

45
YEARS

X Hypox[®]

On-site
Mix Oxidant
Generator

**NEW WAY OF
CHLORINATION**

Welcome,

Kemisan® has been developing and manufacturing electrolysis technology since 1976 in Izmir, Turkey.

With the experience of 45 years in Chlor-Alkali and Electrochemistry, Today Kemisan® introduces solutions that enables to produce chlorine based advanced disinfectants only from Salt and Electricity where you need it.

Kemisan® missions to improve following 5 criteria in every new product launch as;

- Effective Chlorination
- Economical Chlorination
- Safer Chlorination
- Greener Chlorination
- Reliable Chlorination

"The endless possibilities of electrolysis technology is the only way to reach better and better disinfection results" is the main vision of the company while celebrating its 45th year in 2021.



1976

Started as a Chlor-Alkali plant with Diagram Electrolysis Cell Infrastructure



1986

Designed and manufactured its first Chlor-Alkali membrane electrolysis.



1995

Designed and manufactured its first DSA Anodes. Introduced Clorel® brand with the first generation of Clorel® Sodium Hypochlorite Generators. (OSG)



2003

Decided to focus on developing disinfection solutions with onsite electrolysis technology. HypoX® branded generators are introduced for "Advanced Disinfection" solutions and Carad® for Anode Coating Services has started.



2012

Kemisan® introduced its 4th generation Clorel® Sodium Hypochlorite Generators and HypoX® Mix Oxidant Generators.



2021

Celebrating 45th Anniversary



We're...

Meet with our
On-site Production
Disinfection
Solutions...

HypoX® New Way of Chlorination

On-site Hypo-Oxidant Generation

HypoX® is a Mix Oxidant Generator as we can also say the next generation of Clorel®. The chemical synergy of Fresh and Mix Oxidants on besides hypo-chlorite opens another era in disinfection & oxidation results. The speed and power of HypoX® guarantees to solve important problems like Biofilm, Odor, Legionella, and other Strong Pathogens. High disinfection performance of HypoX® makes it an effective, economic, green and safe alternative mainly to chlorine and other biocides.



Clorel® Better Way of Chlorination

On-site Sodium Hypochlorite Generation (OSG)

Clorel® is an OSG* (On-site Sodium Hypochlorite Generator) that produces low pH-natural Sodium Hypochlorite only from Salt, Electric & Water. Clorel® is the safest, greenest and economic alternative to commercial gas chlorine and/or hypochlorite.



Clorel® SEA Unlimited Way of Chlorination

On-site Seawater Electrochlorination

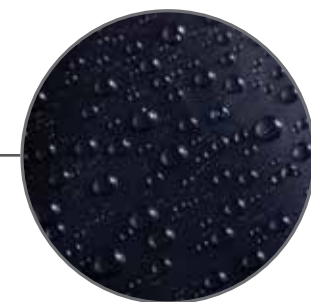
Clorel® SEA uses seawater rather than salt to produce low pH-natural Sodium Hypochlorite to prevent Mussels and biofouling. Clorel® SEA brings an enormous economy, safety, and ease of operation especially in large-scale seawater cooling systems like Seaside power plants and wastewater treatment plants as an alternative to chlorine and other biocides.



Carad® New Life for Electrodes

Electrode Coating & Repairing

Kemisan® has an independent facility for electrode manufacturing, coating and repairing under Carad® brand. This is the know-how of Kemisan® to develop more effective disinfectants by improving the electrode coatings and configurations.



What is HypoX?

Understanding the basics of HypoX® its Technology



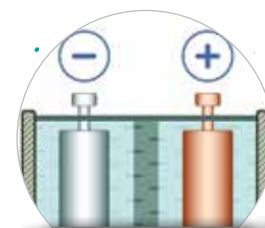
A Disinfection Solution

HypoX® is an advance disinfection solution for water and surface applications. HypoX® is replacing Chlorine and Chlorine Dioxide and eliminating the need for Ozone and UV mainly due to economy, effectivity and safety.



An Oxidation Solution

HypoX® is an advance oxidation solution for removing Iron, Manganese and Arsenic in various water treatment requirements. HypoX® is also decreasing or eliminating chemicals in pre-treatment stages for oxidation purposes.



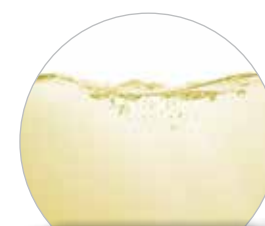
An Electrolyzer

HypoX® technology is based on an electrolysis process of Salt (NaCl), Water (H₂O) and electric power. Ion exchange process between special HypoX® Anodes and Cathodes enables to produce an advance disinfectant from salt & water by electric power.



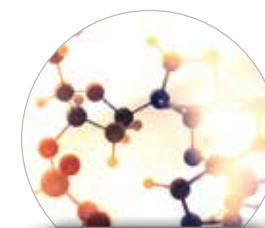
<1% Cl₂ Concentration

HypoX® contains only 7 grams per liter Chlorine-Cl₂, which means lower than 1% chemical concentration, which is out of all safety regulations according to EPA* and WHO*.



