

# Capability Statement



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- Engineering & Gear Cutting
- Horticultural and Nursery Equipment
- Material Handling Equipment
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# Introduction

C-Mac Industries is a specialist sheet metal and engineering manufacturer with significant expertise in Sheet Metal Fabrication, CNC Precision Machining & Gear Cutting, Horticultural & Nursery Equipment, Material Handling Products & Projects, Maintenance, Design Services and Insulating Oil Treatment Equipment. The workgroup is comprised of project managers, project engineers, electronics engineer, tradesmen, apprentices, toolmakers, fitter welders, sheet metal workers, electricians, fitter machinists, design and maintenance engineers all with experience in our specialised field. C-Mac Industries delivers a higher quality of workmanship underpinned by a culture of looking after the customer. This ensures the safest and most productive outcomes for customers.

All staff at C-Mac share in Ownership Status striving to provide Innovative Metal Solutions to solve our customers' problems. We believe that [the versatility of skilled and experienced staff, advanced & diversified range of machinery in house will ensure](#) quality products and services are delivered as customers require. One off small run jobs to high volume production, C-Mac Industries always targets high quality and shortest lead times. Excellent customer service always meets or exceeds our customers' expectation.

As an Australian Made and Owned Company for over 46 YEARS, all staff are committed to C-Mac's MISSION and VISION in the organisation. C-Mac Industries sustains values through training, workplace behaviours, contract selection and customer/supplier relationships. Staff believe the commitment to our mission and vision separates us from our competitors.

## C-MAC'S MISSION

- To provide high-quality, high-value innovative metal solutions to our Australian and overseas customers;
- To achieve this through the skilled, safe hands of our trades people;
- To make a difference to our clients and reassure them through the creation of fabricated metal products, which we are proud to make and they are proud to own.

## C-MAC'S VISION

- Continue to expand as an innovative business whose ownership is shared between the founding family and its employees;
- Clients continually receive value for the money they are investing, in their C-Mac manufactured solution and being reassured by knowing that their work is in safe hands;
- Ongoing training of apprentices and staff, builds skills for the future, and sustains Australian manufacturing.

## Business Units

C-Mac is comprised of seven units –

- Sheet Metal Fabrication
- Engineering & Gear Cutting
- Horticultural and Nursery Equipment
- Material Handling Products & Projects
- Maintenance Service
- Design Service
- Insulating Oil Treatment Machinery

Humbly started in a garage more than 47 years ago, C-Mac's founder Cliff McMaster was able to fabricate stainless steel exhaust manifolds for inboard ski boats, which were something very special and hard to obtain at that time

To this day, with a comprehensive range of computerised equipment to assist skilled and experience tradesmen, our detailed sheetmetal fabrication and CNC Machining Shop are able to provide "innovative sheet metal solutions" by manufacturing items, products and equipment that customers have trouble sourcing or getting designed and manufactured.

C-Mac specialises in:

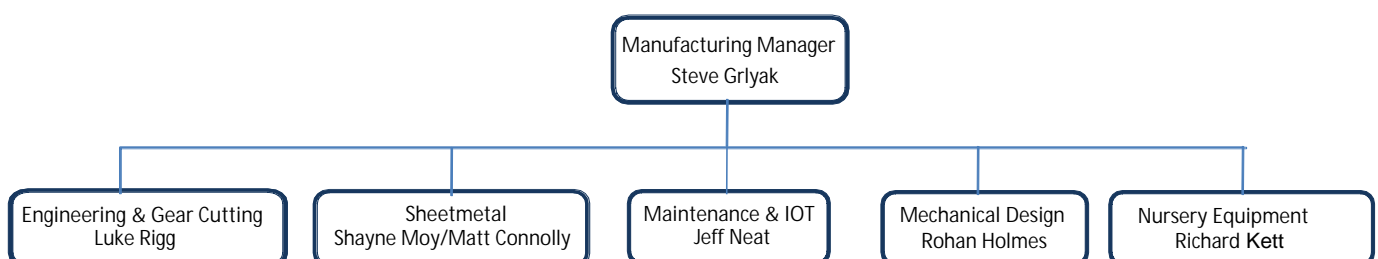
- Purpose built products & components
- Component Engineering
- Emergency Break Down Services
- Restoring Damaged Parts
- Metal Products & Component Prototyping
- Onsite Work: Sheet Metal Fabrication, Installation & Service work



