

# Technical Overview

 **HYBRID**

2K/3K WATERBASED

2K/3K SOLVENT

*OTSON PAINT SHOP - Electrostatic Spray - THINK GREEN and Power Saving*



AUTOMATION



INTERNET OF THINGS



SMART PRODUCTION



GREEN ENERGY



SMART FACTORY



CYBER SECURITY



ARTIFICIAL INTELLIGENCE

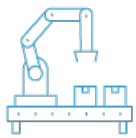


MACHINE LEARNING

## Overview-Paint Shop

**iOTSON**<sup>®</sup>  
Technologies

*iOTSON PAINT SHOP -Electrostatic Spray - THINK GREEN and Power Saving*



AUTOMATION



INTERNET OF  
THINGS



SMART  
PRODUCTION



GREEN ENERGY



SMART  
FACTORY



CYBER SECURITY



ARTIFICIAL  
INTELLIGENCE



MACHINE  
LEARNING

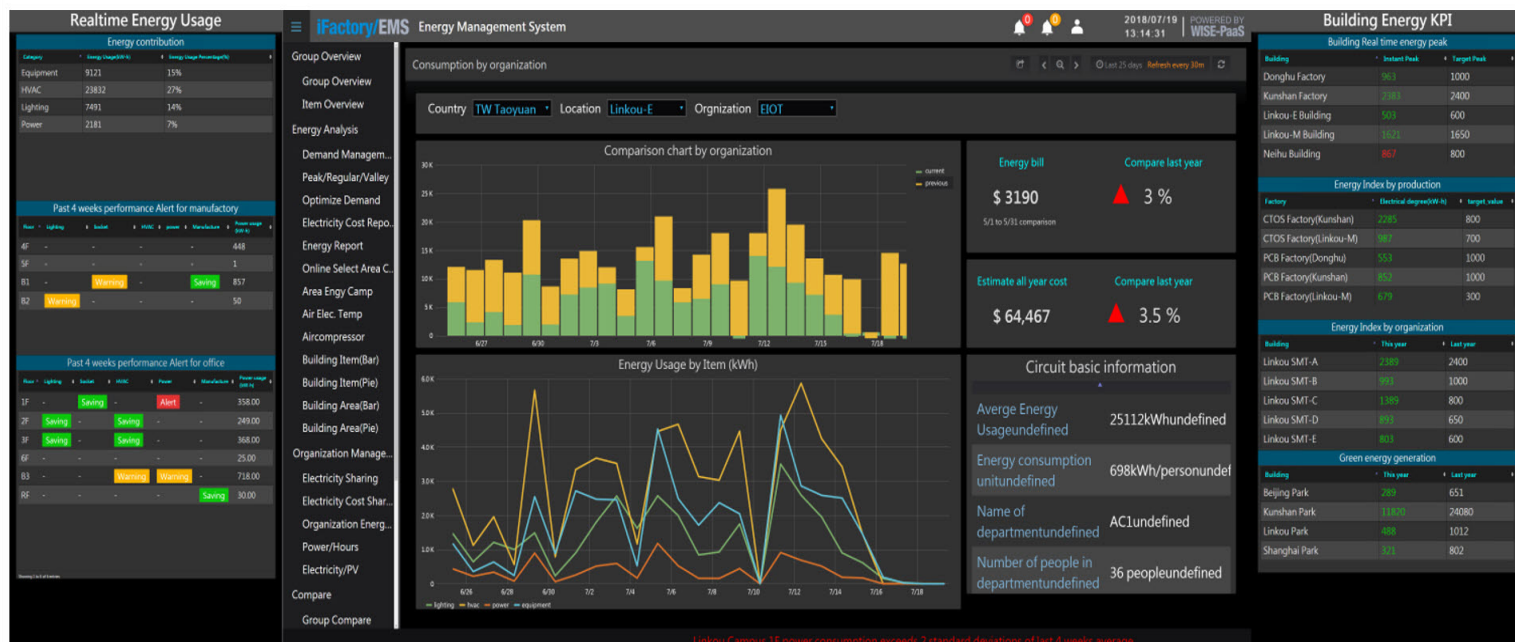




## Dashboard of Electrostatic Spray Coating – Paint Shop



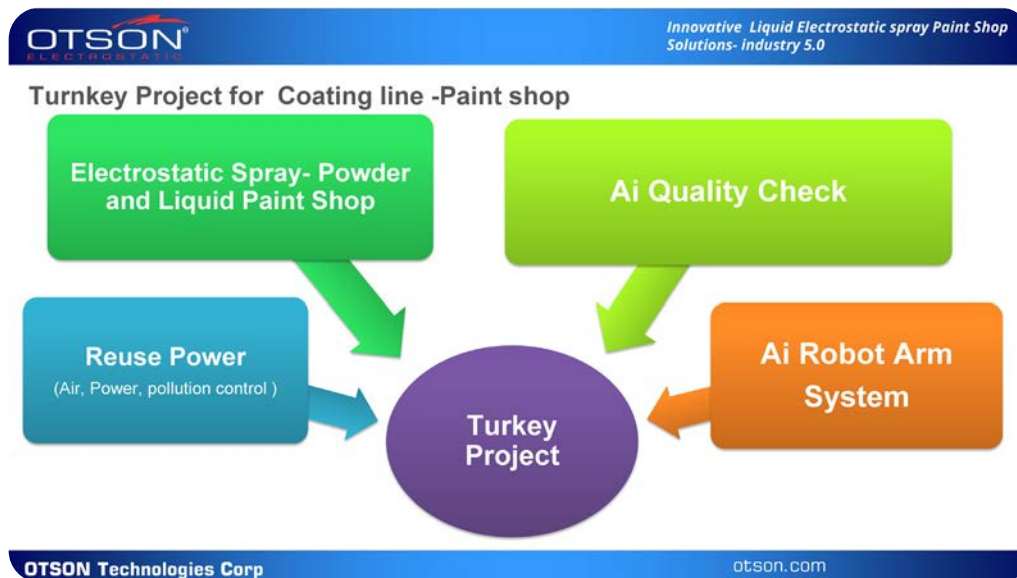
## Energy & Environment-Dashboard of Paint Shop



# ***iOTSON PAINT SHOP -Electrostatic Spray – THINK GREEN and Power Saving***

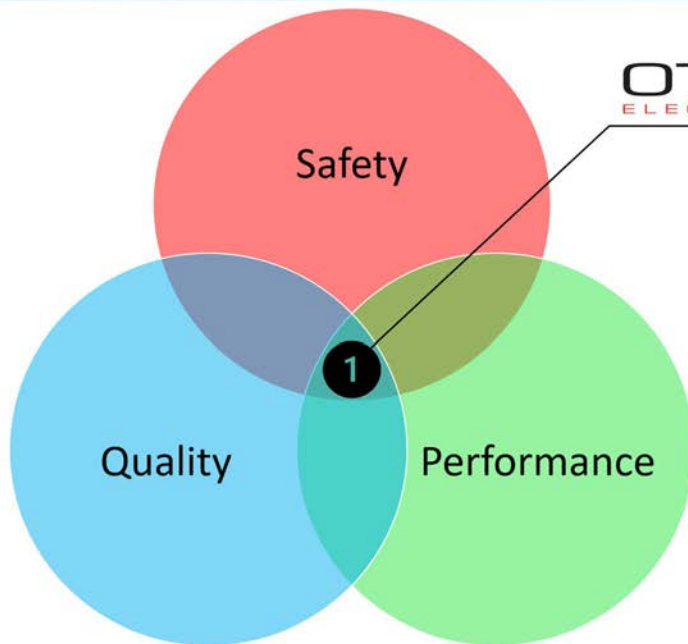
Industry 4.0, the Fourth Industrial Revolution, is a current trend in manufacturing technology that involves automation and data exchange, utilizing advanced technologies such as IoT, AI, and machine learning. On the other hand, Industry 5.0, the Fifth Industrial Revolution, focuses on creating a more sustainable and human-centered manufacturing environment by building on these technologies. A paint shop that operates as part of Industry 5.0 may incorporate advanced technologies and practices to optimize the coating process, reduce waste, and enhance efficiency. Some of the key features of a paint shop operating as part of Industry 5.0 may include:

- **Human-centric approach:** Industry 5.0 prioritizes the well-being and safety of workers and aims to enhance their working conditions through the use of advanced technologies.
- **Sustainable practices:** A paint shop operating as part of Industry 5.0 is expected to incorporate eco-friendly and sustainable practices to minimize its environmental impact.
- **Integration of advanced technologies:** To improve efficiency, accuracy, and quality, a paint shop may integrate advanced technologies such as robotics, AI, machine learning, and IoT-enabled equipment and systems.
- **Real-time data monitoring:** IoT-enabled sensors can monitor various aspects of the coating process, enabling real-time data analysis, and assisting in decision-making for process improvement.
- **Predictive maintenance:** AI and machine learning can be leveraged to predict equipment failures and reduce downtime by performing predictive maintenance.
- **Customization:** Industry 5.0 encourages customization of products and processes to meet specific customer demands, enabling paint shops to provide unique and tailored coating solutions.



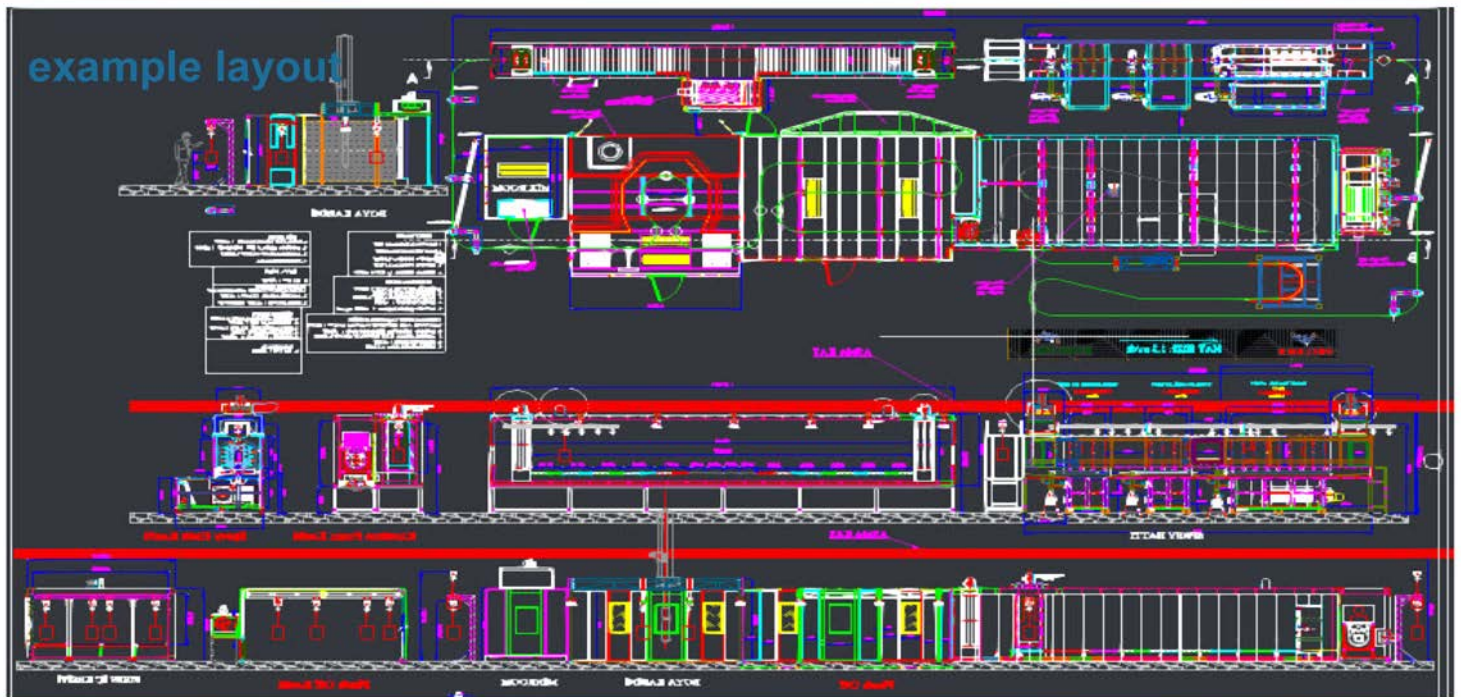
In conclusion, Industry 5.0 takes Industry 4.0 to the next level by focusing on sustainability, human-centered practices, and the integration of advanced technologies in manufacturing. A paint shop operating under this framework has the potential to increase efficiency, reduce waste, and enhance the quality of the coating process, which ultimately benefits both the business and the environment.





