

# ACUMAT AUSTRALIA

## Company Profile

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Acumat Australia, founded fifteen years ago, has grown to be Australia's largest Machine Tool breakdown service company and exceptional mechanical CNC retrofitter / Machine Tool reconditioner. We have built this reputation not just with our uncompromising commitment to quality of workmanship, output and service, but also because of our honesty, integrity and loyalty to our clients, partners and suppliers.

Over the last fifteen years, Acumat Australia has successfully completed more than one hundred (100) large projects 15 of which we have executed overseas, all to a consistently high standard and to tight schedules.

### Commitment

We made a commitment at inception to deliver a total quality package to our clients. To this end, we have specialised in the following areas:

Service, repairs and programmed preventative maintenance Large machine installations/relocations (turnkey)  
Laser alignment, levelling and calibration.

Design and manufacture C.N.C. Retrofits, Reconditioning, Slideway grinding Special purpose machine design, manufacture and build.

*- Stephen Donald  
Managing Director  
Acumat Australia*



### SERVICE, REPAIRS AND PROGRAMMED PREVENTATIVE MAINTENANCE:

We offer four mobile service vehicles, machine assessment reports, 'in-situ' spindle nose regrinding, design and provision of programmed maintenance programs and schedules.

We have now run programmed maintenance contracts in the toolrooms of both GMH, Elizabeth and Toyota, Altona for the last eight (8) years as well as in several smaller

production companies such as Flowserve Australia (Valtek) and Abcor.

More recently we have secured contracts in BHP Billiton. Metso Papers programmed maintenance contract is for their Waldrich Siegen Roll Grinder and Poreba Roll lathe.



## LARGE MACHINE INSTALLATIONS:

We have installed a host of large Machine Tools and production equipment, the largest being a CNC Beam Line of approximately 76 metres in length. This service includes the following functions:

- Foundation design and build
- Strip down and reassembly
- Cranage and transport between locations
- Installation, alignment and level
- Electrical disconnection and reconnection
- Final commissioning.



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## LASER ALIGNMENT, LEVELLING AND CALIBRATION:



We work closely with ACM Laboratories who are NATA Registered for Machine Tool positioning accuracy and geometric feature calibration (traceability being essential for AS9000 systems compliance).

We possess and hire the following equipment to align, level and calibrate Machine Tools, production machinery and to provide certification:

- Optodine MCV 4000 Machine Calibration Laser;
- Renishaw ML10 Laser Interferometer;
- RTH Micro-alignment Telescope;
- Autocolimator;
- Wyler electronic levels;
- Spectra Physics site laser (100-metre range);
- and a host of steel, cast iron and granite straight edges, squares, master squares, parallels, V-blocks, etc.

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## DESIGN AND MANUFACTURE:

At Acumat Australia we prefer to keep as much design and manufacture 'in-house' as possible in order to keep tight control on quality. To achieve this we have the following facilities:





## DESIGN:



Computer aided design utilising Autodesk Inventor 3D software for the design of systems, assemblies and components; design of general arrangements and detail designs for CNC retrofits, additional robotic axes, positioners and effectors, and special purpose machines.

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## MANUFACTURE:

Machine shop with lathes, milling machines, Herbert De-Vlieg Jig Mill, Churchill slideway grinder, Blohm surface grinder and numerous small machines;

A fabrication bay with Mig, Tig, Arc and Oxy welding facilities;

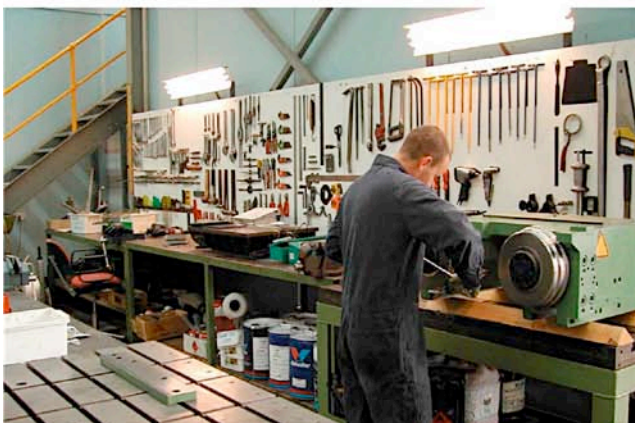
Steam cleaning bay;

Spray booth;

A fitting bay with benches, 30 Tonne press, granite and cast iron surface tables, granite and steel straight edges, master squares, all metrology equipment, pedestal drills, compressed air etc;

10 Tonne overhead gantry crane and a plethora of lifting gear

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Manufacturing equipment

## C.N.C. RETROFITS:

Since inception, Acumat has enjoyed a very close partnership with CNC Design Pty. Ltd. Together we offer the following services:

- Design and manufacture of new drive and motion systems;
- Re-engineering of machine tools to suit new criteria;
- Supply and installation of new measuring systems;
- Supply and installation of motion control systems;
- Commissioning;
- Operator training on new control systems, machine operation and function



One of three Herbert De Vlieg Jig borers reconditioned and CNC retrofit by Acumat and CNC Design.



