



DIGITAL WATER CURTAIN



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1. INTRODUCTION

In its technological commitment to cutting-edge products, SAFE-RAIN is proud to present the digital water curtain. This is one of the most technologically advanced ornamental fountains currently available. The combination of hydraulics, computers and lighting makes it possible to 'print' texts, shapes and coloured patterns with water by means of easy and intuitive programming, using SAFE-RAIN's control software.

The basic elements that make up the digital water curtain are:

Water outlet and lighting modules

Pumping system

Filtration

Control panel

Control software

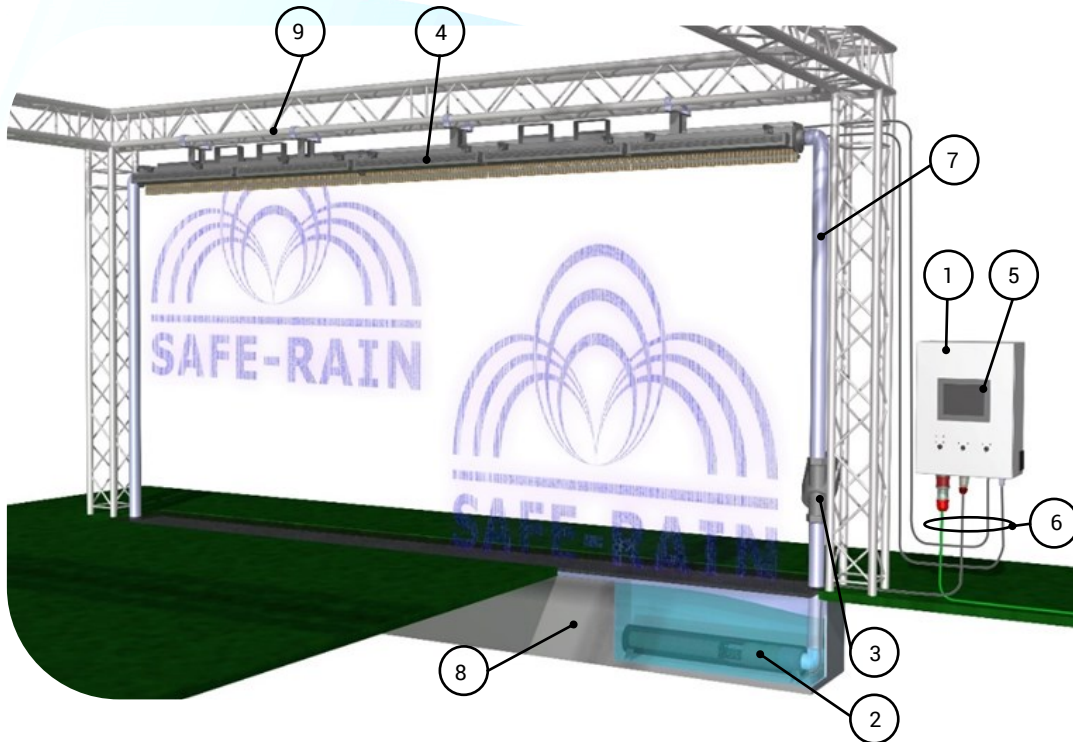


The digital water curtain has many installation possibilities and uses. What ultimately differentiates one type of use from another is whether it is for a specific event, such as a fair, sports event, etc, or on the contrary, whether it is a permanent installation. Currently, both types of installation are possible using easy-to-fit and durable elements.

