

tugwell

automotive tooling & design

design@tugwell.co.za

73 Hardie Muller Street, Rosslyn, Pretoria

www.tugwell.co.za

Toolroom Introduction

“We Ensure Your Success”

Introduction

Since 2009, TTD has been manufacturing CNC tooling mainly for the automotive industry; specifically BMW, Volkswagen, Nissan/Renault, Ford and Toyota.

Although we specialize in Technical Blow Molding, we also manufacture Injection Molds, Vacuum Forming Tools, Checking Fixtures and Press Tools.

Our range of CNC machines enables us to cover a large variety of requirements, we have catered for everything from precision work for defence & aerospace to large molds for fibreglass canopies and caravans.

In addition we build custom machines to automate any aspect of your process, whether it's basic material handling through to robotics.

We also specialise in mold refurbishment and polishing. We can perform precision laser welding on molds to improve flash, or repair gouges. We routinely reverse engineer molds that don't have CAD data, to remanufacture severely damaged or worn parts.

Furthermore, our experienced maintenance department cover all your HVAC/Plumbing/Electrical requirements to offer a truly comprehensive turnkey solution.



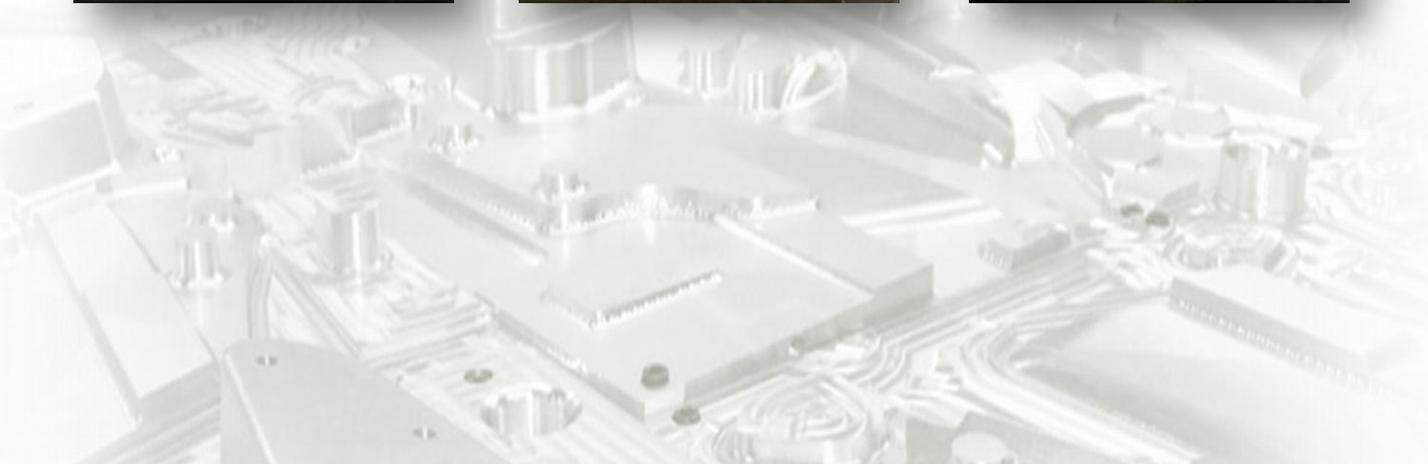
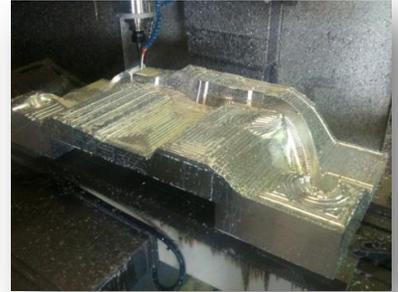
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Blow Molding

We are the Automotive Technical Blow Molding specialists. Chances are, if you drive a locally manufactured vehicle, the blow molded parts came from our tooling. Our methods have been developed closely with OEM requirements to ensure the best possible cycle times. Manufactured from aircraft grade alloys, our molds will outperform any competitor mold, and thus we have claimed this particular Niche in the market.



