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辽宁卓越真空设备有限公司

ZY Vacuum Equipment (LiaoNing) Co., LTD



COMPANY PROFILE

IKS PVD Technology(shenyang)Co.,Ltd. Since established,adhering to the values of "Sincerity/Proactivity/Excellence/Gratefulness" , through unremitting innovation and efforts, set up an excellent vacuum coating equipment development team now.

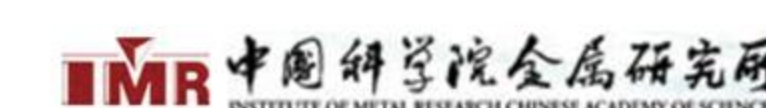
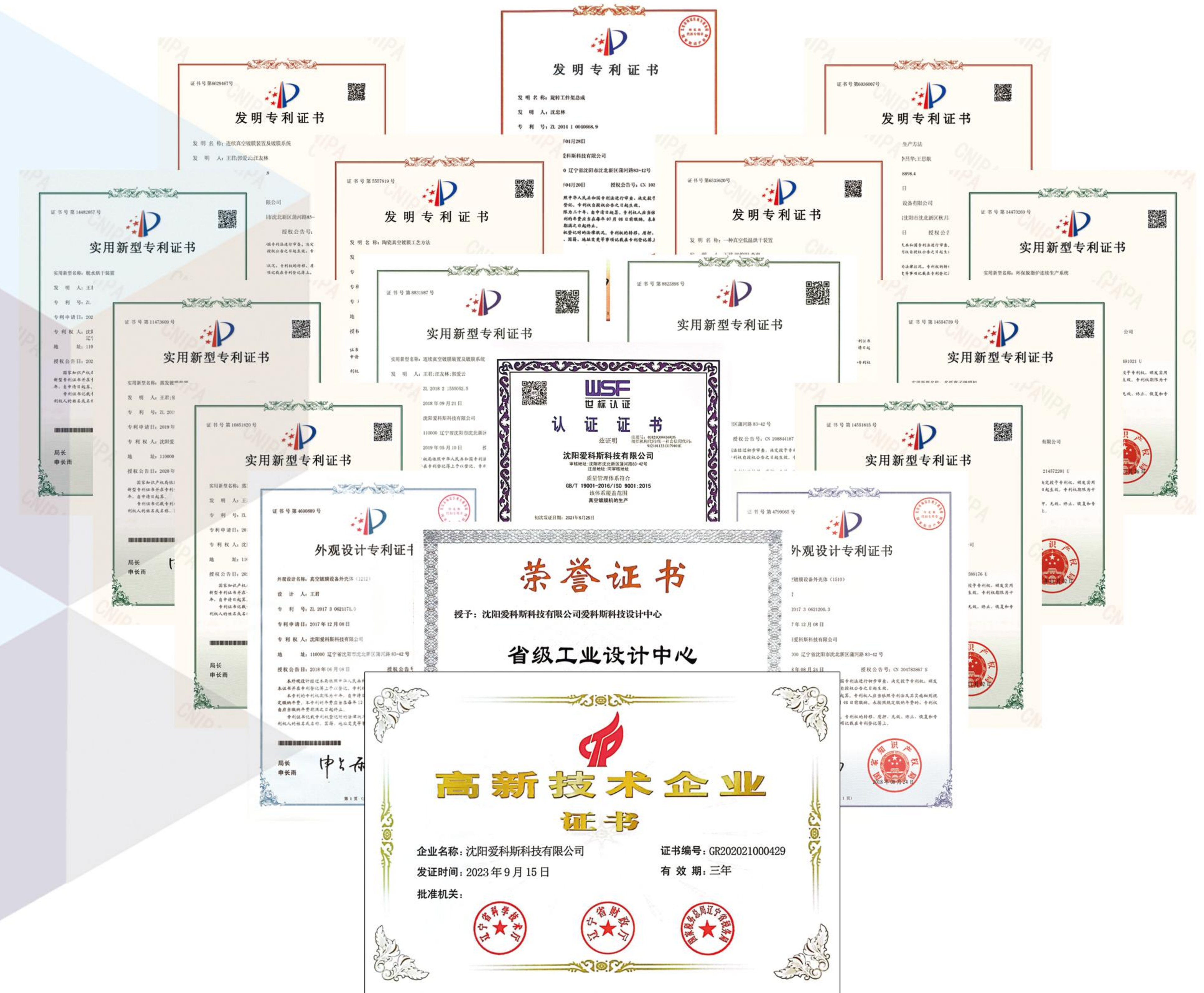
IKS technical team has focused on PVD (physical vapor deposition) coating technology for over 20 years and has successfully developed high-quality vacuum coating equipment and solutions. The main products: ZY-600 series tool coating machine, ZY-1900 series decorative coating machine, ZY-800 series DLC special coating machine, and customized models for various tools and decorative coatings to meet customers, In-line PVD coating continuous line, coating technology application solutions and Turnkey projects for various coating technologies.

