



PATENTED OZONE IN-SITU O₃ GENERATOR AND APPLICATIONS

1. INTRODUCTION

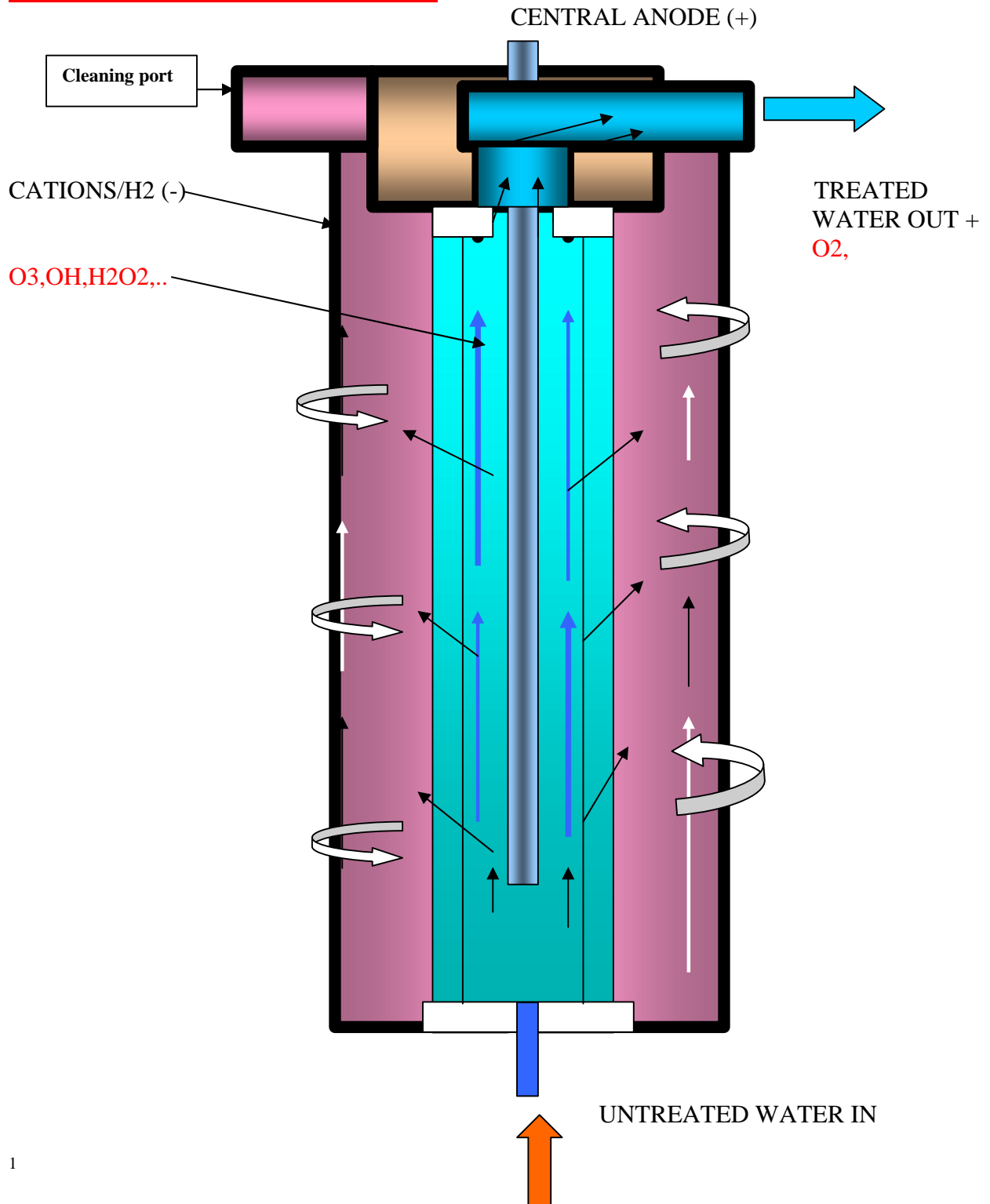
The Ozomax IN-SITU O₃ is a unit which capable of producing ozone directly in water by electro-catalytic dissociation so there is no need of compressors, ventureries , air dryers and /or Oxygen concentrators .The nascent O₂ in the presence of platinum group anode and/ Or UV produces several species of oxygen radicals, ions, Ozone, H₂O₂ and Hydroxyl radicals (Mixed Oxidants)which are capable of removing and oxidizing many pollutants specially destroying micro-organisms.. Water has to have a minimum electrical conductivity which is equivalent to 50 mg/l of TDS (total dissolved solids) depending on model. Higher conductivity will help produce more mixed oxidants and reduce power consumption.

