# Nano Tech MPUV Disinfection System

## LOW COST HIGH UV EFFICIENCY

**For commercial water disinfection and chloramine reduction**


### Main Features

1. Sustantial reduction in chloramines
2. Medium pressure UV lamps for maximum oxidation
3. Microprocessor control with data logging
4. Connects to building managment systems
5. Automatic "Smartdrive" wiper system as standard
6. Simple lamp replacement
7. 316 L Stainless steel reactor vessel

### Applications

1. Commercial swimming pools and spas
2. Water features
3. Lakes and ponds

### Main Characteristics

1. Easy to install with in-line vessel design
2. Higher UV efficiency
3. Typical UVT is 90% at 60 mJ/cm$^2$
4. Lower power consumption

***Pool & Spa Equipment***

Emaux
water technology

## No harmful chemicals

# A Non-Toxic Alternative

The NT-MPUV series of medium pressure ultraviolet unit is designed for easy installation. The system provides a cost-effective solution for disinfection and chloramine reduction in commercial pools.

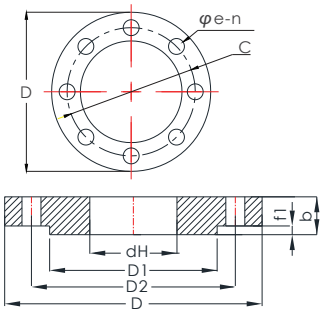
Medium pressure UV systems are highly effective against highly infectious Cryptosporidium parvum and Giardia lambia species which can exist in swimming pool water. These are virtually unaffected by the levels of chlorine used to sanitize swimming pools. As a direct result of its interaction with pollutants, the chlorine in a pool produces chloramines which cause eye and skin irritation and unpleasant odors.

Medium pressure UV systems reduce the side effects and produce a vastly improved water quality and atmospheric environment.

## Controller


## Reactor

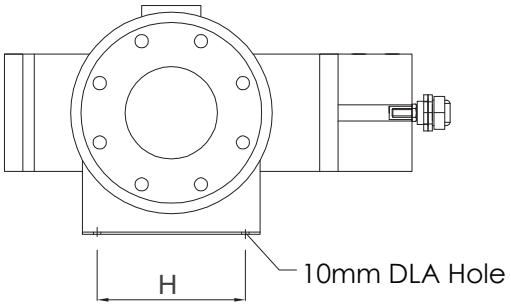
## Flange



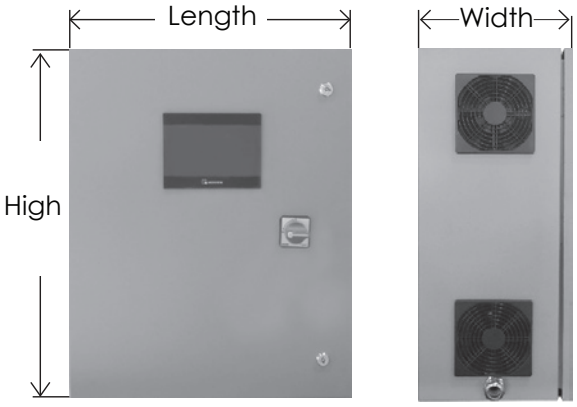

| DN | Model | D (mm) | D2 (mm) | φe-n | Bolt Specification | D1 (mm) | dH (mm) | f1 (mm) | b (mm) |
|---|---|---|---|---|---|---|---|---|---|
| DN80 | 3” | 200 | 160 | 18-8 | M16 | 132 | 90.5 | 2 | 20 |
| DN100 | 4” | 220 | 180 | 19-8 | M16 | 156 | 116 | 2 | 22 |
| DN150 | 6” | 285 | 240 | 22-8 | M20 | 211 | 170.5 | 2 | 24 |
| DN200 | 8” | 340 | 295 | 22-8 | M20 | 266 | 221.5 | 2 | 24 |
| DN250 | 10” | 395 | 350 | 22-12 | M20 | 319 | 276.5 | 2 | 26 |