(Manufacture Manager, Steve Grylak)

## Lead Personnel

Our people are the point of separation between us and our competitors. The leadership group is outlined below and full Job Specifications are available upon request.





## Sheet Metal Fabrication





## Sheet Metal Fabrication



### Sheetmetal Services in-house and onsite

Cover every aspect of sheetmetal fabrication including cutting, folding, notching, pressing, perforating, guillotining, punching, TIG, MIG and Oxy welding, bending, forming, rolling, corrugating, lock seaming, cropping, drilling and painting are all done at C-Mac. Laser Cutting Services, Water Jet services, Wire Cutting services and Tooling services are also available.

### Metal Products

Custom metal products and metal components including Transitions, Walkovers, Walkways, Hand rails, Platforms, Cabinets, Frames, Architectural features, Structural components, Building Projects and Installations, Enclosures, Cubicles, Tanks, Hoppers, Chutes, Air & Dust Ducting, Housings, Panels, Racking, Screens, Drip trays, Architectural work, Machine Covers & Guards, Bench Tops, Machinery and many more.

### Material in use

Stainless Steel, Mild Steel, Galvanized Sheet, Aluminium, Zinc Annealed Steel, Structural Steel BHP Sections, Perforated Steel, Woven and Wire Mesh, Expanded Mesh, Bisalloy, Zinc, Titanium Zinc, Copper, Brass, Plastic, Cast Iron, Incoly, Manganese Steel and more.

### Area

Sheetmetal workshop - 1,550m<sup>2</sup> office - 234 m<sup>2</sup> yard - 2000 m<sup>2</sup>

### Trades Staff

Sheetmetal workers, Fitter welders, Boilermakers, Fitter & machinist Toolmakers. Trades assistants and General Hands.



## Sheetmetal – Detailed sheetmetal fabrication

Having the facility to cut sheet material economically is considered the core of the sheetmetal fabrication shop. The High Definition plasma cutting machine with its large bed taking sheets up to 2.4 x 6.0 metre is used for profiling parts up to 32mm in thickness. The skilled tradesmen in the sheetmetal shop then fold, roll, shape and weld to suit the application as detailed and specified by the design engineers and/or customer.

Processes: Every aspect of sheetmetal fabrication including folding, notching, pressing, perforating, guillotining, punching, TIG, MIG and oxy welding, bending, forming, rolling, corrugating, lock seaming, cropping, drilling and painting,

### Equipment:

- High Definition CNC Plasma Profiling
- CNC Pressbrake
- Automatic Internal Welding Machine
- Cincinnati Guillotine with digital back stops
- Welding machines
- Notching tool capable of a 300mm notch.
- Rolling machines for bar, angle and sheet for cones cylinders and tubes up to 3mm thick x 2.44m long;
- Seaming and lock forming equipment;
- Cropping machine for bar & angle;
- Pipe and tube bending (hydraulic and mechanical);
- Overhead travelling Cranes 3 tonne and 6.4 metres under the hook, all lifting equipment is certified and inspected;
- Cold Sawing, punch presses, bar bender, Pan Brakes and a host of other allied equipment and accessories.

Sheet size 6m x 2.4m, 0.45 to 32mm thick, can be cut.  
220 tonne x 4.3 metres  
25 to 500mm dia. holes.  
capable of cutting 6.0mm x 3.0m  
for MIG, TIG, oxy and spot welding processes.

Materials: Mild steel, galvanized sheet, stainless steel, aluminum, copper, aquaplate, and brass available in sheet, BHP sections and tube.

