



**THE INTRODUCTION OF OUR
NEXT-GENERATION CUTTER**



**THE ART OF ROSE-GOLD UNVEILED
-OUR NEW ELECTROLYTIC OXIDIZATION COLOUR**



CNC PROBING SYSTEM



OUR DIE CASTING

Aluminum was first lab-formed by scientist in 1825. For over 200 years, aluminum has made it possible to transmute manifold of design concepts into real life products and created joyful surprises one after another in the applied market.

We have tied the knot with aluminum since the inception of our company. In the past 16 years, we have worked in partnership with our customers and presented series of innovative finished aluminum products.

Aluminum is our passion, our promise, and our pride. The future of JM Victor will be a forum to share knowledge of applied aluminum. We, together with our aluminum friends, walk the aluminum walk and talk the aluminum talk, to further explore the exquisite of aluminum machining and the beauty of aluminum finishing, delivering our contributed value for a better world!



Lilia,
General Manager
Victor Aluminum

❖ THE INTRODUCTION OF OUR NEXT-GENERATION CUTTER

Lean production has long been our focus in pursuit of superb craftsmanship quality.

The newly introduced cutter is equipped with a special cutting feature: After each cutting, the operation table, controlled by air-compressor, will move the working table away from the route where the saw blade travels back to its starting point. This prevents any “traffic jam” between the part and the returning blade during fabrication process which may affect part’s surface smoothness and precision, and ensures production consistency.

Characteristics:

1. Adoption of servo motor ensures high precision
2. Full automated process from part feeding, part-positioning, lubricant-spraying to cutting.
3. Hydraulic feeding warrants cutting stability
4. Operated in a fully enclosed environment with an automatic safety door which completely separates from workers. It effectively precludes workplace injuries and prevents saw chips from flying everywhere.
5. Equipped with isolated chip disposal channel and chip auto-collector system
6. Equipment with fume-disposal system.



Conveyor Mechanism

Adoption of high precision gear rollers of 0.02mm tolerances (applicable conveyor travel distances between 3 – 6 meters)



Vacuum Sprayer(Atomization)

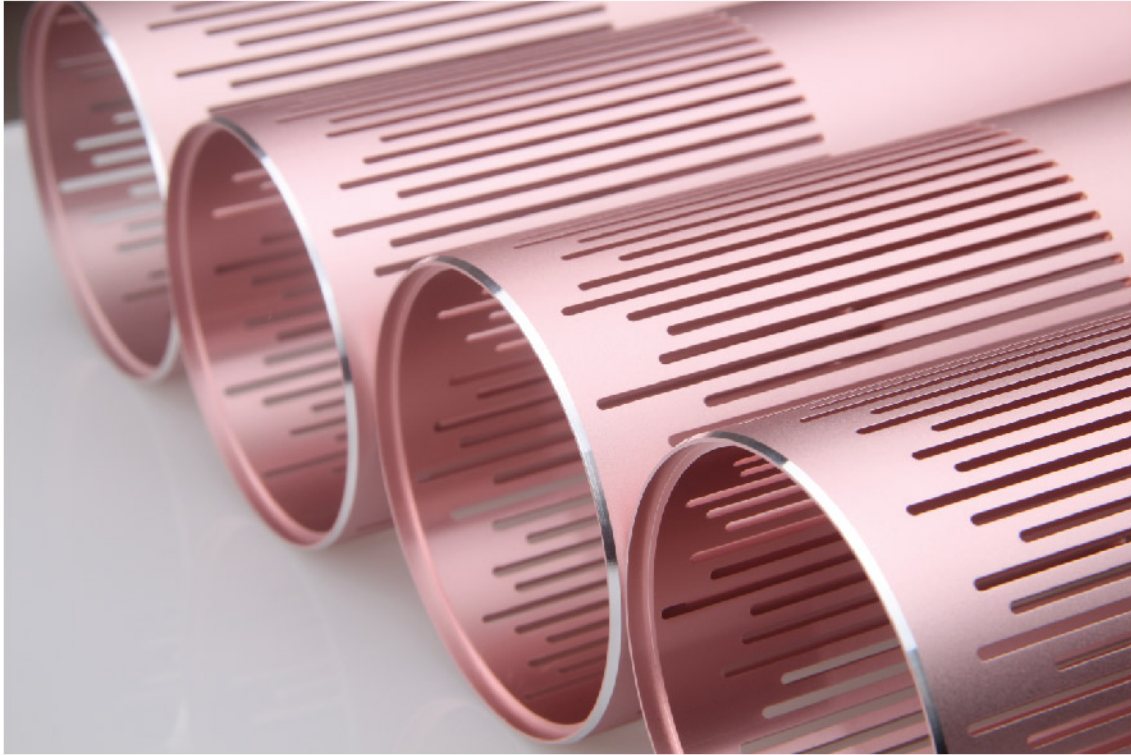
Based on vacuum forming theory, the cutting oil gets mist sprayed, which creates a lubricating and cooling effect to guarantee no built-up on blades for enhanced cutting precision and blade life-span.



