

MM Precision Casting Process

MM精密鑄造工法



Micro Metalsmiths

www.micrometalsmiths.com

Introducing Micro Metalsmiths

Micro Metalsmiths has refined its techniques for excellence in the production of copper alloy and aluminium alloy investment castings.

Employed by Kirkby

部品製造

40年以上にわたり、マイクロ・メタルスミス社は、銅やアルミ合金の精密鑄造部品において優れた技術を磨いてきました。

核となる技術は、職人技とも言える精密鑄造工法。その技術とともに、マイクロ・メタルスミス社はお客さまのご要望に応え、様々なコスト削減に貢献してきました。

少量バッチでも年間500,000個になる量産品でも、より早くより安価な方法を提供しております。塊からの削り出しを必要とせず、複雑な内部・外部形状、優れた仕上げ加工、薄壁加工の製品に対応して参りました。

- project management
- design department
- investment foundry
- machine shop
- assembly shop

Quality standards

Micro Metalsmiths was accredited to BS5750 in 1998 and currently holds the latest ISO9001 : 2000. The company is audited twice a year by the British Standards Institute.

Micro Metalsmiths has also been audited by many major aerospace and defence organisations and is on the approved supplier list for many of these international organisations.

Our customers

- Honeywell
- Saab
- Molex
- Bentley Motors
- Thales
- Goodrich
- Andrews Cor
- Siemens

下請業者の管理

マイクロ・メタルスミス社は、お客さまの要求に応じて完全な製品をお届けするために、多くの腕のいい下請業者と、親密な関係を築いています。

Why use the

- Reduce the overall cost of assemblies, by reducing the price of finished products. (市場の要求により、マイクロ・メタルスミス社は、お客さまに完成品を供給する経験を積んできています。たとえ、鉄製品や保護コーティング、検査、美しい仕上がりや組付部品であろうと、マイクロ・メタルスミス社は、)
- Reduce the time taken in obtaining castings from source. Finished products are delivered within four weeks.
- Design flexibility. Lead times are 90% less than traditional economic batch production.
- High quality finish, detail and specification.

Component Castings

For over forty years, Micro Metalsmiths has refined its techniques for excellence in the production of copper alloy and aluminium alloy investment castings.

The core technology is specialist investment casting, which gives Micro Metalsmiths the ability to take a customer's concept and achieve reality in a cost effective manner.

The process provides a fast and cost effective method for both small batches and quantities up to 500,000 a year. Parts with complex internal and external detail, superior finishes and thin wall capabilities can be produced, without the need for machining from solid.

The foundry specialises in copper and aluminium alloys is one of the largest of its type in the UK. Micro Metalsmiths has close associations with other foundries, allowing true global sourcing and supply of steel and other alloys. This combined with long relationships with paint, coating, polishing, finishing and sub contract testing allows the production from concept, to finished article assembly on components. All undertaken by Micro Metalsmiths to customer requirements.

The company has combined its impressive investment casting technology with best practice CNC machining to help overcome many of the constraints often placed on engineering design. This is all carried out within a BSI accredited ISO 9001 Quality System.

機械加工

マイクロ・メタルスミス社は、CNCマシニングセンターを稼働しています。最大限の正確性と反復性を得るために、マシンはレニショーのブルーブを備え、定期的に芯出しや直角、そしてサーボエラーのテストを行っています。

各マシンは最新のCADソフトを完備し、熟練したオペレータにより管理・操作されています。24時間、効率的な運転が可能です。

Sub Contract Handling

Micro Metalsmiths has a firm relationship with a vast array of skilled sub-contractors to suit the demanding requirements enabling the supply of finished product.

In response to the demands of the market Micro Metalsmiths has gained a reputation for supplying completely finished product to the customer. Whether the requirement is steel castings, protective coats, testing, finishing or assembled components, Micro Metalsmiths has the experience and proved supply lines to meet customer demands.

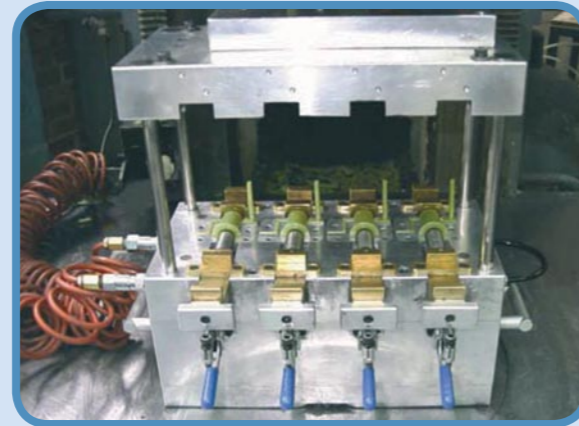


The MM Process is a 'block moulding' version of the 'Lost Wax' method'. A fine plaster investment is applied under a vacuum. The plaster penetrates all features and fills internal voids to ensure that, as the mould is formed, every detail of the wax pattern is faithfully reproduced.

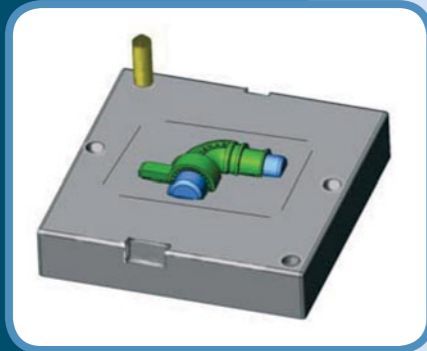
A vacuum assists the flow of metal. Thin sections, sharp edges and complex internal detail are all accurately cast.

