Medium Pressure UV System - MP Series

Function

The Medium pressure system is designed and optimized for advanced photo oxidation process as well as general disinfection. For use in medium and large pools. This system takes advantage of the UltraTherm UV-lamps, developed for high radiation output of wavelength 200 - 240 nm to maximize photo oxidation performance.

Furthermore, reactor geometries and electronic control systems have been designed to reduce operating costs to a minimum. Large flanged connections and body geometry results in very low head loss even at a high flow rate. The intelligent PLC control enables both automatic lamp dimming and diurnal power variation.

Specifications

Reactor Material
Stainless steel 316L (Super Duplex by request)

Orientation of Connections
In-line Vertical or Horizontal installation.

Temperature Protection
pT-100 - Titanium housing 2x thermo-switch

UV intensity sensor (Optional)
PTFE UV sensor

Quartz sleeve wiping system
Manual wiper
(Fully automated system available upon request)
** MP-NANO/MP1-600SS/MP2-600SS does not have wiping system

Operating Pressure
up to 10 bar

Power Supply
230V AC / 400V AC, 50Hz - 60Hz

Controller type: PLC

Cabinet Interface / HMI
Digital display / 4" display

Control Cabinet Material
Powder coated steel

Control cabinet Installation
Wall mounted

Control cabinet Operating temp.
0 - 40 ºC

UV Lamp failure indicator: Yes

UV Lamp power level indicator: Yes

UV Lamp lifetime monitoring: Yes

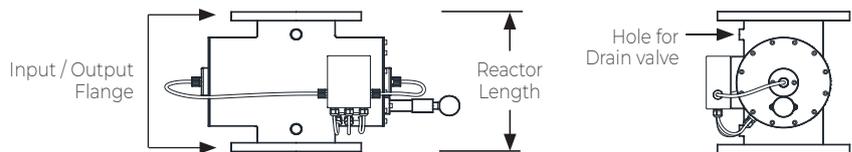**Lamp Cable length**
4meters (Max. 10 m)

UV Lamp type
UltraTherm medium
Pressure series
Electronic HF Modbus

UV Lamp life
9000 H

SCADA
MODBUS (optional)

Approvals
CE

Protection
Reactor: IP68
Cabinet: IP54

Input / Output Flange — Reactor Length — Hole for Drain valve

Model No.	No. of Lamps	Power/ Lamps (W)	Inlet/ Outlet	30mJ/cm² Max. Flow m³H	60mJ/cm² Max. Flow m³H	Reactor Length (mm)	Cabinet Power Supply (V AC)	Cabinet Power (kW)	Cabinet Dimensions (mm)
MP-NANO	1	600	2.5" BSP	30	15	200	230	0.67	400x300x210
MP1-600SS	1	600	D110	60	29	250	230	0.69	400x300x210
MP2-600SS	2	600	D110	120	59	400	230	1.4	600x400x210
MP1-1000SS	1	1000	DN150	64	32	500	400	1.1	600x600x300
MP1-2000SS	1	2000	DN200	253	126	500	400	2.2	600x600x300
MP1-3500SS	1	3500	DN250	555	277	500	400	3.6	600x600x400
MP2-3500SS	2	3500	DN300	1429	714	650	400	7.2	800x800x300
MP3-3500SS	3	3500	DN300	2239	1119	650	400	10.7	1000x1000x300
MP4-3500SS	4	3500	DN300	3000	1500	650	400	14	1000x1000x300

Ultra Violet System	MP Series	Model No. MP	Rev. 3	
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⚠️
1. Max. Flow for general disinfection calculated at UV95%, min. UV dose 30 mJ/cm² and 60 mJ/cm². Contact Aquashi for flow rates of higher or lower UV dose.
2. Holes and connections of Reactor can change depending on reactor size and type.
3. Lamp access is important.

