



**DAYTON COATING
TECHNOLOGIES**

**CHICAGO COATING
TECHNOLOGIES**

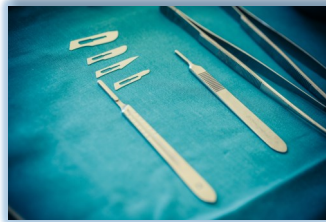


PRODUCT CATALOGUE

RAPID RELIABLE PVD HARD COATINGS

- Ordering is easy, at any quantity, with no minimum order requirements
- A.T.M. is our key coating problem solving model - Adhesion, Thickness, Morphology
- With technicians operating three shifts from multiple facilities, we proudly provide the fastest turnaround
- Providing standard as well as specialized PVD coating services for various industries
- Customer Service Representatives simplify inquiries with a vast array of vertically integrated products and services
- With industry leading quality, repeatability, and consistent performance we increase productivity and lower costs
- With professional, experienced Quality Technicians and tribology laboratories, we create solutions
- As a rapid one stop shop, we support our customers by providing coating solutions, tool refurbishing facilities, testing and more

PROVIDING SPECIALIZED PVD SERVICES FOR MULTIPLE INDUSTRIES



BEVERAGE TOOLING

AEROSPACE

MEDICAL

AUTOMOTIVE

NUCLEAR

COMMERCIAL

GREEN ENERGY

MILITARY

TOOL & DIE

AND MORE

AS YOUR SPECIALIZED SOLUTION PROVIDER,

SHIPPING IS AVAILABLE AT STANDARD AND EXPEDITED SPEEDS.

ASK US ABOUT PERSONALIZED PICKUP AND DELIVERY IN YOUR AREA

937.278.2060

847.888.8110

AS AN EXAMPLE OF OUR INDUSTRY EXPERIENCE:

BEVERAGE TOOLING

We offer an extensive portfolio of services including the smoothest coatings for some of the industries most significant participants.

We understand score line tolerances, handling requirements and quality.

With over 10 years of experience, our expert Quality Technicians provide specialized inspection. All beverage tools are inspected before and after coating in our state of the art Tibology Lab.

We save you time by using the most effective treatments; before and after coating.



DIE LIFE

A unique deep diffusion treatment that stops heat check while adding ductility.

We perfected the process to eliminate a limit size change.

Providers of custom surface preparation with HPDC PVD top coat, providing hard wear surface solutions for the most discriminating customer.



SUPERIOR COATING ADHESION THROUGH EFFECTIVE SURFACE TREATMENT SOLUTIONS

Carefully Handled Pre/Post Treatment (Edge Prep)

