Operation manual

Action shower „Niagara Rain“

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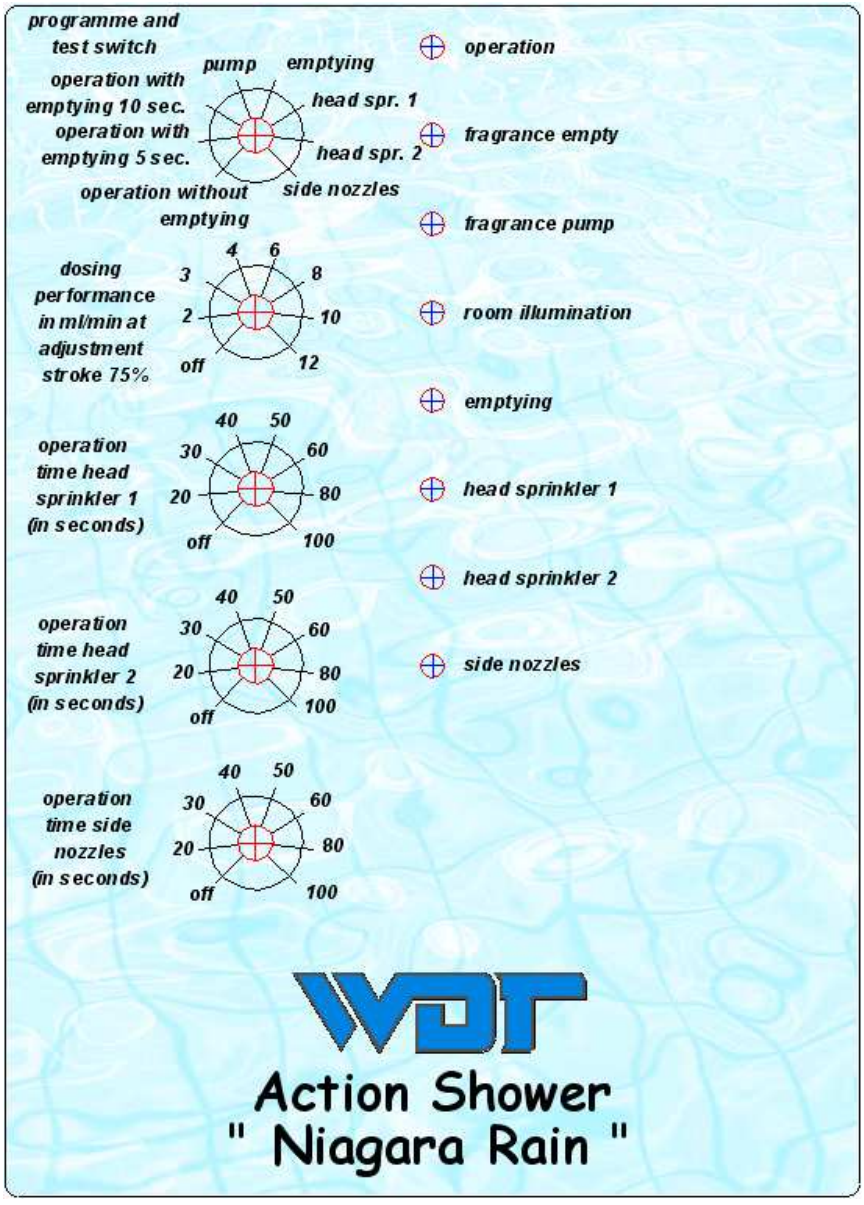
Niagara Rain
standard with 2 warm- and 1
cold water cycle

1. Function – programmes

The Action shower „Caribbean Storm” is a control unit for 3 shower cycles. The programmes can be started by a 3-fold push-button from the shower cabinet. Option: with 2 programmes (1warm one cold) or 3 programmes where programme 3 is alternating programme 1 and 2 – also 2 warm programmes are possible.

