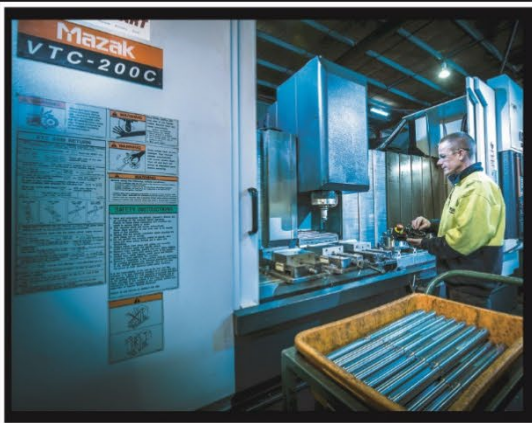


# HERCUS

*Gear Your Future*



***Dynamic Solutions***  
*from concept to manufacture*



# HERCUS PERSONNEL



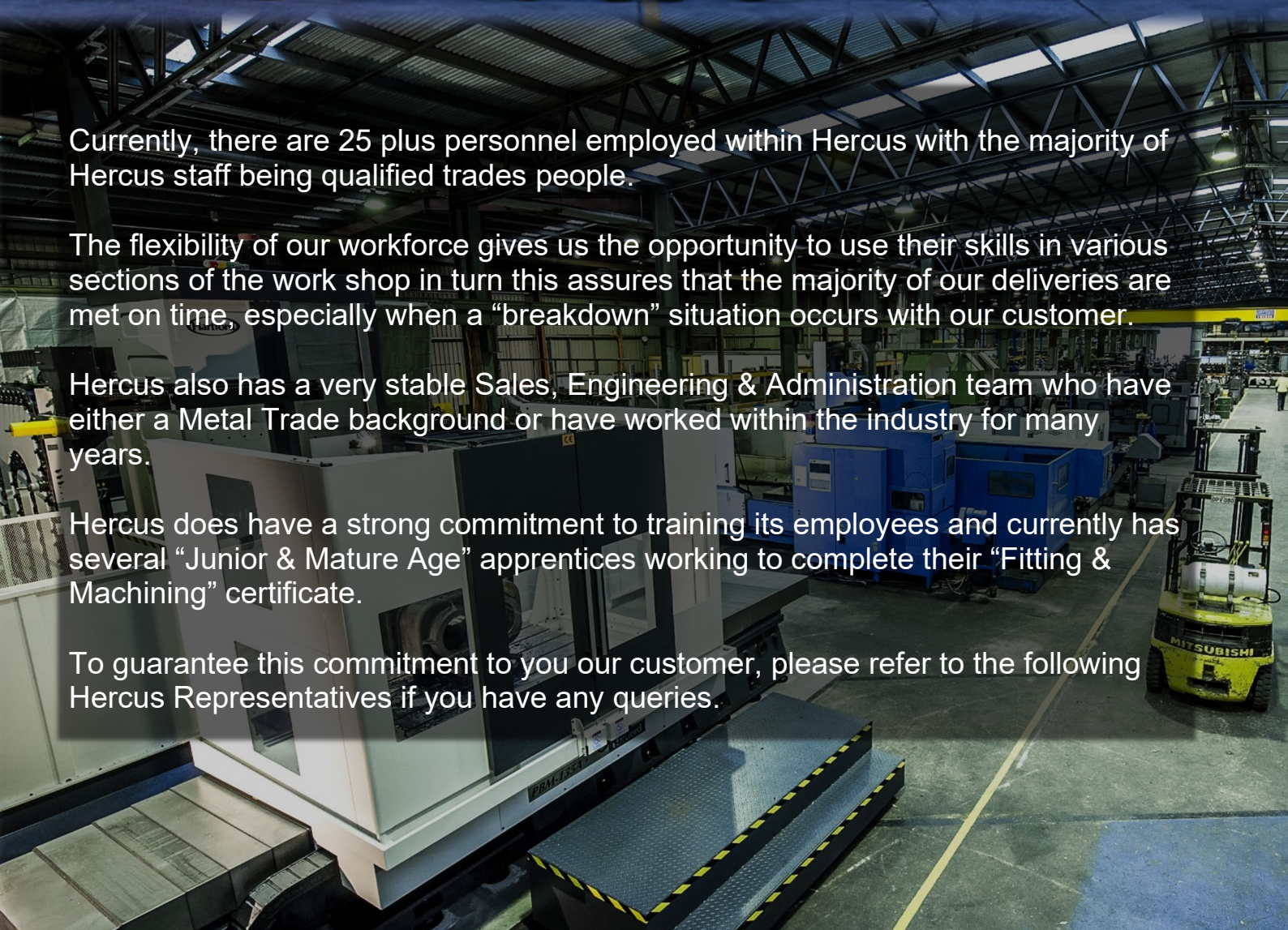
Currently, there are 25 plus personnel employed within Hercus with the majority of Hercus staff being qualified trades people.

