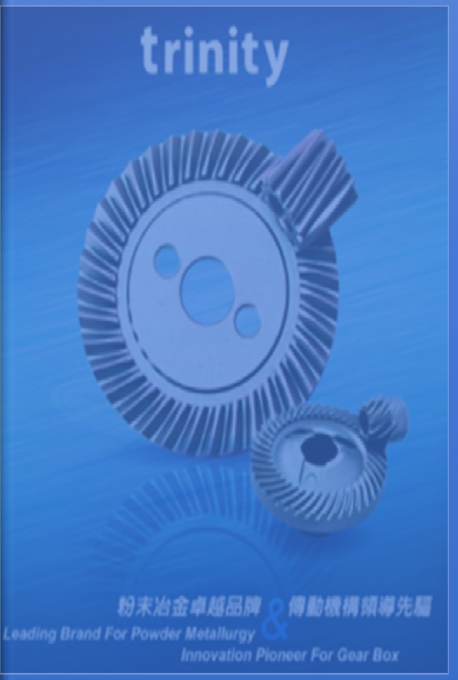
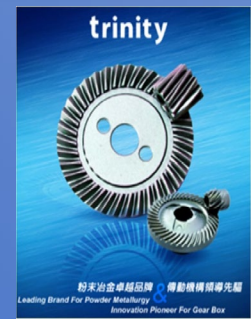


Trinity Precision Technology Co., Ltd.

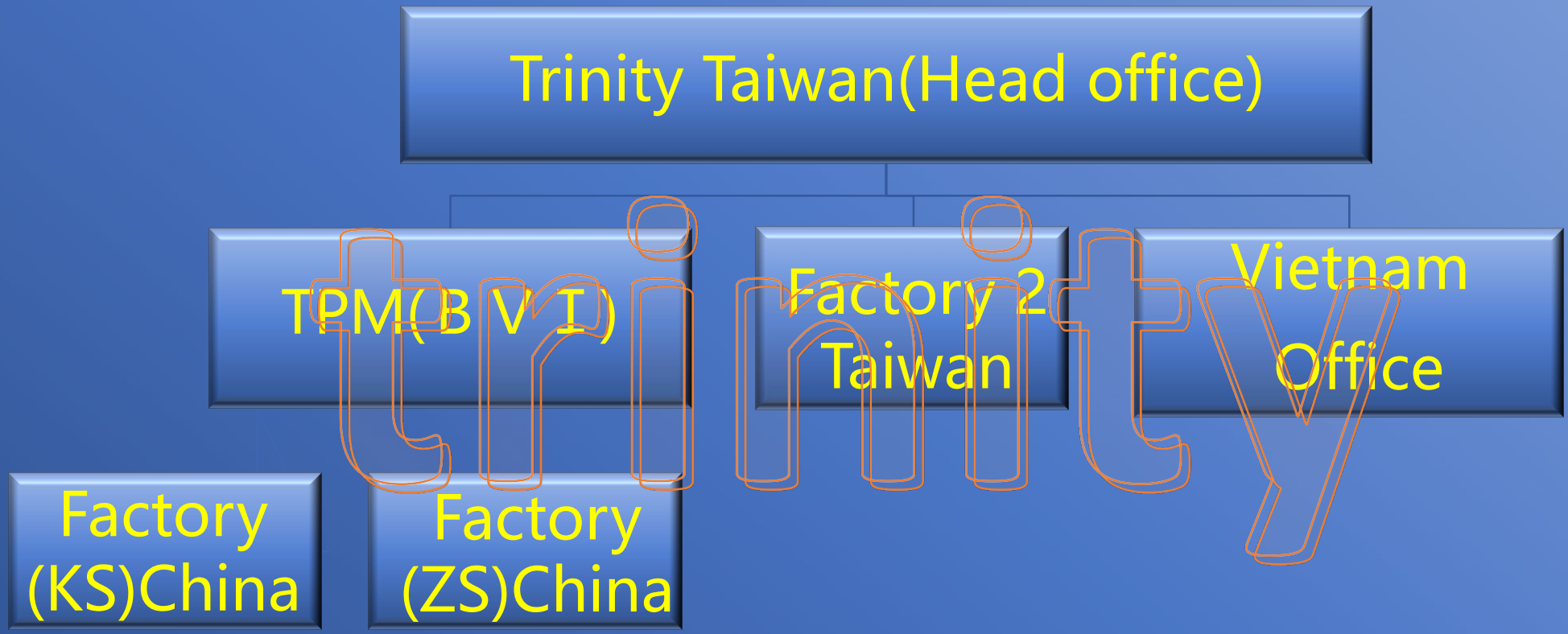
Operating Report

2024.12.3

Leading brand for powder metallurgy & Innovative pioneer for gearbox



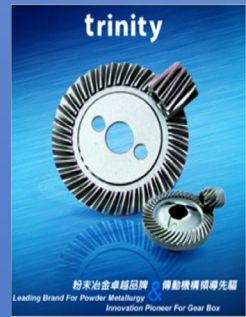
Organization



Factory distributions

Certificate of

ISO 9001
ISO 14001
IATF 16949



Milestones

- Established in1993, major market in power tools.
- 2002, set up factory in Dongguan China.
- 2003, listed in Taiwan stock market.
- 2009, set up factory in Zhonshan(ZS) China.
- 2010, set up factory2(ZL) in Taiwan and built gearbox production line.
- 2010, MIM production line built in (ZS).
- 2011, set up factory in Kunshan(KS) China.
- 2012, the world's first company to successfully develop powder metallurgy spiral gear products.
- 2017, powder forging product launched in China & Taiwan.
- 2021, developed alloy products successfully.
- 2023, built gearbox & MIM production line in Kunshan(KS) China.
- 2024, Co-development of gearboxes with customers including humanoid robots, robot dogs, solar tracker and quiet transmission device for inside carriage of NEV.
- 2024 Co-development of water cooling pipe, UQD,UQDB,VC products waiting for customer verification.
- 2025 The goal is to develop Radiator tank & Vietnam Preparatory Office