The feeding table fixture can accommodate cutting parts of various specifications without having to switch new jigs.



Expandable working table to hold longer parts in place during fabrication.



❖❖❖ THE ART OF ROSE-GOLD UNVEILED – OUR NEW ELECTROLYTIC OXIDIZATION COLOUR

Consumers' appreciation of electrolytic oxidation rests on such popular colours as silver, grey and black. But the recently debuted Rose-Gold finish applied on 3C product is absolutely stunning. This new colour has brought a great challenge to the anodizing practice. It requires sound process control over the automated line and programming to achieve shade consistency and uniformity with healthy glossiness.

Electrolytic oxidation dyed Rose-Gold can be labelled by Lab colour system as
-L: 77-84, a: 10.5-14.5 b: 8.5-10.5
-Film Thickness: 10 – 13µm
-Gloss: 9 - 12

The following are KPIs to achieve to maintain surface quality of Rose-Gold Product:

- Sulfuric acid concentration:** higher concentrations of sulfuric acid can facilitate acceleration of the dissolution reaction of the oxide film, which helps pore expansion for ease of dyeing
- Alum-ion concentration:** with low

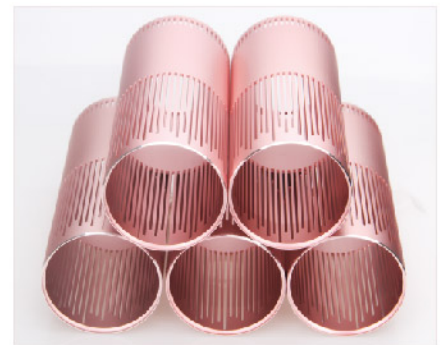
alum-ion concentration, the resulting oxide film reduces adsorption capacity, which affects the dyeing speed; high alum-ion concentration may affect the uniformity of the oxide film which may emanates irregular film layer.

-**Oxidation temperature:** Oxide temperature too low creates close-knitted pores, which significantly slows down the dyeing speed; while temperature too high creates porosity – a loose pore, which makes dyeing speed too hard to control.

-**Electric Current Density:** proper current density within a certain range helps speed up film growth rate; when density reaches over, film growth rate reduces.

-**Thickness:** oxide film thickness is generally at 10µm or beyond.

With 16 years accumulated expertise in Electrolytic Oxidization and introduction of automated Electrolytic Oxidization production line, JM Victor offers more personalized and diversified surface options for your products of up to 3.6meter in linear length.



❖❖❖ CNC PROBING SYSTEM



To overcome low efficiency and instability of manual testing, CNC probing system has been introduced to manufacturers and becomes indispensable for enhancing fabrication precision. It measures against the characteristics of a machine part, and adjusts fabrication programming for better machinability and size detectability of a finished product.

CNC probing head is commonly used in machine positioning and parts inspection.

MACHINE POSITIONING

CNC probing system auto-detects position of the machine part, and auto-updates tolerances on related parts so that fabrication can be resumed after re-positioning. This saves high cost on jig tooling and the inconvenience of using a manual caliber, precludes human errors, and improves mass production stability.