The flexibility of our workforce gives us the opportunity to use their skills in various sections of the work shop in turn this assures that the majority of our deliveries are met on time, especially when a “breakdown” situation occurs with our customer.

Hercus also has a very stable Sales, Engineering & Administration team who have either a Metal Trade background or have worked within the industry for many years.

Hercus does have a strong commitment to training its employees and currently has several “Junior & Mature Age” apprentices working to complete their “Fitting & Machining” certificate.

To guarantee this commitment to you our customer, please refer to the following Hercus Representatives if you have any queries.





# DYNAMIC SOLUTIONS FROM CONCEPT TO MANUFACTURE

Hercus offer the complete Engineering and Transmission package for all types of Industries and Situations.

For over 100 years, Hercus have offered the following commitment to their customers of quality product and on time delivery with flexibility, competitive pricing and at all times a "Hands on, open approach".

Furthering enhancing Hercus reputation, we have now achieved ISO 9001 : 2008, and also audited regularly by several large customers, with regard to WHS and Delivery KPI's

Mining, Manufacturing, Agriculture, Food production, Aquaculture, Power generation are some of the Industries Hercus offer their services too.

Whether working together with a major company on a planned shut down or a breakdown on a prawn trawler, Hercus are able to support your needs.

## **The Hercus Workshop services include.....**

Gear Cutting (all forms)	CNC Machining – Milling, Boring, Lathe & Slotting
Worm Grinding	Gear Grinding
Worm and Worm Wheels	Conventional Turning and Milling
Slotting and Broaching	Horizontal Press – up to 400 Tonne
Gearbox Repairs and Refurbishment	All types of Assembly repairs / service
General Welding	Paint Shop
Design and Drafting solutions	

Combined with our workshop services Hercus has access to a large network of outside contractors that allow Hercus to manage the complete project, therefore the customer does not need to deal with several suppliers to get the job done.

## ***Hercus the Dynamic Solutions provider***

Please visit the Hercus website at [www.hercus.com.au](http://www.hercus.com.au) where you can see the full range of Hercus 's services and transmission products available.

If you require an onsite visit, please contact Hercus and one of our Sales Representative will then contact you for a convenient time.





# 5 axis Multitasking Machining



## INTEGREX i400S-AG

- Twin Spindle
- DONE IN ONE Machining
- Eliminates the need for multiple setups
- Hybrid AutoGear (AG) Software

## Able to cut any tooth form:

- Spiral bevel (pictured left top)
- Helical (pictured left bottom)
- Spur (pictured above)
- Double Helical
- Splines (internal and external)