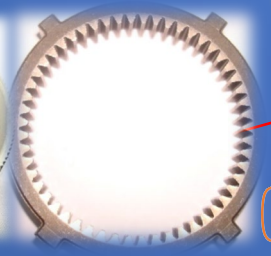
Production – Powder Metallurgy

Automotive products & First-tier supplier to two automakers

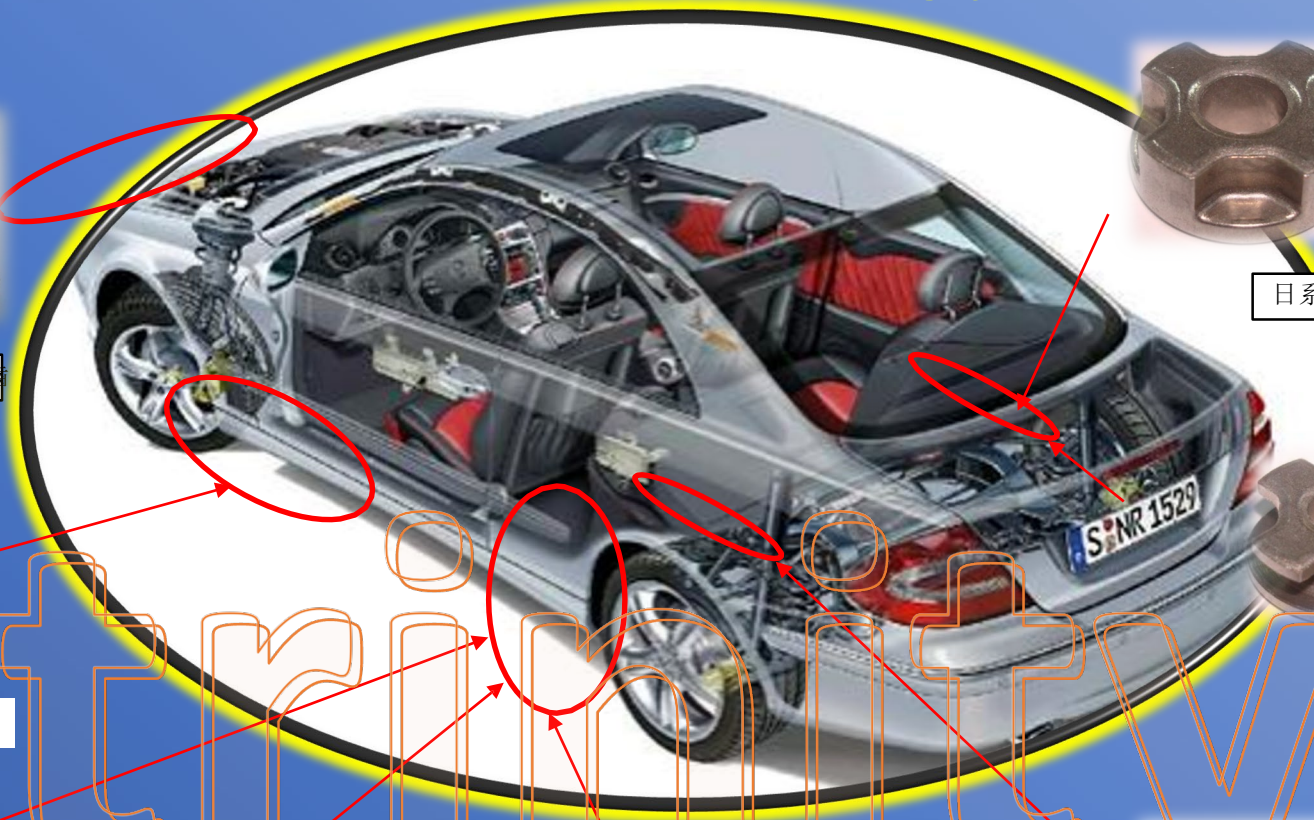
歐系車廠啟動馬達行星齒

日系車廠發動機零件

日系車廠方向機總成



歐系車廠起發電機

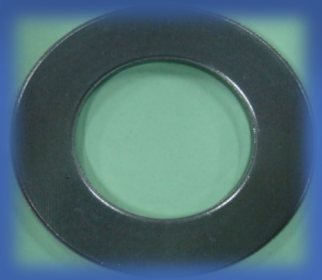


日系車廠稱桿活塞

日系車廠油封活塞

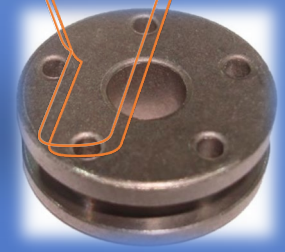
日系車廠電動椅

日系車廠稱桿抵閥

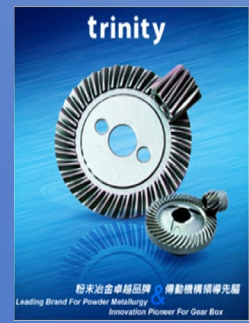


日系車廠減振器油封擋環

日系車廠油封底閥



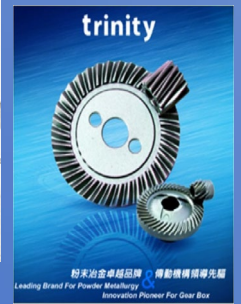
日系車廠稱桿活塞



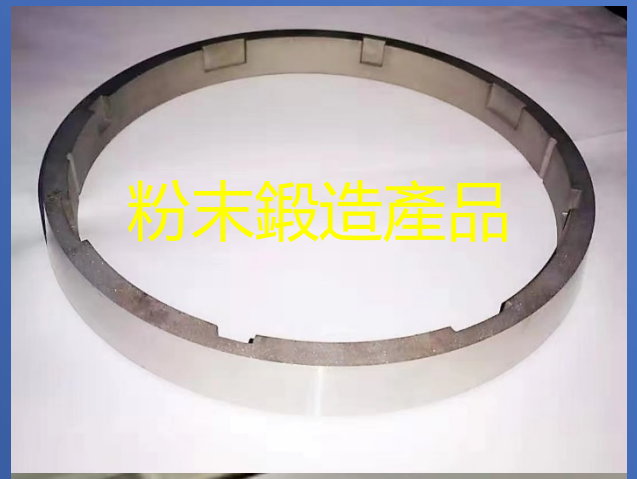
PM products- powder metallurgy

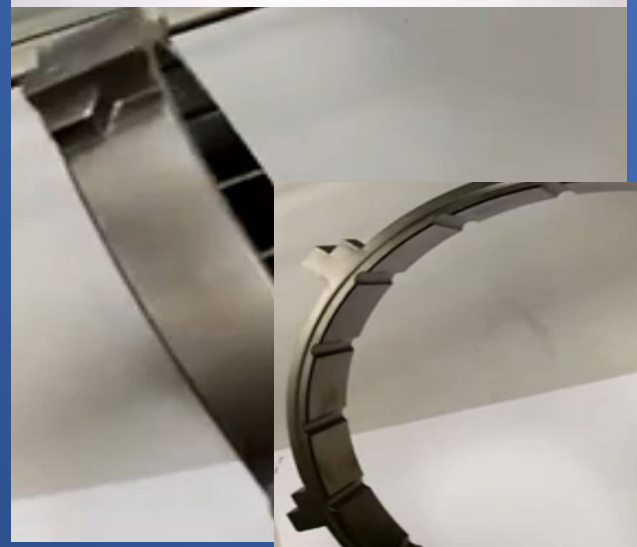
Parts for

Power tools
Sewing machine
Floor scrubbermachine
Ship
Garden tools
Sports equipment



Production – Powder Forging