PART INSPECTION

During fabrication process, the CNC probing head will inspect critical dimensions of an individual part, while auto-updating tooling offset compensation values to be applied in upcoming job. Upon completion of current job, the probing head will re-inspect for dimension conformity.

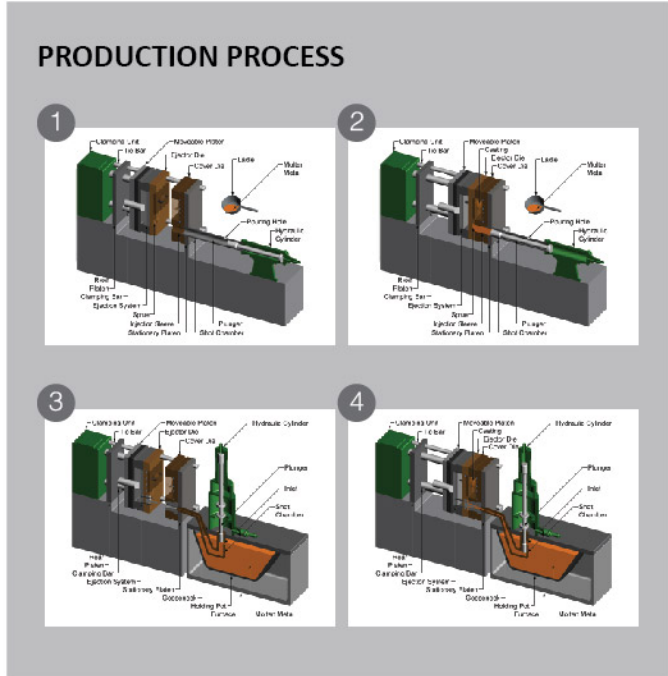
A series of CNC probing system have now been in commission in our facility, which greatly improves production reliability over manual process, makes it possible for custom fabrication, and sends a warranty on production consistency and precision.



OUR DIE CASTING

DIE CASTING is a well-developed metal forging process. It can be tailor-made as per customers design requirements, and put in mass production of forged parts of consistent dimensions and high precision.

Our die casting facility has an investment of a specialized casting house and several advanced die casting machines. By far, phase one has been completed and in commission with a production capacity of 500KG/HOUR integrated consecutive central casting furnace and three Toshiba die casting machines. To comply with chemical composition standard and upkeep with surface quality, we attentively follow through every step of our production process.



PRODUCTION STAGE

HARDWARE OR SOFTWARE INPUT

Tooling Design

Specialized Simulation Software
DFMEA

Casted Alloy

In-line Refining System
Spectrometer

Forging Stage

Toshiba Die-Cast Machine
Vacuum System
Die Thermo

OBJECTIVES

- Pre-evaluation of production difficulty scale for a resolution
- Injection process simulation for optimization of casting mould or casting process design
- Defume and Demut
- Testing of Chemical Composition
- Injection Speed at 9M/S to allow injection fully filled up
- Reducing pores, bubbles and other casting defects
- Maintaining die thermostat for enhanced finish quality

Currently we offer our customers casting products with specifications upto **150cm** in height and **400sq.cm** in area.



❖❖❖ COMPANY PROFILE

Our company was founded in year 2000. Being a company specialized in sophisticated alloyed aluminum fabrication and high-end surface treatment, JM Victor is not only refined with hands-on experiences through years of accumulation through the sector chain of precision manufacture, but also with unparalleled wealth of knowledge enriched from company operation and management process, which enables the company to offer solutions in overcoming design and production bottlenecks in high-end aluminum fabrication.

In Jiangmen High-Tech Industrial Park, we have invested in construction of our new cyber-physical powered Smart Plant embracing the core Industry 4.0 design concept. The new plant, residing on an area of 100,000 square metres, comprising a global lab of aluminum-magnesium surface treatment and a smart CNC fab centre with its own casting house and stamping workshop, will add on a new chapter of consummate expertise to the venture of JM Victor.

Our Mission Statement

We stand by our commitment to share the harvest and happiness with our staff and workers, create value for our customers and cultivate a company culture with a vision. This is the foundation for the sustainability and continuity of our company and our business.



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