# EXAMPLES OF WORK

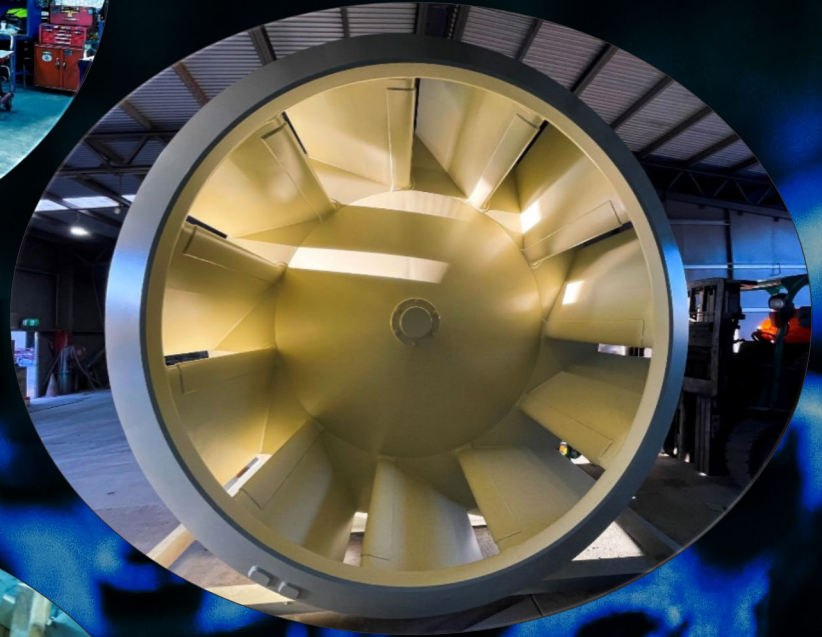


## *VR FAN ASSEMBLY*

3050mm diameter fan and pillow blocks all assembled onto the driveshaft in our fitting section.

## *VR FAN DRUM PAINTED*

AG20-1 paint specification



## *DUST PUMPS*

Usually supplied disassembled as pictured left.

Reassembled with all new internals including Chesterton mechanical seals, barrel bushes and screw.

