



# C-Mac Industries (Aust) Pty Ltd

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## Complete Engineering & Manufacturing Service

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### *Profiling capability, capacity and facilities.*

### **C-Mac Industries (Aust) Pty Ltd**

Established in 1966 C-Mac is a private Australian company focused on providing a complete engineering service, from small components to complex special purpose machines and detailed fabrication. The range of engineering processes has been segregated into five operating divisions:

- ❖ **C-Mac Engineering & Gearcutting**
- ❖ **C-Mac Sheetmetal**
- ❖ **C-Mac Nursery & Horticultural equipment**
- ❖ **C-Mac Maintenance Services**
- ❖ **C-Mac Design Services**

Grouping these core competencies/trades and equipment creates a complete manufacturing facility, concentrating on providing advice to customers for their requirements, in a bid to satisfy part or all of their contract, manufacturing or maintenance needs.

To drive the advanced range of computer controlled equipment, a range of software products has been installed enabling machinery to optimize manufacturing methods and materials, minimize drawing and programming times, efficiently handle process control, design, accounts, office and customer relationship requirements along with internet and e-mail. This means all customer records created can be controlled efficiently thus allowing effective transfer of manufacturing information and reducing on-going manufacturing costs.

Having a core of advanced computer controlled equipment means there are inherent benefits for the customer and for production control. CNC equipment means accuracy and repeatability, easy to use flexible software means less dependence on large production volume and the added facility to produce for just in time flexible manufacturing systems.

**C-Mac** have addressed the service aspects of the manufacturing process to ensure customer requirements, involvement, and access to key staff remain the priority, this also extends to the quality system, where **C-Mac** is accredited to ISO9001: 2008. **C-Mac's** Quality, Safety, & Environment Company Manual is constantly being reviewed with procedures and control systems for the factory and through to the accounts department. Keeping up with modern management and manufacturing processes, training of staff and apprentices, OH&S, environmental issues and other statutory and legal requirements, is an ongoing and improving process.

With a significant investment in buildings & yard area, plant equipment and expertise of staff, **C-Mac** are ideally suited for manufacture of new and replacement parts, prototypes and short run production through to project work. **C-Mac** has a diverse customer base and service a wide range of industries at all levels of supply.

# *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

**Area:** Engineering workshop -510m<sup>2</sup>                      Office-36m<sup>2</sup>                      Yard -2,000m<sup>2</sup>

### **Equipment:**

- CNC Vertical Machining Centre (Hitachi)                      Travel x = 560mm, y = 410mm z = 410mm.                      20 tool changes
- CNC Machining Centre (Okuma)                      x = 1.050mm, y = 560mm, z = 460mm
  
- CNC Turning Lathes (Hitachi)                      up to 620mm dia. x 1100mm between centres,  
110mm dia. spindle bore,  
With special tooling: max.OD Turning 910mm dia. x 250mm long,  
with milling capability 300 dia. x 1060 long.
  
- CNC Turning Lathe (Okuma)
  
- Vertical bandsaw (Pehaka)                      780mm throat x 480mm thickness.
- Automatic Saw (Kasto)                      250mm capacity
- Mas Radial Arm Drilling                      55mm dia. capacity x 1.5metres
- OTC Hydraulic Press                      55tonne x 600mm stroke
- 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.

**Materials:** Incolloys, plastics, stainless steel, copper brass and bronze, alloy steels, aluminium, 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                      Up to a throat depth of 600mm x 280mm stroke
- Fellows gear shaping                      internal gears up to 6 Module x 400mm ID max.  
external gears up to 3 Module x 450mm OD max.
  
- Gear hobbing                      2.5 to 10 module x 600mm OD max.
- 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

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

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

## C-Mac 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 6.0m 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.

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

**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      Sheet size 6m x 2.4m, 0.45 to 32mm thick, can be cut.
- Synchromaster Pressbrake      220 tonne x 4.3 metres
- Automatic Internal Welding Machine      25 to 500mm dia. holes.
- Cincinnati Guillotine with digital back stops      capable of cutting 6.0mm x 3.0m
- Welding machines      for MIG, TIG, Oxy and Spot Welding processes.
- 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.

**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.

**Trades Staff:** Sheetmetal workers, Fitter welders, Boilermakers, Fitter machinist Toolmakers. Trades assistants and General Hands.

# C-Mac Engineered Products

C-Mac also extends its capability into assembly of finished products. The in-house ability to produce machined parts such as transmissions, and drive mechanisms and then build frames, hoppers and enclosures means we can provide a full conversion service, producing complete assemblies from components manufactured in the divisions to suit customer specifications.

## **For companies and overseas organizations**

- ❖ Undertaking engineering activities that are not core to their business and are looking for a solution, C-Mac can offer an alternative.
- ❖ Requiring a proto-type capable facility, C-Mac has the know-how and facilities under one roof.
- ❖ Importing manufactured products or machinery and finding prices escalating we can reverse engineer and make the goods locally in Australia.
- ❖ We can manufacture under license and undertake distribution using our sales and local knowledge of companies and markets.
- ❖ Engineering mechanical design and drawing service in house.

**Processes:** Design, construction, assembly and testing. Installation and after sales service.

**Trade Staff:** Sheetmetal workers, Fitter welders, Boilermakers, Fitter Machinist, Toolmakers and Mechanical Engineers.

**Materials:** as required for the projects

## **Other Products:**

- C-Mac also provides a range of materials handling equipment and “tailored solutions” for the Nursery, Horticultural Sand & Soil Industries. e.g. conveyors, mixers, trailers, benching, pasteurisation equipment and bagging machinery

## **Additional Services**

- 1 tonne pick-up & delivery vehicles (gas & diesel)
- 2.5 t Container packing Komatsu Forklift
- Ready access to Technical Staff for Customer Service.
- Modern offices and conference facilities.
- Visa and MasterCard facilities.
- Website with comprehensive information [www.cmac.com.au](http://www.cmac.com.au) or email: [info@cmac.com.au](mailto:info@cmac.com.au)

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**C-Mac Industries (Aust). Pty Ltd.**

Divisions:

C-Mac Sheetmetal

C-Mac Engineering & Gearcutting

C-Mac Maintenance Service

C-Mac Design & Drafting Service