A Liquid

HypoX® is a Sodium Hypochlorite based Mix Oxidant, which is a liquid of light yellow colored. It smells like Sodium Hypochlorite due to its natural chlorine content



Hypochlorite + Oxidants

HypoX® is taken its name from its mixture of Hypochlorite + Oxidants. The electrolysis combination of Sodium(Na), Chlorine(Cl), Hydrogen(H) and Oxygen(O), which is coming from Salt (NaCl) and Water (H₂O) outcomes such as Sodium Hypochlorite (NaOCl), Hydrogen Peroxide(H₂O₂), Hypochlorous Acid(HOCl), Ozone(O₃), Oxygen(O₂) and Hydroxyl Radicals(OH*) as a whole HypoX® product.



An Onsite Generator

HypoX® Generator is designed to produce where consuming is; so, it is an on-site solution that locally produces required amount according to live demand. HypoX® is not designed to produce and transport due its <1% product concentration but it is designed to bring advantages by producing and consuming on the same location.



Only 8,5-9,0 pH

The pH value of HypoX® is only between 8,5 - 9,5; which is close to water and far from commercial Sodium Hypochlorite (pH12-13) and also Gas Chlorine (pH <4).



How? it works●

Understanding the system logic and main sections of HypoX[®] electrolysis process

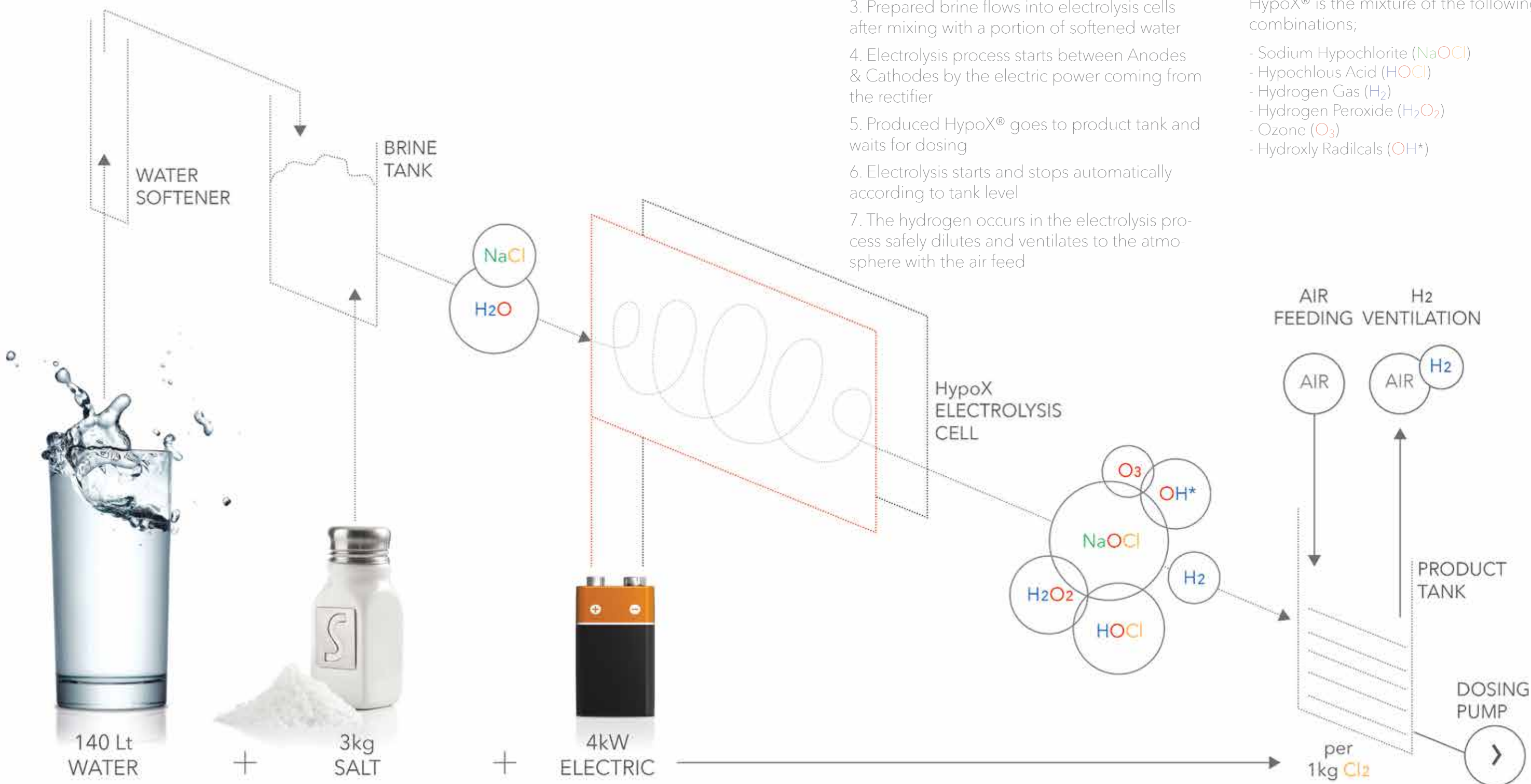


1. We feed raw water into a water softener system
2. Softened water mixes with salt in saturation tank to make a brine solution
3. Prepared brine flows into electrolysis cells after mixing with a portion of softened water
4. Electrolysis process starts between Anodes & Cathodes by the electric power coming from the rectifier
5. Produced HypoX[®] goes to product tank and waits for dosing
6. Electrolysis starts and stops automatically according to tank level
7. The hydrogen occurs in the electrolysis process safely dilutes and ventilates to the atmosphere with the air feed

HypoX process obtains 4 ions from Water and Salt as Sodium(Na^+), Chlorine(Cl^-), Oxygen(O^{2-}) and Hydrogen(H^+) to create many combinations by electrochemistry.

HypoX[®] is the mixture of the following ion combinations;

- Sodium Hypochlorite (NaOCl)
- Hypochlorous Acid (HOCl)
- Hydrogen Gas (H_2)
- Hydrogen Peroxide (H_2O_2)
- Ozone (O_3)
- Hydroxyl Radicals (OH^*)





Why?

See Why HypoX is a 5 Star Solution for Disinfection and Oxidation Requirements



5 Star Disinfection

HypoX® brings a 5 Star solution to your disinfection & oxidation requirements. It is now possible to have an Effective, Economical, Safe, Green and Reliable solution at the same time!



How many stars you have?

Compare your current disinfection solution with five (5) HypoX® criteria and ask the question: How many stars you have now in your current disinfection?



Invest for 5 Star Disinfection..!

Stop buying chemicals for your disinfection and invest on HypoX® for once. HypoX® will pay back its investment quickly with its much higher effective and economic operation. Please contact with us to calculate your project and return of investment.



