# Ultra-Oxygen

U<sub>2</sub>

# **Optimizing Water Quality**

"The Ultimate Sustainable Global Dissolved Oxygen Solution for Water"

www.ultra-oxygen.com

Ultra-Oxygen, the Water Solution division of Soldevco (Pty) Ltd, CR 2021/145973/07, 64 Island View Close, Island View 2, Big Bay, 7441, Western Cape, South Africa <a href="https://www.ultra-oxygen.com">www.ultra-oxygen.com</a> | CEO-Heindré Rademan | <a href="https://www.ultra-oxygen.com">heindre@ultra-oxygen.com</a> | +27 (0) 60 70 33 865

# MARKETING INFORMATION & SALES USER MANUAL

September 2023 - rev 2

#### TABLE OF CONTENTS

1	INT	RODUCTION	2
	1.1	Project Support and Water Quality Solutions	2
	1.2	Our Core Values	3
	1.3	What makes our Ultra-Oxygen generators bubbles so special?	3
	1.4	Our UO2-Drylet biocatalyst innovation showcase	6
	1.5	Our UO2-Quantum Disinfection™ (QD) innovation showcase	6
	1.6	Smart Farming, Environment management, and Water quality monitoring	7
2	AVA	AILABLE PRODUCTS	8
	2.1	Introduction	8
	2.2	1N-PVC - Micro and Ultrafine bubble generator	8
	2.3	VIPER 30 - Micro and Ultrafine bubble generator	9
	2.4	VIPER <sub>100</sub> - Micro and Ultrafine bubble generator	9
	2.5	1N-VIPER - Micro and Ultrafine bubble generator	10
	2.6	UO2-DRYLET - Biocatalyst innovation	11
	2.7	UO2-CLAIRE - Quantum Disinfection™ (QD) innovation	13
	2.8	Smart Farming, Environment management, and Water quality monitoring	15
3	SO	LDEVCO - SOLutions DEVelopment COmpany	16
	3.1	User Manuals and detailed information	16
	3.2	Solutions offered.	16
4	YO	UR POINT OF CONTACT	16
	4.1	Heindre Rademan - +27 60 70 33 865 – WhatsApp me today	16

# 1 INTRODUCTION

## 1.1 Project Support and Water Quality Solutions.

- 1.1.1 Building a Better Tomorrow, Today: At SOLDEVCO/Ultra-Oxygen, we are dedicated partners in sustainability, driving change through innovative technology and sustainable solutions for a greener future. United in collaboration, we optimise success for our clients with a solution-driven approach, always prioritizing quality without compromise.
- 1.1.2 At SOLDEVCO/Ultra-Oxygen, we are passionate about creating a greener, more sustainable future for all.
  Our focus is on industries that align with our expertise and innovative technology, including project support, agriculture, aquaculture, aquaponics, water quality, and wastewater treatment.
- 1.1.3 We believe in the power of collaboration and strive to build long-term partnerships with our clients. We shift the traditional business model of selling to one of collaboration, where the goal is to create mutually beneficial relationships that drive positive change and promote sustainability. Join us as we work together towards a brighter future.

#### "WE ARE IN THIS TOGETHER".

1.1.4 **Project Support** - For a quarter of a century, we have been at the forefront of delivering exceptional project support services to clients across a range of industries.

Our unwavering commitment to building strong, trustworthy relationships with our clients has allowed us to serve as their trusted advocate and guardian of their interests. Our unparalleled expertise equips us to effectively manage all aspects of construction projects, from coordinating professionals and contractors to procuring materials and equipment. Whether you're a small or large business, we are here to support and guide you towards success.

1.1.5 **Water Quality Solutions** - At Ultra-Oxygen, the water quality solution division of Soldevco Pty Ltd, lies our passion for elevating water quality to new heights.