## Features

- **Customized solutions:** OTSON provides customized solutions for different industries, including automotive, woodworking, bicycles, glass bottle, and metal parts, based on their unique needs and requirements.
- **Advanced technologies:** OTSON uses advanced technologies such as Industry 5.0, IoTSON, robotics, AI, and machine learning to improve the efficiency of the coating process, reduce waste, and create a more human-centered and sustainable manufacturing environment.
- **High-quality equipment:** OTSON is dedicated to providing customers with the highest quality paint shop equipment to achieve a high production rate and improve production efficiency.
- **Experienced team:** OTSON's team of experts has extensive experience and knowledge in the field, providing support and guidance throughout the entire process, from design to installation and maintenance.
- **Commitment to customer satisfaction:** OTSON is committed to providing customers with the best possible solutions for their coating needs and ensuring their satisfaction.



The production rate of a paint shop factory refers to the amount of paint that the factory is able to produce in a given time period. This will depend on a variety of factors, including the size and capacity of the factory, the efficiency of the production processes, and the availability of raw materials and other resources.

**There are a few key considerations that can impact the production rate of a paint shop factory:**

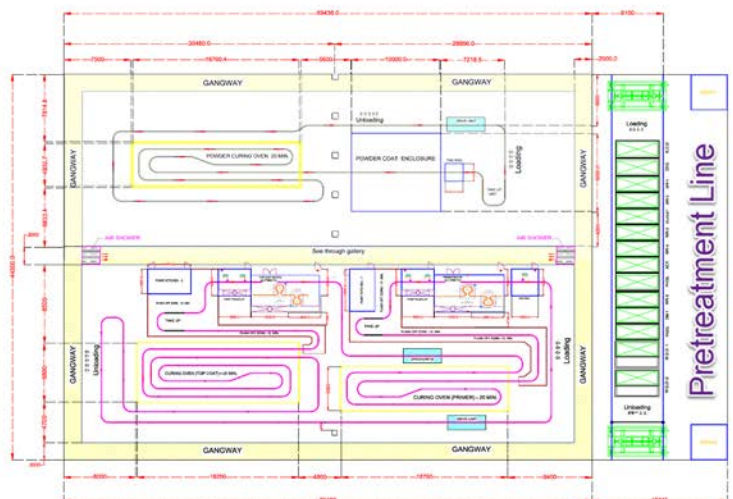
- **Capacity of the mixer room:** The capacity of the mixer room, which is the area where the paint is mixed and prepared for use, will impact the production rate of the factory. If the mixer room is small or has limited equipment, it may be able to produce less paint than a larger or more well-equipped mixer room.
- **Efficiency of the production process:** The efficiency of the production process, including the speed and accuracy of the mixing equipment and the efficiency of the material handling and storage systems, will also impact the production rate of the factory.
- **Availability of raw materials and other resources:** The availability of raw materials, such as pigments and solvents, and other resources, such as labor and energy, will also impact the production rate of the factory. If these resources are in short supply or not being used efficiently, it may limit the factory's production capabilities.

- **Quality control:** It is important to ensure that the paint being produced meets the required quality standards. This may involve performing regular quality control checks to ensure that the paint is properly mixed and meets all necessary specifications. This can impact the production rate of the factory, as time must be set aside for these checks and any necessary adjustments to the production process.
- **Production schedule:** The production schedule of the paint shop factory will also impact the production rate. If the factory is operating at full capacity, with all of its equipment and resources being used to the maximum extent possible, it will be able to produce more paint than if it is operating at a lower capacity.
- **Customization:** Some paint shop factories may offer customized paint products, which may require additional time and resources to produce. This can impact the overall production rate of the factory, as customized products may take longer to produce than standard products.
- **Automation:** The use of automated systems and equipment can help improve the efficiency and speed of the production process, increasing the production rate of the factory.

Overall, the production rate of a paint shop factory will depend on a variety of factors, and it can be influenced by changes in the factory's equipment, processes, and resources. By carefully managing these factors, it may be possible to increase the production rate and improve the efficiency of the factory.

The paint shop is designed and built according to the needs and established technology from selected, following process equipment units:

- Surface preparation
- Water drying
- Painting
- Drying / heating of paint
- Cooling details
- Wastewater treatment
- Preparation of process water
- Air purification
- Parts transport in the production system
- Supplying and receiving media to / from facilities
- Object and system control



### example layout

The painting installation project is always consulted with the investor and suppliers of materials for technological processes, and the production of equipment monitored by the investor's staff, who is a qualified specialist in the industry.