Our equipment have widely application, like tools, mould, hardware, architectural material, horologe(clock and watch), jewelry, mobile phone, electronics, digital Products, automobile, aerospace, Photovoltaic, decoration, and so on.Over the years, high quality products have won the industry wide praise and good reputation.

Company insists that innovation and development are the soul, Product quality is Kernel, Quality service is the guarantee. We will continually provide the best quality products and services for customers.

IKS sincerely looks forward to cooperate and develop together with customers all over the world.

QUALIFICATION&PARTNER



TOOL COATING

ZY 600 SERIES TOOL COATING MACHINE



EQUIPMENT BRIEF

ZY-606 series tool coating machine is independent research and development of hard coating ion coating machine by IKS, adopt unipue new filter arc source coating technology, IET etch-assisted coating technology, the route and distribution of plasma in the chamber are palnned, enhance the etching effect, improve the ionization rate, so that the surface of the target is evenly etched, The coating surface is smooth and dense while optimizing the adhesion of the coating,ensure the coating thickness and coating uniformity.

EQUIPMENT ADVANTAGE

1. Save space: The overall layout of equipment is reasonable, save space, easy to disassemble, maintenance and transportation management.
2. Save power: Reasonable configuration between the systems, the use of equipment efficiency, more energy saving.
3. Save time: Modular design, standardized process, save installation and training time.
4. Save worry: Automatic coating system, touch screen operation is simple, storage data, abnormal alarm, valve interlock,etc.

EQUIPMENT PARAMETERS

Item	Model	ZY-606	ZY-609 (Rectilinear Arc Sources)	ZY-612
Coating Effective Zone		Φ800×H650mm	Φ570×H650mm	Φ980×H900mm
Applied Technology		IET+Arc	IET+Arc	IET+Arc
Number Of Arc Sources		9	6- (12)	12
Coating Species		ALCrN、TiAlN、TiSiN、 etc		
Production Cycle		8-10h	6-8h	8-10h
Number Of Rotating Rod		12-Φ150	8-Φ150	12-Φ150
Standard Turntable Load		500kg	300kg	800kg
Rang Of Application		All kinds of tools, molds, etc	Hob, milling cutter, inserts, etc	Tools based on molds and accessories