We specialize in innovative aeration techniques using Micro and Ultra-Fine Bubbles (MB/UFB) technology to enhance water and wastewater treatment processes, Water Quality Monitoring and Control, Bioremediation, and Water Disinfection. Our commitment is to deliver oxygen to plant roots and microorganisms for optimal results, benefiting industries such as agriculture, aquaculture, horticulture, aquaponics, and wastewater treatment, supply and implement award-winning biocatalysts for enhanced bioremediation, and utilise the latest disinfection technology that uses the quantum mechanics principles of electron movement to create catalytic active surfaces (positively charged) that disintegrate any microorganism instantly, upon contact.

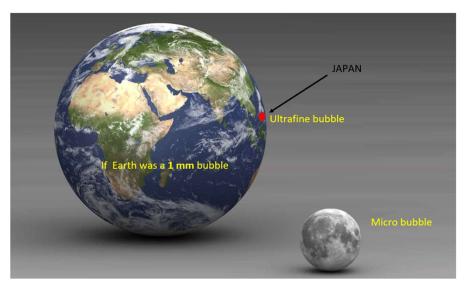
We partner with our clients to tailor solutions that meet their unique project requirements and drive towards a brighter, healthier future for all.

#### 1.2 Our Core Values

- 1.2.1 Empowering People, Building Partnerships, Achieving Purpose with Professionalism and Integrity At Soldevco (Pty) Ltd, we believe in the power of people, partnerships, and purpose. We are passionate about our work and are driven by the desire to deliver professionalism and integrity in everything we do. We believe that by treating our employees and customers with dignity and respect, we can create a safe and inclusive workplace that celebrates diversity.
- 1.2.2 Empowering progress through accountability and innovation Empowerment and accountability are at the core of our values. We are not afraid to take on challenges and turn them into opportunities. Our leadership style is proactive and client-focused, and we are always looking for ways to improve and innovate. We understand that the satisfaction of our customers is the foundation of our success and longevity, and we are dedicated to managing your business with the same level of care and responsibility as if it were our own.

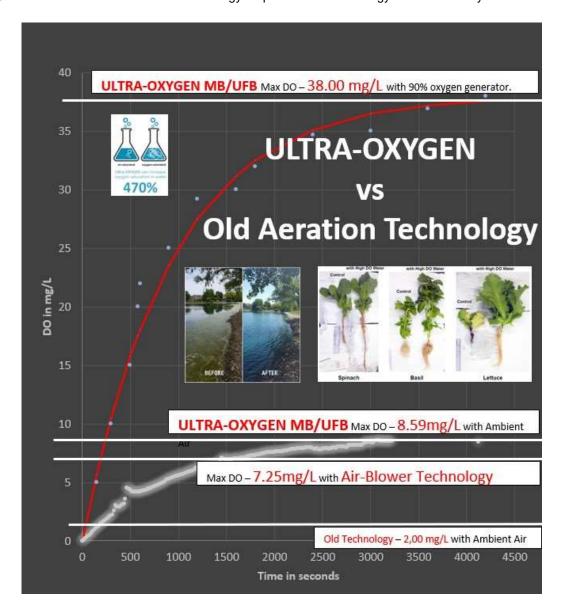
## 1.3 What makes our Ultra-Oxygen generators bubbles so special?

- 1.3.1 Micro and Ultrafine bubbles generated with the patented equipment of Ultra-Oxygen, are not your ordinary bubbles. These tiny, charged bubbles possess remarkable properties that set them apart from their larger counterparts. Ultrafine bubbles are so small that they measure under 50 microns and can even shrink naturally down to 350 nanometres. These bubbles are incredibly stable, neutrally buoyant, and can remain suspended in water for months.
- 1.3.2 Ultrafine bubbles are not just any bubbles; they have a charged surface that can perform electrochemistry and oxidative reactions. With the right mixture of iron and oxygen molecules, these bubbles can do oxidation reactions, making them ideal for a variety of applications.
- 1.3.3 These tiny bubbles also have the ability to reduce surface tension and pH of water, creating amazing effects in the water. This unique class of bubbles has even gained a new classification under ISO/TC 281 Fine bubble technology.
- 1.3.4 Ultrafine bubbles are truly a superior aeration technology that can efficiently aerate the entire water column. With all these fascinating benefits, it is no wonder that ultrafine bubbles are a game-changer in many industries.