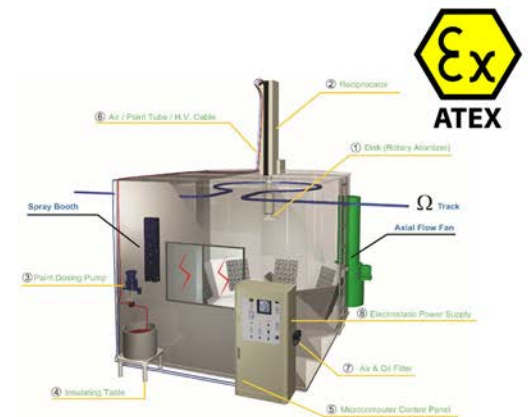










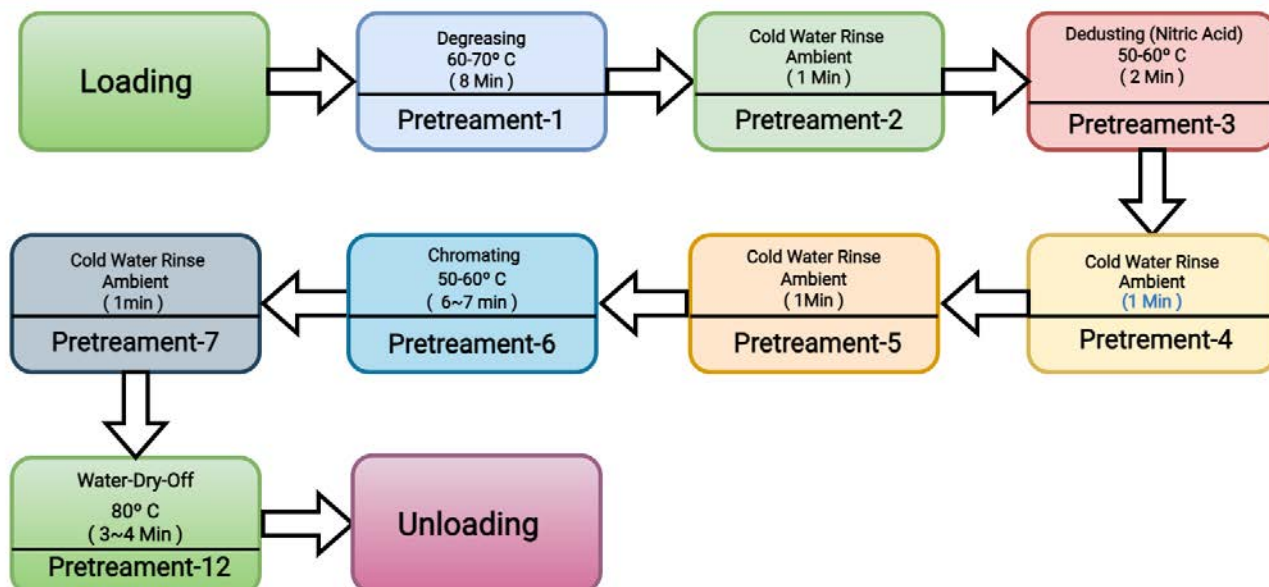


## Spray Booth

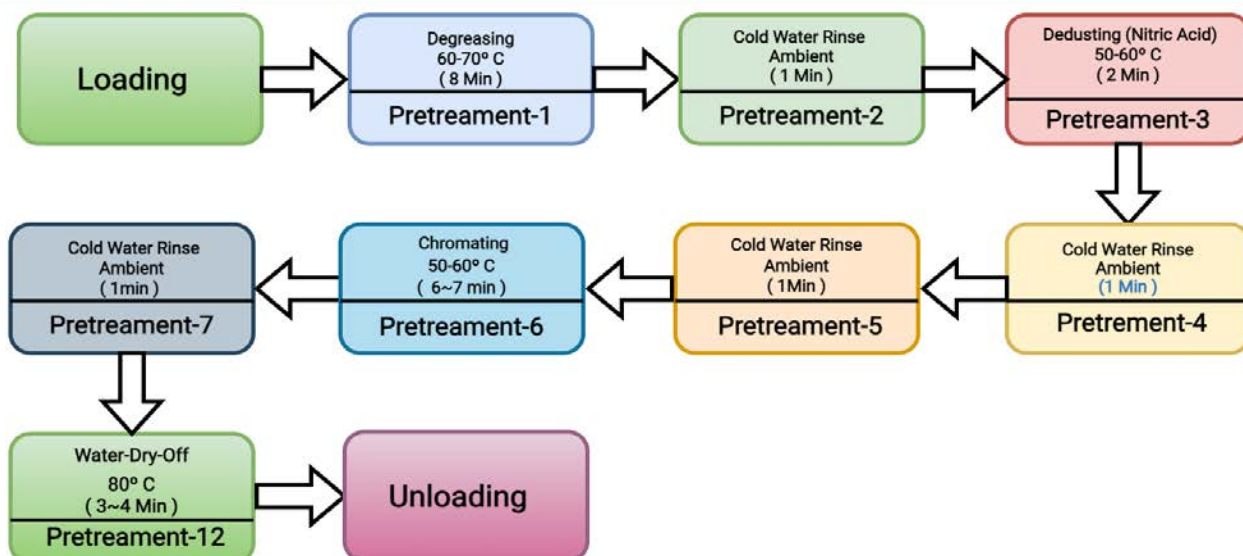




### The Pretreatment Process Step of Die-casting

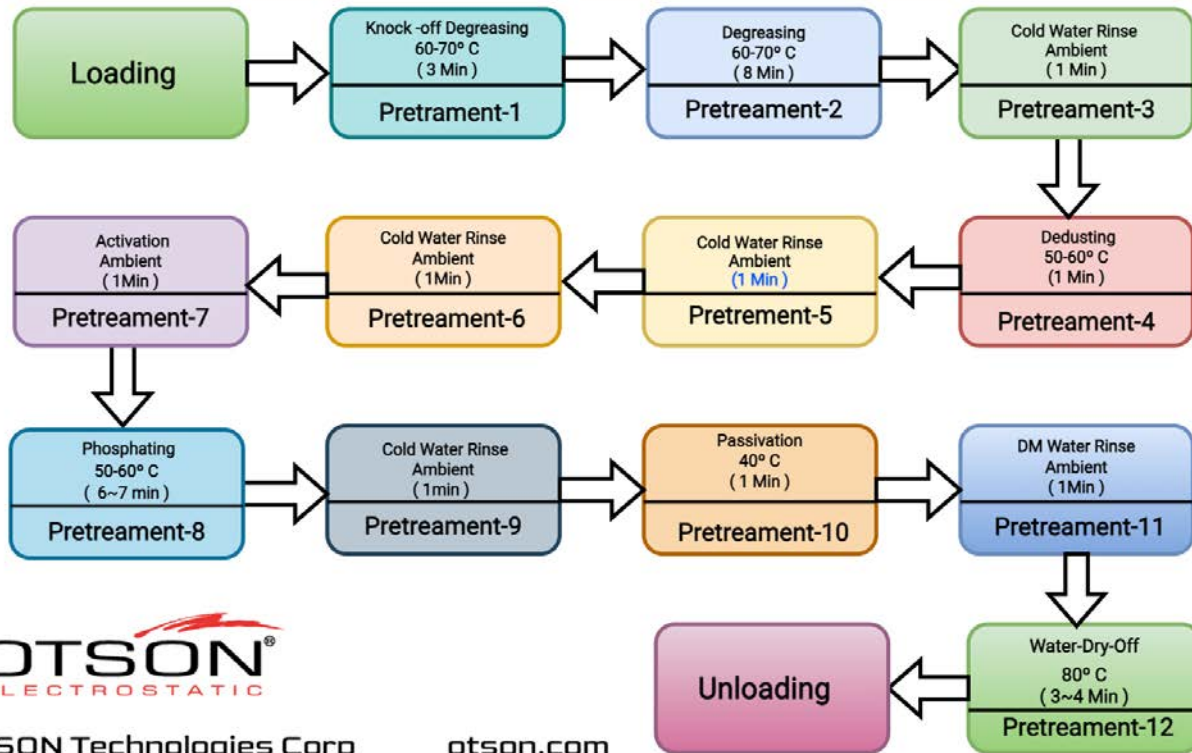


### The Pretreatment Process Step of Aluminum



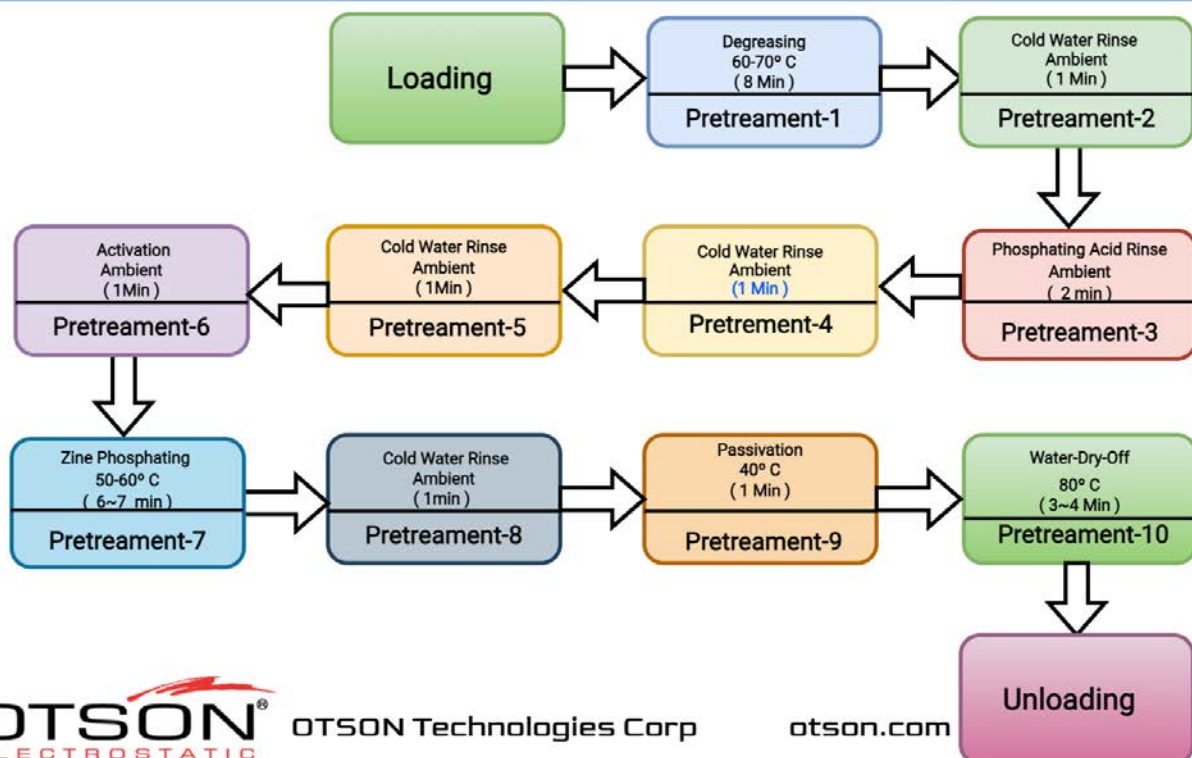


### The Pretreatment Process Step of Carbon Steel



V9

### The Pretreatment Process Step of Galvanized Steel



V9



# Overview- Liquid Electrostatic Spray

## Electrostatic Spray Coating - Reduce Paints Cost-

OTSON Technologies Corp. is a well-known provider of cutting-edge paint shop solutions for various industrial and commercial markets. Our extensive range of products and services are designed to help our clients improve their painting processes, reduce costs, and increase overall efficiency. With years of experience as a reputable manufacturer, we take pride in delivering high-quality products and services to meet the needs of our valued customers.

One of our flagship products is the OTSON Liquid Electrostatic, which features innovative technology and patented designs for electrostatic liquid coating and fluid transfer applications. Our product range includes a wide variety of equipment options such as disc and bell systems that cater to the unique requirements of various industries and applications.

OTSON Liquid Electrostatic systems are renowned for their precision, high efficiency, and reliability. Our products are specifically designed to minimize paint waste and increase production rates, resulting in a significant return on investment for our customers. Furthermore, our systems meet industry safety standards with ATEX certification, ensuring the delivery of high-quality finishes to our clients.

At OTSON, we understand the significance of offering complete solutions to cater to the diverse needs of our clients. Therefore, we are committed to integrating our OTSON Liquid Electrostatic systems with our smart paint shop solutions that provide greater process control, enhanced efficiency, and improved quality.

If you are looking for a reliable and efficient liquid electrostatic coating system, OTSON's OTSON Liquid Electrostatic line is the perfect choice. Get in touch with us today to learn more about our products and services, and how they can benefit your business.



At OTSON Technologies Corp, we specialize in the manufacturing of iOTSON paint shop technologies, which includes the design and production of spray booths for electrostatic spray systems. Our spray booths are designed to provide a controlled environment for the efficient and effective application of paint or other coating materials, while also ensuring compliance with ATEX regulations and safety standards.

**Our key features include:**

- Large capacity mixer room equipped with state-of-the-art mixing equipment
- Advanced material handling and storage systems, as well as automated systems and equipment
- Access to a steady supply of pigments and solvents, as well as enough labor and energy
- Regular quality control checks to ensure paint meets necessary specifications and standards
- Flexible production schedule to meet the specific needs of our customers
- Customized paint products and solutions to meet the unique needs of our clients
- ATEX compliant equipment to ensure safe operation in hazardous environments
- Fire detection sensors for early warning of potential hazards
- Emergency stop button for immediate shutdown in case of emergency

Our mixer rooms are designed to handle high volumes of paint production and ensure a consistent, high-quality output. We use advanced material handling and storage systems, as well as automated systems and equipment, to keep the production process moving smoothly and quickly. This helps to minimize downtime and increase overall production rate.



We also prioritize the availability of raw materials and other resources. This includes ensuring that our factories have access to a steady supply of pigments and solvents, as well as enough labor and energy to keep the production process running smoothly.

Quality control is also a key consideration for us. We have a team of experts that perform regular quality control checks to ensure that the paint produced meets all necessary specifications and standards.

Our production schedule is flexible and can be adjusted to meet the specific needs of our customers. This allows us to keep the factory running







OTSON is a leading manufacturer of liquid electrostatic equipment, including spray guns and automatic systems, that are designed to efficiently and effectively apply a variety of coatings to various surfaces. The company's range of equipment is known for its high-quality performance, reliability, and durability, making it a popular choice for professionals across a range of industries.

The OTSON Liquid Electrostatic Equipment is designed to reduce CO2 emissions and overspray, which can help to save costs and be more environmentally friendly, ultimately leading to cost savings for your customers.

The range of equipment includes spray guns and automatic systems that are designed to provide uniform, high-quality coverage of liquid coatings on a range of surfaces. They use an electrostatic charge to atomize the coating, ensuring that it evenly coats the surface. This leads to reduced overspray, which not only saves on material costs but also reduces the amount of paint that goes to waste, making it a more environmentally friendly option.

The automatic systems available in the range provide high production rates and reduce labor costs. They come with a fully automated control panel that gives operators total control flexibility and allows them to change process parameters, not only between batches but also within the same part. The simplified user interface control panel is capable of recording ten different coating parameters, making it easy and efficient to apply to various objects.

Moreover, OTSON Liquid Electrostatic Spray Equipment can use 2k/3k systems, which allows for the efficient mixing and application of two or three-component coatings, providing enhanced coating performance and durability.

Furthermore, the equipment has received CE and ATEX certification, ensuring that they meet high safety and quality standards. The CE marking indicates that the equipment meets the EU's health, safety, and environmental protection requirements, while the ATEX certification shows that the equipment complies with the EU's regulations for equipment used in potentially explosive environments.

Overall, the OTSON Liquid Electrostatic Equipment offers a cost-effective and environmentally friendly solution for professionals looking to efficiently and effectively apply coatings to a range of surfaces while meeting high safety and quality standards.

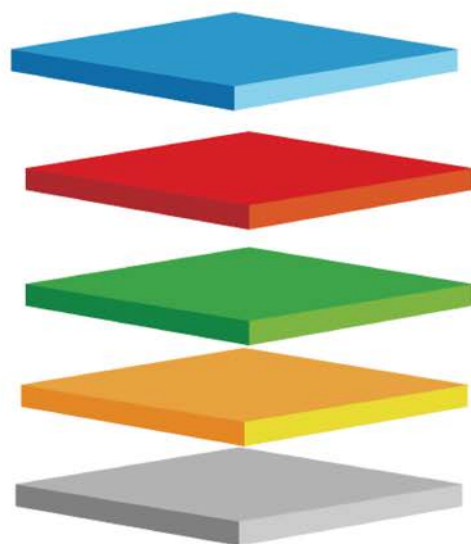


**2K/3K WATERBASED**

**2K/3K SOLVENT**

***Dual Coating for  
Solvent and Waterborne Paint***





**Clear Coating :**

Clear Coat: A clear coat layer is applied to the surface to provide additional protection and durability. The thickness of the clear coat is around 20-30 microns. The clear coat is cured in an oven at a temperature of around 150-180°C for 20-30 minutes.

**Base Coating:**

Base Coat: A thicker layer of base coat is applied to the metal surface to provide the desired color and finish. The thickness of the base coat is around 30-50 microns. The base coat is cured in an oven at a temperature of around 150-180°C for 20-30 minutes.

**Primer Coating:**

Primer Coating: A thin layer of primer coating is applied to the metal surface to improve adhesion and provide corrosion resistance. The typical thickness of primer coating is around 10-20 microns. The primer coating is cured in an oven at a temperature of around 120-150°C for 20-30 minutes.

**CED Coating:**

CED (Cathodic Electrodeposition): This is an electrocoating process that uses an electrical current to deposit a uniform and consistent layer of paint onto the metal surface. The thickness of the CED coating is around 50-80 microns. The CED coating is cured in an oven at a temperature of around 180-200°C for 30-60 minutes.