APPLICATION



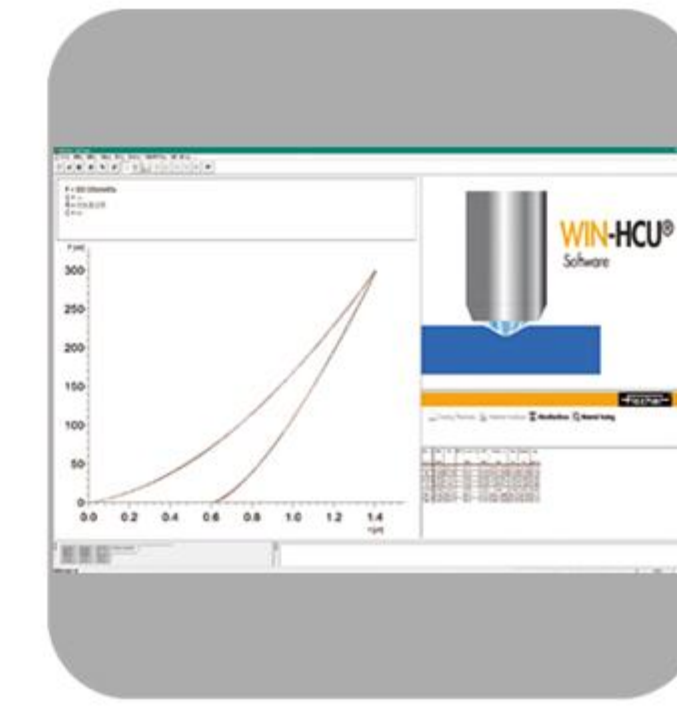
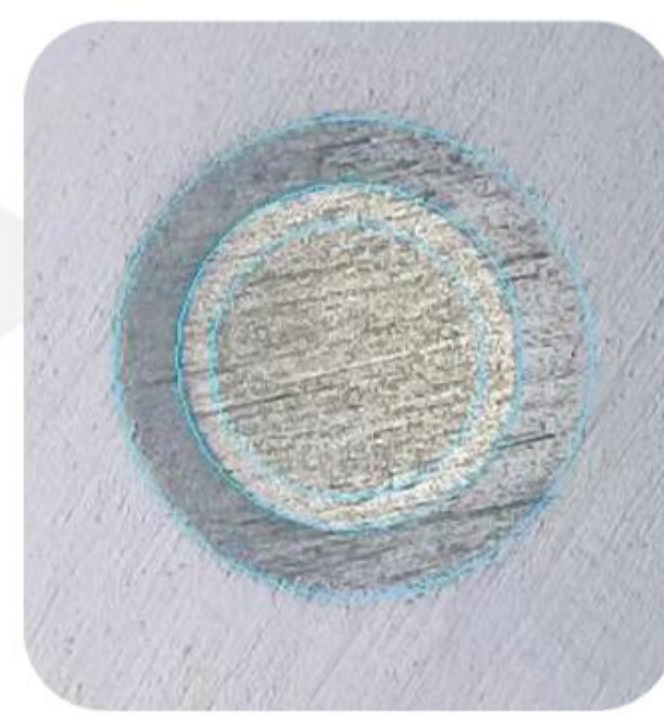
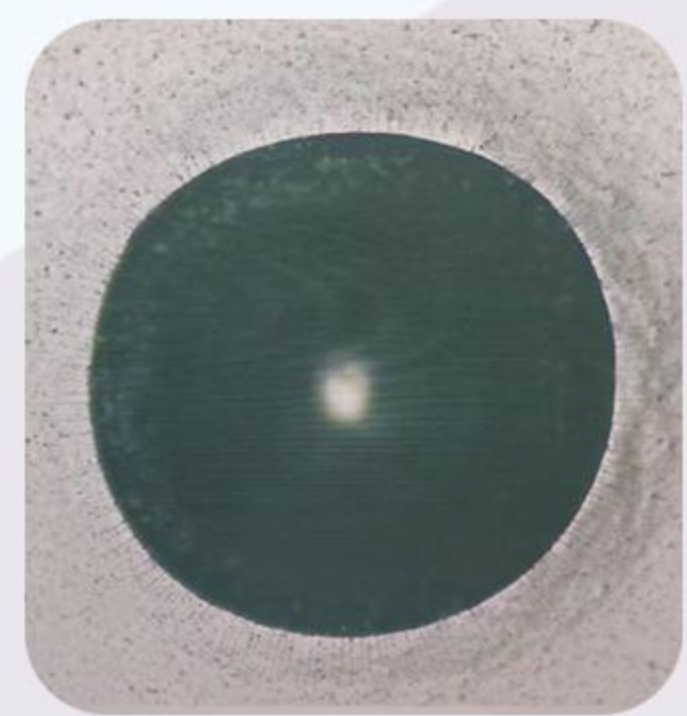
TOOL COATING

Tool coating—customized model



★Tool coating customized model:

can customize a variety of vacuum chamber size, effective space and solutions to meet the needs of various tools, cutting tools and molds and other functional coating.



