



ROSS & CATHERALL

Have you secured your Q1 2025 alloy demand?

Flexible superalloy cast bar stick melt
capacity options

Turning **Metals** into **Motion**



Have you secured your Q1 alloy demands?

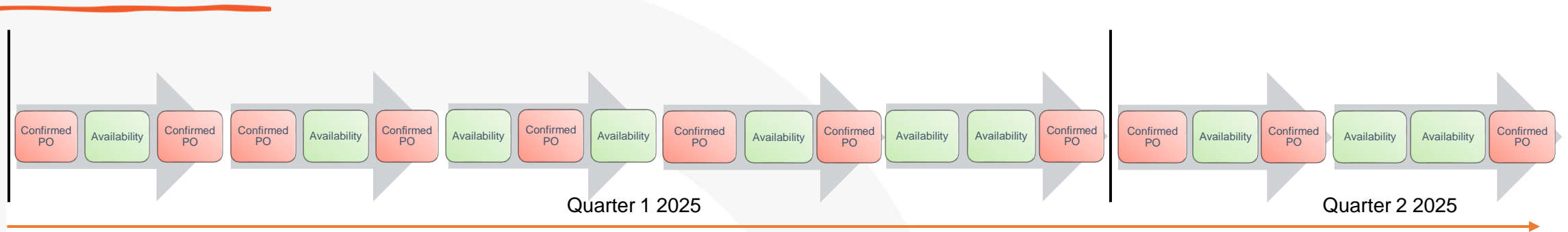
- Alloy volumes from across all sectors continues to grow. Ross & Catherall have invested in new production capabilities with the latest VIM technology for the 21st century alloys required today!
 - Furnace technology configured for the highest quality masteralloy production of highly specialised nickel and cobalt-based superalloy cast bar stick, with features including:
 - Short tundish VIM design with multiple filtration to ensure optimum metallurgical quality and cleanliness
 - Integrated Unidirectional Stirring system to provide enhanced metal stirring / agitation for shortest degassing times with the highest possible electrical efficiency
- We provide melting commitment with proven technical, quality and melting capabilities, flexibilities and capacities (8 furnace capacity options)
 - Remove the concerns of revert availability by utilising our multiple capacity furnace options
 - Choose from 500kg (1,100lbs), 2800kg (6,200lbs), 4000kg (8,800lbs), 6000kg (13,200lbs), 7200kg (15,800lbs)
 - Take advantage of the current, historically low element prices, that can be realised now and secured for future melting



ROSS & CATHERALL

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

Melt capacity availability Q1 2025



Q1 2025 melt availability

- 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)
- We have available melt capacity in Q1 2025, however, we do have a marked increase in demand, as such there may be a longer lead-time than usual for “spot orders”
- Our lead-times for melting is approx. 4-6* weeks as melt demand from customers requires additional melt capacity from Ross & Catherall
- We continue to remain as proactive as possible, with regards to ensuring your alloy demands are met, however, commitment for melting with a confirmed PO must be provided to “lock-in” melting slots
- Revert bearing melts must have the required revert delivered to R&C on time[^] to make “furnace ready” to meet the melting schedule
- Melt slots will be allocated based on first received receipt of PO confirmation



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

Insufficient revert will delay your scheduled melt slots

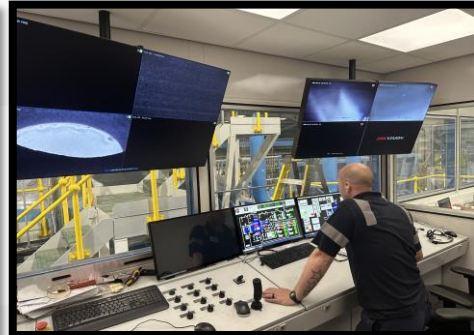
- Review, and if required, amend your revert ratios to avoid rescheduling of your confirmed melt date
 - If we do not receive your revert for the ratio requested on your PO, we cannot sequence the melt!
 - Revert not delivered “on-time” will result in missed slots, and rescheduling of the cast to meet the next available melt sequence
 - Melts cannot be rescheduled until your revert[^] arrives on site and is prepared for melting
 - This could result in several weeks delays for melting from the advised date
- To overcome this reduced revert generation you must consider:
 - **Increasing the virgin* content to allow the revert volume to normalise**
 - **Utilise one of our 8 furnace capacity options**