HG-20592 PN 1.0 Mpa Standard flange size

## Dimensions of the Controller

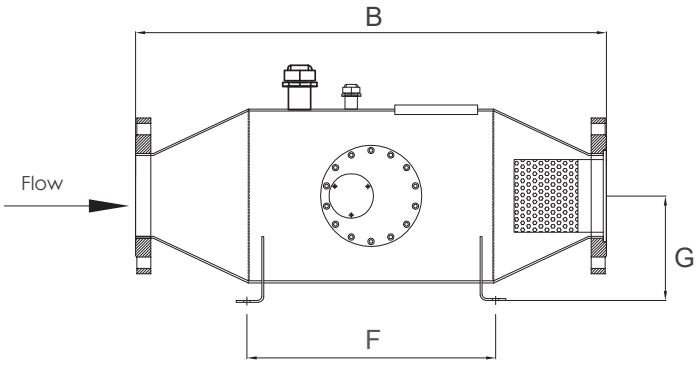



End View

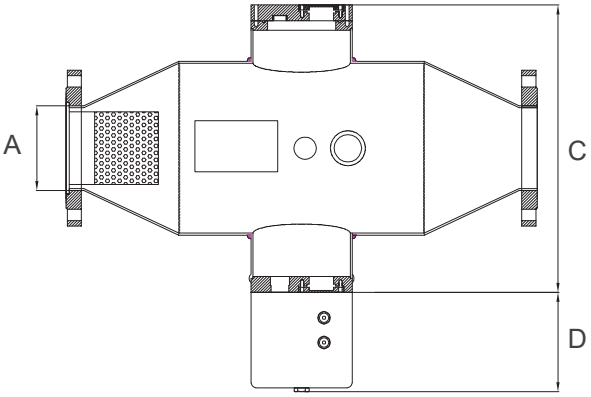



Note: UV intensity mJ/cm$^2$ requires a 4-20mA signal from a water flow rate measuring device (not supplied)

## Dimensions of the Reactor




Side View




Top View

## Technical Information and Dimensions:

*Supply rating must be specified with order

| Code | Model | Connection | Flow Rate | | Lamp Power (kW) | Supply Rating (V/ph/Hz) | Control Panel Dimension mm (LxWxH) | Reactor Dimensions (mm/inch) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | m³/h | US gpm | | | | A | B | C | D | F | G | H |
| 931135873(220V)<br>931137883(380V) | NT-MPUV40 | DN80 | 40 | 175 | 1.0 | 200-240/1/50-60<br>360-380/3/50-60 | 600x300x600 | 80/3.0 | 740/29.1 | 422/16.6 | 195/7.7 | 300/11.8 | 200/7.9 | 170/6.7 |
| 931135874(220V)<br>931137884(380V) | NT-MPUV60 | DN100 | 60 | 264 | 1.5 | 200-240/1/50-60<br>360-380/3/50-60 | 600x300x700 | 100/4.0 | 740/29.1 | 422/16.6 | 195/7.7 | 300/11.8 | 200/7.9 | 170/6.7 |
| 931135875(220V)<br>931137885(380V) | NT-MPUV105 | DN150 | 105 | 460 | 2.0 | 200-240/1/50-60<br>360-380/3/50-60 | 600x300x700 | 150/6.0 | 800/31.5 | 422/16.6 | 195/7.7 | 400/15.7 | 200/7.9 | 170/6.7 |
| 931135876(220V)<br>931137886(380V) | NT-MPUV145 | DN150 | 145 | 640 | 2.5 | 200-240/1/50-60<br>360-380/3/50-60 | 600x300x700 | 150/6.0 | 820/32.3 | 585/23 | 195/7.7 | 400/15.7 | 275/10.8 | 250/9.8 |
| 931135877(220V)<br>931137887(380V) | NT-MPUV170 | DN150 | 170 | 750 | 3.0 | 200-240/1/50-60<br>360-380/3/50-60 | 600x300x700 | 150/6.0 | 820/32.3 | 585/23 | 195/7.7 | 400/15.7 | 275/10.8 | 250/9.8 |
| 931135878(220V)<br>931137821(380V) | NT-MPUV220 | DN200 | 220 | 970 | 2x2.0=4.0 | 200-240/1/50-60<br>360-380/3/50-60 | 700x300x1100 | 200/8.0 | 890/35.0 | 422/16.6 | 195/7.7 | 450/17.7 | 225/8.8 | 250/9.8 |
| 931135879(220V)<br>931137822(380V) | NT-MPUV300 | DN200 | 300 | 1320 | 2x2.5=5.0 | 200-240/1/50-60<br>360-380/3/50-60 | 700x300x1100 | 200/8.0 | 890/35.0 | 585/23 | 195/7.7 | 450/17.7 | 275/10.8 | 330/13 |
| 931135880(220V)<br>931137823(380V) | NT-MPUV355 | DN250 | 355 | 1560 | 2x3.0=6.0 | 200-240/1/50-60<br>360-380/3/50-60 | 700x300x1100 | 250/10.0 | 890/35.0 | 585/23 | 195/7.7 | 450/17.7 | 275/10.8 | 330/13 |
| 931135881(220V)<br>931137824(380V) | NT-MPUV415 | DN250 | 415 | 1825 | 2x3.5=7.0 | 200-240/1/50-60<br>360-380/3/50-60 | 700x300x1100 | 250/10.0 | 890/35.0 | 585/23 | 195/7.7 | 450/17.7 | 275/10.8 | 330/13 |