一般粉末冶金產品的密度有一定的極限在，為了提高密度接近材料理論密度並提升產品物理性能，故實施粉末冶金再鍛造的手段

Combining sintering process with forging process to improve density and physical properties of Powder metallurgy components 。

優點Advantage:

a. 節省材料(餘料少)

Reduce raw material lose

b.提升產品密度

Improve parts density (7.7以上 g/cm*3)

c. 提升產品強度

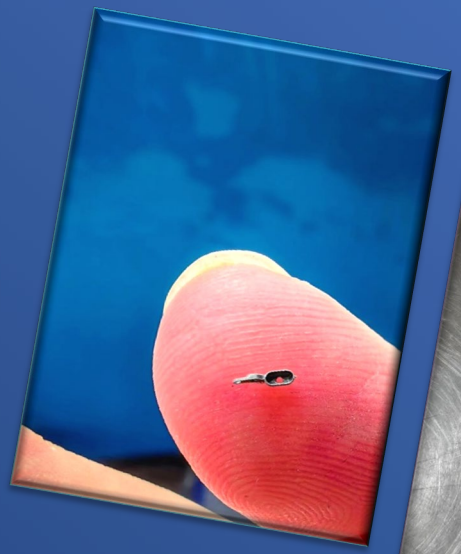
Improve parts strength

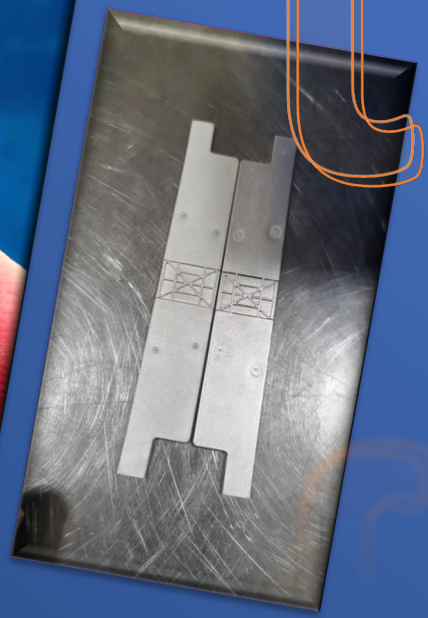
d. 製程少

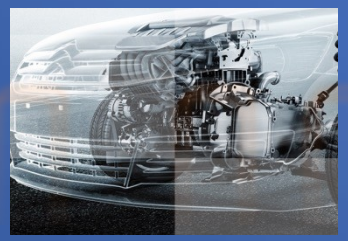
Less process

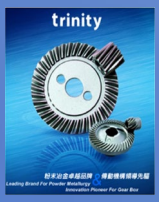
Production – Metal Injection Molding

Major products are for automobile, motorcycle, power tool, kitchen tool, Floor scrubber, bicycle, electronics, wireless communication, medical device & AI hardware