Head sprinkler 1: warm Tropical Rain
Head sprinkler 2: cold Fog Rain
Side Nozzles: warm side nozzles

The single adjustments are handled by rotary knobs at the control housing:



programme and test switch
This rotary knob is to test every function of the action shower. Each function is indicated by a burning of the yellow LED on the right side of the control housing. The fragrance pump can only be operated if the fragrance canister

is filled or if the pressure switch bellow the pump is bridged (not important for “Niagara Rain”).

Before the test of the functions the unit has to be switched on by the *main switch* at the right side of the hosuing!!
Adter the test of the functions the operation mode has to be chosen by the switch position: **operation without emptying**

Dosing performance in ml per minute, pump adjustment stroke 75%“:
No function as there is no fragrance dosing at the Niagara Rain

operation time head sprinkler 1 in seconds:
Adjustment of the operation time for the warm shower from 20 – 100 seconds.

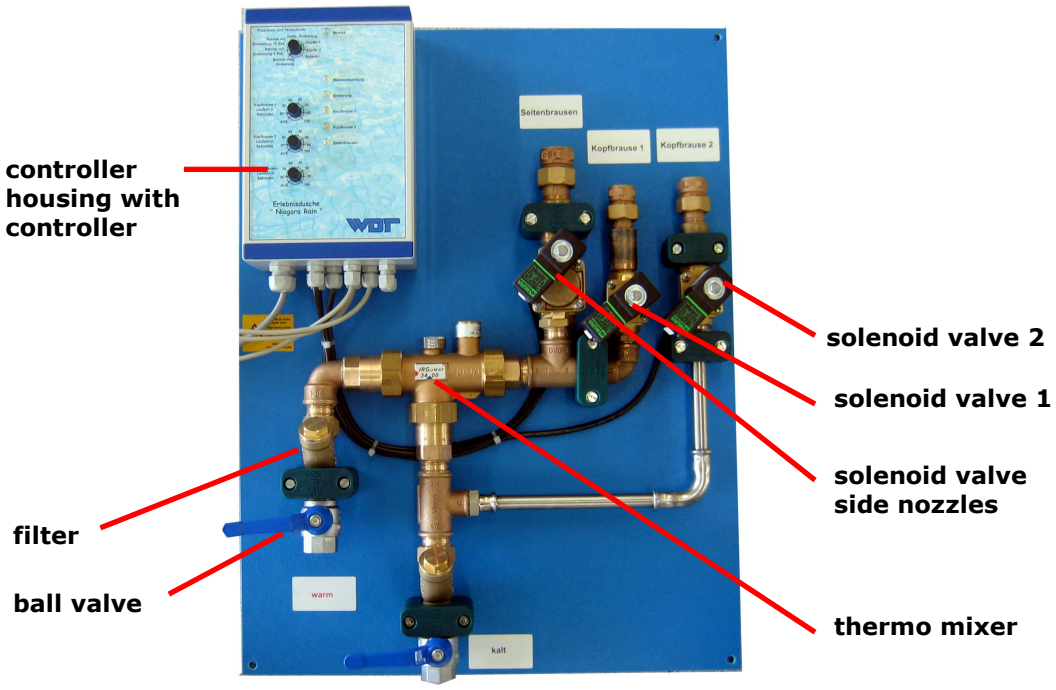
operation time head sprinkler 2 in seconds:
Adjustment of the operation time for the cold shower from 20 – 100 seconds.

operation time side nozzles in seconds:
Adjustment of the operation time for the warm side nozzles from 20 – 100 seconds.

