



## Overview

ZY-1211 mold multi-arc ion coating machine is independently developed by our own R&D center for super hard coatings. It adopts unique new filter arc source coating technology and electron gun auxiliary coating technology to make the arc move fast on the entire target surface. The ionization rate of target is enhanced and the surface of the target is uniformly etched. The surface of the coating is extremely smooth and dense while the coating adhesion is optimized. Also the advanced technology ensures the thickness and the uniformity of the coating. At the same time, the application of new technologies successfully improves the coating efficiency and saves operating costs.

## Introduction

ZY-1211 multi-arc ion coating machine adopts intelligent touch screen automatic control system to improve the process stability. At the same time, it is equipped with a brand-new PLC control system with programming, process setting, data collection, recording and other functions. Also, the using of special coating software that developed by ourselves ensure the easy operation of the machine. Besides, the machine adopts advanced process control system to ensure keep excellent performance and stable operation.

ZY-1211 can make protective coatings with high quality, great density, good bonding strength, high hardness, good wear resistance on the metal surface, such as TiN, CrN, AlTiN, TiCN, AlCrN, TiSiN, TiAlCN, TiAlCrN, etc. The protective coatings help improve hardness, wear resistance, and corrosion resistance of tool surface, also, it can significantly increase the service life of tools. So this nice machine are widely used in precision mold industry (punch dies, shearing dies, standard moulds, forming dies, etc.), tool industry (drills, blades, milling cutters, broaches, taps, and gear cutters, etc.), and automotive industry (pistons, piston rings, alloy wheels, etc.).

## Features

1. The designs and materials of both vacuum seal of the vacuum chamber and the moving parts in the chamber are fully considered to withstand high temperatures, so the super-hard coating is available.
2. The coating has better adhesion strength of coating-substrate, smoother coating surface and better toughness, as well as more uniform coating thickness distribution.
3. Fully automatic control system greatly improves the process stability.
4. Large furnace cavity design (vacuum chamber size is  $\phi 1200 \times H1100$ ), and it is equipped with a removable low rotating stand to achieve fast furnace conversion, and ensure high production efficiency with convenient operation.

## Specification

Chamber Size	φ1200*H1100	Effective Space	φ850*H700
Max Dia of Workpiece*qty	φ150*12pcs	Pumping-down Time	(from atm.to 6*10 <sup>-3</sup> <15 mins
Voltage/Hz	380V/50Hz	Actual Power	70KW
Technology	HCD+ARC	Target Qty	12pcs
Ultimate Pressure	5.0*10 <sup>-4</sup> Pa	Leak Rate	<10-3Pa.L/s
Standard Coatings	TiN, CrN, TiCN, AlTiN, etc.	Composite Coatings	TiAlCrN, TiSiN, TiCrN, DLC...
Rotating Stand Structure	Lower Structure	Vacuum Chamber Structure	Vertical Single Open
Power Supply	Arc Power Suppl Pulse-bias Power Supply Gun Power Supply	Vacuum System	Molecular Pump Roots pump Monoblock Pump
Coating Cycle	3-6 hours/furnace	Occupation Space	L4200*W2900*H2600mm
Output/Furnace	Milling cutter φ10*70 900pcs	Supporting Conditions	Circulating Water Pressure: 2-3KG/CM <sup>3</sup>
	Blade φ18*6 6600pcs		Flow:10T/H
	Hob φ80*80 68pcs		Compressed Air:4-6KG/CM <sup>3</sup>
	Moulds 500kg		
Control Method	PLC+Touch Screen Configuration Software	Working Gas	Ar, N <sub>2</sub> , O <sub>2</sub> , C <sub>2</sub> H <sub>2</sub> , etc
	Industry PC+PLC+Touch Screen		
	Our own special coating software		
Application	Hardwares, Injection Moulding, Die Casting, Stamping Moulding, Various Accessories and Parts, Cutting Tools, etc.		
Notes	The Furnace, Outlook and Other Parameters Can be Customized According to Your Requirement.		