Metal Material

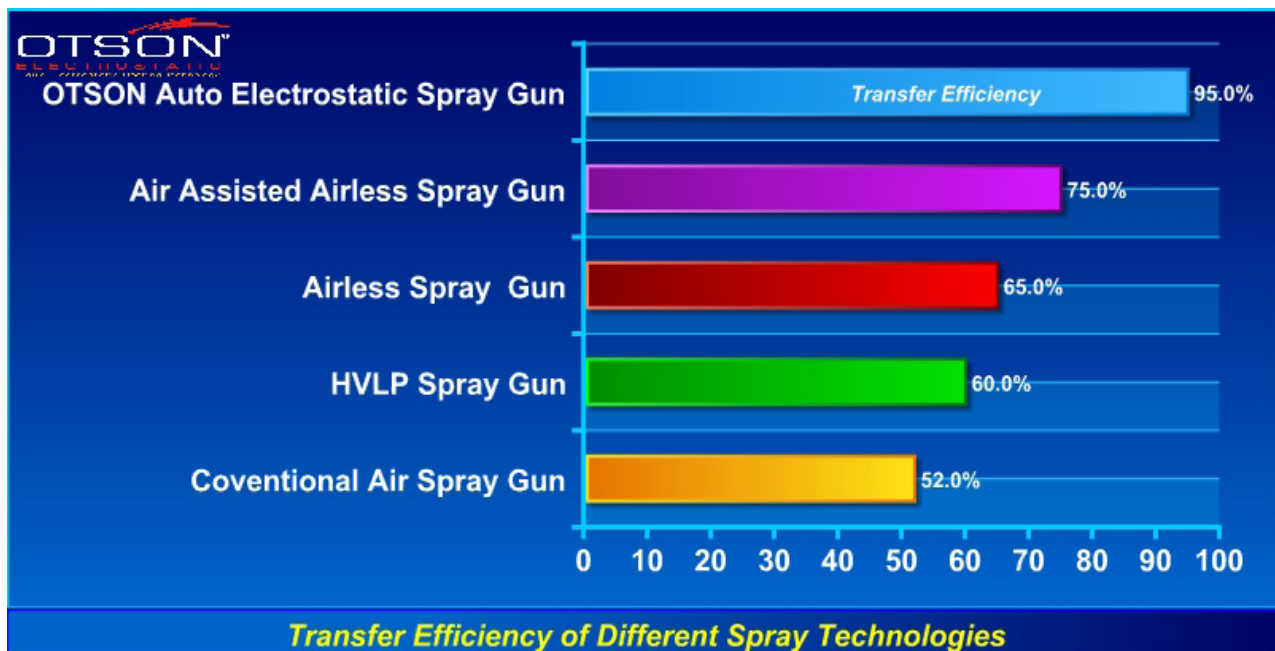




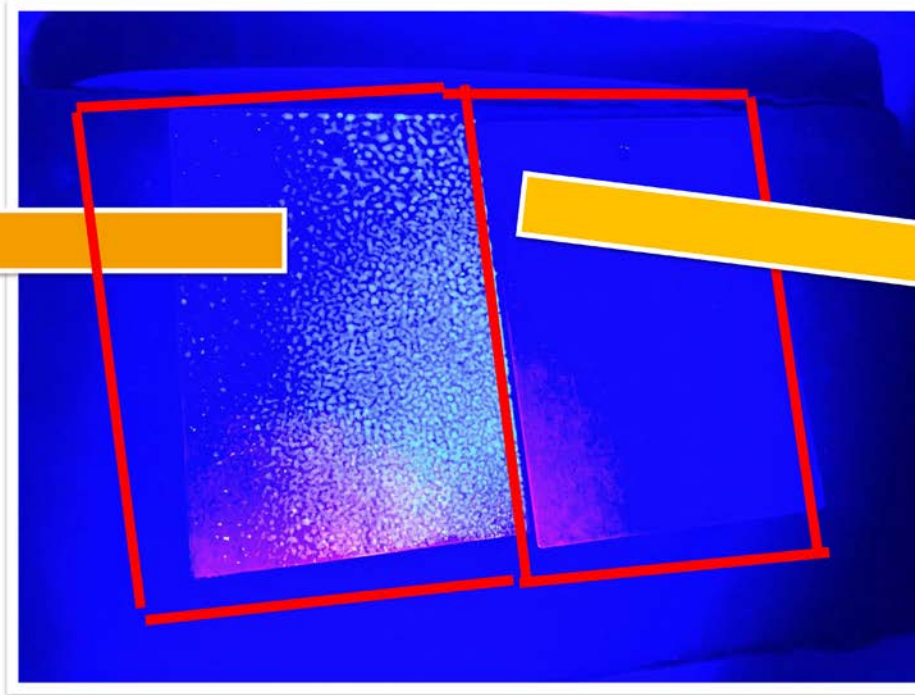
## There are several advantages to using electrostatic spray coating over traditional spraying methods:

Electrostatic spray coating is a popular choice for mass production factories due to the many benefits it offers over traditional coating methods. Some of the key advantages of using electrostatic spray coating include:

- **High Spray Efficiency:** Electrostatic spray coating is highly efficient, requiring less material to achieve the desired coating thickness. This leads to cost savings and reduced waste.
- **Uniform Coating:** Electrostatic spray coating creates a uniform coating on the surface of the product, thanks to the electrostatic charge that attracts the coating material to the surface. This ensures even distribution, resulting in a higher quality finished product with fewer defects.
- **Lower Environmental Impact:** Electrostatic spray coating has a lower impact on the environment than some traditional coating methods. It produces less air and water pollution and can be used in enclosed areas with proper ventilation, reducing the amount of overspray and waste.
- **Advancements in Electrostatic Coating Equipment:** In recent years, there have been significant advancements in electrostatic coating equipment. High-voltage electrostatic generators, new structures for electrostatic spray guns, and new automatic control panels have enhanced the reliability and efficiency of the electrostatic coating process, providing a solid foundation for its continued development and implementation in various industries.



Overall, electrostatic spray coating is a versatile, efficient, and sustainable method that is widely used in various industries, including automobiles, bicycles, wheels, instrumentation, electrical appliances, agricultural machinery, household electrical appliances, daily hardware, steel furniture, doors, windows, power tools, toys, gas appliances, and other industrial fields. The benefits of electrostatic spray coating make it an ideal choice for businesses looking to improve their coating processes, reduce costs, and increase efficiency while reducing their environmental impact.



No uniform spray  
by other  
conventional  
sprayer

Uniform spray by  
OTSON  
electrostatic  
spray  
technologies

**Uniform Coating Quality**





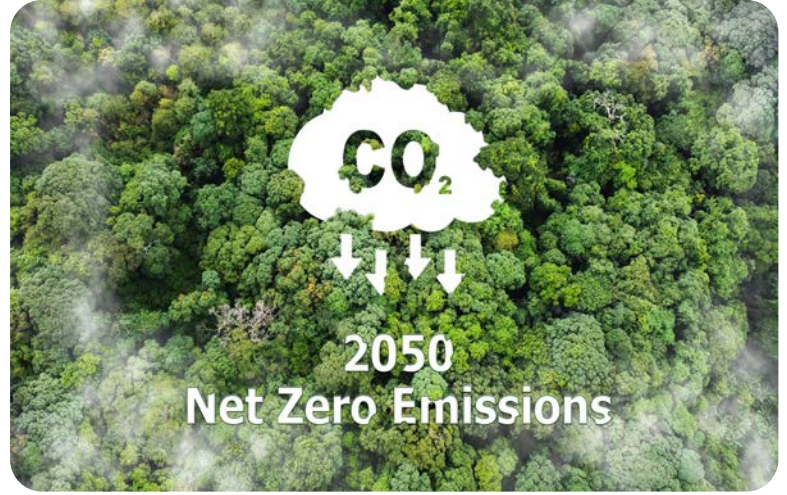
Electrostatic spraying is a highly efficient and cost-effective coating method that has become increasingly popular across a range of industries. Here are some key features and benefits of using electrostatic spray equipment in your paint shop:

- **Increased efficiency:** Electrostatic spraying allows for a more efficient use of paint, resulting in significant cost savings and reduced waste.
- **Improved coating quality:** Electrostatic spray equipment provides a more even and consistent coating, resulting in a higher-quality finish, improved product durability, and longer lifespan for the coated item.
- **Greater flexibility:** Electrostatic spray equipment can be used for a wide range of coating applications, including large and irregularly shaped objects, making it a versatile solution for many different industries.
- **Increased safety:** Electrostatic spraying reduces the amount of overspray and allows for a safer working environment by eliminating the need for excessive amounts of paint in the air.
- **Reduced downtime:** Electrostatic spray equipment is easy to clean and maintain, reducing downtime and increasing productivity.
- **ROI-friendly:** Electrostatic spray equipment has a relatively low initial investment cost and is known to have a relatively short payback period, making it a cost-effective solution for many businesses.
- **Energy-efficient:** Electrostatic spray equipment typically uses less energy than traditional spray equipment, leading to cost savings and a reduced environmental impact.
- **Environmental-friendly:** Electrostatic spray equipment results in reduced emissions, leading to a smaller environmental footprint.



Overall, electrostatic spray equipment can provide a wide range of benefits for paint shops, from increased efficiency and improved coating quality to greater flexibility and increased safety. With its relatively low initial investment cost and short payback period, it can be a cost-effective and environmentally-friendly solution that can improve the ROI of your paint shop operations.

# Water-based electrostatic spray coating



Water-based electrostatic spray coating has a variety of features that make it a popular and environmentally friendly coating option. Here are some of the key features of this process:

- **Environmentally friendly:** Water-based electrostatic spray coating produces fewer emissions and less VOCs than solvent-based coatings, making it a more environmentally friendly option.
- **High-quality finish:** The electrostatic charge created during the spraying process ensures that the coating material is uniformly attracted to the substrate, resulting in a high-quality finish.
- **Wide range of substrates:** Water-based electrostatic spray coating can be used on a wide range of substrates, including metals, plastics, and composites.
- **Versatility:** This process can be used to coat a variety of products, such as automobiles, bicycles, electrical appliances, agricultural machinery, household items, steel furniture, and more.
- **Specialized equipment:** Water-based electrostatic spray coating requires specialized equipment, including a high-voltage electrostatic generator, a water-based electrostatic spray gun, and a control panel that regulates the voltage and flow rate of the coating material.
- **Proprietary technology:** Some companies, such as OTSON, have developed proprietary technology that ensures optimal performance of the equipment and the coating.

Overall, water-based electrostatic spray coating is an environmentally friendly and high-quality coating process that can be used on a wide range of substrates and products. Its specialized equipment and proprietary technology make it a versatile solution for many different industries.





- Electrostatic atomizer spray systems use an electrostatic charge to apply a coating material to a surface. The charge is generated by an electrical current applied to the coating material as it is atomized into fine droplets.
- The charged droplets are attracted to the surface being coated, allowing for more precise application and a more even finish. The charge also helps to increase the transfer efficiency of the coating material, resulting in less material being used and potentially reducing costs.
- Electrostatic atomizer spray systems are often used in the automotive, aerospace, and manufacturing industries to apply paints, coatings, and other finish materials. They can be used to coat a wide range of surfaces, including metal, plastic, and composite materials.
- Electrostatic atomizer spray systems have several advantages over traditional spraying methods, including improved precision, reduced overspray, increased efficiency, and better transfer efficiency. They also offer greater control over the coating process and can be more environmentally friendly, as they often produce fewer volatile organic compounds (VOCs) compared to other coating methods.

OTSON Powder Electrostatic is a leading provider of electrostatic powder coating solutions, designed to improve the efficiency and quality of your industrial coating processes. Our patented technology utilizes a high-voltage electrostatic charge to attract powder particles to the surface being coated, ensuring a uniform and consistent finish.

Our powder electrostatic systems include disc and bell systems, both of which are designed to handle a wide range of coating materials and applications. The disc system utilizes a rotating disc to distribute the powder evenly, while the bell system uses a bell-shaped nozzle to create a fan-shaped powder spray.

Our powder electrostatic systems are also designed with safety in mind, featuring built-in overload protection and emergency stop buttons to ensure the safety of our operators. Our systems also include advanced control panels for easy operation and process monitoring.

At OTSON, we understand the importance of reducing costs and improving efficiency in industrial coating processes. Our OTSON Powder Electrostatic systems are designed to do just that, by reducing paint waste and increasing production rates, ultimately leading to a higher return on investment for our customers.

With OTSON Powder Electrostatic, you can trust that you are getting the best in electrostatic powder coating technology, backed by the expertise and innovation of OTSON– a leading smart paint shop solutions provider.

Power electrostatic spray is a process in which an electric charge is applied to a liquid coating material as it is sprayed through a nozzle. This creates an electrostatic field around the droplets of coating, which attracts them to the surface being coated. The result is a more uniform and efficient coating process, with less overspray and waste.