The value of each Star!

Your current disinfection can be economic but not safe and not effective. Or another solution can be effective but too expensive to operate. Evaluating your disinfection solution in 5 criteria is essential to see the real frame of your solution.



Effective

HypoX® is one of the fastest disinfectant on Earth that have residual capability. The chemical synergy of fresh produced Hypochlorite + Mix Oxidants opens another era in disinfection solutions.



Economical

HypoX® consumes only SALT + ELECTRICITY + WATER. A huge economy and short return of investment when compared with chemical purchases makes HypoX® a profitable investment in disinfection & oxidation requirements.



Safe

HypoX® is a liquid under 1% concentration and 8,5 - 9,5 pH value, which is out of all safety requirements of EPA and WHO. You can now stop the safety requirements and danger of Chlorine Gas, Chlorine Dioxide, etc.



Green

Stop all plastic packages of chemicals. Reduce dangerous chemical transportation min. 10 times with only salt transportation of HypoX®. Produce exactly as much as you consume and decrease your carbon food print by eliminating the chemical degrade, etc. Choose a Greener disinfection for our world.



Reliable

HypoX® is an electrolysis system with a simple, reliable and flow based operation. It is developed, manufactured and tested in Kemisan® İzmir Factory with 45 years of experience. HypoX® is manufactured with the standards of CE, ISO and TSE.



Effective



Fresh is Fast

HypoX® is a Fresh product because HypoX® produce where consuming is. Onsite generation is the only way that allow us to have electro-chemically activated fresh oxidants, which is able to inactivate many pathogens less than 5 min. rather than 30 min. like chlorination.



Unique Mixture

Different electrolysis cell designs give different results from same water and salt. Kemisan® R&D department constantly studies for better disinfection results with unique electrode design and coatings to have better disinfection results from the same salt and water ions.



Improved Flocculation

HypoX® improves the coagulation and flocculation efficiency much more than Chlorine. The oxidation power of fresh HypoX® notably reduces the coagulant consumption.



Tastes & Smells Better

"Chloramines" or also called "Combined Chlorine" is one of the main reason of bad taste & odor in water, when chlorine react with Ammonium of organics. Phenols in water also has the similar chemistry that occurs Chlorophenols when react with chlorine. High oxidation capability of HypoX® enables to pass the Chloramine and Chlorophenol steps quickly in water chemistry. That is the reason why swimming pools with HypoX solution is not experiencing the increase of Combined Chlorine levels and do not require shock-chlorination.



Kills All Kind of Pathogens

Fresh HypoX® solution guarantees to inactivate all kind of Pathogen such as E. Coli, Legionella, Biofilm, Algae and Mussels.



