ROSS & CATHERALL

Increased melting capacity added for Q4 2025 alloy requirements

We have increased melting and manufacturing hours to support market demand

Turning Metals into Motion

Secure your Q4 alloy requirements now!

- To support growing market demand across all industry sectors, we have expanded our alloy melting and processing capacity
  - We offer flexibility with more furnace capacity options with a choice of 8 Vacuum Melting Furnaces (VIM)
  - Furnace technology configured for the highest quality masteralloy production of highly specialised nickel and cobalt-based superalloy cast bar stick - supplying 21st century alloys today!
- Revert is a key cost driver; our flexible furnace capacity options enable you to determine the most cost-effective ratio to meet both your budget and delivery requirements
  - In-house revert processing ensures “closed loop” security with rapid conversion into new alloy
- With eight furnace options and a strong commitment to quality, technical expertise, flexibility, and strategic location, our melting capabilities and capacity ensure your order is delivered on time and in full
  - Remove the concerns of revert availability by utilising our multiple capacity furnace options
  - Choose from 500kg (1,100lbs), 2500kg (5500lbs), 2800kg (6,200lbs), 4000kg (8,800lbs), 6000kg (13,200lbs), 7200kg (15,800lbs)

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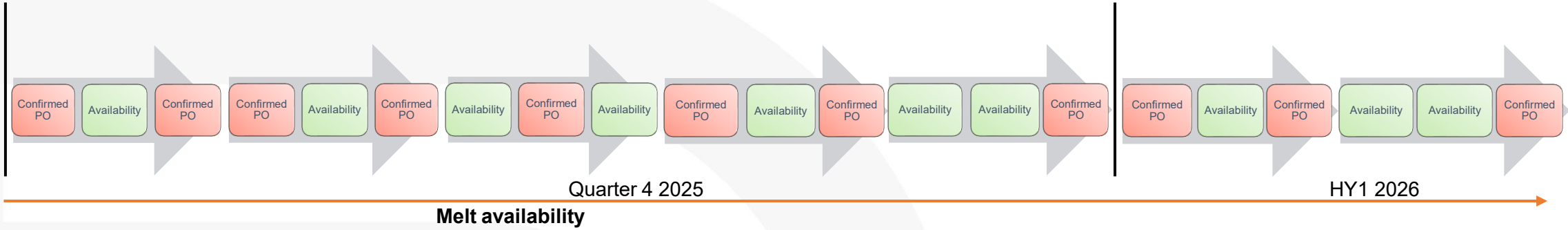
Additional melting capacity introduced



- Customers can utilise the additional melt capacity from our latest 4t furnace, increasing the melt volume range from 500kg (1,110lb) to 7200kg (15,800lbs)
- Some key element prices are rising; trade tariffs are already impacting element cost increases and alloy costs. Secure your future alloy requirements
- Our lead-times for melting to despatch is approx. 4-6* weeks, including “spot orders”
- We continue to remain as proactive as possible, with regards to ensuring your alloy demands are met with increased production hours, however, commitment POs for melting must be provided to “lock-in” melting slots
- Revert containing melts must have the required revert delivered to R&C on time^ to make “furnace ready” to meet the melt date advised. Alternate ratios will be required if revert is not available 2 weeks prior to the confirmed melt date
- Melt slots will be allocated based on first received receipt of PO confirmation

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*based on revert being available and furnace ready
^ As per revert specification document

Various Melting options to maximise your available revert

Furnace capacities kgs (lbs)	Bar Diameters mm (inches)
500 (1,100)	75 (3"), 88 (3½"), 100 (4"), 125 (5"), 150 (6"), 175 (7")
2 x 2800 (6,200)	
4000^ (8,800)	
7200 (15,800) *	

ˇ Furnace yields approx. +/- 10% of stated capacity, * 3 x 7200kg & 6000kg furnace bodies ^ New furnace commissioned Q4 2023

- We are confident that we can meet your varying volume alloy demands using any one of our 8 VIM furnaces, combined with our revert processing cell – guaranteeing a truly sustainable “circular economy” of your revert stream




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Current market conditions – September 2025

- Trading and supply conditions have shifted significantly following the introduction of trade tariffs by the U.S. government on global trading partners
- While some stability has returned among major economies; the effects continue to ripple through the marketplace. Rising element prices - driven by shipment delays and growing concerns over availability - are a key consequence
- Superalloys rely on globally sourced elements, with critical materials such as Tungsten (W), Tantalum (Ta), and Hafnium (Hf) predominantly processed in China. For example, approximately 80-85% of the world's tungsten supply originates from Chinese facilities
- These elements are traded as commodities on international markets, and the imposition of tariffs has disrupted exports to certain regions, contributing to price volatility
- Many superalloys contain tungsten in concentrations ranging from 1% to over 10%. Alloy families such as MarM, Rene, and GTD are particularly affected due to their higher tungsten content

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Ross & Catherall can provide alloy volumes with consistent and stable pricing