Power electrostatic spray is often used in industrial and manufacturing applications where precise and consistent coating is critical. It is commonly used to apply coatings such as paints, primers, and adhesives, as well as a variety of other materials including lubricants, insecticides, and flame retardants. The process is especially useful for coating complex shapes or hard-to-reach areas, as the electrostatic attraction helps to ensure that the coating material adheres evenly and completely.







There are a few key benefits to using power electrostatic spray for coating applications. These include:

**Increased efficiency:** Power electrostatic spray can significantly increase the efficiency of the coating process, with up to 50% less overspray and material waste compared to traditional spraying methods.

**Improved coverage:** The electrostatic field helps to ensure that the coating material adheres evenly and completely to the surface being coated, resulting in improved coverage and a more uniform finish.

**Greater precision:** Power electrostatic spray allows for precise and consistent application of the coating material, making it ideal for applications where a uniform finish is critical.

**Easy to use:** Power electrostatic spray systems are relatively easy to operate and maintain, making them suitable for use in a variety of industrial and manufacturing environments.





- **Power supply:** The power supply provides the electrical charge that is applied to the coating material as it is sprayed. This can be generated through a variety of means, such as a high voltage transformer or a corona discharge system.
- **Spray gun:** The spray gun is the device that is used to apply the coating material. It typically consists of a nozzle, an electrode, and a handle with a trigger. When the trigger is pulled, the coating material is sprayed through the nozzle and the electrical charge is applied to the droplets.
- **Hose:** The hose is used to connect the spray gun to the power supply and to the source of the coating material. It is typically made of a flexible, non-conductive material to ensure the safety of the operator.
- **Material pump:** The material pump is used to deliver the coating material from its container to the spray gun. It may be a separate unit or it may be integrated into the spray gun itself.
- **Control unit:** The control unit is the central component of the power electrostatic spray system. It is used to regulate the flow of coating material and the electrical charge applied to it. It may also include features such as variable speed control and automatic shutdown.
- **Grounding system:** The grounding system is an important safety feature of a power electrostatic spray system. It is used to ensure that the electrical charge is safely discharged to the ground, protecting the operator and equipment from electrical shock.





**Different coatings thicknesses by OTSON Electrostatic Spray System**



## Benefits of Electrostatic Spray Technology

- Improve Finishing Quality
- Reduce Refinishing Work
- Time Savings
- Reduce Paint Wastage
- Material Savings

## Reduce Paints Costs

**OTSON®**  
ELECTROSTATIC



Conventional  
Air Spray Gun



HVLP  
Spray Gun



Airless  
Spray Gun



Manual  
Electrostatic  
Air Spray Gun



Auto  
Electrostatic  
Air Spray DISK



Paints  
Saving



## Return-on-Investment (ROI)

By replacing Conventional Air Spray gun with Auto Electrostatic Spray Disk (Disc) System

	Typical	Calculate Your Own Application
Paint price per litre	USD 10	
	X	X
Litre Used per Day	100 litres	
	X	X
Business Days per Year	220 days	
Electrostatic Transfer Efficiency	95%	
Annual Savings	USD 209,000.00	

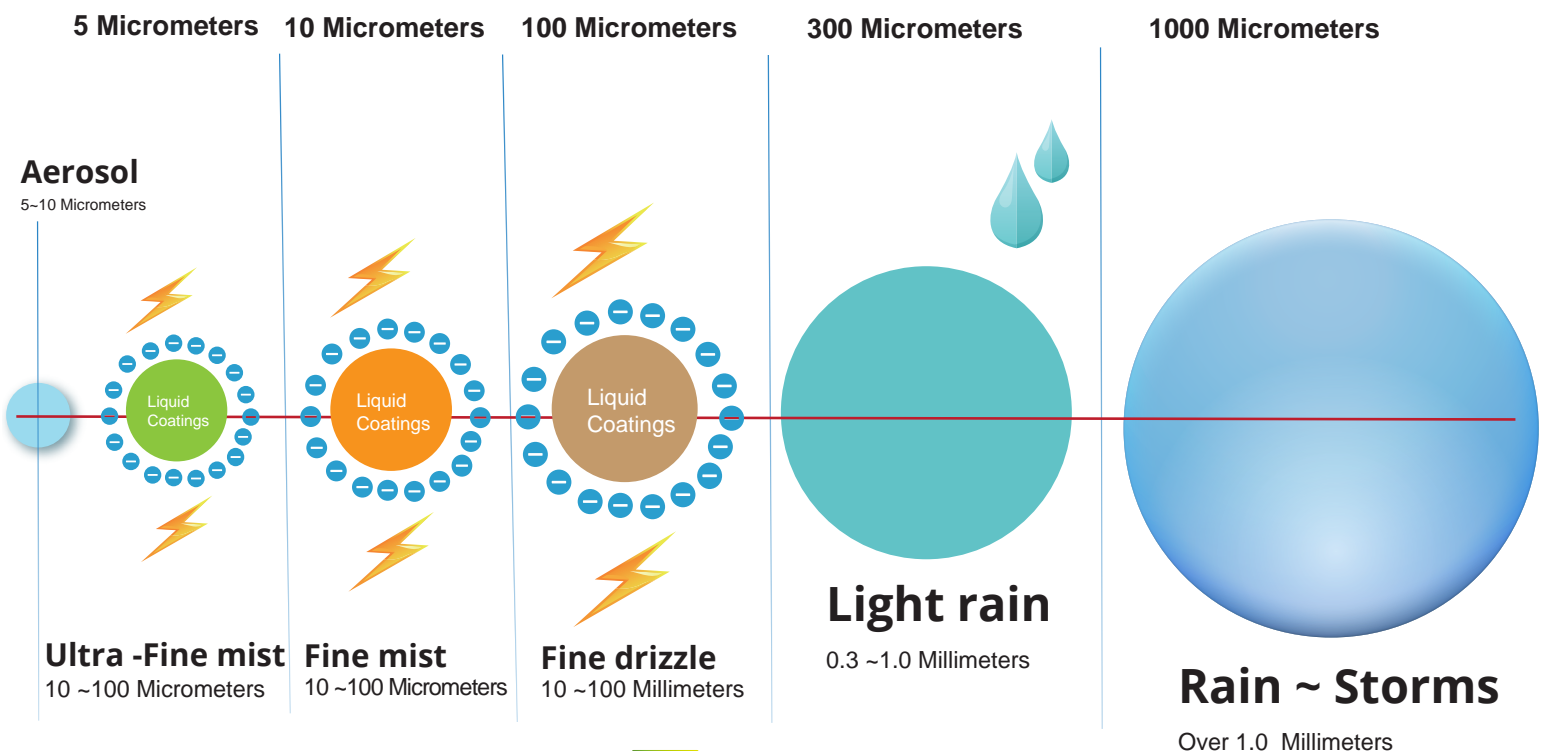




OTSON Technologies Corp

otson.com

## Classification of Electrostatic Spray Droplet / Particle Size



5.0~ 300.0 Micrometers **HYBRID**

Waterbase Coatings

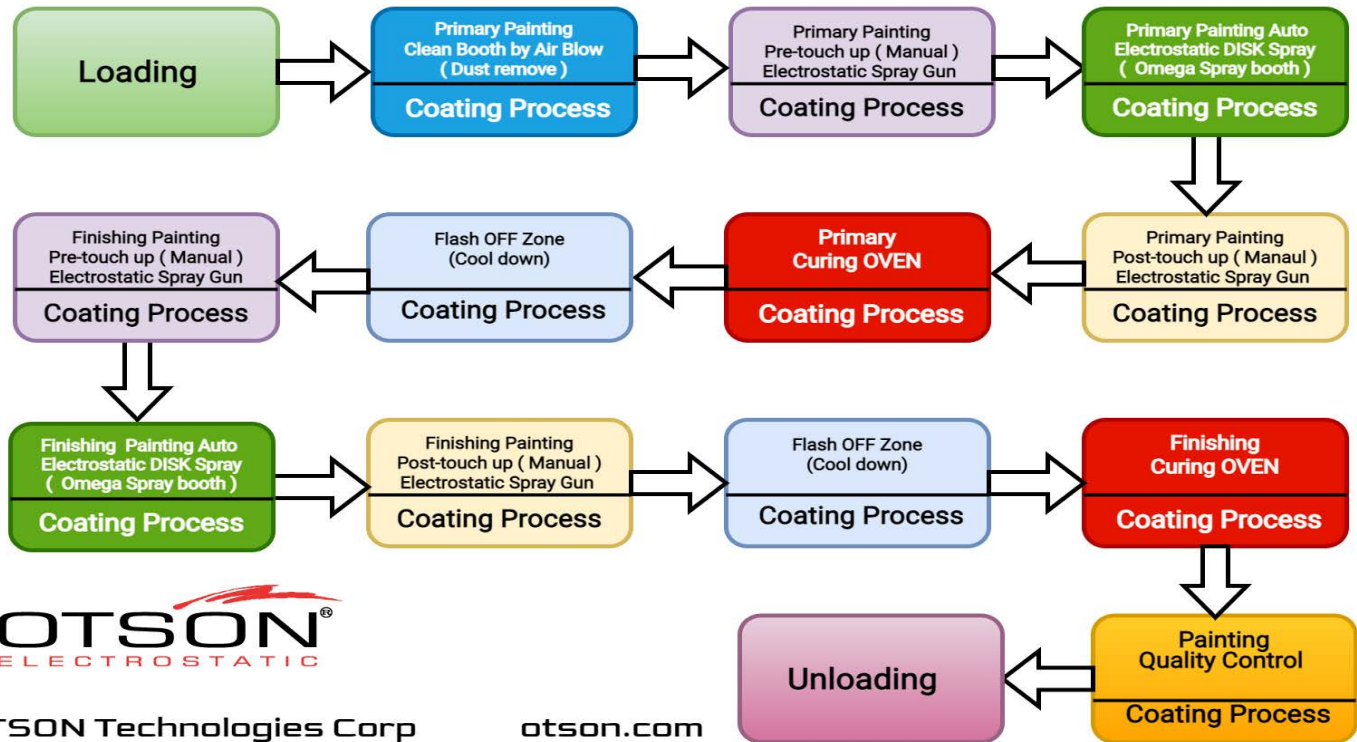
Solvent Coatings

Auto DISK (Disc) Electrostatic Spray

**Series 5000**

## The Process Steps of Disk Electrostatic Automatic Coating System

### The Process Step of Disk Electrostatic Automatic Coating System



Water Tank Coating - Base Coating



## Benefits of Electrostatic Spray Technology

- *Improve Finishing Quality*
- *Reduce Refinishing Work*
- *Time Savings*
- *Reduce Paint Wastage*
- *Material Savings*