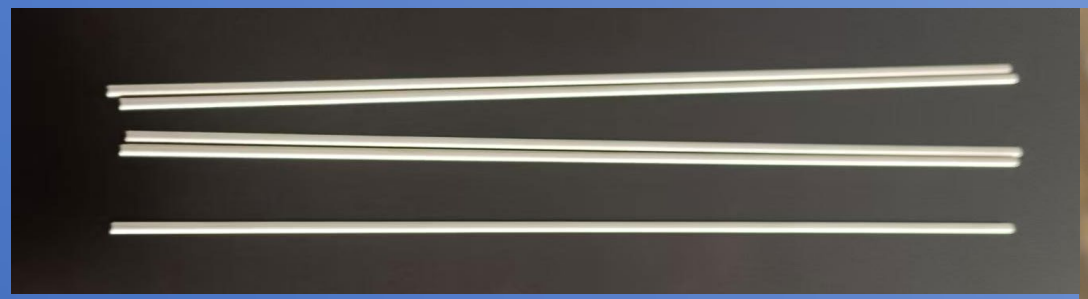


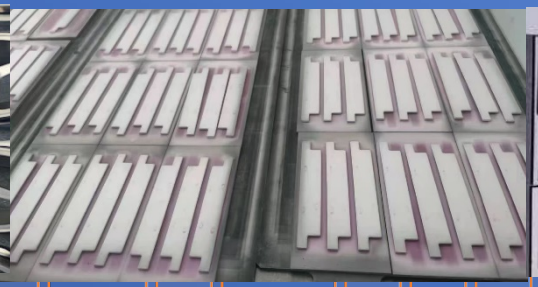


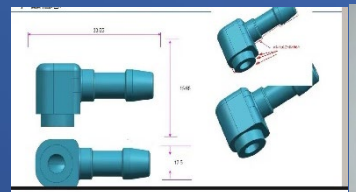


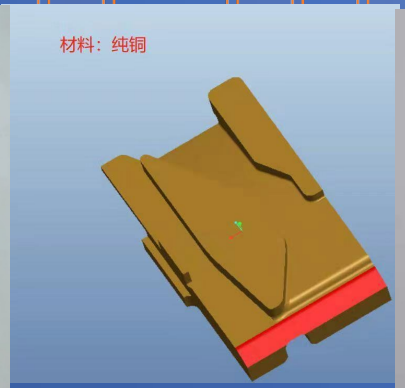
Production – Metal Injection Molding

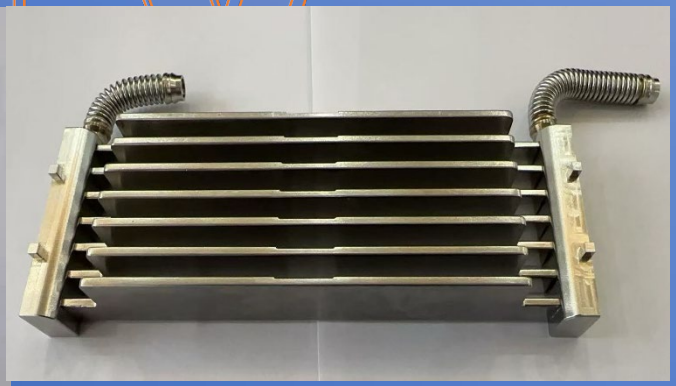
Key projects are the medical industry and thermal modules