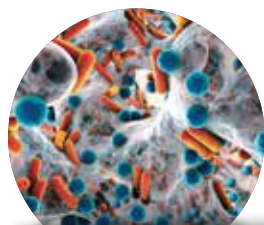
Only Good Sides of Chlorination

HypoX® is achieving to eliminate the disadvantages of commercial chlorination and uses chlorine ions to benefit the residual content in disinfection. HypoX® achieves to reduce TTHM values, eliminate Taste & Odor problems, eliminate safety risks and reduce operational costs.



Iron, Manganese & Arsenic Oxidising

HypoX® is much more powerful than chlorine in oxidizing of Iron, Manganese and Arsenic in water treatment processes.



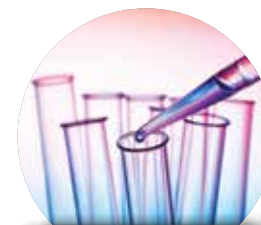
Biofilm Guarantee

HypoX® guarantees to eliminate all kind of biofilm problems in water systems with its high oxidation power.



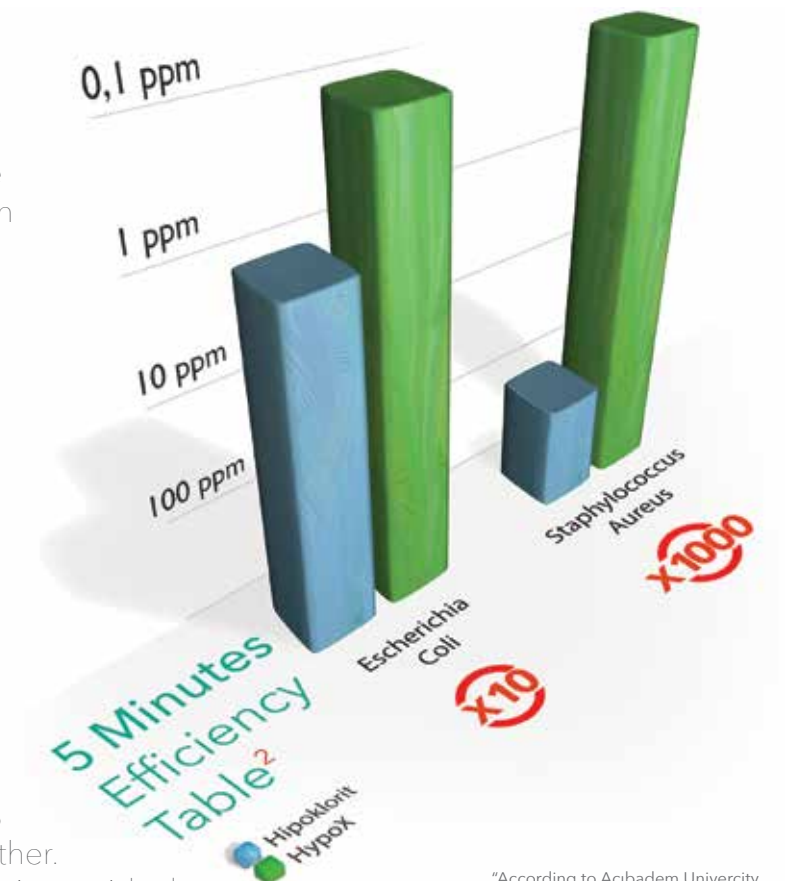
Longer Chlorine Residual

HypoX® enables longer distance in residual Free Available Chlorine(FAC) with the help of Mix Oxidants content.



Lower THMs & HAAs

The high oxidation performance of HypoX® reduces the TTHM (Total Trihalometan) and HAAs (Haloacetic Acids) formation up to 40% when chlorine and organics react with each other. HypoX® is a special solution that enables chlorine residual with much lower disinfection by products(DBPs).



"According to Aciabdem University Biocidal Lab. official test results."

Economic



Chemicals are expensive

HypoX® only consumes salt, electricity and water. The operation of HypoX® is much lower than buying disinfection chemicals, so it has a short return of investment.



Compare with other Generators

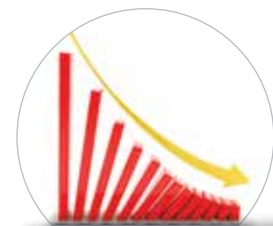
HypoX® Electrolysis design is consuming 3 kg of Salt (NaCl) and 4,0 kW* of Electricity per 1kg of Cl₂ based Hypo - Oxidant production.



Chemicals and Side Costs

Eliminate the following secret costs with HypoX®;

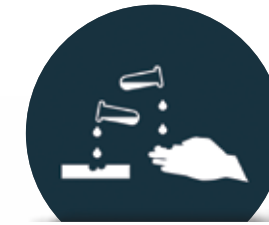
- The costs of safety requirements,
- The heating costs of gas chlorine,
- The social and physical damage costs of any possible chemical handling accident,
- The maintenance costs of chlorine tanks, etc.



