This is EISENMANN

EISENMANN designs and constructs plants for surface engineering, material flow automation, environmental engineering, firing lines for ceramics and specialized plants for coating, recycling, heat treatment and energy recovery.

Approx. 2400 employees worldwide, half of which are engineers or technicians, develop new ideas for the fields of production, painting, assembly or distribution. Among them are experts and specialists with well-founded know how in various areas of expertise and industry sectors. An advantage that is mirrored in tailored concepts with state-of-the-art technology and a high degree of economic efficiency.

Another result of our efficient production and assembly strategies: Our production centers are tailored to the requirements of individual customers. They facilitate the production of a plant configuration especially adapted to your needs.

When complex systems are involved, we install the entire plant in our house before we deliver it to put the plant to the acid test. Only when the pre-assembled function modules have passed the test run, will they be handed over to the customer.

This method considerably saves time and cost for assembly and facilitates installation in your house without even interrupting the production process.

Of course we will assist you even after commissioning, if you want: Our After-sales Service provides for professional maintenance, short repair times and immediate procurement of spare parts.

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Having delivered more than 250 painting systems for plastic parts, EISENMANN ranges among the leading system supplier of the industry sector. Among the plants delivered are the largest plants in Europe as well as the smallest plant for golf balls and the first plastics painting line for a consistent use of environmentally-friendly water-based paint.

First-class surface engineering quality without rejects is a demand placed on every painting system. Prerequisites are cleaning and pretreatment appropriate for the material as well as utmost cleanliness in all plant areas.

For this reason, a primary objective is the consistent enforcement of dust-protection measures. Examples are enclosed plants with an optimally adjusted air balance, bottom-mounted conveyor systems, air showers and antistatic treatment of the workpieces with ionized air.

Inside the spray booths, the paint mists are discharged systematically through a vertical air conducting system. Plastics painting lines are planned individually depending on the types of workpiece, throughput rates and material characteristics. Our customers paint glass-fiber reinforced polyester parts, colored or crystal-clear thermoplastics as well as foamed PUR parts. Examples are passenger car attachment parts such as bumpers, exterior mirrors or lenses, mounting parts for the interior of passenger cars, TV and VCR housings, mobile phones, sports equipment, phone booths and many other pieces of equipment.

All the pretreatment, application, drying and material flow plant components are exactly designed for the different temperature sensitivities and deformation characteristics of the respective workpieces.

EISENMANN offers target-oriented material flow systems with state-of-the-art control systems, automatic handling and user-friendly visualization systems especially adapted to the special conditions of plastics painting.

To reduce emissions and disposal cost for exhaust air and waste water, we plan all the processes involved with integrated environmental engineering systems right from the start.
To achieve optimum adhesion of the paint to the plastic, workpiece-specific cleaning and pretreatment is required. Since EISENMANN offers all the procedures, the optimum variant can be recommended impartially in each case.

**Cleaning Using Wet Chemical Methods**

Parts with a normal degree of soiling are cleaned through alkaline spray degreasing and then rinsed with DI water. This enhances the paint adhesion and removes tenside and salt residues that would affect the quality.

More heavily soiled parts are degreased in two stages at higher temperatures and using higher spray pressures. If integrated separating agents must be removed, acidic cleaning agents are used. The workpieces are degreased and rinsed in two cycles, then rinsed again with DI water.

Workpieces made of polyolefins are additionally submitted to a surface treatment consisting of a flame treatment, fluoridation or plasma treatment.

EISENMANN is implementing the first plasma plant in "online" mode for an automobile manufacturer. The quality enhancement: Without any manual intervention and without touching the surfaces, the workpieces on their skids are transferred from the wet chemical cleaning system via the plasma treatment to the painting booth.
Pretreatment plant with circular conveyor for reflectors of vehicle lamps

For effective removal of water residues, blowing zones are installed at the exit of the pretreatment plant.

If desired by the customer, an additional tilting and joggling zone can be installed for workpieces that tend to scoop matters (see fig. below).
EISENMANN designs and constructs maintenance-friendly large-capacity spray booths made of stainless steel and glass for manual painting or painting by robots. They are optionally equipped with an integrated sludge removal unit through floor scrapers or with a central water trap.

The most effective separator system is the cross flow current double venturi scrubber, the nozzle shape of which provides for an especially effective removal of the paint mists from the exhaust air.

The downstream relief zones provide for an extremely effective separation of solids attaining values below those specified in the TA-Luft.

To save expenses for fresh water and waste water, the water in the scrubber is circulated. Coagulated paint particles are continuously removed in external sludge removal systems.

Especially for plastics painting systems, EISENMANN has developed tailored solutions with surface scrapers or decanters as sludge removal systems.

When using water-based paints, the possibility of implementing the economical and environmentally friendly water-based paint recycling system via ultrafiltration should be taken into consideration.
Spray booths in clean room technology with air showers

Paint line for vehicle attachment parts with skid conveyor system

Plastics painting line for bumpers
Practical Examples

Job Coating Systems

This automobile supplier has already received the 4th EISENMANN plastics painting line for his broad scope of products ranging from large spoilers to small vehicle attachment parts. A comprehensive skid conveyor system is used for transport.
Automobile Suppliers

Plastic parts for special series automobiles are a specialty of this South German automobile supplier. The complex paint line with robot application and skid conveyor system they are using is just as flexible.
Automobile Manufacturer

This Russian automobile manufacturer relies on EISENMANN quality: Bumpers and various plastic attachment parts are perfectly painted on two parallel large-capacity paint shops.

The paint shops are designed for a production of 800,000 vehicles/year.
Coating of Polycarbonat

Plastics instead of Glass

High-transmission plastic parts are used instead of glass components more and more. These require sophisticated scratch-resistant coating under clean room conditions.

Depending on the geometric data of the parts, the workpieces are either flooded or spray coated using robots.

Photo left: Panorama roofs are flow coated on an EISENMANN line to achieve a first-class, scratch-proof and UV-resistant layer.

Photo above: Coating line for the application of scratch proof paint on headlamp lenses, with automatic handling by robots.

Photo above left: Flow coating line for headlamp lenses.

Photo left: Spray coat line with robot for headlamp lenses.