





#### Innovative Technologies of

Liquid Electrostatic Coating Solutions

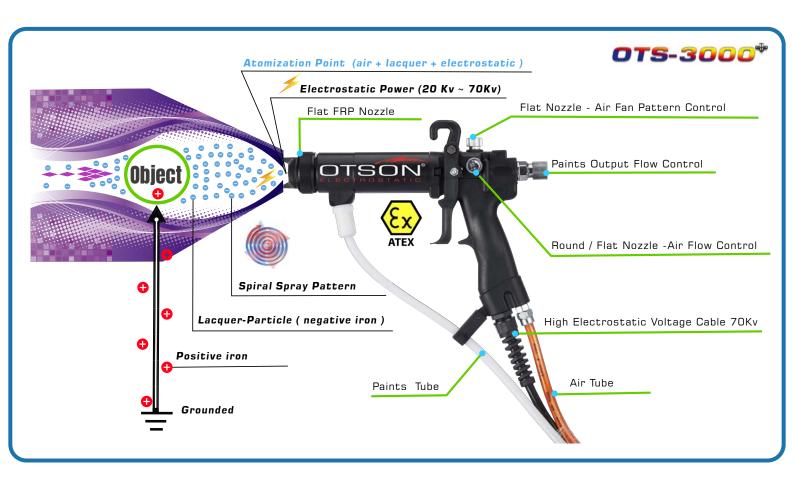
#### OTSON<sup>®</sup>

#### Overview

The **OTS-3000+G7 Manual Liquid Electrostatic Spray Gun** from OTSON is a high-performance tool that uses air or high-pressure to atomize lacquer and charge the particles upon exiting the nozzle. It offers a variety of air nozzles, caps, and materials that create different spiral spray patterns to reduce lacquer particle velocity and enable effective atomization.

The electrostatic coating technique used by the OTS-3000+G7 involves imparting a charge, typically negative, to the coating material during atomization. This causes the negatively charged spray droplets to be attracted to any earthed surface, such as the workpiece being coated. The attraction effect is so potent that the coating spray can even "wrap around" some objects. This method offers a transfer efficiency of up to 95% and minimizes overspray.

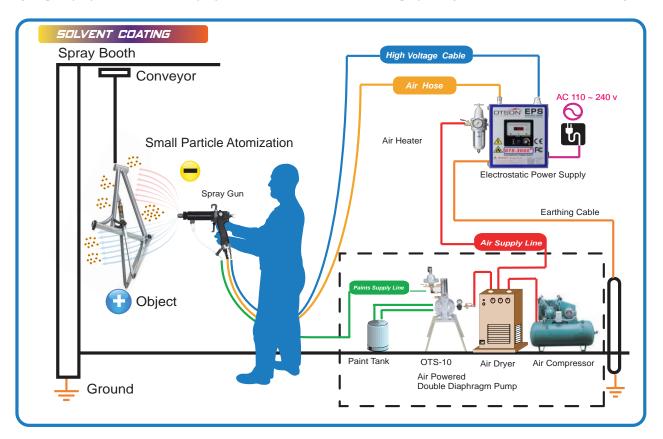
The OTS-3000+G7 is a versatile and reliable tool for a variety of coating applications. It can be used with waterborne paints, solvent paints, and lacquers. It is also easy to clean and maintain.





The **OTS-3000+G7 Manual Liquid Electrostatic Spray Gun** from OTSON comes with a set of standard accessories, including an air regulating valve, an electrostatic power supply, and a round (TIN) nozzle. An additional set is available as an option, and includes a round (FRP) and flat (FRP) nozzle.

When combined with a paint tank, double diaphragm pump, paint filter, paint stabilizing valve, air dryer, and air compressor, the OTS-3000+G7 forms a complete set of manual liquid electrostatic spraying equipment. This equipment enhances finishing quality and transfer efficiency.