Heckert Roll lathe, reconditioned and retrofit for Gear & Shaft by Acumat and CNC Design.

Below are before and after photographs of one of three Morando VS 14 Vertical Borers reconditioned and CNC Retrofit by Acumat and CNC Design for Smorgon Steel Manufacturing.

All three machines prior to the retrofit were hydraulic /electric copy turning machines.

We fully reconditioned these machines and converted all axes to ballscrew drive and six channel CNC control, enabling each head to contour machine a different path to the other two heads.

Smorgon Steel has reported a threefold improvement in production rates from these machines since the recondition and CNC retrofit.



Wagner Roll Lathe  
CNC retrofit by Acumat  
and CNC Design for  
Voith Paper -Indonesia.





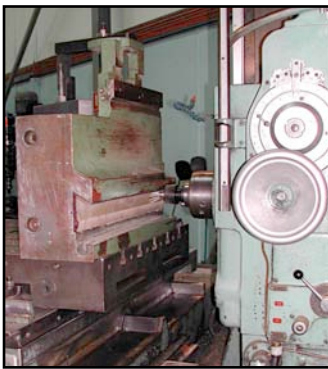
## RECONDITIONING AND SLIDEWAY GRINDING:



We undertake total reconditioning of Machine Tools and production machinery. This work includes:

- Strip down and assessment of machine;
- Slideway grinding;
- Relining of old slideways with new material such as turcite, unascite, rulon, bakelite, bakelite backed nylon and bronze;
- Hand and machine scraping of slideways, keepers and gibs;

- Hand and machine half moon "mottling or flaking" of slideways, keepers and gibs;
- Reconditioning of spindle heads, facing heads, large cross roller bearings, gearboxes, saddles, slideway assemblies, etc;
- Re-engineering of lubrication systems;
- Final painting (two pack epoxy enamel).



## SPECIAL PURPOSE MACHINES:

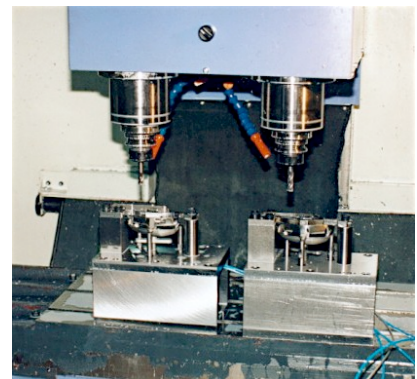
Over the last few years we have designed and built the occasional special purpose CNC machine. The first was a 2.1 metre swing x 300mm stroke CNC Lathe for the machining of urethane seals. The second was a 12-metre stroke CNC high definition plasma profiling and drilling machine for processing Chassis Rails for Kenworth Trucks. The third and fourth machines were roll-grooving lines for Onesteel.

Below

FBL 2100 – Special purpose 2100mm swing CNC lathe, designed and built for Oz Seals.

Start of build -Chassis rail machine built for Kenworth Trucks.

Double spindle milling head conversion for Super Alloy



## THE TEAM:

Our team is a cohesive collection of highly self motivated individuals, selected for their attitude, knowledge and skills and continually trained in both the old “arts” of reconditioning and in the latest in Machine Tool technological advances.

They have one goal – to be the best.

All team members work extremely well both individually and as a team, and most importantly, they enjoy their work. This is reflected in the quality of our workmanship and our retention rate – only three team members have left us in fifteen years.

Although each team member has their own areas of expertise, they are all multi-skilled and can competently support each specialist.

All our work is scheduled and is reviewed weekly. During peak periods and major projects we review progress daily.

### **Our team consists of:**

- Seven machine tool fitters / toolmakers;
- One welder / fabricator;
- One apprentice;
- Two mechanical engineers;
- One engineering and project manager;
- One office manager;
- One sales engineer / managing director.

