

# PRECISION THIN METALS

# **CAPABILITIES**

# Precision Rolled Thin / Ultra-Thin Alloy Strip and Foil

PTM's materials improve the power density of motors, transformers, batteries and many other applications in Automotive, Aerospace, Energy Exploration, Industrial and Medical markets. For example, our Silicon Steels improve the power density of motors and transformers, our ultra-thin Ni, Al and Cu are helping in the development of tomorrow's batteries, while our thin Titanium strip is both strengthening and lightening components used in the aerospace industry.

# **Dimension Capabilities**

Arnold's Precision Thin Metals team stands behind our ability to achieve optimized performance of our Silicon Steels and other precision thin materials utilized in your design. Our in-house laboratory and testing facilities enable us to fine-tune grain structure, for example, so that our customers receive top performance materials at a favorable price point.

#### Width

Inches	(mm)	0.035 in 0.9 (mm)	4.0 in 101.6 (mm)	4.5 in 114.3 (mm)	16.5 in 419.1 (mm)
0.060	1.524	X	X	Χ	X
0.0005	0.013	X	X	X	X
0.0004	0.010	X	X		
0.0001	0.003	Х	X		

#### How thin is thin?

Thinness is a relative term, and we're often asked how we categorize the end product's thinness or gauge. We defi ne thin and ultra-thin this way:

0.060" to 0.0005" Thin 1.524mm to 0.013mm

**Ultra-Thin** 0.00049" to 0.000069" 0.01245mm to 0.00175mm

#### Materials

Titanium Alloys

Stainless Steel

Nickel-Base and High-Temperature Alloys

Ferrous-Based Alloys

Aluminum Alloys

Nickel Chrome

Non Grain Oriented Electrical Silicon Steels

Nickel Iron Alloys

Magnetic and Cobalt Alloys

Controlled Expansion Alloys

Copper-Base Alloys

Spring Alloys



# PRECISION THIN METALS

Precision Thin Metals (PTM) business of Arnold Magnetic Technologies manufactures thin and ultra-thin gauge metal strip and foil products. In our advanced precision rolling facility, our team has the expertise and capability to roll, anneal, and slit materials at some of the thinnest and widest gauges in the industry. Our materials are commonly found in aerospace and military applications, high efficiency motors, advanced transformer designs, electron beam processing equipment, HVAC systems for smart buildings, security tags, sensing applications, batteries, and high temperature strip and metal tape wound core products.

## **Markets Served**



Motors & Transformers

PTM's thin and ultra-thin GOES and NGOES Silicon Steels help customers achieve efficiency gains of their motor and transformer designs.



Aerospace & Defense

Customers choose our products to create lighter-weight structural sections to reduce the weight of permanent magnet DC motors.



Industrial

Proven, reliable results make this one of our largest markets. Our products can be found in motors, sensors, gauges, and more.



Oil & Gas / Energy

PTM materials are used in a host of oil and gas exploration, green power generation, and other power grid applications.



Battery

PTM products help improve battery design and energy storage performance for the efficient electrification of system.



Motorsport & Automotive

We aid auto manufacturers' work towards more efficient electrification of motors and systems.

## **Certifications**

Arnold Magnetic Technologies and the PTM business provide materials that meet DFARS and ITAR requirements.

ISO 9001:2015 AS9100 Rev D







## **Manufacturing Capabilities**

Motor Lamination Materials Annealing
Toll Processing Coating
Rolling Magnetizing
Slitting

### **Applications**

Shielding

**Motor Laminations** Magnetic Bearings Reverse Thrusters Barrier Membranes Implant Devices **Batteries** Gaskets Heat Shielding Magnetic Tag Stock Magnetic Sensors Honeycomb Structures Hysteresis Drives Irradiation Windows Solar Panels **Radiation Detectors Transformers** Satellites **Brazing Alloys** 

# **Contact PTM directly**

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Visit us at www.arnoldmagnetics.com/PTM



Sacrificial Wear Surfaces

