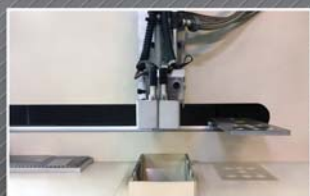




## Special Surface Treatment System (Radical Type)

# STS

By combusting special organic compound in the flame, it maximizes hydrophilicity, adhesion, printing. Also, this eco-friendly machine has advantage such as applicable to 3D material, requiring low maintenance fee.



Classification	Glass	PP	HDPE	Steel	Al
Current dyne	35	40	38	34	40
After corona Treat	35	46	46	34	40
After flame Treat	35	52	50	34	46
After STS Treat	73	73	73	73	73

Unit : Dyne



### Key Features

- Carbon Radical cam improve the surface which is difficult to apply corona or plasma treatment
  - Polymer : PP, PE, PET, PBT, FRP, Carbon fiber, Thermosetting resin, Thermoplastic elastic body etc.
  - Metal : Fe, Stainless steel, Al, Mg, Ti, Zn, Sn etc.
  - Inorganic material : glass, ceramic, standard inorganic substance etc.
- Longer hydrophilic maintaining period than plasma, corona, UV treatment
- Less maintenance cost and fast speed of surface treatment, 3D material applicable, high efficiency

## Specifications

Parameter	Description / Value
Input Power	3 phase 440V
Power Consumption	5kW
Dimension	1,650 x 1,200 x 1,000 mm
Weight	100 kg
Special Solution	The amount used : about 5g/hr
LPG	The amount used : about 250~500g/hr
Air	Dry Air
Material	Steel (SS400)
Function	PLC / Alarm / On&Off Signal Communication
Warranty	1 year

- ※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.
- ※ If do not use dry air, drop the performance.
- ※ Manufacturer does not offer LPG or Air.
- ※ Special reagent is consumable and is required to purchase separately.  
(1L plastic container)

## Advantage

### ▶ Applicable for various type of surface treatment

1. Special flame improve to make hydrophilic surface on metal and its alloy, and oxidative surface on metal. (Just only, protective oxidation surface)
2. It improve to make hydrophilic surface on polymers and silicon compounds without polarity.
3. It improve to make hydrophilic surface on ceramics and glass, it is difficult other method.

### ▶ Eco Technology

1. To make hydrophilic surface does not use acid and base. (Excluding washing)
2. To make hydrophilic surface does not use VOC and a dangerous agents. (Volatile Organic Compound)

### ▶ Improvement of Productivity and cost reduction

1. Very fast speed on surface treatment (30 - 1,000m/min)
2. It is not necessary other apparatus, just Special flame (Air compressor, LPG gas or LNG gas)
3. Just need Air, Gas and Special solution

### ▶ The other

1. Extend to use the water coatings, water Inks
2. Remove the Primer process
3. Adhesion among the difference of materials
4. Customize & Sample Test

## Application

### ▶ Adhesion Tech.

1. Adhesion for silicon materials
2. Adhesion for engineering plastics
3. Adhesion for plastics and metals
4. Adhesion for plastics and glasses

### ▶ Printing Tech.

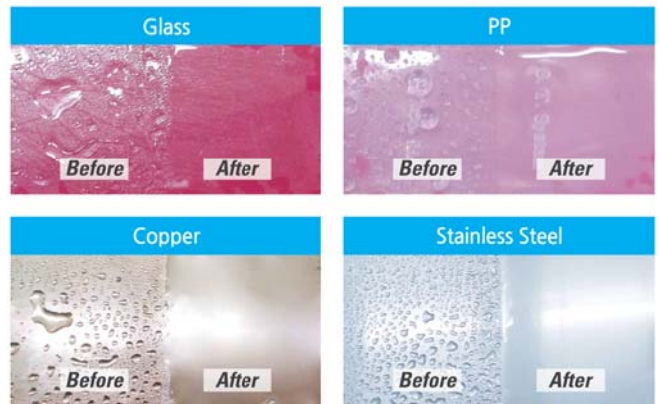
1. Direct digital printing for plastics
2. Direct digital printing for metals and glasses (ceramics)
3. Other application : screen, web and pad printing

### ▶ Coating Tech.

1. Coating for metal such as Mg, Al, etc
2. Coating for rubber, engineering plastics
3. Free primer coating for PP, PE
4. Coating for inorganic compounds and glass

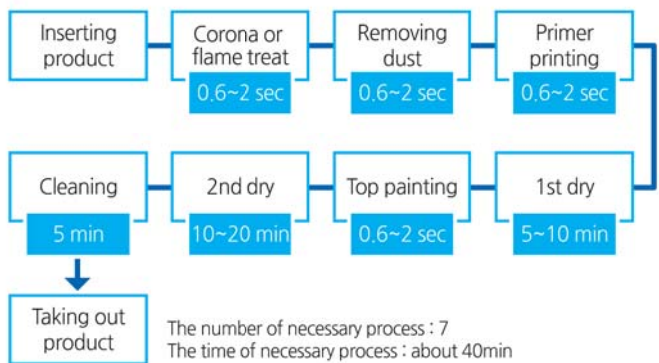
## hydrophilicity comparison picture

▶ Dyne level of water : 70 and more



## Process

▶ The current process (In case, using organic solvent paint)



▶ If using STS (In case, using organic solvent paint)



▶ If using STS (In case, using UV paint)