Adhesion measurement



Coating thickness measurement



Nano hardness measurement

EQUIPMENT PARAMETERS

Tool coating recipe (Custom coating can be developed on demand)

Coating type	Recommended application	Basic coating composition	Coating structure	Hardness (HV0.05)	Maximum operating temperature	Color	Recommend model
IKS-1	Standard applications in machining, forming, components, decoration	TiN	Monolayer	2300-2500	600°C	Gold	ZY-600
IKS-2	Cutting, stamping, threading, decoration	TiCN	Multilayer	3200-3500	500°C	Reddish brown	ZY-600
IKS-3	Forming, plastic processing, hot forging, parts	CrN	Monolayer Multilayer	1800-2000	700°C	Cr	ZY-600
IKS-4	General cutting applications (milling, drilling, reaming, sawing)	AlTiN	Monolayer Multilayer Nanolayer	3200-3500	900°C	Smoky gray	ZY-600
IKS-5	Cutting non-ferrous metal, decoration	ZrN	Monolayer	2200-2500	700°C	Light gold	ZY-600
IKS-6	(dry) cutting, milling 45-60HRc steel, stainless steel, titanium alloy; Drilling, gear cutting	TiAlSiXN	Monolayer Multilayer	3200-3500	1100°C	Bronze	ZY-600
IKS-7	(dry) hard cutting, milling 60-70HRc copper, stainless steel, titanium alloy; drill hole	TiSiXN	Nanolayer	3200-3500	1100°C	Bronze	ZY-600
IKS-8	Cut <45HRc steel, (exhaust) valves, parts	AlCrXN	Multilayer	3200-3500	1100°C	Light gray	ZY-600
IKS-9	Cut <45HRc steel, (exhaust) valves, parts	CrXAlSiN	Multilayer	3000-3300	900°C	Silver gray	ZY-600
IKS-10	Cutting non-ferrous metal, wood-based and fiber-reinforced material molds; Auto parts	Ta-C	Monolayer	3000-5000	400-500°C	Smoky gray	ZY-800
IKS-11	Parts, automobiles, molds, plastic processing	DLC	Multilayer	2000-2500	300°C	black	ZY-800
IKS-12	Precision parts	CrWC	Multilayer	1000-1500	300°C	Black gray	ZY-800
IKS-13	Precision parts, automotive applications	CrN	Monolayer	1800-2000	700°C	Silver gray	ZY-800

DECORATIVE COATING

ZY-1900 Series Decorative Coating Machine



EQUIPMENT BRIEF

ZY-1900 series vacuum coating machine is specially used for decorative products vacuum coating equipment, the machine integrates cathode arc ion coating technology, medium frequency magnetron sputtering technology and other advanced technology, which improves the sputtering rate of the target and the deposition rate of the coatings at the same time, but also greatly improves the uniformity of the coatings and rich colors. At the same time, the ZY-1900 series used the newly developed industrial PC, professional industrial control software automatic control system, simple and fast operation, stable and reliable performance, through the software and hardware interlock, intelligent monitoring, online state memory, break point protection design, combined with a variety of hard protection devices, so that the use of equipment safe and reliable.

EQUIPMENT ADVANTAGE

1. Automatic coating system, high intelligent coating machine, large capacity hard disk, can achieve year-round data storage.
2. Low energy consumption, reduce production costs.
3. Ensure the uniformity of Coatings in same chamber, batch to batch consistency, to ensure repeated, stable production.