## Reduce Paints Costs



Chemical Reduction of at least 75 % - after 1 hours operation



Conventional  
Air Spray Gun



HVLP  
Spray Gun



Airless  
Spray Gun



Manual  
Electrostatic  
Air Spray Gun



Auto  
Electrostatic  
Air Spray Gun



LIQUID  
Saving



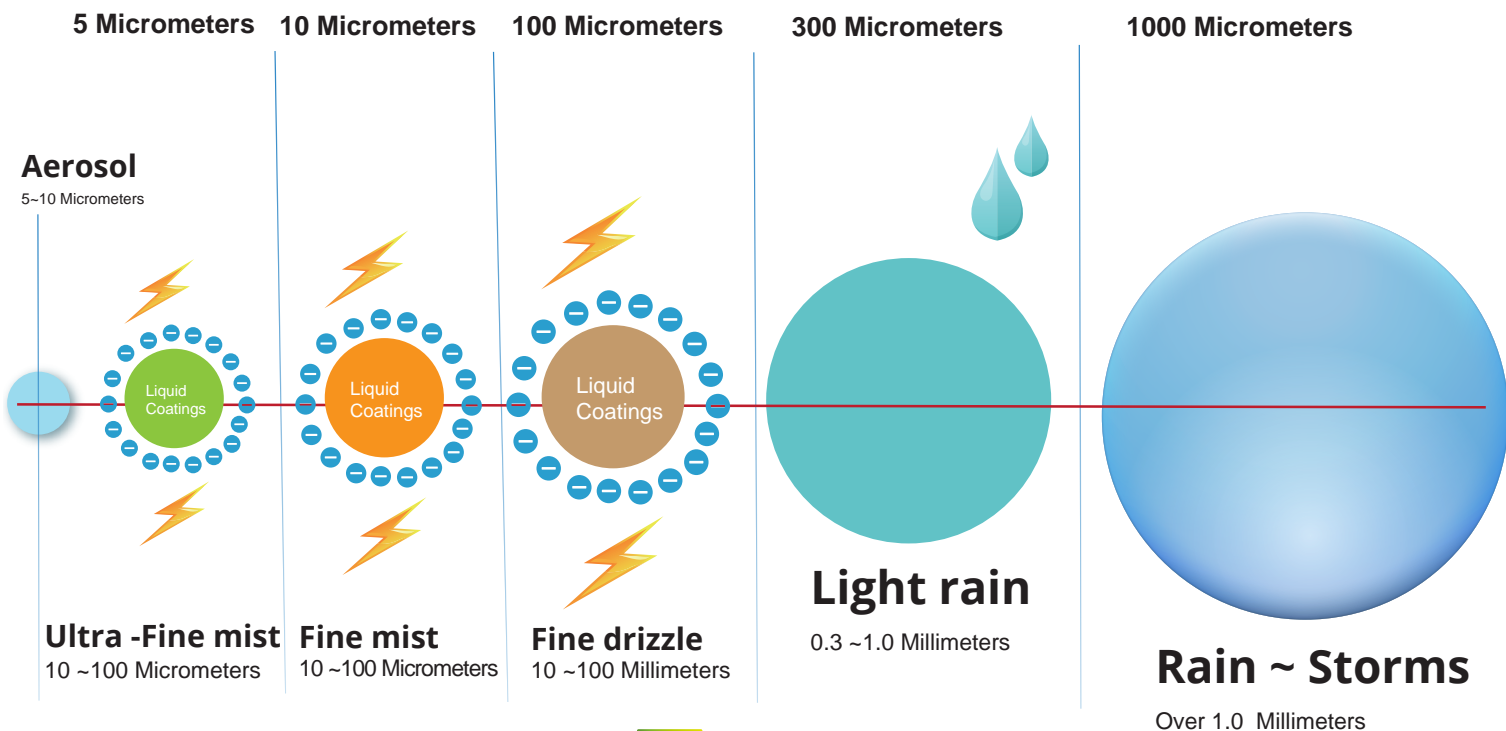
## Return-on-Investment (ROI)

By replacing Conventional Air Spray gun with Auto Electrostatic Spray Bell System

	Typical	Calculate Your Own Application
Paint price per litre	USD 10	
	X	X
Litre Used per Day	100 litres	
	X	X
Business Days per Year	220 days	
Electrostatic Transfer Efficiency	95%	
Annual Savings	USD 209,000.00	



## Classification of Electrostatic Spray Droplet / Particle Size



**5.0~ 300.0 Micrometers**  **HYBRID**

Waterbase Coatings

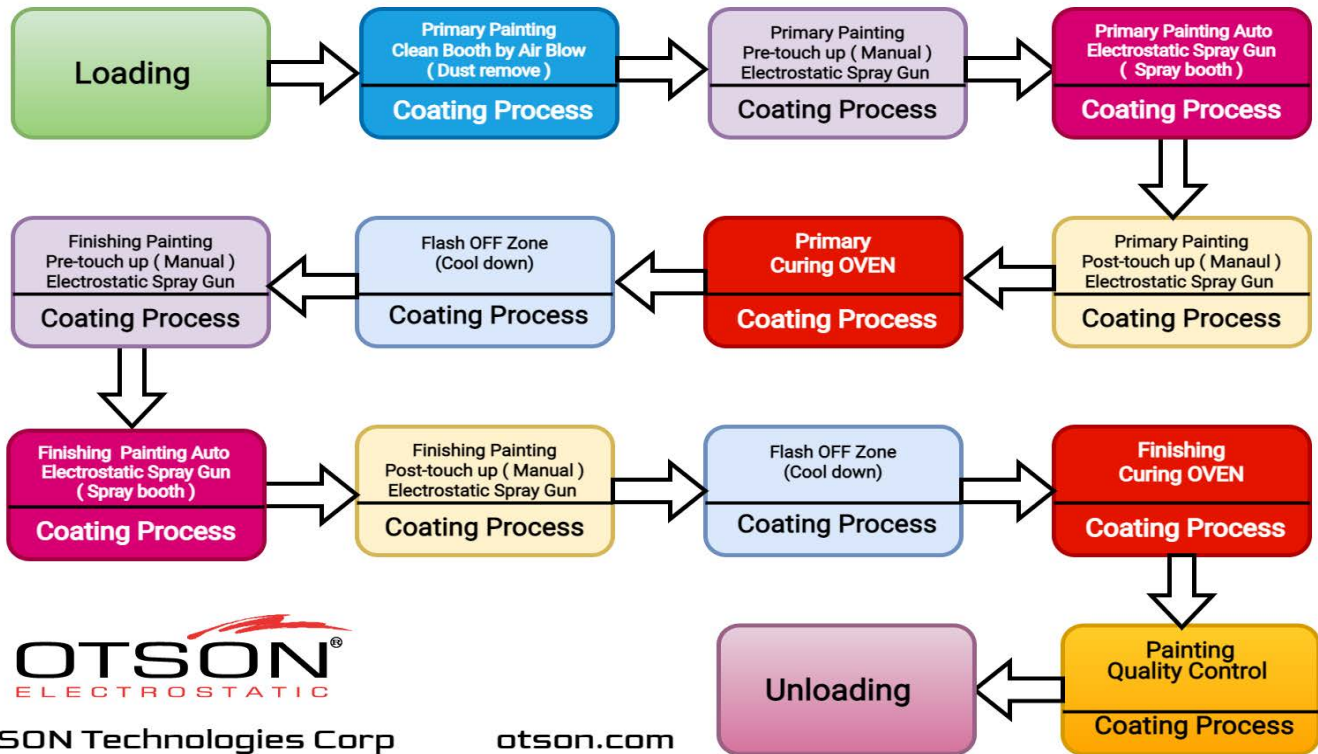
Solvent Coatings

 **OTS-8000**  
Auto Electrostatic Spray Gun



## The Process Steps of Auto Electrostatic Spray Gun Coating System

### The Process Step of Automatic Electrostatic Gun Coating System



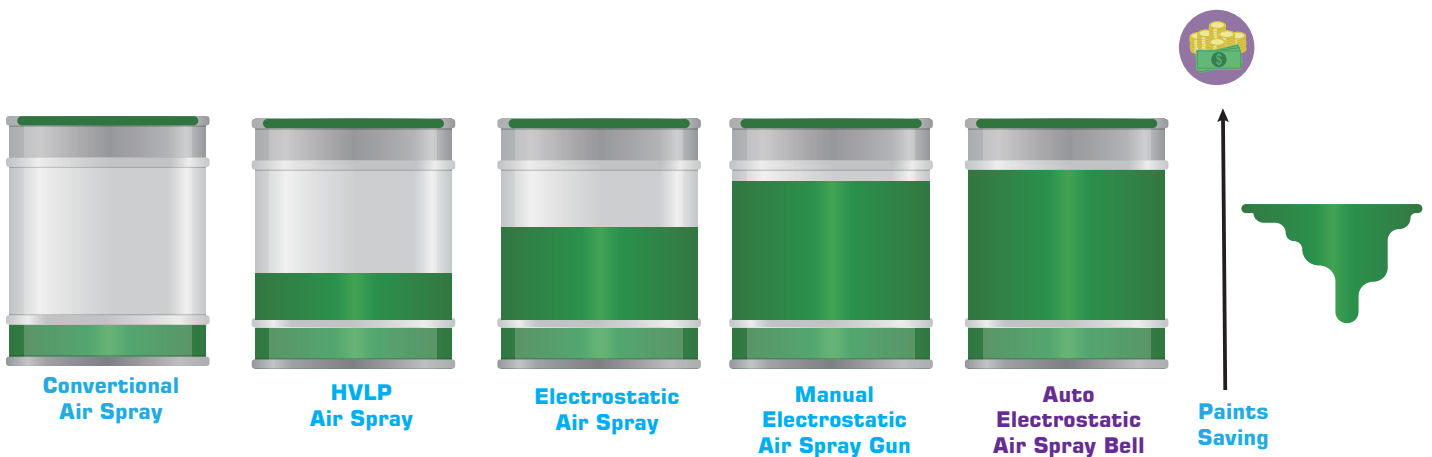
**Round TIN  
Nozzle - B**



## Benefits of Electrostatic Spray Technology

- *Improve Finishing Quality*
- *Reduce Refinishing Work*
- *Time Savings*
- *Reduce Paint Wastage*
- *Material Savings*

## Reduce Paints Costs



## Return-on-Investment (ROI)

By replacing Conventional Air Spray gun with Auto Electrostatic Spray Bell System

	Typical	Calculate Your Own Application
Paint price per litre	USD 10	
	X	X
Litre Used per Day	100 litres	
	X	X
Business Days per Year	220 days	
Electrostatic Transfer Efficiency	95%	
Annual Savings	USD 209,000.00	





## Classification of Electrostatic Spray Droplet / Particle Size

5 Micrometers

10 Micrometers

100 Micrometers

300 Micrometers

1000 Micrometers

**Aerosol**

5~10 Micrometers

Liquid Coatings

Liquid Coatings

Liquid Coatings

**Ultra -Fine mist**

10 ~100 Micrometers

**Fine mist**

10 ~100 Micrometers

**Fine drizzle**

10 ~100 Millimeters

**Light rain**

0.3 ~1.0 Millimeters

**Rain ~ Storms**

Over 1.0 Millimeters

5.0~ 300.0 Micrometers

**HYBRID**

Waterbase Coatings

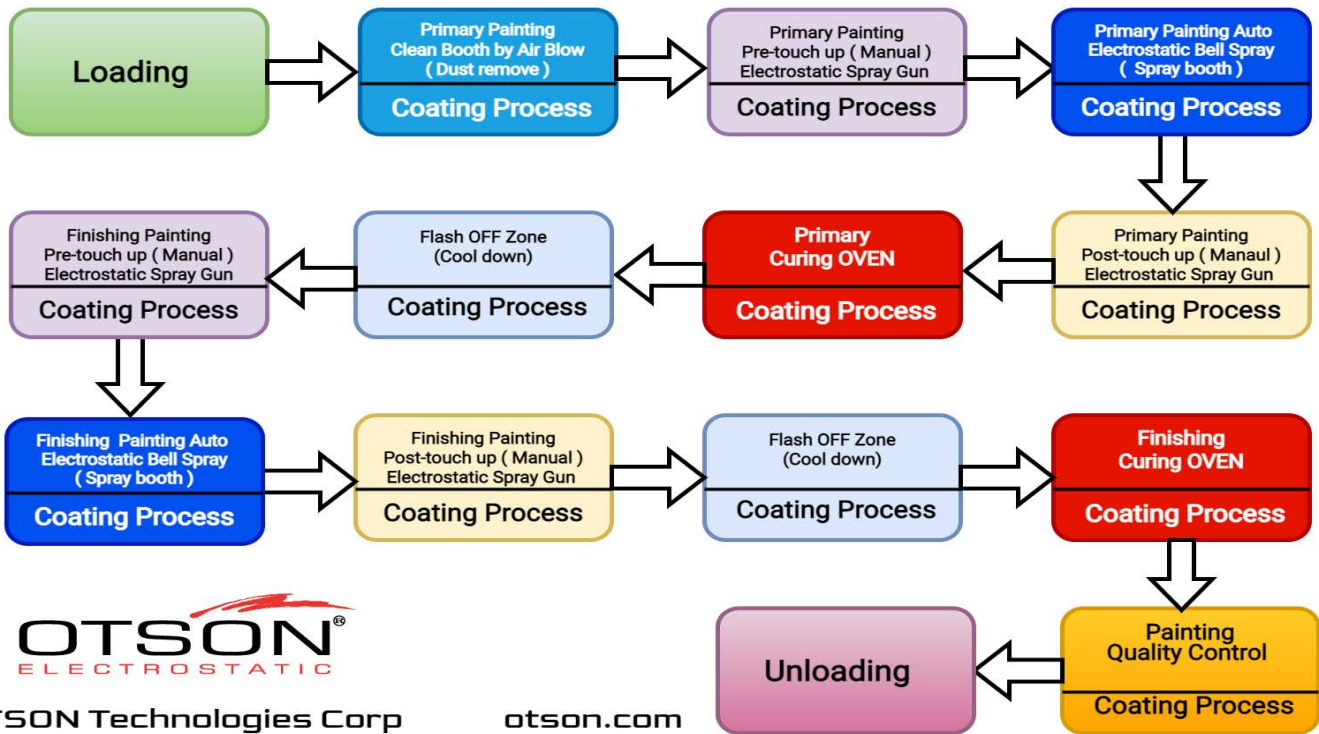
Solvent Coatings

Auto Electrostatic Spray Bell

**OTS-9000**

## The Process Steps of Auto Electrostatic Spray Bell Coating System

### The Process Step of Bell Electrostatic Automatic Coating System



**OTSON**<sup>®</sup> **OTS-9000**  
Rotary Speed Control (Atomization)





## Benefits of Electrostatic Spray Technology

- *Improve Finishing Quality*
- *Reduce Refinishing Work*
- *Time Savings*
- *Reduce Paint Wastage*
- *Material Savings*