Heat Treat

Polishing

Lubricants

Engineered Custom Solutions

Personalized, Professional Service Providers

Process Specifications for Regulatory Submissions



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COATING SELECTION CHART

COATING NAME	COATING COLOR	HARDNESS (HV)	COATING THICKNESS (μ = MICRONS)	COEFFICIENT OF FRICTION (COF)	DEFINITION AND COMMON USE Call us for assistance in coating selection
TiN (Titanium Nitride)	Gold	2300-2500	Industry Standard: 2.2 μ - 3.2 μ Maximum Range: 1 - 8 μ DCT Tolerance: 2.5 μ $\pm$ 20%	0.4	Great general purpose coating, a proven starter coating for numerous applications (common use: machining ferrous materials, molding, medical industry) NOTE: Can be removed and recoated to add life to expensive components.
TiCN (Titanium Carbon Nitride)	Rose	2800-3200	Industry Standard: 2.5 μ - 3.5 μ Maximum Range: 1 - 8 μ DCT Tolerance: 2.8 μ $\pm$ 20%	0.3	Improved hardness, toughness, wear resistance over TiN with very low COF (common use: stamping, punching, blanking, forming tools, tough machining, injection molding) NOTE: Can be removed and recoated to add life to expensive components.
TiAlN (Titanium Aluminum Nitride)	Dark Gray	2900-3100	Industry Standard: 1.8 μ - 3.2 μ Maximum Range: 1 - 5 μ DCT Tolerance: 2.4 μ $\pm$ 20%	0.35	Forgiving coating with high surface hardness at elevated temp (common use: machining difficult materials, dry or high temperature machining, fast feed rate machining, core pins) NOTE: Can be removed and recoated to add life to expensive components.
AlTiN (Aluminum Titanium Nitride)	Dark Gray	3000-3400	Industry Standard: 1.8 μ - 3.2 μ Maximum Range: 1 - 5 μ DCT Tolerance: 2.5 μ $\pm$ 20%	0.35	Versatile coating, low COF, higher breakdown temperature than TiAlN (common use: dry machining, high temperature, machining, fast feed rate machining, hot forging)
TiAlSiN (Titanium Aluminum Silicon Nitride)	Gray	3200-3500	Industry Standard: 1.8 μ - 3.2 μ Maximum Range: 1 - 4 μ DCT Tolerance: 2.5 μ $\pm$ 20%	0.35	Extremely hard and tough, higher breakdown temp than TiAlN/AlTiN, excellent wear resistance when post treated by DCT (common use: machining cast iron. Any tough application in high temperatures, high temperature drilling) NOTE: Can be removed and recoated to add life to expensive components.
ZrN (Zirconium Nitride)	Pale Gold	2300-2500	Industry Standard: 2.2 μ - 3.8 μ Maximum Range: 1 - 5 μ DCT Tolerance: 3.0 μ $\pm$ 20%	0.35	Exceptional abrasion resistance and lubricity (common use: general purpose machining, medical)
CrN (Chromium Nitride)	Silver	1800-2100	Industry Standard: 2.2 μ - 3.8 μ Maximum Range: 1 - 5 μ DCT Tolerance: 3.0 μ $\pm$ 20%	0.45	Great sliding wear resistance, ductile and helps prevent cold welding similar in use to hard chrome plating (common use: machining in a corrosive environment, machining aluminum, copper, metal forming)
AlCrN (Aluminum Chromium Nitride)	Blue-Gray	3000-3200	Industry Standard: 1.8 μ - 3.2 μ Maximum Range: 1 - 5 μ DCT Tolerance: 2.5 μ $\pm$ 20%	0.35	Superb hot hardness with extraordinary wear resistance under extreme mechanical stress (common use: machining such as gear cutting tools, inserts, some punching)
AlCrN-HC	Blue-Gray	3000-3200	Industry Standard: 1.8 μ - 3.2 μ Maximum Range: 1 - 5 μ DCT Tolerance: 2.5 μ $\pm$ 20%	0.35	Ideal for coating PM tool steels used in cold work applications. Enhances performance of precision instruments under extreme compressive loads. (common use: punches, dies, stamping, coining, beverage and powdered metal industries)

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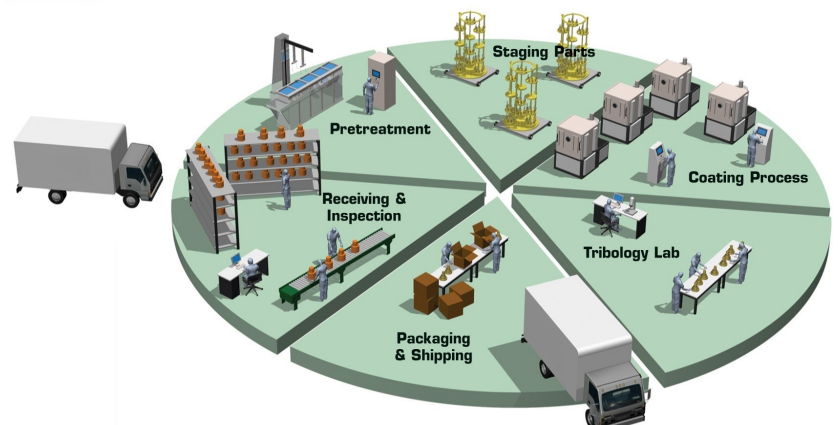
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Here's How It Works . . .



We listen and we care . . . your success is our success.