Products: Enclosures, cubicles, tanks, hoppers, chutes, air and dust ducting, housings, panels, racking, screens, drip trays, architectural work, machine covers and guards, bench tops and machinery.

Facilities: Multiple welding bays with fume extraction, large piped compressed air facility, Semi-trailer access, 3 tonne overhead crane (wall to wall coverage), yard crane. Large hard standing area. Gas yard with various gases piped throughout factory to work welding bays. Spray booth with fume extraction 4m wide x 6m deep x 2.5m high. Range of steel stock.



## Engineering & Gear Cutting





## Engineering & Gear Cutting



### CNC Precision Machining & Gear Cutting Services (in-house and Onsite)

- CNC Milling, CNC Turning, CNC Gear Cutting
  - Re-engineering, Reverse Engineering, Component Engineering, CNC Precision Engineering
  - Drilling, Grinding, Broaching, Fitting, Splining, Keyway Cutting, Threading, Sawing, Reaming, Tapping, Boring
- Metal & Plastic Products

- (1) Pins, Pulleys, Fittings, Threading, Rollers; Screws; Shafts including Coupling;
- (2) Piston control valves, Brass inserts, Neck rings, Shaft sleeves, Hose connector, Nuts(domed, elbow, lock), Nipples, Nozzles, Sockets, Rods, Bleed screws, Studs, Plugs, Pistons, Rivets, Valves, Spindles, Bolts, Tubes, Transmission drives, bearings, jigs and special purpose machinery components
- (3) Gears such as Spur gear, Helical gear, Worm gear, Herringbone gear; Sprockets etc

### CNC Precision Component Materials

- Stainless steel, aluminium, incolloys, copper brass and bronze, alloy steels, castings and forgings, bronze;
- Special Steel, High tensile, Bisalloy and hardened steels;
- Plastics and Engineered plastic, felt and synthetic materials including urethane and rubber;
- Composite fibre

### Area

- (1) Engineering workshop -510m<sup>2</sup> workshop -510m<sup>2</sup> Yard -2,000m<sup>2</sup>
- (2) Gearcutting workshop -260m<sup>2</sup>

### Trades Staff

CNC Machinists, Fitter Machinists, Mechanical Engineers, Toolmakers, Sheetmetal workers, Fitter Welders and Boilermakers





# Engineering New and Replacement Machined Parts

## C-Mac Engineering, New and Replacement Machined Parts (Also Import Replacement)

Although C.N.C. machines dominate the factory there is also a full range of machines considered essential to a general engineering shop. Secondary processes include radial arm drilling, milling, turning, slotting, cylindrical grinding and various cutting equipment

### Equipment:

- CNC Vertical Machining Centre
  - CNC Turning Lathes
  - Vertical bandsaw
  - Automatic Saw
  - Radial Arm Drilling
  - OTC Hydraulic Press
  - Universal & Turret Mills, Centre lathes, Tool & Cutter grinders, drill presses, tap removal, and other allied pieces of equipment.
  - Extensive range of measuring equipment and gauges.
- Travel x = 560mm, y = 410mm z = 410mm. 20 Tool changes  
up to 620mm dia. x 1100mm between centres,  
110mm dia. spindle bore,  
With special tooling: max.OD Turning 910mm dia. x 250mm long,  
780mm throat x 480mm thickness.  
250mm capacity  
55mm dia. capacity x 1.5metres  
55tonne x 600mm stroke

Materials: Incolloys, plastics, stainless steel, copper brass and bronze, alloy steels, aluminum, castings and forgings. Plastics, Felt and synthetic materials including urethane and rubber.

Products: Shafts, transmission drives, turned components, bearings, jigs and special purpose machinery components..

Facilities: 3.2 tonne overhead crane (wall to wall coverage). Range of steel stock.

### C-Mac Gearcutting, additional services

The range of gear manufacturing machinery parallels the engineering capability. Engineering makes the gear blanks and shafts; gear cutting completes the service.