To increase conductivity we can add table salt (NaCl), Sodium sulfate , Potassium salts, etc,...No organic salts to be used as it will consume O₃ and other oxidizing radicals.

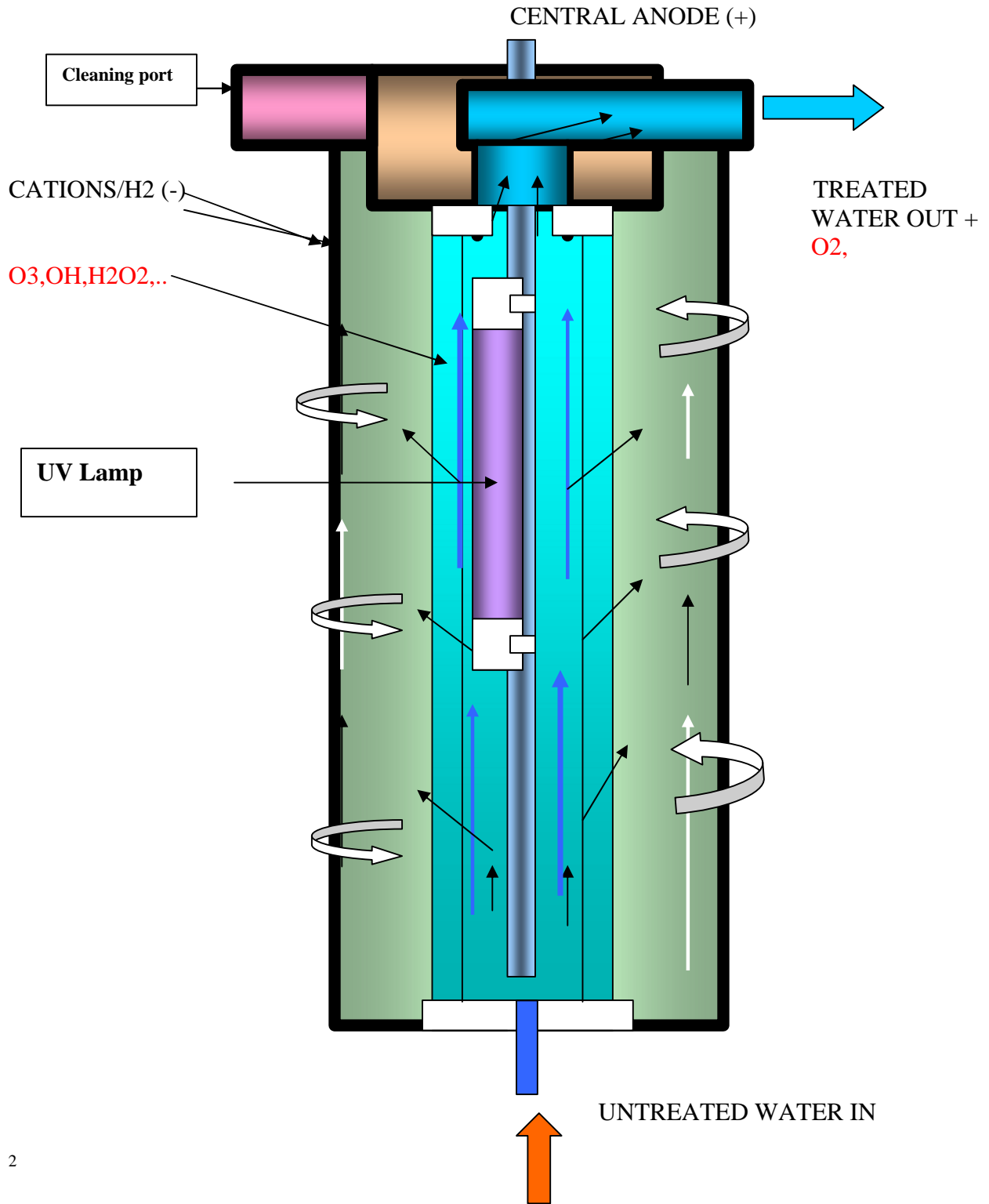
These electric pulses dissociate the water molecules to form many oxidizing radicals and ozone to attack all micro-organisms and COD (organics) . This unit also can be combined with UV lamp to accelerate the rate of reactions .

2. PRINCIPLE OF OPERATION INSIDE THE IN-SITU REACTOR

REACTOR WITHOUT CENTRAL UV



REACTOR WITH CENTRAL UV





POU unit for under the counter (1-2 GPM)



Dentopure Unit for Dentists



Pool residential and commercial pools up to 200 M3 volume.





POE commercial unit at (10-20 GPM)



**Washer to disinfect floors and other surfaces
Or for re-circulation in cooling Towers**



Tertiary septic treatment (small towns)