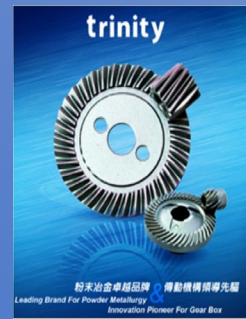






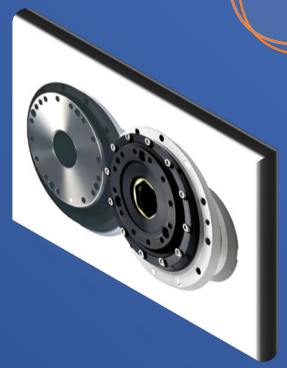


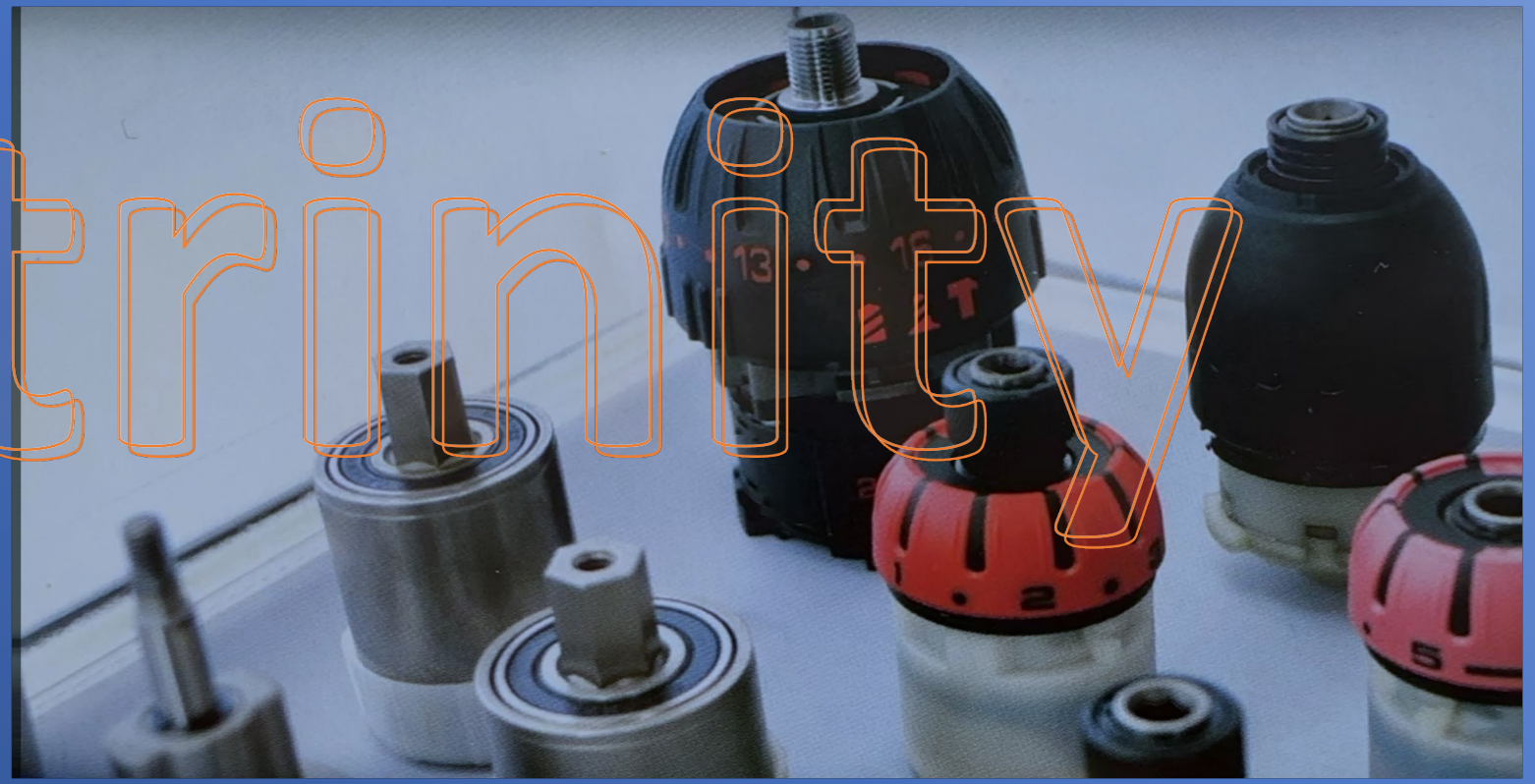


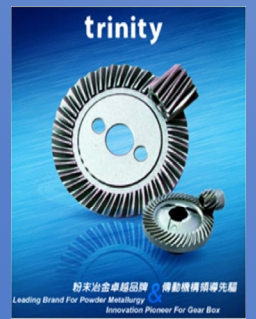


Production – Gearbox Division

- Gearbox applications in power tools, household appliances, logistic managing system, solar energy & medical device.
- Production lines in Taiwan(ZL) and China(KS)







Industry overview

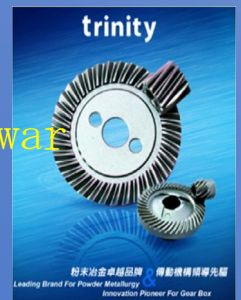
Powder metallurgy- Application in traditional market	Automotives	Powertrain systems(transmission, synchronizer, starting motor, steering wheel)/oil pumps and brake system, power window, power chair, power curtain..	70%	90%
	Power/Air& Hand tools	Mainly used in various gearbox reducer (screwdriver、electric drill、hammer drill、cylinder、hand tool parts)	15%	
	Sewing machine	Connecting lever crankshaft、eccentric shaft、functional parts and fasteners.	5%	
	Others	Aerospace、medical、home appliances、locks、fuel cells..	10%	10%

1.)PM industry has been thriving over 50 years due to improvements on material、mold、equipment. Many new comers create market competition.

2.)Traditionally, automotive power train system is biggest application for powder metallurgy. However ; electric vehicle do not require powertrain system.

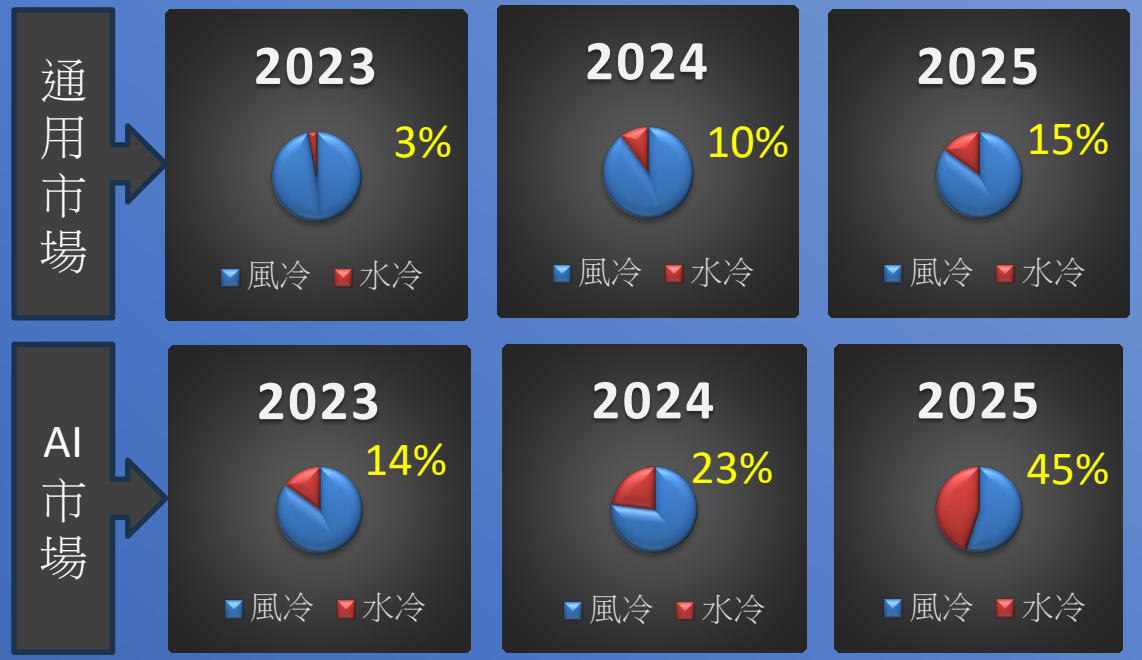
3.) Engineering plastic improvements replace some power metallurgy market. Low Cost Chinese forging producers also erode PM market.

4.)Wars between Russia & Ukraine/Israel & Palestine;COVID-19;global inflation; Sino-US trade war lead industrial restructuring. Powder metallurgy industry faces unprecedented challenges.



Industry outlooking

1. The AI era has arrived.
2. PUE(Power Usage Effectiveness)
   For Ex. The China government officially implements the PUE policy in 2023.8.3 (1.4<PUE<1.8: unite price increase of 0.2/degree; PUE>1.8: unite price increase of 0.5degree)
3. The age of liquid cooling has arrived.



資料來源賽迪顧問

Industry outlooking

The Core Value of Liquid Cooling Technology in High Speed Computing Function

1000W
How to solve the heat problem?