1.3.5 Visit https://ultra-oxygen.com/ to learn more about the world of MICRO and ULTRA-FINE BUBBLES.

1.3.6 Test results showed that the technology outperform old technology and methods by far.



- 1.3.7 The major benefits users recorded, studies verified, and results obtained from using MB/UFB aeration equipment can be summarized as follows:
  - Ability to replace lost oxygen in water bodies very fast and efficient, to use other gasses such as ozone more efficiently in water treatment processes, and to supersaturate water with oxygen up +-450% - 38mg/L.
  - Eliminate up to 70% to 90% of algae, reduce chlorophyll by 50%, remove 80% to 100%
     Manganese, Iron, Hydrogen Sulphide, and Copper Sulphate in water by oxidation.
  - Prevent the occurrence of toxic blue green algae.
  - Increase agriculture productivity and control fouling in sand filters and clarifiers.
  - Prevent biofouling growth and safe for fish, plants, and other aquatic life.
  - Reduce and prevents taste and odour problems, improve water quality, reduce pH, TSS, BOD and chemical dosage.
  - Remove surfactants, enabling Lower cost to treat wastewater (less CAPEX and OPEX),

- Increased treatment capacity of WWTP and makes smaller process units & ancillary equipment more efficient to improve water quality.
- Improved energy efficiency to treat water and improve BOD / COD / N removal efficiencies.
- Less chemical usage and prevent clogging of filters.
- Improve coagulation and flocculation processes.
- Lower bacterial counts, reduce the risk of spreading legionella, Improve habitat for fish and wildlife. and increase Aesthetic Appearances.
- Reduce chemical expenses and improve Yield and Quality of crops, and the health of all species
  that live in water and create a healthier environment that promotes the well-being of humans.

#### 1.3.8 Micro and Ultrafine bubble technology replacing air blowers?

# Why use Micro and Ultrafine bubble generators instead of air blowers?

PERFORMANCE FACTORS FOR CONSIDERATION	UO2-MB/UFB Generators	AIR blowers with Diffusers
Bubble sizes in terms of ISO standards.	SMALL	LARGE
	Micro and Ultrafine bubbles	Fine course and Course bubbles
Maximum dissolve oxygen(DO) level using AIR (21% oxygen)	8.59 mg/L (96.52% saturation)	7.1mg/L (79.78% saturation)
Maximum dissolve oxygen(DO) level using AIR (90% oxygen)	38 mg/L (427% saturation)	Not feasible/unable to compete
Require additional air blowers to dissolve oxygen into water.	NO	YES
Require additional sub-network of AIR delivery to diffusers.	NO	YES
Able to use existing water pumps and pipe networks to dissolve oxygen to water.	YES	NO
Require additional water pump to dissolve oxygen into the water.	YES	NO
The footprint of equipment used.	Very small	Large
Installation mobile and can be moved easily to different locations by un-skilled and semi-skilled workers.	YES	NO
Equipment maintenance burden	VERYLOW	VERYHIGH
Installation time	hrs	days
AIR temperature impact on DO performance	VERYLOW	VERY HIGH
AIR use design factor to reduce COD and BOD	not required	add 50% more AIR as normally required to break down BOD and COD
Risk of condensation in air-feed lines to reduce AIR-FLOW	No Risk	HIGH
Risk of water temperature rising due to high air temperatures, reducing efficiency to dissolve oxygen in the water.	No Risk	HIGH
Risk of noise pollution.	No Risk	HIGH
Risk of scaling and biofilm affecting the efficiency of dissolving oxygen in the water.	No Risk	HIGH
Maximum installation depth of diffuser	Unlimmited	5 m
Bubbles have a charged surface that can perform electrochemistry and oxidative reactions	YES	No
Effectively oxygenates the entire water body	YES	NO
Offer water treatment engineers and farmers the unprecedented potential to attain remarkable outcomes.	YES	NO