Area: Gearcutting workshop - 260m<sup>2</sup>

Processes: Keyways, slotting, gear hobbing & shaping in spur and helical forms, internal and external splines, broaching, tooth rounding, tooth deburring

### Equipment:

- Slotting machines
  - Fellows gear shaping
  - Gear hobbing
  - Over 320 hobbing cutters covering a large range of tooth profiles.
  - Splines up to 80mm dia.
  - Broaches for internal splines straight sided and involute: up to 50mm dia. x 1.2m broaches
- throat depth of 600mm x 280mm stroke  
internal gears up to 6 Module x 400mm ID max.  
external gears up to 3 Module x 450mm OD max.  
2.5 to 10 module x 600mm OD max.

Materials: Steel, castings, bronze, composite fibre and engineered plastics.

Products: Gears manufactured include spur and helical gears, in metric and imperial sizes, worm gears, splines and pinions. Heat treatment and gear grinding organised.



## Horticultural and Nursery Equipment





## Horticultural and Nursery Equipment



### Horticultural and Nursery Equipment

- (1) Nursery Benches and Shade House;
- (2) Manual Potting Equipment such as Potting Station, Potting Bench and Hopper, Potting Trailer, "Beantree" Dispatch Bench, Potting Bench And Shelf, Pot Accumulator;
- (3) Potting Machines such as Continuous Conveyor Potting & Mixing Machine, Jarvo Soil Drills and C-Mac Potting Machine;
- (4) Soil Mixers;
- (5) Different types of trailers;
- (6) Steam Sterilising and Steam Pasteurisation System;
- (7) Other Horticultural and Nursery Equipment such as Trommel System, Pot Handlers, Pallet Racking, Trolley, Rotating Table, Rolling Benches, Trough benches

### Competitive Advantage

- (1) High Quality (ISO 2008 Certificated)
- (2) Short Lead Time (always underpromise and overdeliver)
- (3) Customisable (Any special orders are at a minimum cost due to our modular system)
- (4) Reduce transport cost (Most of our equipment could be supplied in flat pack/kit forms)
- (5) Product Part ID System (Makes it extremely easy for re-ordering or replacing parts)
- (6) Your jobs are in safe hands (Market Leader in the industry, with over 40 years experience)





## Material Handling Products & Projects





## Material Handling Products & Projects



### Material Handling Products & Projects

- (1) Bagging Machines include Ezi Bagger Machine, Gravity Bagger, Bulk Bagger, Bagging Frames, Quick Sander, Bulk Bagger Filling lines, Bag Flattener, Bag Sealers, Emergency Sand Bagger
- (2) Conveyors include Mobile Conveyors, Drum Spiral Conveyors, Custom Design Conveyors
- (3) Feeder Bin and Vibration Feeder
- (4) Automated Solutions (material handling solutions) for "a bottle-neck, WH&S issue, inefficient process, dust problem, blockages, conveyor spillage, loading/unloading issues, plant upgrade, lubrication problems, don't know how to move something issues;

### Competitive Advantage

- (1) High Quality (ISO 2008 Certificated)
- (2) Short Lead Time (always underpromise and overdeliver)
- (3) Versatile (wide range of versatile trades people and equipment readily available)
- (4) Reduce transport cost (most of our equipment can be supplied in flat pack)
- (5) Product Part ID System (make it extremely easy for re-ordering or replacing parts)
- (6) Your jobs are in "safe hands" (Market Leader in the industry with over 40 years' experience)





## Insulating Oil Treatment (IOT)



### Oil Reconditioning Equipment Manufacture

- (1) Fabricate and engineer the equipment according to our in-house design;
- (2) Machine update/ spare part replacement;

### Oil Reconditioning Service

- (1) Maintenance: Regular service and maintenance contract
- (2) Operator Training
- (3) New machine commissioning