EQUIPMENT PARAMETERS

Item	Model	ZY-1212	ZY-1413	ZY-1515	ZY-1613	ZY-1913
Coating Effective Zone		Φ800×H900mm	Φ1250×H1000mm	Φ1250×H1200mm	Φ1520×H1000mm	Φ1720×H1000mm
Applied Technology		Standard: Small arc + Medium Frequency Sputtering technology Options: Planar DC magnetron sputtering, ion source, AF, etc				
Number of MF magnetron		4 Pairs	4 Pairs	2 Pairs	6 Pairs	6 pairs (2 pairs each)
Number Of Arc Sources		10	10	11	10	10
Production Cycle		1-3h	1-3h	1-2h	1-3h	1-3h
Number Of Rotating Rod		11-Φ150	18-Φ160	9-Φ300	22-Φ170	25-Φ170
Rang Of Application		Watches, glasses, jewelry, etc		Bathroom accessory	Mobile phone, 3C, hardware, etc	

APPLICATION



DECORATIVE PVD COATING

Decorative coating—customized model



★This decorative coating custom model can customize various vacuum chamber sizes and solutions according to customer needs.



Colorimeter



Industrial microscope



Salt spray test equipment



Standard light source color matching light box



Multi-functional friction testing machine



Vibration wear tester

COLOR SAMPLES

Color Card—Available colors

Name	LAB reference value	Reference Color
IP gold	L:87.30 A:-11.8 B:-41.6	
IP Rose gold	L:82.4 A:+13.2 B:+22	
IP Champagne gold	L:80.5 A:+2.1 B:+23.6	
IP Titanium	L:74.9 A:+6.9 B:+37.2	
IPS	L:78.8 A:-0.6 B:3.8	
IP Gray	L:62.8 A:+0.8 B:+6.9	
IP Gun	L:52.7 A:+0.6 B:+5.8	
IP Coffee	L:46 A:+8.1 B:+1	
IP Blue	L:50.9 A:-14.4 B:-18.1	
IP Dark blue	L:33.3 A:-6 B:+17.6	
IP Purple	L:37.4 A:+11.3 B:-17.9	
IP Red	L:37.7 A:+21.6 B:+5.2	
IP Green	L:53.1 A:-10.7 B:+6.8	
IP Rainbow	L:60.2 A:+6 B:-25.9	
IP Black	L:33.2 A:+0.4 B:+3.7	

FUNCTIONAL COATING

ZY-800 series DLC special coating machine



EQUIPMENT BRIEF

ZY-800 series DLC functional coating vacuum coating machine is a diamond-like coating machine independently developed by IKS, using unique ion gun + magnetron sputtering + plasma assisted deposition technology, DLC coating properties between diamond and graphite, the performance is stable, Good binding force with substrate, not only has high hardness, but also has excellent friction, good adhesion resistance, corrosion resistance and other excellent comprehensive performance. the equipment is widely used in engine parts, non-ferrous metal cutting, stamping mold and sliding seal parts, medical equipment and appliances, textile industry, etc.

EQUIPMENT ADVANTAGE

1. The thickness of coating can reach more than 3 μm .
2. The adhesion of coating is I grade.
3. The hardness of coating is 2200-2600HV.
4. Dry friction coefficient (to steel) is 0.1-0.2.