Concentration Loss & Left Over Chemicals

Companies lost huge amounts from concentration loss of Sodium Hypochlorite as well as left over gas chlorine in used tanks. On the other hand, HypoX® only produces as much as required and consumes it fresh in a short time after production.

Safe



Free from Safety Regulations

HypoX® contains 7 gr/lit Cl₂ and additional mix oxidants with 8,5 - 9,5 pH value. So, this below 1% concentration with low pH value disinfectant is out of danger regulations of EPA, WHO and other organizations. We even don't need to use safety protection in the operation of HypoX® Generator.



Safe for Everybody

Transporting of Gas chlorine and derivatives is not only risky for consumers but also dangerous for public. HypoX® is not only safe for your personnel but also safe for other people on streets.



HypoX® SX 100



Reliable



Proudly "Made in Turkey"

Kemisan® is a 100% independent developer and supplier for HypoX® technology. 45 years old company has a valuable experience and capability in designing and manufacturing its own electrodes as well as coatings.



Full Guarantee

Kemisan® gives 5 years of Electrolysis Cell guarantee and 2 years of overall guarantee as well as 10 years of spare part guarantee in all HypoX® models.



360° Transparent Cell

Viewing the electrolysis cell in 360° is essential to prevent failures in cell cleaning maintenance and also enables to check the live production. 360° transparent cell design ensures the reliability in operation.



Designed with 45 years of Electrolysis Knowhow

HypoX® technology is designed and manufactured with Kemisan®'s 45+ years of experience in electrolysis.



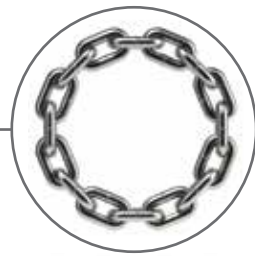
CE, ISO, TSE...

Standards and reliability of HypoX® systems are also approved by authorities. All HypoX® models have CE, ISO and TSE certificates.



Sparkling Quality

HypoX® Generator is constructed with first class materials from top to bottom. All HypoX® Generator line is build up a full stainless steel construction with well-known vendor sub- brands.



Green



End of Plastic Packages

Eliminate all plastic packaging of disinfection chemicals. Save world from plastic packages of chemicals.



Sustainable Solutions

HypoX® is the most independent and sustainable disinfection for sure by using two natural source: Salt and Electric Energy.



70% Lower Transportation

Replace the transportation of Gas Chlorine, Sodium Hypochlorite or other chemicals with only Salt. Decrease minimum 70% of your disinfection transportation from roads.



HypoX® VX 200

Meet with HypoX® Family

Different HypoX® Series is available for various requirements and capacities. Let us help you to choose your HypoX® and enhance your current disinfection / oxidation solution.



SX is a stick-type electrolysis cell as an economic option. It is a batch process model rather than continues which is suitable for small application.

Brief Features;

- BTCH
- ECO
- ~~SOFT~~
- ~~P.TANK~~
- ~~S.TANK~~
- MN.EC
- ~~PLC~~

Capacity - g/h/unit

- 50
- 100



DX is a super-simplified innovative HypoX® model with continues production. DX Series has no product tank and dosing pump like other continues models but doses directly to the required point.

Brief Features;

- CONT
- ECO
- SOFT
- ~~P.TANK~~
- S.TANK
- MN.EC
- ~~PLC~~
- ~~DOS~~
- RX

Capacity - g/h/unit

- 200
- 400
- 600



TX is the brother of DX Series with storage tank and dosing station. It is a small capacity solution if multi dosing points with shock disinfection are the requirements.

Brief Features;

- CONT
- ECO
- SOFT
- P.TANK
- S.TANK
- MN.EC
- ~~PLC~~
- DOS
- RX+FW

Capacity - g/h/unit

- 200
- 400
- 600



MX is a small capacity HypoX® Series with PLC automation possibilities and controls for complex dosing, sensor and alarm automation requirements.

Brief Features;

- CONT
- IND
- SOFT
- P.TANK
- S.TANK
- SA.EC
- PLC
- DOS
- RX+FW

Capacity - g/h/unit

- 200
- 400
- 600



LX Series is an industrial level HypoX® generator line with wide capacity range that answers all industrial requirements with most complex automation requirements.

Brief Features;

- CONT
- IND
- SOFT
- P.TANK
- S.TANK
- FA.EC
- A.PLC
- DOS
- RX+FW

Capacity - kg/h/unit

- 1
- 2
- 3
- 4
- 5
- 6
- 8
- ...
- 40



HX is the Heavy-Duty brother of LX Series with high-end robust materials specially for longer lifecycle projects in hard operational conditions.