The PUE less than 1.2 or 1.5 will be significantly better than the air-cooled system 1.3

Reducing the power consumption of the server can reduce the speed of the fan and reduce the power consumption of the whole machine by 10%

Reduced fan speed reduces noise by more than 15dbs

Reduced fan speed
Can reduces vibration
And protects hard drives

After cooling, the chip performance and life can be improved to ensure that the function

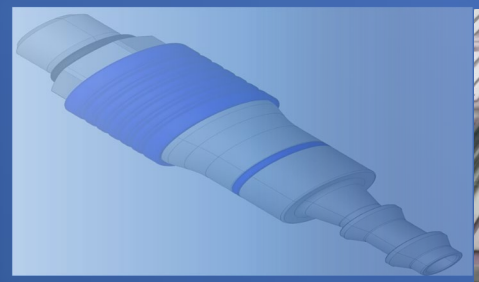
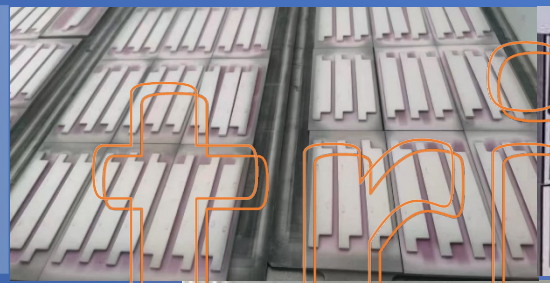
The general environment can be increased by 50%
AI/HPC can be increased by 50%

項目	風冷	冷板	噴淋	單向浸沒	相變浸沒
芯片/TDP	<250 W	<1500 W	<400 W	<400 W	>600 W
解熱能力 cm2	最低 ~10W	最佳 ~200	一般 ~50W	一般 ~50W	最佳 ~150
易維護性	最佳	次佳	次差	次差	次差
節能效果	最差	一般	次佳	次佳	次佳
產業完整	次佳	次佳	最差	次差	次差

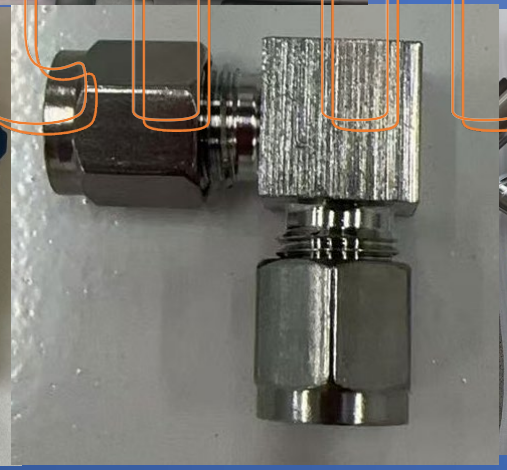
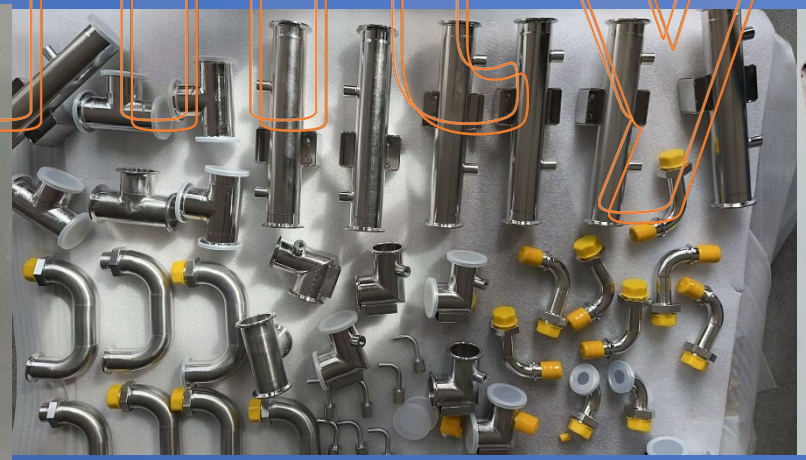
註: 1.供液溫度為40度C
2.不含IGBT等大尺寸芯片應用場景

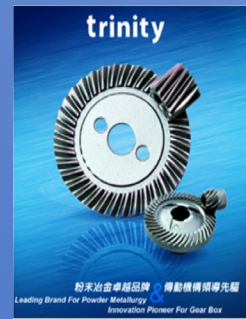
Major Industry Priorities

MIM focuses on the development of medical industry and thermal module industry-
Ready for mass production