## Reduce Paints Costs



Chemical Reduction of at least 75 % - after 1 hours operation



Conventional  
Air Spray Gun



HVLP  
Spray Gun



Airless  
Spray Gun



Manual  
Electrostatic  
Air Spray Gun



Auto  
Electrostatic  
Air Spray Gun



LIQUID  
Saving



## Return-on-Investment (ROI)

By replacing Conventional Air Spray gun with Auto Electrostatic Spray Bell System

	Typical	Calculate Your Own Application
Paint price per litre	USD 10	
	X	X
Litre Used per Day	100 litres	
	X	X
Business Days per Year	220 days	
Electrostatic Transfer Efficiency	95%	
Annual Savings	USD 209,000.00	

## OTS-7900 Auto Electrostatic Spray Bell –Robot ARM

**ABB**

**YASKAWA**

**KUKA**

**FANUC**

**Kawasaki**

**EPSON**

**STÄUBLI**





## OTS-7800 Auto Electrostatic Spray Gun Kit –Robot ARM

**ABB**

**YASKAWA**

**KUKA**

**FANUC**

**Kawasaki**

**EPSON**

**STÄUBLI**



**OTSON Technologies Corp**

[otson.com](http://otson.com)



## 2K/3K Mixer and Color Change System- Disk Electrostatic Spray

Color change valves, also known as paint dispensers, are a valuable investment for any business in the painting industry. These devices are used in paint shops to mix and dispense paint quickly and accurately, reducing waste and cleanup time.

One of the key benefits of a color change valve is its ability to automatically switch between different paint colors, which can save time and increase efficiency. This feature is especially useful for businesses that work on multiple projects and need to switch between colors frequently.

Another advantage of color change valves is their mixing capabilities. These devices can mix the paint with hardeners, reducers, or other additives as it is dispensed, ensuring that the paint is properly mixed and ready to use, which can help improve the quality of the paint job.

In terms of market view, the use of color change valves is prevalent in industrial paint application such as automotive, aerospace, and wood finishing industries. Many companies are investing in color change valves to improve their production efficiency and reduce cost.

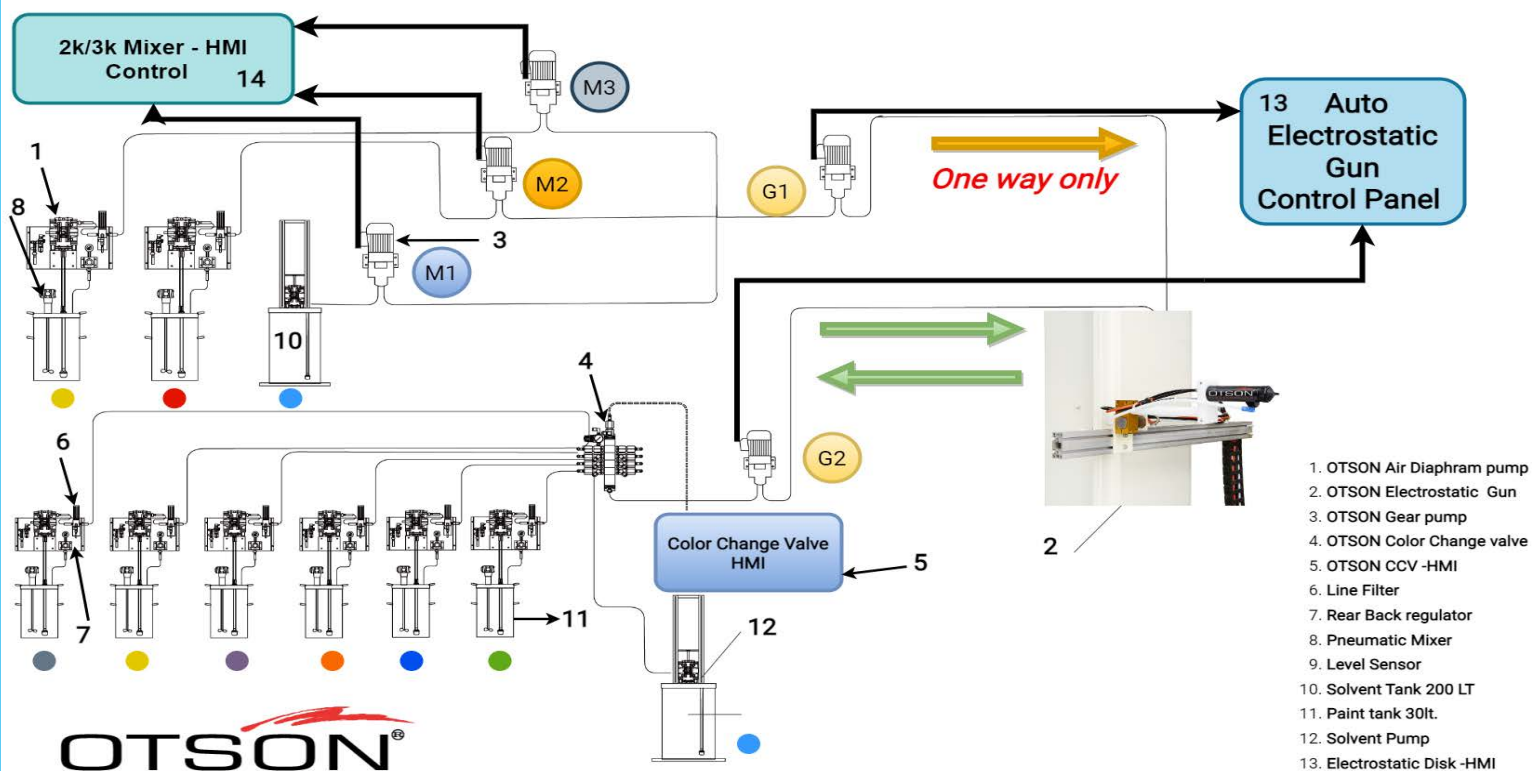
Overall, color change valves are an essential component of any paint shop, providing accurate and efficient paint dispensing and color change capabilities. Investing in a high-quality color change valve can help businesses in the painting industry to increase productivity, improve the quality of their paint jobs and save money in the long run.

### 2K/3K WATERBASED

### 2K/3K SOLVENT

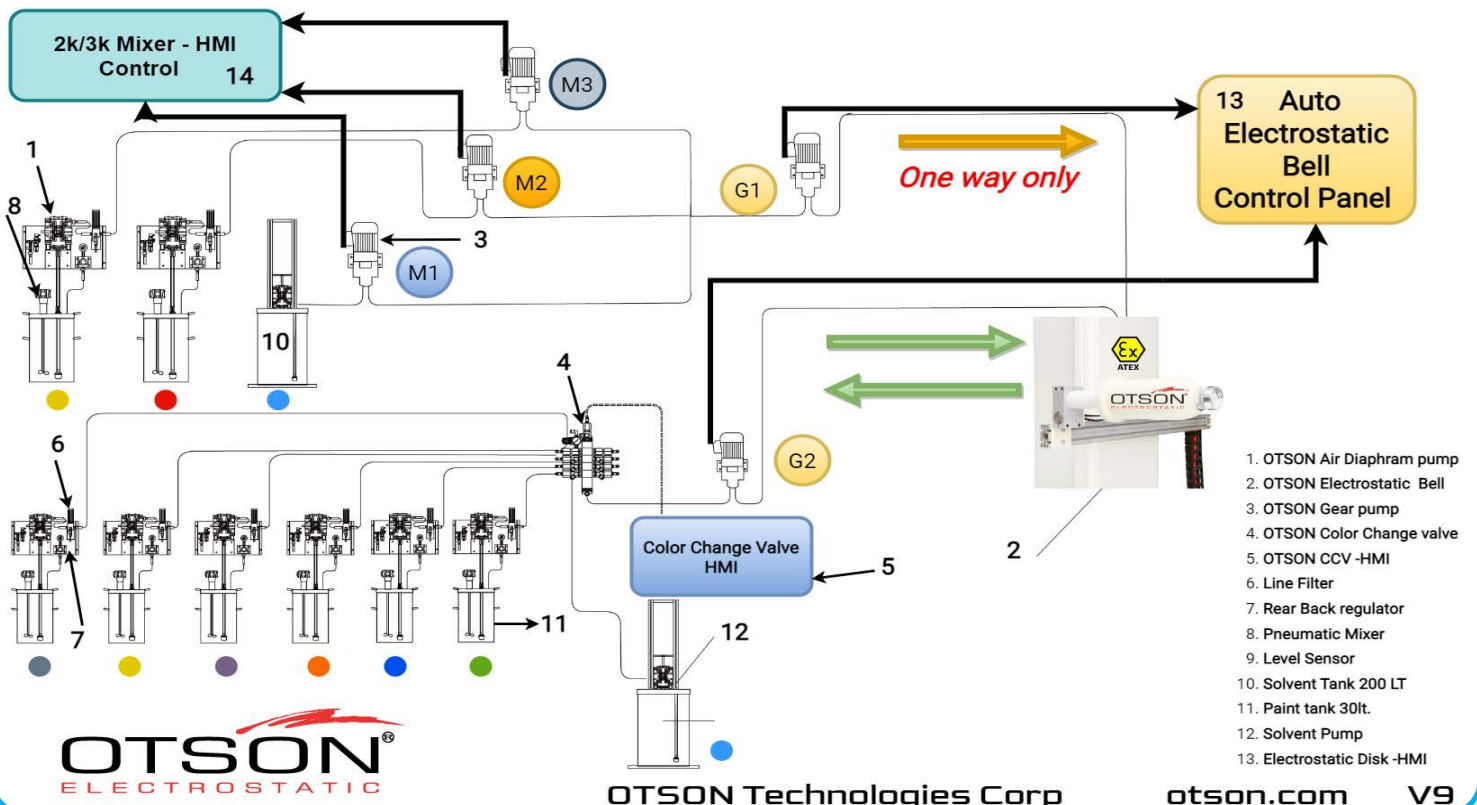
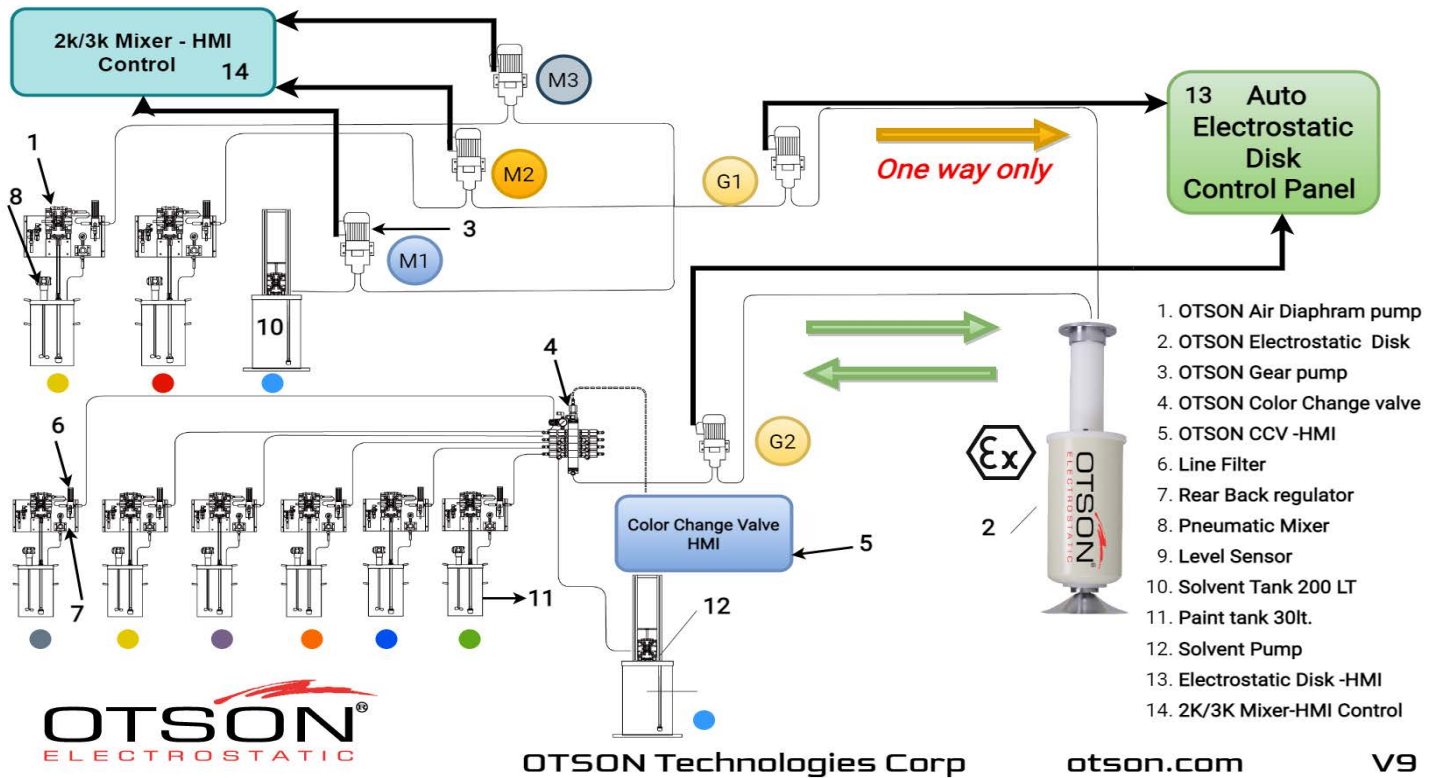
**OTSON**  
Fluid Technologies

