 µm to prevent any contamination of the valves. Protect from rain and wind.

Materials:

Manifold: anodised aluminium

Valves: stainless steel and polymer

Ordering information and recommended components

Component	Required / Optional	Contents	Notes	Norgren part number
Module	Required	Manifold with attached valves and electronic control	Main waterfall display, shipped in reusable wheeled storage crates	SPGB 38426
Communications kit	Required	Control software, settings generator software, USB cable, HDMI cable, USB adapter	Communications connections and software	SPGB 38430
End plate kit	Required	End plates for module	Seals the manifold	SPGB 38427
Power supply	Required	240V/110V to 24V supply and 6 metre cable. Comes with a UK cable unless specified otherwise.	Provides power for the electronic control for 3 modules only (288 valve display).	SPGB/ BMT/ 38431
US power supply mains lead	Optional	1 US mains lead	Contains built in RCD protection	SPGB/ 38433/US
UK power supply mains lead	Optional	1 UK mains lead	Contains built in RCD protection	SPGB/ 38433/UK
EU power supply mains lead	Optional	1 EU mains lead	Contains built in RCD protection	SPGB/ 38433/EU
Trough	Required		Collects the water for recirculation	Not supplied
Pipework	Required	(Fittings are 1" BSP on manifold)	Provide water to the manifold	Not supplied
Pump	Required		Provide water to the manifold	Not supplied
Filter	Required	5 micron filtration required	Protects the valves from contaminants	Not supplied
Laptop	Required		Controller	Not supplied
Backdrop	Recommended		Makes the water easier to see	Not supplied
Lighting	Recommended		Makes the water easier to see	Not supplied
Mounting kit	Recommended	Brackets, screws	Provides brackets to mount the manifold to a beam or frame. 2 kits required for first manifold and then 1 extra for each additional manifold	SPGB 38428
Valve spares kit	Optional	Set of 5 valves	Spare parts	SPGB 38426-00
Accessories kit	Optional	Contains: 2 x jumper links, 4 x fuse, 1 x ribbon cable (long), 4 x O-ring (large), 5 x O-ring (small), 4 x M8 x 30 hexagon bolt, 4 x M8 flat washer and 4 x tie rod nut 10 x fixing screws		SPGB 38426-01
Spare PCB	Optional		Replacement PCB and solenoid cable assembly	13001-E01
BSP/NPT adapter	Optional			13103-C01
Bacteria prevention	Required	E.g. Biocide solution, UV purifier, etc.	Prevents harmful bacterial build up and biofilms	Not supplied

Order contact details

To order please contact Norgren at:
advantage@norgren.com
 01543 265000

Norgren Ltd.
 PO Box 22
 Eastern Avenue
 Lichfield
 Staffordshire
 WS13 6SB

Installation and commissioning

Norgren will provide installation and training services upon request.

Disposal/Recycling of components

In order to comply with the WEEE directives, please ensure metals and plastics are disposed of as per normal recycling procedures and the PCB's and other electrical items are disposed of as per the WEEE directive. Alternatively the PCB's can be returned to Norgren for disposal. Please contact Norgren or your authorised distributor in order to obtain the most up to date return address and instructions on how to return.

Servicing and repairs

A one-year warranty applies to all Norgren products. For terms and conditions please ask for a copy of our 'General Conditions of Sale'.

You should by no means attempt to repair the product by yourself, apart from in accordance with the spares kits and manuals recommended maintenance guidelines. For repair please have ready a description of the error, malfunction or failure and contact your local representative dealer or agent.

PLEASE NOTE:

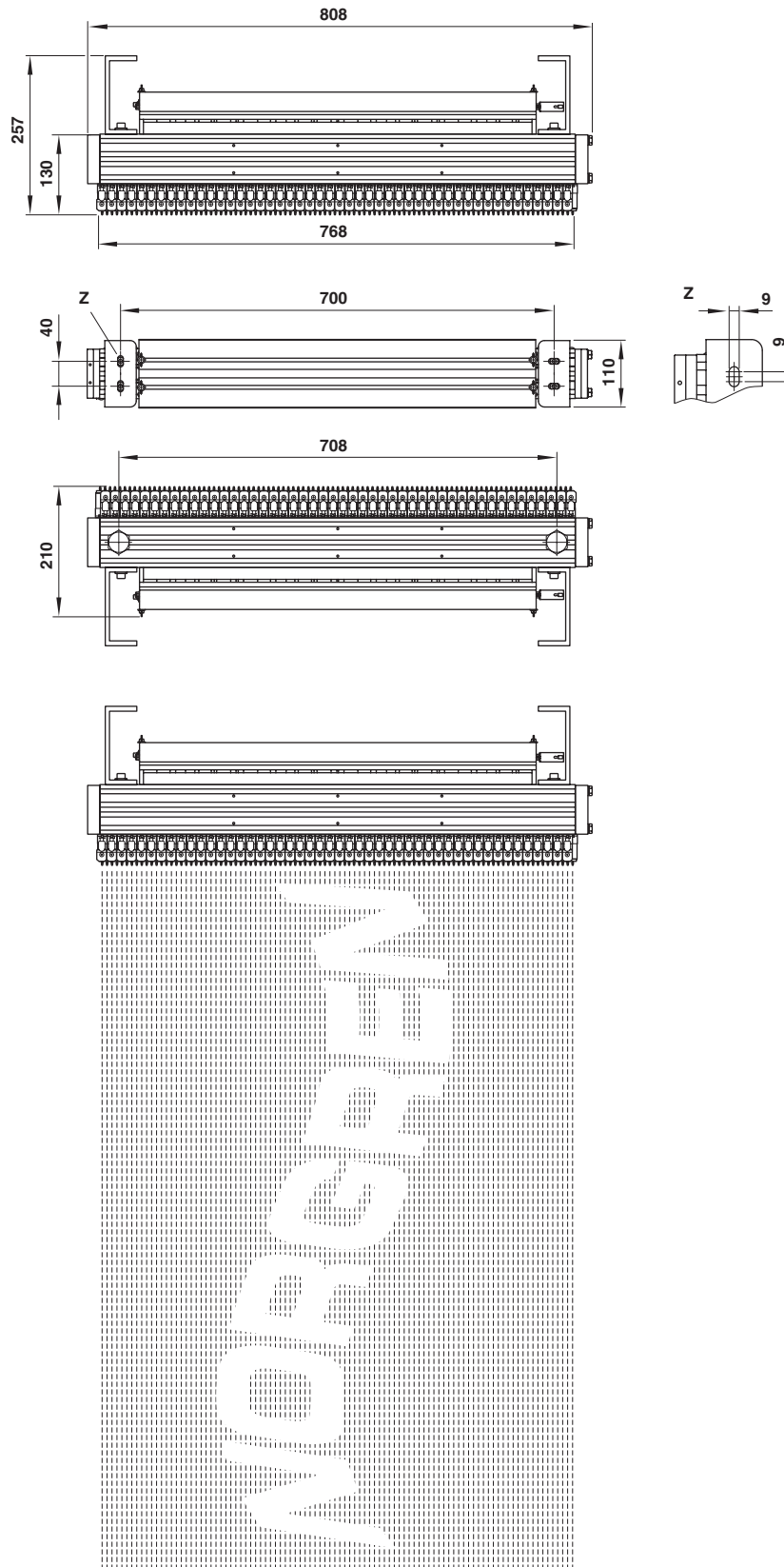
Norgren does not accept any liability for damage to the system or for loss or damage to property which is, in its absolute discretion, determined to be caused by water quality or particulate contamination. The supply of water and its quality is not Norgren's responsibility within the scope of the supply of the Aquasermo.

Transport and storage

This product can only be transported and stored in the original Norgren or Norgren Distributor packaging, which ensures suitable protection against mechanical damage.