### 1.4 Our UO2-Drylet biocatalyst innovation showcase

1.4.1 The UO2-Drylet biocatalyst, renowned for its award-winning status. Complemented by our advanced Ultra-Oxygen Micro and Ultrafine Bubble generators, these cutting-edge technologies redefine wastewater treatment, ushering in elevated bioremediation, microbial protection, and oxygenation. This powerful collaboration empowers wastewater treatment operators and facilities to enhance operational efficiency and environmental impact.

The UO2-Drylet biocatalyst stands as a pioneer in enhanced bioremediation, securing microbe viability through its patented silica substrate that safeguards against phages and predators, ensuring sustained efficacy in both liquid and solid layers. The retention of these microbes within the system paves the way for unparalleled results.

Reach out to us for comprehensive product insights on AQUA-ASSIST, BIO-REACT, and MANURE MAGIC, and discover how this integrated solution transforms possibilities in waste management, agriculture, and beyond.



# 1.5 Our UO2-Quantum Disinfection™ (QD) innovation showcase

1.5.1 This groundbreaking innovation will revolutionize the way we approach hygiene, health, and sustainability. This cutting-edge technology harnesses the intricate principles of quantum mechanics to forge a new frontier in disinfection. By utilizing the mesmerizing dance of electrons, it engineers catalytic active surfaces with a positively charged demeanour, armed to combat the invisible threats that surround us.

In an era where the need for rapid, effective, and eco-conscious solutions is more pressing than ever, this innovative marvel stands as a beacon of hope and progress. With the power to instantaneously disintegrate any microorganism upon contact, this technology holds the potential to reshape the very fabric of our lives – from safeguarding public health to protecting our delicate ecosystems.

Its implementation marks not just a leap forward, but a monumental stride towards a safer, cleaner, and more resilient future for all.

#### 1.5.2 Human Benefits:

Healthcare Facilities: Medical Equipment and PPE; Water and Sanitation: Accessible Clean Water; Food Industry: Enhanced Food Safety; Public Transportation: Reduced Disease Transmission; Educational Institutions: Healthier Learning Environments; Emergency Response: Protection for First Responders; Elderly Care Facilities: Improved Care for Seniors; Remote Areas: Access to Clean Water.

#### 1.5.3 Animal and Plant Life Benefits:

Aquaculture: Sustainable Fishery Practices; Agriculture: Enhanced Crop Health and Yield; Aquatic Ecosystems: Biodiversity Preservation; Terrestrial Ecosystems: Sustainable Plant Growth; Animal Welfare: Disease Control in Livestock; Epidemic Preparedness: Limiting Disease Spread; Environmental Stewardship: Reduced Chemical Dependency; Biodiversity Conservation: Wildlife Habitat Protection.



# 1.6 Smart Farming, Environment management, and Water quality monitoring

#### 1.6.1 IF YOU CAN'T MEASURE IT, YOU CAN'T MANAGE IT

Embarking on a journey without the proper tools and guidance can transform what should be an exciting adventure into a nerve-wracking and uncertain endeavour. Just like driving a vehicle without reliable speed and fuel gauges, the path ahead can become stressful and laden with risks.

But fear not, our mission is to empower water treatment customers, especially visionary farmers who have invested millions in their infrastructure, with the remarkable gift of informed choice. Together, we illuminate the way towards optimal instrumentation and ingenious Smart Farmer solutions.

We embraced these available cutting-edge solutions and can transcend the boundaries of uncertainty and to step into a realm of enhanced productivity and flourishing returns on the investments. Your journey into the new world of IoT and environmental monitoring and management is our shared commitment, and together, we shall find the appropriate long-term cost effective site-specific solution for you.