#### 2k /3K Mixer and Color Change System - Electrostatic Spray Gun

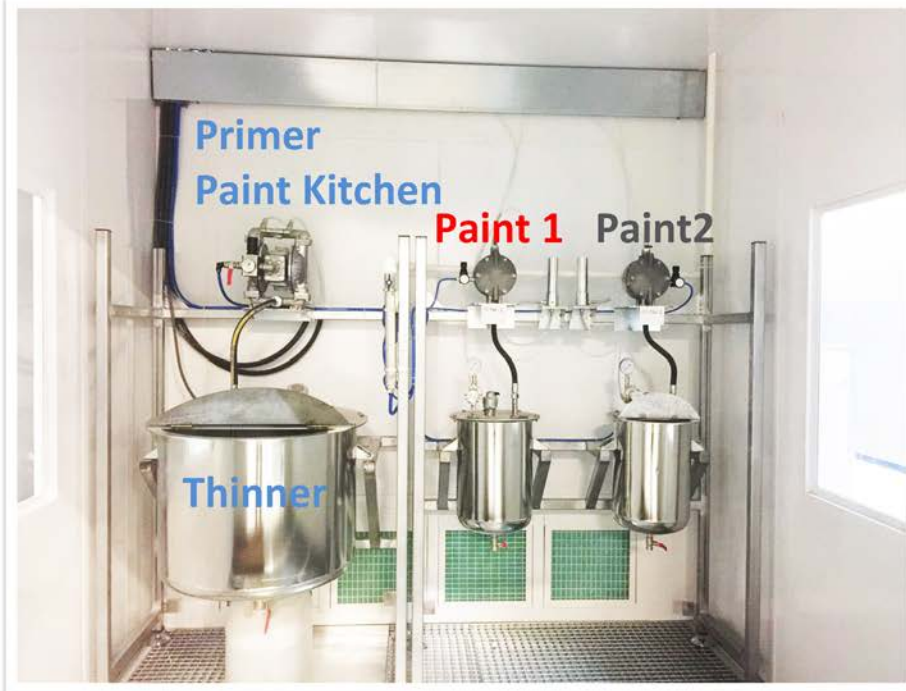


**OTSON**  
ELECTROSTATIC





The 2K-3K Electronic Mixing & Dosing System is an advanced system designed for use in a liquid electrostatic spray system. It is used to control the mixing and dosing of two or three liquid components in a precise and accurate manner. The system uses electronic sensors and controls to measure and adjust the flow rate of each component, ensuring that the correct proportion of liquids are mixed and sprayed. The end result is a more uniform and efficient application of the sprayed liquid, resulting in improved product quality and increased productivity.



The 2K-3K Electronic Mixing & Dosing System typically comprises of the following components:

- **Metering Pumps:** These pumps are used to accurately control the flow rate of each component, ensuring that the correct proportion is mixed and sprayed.
- **Mixing Chamber:** The mixing chamber is where the two or three liquid components are combined and mixed together.
- **Control Unit:** The control unit is the heart of the system and is responsible for monitoring and adjusting the flow rate of each component. It may use electronic sensors, computer control and software to manage the mixing and dosing process.
- **Display Unit:** A display unit is used to show the operator the current status of the system, including the flow rate of each component, total amount of liquid mixed and any alarms or faults that may arise.

The system may also be equipped with additional features such as automatic cleaning, continuous monitoring, and alarms for low level and low pressure, to ensure the reliable and consistent operation of the mixing and dosing process.

Overall, the 2K-3K Electronic Mixing & Dosing System provides precise control over the mixing and dosing of two or three liquid components, which results in a more efficient, consistent and uniform

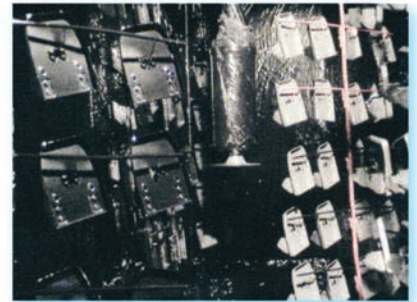
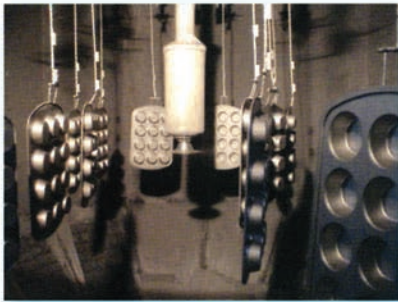
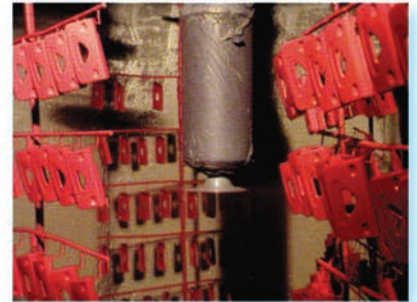
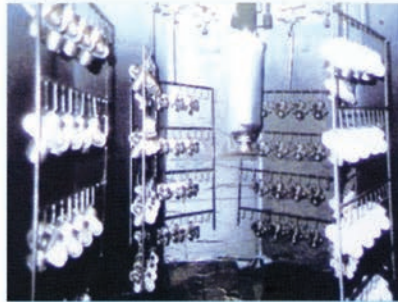
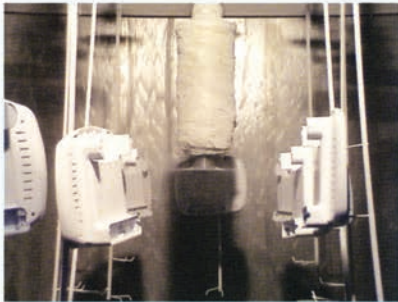
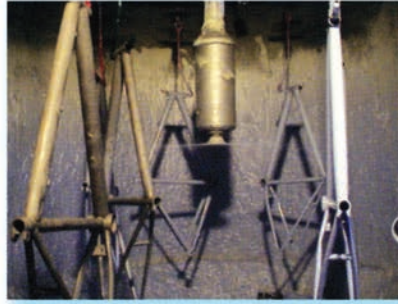
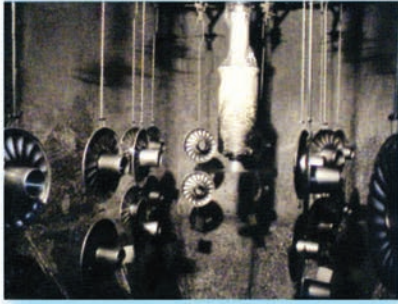


## Application - Industries



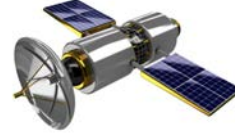
- Small parts
- Bicycle
- Application
- Small parts
- Bicycle
- Computer Housing
- Stationery
- Wooden Furniture
- Hardware
- Lockers
- Freezers
- Iron Railing
- Display Cases
- Office Partitions
- Medical Equipment
- Rest room Partitions
- Roller Bars
- Metal Doors
- Decorative Lamps
- Electrical Home Appliances
- Car Accessories, Teflon Pot
- Sports Equipment
- Handcraft
- Files
- Desks
- Sports Equipment
- Handcraft Computer
- Housing
- Stationery
- Wooden Furniture
- Hardware
- Lockers
- Freezers
- Iron Railing
- Display Cases
- Refrigerators
- Heavy Machinery
- Office Equipment



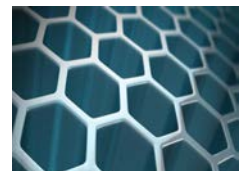




## Application - Industry



*Meeting the requirements  
of each industry....*



## Application - Spray Range





## OTS-8000

Auto Electrostatic Spray Gun System



## OTS-9000

Auto Electrostatic Spray Bell System



Copyright © 2023, OTSON Technologies Corp All rights reserved.

The contents of this document are protected by national and international copyright and other applicable laws, and are the exclusive property of OTSON Technologies Corp. Unauthorized storage, reproduction, transmission, and/or distribution of this document or any part thereof is strictly prohibited and may result in civil and/or criminal proceedings.

The term "OTSON" is a registered trademark of OTSON Technologies Corp and may be registered in certain countries. All other product names mentioned in this document may be trademarks of their respective owners.

This document is provided subject to contract, and therefore, nothing contained in this document shall be deemed to constitute an offer, obligation, or an acceptance of any offer previously made. Any contract resulting from this document shall be in accordance with the standard form provided by OTSON Technologies Corp.

\*The appearance of all products, detail, figure and specification are subject to change at any time without notice.

Copyright © OTSON is a registered trademark of OTSON Technologies Corp. All other names and brands may be claimed as the property of others.

## OTSON Technologies Corp.

1F., No.20, Lane 211, Huacheng Rd., Sinhuang City,  
NEW Taipei City 242, Taiwan (R.O.C.)

<https://spray.otson.com>

e-mail : [sales@otson.com](mailto:sales@otson.com)

Tel : 886+2+2659-7162

Fax : 886+2+8192-6058