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2. INSTALLATION EXAMPLES

TEMPORARY INSTALLATION (FOR EVENTS)



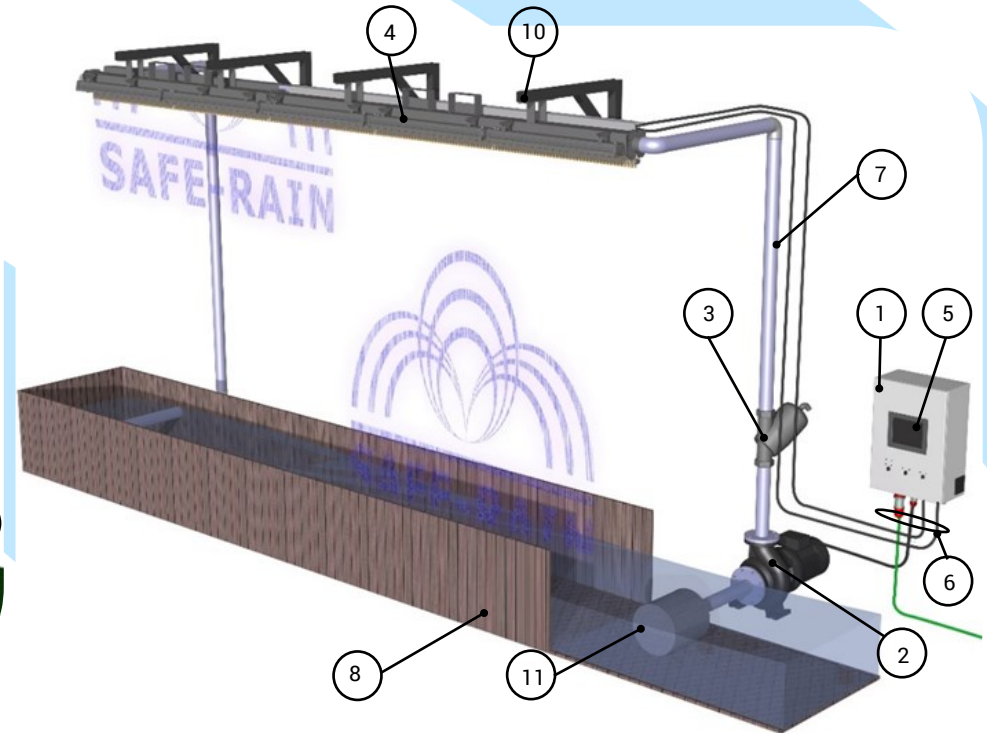
TEMPORARY INSTALLATION:

1. Control panel
2. Submerged pumping and filtration system
3. Filtration
4. Water outlet and lighting modules
5. Control software
6. Wiring

Accessories not included:

7. Piping system
8. Deposit
9. Truss
10. Fixed anchors
11. SAFERAIN filter

FIXED INSTALLATION



FIXED INSTALLATION:

1. Control panel
2. Submerged or dry pumping system
3. Filtration
4. Water outlet and lighting system
5. Control software
6. Wiring

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3. WATER AND LIGHTING MODULES

This is the key element of any digital water curtain installation. An AISI 304 stainless steel water collector is the structural base for all the elements needed to achieve the desired effect. Solenoid valves, spotlights and control electronics form a modular unit. These are 2 and 3m long in order to adapt to the final length of each project. The hydraulic and electrical connection between modules is as simple as screwing in flanges and joining two different types of male-female connectors. A sound and secure method.

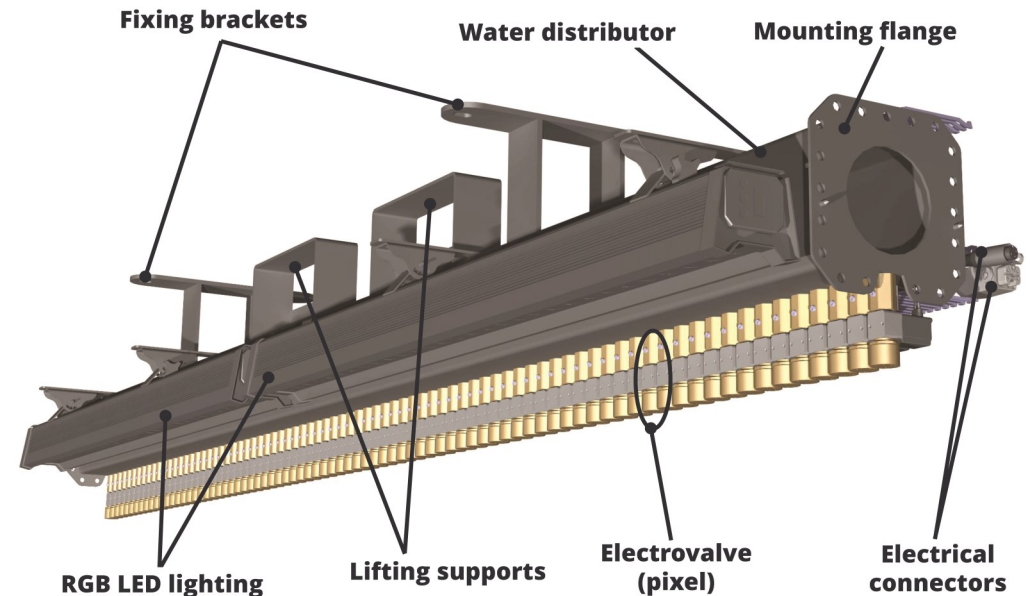
Main elements:

- General water distributor with 40 electrovalves (pixels) per metro.
- Supports for holding the module in its fixed or portable structure.
- Supports for lifting the module with a forklift
- Lighting with 90W 3 in 1 RGB LED spotlights with DMX control and 1 metre in lenght.
- Electronic control modules for solenoid valves and RGB LED spotlights.

Input and output electrical connections:

- XLR input and output connector for data control.
- Power input and output connector for solenoid valves and lighting.

2 meter water and lighting module



Hydraulic inlet and outlet connection:

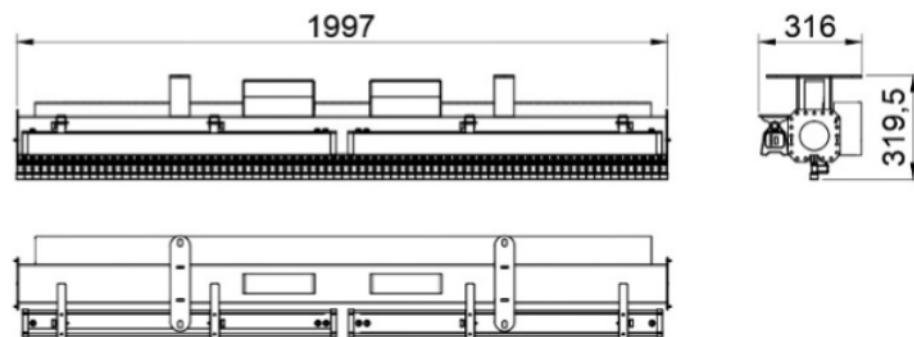
- The water supply and return connection to the curtain is achieved by means of a flange and connection with a 3" male thread.



TECHNICAL DATA

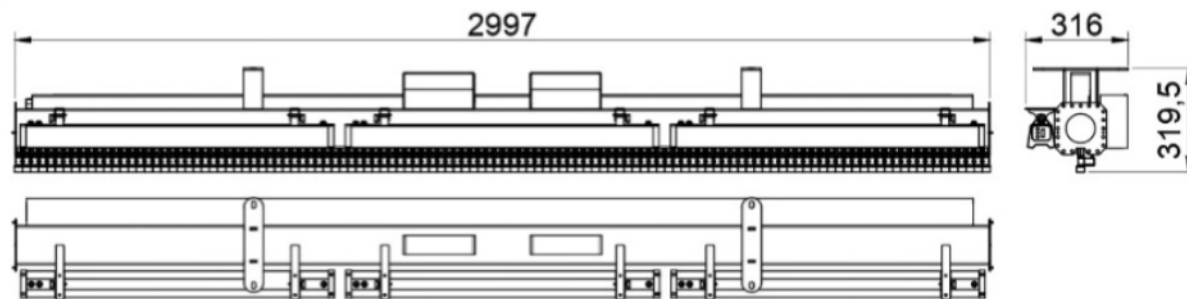
2 meter module

Dimensions (mm)	1997 x 319,5 x 316
No. Of outputs	80
Nominal voltage	100 - 230 VAC 50/60Hz
Rated power	450 W (without pump)
Material	AISI 304 and brass
Empty weight (Kg)	56,4
Weight with water (Kg)	82