# 2 AVAILABLE PRODUCTS

#### 2.1 Introduction

- 2.1.1 At the heart of the Ultra-Oxygen Water Quality Division beats an unwavering commitment to innovation and transformation. Soldevco (Pty) Ltd has ingeniously sculpted a future where water quality isn't just maintained; it's elevated to an art form. At the epicentre of this visionary endeavour stand the Micro and Ultrafine Bubble Generators marvels of technology that infuse the essence of life, oxygen, into every droplet, redefining the very essence of purity.
- 2.1.2 But the essence of innovation doesn't stop there. Enter the UO2-Drylet Biocatalyst Innovation, a symphony of science and nature, revolutionizing how we harmonize with our environment.
- 2.1.3 The **UO2-Quantum Disinfection Innovation** follows suit, a beacon of hope that illuminates a world where waterborne threats retreat before the might of human ingenuity.
- 2.1.4 Yet, this is not just about science; it's about stewardship. The Ultra-Oxygen Water Quality Division marches forward with a banner of **Smart Farming**, epitomizing the fusion of technology and agriculture in a way that respects both the Earth's bounty and its limits. In the grand tapestry of innovation, the threads of Environment Management are meticulously woven, ensuring that progress doesn't come at the cost of our planet's well-being.
- 2.1.5 And as if painting a masterpiece, the division wields Water Quality Monitoring Equipment, a brush that sweeps across landscapes of liquid, gathering insights that empower us to be better custodians of our most precious resource. With every droplet that passes through this technology, we're one step closer to a world where pristine water is a birthright, not a privilege.
- 2.1.6 The face of water quality optimization is being transformed, and it wears the glow of inspiration. Soldevco's Ultra-Oxygen Water Quality Division isn't merely delivering products; it's pioneering a movement that celebrates the elegance of purity, the brilliance of innovation, and the sanctity of nature. In these creations, we see the ripple effects of change a change that heralds a future where water, that life-affirming elixir, flows clearer, healthier, and more abundant than ever before.

## 2.2 1N-PVC - Micro and Ultrafine bubble generator



Weigh 1.95 kg - 125mm dia x 230mm - max 6 Bar pressure - 50mm INLET connection.

# 2.3 VIPER 30 - Micro and Ultrafine bubble generator



Weigh 0,38 Kg - 32mm dia x 255mm - max 6 Bar pressure – 32mm INLET and OUTLET connection.

# 2.4 VIPER 100 - Micro and Ultrafine bubble generator



2.4.1 The VIPER<sub>100</sub> MB/UFB generator.



OPEN END VIPER<sub>100</sub> UNIT

Weigh 3,54kg x 230mm-125mm dia x 320mm - max 6 Bar pressure - 50mm INLET connection.

#### 2.4.2 In-Line MB/UFB receiving chamber.



Weigh 2,75kg + 1.97 kg Bolts/Nuts x 230mm-125mm Dia x 510mm - 50mm OUTLET connection.

2.4.3 Export kit = MB/UFB Generator without Endcap and Fixed Flange. The client to purchase fittings and pipe and complete assembly in terms of instructions and drawings that will be provided on request.



Weigh 1,9kg x 125mm Dia x 230mm.

# 2.5 1N-VIPER - Micro and Ultrafine bubble generator





#### **Water Flow Direction**

Weigh 8,8kg (2,7kg cover + 3,3kg MB/UFB generators +2,8kg 200dia fixed Flange) x 340mm-200mm Dia x 510mm max 6 Bar pressure. – 50mm INLET Connection.

2.5.1 In-Line MB/UFB receiving chamber with 50mm outlet.

Weigh 10,33kg (Weigh 7,75kg + 2.58 kg Bolts/Nuts) x 340mm-200mm Dia x 510mm max 6 Bar pressure – 50mm OUTLET Connection.