OTS-3000+ Manual Liquid Electrostatic Spray System



**Transfer Efficiency of Different Spray Technologies** 



#### **Benefits of Electrostatic Spray Technology**

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

**Reduce Paints Costs** 



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#### **Return-on-Investment (ROI)**

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

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

#### 

## Features **HYBRID**

- Dual Coating- Solvent and Waterborne Paint
- Improve Finishing Quality
- Reduce Air and Water Pollutions
- High Transfer Efficiency Spray Painting
- High Atomized Nozzle
- Easy Handle for Long Term Operation
- Long Life Operation
- Low VOC Emissions
- Low Failure Rate and Easy Maintenance
- Light Weight Gun- 470g Only





The Spray Direction of High Atomized Nozzle







## New Round Nozzles - All in One



Small Spray Round Pattern



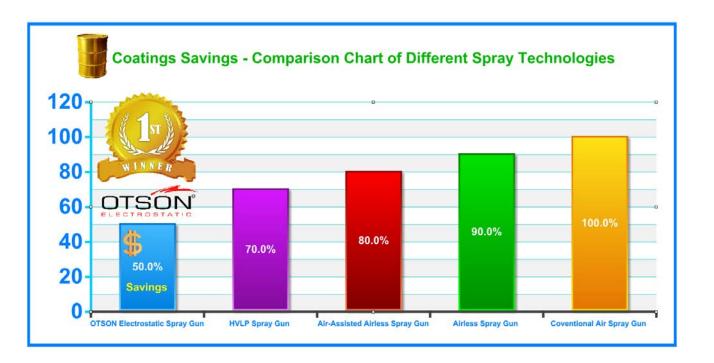






Large Spray Round Pattern



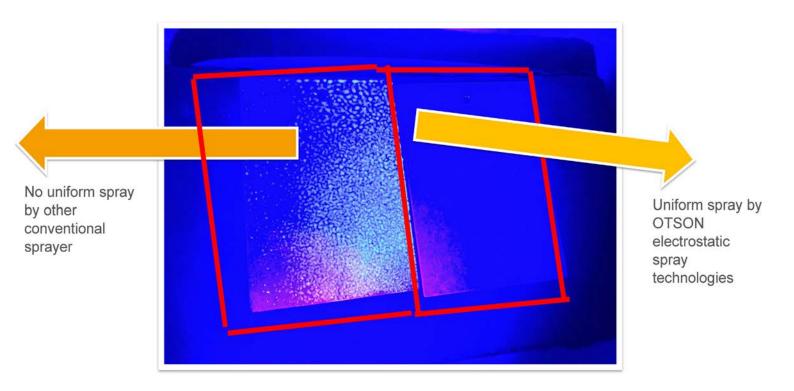






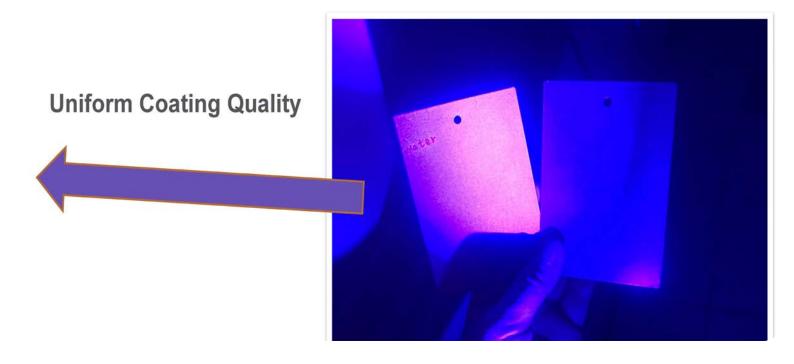






Conventional spray guns charge liquid droplets only by the movement of the liquid through the nozzle, which produces a negligible charge. The OTSON OTS-3000+G7 Manual Liquid Electrostatic Spray Gun, on the other hand, applies an electric charge to the droplets as they are ejected from the nozzle, using a high voltage to charge the paint or coating material.

This electrostatic effect causes the charged particles to be attracted to an earthed object, such as a car body or a piece of furniture. This results in a more efficient, precise, and consistent application of paint or coating material. The electrostatic attraction overcomes the natural tendency of the droplets to disperse or deflect, resulting in a highly controlled, even application.





The electrostatic effect also reduces overspray and bounce-back, which reduces waste and cleanup time. Overall, the electrostatic effect of the **OTSON OTS-3000+G7 Manual Liquid Electrostatic Spray** Gun produces a high-quality finish.

Additional benefits of using the OTSON OTS-3000+G7 Manual Liquid Electrostatic Spray Gun:

- Can be used to apply paint or coating material to a wider variety of surfaces, including those that are difficult to reach with a conventional spray gun.
- Can be used to apply paint or coating material in a more environmentally friendly way, as it reduces the amount of overspray and waste.
- Can be used to apply paint or coating material more quickly and efficiently, which can save time and money.