3 meter module

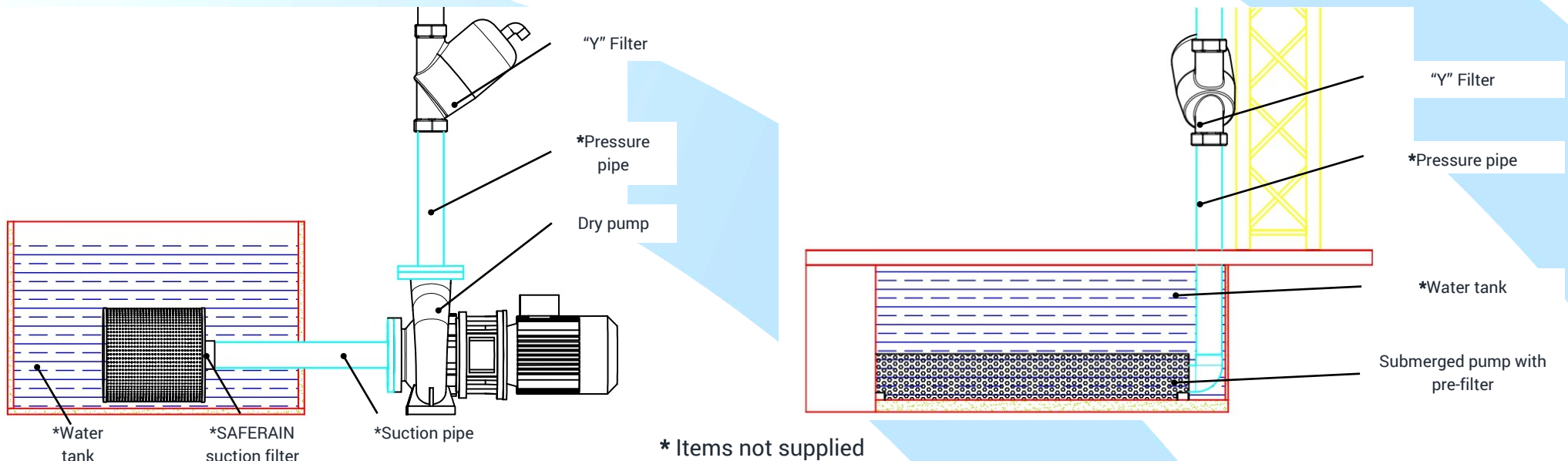
Dimensions (mm)	2997 x 319,5 x 316
No. Of outputs	120
Nominal voltage	100 - 230 VAC 50/60Hz
Rated power	630 W (without pump)
Material	AISI 304 and brass
Empty weight (Kg)	90,2
Weight with water (Kg)	129



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4. PUMPING SYSTEM

The pumping and filtration system pushes the water from the tank too the hydraulic inlet in the first module with the necessary pressure and Flow for optimal output speed in each solenoid valve for drawing the required strokes or patterns correctly. The pumping system can be either submerged or used as a dry pump, depending on your project's requirements.



5. FILTRATION

The fast-acting solenoid valves that draw the selected water patterns are equipped with a movable piston with a rubber seal that shuts off the flow when the solenoid is de-energized. Particles deposited on this seal may cause the solenoid valve not to close completely. It is therefore essential that the installation have a strong filtration system. The fliter that we include guarantees that the water that arrives at the electrovalves is free of suspended particles to prevent at all cost the electrovalves from not closing properly.



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6. CONTROL PANEL

All the control and power elements necessary for starting the installation are included in the installation electrical panel. The power circuit includes all the necessary differential and magnetothermal elements together with the pump frequency converter.

The control circuit consist of PC software specifically designed for sequential control of the solenoid valves, RGB lighting, frequency converter and pump. This is a software that runs the sequences previously programmed for other PC desktop software.