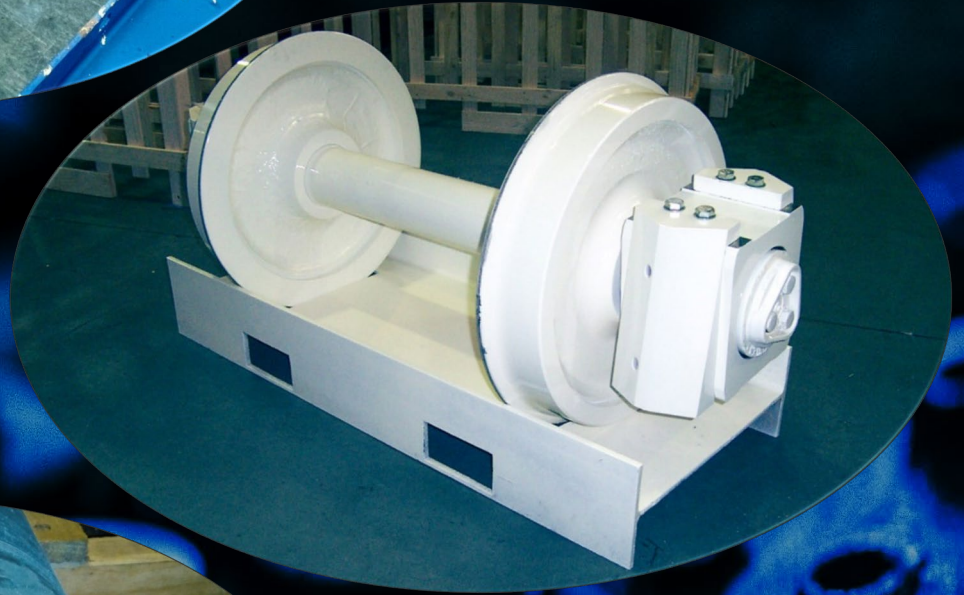






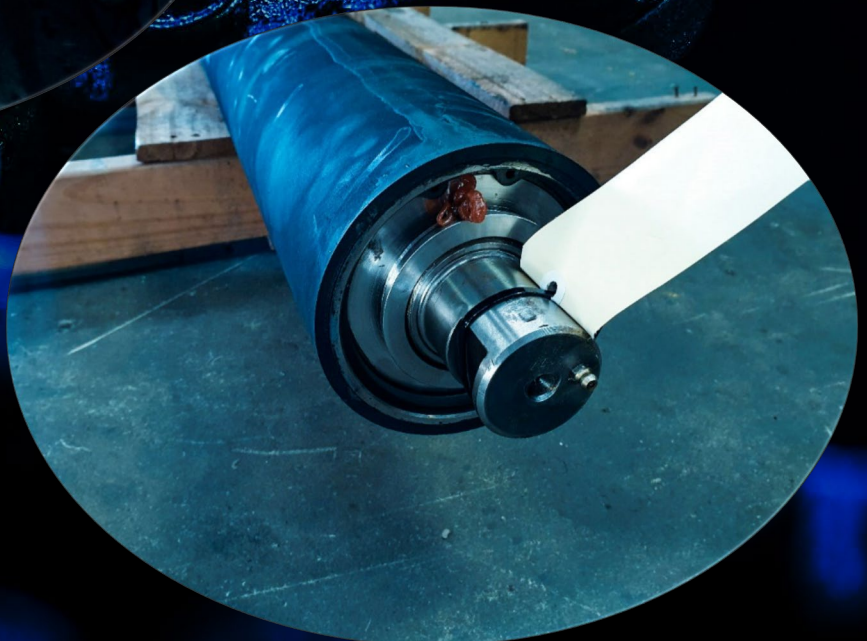
### ***ORE CAR AXLES***

Fully disassembled and inspected.  
Parts that are fit for use are  
refurbished.  
All other parts are replaced.  
Axle is then reassembled and  
painted



### ***LAROX ROLLERS***

Completely refurbished with new  
bearings and seals as well as  
relagging of the roller.





# MILLING CAPABILITIES

## *HORIZONTAL MACHINING CENTRES*

### **HARTFORD PBM-135A**

18I-MB Fanuc CNC Controller

7 tonne table capacity

X Axis travel = 3000mm

Y Axis travel = 2000mm

Z Axis travel = 1500mm

W Axis travel = 700mm

B Axis Table = Programmable



## **VERTICAL MACHINING CENTRES**

### **MAZAK VTC200C**

Mazatrol 640M CNC Controller

X Axis travel = 1100mm

Y Axis travel = 600mm

Z Axis travel = 600mm

### **AWEA BM1200**

Fanuc Oi-MC CNC Controller

X Axis travel = 1200mm

Y Axis travel = 600mm

Z Axis travel = 600mm

### **WINTEC DMV3000**

Fanuc O-M CNC Controller

X Axis travel = 3000mm

Y Axis travel = 1200mm

Z Axis travel = 700mm

### **AWEA BM1100**

Fanuc 18I-MB CNC Controller

X Axis travel = 1100mm

Y Axis travel = 600mm

Z Axis travel = 600mm





# TURNING CAPABILITIES

For over 30 years Hercus CNC Lathe Services have built a reputation for providing quality products, whether in a "Production Run" situation or a "One Off" component.

## **AJAX FEL-60160**

Swing over bed = 1200mm Diameter  
Swing over saddle = 700mm Diameter  
Distance between Centres = 3000mm Diameter

## **Annn Yang DY860**

Swing over bed = 860mm Diameter  
Swing over saddle = 530mm Diameter  
Distance between Centres = 3000mm

## **Goodway GLS200 with Bar Feeder**

Swing over bed = 460mm Diameter  
Swing over saddle = 380mm Diameter  
Distance between Centres = 500mm

## **Mazak Quick Turn 250 with Bar Feeder**

Swing over bed = 610mm Diameter  
Swing over saddle = 350mm Diameter  
Distance between Centres = 500mm