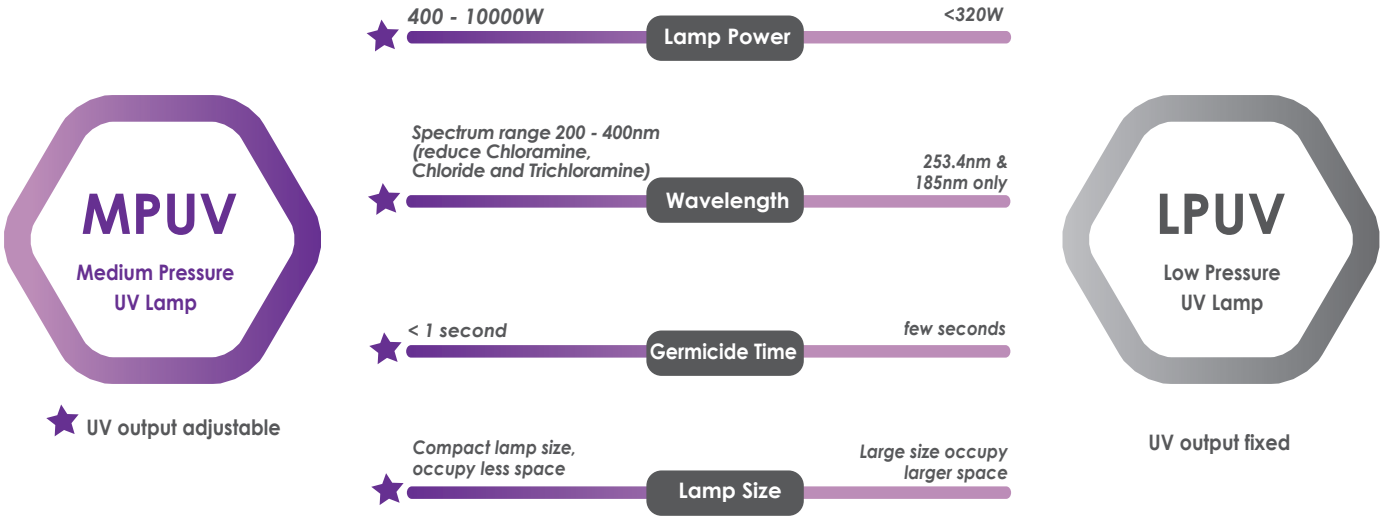
# MP vs LP UV Lamp Comparison:

A medium-pressure (MP) UV lamp (400w-10000W) has higher sterilization efficiency and shorter sterilization time than a low-pressure (LP) lamp (below 320W).

MPUV lamp has wider wavelengths, illumination in the range of 200–400 nm, and is effective for the removal of bacteria, viruses, chloramines, chlorides, and trichloramine. So they are suitable for use in public swimming pools. The low-pressure UV lamp can only emit a single wavelength at 254 nm, limiting the field of use.

Also, the MPUV lamp greatly reduces the size of the UV reactor and the number of UV lamps used, so the volume is relatively small. In contrast, low-pressure (LP) UV lamps are longer in size as wattage increases, so a slightly higher power low-pressure UV system needs more place.

The control system of the MPUV lamp can automatically adjust the energy of the UV output, while that of the LPUV lamp cannot.




**EMAUX WATER TECHNOLOGY CO., LTD**
ADDRESS: 2/F, Lockhart Centre, No. 301-307
Lockhart Road, Wanchai, Hong Kong
PHONE +852 2832 9880
www.emauxgroup.com

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