Typical Installation

0.2 meter (Service area)

0.6 meter (Operation and Service area)

Cabinet (Controller)

Reactor

min. 0.8 meter (only use UV resistant materials. Example PE or Steel)

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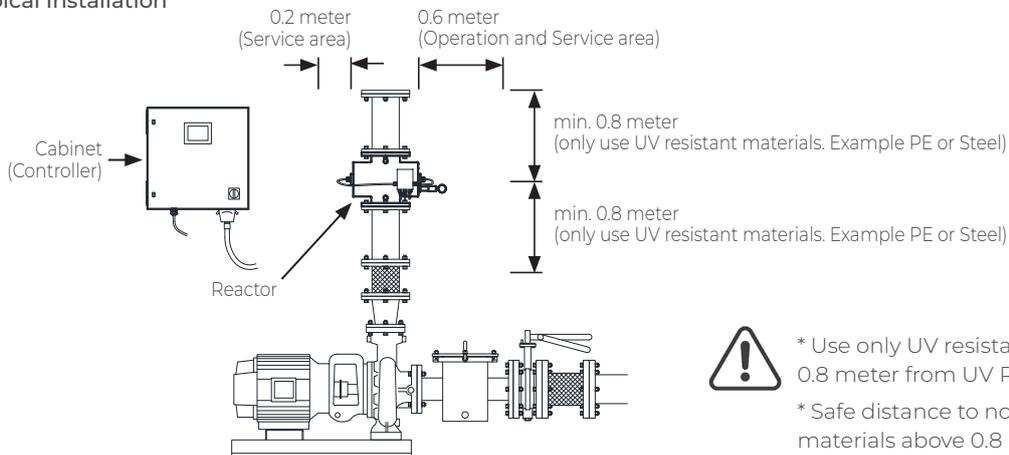
⚠️
* Use only UV resistant materials within 0.8 meter from UV Reactor.
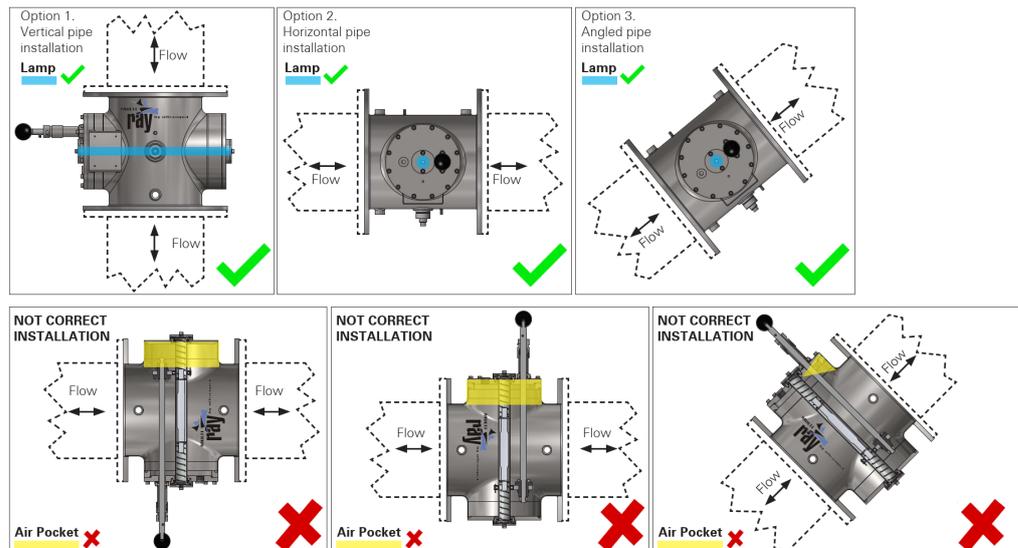
* Safe distance to non-UV resistant materials above 0.8 meter

Installation Guide to avoid air pockets created by pipe configuration

⚠️

Do not install UV system in a pipe section which can accumulate air pockets.

Installing the reactor incorrectly will also place the lamp vertical. this will result in premature failure of the lamp which leads to overheat, causing system damage. Do not do it!.

Option 1. Vertical pipe installation — Lamp ✓ — Flow — Flow ✓

Option 2. Horizontal pipe installation — Lamp ✓ — Flow — Flow ✓

Option 3. Angled pipe installation — Lamp ✓ — Flow ✓

NOT CORRECT INSTALLATION — Flow — Flow — Air Pocket ✗ ❌

NOT CORRECT INSTALLATION — Flow — Flow — Air Pocket ✗ ❌

NOT CORRECT INSTALLATION — Flow — Air Pocket ✗ ❌

Accessories (Spare Parts)

UV Lamp

* UV-600 (for MP1-NANO, MP1-600SS, MP2-600SS)

* UV-1000 (for MP1-1000SS)

* UV-2000 (for MP1-2000SS)

* UV-3500 (for MP1-3500SS, MP2-3500SS, MP3-3500SS, MP4-3500SS)

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