## **Mazak Quick Turn 350**

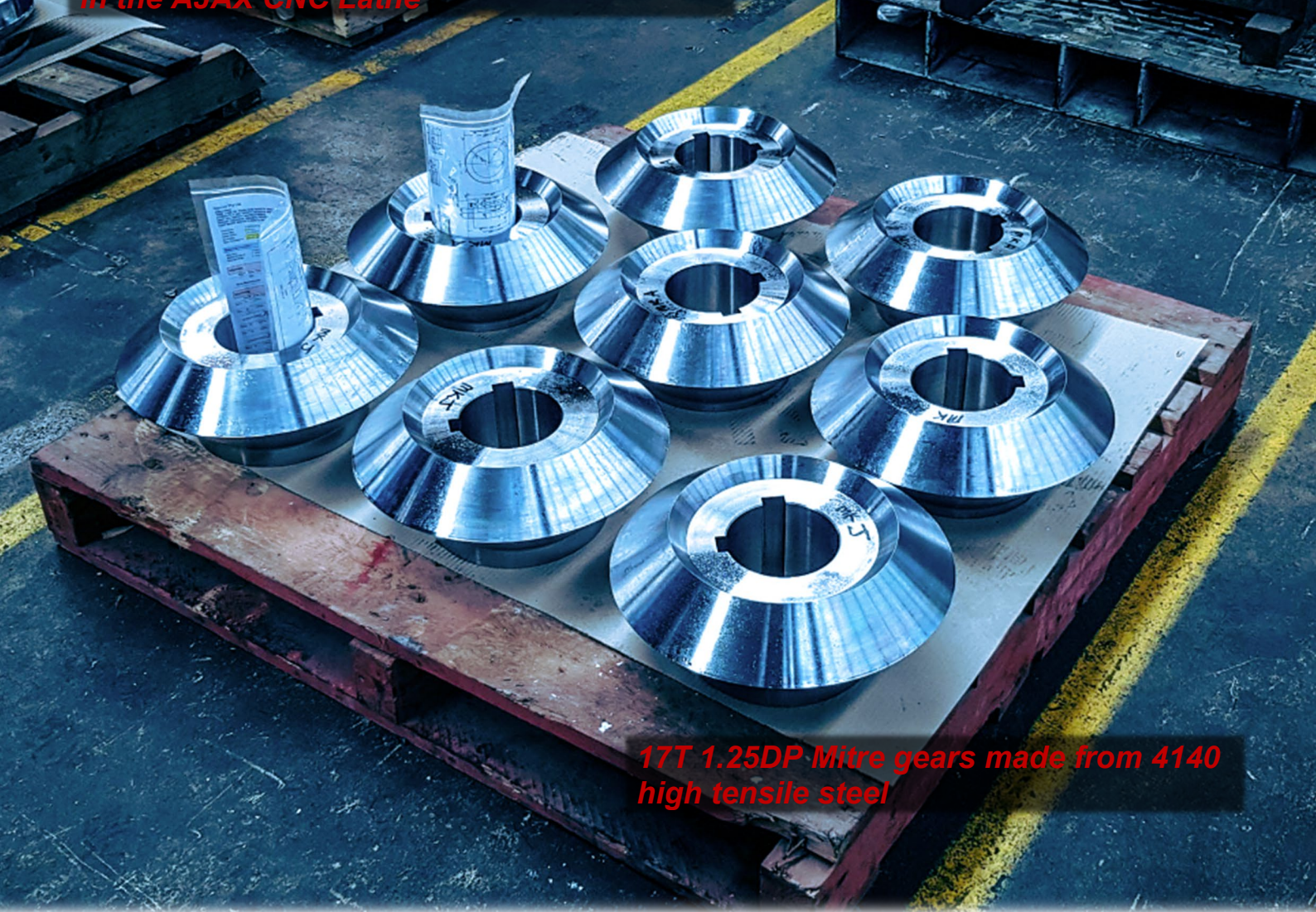
Swing over bed = 680mm Diameter  
Swing over saddle = 420mm Diameter  
Distance between Centres = 1200mm

To further enhance our CNC Lathe and Mill capabilities Hercus utilise Solidworks and KISSsoft (CAD) as well as HyperMILL (CAM) for all our design and programming needs.





**360mm diameter x 2800mm long axle shaft  
in the AJAX CNC Lathe**



**17T 1.25DP Mitre gears made from 4140  
high tensile steel**



# FITTING AND ASSEMBLY

## *BEARING PRESSES*

Axle Press Floor 400 tonne  
*(pictured left)*

– specially built for stripping axles apart

Niles Horizontal 300 tonne  
*(pictured below)*

– 2200mm swing x 4000mm  
centre distance  
(centre distance is not fixed)

Enerpac Roll Frame 100 tonne

– 1500mm swing x 450mm height

Hawke Vertical 100 tonne

– 1000mm swing x 500mm height

Hawke Vertical 60 tonne

– 1000mm swing x 500mm height

## *OVERHEAD CAPABILITIES*

- 6.3 tonne over head crane
- 5 tonne over head crane
- 8 tonne fork lift
- 2.5 & 1.5 tonne fork lift
- high access building
- – large trucks can enter building
- storage, able to secure customer products inside our premises