If you are looking for a more efficient, precise, and consistent way to apply paint or coating material, then the OTSON OTS-3000+G7 Manual Liquid Electrostatic Spray Gun is a good option to consider.



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



Pretreatment and coating process of metal parts in the metal industry



#### **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:

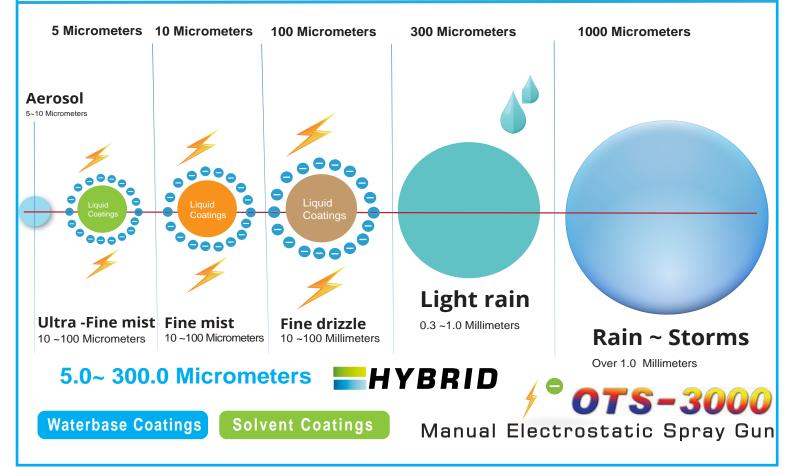
Primer Coating: A thin layer of primer coating is applied to the metal surface to improve adhesion and provide corrosion resistance. The typical thickness of primer coating is around 10-20 microns. The primer coating is cured in an oven at a temperature of around 120-150°C for 20-30 minutes.

#### **CED Coating:**

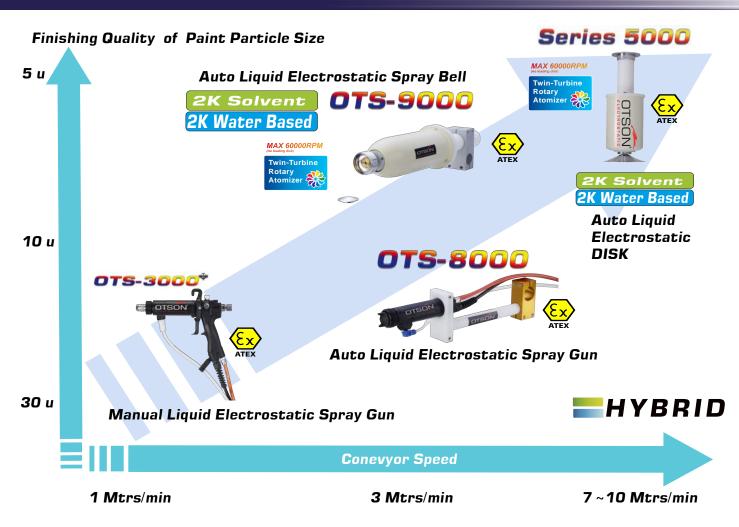
CED (Cathodic Electrodeposition): This is an electrocoating process that uses an electrical current to deposit a uniform and consistent layer of paint onto the metal surface. The thickness of the CED coating is around 50-80 microns. The CED coating is cured in an oven at a temperature of around 180-200°C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

Metal Material

## Classification of Electrostatic Spray Droplet / Particle Size



#### OTSON<sup>®</sup>



OTSON is a leading manufacturer of liquid electrostatic spray systems. We offer innovative solutions for a variety of painting and coating applications, using advanced technology to deliver a highly charged spray of paint or coating material, resulting in a more efficient and high-quality finish.