## RECONDITION AND/OR CNC RETROFIT REFERENCES:

Machine Type	Make	Size	Qty
<b>Lathes:</b>			
Roll Lathe	Heckert	Ø 1.5 x 8metre	1
Roll Lathe	Wagner	Ø 4 x 18metre	1
Roll Lathe	Toshiba	Ø 1.5 x 9metre	1
Roll Lathe	Weisser	Ø 0.9 x 3metre	1
Chucking lathe	Acumat	Ø 2.2m x 0.3m	1
Portal Wheel lathe	Hegenscheidt	Ø 1.5 x 2 metre	1
Portal Wheel lathe	Rafimet	Ø 1.5 x 2 metre	1
Underfloor lathe	Hegenscheidt	Ø 1.5 x 2 metre	1
Vertical lathe	Schiess	1500 swing	1
Vertical lathe	Morando	1300 swing	2
Vertical lathe	Morando	1500 swing	1
Vertical lathe	Morando	4100 swing	1
Roll Form Lathe	Leifield		1
Turret Lathe	Hardinge		3
Piston Lathe			1
Chucking lathe	Mori – Seiki		1
Underfloor Wheel Lathe – Recondition	Hegenscheidt		1
<b>Milling Machines:</b>			
Plano Mill	Waldrich Seigen	10 metre	3
Plano Mill	Waldrich Seigen	10 metre	1
Plano Mill	Line	10 metre	1
Plano Mill	Kollman	9 metre	1
Plano Mill	Zayer	9 metre	1
Horizontal Mill	Mitsui-Seiki		1
Horizontal Borer	Union		1
Horizontal Borer	Giddings&Lewis		1
Horizontal Jig Mill	De Vleig	1800	1
Horizontal Jig Mill	De Vleig	2450	2
Vertical Jig Borer	Burkhardt	1200	1
Floor Borer	Nomura	10 metre	1
Floor Borer	Wotan	10 metre	2
Floor Borer	Poreba	7.6 metre	1
Bed Mill	Butler Elgamil	12 metre	1
Universal Mill	Schaublin		1
<b>Grinders:</b>			
Camshaft Grinder	Landis		5
Crankshaft Grinder	Hulle-Hille		1
Flute Grinder	Norton		4
Flute Grinder	Hertlein		1

Machine Type	Make	Size	Qty
Gear Grinder	Pfauter		1
<b>Grinders:</b>			
Roll Grinder	Voith	Ø 1.5 x 12 m	1
Roll Grinder	Waldrich Seigen	Ø 1.5 x 12 m	1
T & C Grinder	Reineker		
Clutch Grinder	Sansei		1
Roll Grinder – CNC Retrofit	Herkules		
<b>Miscellaneous:</b>			
Beam Line	Wagner		1
Beam Line	Peddinghaus		1
Beam Line	Peddinghaus		1
Beam Line	Peddinghaus		1
Bed Mill – Ballscrew retrofit	Butler Elgamill	6 metre	
Plasma Cutter	ESAB		1
Chassis Rail M/c	Macson	24 metre	1
Chassis Rail M/c	Acumat	15 metre	1
Chassis Rail M/c		24 metre	1
Blanking Line			3
Cross	Line Borer		1
Turret punch	Amada	1200 x 2400	2
Turret punch	Trumf	1200 x 2400	1
Turret punch	Trumf	1200 x 2400	1
Slitting Line	Wyco		1
Robot – 2-axis end effector	Kawasaki		
Roll grooving line	Acumat	12 metre	1
Roll grooving line	Acumat	12 metre	1
Roll grooving line	Acumat	12 metre	1
Roll Loader			1

## CURRENT PROJECTS:

Machine Type	Make	Size
Chassis rail machine -design and build	Acumat	18 metre
Gear Generator – CNC Retrofit	MAAG	
Gear Measuring Machine	Hofflar	
Universal Drilling Head	Acumat	
Roll grooving line – design and build	Acumat	12 metre
Floor Borer recondition	Butler	17.6
Lathe Recondition	Morie Seiki	



## MAJOR CLIENT LISTING:

We undertake project work for the following companies:

Abcor  
ABB Robotics  
Australian Defence Industries  
BHP Billiton  
Bosch Rexroth Australia  
Caterpillar  
CNC Design Australia, Indonesia, Malaysia, Thailand and South Korea  
Comsteel  
Containers Packaging  
Crontec Tooling Australia  
Cummins Diesel Recon Australia  
Daikin Clutch Australia  
David Brown Woolongong  
Falk Australia  
Flowserve Australia  
Ford Motor Co. Australia  
Frontline Australasia  
Gemco Rail  
General Motors Holden  
Public Transport Corporation  
Halla Heavy Industries -Korea  
Hanjung Heavy Industries – Korea  
HG Farley  
International Trucks Australia (IVECO)  
Mahle ACL  
Melbourne University  
Metso Paper  
Mitsubishi Motor Co.  
OneSteel  
P & N Tools  
Robotic Automation  
Sancell Pty Ltd (Carter Holt Harvey)  
Southcorp Whitegoods  
Suttons Tools  
SmorgonSteel  
Tefco  
Texmaco -Indonesia  
Transfield Shipbuilding Australia  
Toyota Motor Co.  
Unidrive  
United Pumps Australia  
Voith Paper Indonesia  
Volvo Trucks Australia