2.5.2 1N-VIPER Export kit.

Weigh 3,3kg x 200mm Dia x 500mm - 50mm INLET Connection.



# **2.6 UO2-DRYLET -** Biocatalyst innovation

2.6.1 **AQUA-ASSIST** bio catalyst with microbial consortia for enhanced bioremediation in AERATED basins.



AQUA-ASSIST-50	50ML AQUA-ASSIST BIO CATALYST WITH MICROBIAL CONSORTIA FOR ENCHANCED BIO-REMEDIATION -35G
	Max flow 32 m3/month
	Min.DOZING: 1st Month - Double doze (50 ml x 2)
	2nd Month - 50 ml and every 2nd month hereafter.
AQUA-ASSIST-100	100ML <b>AQUA-ASSIST</b> BIO CATALYST WITH MICROBIAL CONSORTIA FOR ENCHANCED BIO-REMEDIATION -75G
	Max flow 95 m3/month
	Min.DOZING: 1st Month - Double doze (100 ml x 2)
	2nd Month - 100 ml and every 2nd month hereafter.
AQUA-ASSIST-250	250ML <b>AQUA-ASSIST</b> BIO CATALYST WITH MICROBIAL CONSORTIA FOR ENCHANCED BIO-REMEDIATION -190G
	Max flow 315 m3/month
	Min.DOZING: 1st Month - Double doze (250 ml x 2)
	2nd Month - 250 ml and every 2nd month hereafter.
AQUA-ASSIST-500	500ML AQUA-ASSIST BIO CATALYST WITH MICROBIAL CONSORTIA FOR ENCHANCED BIO-REMEDIATION -380G
	Max flow 630 m3/month
	Min.DOZING: 1st Month - Double doze (500 ml x 2)
	2nd Month - 500 ml and every 2nd month hereafter.
AQUA-ASSIST-1000	1L AQUA-ASSIST BIO CATALYST WITH MICROBIAL CONSORTIA FOR ENCHANCED BIO-REMEDIATION -760G Max flow 3 150 m3/month
	Min.DOZING: 1st Month - Double doze (1000 ml x 2)
	2nd Month - 1000 ml and every 2nd month hereafter.
AQUA-ASSIST-2500	2.5L AQUA-ASSIST BIO CATALYST WITH MICROBIAL CONSORTIA FOR ENCHANCED BIO-REMEDIATION -1.9kg
	Max flow 7 600 m3/month
	Min.DOZING: 1st Month - Double doze (2,5L x 2)
	2nd Month - 2,5L and every 2nd month hereafter.

2.6.2 **BIO-REACT & MANURE MAGIC** bio catalyst with microbial consortia for enhanced bioremediation in ANAERATED basins.



BIO-REACT-50	50ML BIO-REACT - BIO CATALYST WITH MICROBIAL CONSORTIA FOR ENCHANCED BIO-REMEDIATION -35G Max flow 32 m3/month Min.DOZING: 1st Month - Double doze (50 ml x 2) 2nd Month - 50 ml and every 2nd month hereafter.
BIO-REACT-100	100ML BIO-REACT - BIO CATALYST WITH MICROBIAL CONSORTIA FOR ENCHANCED BIO-REMEDIATION -75G Max flow 95 m3/month Min.DOZING: 1st Month - Double doze (100 ml x 2) 2nd Month - 100 ml and every 2nd month hereafter
BIO-REACT-250	250ML BIO-REACT - BIO CATALYST WITH MICROBIAL CONSORTIA FOR ENCHANCED BIO-REMEDIATION -190G Max flow 315 m3/month Min.DOZING: 1st Month - Double doze (250 ml x 2) 2nd Month - 250 ml and every 2nd month hereafter.