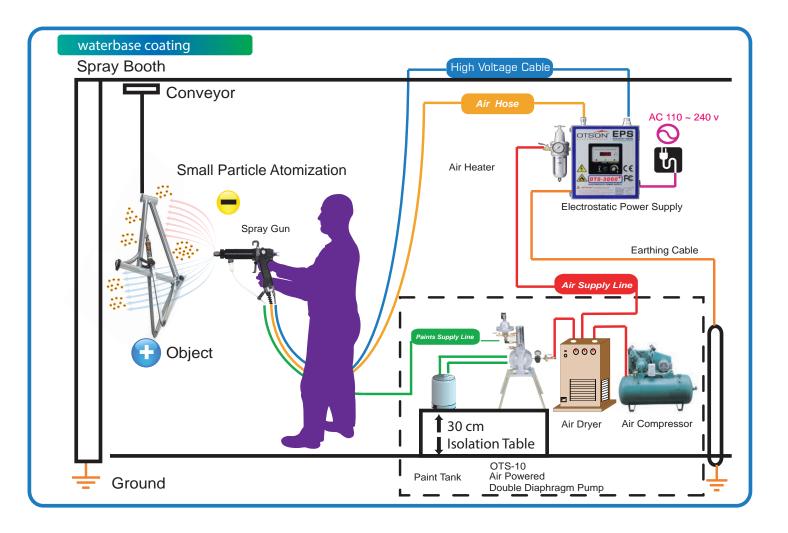
With over 40 years of experience in the industry, we are committed to developing and improving our electrostatic spray system technology to meet the changing needs of our customers. Our products are designed with the latest features, including adjustable fluid flow and pressure, to provide a consistent and controlled application process.

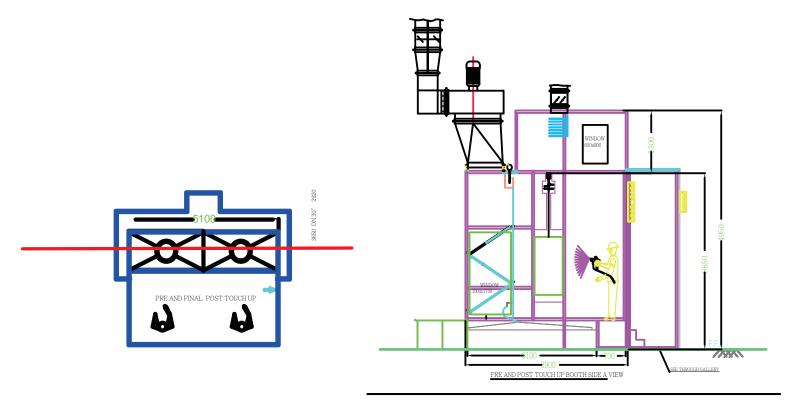
The electrostatic effect of our spray systems ensures a higher transfer efficiency and reduces overspray, which not only saves paint and coating material but also makes the process more environmentally friendly. Additionally, the uniform deposition of the material ensures a high-quality and consistent finish every time.

We take pride in our reliable and durable spray systems, which are easy to clean and maintain. Our customer service team is always available to answer any questions and provide support to our customers.

Whether you are in the automotive, aerospace, or furniture industry, OTSON has the right electrostatic spray system solution for you. Trust us to provide the technology and expertise you need to achieve the perfect finish for your product.