Various Melting options to optimise revert levels

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) *	

* 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



Timeline for deliveries (Virgin & Revert) based casts

- Typical manufacture to despatch for a 100% Virgin* order is 4 weeks from receipt of PO & contract review
- Typical manufacture to despatch for a Revert bearing ratio is based on the following:
 - Revert processing/sorting approx. 5-10 working days
 - Manufacture to despatch of alloy 5 to 6 weeks (subject to revert availability & condition^)

Superalloy manufacturing excellence



- Vacuum melting since 1968
 - 150 employees
 - 191,000 ft² facility
- Aerospace, IGT, additive manufacturing, automotive and biomedical sectors
- Investment casting and Metal Powder Manufacturing (VIGA, EIGA and PREP)
 - Over 50-years history of product and process development

What do Ross & Catherall provide?

- Supply chain confidence ✓
 - Known element prices/availability for all alloy requirements for 3,6,9 & 12 months (based on volume commitment)
 - Guaranteed melting slots and volume commitment*
 - Latest furnace technology of any superalloy cast bar stick manufacturer worldwide
 - Known, programmed deliveries
- Flexibility ✓
 - Scheduled melting and delivery to align with your customers forecasts/demands*
 - Largest range of melting furnace capacities from 500kg-7200kg (8 furnaces in total) – widest choice worldwide
 - Revert managed, prepared in-house and available to meet known melt demand
- Location ✓
 - Centrally located for deliveries worldwide
- In-house revert processing & preparation facility ✓
 - Revert managed and shipped from customers worldwide
 - Revert prepared, stored and available to meet known melt demand – readily available*
 - Revert is utilised sooner and alloy cast bar stick is delivered in time, in full



New 4t furnace commissioned October 2023



In-house Revert Processing, Storage and Secure Stocking



- Customer revert segregated, prepared & cleaned for melting
 - Revert storage “closed-loop” guaranteed
 - Revert ready for use in one of our 8 furnaces



Advantages of using Ross & Catherall

Our expertise adds value to chemical elements to meet customers exacting “chemistries”

Located “centrally” to all major Aerospace & IGT producers

- We are a technological, quality and service orientated supplier with the most flexible melting capabilities of any superalloy cast bar stick manufacturer worldwide.
- We will beat or at least match the competition on quality:
- Cleanness ✓
- Low N <5ppm ✓
- Low S & Super Low S < 3ppm and < 1ppm ✓
- Fully accredited laboratory with ISO17025:2017 & Nadcap approvals ✓
- Largest volume capacity range of 8 VIM furnaces worldwide for cast bar stick supply ✓

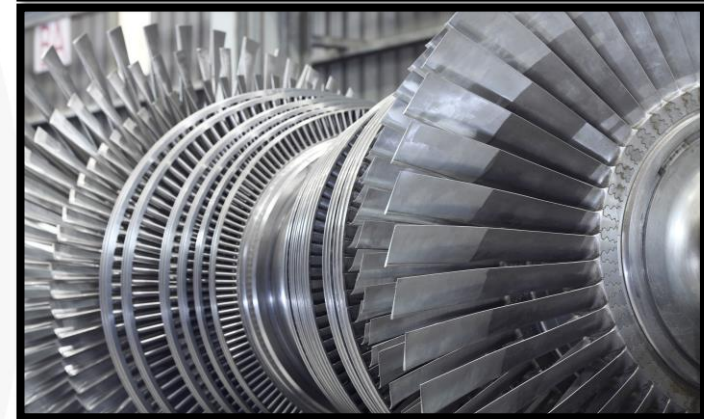
Industry Approvals

- AS 9100: Rev D / ISO 9001: 2015
- ISO 14001: 2015 Environmental Management Standard
- ISO 45001: 2018 Occupational Health & Safety Management
- ISO17025: 2017 Testing and Calibration Laboratories
- Nadcap (MTL)

Copies of all certificates can be provided



Materials Testing Laboratories



SERVING THE GLOBAL COMMUNITY

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- Aerospace, IGT, Additive Manufacturing, Space Exploration and biomedical sectors
- Supplying to the Investment casting and Metal Powder Manufacturing industries
- Over 50-year history of product and process development