MANURE MAGIC-250	250ML MANURE MAGIC - BIO CATALYST WITH MICROBIAL CONSORTIA FOR ENCHANCED BIO-REMEDIATION -190G Max flow 315 m3/month Min.DOZING: 1st Month - Double doze (250 ml x 2) 2nd Month - 250 ml and every 2nd month hereafter.
MANURE MAGIC-500	500ML MANURE MAGIC - BIO CATALYST WITH MICROBIAL CONSORTIA FOR ENCHANCED BIO-REMEDIATION 380G Max flow 630 m3/month Min.DOZING: 1st Month - Double doze (500 ml x 2) 2nd Month - 500 ml and every 2nd month hereafter.
MANURE MAGIC-1000	1L MANURE MAGIC - BIO CATALYST WITH MICROBIAL CONSORTIA FOR ENCHANCED BIO-REMEDIATION 760G Max flow 3 150 m3/month Min.DOZING: 1st Month - Double doze (1000 ml x 2) 2nd Month - 1000 ml and every 2nd month hereafter.
MANURE MAGIC-2500	2.5L MANURE MAGIC - BIO CATALYST WITH MICROBIAL CONSORTIA FOR ENCHANCED BIO-REMEDIATION 1.9kg Max flow <b>7 600 m3/month</b> Min.DOZING: 1st Month - Double doze (2,5L x 2) 2nd Month - 2,5L and every 2nd month hereafter.

# 2.7 UO2-CLAIRE - Quantum Disinfection™ (QD) innovation



Clairify 12 or Platinum Quantum Disinfection unit	Whole House & Agriculture Size- 280x80 - Max Water Flow - 44 L/min - 740 000L - 660g QD media - Max 8.6 bar - 5 to 38°C 2.96kg
Clairify AG or Gold Quantum Disinfection unit	Irrigation water quality improvement: increase in the growth of plants Size- 300x62,3 - Max Water Flow - 27 L/min - 380 000L - 380g QD media - Max 8.6 bar - 5 to 38°C 1.72kg
Silver Quantum Disinfection unit	Under-the-Sink (kitchen and bathrooms) & Refrigerator Size- 150x50 - Max Water Flow - 7,5 L/min - 140 000L - 120-140g QD media 0.69kg
Clairify 1 Quantum Disinfection unit	Kitchens (homes, restaurants), hotels, recreative vehicles (camping cars and boats) Size- 300x75 - Max Water Flow - 3,8 L/min - 56 000L - 70g QD media - Min 1.4 bar - Max 8.6 bar - 5 to 38°C 3.18kg
Clairify RO10 PostRO Quantum Disinfection unit	Under-the-Sink Post RO systems Size- 250x50 - Max Water Flow - 2 L/min - 11 000L - 20g QD media - Max 8.6 bar - 5 to 38°C 0.85kg
Clairify RO6 PostRO Quantum Disinfection unit	Under-the-Sink Post RO (reverse osmosis) systems Size- 150x50 - Max Water Flow - 2 L/min - 11 000L - 20g QD media - Max 8.6 bar - 5 to 38°C 0.47kg
Media in bulk Quantum Disinfection unit	Max Water Flow - 3kL QD media - ENGINEERING REQUIERED - Max 8.6 bar - 5 to 38°C 3.8kg

- 2.7.1 The VIRO-BLASTER solution includes a water disinfection technology that uses silver-based germicide ceramics to kill microorganisms by the disintegration of the cells due to an instant 'rip-off' of electrons. The killing mechanism is unique and allows the elimination of a large range of microorganisms (bacteria, viruses, micro-algae, yeast, etc.) at high concentrations without any contact time.
- 2.7.2 Why do we choose this disinfection solution above chemicals and Ultra-Violet technology (UV)?

