

Decorative Coatings

Scratch Resistance & Bright Colours



Applications:

- Automotive interior & exterior parts
- Consumer products, such as mobile phones, computers & cameras
- Jewellery & watches
- Bathroom equipment
- Door handles
- Eyewear

Advantages:

- Longer lifetime
- Many bright, metallic colours
- Excellent scratch protection
- Environmentally-friendly processes

Job Coaters and Manufacturers

Decorative coatings deposited by Physical Vapour Deposition (PVD) can add many functional features to products that need a brightly coloured, scratch resistant finish. Different substrate materials, such as metals and plastics, will be coated in a uniform and reproducible way in colours such as polished brass, chromium, nickel, stainless steel, black and gold. Nowadays many substrates need to be hardened in order to achieve a superior end-product. Already for decades Hauzer is an expert supplier of technology and machines to deposit PVD hard coatings on brass, zinc and stainless steel parts. In the last few years metallizing of plastics has been added to our product portfolio.

Coating on Plastics

More and more plastic products are used in fields where metal was previously predominant. In these cases, the end product should meet functional requirements (durability and scratch resistance) and aesthetic appearance. There are basically three ways to achieve this result; electroplating, painting and PVD deposition. Electroplating has a typical surface hardness of around 600 HV. The typical thickness of around 30 µm levels the surface imperfections. Electroplating, however, is a wet, environmentally-unfriendly process and a source of hexavalent Cr⁶⁺, which is considered carcinogenic and therefore banned in more and more countries. Furthermore, chromium plating is mainly limited to ABS. The main disadvantage of painting is the absence of an attractive metal look.

Metallic Colours, Cool Touch

Alternatively, PVD coating has several advantages. It is an entirely dry and thus environmentally-friendly process. It offers a wide range of coating materials resulting in vivid metallic colours, has a cool touch. Levelling effect can be achieved in combination with a top quality mould for zero-defect plastic products or by using a lacquer with enough thickness and depositing the PVD coating on top. Such an approach is realized

by Hauzer using Cromatipic[®], an environmentally-friendly process developed by Sidasa, consisting of two layers without the need for a transparent topcoat. Cromatipic[®] and PVD directly on plastics are both applicable on many thermoplastics.

Batch and Inline Equipment

The coating processes of metal and plastic products are often mass production. Depending on the manufacturing needs, a choice can be made between batch machines in several sizes or a flexible inline production platform. All machines are robust and give a choice in capacity and cycle times. The equipment offers a wide range of process solutions with a possibility to combine different technologies in one process: e.g. arc evaporation, magnetron sputtering, activation and plasma assisted chemical vapour deposition (PACVD). Due to the multi-target system in all Hauzer machines, compound coatings from more than one metal are available. Furthermore, upgrading with new technologies is always possible, which makes adaptation to fast changing market needs easy. Job coaters and manufacturers all over the world use Hauzer PVD coating equipment to give their products a longer lifetime and a brilliant finish.



Flexicoat[®] 1500, batch equipment



Metalliner, flexible inline production platform