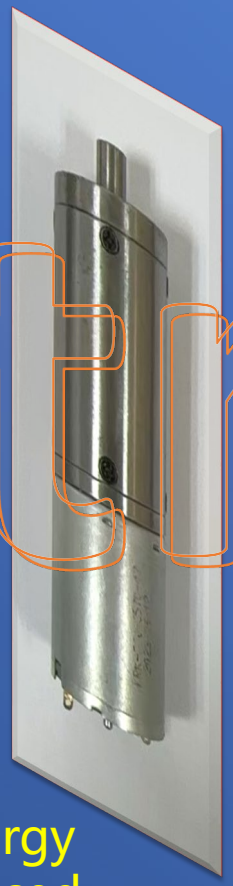


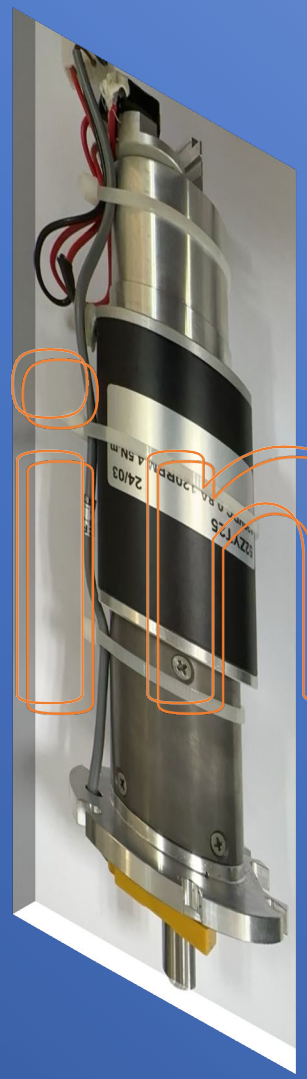
Major Industry Priorities

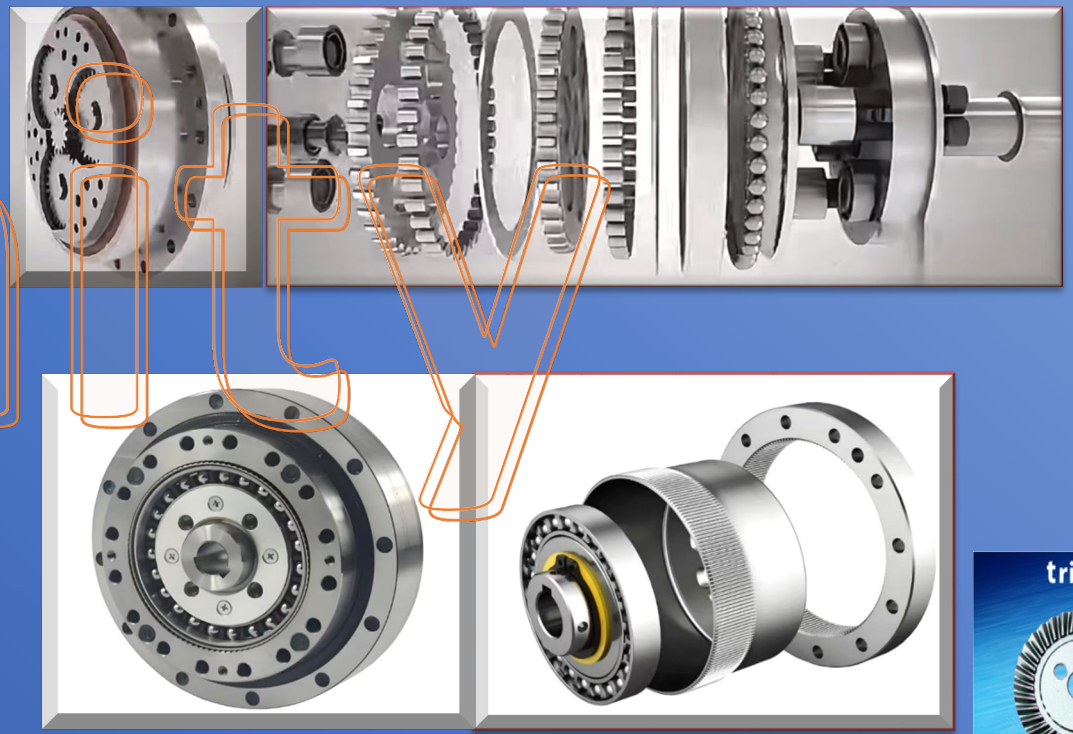
MIM focuses on the development of medical industry and thermal module industry-
Has been mass-produced

Major Industry Priorities

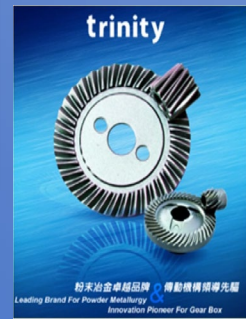
The gearbox focuses on the medical, AI, and new energy industries.