Brief Features;

- CONT
- HD
- SOFT
- P.TANK
- S.TANK
- FA.EC
- A.PLC
- DOS
- RX+FW

Capacity - kg/h/unit

- 10
- 15
- 20
- 25
- 30
- 35
- 40

- 600
- P.TANK
- S.TANK
- PLC
- A.PLC
- FA.EC
- SA.EC
- MN.EC
- ECO
- IND
- HD
- SOFT
- DOS

Capacity as 100% Cl₂/h Product Tank Salt Tank PLC or Advanced PLC FullAuto, SemiAuto or Manuel Electrode Cleaning Economic, Industrial or Heavy Duty Construction Water Softener Dosing Station

- RX
- RX+FW
- CONT
- BTCH

RX or/and Flow Based Dosing Continue or Batch Production

* Product pictures are only for visual and may change in real.
** Capacities are given based on 100% Cl₂ based HypoX solution with 7gr/lit Cl₂ concentration.

Applications...

HypoX® is a perfect solution for many applications such as;



Drinking Water Pre-Treatment

Reducing Disinfection By-Products (DBPs) such as TTHM, HAAs up to 40%. HypoX can reduce Disinfection By-Products such as TTHM and HAAS up to 50% hence is a unique chlorination solution for organic loaded waters. Additionally, HypoX® reduces the Flocculant and Coagulant consumptions in pre-treatment with its unique oxidation potential.



Drinking Water Post-Treatment

The fast reacting mix oxidants in HypoX enable chlorine ions to travel further kilometers up to 50% more when compared with commercial chlorine. For the same distance, HypoX can leave up to double chlorine residual with the same dosing amount when compared with commercial chlorine. Moreover, HypoX totally eliminates the chlorine smell in drinking water by the help of its unique oxidation power.



Animal & Milk Hygiene

HypoX® is a central disinfection solution of all kind of animal farms and milk process facilities with more than 10 applications in the same facility. Disinfecting the cages, breast tips, drinking waters, bedding areas, CIP tanks and so on... HypoX® brings another level of disinfection and economy to all farms of Cow, sheep or chicken...



R.O. Process Water

Treatment of R.O. membranes with HypoX® enables quicker disinfection and much quicker rinsing thanks to low pH (8,5-9,5)/low caustic. HypoX® brings effective biofilm and algae prevention on membrane surfaces with lower dosages.



Pools & Aqua Parks

No more smell and skin irritation problems with HypoX, because no more bounded chlorine will occur in your swimming pool and No bacteria will be count even in low chlorine ppm levels. HypoX® promises another level of water quality standard for swimming pools and aqua parks.



Waste Water

Enabling the same oxidation with lower chlorine is the key benefit of HypoX® for reducing Disinfection by Products(DBPs). HypoX® also enables no bacterial count in even very low residual chlorine ppm values in Waste Water applications.



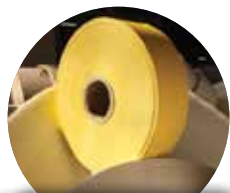
Food Washing

Enabling good disinfection with low volume is the key point of HypoX® on vegetables and fruits to prevent chemical residuals on food surfaces. HypoX® also brings much easier rising advantage due to low pH-low caustic value. At the total, HypoX is an ultimate solution to extend the shelf life of vegetables and fruits with no chemical deposits.



Cooling Waters

Eliminating the biofilm so increasing the cooling efficiency is the key benefit of HypoX® in Cooling Towers. HypoX® brings solid disinfection results with much economical operation than buying biocides and chemicals for cooling towers.



Industrial Process Water

HypoX® guarantees to remove and control Biofilm in process water lines especially in warm process waters. Switching to HypoX® will immediately eliminates biocidal cocktail purchases for biofilm removal.



Surface Disinfection

HypoX® is the most effective but also the most economical method of surface disinfection. Imagine any surfaces such as trucks, food process tables, floors, hiegiene required equipment, human gloves, boots, etc.



CIP

HypoX® is a multi-capable solution for CIP applications. Very low caustic ingredients with low pH (8,5-9,5) value as well as the superior disinfection performance eliminates the chemicals like Alkali (Caustic), Hydrogen Peroxide(H2O2) and Acid consumption on CIP applications. HypoX® changes the chemical habits in CIP.



Irrigation Water

HypoX® Greenhouse models work with Potassium Chloride(KCl) salt to produce Potassium Hypochlorite with mix oxidants, which is healing the strongest plant root diseases quickly and economically. You can definitely protect your greenhouse from pathogens under and above ground.

Solution for...

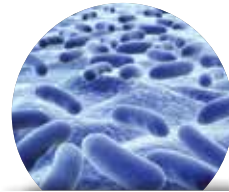
HypoX® is designed to solve the hardest disinfection problems such as...

S



Biofilm Problems

Biofilm is a hidden and still less awaked treat in most of the applications such as various water pipes, cooling tower systems slow circulating tanks etc. Did you know biofilm in any water pipes enables pathogens to attach on pipe surfaces hence in the result of many diseases? Chlorine itself is a weak disinfectant to eliminate biofilm but HypoX® guarantees to clean available biofilm structures and maintain the prevention even with low dosages.