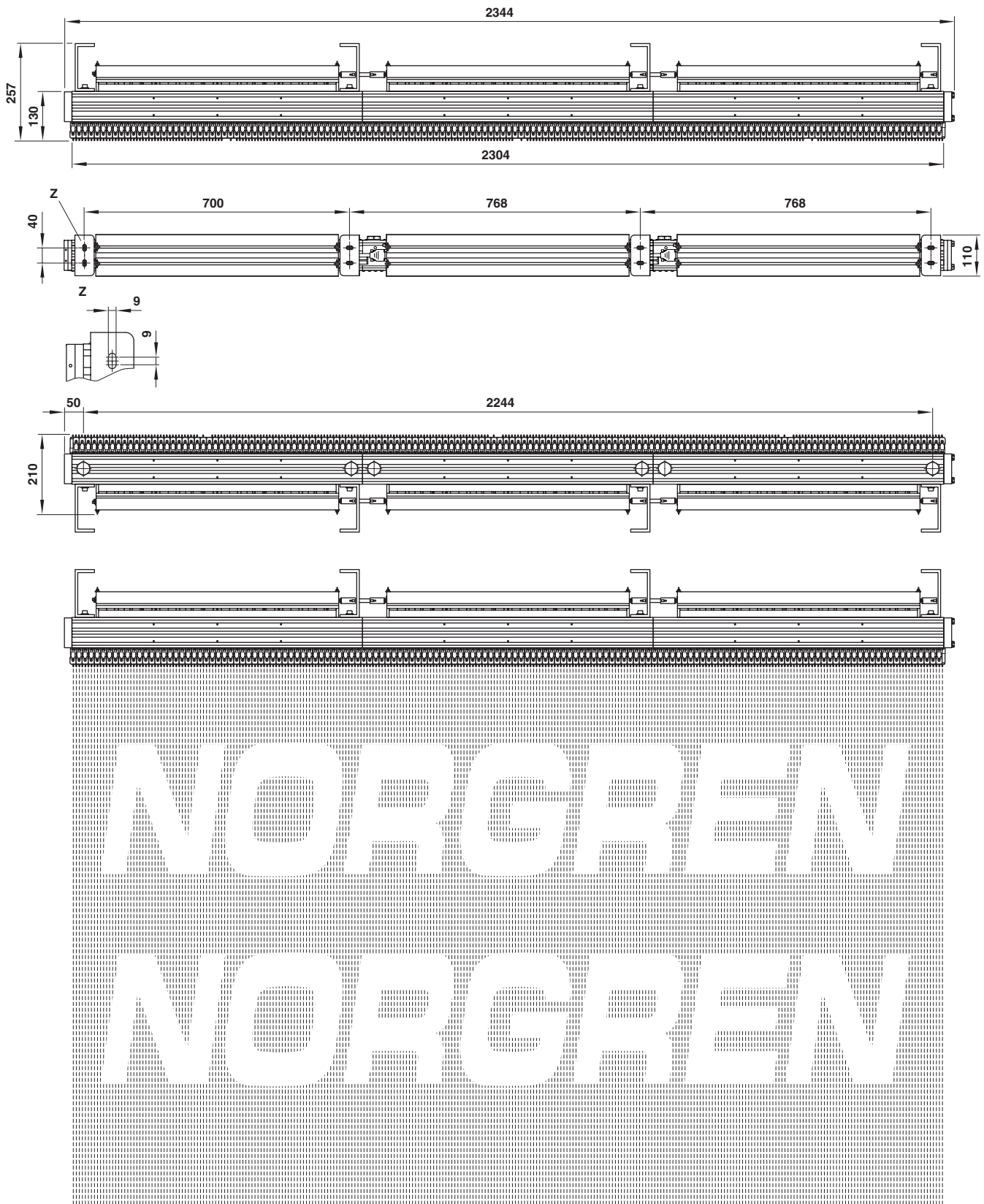
Single module dimensions

Displays consisting of one module are portable and are suited to displaying text in a falling ribbon.



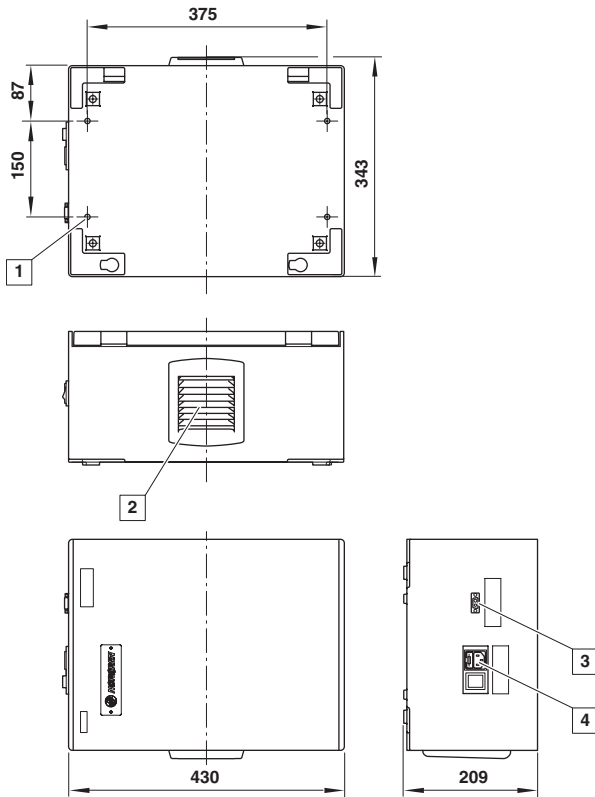
Triple module display dimensions

Displays consisting of three modules make reading text easier and provide a larger impact at shorter distances.



Power supply housing dimensions

The Norgren provided supply must be specified with the correct mains cable and can power three modules in series. Note that power cannot be cascaded along more than three modules as the internal wiring is rated to 20A.



- 1 Ø 8 fixing holes
- 2 Vent
- 3 24 V d.c. power supply output
- 4 Mains power supply input

Warning

Do not use these products where pressures and temperatures can exceed those listed under 'Technical data'. Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult NORGREN. Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes. The system designer is warned to consider the failure modes of all

component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.