The medical and new energy GB Has been mass-produced



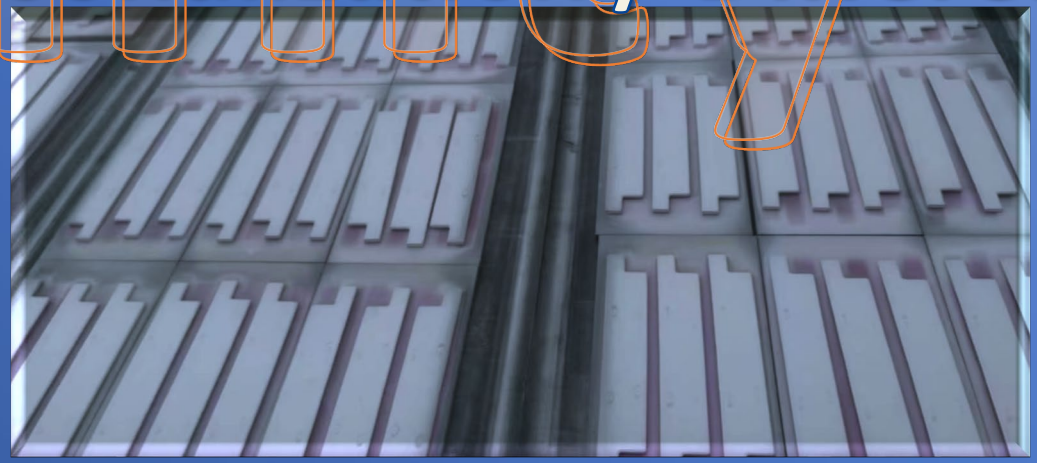
Strategy for challenges

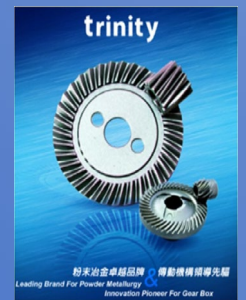
Embracing future BIG market

Utilizing advantages on material improvement

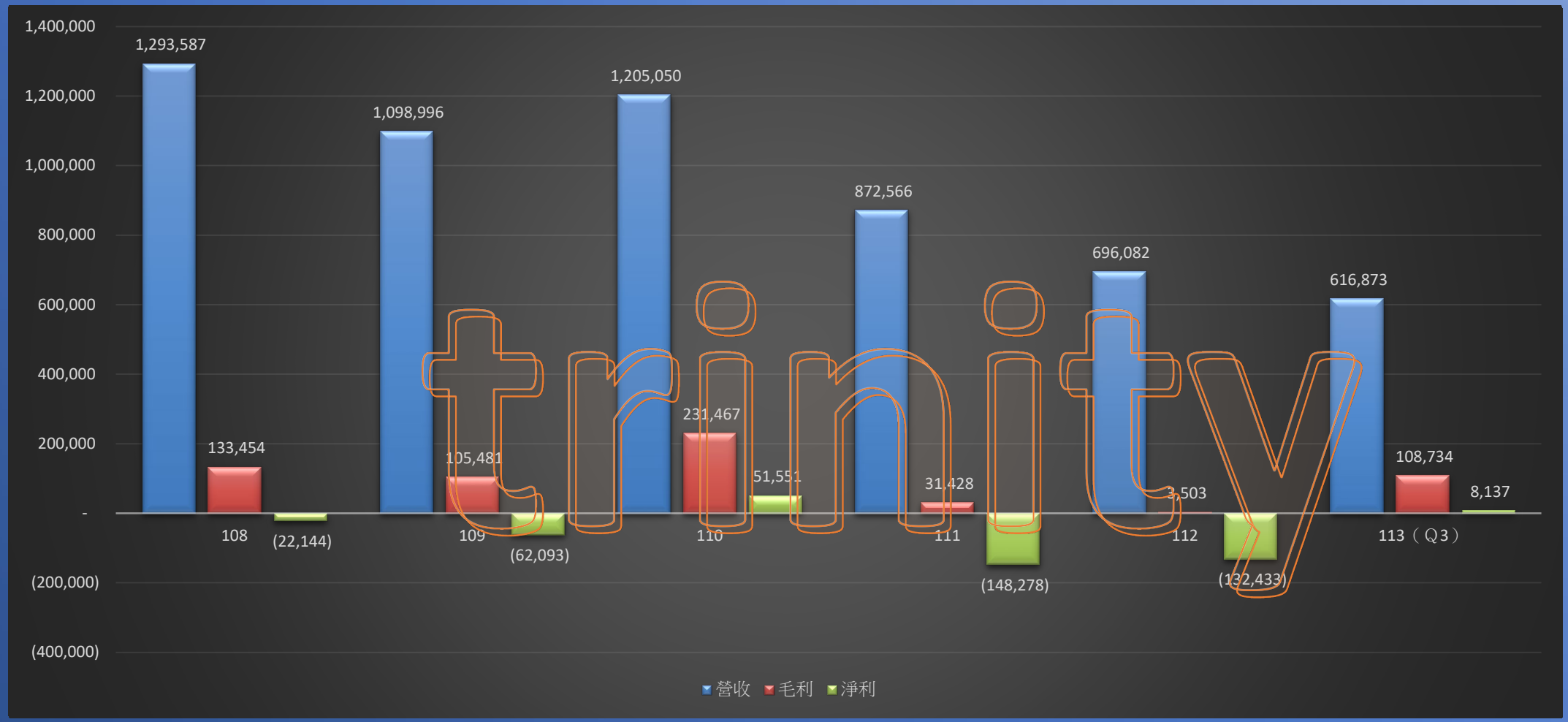
High density/High strength/High wear resistance/High ductility/High conductivity

Customization / Personalization / Differenciation



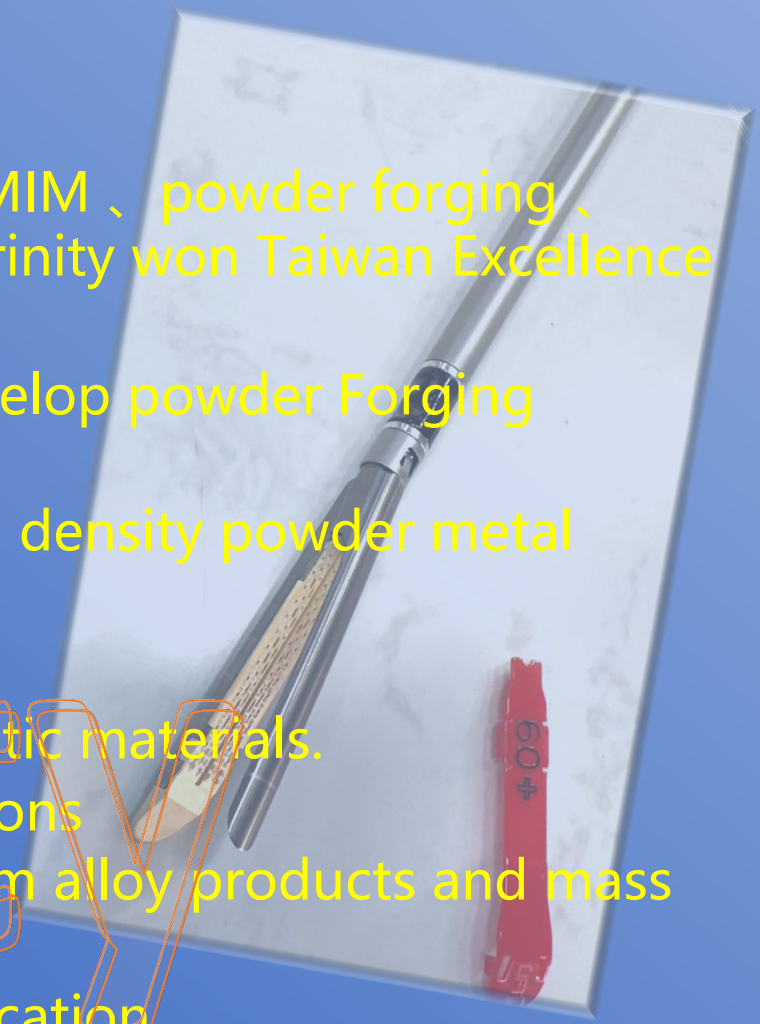


Historical operating outcome



Trinity advantages

The only one in the Chinese world owns powder metallurgical 、 MIM 、 powder forging 、 gearbox technology and production line. For 3 consecutive year Trinity won Taiwan Excellence award.



- 2018 the first and only manufacturer in Taiwan to successfully develop powder Forging technology and mass production to auto Tier 1 customer.
- 2019 the first manufacturer in Taiwan to successfully develop high density powder metal products.
- 2020 Qualified by 2 different Tier1 auto brands.
- 2020 Successfully developing magnetic and stainless steel magnetic materials.
- 2021 Successfully developing MIM parts for chip cooling applications
- 2021 the first company in Taiwan to successfully develop aluminum alloy products and mass production.
- 2024 Just passed Geely Automotive Group first tier supplier certification
- 2024 Has successfully developed Thermal products -cooled pipe, cold plate, quick connector spool and sleeve and other products
- 2024 successfully enter medical, new energy and AI industry device industry.