Caracteristic	υv	Viro-Blaster Solution	
Power requirement.  (UV lamps consume a significant amount of electricity, making it an energy-intensive process.)	Yes	No	
Remove oxygen from water due to heating. (Oxygen is required to keep water healthy.)	Yes	No	
Requiere engineering and calculations to ensure enough contact time is provided to kill microorganisms.	Yes	No	
Constant problems related to electrical devices in the water.	Yes	No	
Significant maintenance. (The UV lamps need to be regularly maintained, including regular cleaning and replacement, which can add to the operational cost.)	Yes	None	
Inactivation of bacteria and not killing.  (UV irradiation is not effective against certain microorganisms, such as Cryptosporidium and Giardia, which are commonly found in surface water sources.)	Yes	No	
Toxic/hazardous mercury waste. (UV irradiation lamps contain mercury, which is a toxic heavy metal that can leach into the environment if not properly disposed of.)	Yes	No	
Toxic/hazardous chemical waste. (The use of chemical disinfectants, such as chlorine, along with UV irradiation can result in the formation of toxic byproducts, such as trihalomethanes, which can be harmful to human health.)	Yes	No	
Production of dangerous bacteria mutations (especially E. coli) (UV irradiation may not completely remove all contaminants from water, and some may remain even after treatment.)	Yes	No	
Production of toxic/hazardous partially burned Volatile Organic Compounds. (VOC) (When UV irradiation lamps are used in water treatment, they can partially break down certain VOCs, which can result in the production of partially burned, toxic and hazardous compounds. These partially burned VOCs can contain hazardous substances such as formaldehyde, aldehydes, ketones, and other toxic chemicals that can pose a risk to human health and the environment.)	Yes	No	
Heating of the water.	Yes	No	
Application possible in slow gravitational flows.(e.g.pitchers, small water filters, bottles, etc.)	No	Yes	
Devices/systems size		Compact, and 2-8 times smaller than UV function of water flow	
Price (The initial investment in UV irradiation lamps can be quite high and requires a significant upfront cost.)		cheaper than UV ally at higher water	

# 2.8 Smart Farming, Environment management, and Water quality monitoring



- 2.8.1 The range of products available includes, Basic Smart Farming IoT Systems, Multi and Single parameter Controllers, Industrial Online Controller Solutions, Portable and Pen-Type models, Smart Farmer Weather station solutions.
- 2.8.2 The importance of preventative maintenance is etched into the very fabric of advancement. It is the guardian of reliability, the gatekeeper of precision, and the sentinel of success. All sensors or parts of sensors need to be replaced at some point. We understand that no sensor last for ever and therefore focus on sensors that is reliable, affordable and makes practical sense.
- 2.8.3 We take pride in helping clients to minimise lifecycle costs on instrumentation and sensors. Furthermore, the value of foresight cannot be overstated when it comes to choosing the appropriate instrumentation and sensors.

# 3 **SOLDEVCO - SOL**utions **DEV**elopment **CO**mpany

#### 3.1 User Manuals and detailed information

3.1.1 This MARKETING INFORMATION & SALES USER MANUAL was compiled to introduce available products and services to new Sales Agents, Distributors, and Clients. It must be noted that each of the 4 product lines has its own detailed information and user manual, to be used during solution developments, and freely available on request.

#### 3.2 Solutions offered.

- 3.2.1 At the heart of our achievements lies a dedication to understanding, facilitating solutions, and resolving challenges through thoughtful inquiry.
- 3.2.2 Irrespective of the scale of your venture whether you're a cherished local establishment or a sprawling global enterprise we possess the capability and sincere commitment to harmonize our strategies with your organizational ethos and aspirations. Collaboratively, we can cultivate a seamless partnership that propels your business towards unparalleled accomplishments.
- 3.2.3 Every obstacle presented before us is an opportunity to exhibit our prowess, as we approach each endeavour with an individualized perspective, mindful of its distinct contextual factors. Your project will receive the attention it deserves, embracing its unique site-specific attributes in our considerations.

"We listen, find solutions, and solve problems by asking the right questions."

# **4 YOUR POINT OF CONTACT**

4.1 Heindre Rademan - +27 60 70 33 865 – WhatsApp me today.

