



Modular Paint System  
**MPS**  
TM

## ▶ Reason behind MPS Project

The current solution of a plastic painting line for multiple layer is not lean and flexible enough. It comes with big investment and hard to maintenance. (1) When paint application from end customers is changed, cost of process modification is substantially high. Sometime it's almost impossible to change. (2) When production volume is going down or customers request small lot order (Just-in-time order), it's not sensible in term of running cost to start the line

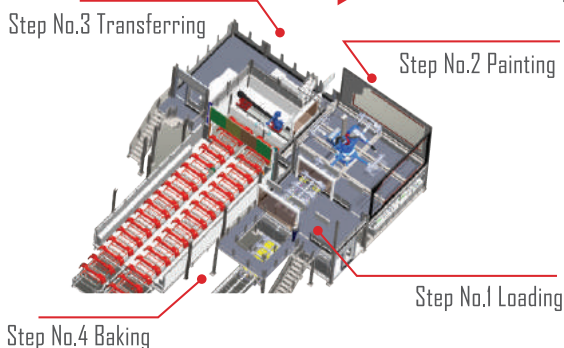
## ▶ MPS benefit compared to conventional line

Less investment cost, No need invest at one time. Invest step by step  
Less process downtime. No risk for production line break down at once  
Less part travelling from injection machine to the paint line. Easier robot programming. No conveyor tracking is needed. Robot can reach hidden area, because part is rotatable. Less down time for robot programming. No need to stop the whole line for programming  
Easier to relocate the line with compact and modular design  
Better delivery lead-time (4 month lead time) compared to 6-8 months for conventional line  
Line is flexible for 1K / 2K single layer or multilayer.  
Better process optimization

## ▶ Target customers of MPS

Bumper painting line of Car assembly plant  
First Tier and Second Tier OEM  
Plastic Painting Jobber

## ▶ MPS Process Step



## ▶ MPS section



Loading Section



Booth Section



Oven Section



Main and Gripper Section





## ▶ Application and Paint feeding concept

Application technology and paint feeding concept is heart of MPS. Integrated color changing valve (CCV) inside bell atomizer is a key to minimize color changing waste.

MPS can handle up to 18 ports of color. There are 2 Primer + 10 Base + 2 Clear + 2 Hardener + 2 Spare. The paint flow rate of each color port is controlled by a precision gear pump for accuracy.

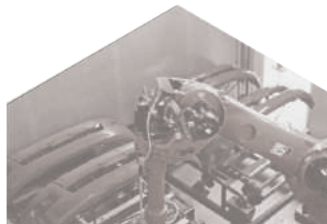


## ▶ Supervision System

MPS utilize programmable logic controller (PLC) and SCADA system from leading controller suppliers. The whole unit is under supervision of only one PC.

## ▶ Capacity Calculation

MPS output is depended on paint cycle time and no of layers. The system can reach production output of 70,000 bumpers per year for 4 layers of painting (Primer / Base 1 / Base 2 / Clear).



## ▶ Equipment list inside MPS

Downdraft spray booth with dynamic chamber Baking oven with hot air heater box Floor slat oven conveyor Air supply unit with temp and humidity control (exclude external facility) Loading station with X-lifter and Roller Conveyor Painting Robot with special design painting system 4 Axis servo turntable Transfer robot with linear tracking Paint Circulation System (PCS) SCADA Supervision System

For enquiry, please contact

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