The MM Casting Process

Low cost aluminium tooling



Wax Injection



Wax injection



If required, soluble cores are used to form difficult internal detail

- Temporary soluble core
- Wax pattern moulded around soluble core
- Wax pattern

Thin sections of 1mm are common. Small areas down to 0.2mm thick.

Investing



Firing of moulds



Pouring



Wash

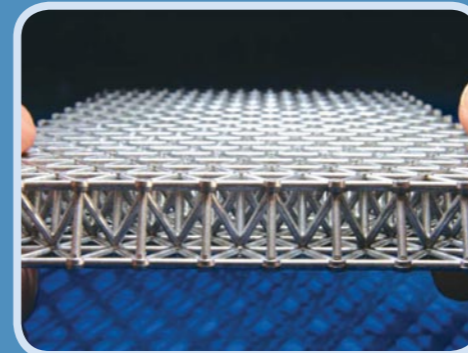


Finishing

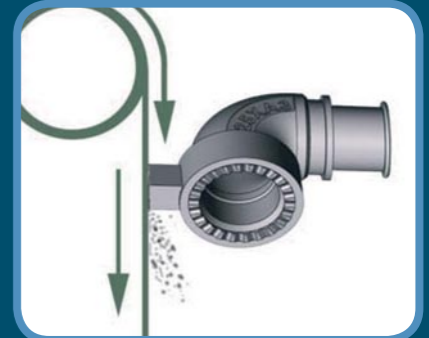


Machine

Complex internal shapes



De-gating



Saw





Call Micro Metalsmiths today

This brochure will have given you an excellent overview of the world-class investment casting provided by Micro Metalsmiths.

We have the experience, the advanced technology, the highly qualified staff and an absolute commitment to customer satisfaction.

Our outstanding track record of successful projects for customers around the world speaks for itself.

Micro Metalsmiths continues to develop its processes to meet the ever more exacting challenges of the marketplace.

Whether you have a specific project in mind, are looking for technical advice, or require an initial assessment, contact us now.

If you have an issue not covered by this brochure, please contact our Liaison Engineers who will provide you with an update on our latest capabilities and discuss ways in which we can help in the design and production of your components.

Micro Metalsmiths Ltd,

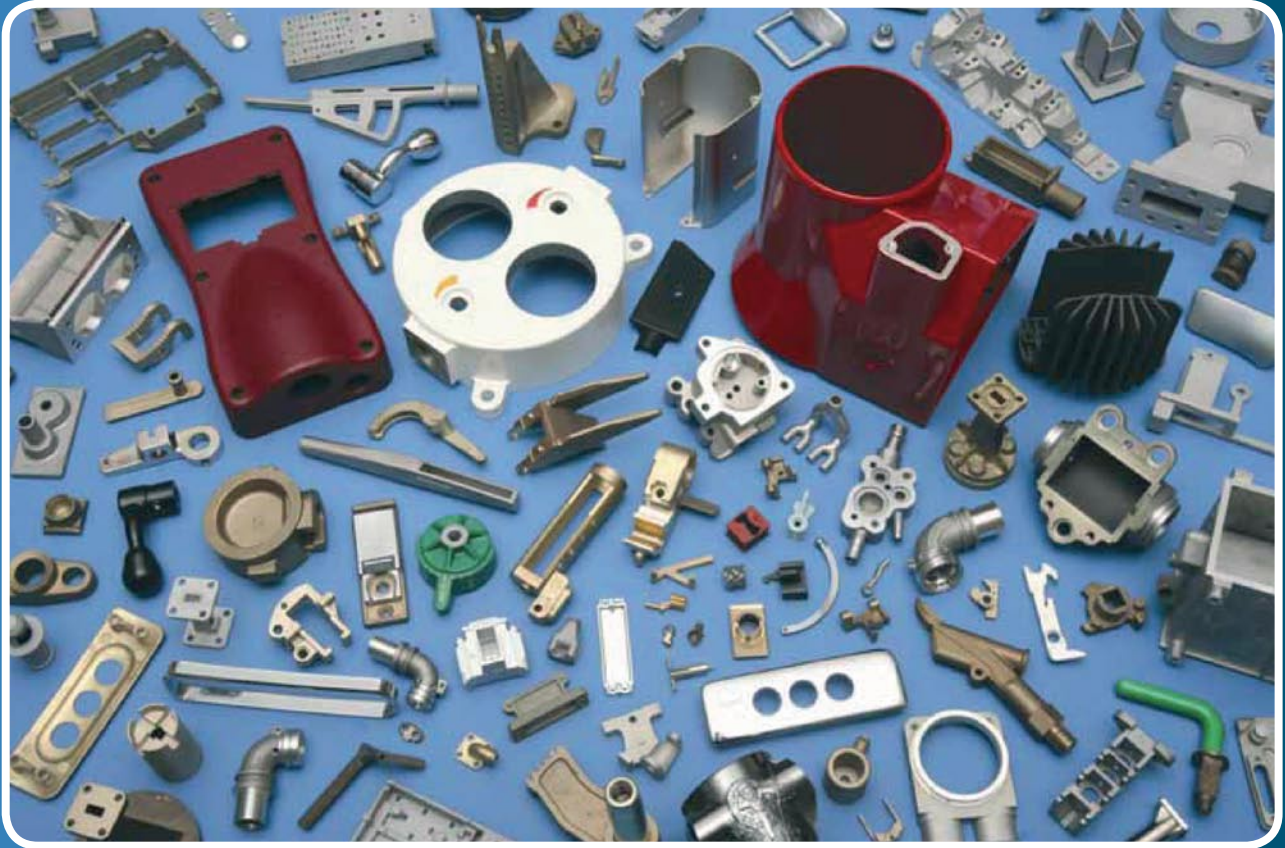
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