

ZYPL1011 Coating Machine



Product Description

ZYPL1011 special coating machine for tools is a newly developed physical vapor deposition (PVD) vacuum coating equipment. This machine can be equipped with four plane arcs at most to deposit monolayer film or multi-layer (Nano) film.

As a special coating machine for tools, ZYPL1011 meets all kinds of tools coating requirements, such as cutting tools, drills, punch press tooling and so on. Through the improvement of the surface of the workpiece in terms of physics, chemistry, mechanics, color, etc., the wear-resistant, super-hard, self-lubricating effect is achieved.

Application

Tools, cutting tools, drills, milling cutters, hobbing cutters, blades, high-grade molds, precision parts, etc.

Specification

Vacuum Chamber	φ1000 × H1100	Occupation Space	L4000×W1900×H2300MM
Ultimate Pressure	5.0×10 ⁻⁴ Pa	Leak Rate	<10 ⁻³ Pa.L/s
Actual Power	80KW	Planar target	4 PCS
Pump Down Time	(from atm. to 4X10 ⁻³ Pa) ≤20 mins	Coating Cycle	5~8 Hours/Furnace
Work-Piece Turntable	Lower Frame Structure	Hardware	Molecular Pump, Bias Power Supply
Control System	Manual + Semi-Auto+ Full-Automatic or Torch Screen + PLC		
Remarks	The Furnace, Outlook and Other Parameters Can be Customized According to Your Requirement		

Technology Application

Coating	Color	Features	Application
TiN	Golden Yellow	universal hard coating	It is mainly used as durable coating of turning, milling, drilling and gear cutting tools as well as the anti-adhesion of forming of forming and injection molds to improving lubricity.
TiCN	Blue Grey	Low Friction Coefficient and Excellent Hardness	The hardness of the coating is improved and the friction coefficient is lowered compared with TiN, It is mainly used for high-speed steel cutters, stamping dies, and forming dies.
TiAlN	Purple Red	universal Anti-Oxidation hard coating	With good red hardness and great surface smoothness, it can be used for high speed processing. Also, it is suitable for die steel, HSS, cement carbide tools (hardness of work material is lower than HRC45), stamping dies.
CrN	Silver Gray	universal anti-corrosion hard coating, Low adherence tendency	With characteristics of good anti-adhesion, anti-corrosion and wear resistance. It is almost suitable for processing all materials including high silicon aluminum, stainless steel, high nickel alloy, titanium and composite materials, injection molds, components, rubber molds, silicone molds, semiconductor packaging molds and so on.
DLC	Black	Ultra-low friction coefficient	With High hardness and good lubricity, it is applicable to molds, parts, medical equipments, aerospace parts and so on.
AlTiN	Purple Black	ultra-high hardness, Anti-Oxidation	With very high micro-hardness and hot hardness, it is suitable for tool coatings with high thermal stress. It also has good thermal shock resistance and applicable for cement carbide tools (hardness of work material is lower than HRC45), die-casting molds.
TiAlCrN	Grey	high hardness, Anti-Oxidation, Anti-shock	It is applicable for hard material machining at medium cutting speeds.
TiAlCN	Rose Red	high hardness, Anti-Oxidation	
AlCrN	Grey/Dark Grey	ultra-high oxidation resistance temperature and red hardness	It is applicable for hard cutting at high speeds, as well as the milling and hobbing of medium to high hardness materials.