Specific Pathogens

Chlorine has a limited disinfection performance for some pathogens and organisms like Cryptosporidium parvum, Toxoplasma gondii, Legionella, Zebra Mussels and Biofilm, however HypoX® guarantees to eliminate all specific pathogens and organisms that chlorine is weak to disinfect.



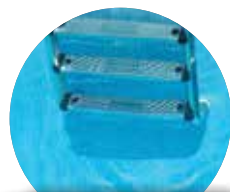
High Costs

It is time to reconsider the high costs of purchasing chemicals like Sodium Hypochlorite, Calcium Hypochlorite, Chlorine Dioxide, Hydrogen Peroxide, Cocktail Biocides and etc. Switching from chemicals to HypoX® will bring multi-times of profit per day and this will pay back your HypoX® investment much quicker than you can imagine. Contact us to make the feasibility report for your "Switch to HypoX®" project.



Iron, Manganese, ...

Iron, Manganese and Arsenic are the well-known health risks in drinking waters. High oxidizing potential of HypoX® enables very efficient Iron, Manganese and Arsenic removal in treatment plants.



Odor & Irritation in Pools

Disinfection with Sodium or/and Calcium Hypochlorite results with odor and irritation problems in swimming pools due to increasing combined chlorine (Chloramine) levels. The high oxidation potential of HypoX® stops the rise of bounded chlorine (Chloramines) and Chlorophenol level, so also stops the shock chlorination requirement.



Taste & Odor in Waters

Municipalities generally receives taste & odor complains from public about city tap water. Low pH, Fresh Mix Oxidant based HypoX® eliminates this well-known chlorine disadvantage. Strong oxidation capability of HypoX® preventing taste & odor problems in drinking water due because Chlorophenols and Chloramines.



Safety Risks & Costs

The world-wide well known danger of chlorine gas is not only increasing the risks but also costs a lot to cover the risks. On the other, HypoX® is out of risk regulations with lower than 1% concentration but ironically stronger than gas chlorine in disinfection & oxidation applications.



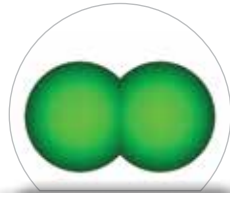
Residual Need

Residual chlorine is vital in long drinking water lines for city municipalities. Residual chlorine has to be measured in the end of drinking water lines even after long kilometers. Mix oxidant ions of HypoX® helps disinfection so, slower chlorine ions can travel longer and still enables to read residual in water.

Alternative for...

HypoX® is an alternative disinfection method for the following;

ALT



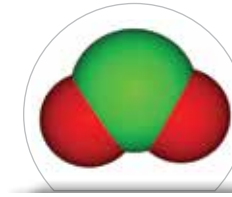
Chlorine Gas

Switching to HypoX® from Chlorine Gas (Cl_2) means forgetting the risks of safety and accidents. Also lower smell, lower disinfection by products (DBPs) and guaranteed biofilm removal are some of other benefits about switching from Chlorine Gas to HypoX®. Gas Chlorine known as economic to operate in the first look but the reality is not that economic when all booster pumps, heating, maintenance and safety risk costs are considered.



S. Hypochlorite

Switching to HypoX® from Sodium Hypochlorite (NaOCl) means a lot for your operational budgets because the operation cost (Salt + Electricity) of HypoX® Generators are many times lower than purchasing NaOCl . Mass volume in transportation and handling of NaOCl is also eliminating by switching to HypoX®. Additional bioside consumptions in some applications due to low disinfection activity of NaOCl also eliminating after switching to HypoX.



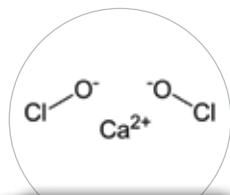
Chlorine Dioxide

Chlorine Dioxide (ClO_2) is a strong disinfectant that active on many pathogens but also carrying disadvantages such as safety risks and high chemical costs. Onsite production of Chlorine Dioxide can be highly explosive in some control failures so, Switching to HypoX® from ClO_2 means to have an advance disinfection performance with no safety risks and much more economical operation.



Hypochlorous Acid

Hypochlorous Acid (HOCl) Generator is another type of electrolysis solution, which looks like suitable for small applications, however the adaptability of this industrial membrane type electrolysis to small-scale applications is still a discussion especially when considered that suppliers give only 2 years of electrolysis guarantee, end-product has limited concentration that prevents shocking and sort of a complex structure of different Anodic and Cathodic product sides. HypoX® is a matured electrolysis technology for onsite applications that supplies 5 years' electrolysis guarantee with 7000ppm product concentration.



C. Hypochlorite

Calcium Hypochlorite (Granule Chlorine) is easy for storage, however it is expensive and also very slow as a disinfectant due to stabilizers and other contaminants. Switching to HypoX® from Calcium Hypochlorite is a big reduce in operational costs as well as gaining some health issues such as eliminating "Bounded Chlorine" (Chloromines) increase.