2. Technical description

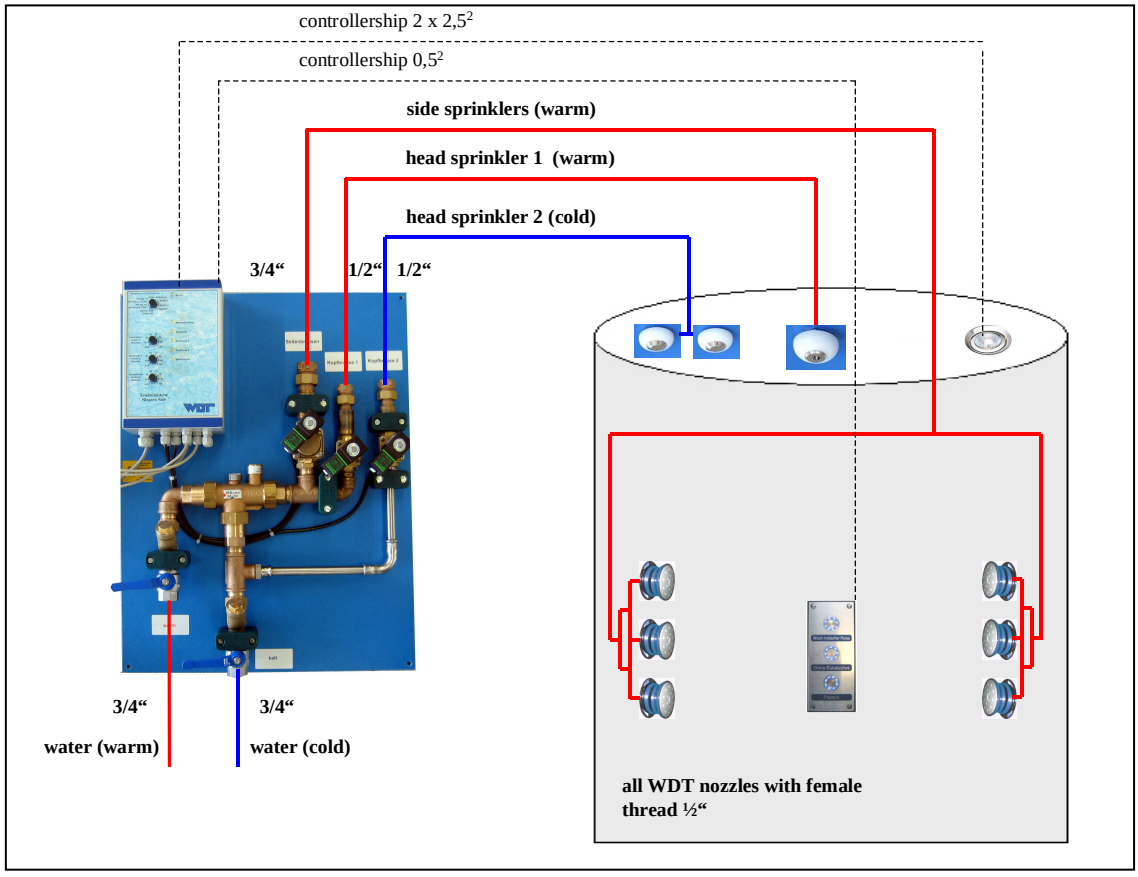
measures:	width 50cm, height 65cm, depth 15cm
weight:	app. 12 kg
power supply:	power plug 230V
water supply pressure:	min. 3 bar at a flow through of 3m^3/h

The action shower „Niagara Rain“ consists of the following components:



3. Installation

The control unit **„Niagara Rain“** has to be installed at a capable place next to the shower. The water tubing has to be installed according to the following schema. Electrical supply with power plug 230V/AC. Ensure that the nozzles are not blocked by residues that have been in the tubing if you take the unit into operation for the first time!



- Installation only by authorised staff!!!
- Before taking the unit into operation we recommend to flush all the tubings without nozzles to guarantee that no residues will block the nozzles.
- We recommend to install a fine in-line strainer before the shower techniques!
- We recommend to use (softened) water with a low hardness to prevent residues of calcium!

4. Taking the unit into operation

If the whole tubings and the electrical supply are connected the unit is ready for taking it into operation.