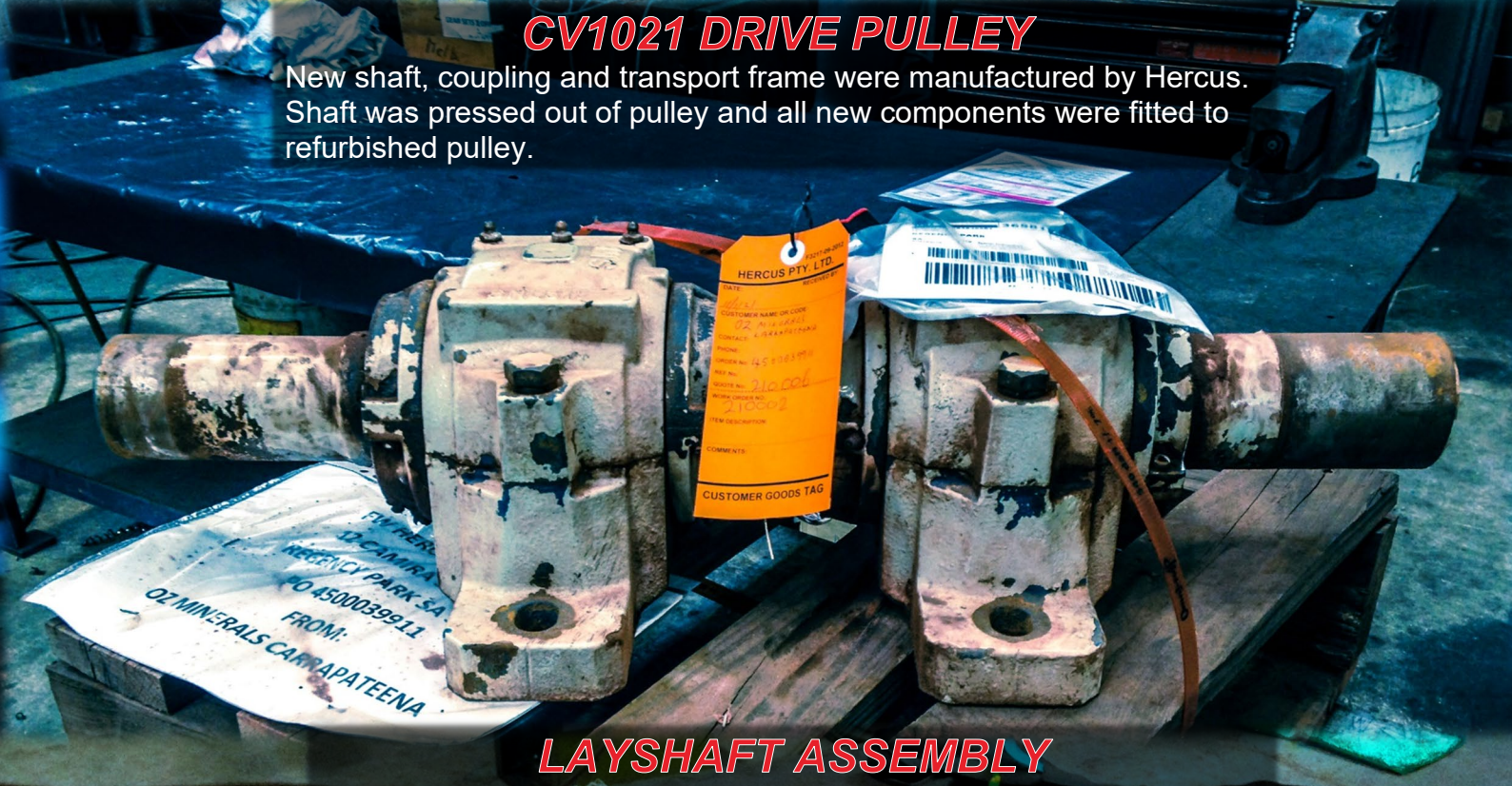






## CV1021 DRIVE PULLEY

New shaft, coupling and transport frame were manufactured by Hercus. Shaft was pressed out of pulley and all new components were fitted to refurbished pulley.



## LAYSHAFT ASSEMBLY

Before and after images of a brand new layshaft assembly, all fitting, machining and painting was done in house.





# GEARCUTTING

## **SPUR GEARS**

Hercus can cut Straight Tooth, Helical Tooth and Double Helical Tooth gears. With regard to Double Helical Gears, Hercus can cut up to a 250mm Face Width, at 30 and 22 ½ degree helix angles.