Data:

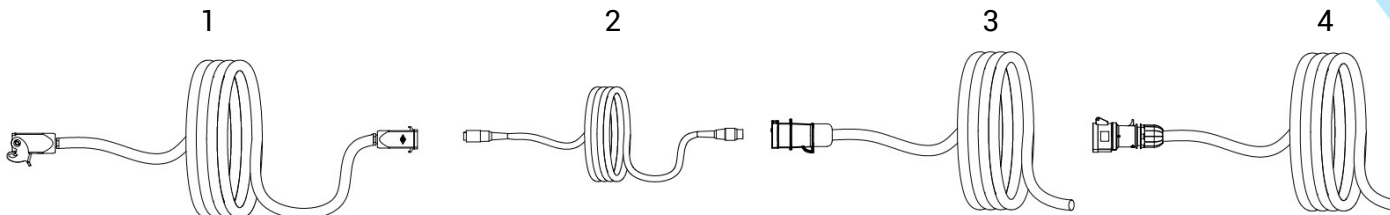
Input: AC230~400V, 50~60Hz (III)

Dimensions: 500x700x270mm

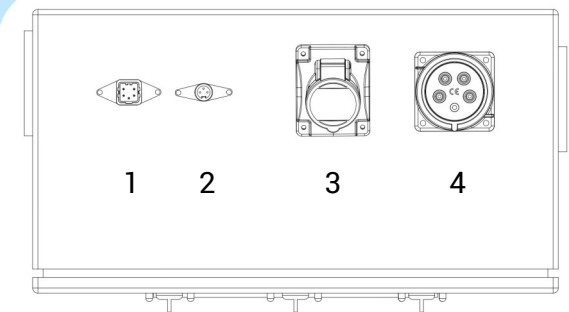
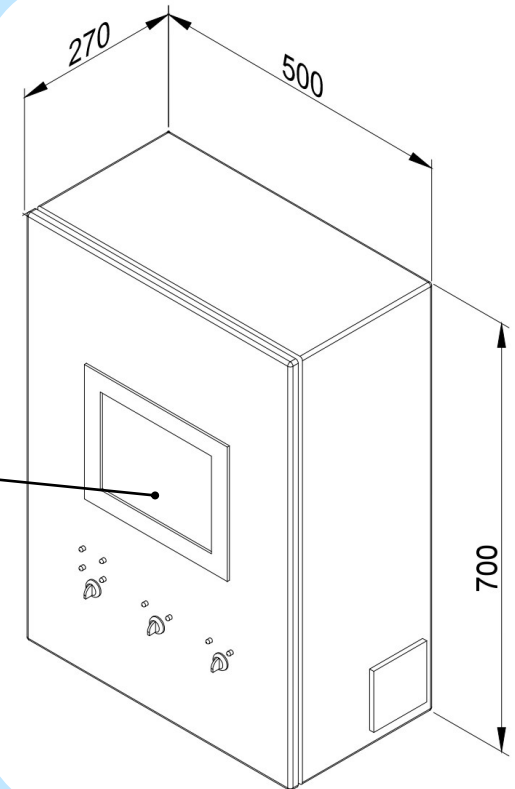
Connectors:

1. Power output for solenoid valves and spotlights.
2. Data output: XLR 3P
3. Power and control output for pump: 3P+T 6h 380-415V 50Hz~60Hz
4. Power outlet: 3P+N+T 6h 346-415V 50Hz~60Hz

Different connectors are available in order to facilitate control panel and curtain mounting. Different cables can be requested per your installation requirements.



Touch screen control.
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The control paner included in the basic installation of the digital curtain includes a fully PC, containing SAFERAIN control software. This software controls the operation, frequency converter, solenoid valves (or pixels) and the RGB lighting by means of DMX protocol.

Additionally, a desktop application is included for programminf the water feature that will 'print' the digital curtain.

By means of a file exchange (via USB, email, etc.) between both applications, the water features programmed in the desktop application will be transferred to the PC application mounted in the control panel for their execution.

With the desktop application we can program water features with up to 12 presets effects, in addition to the texts, images and custom logos that we include in the programming.