Reduce your costs, use your revert effectively

- Revert is the internal arisings, such as runners, risers or scrap castings generated from the casting process. It has a known composition and is “clean” so can be recycled

- Our in-house revert processing and preparation facility utilises the revert from customers, creating a “closed loop” network to ensure final composition and specifications are met:
  - **delivering a truly “circular economy” of production and consumption within our melting and processing functions**

- Recycling of revert helps to reduce mining and refining of elements globally, as such reduces the environmental impact of the final components made, ultimately enhancing the sustainability of the manufacturing process

- Revert is valuable, it contains elements such as Ni, Co, Ta, Re, Hf, W etc. It has the exact composition of the finished cast component it was derived from, as such it can be “recycled” back into sustainable superalloy bar stock
  - ***reducing the need for additional “mined” raw materials, and your alloy costs!***

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In-house Revert Processing - Sustainability is possible using your in-house revert






- Our commitment to sustainability drives us to adopt environmentally friendly practices and reduce our carbon footprint, ensuring that our production processes are as sustainable as they are efficient
  - Customer revert segregated, prepared & cleaned for melting
    - Revert storage “closed-loop” guaranteed
      - Revert ready for use in one of our 8 furnaces

ROSS & CATHERALL

Superalloy manufacturing excellence

- Vacuum melting from 1968 ✓
- 155 employees
- Over half a century of superalloy melting, development, manufacturing and processing experience ✓
- World's largest selection of VIM furnace capacity options utilising the latest melting technology ✓
- Markets served: Aerospace, IGT, Additive Manufacturing, Space Exploration, and biomedical sectors ✓
- Manufacturers of cast bar stick to the Investment Casting foundry sector ✓
- Long history of product and process development ✓

ROSS & CATHERALL

Superalloys for investment casting

Ross & Catherall capabilities

- Technical, metallurgical & chemical specialists with long service industry knowledge and experience ✓
- Fully accredited laboratory with ISO17025:2017 & Nadcap approvals ✓
- Largest volume capacity range of any superalloy manufacturer worldwide - 8 VIM furnaces ✓
- Invested and committed workforce with knowledge, experience and continuity in the sector ✓
- Exact Chemistry control and bar cleanliness ✓
- Low N <5ppm ✓
- Low S & Super Low S < 3ppm and < 1ppm ✓

ROSS & CATHERALL

Advantages of using Ross & Catherall

Ross & Catherall hold a prestigious position within the investment casting sector for the manufacture of superalloy cast bar stick, leveraging over 50 years of expertise and continuous innovation in vacuum melted superalloy production, while supplying our knowledge to your specifications

- We are a technological, quality and service orientated supplier with the most flexible melting capabilities of any superalloy manufacturer worldwide.

- Largest volume capacity options worldwide of any superalloy cast bar stick manufacturer - choice of 8 VIM furnaces ✓
- In-house revert processing & preparation facility ✓
- Located “centrally” to all major Aerospace & IGT producers ✓
- Alloy cleanliness ✓
- Delivering Low N <5ppm ✓
- Delivering Low S & Super Low S < 3ppm and < 1ppm ✓
- Fully accredited laboratory with ISO17025:2017 & Nadcap approvals ✓

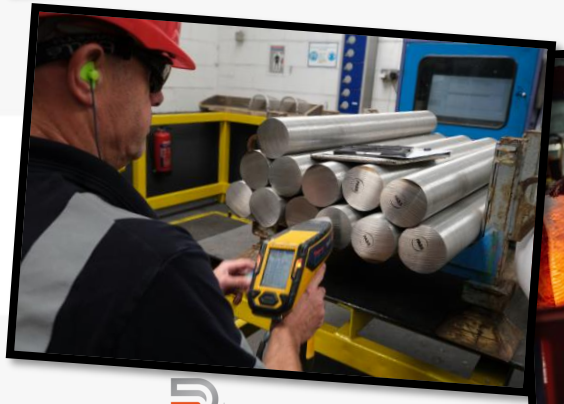
ROSS & CATHERALL

Your trusted partner in advanced superalloy solutions

Our people are our strength!

- Mastermelt principle melters - continuity of workforce with over 150 years* experience and knowledge
- Senior Management Team - average tenure 10 years at Ross & Catherall, several with over 30 years industry experience
- Technical and Laboratory specialists, many with over 25 years industry experience in superalloy metallurgical development and chemical services
- Established programmes for investment in technical excellence, people, capability and plant capacity







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*based on combined years of service

Ross & Catherall Limited

Superalloy Manufacturing Excellence

- Vacuum melting since 1968
- World's largest selection of VIM furnace capacity options utilising the latest melting technology
- Aerospace, IGT, Additive Manufacturing, Space Exploration and biomedical sectors
- Supplying to the Investment casting and Additive Manufacturing industries
- Over 50-year history of product and process development
- Our expertise adds value to chemical elements to meet customers exacting “chemistries”

SERVING THE GLOBAL INVESTMENT CASTING COMMUNITY FOR OVER 50 YEARS

ROSS & CATHERALL