### **Maximum**

#### Horizontal – Sunderland Generator

1440mm swing x 230mm face width, up to 1 dp (25.4 mod)

#### Vertical – TOS Hobbers

1600mm swing x 400mm face width, up to 1.58dp (16mod)

### **Minimum**

#### Horizontal – Sunderland Generator

20mm swing x 100mm face width, to 120dp (.2 mod)

#### Vertical – Hamaj Hobber

10mm swing x 150mm face width, to 120dp (.2mod)

## **BEVEL & MITRE GEARS**

### Heidenreich & Harbeck

- Minimum 20mm swing x 48 dp (.52mod)

Gleason - Maximum 768mm swing x 4 dp (6.35 mod)

## **INTERNAL**

Fellows - Maximum 610mm swing x 125mm face width, up to 3 dp (8.5 mod)

## **RACKS**

Sykes Rack Generator - Maximum length / pass 2000mm x 120mm face width, up to 3dp (8.5mod) Can cut up to any length rack

## **WORM WHEELS**

TOS Hobber - Maximum 1600mm swing x 150mm face width, up to 2.25dp (11 mod)

## **POINTING**

Hey Gear Pointer - Both Internal & External Gears can be pointed

## **WORM MILLING**

Lee-Bradner Worm Mill – 204mm swing, centre distance is not restricted.

Can mill any “pitch” and “multiple” starts





### ***BRONZE WORMWHEEL NUT***

All machining including screwcutting an internal LH buttress thread was done at Hercus.



### ***DOUBLE HELICAL GEARSET***

Teeth were milled on one of our 4 Axis machining centres.  
Case hardened to 58 HRC with finish ground faces and bores.



### ***HIGH TENSILE SPUR GEARS***

The ability to have several gears cut at the same time on our TOS hobber means set up times are drastically reduced.



### ***NEW WORMWHEEL RING ONTO EXISTING HUB***

The old sample worm wheel (pictured left) was taken out of a gearbox being refurbished. We then took measurements to replicate the tooth form and cut a new ring (pictured right). This ring was then fitted onto the old hub and scotch keyed as the hub was still fit for use.



# GEARBOX MANUFACTURING AND REFURBISHMENT

- Strip, report and then reassemble Gear Boxes up to 13 tonnes (larger gearboxes can be worked on, Hercus must be notified of weight)
- Refurbishing a wide range of Gearbox “styles”
- Facilities to perform a range of painting processes
- Fault finding
- Fabrication
- Test running of gearboxes.

## **EXAMPLES OF REFURBISHED UNITS**

These gearboxes have all been fully disassembled and rebuilt with new bearings, seals, ringlocks etc. Any item that does not pass inspection is replaced including gears, pinions and shafts.





## **WILLIAM DURDEN (BILL) – GENERAL MANAGER**

Bill is a certified tradesman who has been in the metal industry since 1986 and has a strong back ground in CNC Machining and Programming on both lathes and mills.

In 1997 He was appointed General Manager of F W Hercus Pty. Ltd and continues to hold this position today. In 1998, Completed the “Certificate in Business Management Practices”.

Mobile: 0409 287 830  
Email: [billd@hercus.com.au](mailto:billd@hercus.com.au)

## **STEVEN DURDEN (STEVE) – SALES MANAGER**

Steve is a qualified tradesman who has been in the metal industry since 1980 and has a good understanding of this field, however Steve’s main strength is in Sales where he has experience as a Sales Representative since 1985.

In 1995, He was appointed Sales Manager of F W Hercus Pty. Ltd and still currently holds this position. In 1998, Completed the “Diploma of Business Management Practices”.

Mobile: 0418 852 285  
Email: [steved@hercus.com.au](mailto:steved@hercus.com.au)

## **JACKSON DURDEN – SALES REPRESENTATIVE**

Jackson is a qualified Fitter and Machinist who has been in the trade since 2014. He has great knowledge in programming and operating CNC lathes and mills, as well as a good fabrication background.

In August 2020, Jackson moved away from Machining and into Sales where he continues today.

Mobile: 0458 600 548  
Email: [jackd@hercus.com.au](mailto:jackd@hercus.com.au)

## **KEITH JONES – FACTORY MANAGER**

Keith has over 35 years’ experience within the metal industry and during this period has held key managerial roles for over 20 years.

Prior to Keith joining Hercus 2005, Keith has worked at other established Engineering Companies and has brought this experience to Hercus.

As Factory Manager Keith has total control of all Factory operations and therefore this guarantees continuity of quality and delivery.

Mobile: 0407 807 035  
Email: [keithj@hercus.com.au](mailto:keithj@hercus.com.au)



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