### Dry Spray Booth



## Water Curtin Spray Booth



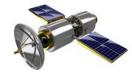


## **Application - Industry**













## Meeting the requirements of each industry....





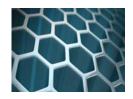




**OTS - 3000+** Manual Liquid Electrostatic Spray Gun















## **Metallic Spray Painting**









#### Waterborne Spray Painting

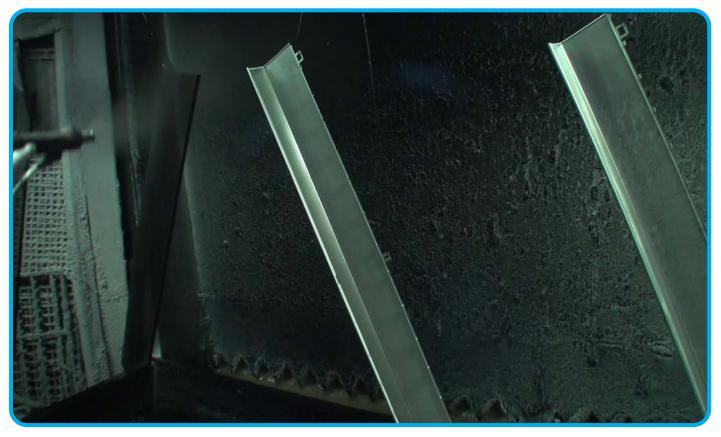












Home Theater Speaker Mesh Cover



**Windows Fences** 





Air Compressor Tank



Wood Chair



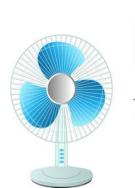








## **Application - Spray Range**





















**OTS - 3000+** Manual Liquid Electrostatic Spray Gun









#### Specification

		0
Liquid Electrostatic Spro Input Voltage Gun Length	ay Gun 0~70KV DC(-) 225 mm	
Gun Weight *(no nozzle , hv cable ,sp Fluid and Air Pressure Operating Pressure		
Electrostatic Power Sup		
Out Voltage Out Current Input Voltage Intercepting current Weight Dimensions	0~70KV DC(-) 50 microamperes 110 V~240 V AC (50/60 Hz) 20~150 microamperes 12 kg 300(L)x120(W)x350(H) mm	
Round ( TIN ) Nozzle - K	type	
1		
Round ( FRP ) Nozzle		
Flow Rate :50 ~ 30Fan pattern width :	12 mm 4 ~ 6 Bar 00 ml/min 160 mm 0 NI / min Round FRP Nozzle	
Flat ( FRP ) Nozzle		
Fan pattern width :	3 mm 4 ~ 6 Bar 00 ml/min 300 mm 0 NI / min	



#### Support Equipment





AIR POWERED DOUBLE DIAPHRAGM PUMP

# Insulation Box for water based paints





**Big TypeA** 

Small Type B





#### Adjustable Electrostatic ( 0 ~ 70 KV ) (-) DC







#### OTS-3000-G7 Liquid Electrostatic Spray Gun

Note: OTSON does not offer an air compressor, paint tank, and stage 1 air filter, the customer can buy from the local distributor or online store. It will help the customer get secure service and spare parts of air compressor and filter.











**Electrostatic Sprayer** 

#### OTS-3000-G7 Liquid Electrostatic Spray Gun

#### 835 mm / 32.87 inch H: |

Air Fliter (Stage 2) for Electrostatic Sprayer



#### Note: OTSON does not offer an air compressor, disinfection tank, and stage 1 air filter, the customer can buy from the local distributor or online store. It will help the customer get secure service and spare parts of air compressor and filter.





#### **Ordering Information**

#### OTS-3000+ G7 Manual Liquid Electrostatic Spray Gun

Model	Manual Spray Gun <b>(70kv)</b>	Electrostatic Power Supply (70kv)	iund I <b>N (K)</b> zzle	Round FRP Nozzle	Flat FRP Nozzle	H.V Cable (5.0 m - <b>70kv</b> ) Teflon Spraying Tube(6.0 m) PU Air Tube(5.0 m)	H.V Cable (6.5 m - <b>70kv</b> ) Teflon Spraying Tube(7.5 m) PU Air Tube(6.5 m)	H.V Cable (10.0 m <b>- 70kv</b> ) Teflon Spraying Tube (11.0 m) PU Air Tube (10.0 m)	Tool box
OTS-3000+G7-SF	Ø	O		0		Ø			0
OTS-3000+G7-SF-A	Ø	0		0			Ø		0
OTS-3000+G7-SF-B	0	0		0				Ø	0
OTS-3000+G7-SL	0	0			0	Ø			0
OTS-3000+G7-SL-A	Ø	0			O		0		0
OTS-3000+G7-SL-B	Ø	O			O			Ø	0
OTS-3000+G7-STK	Ø	0	Ø			Ø			0
OTS-3000+G7-STK-A	O	O	Ø				Ø		0
OTS-3000+G7-STK-B	Ø	Ø	Ø					Ø	0
	Accessories								
3000AF	Round (FF	RP) Nozzle							
3000ATK	Round (TI	Round ( TIN )Nozzle -K							
3000AL	Flat (FRP )Nozzle								
OTS-14-B	Isolation B	Isolation Box for water base coating							
OTS-14-A	Isolation B	Isolation Box for water base coating							
OTS-7	Electrostatic Power Meter ( digital version )								
OTS-3-B	Conductivity Meter (digital version )								

OTS-5 Ground Rod

ptions HV Cable ,Teflon Spraying Tube and Air Tube Lengths : 15m, 20m, 25m, 30m, 35m and 40m

Round ( FRP ) Nozzle	Round ( TIN ) Nozzle -K	Flat ( FRP ) Nozzle	
			<b>EX</b> ATEX
Part No : 3000AF	Part No : 3000ATK	Part No: 3000AL	CEF®

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#### OTSON Technologies Corp.

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