Ozone

Ozone (O_3) Generator is a very useful solution when the organic load is very high in your raw water and not possible to reduce the disinfection by products (DBPs) levels under limits with chlorination. However today, increasing number of plants with HypoX® upgrade achieves to reduce DBPs up to 40% when compared with chlorine and makes the ozone investments unnecessary. When visiting many Ozone plants that is not in full-duty due to high operational costs proves the idea that Ozone solution should be considered only if DBPs could not be controlled even with HypoX®.



UV

If you are bottling drinking water and purity is indispensable, then you definitely need a UV Generator. However, UV is in the same category with Ozone in means of high investments and operational costs. These costs of UV and Ozone can only be logical if your water is extremely organic loaded or your disinfection process will not accept of any dosing of an additive. HypoX uses the advantage of residuality of chlorine as well as eliminating many disadvantages of chlorine, so it changes the need of expensive alternatives like UV when chlorine is not adequate.



Biocide Cocktails

You need biocide cocktails because the biocidal effectivity of Chlorine Gas (Cl_2) and Sodium Hypochlorite (NaOCl) is not enough to prevent specific pathogens, mussels and also biofilm. So, consumers try to find a mixture of economy and effectivity by mixing biocides with chlorine. HypoX® stops all kind of Biocide Cocktails and Chlorine consumption because fresh and active HypoX® is guarantees to eliminate biofilm, mussels, Legionella, etc. as a much economic way.

Meet with HypoX® Containerized Solutions



Plug & Play Concept

HypoX® containerized solutions are designed for easier installation and start-up. Custom designed containers for every capacity eliminates building requirements and enables immediate start-up with no hassle.



Tested at Factory

There is no unexpected with HypoX® containerized solutions because all equipment are installed and tested on factory before delivery. Installation and Start-up is super simplified with containerized solutions.



Custom Design

Kemisan® designed different custom containers for various sizes and applications. Custom containers have special isolation, electrical and process layouts with separate rooms, ventilation, etc.

FAQ

FAQ

Here you can find the Frequently Asked Questions for easier understanding of HypoX technology.

What is "periodical cell cleaning"?

The hardness (calcium and magnesium) coming from salt is depositing on electrode surfaces because of a natural electrolysis chemistry. These deposits need to be clean with a simple periodical cleaning with diluted 5% HCl acid in electrolysis systems.

What should be the quality of salt?

Kemisan® brings easier and cheaper operation to its customers with the electrolysis cells, which is able to work with coarse salt, although other companies ask only 99.8% table salt for any guarantee validity.

How much chlorine and how much other mix oxidants it contains?

HypoX® contains different combinations of 4 ions as Sodium, Chlorine, Oxygen and Hydrogen. 7gr/Lt chlorine is the major content in HypoX®, where other oxidants are minor in concentration but very effective to create the chemical synergy to upgrade the disinfection/oxidation performance.

Can I use my available Sodium Hypochlorite Dosing Pump(s)?

The chlorine concentration of commercial Sodium Hypochlorite (NaOCl) is generally 100-160 gr/Lt in average, where HypoX® has 7gr/Lt chlorine concentration. Briefly, we need to dose more volume from HypoX® to dose the same amount of chlorine (Cl_2) when compared with commercial Sodium Hypochlorite. So, available Sodium Hypochlorite pumps will be probably small to dose HypoX®.

Is Gas Chlorine more powerful because its 100% concentrated?

Absolutely No!
Concentration per liter is not important as a chemical form but it is important how much we dose by volume.
We only need to dose more volume if per liter chemical concentration is lower. So, the total dosage amount of chlorine will be same at the end. HypoX® shows better disinfection / oxidation results when compared with gas chlorine by using multi-oxidants where gas chlorine is a single-oxidant.

What is "100% chlorine based" means?

All chlorine based disinfectants such as as HypoX® Mix Oxidant, Sodium Hypochlorite or Hypochlorous Acid Generators indicates their active ingredient capacity as 100% Chlorine (Cl_2) however, these generators are not producing 100% Chlorine. These capacities indicated the quantity of dissolved chlorine in the product. For example, commercial Sodium Hypochlorite (NaOCl) contains 150gr/Lt Cl_2 and HypoX® contains 7gr/Lt 100% dissolved chlorine in their liquid forms.

Will I use ppm(mg/Lt) to measure the chlorine level in my water after HypoXing?

Yes, ppm of chlorine (Cl_2) is the major and widely official measurement method in our today's world. So, the level of HypoXing can easily follow over chlorine level. Even lower ppm levels will give the same results with commercial chlorine due to additional mix oxidants ingredients of HypoX®.

Notes

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Given technical details, specifications and other features of the process and equipment are in preliminary and intended to indicate the overall details. In case, Seller may find it necessary to modify, delete, add to these on completion of detailed engineering, these changes shall be incorporate in the final designs, provided however that the overall performance and workmanship guarantees are maintained.

