ZY-1212 Clock and Watch Mid-Frequency Magnetron Sputtering Vacuum Coating Machine



Overview

ZY-1212 decorative mid-frequency magnetron vacuum coating machine is mainly used for depositing metal film, semiconductor film, insulating film, hard film, heat resistant film, corrosion-resistant film, superconducting film, magnetic film, optical film and other special film on the substrate. It has advantages of both ion plating and magnetron sputtering, and the coating layer is very smooth with uniform color, good brightness and strong adhesion. So, ZY-1212 decorative mid-frequency magnetron vacuum coating machine is very suitable for depositing high quality decorative film on watch straps and dials.

Introduction

In recent years, the mid-frequency magnetron sputtering coating technology has gradually become the mainstream of sputtering film coating technology, the significant characters of it are overcoming the phenomenon of anode disappear, weakening or eliminating the abnormal discharge of target, which is superior to DC magnetron sputtering coating. Also, it can effectively increase the process stability of the sputtering process as well as the deposition rate of the dielectric film. ZY-1212 decorative mid-frequency magnetron vacuum coating machine integrates vacuum technology, mid-frequency magnetron sputtering technology, film technology and other technologies, and adopts fully automatic control mode to ensure simple and reliable operation, high productivity, great efficiency, and stable performance. The machine can deposit IP black, rose gold, IP gold, sapphire blue, champagne gold, dazzling silver, coffee color, colorful, gun black, zirconium gold, rose red and other various colors coating layers.

With beautiful appearance, compact structure and diversified performance, ZY-1212 decorative mid-frequency magnetron vacuum coating machine is widely used in home appliances, watches and clocks, electrical appliances, cell phone keypad, instrumentation, decoration, jewelry and other fields.

Specification

Vacuum Chamber	φ 1200 × H1200	Effective Coating Space	φ 850 × H900
Voltage/Hz	380V/50Hz	Actual Power	90KW
Max Diameter of Work-Piece×Quality	φ150 × 11PCS	Standard Configuration	6 Arc Source + 4 Pairs Mid-Frequency
Technology	Mid-Frequency + ARC Planar Target + Ion Source (Optional)	Target	8 Mid-Frequency Magnetron Cylindrical Targets / 6 Arc Targets
Ultimate Pressure	5.0×10^{-4}Pa	Leak Rate	$<10^{-3}$Pa.L/s
Pump Down Time	(from atm. to $4X10^{-3}$ Pa) ≤20 mins	Occupation Space	L3300×W2900×H2500MM
Work-Piece Turntable	Lower Frame Structure	Vacuum Chamber Structure	Vertical Single Open
Power Source	DC Inverter Power Source, Pulse-Bias Power Supply, Mid-Frequency Magnetron Power Supply, DC Magnetron Power Supply	Vacuum System	Molecular Pump, Roots Pump, Rotary Vane Pump
Coating Cycle	0.5~2 Hours/Furnace	Working Gas	Ar, N_2, O_2, C_2H_2, etc
Operational Mode	Manual + Semi-Auto + Full-Automatic/Torch Screen + PLC	Necessary Conditions	Circulating Water Pressure： 2-3KG/CM^3 Flow：10T/H Compressed Air：4-6KG/CM^3
Application	Decorative PVD Plating, jewelry, watch, flatware, spoon, fork, knife, etc (24K pure gold coating is ok)		
Remarks	The Furnace, Outlook and Other Parameters Can Be Customized According to Your Requirement.		

Characters of Decorative Coatings

IP Series

Color	Gold	Champagne	Brown	Rosy	Sapphire	Chromium White	Silver Gray	Gun Black	Ultra Black
Thickness（μm）	0.3~2.0	0.3~2.0	0.3~2.0	0.3~2.0	0.3~2.0	0.3~2.0	0.3~2.0	0.3~2.0	0.3~2.0
Hardness（HV）	300~900	300~900	300~900	300~900	300~900	300~900	300~900	300~900	300~900
Salt fog Test	> 48H	> 48H	> 48H	> 48H	> 48H	> 48H	> 48H	> 48H	> 48H

DH Series

Hardness（HV）	Thickness（μm）	Abrasion Test	Salt Fog Test	Color
800~1000	0.8~2.5	>1000 times	>48H	Decorative Coating color

Features

- Good controllability of film thickness and repeatability. The coating layer can easily achieve designed thickness. And it can deposit uniform film on the large surface.
- Strong adhesion of substrate and the film
- ZY-1212 can deposit films of special materials, as well as mixed films and composite films.
- The electric control system can be controlled manually, semi-automatically or fully-automatic. And the machine can run various processes with high reliability.

Sample Pictures