Put the „Selector switch 1“ on **„0“** and switch-on the unit by the main switch on the left side of the controller housing. The main switch shines red and the operation-LED green. Afterwards all functions can be tested like described above (see page 3). Now the single programme functions can be adjusted according the demanded needs.

5. Programme flow

The characteristics of the programmes are describes on page 3. The **3 functions** *„Tropical Rain*“, *„Polar Fog*“ and *„Side Nozzles*“ are started by the user by a push button from the cabinet. If one programme runs the others are locked.

Example:
The operator of the unit sets the time for the Tropical Rain on 30 seconds. If the user in the cabinet presses the according push-button a smooth and warm rain patters down on him for 30 seconds. The hardness of this rain can be regulatet by the pressure gauge.

6. Temperature adjustment

Cross section

- Warm
- Cold
- Mix / blend
- Circulation

A Thermostat
B Valve slide
C Pin

1 Standard temperature
2 Limits of the blended water setting range

Function

The blended water temperature is transmitted to the thermostat A. This compares it with the setpoint value.
If the blended water temperature does not correspond to the setpoint value, then a volume change takes place in thermostat A. This leads to the valve slide B being regulated by the pin C until the blended water temperature corresponds to the setpoint value.

Classification of the thermal blending valves 3400 in accordance with their noise characteristics:

GN	½	¾ - 1 ¼
DN	15	20 -32
Fittings group	I	II

The warm water temperature has to be at least 5 K higher than the blended water temperature.

Standard temperature set by the factory °C	Limits of the blended water setting ranges °C	Change of the blended water temperature with 1 rotation of the key		
		GN ½ - 1	GN 1¼ -2	DN 65 u. 80
25	20-30	ca. 6 K	ca. 4 K	ca. 2 K
40	30-45			
48	36-53			
55	45-65			

7. Maintenance

If the unit will be out of operation for a longer period of time we recommend to empty the whole tubing and to switch the unit off by the main switch. If the pressure should fall down immediately the filter inserts in the supply have to be cleaned.

			⇓ to be done!		
1.	**Water part** ⇓		⇓		
1.1	check solenoid valves in test function	OK	[ ]	exchange	[ ]
1.2	solenoid valve diaphragms all every two years	OK	[ ]	exchange	[ ]
1.3	clean pre-filter	OK	[ ]	clean	[ ]
1.4	filter pressure gauge	OK	[ ]	clean	[ ]
1.5	check tube cutter	OK			
1.6	check function of thermo mixer	OK			
2.	**Fragrance pump**				
2.1	function	OK	[ ]	exchange	[ ]
2.2	valve inserts of the pump every two years	OK	[ ]	exchange	[ ]
2.3	diaphragms of the pump every two years	OK	[ ]	exchange	[ ]
2.4	function of the dosing valve 3/8“	OK	[ ]	clean	[ ]
2.5	check dosing tubes	OK	[ ]	exchange	[ ]
2.6	function empty switch	OK	[ ]	exchange	[ ]
3.	**Nozzles**				
3.1	spraying pattern in test function	OK	[ ]	clean	[ ]
3.2	view of the nozzles	OK	[ ]	clean	[ ]
4.	**Controller**				
4.1	Test all functions	OK	[ ]		
4.2	All knobs present?	OK	[ ]		
4.	**Miscellaneous**				
4.1	Clean the whole unit		[ ]		

8. Spare part list

10424	ball valve G 3/4" i-a, PN25
12887	filter Ms 3/4"
15955	thermo mixer 3/4"JRG
14761	solenoid valve Ms 3/4"
14680	solenoid valve Ms 1/2" M24K
13082	plug for solenoid valve 230VAC LED 1,5m
15995	controller ED-SeD complete
10959	hosuing 240/160/90
14833	control board ED-V2-11x230V
12985	rotary knob 6mm

9. Wiring diagramme