EQUIPMENT PARAMETERS

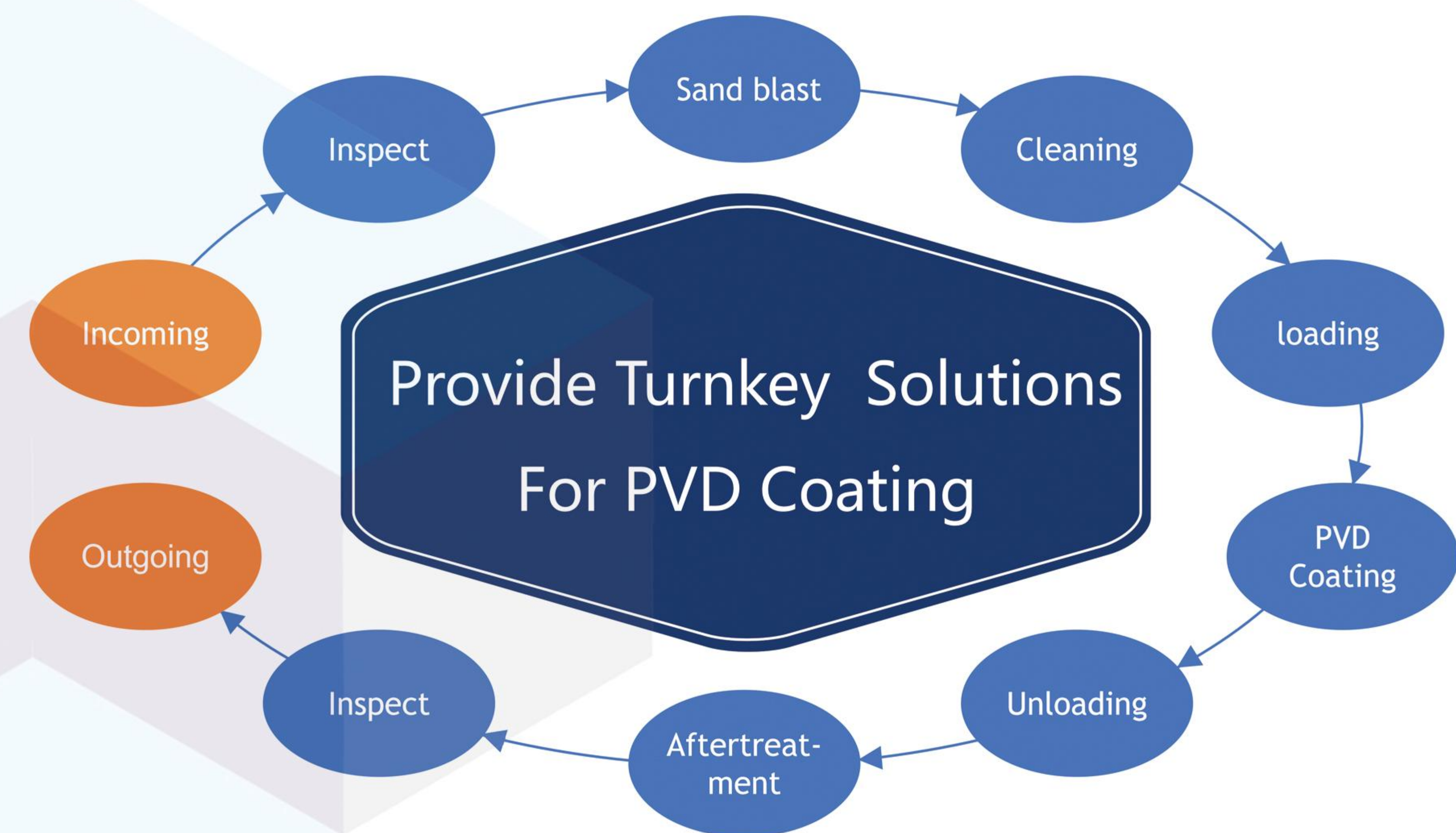
Item	Model	ZY-800	ZY-801	ZY-802
Coating Effective Zone		$\Phi 1060 \times H750\text{mm}$	$\Phi 800 \times H800\text{mm}$	$\Phi 900 \times H1500\text{mm}$
Applied Technology		Magnetron Sputtering + Ion beam	Magnetron Sputtering + PACVD	Magnetron Sputtering + PACVD
Magnetron Cathode Length		850	1020	1680
Production Cycle		13-15h	8h-10h	8-10h
Number Of Rotating Rod		12- $\Phi 150$	12- $\Phi 150$	12- $\Phi 150$
Standard Turntable Load		500kg	400kg	800kg
Rang Of Application		Molds, mold accessories, textile, medical, 3C products and various moving parts with hardness and friction coefficient requirements		

APPLICATION



COATING SOLUTION

Decorative coating production turnkey project
 Functional coating production turnkey project



IN-LINE CONTINUOUS LINE SOLUTION

How do you combine local technologies organically?
 How to realize the unmanned factory of PVD technology?