### Competitive Advantage

- (1) High Quality Machinery and Services (ISO 2008 Certificated)
- (2) Short Lead Time (always underpromise and overdeliver)
- (3) Convenience (Product and Service Packages)
- (4) Customisable (mobile or free standing for treating the oil to suit different conditions)
- (5) OEM Benefit (made & serviced in Australia spare part supply is readily available)
- (6) Your jobs are in "safe hands" (Market Leader in the industry with over 15 years' experience)





## Maintenance and Design



### Maintenance Services in-house and onsite

(1) Reverse Engineering & Re-Engineering collaborating with sheet metal fabrication workshop

#### in-house

- Restored Damaged Machinery/Parts/Components;
- Imported Parts/Components Replacement;
- Machinery Emergency Breakdown;
- Plant constructions and upgrades;
- Rectifications and Onsite Installations.

(2) Insulating Oil Treatment (IOT) Machinery Maintenance

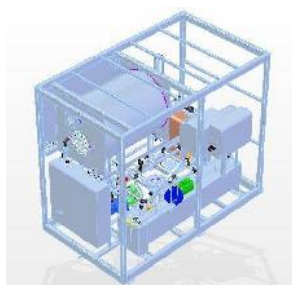
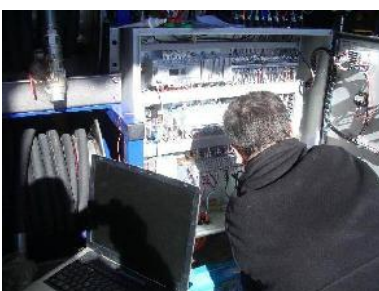
- Detailed inspection;
- Record details of all components for any future spare parts requirements;
- Provide a detailed "service report" listing recommended service requirements;
- Recommend any short term or long term repairs;
- List any recommended equipment updates and improvements.

### In-house Design

(1) Supply professional and accurate mechanical design services and design calculations;

(2) Produce professional, accurate and easy to read manufacturing drawings using 3D CAD software

(3) Designers with industrial experience show the finished product before you start manufacturing



## Employee Buyout

How do you move from family ownership to “employee” ownership, whilst keeping the good character, professional skills, loyal employees and various capabilities of the company intact? C-Mac’s ownership share plan managed to achieve this.

C-Mac was presented with the national award for “Best employee share plan for SME’s / Succession” at the inaugural Employee Ownership Conference and awards dinner in May 2012 at the Sofitel in Melbourne.



Why is Employee Ownership so important?

Employee ownership is a factor that impacts company performance, morale and broader employee engagement. Well designed and implemented employee ownership programs increase productivity for the organisation which leads to a direct gain for the Australian economy.

“The engagement of C-Mac employees as owners has already seen an 18 % hike in productivity at the plant” ----- Craig West (CEO of Succession Plus);

“People are now saying ‘us’ instead of ‘me’ and asking ‘what do you want us to do?’ Our meetings are now open for discussion with great ideas from all staff on how to improve efficiency.” ---- Product Manager Steve;

“The McMaster family has provided more info and is now more open to allow people to make decisions and contribute ideas to the plan, allows employees to work harder/smarter to make more money to allow us to buy more shares ” ----- Ben (Tradesman at C-Mac);

“Being a board member has definitely given me a much different perspective on the way the business runs. I now have a lot more respect for the decision makers and have found that a lot of the day to day issues aren’t as clear cut as they seem. I’ve found it quite interesting so far and can only imagine it will get more exciting.” -- Technical Officer and staff elected Board Member Matthew;

“I will be constantly on the lookout to improve the business and carry a sense of pride when representing the company during or even after work hours. It has also made me think long term in regards to my employment and also in regards to future opportunity with C-Mac.” ---- Sheet Metal Estimator Matt

As an Australian Made and Own Company for over 46 years, where our employees share the ownership, we strive to provide you [Innovation Metal Solutions](#) and make sure [Your Jobs Are In Safe Hands](#).





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