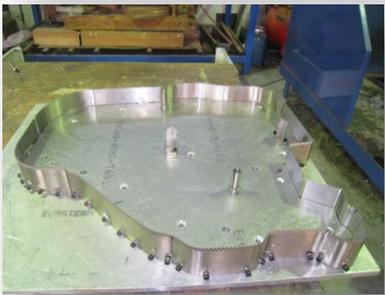
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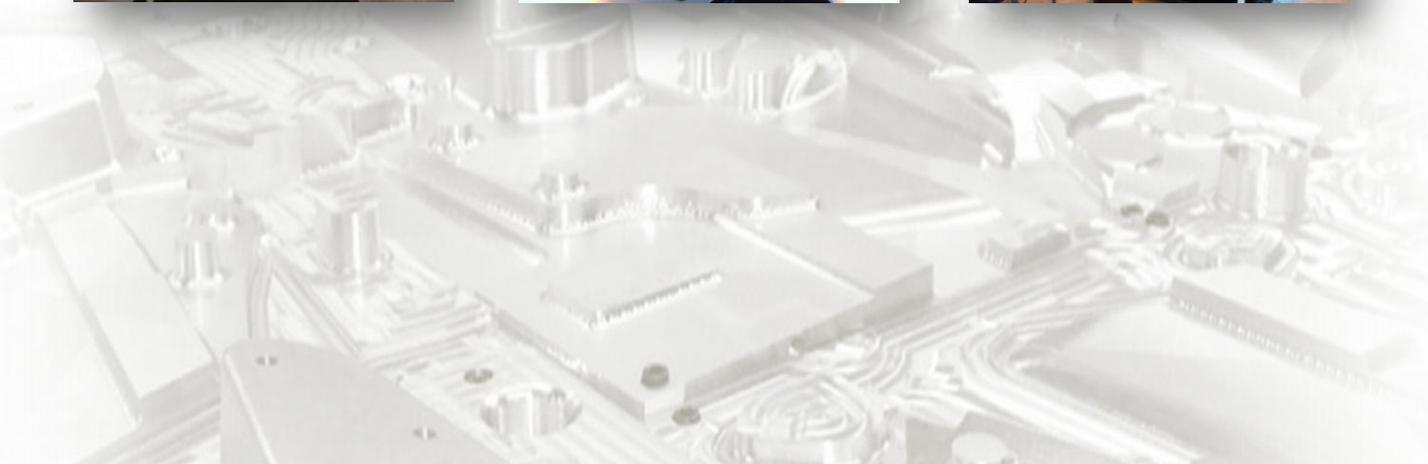
Vacuum Forming

From short lead MDF Prototypes, to Tooling Board, through to high volume production Alloy Molds with Knife dies and automated plug assist. No application is too simple nor complex. We have manufactured tooling for Caravans, Jacuzzis, the Load Bin Liner for the new Ford Ranger, medical equipment enclosures, aerospace and military applications.



Custom Machines

We further ensure our customers' success by supplying them with customized automation to optimize their process. Almost any part of your process can be enhanced with a customized solution, whether it be de-flashing, trimming, cooling or material handling.



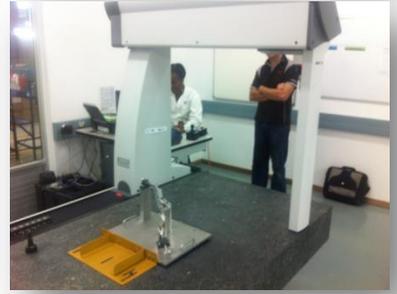
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Jigs & Fixtures

Being able to accurately and repetitively measure your parts is fast becoming a necessity for even your non-automotive clients. We manufacture a range of fixtures to suit your requirements, backed up with state of the art CMM reports to put you at ease.



Laser Welding

Tugwell Tooling and Design is proud to offer a new service to our line up with the introduction of a versatile state of the art laser welder.

The HTS mobile



- Autofocus system
- Motor traverse in X/Y/Z and R-axis!
 - Teach-in function
 - Digital joystick
- Direct laser beam source

- High quality rail system by THK

Dimension and weight

Dimensions: width 950 mm x height 1550 mm x length 1250 mm

Weight: 370 kg net

Completely portable, we will be able to come straight to your doorstep

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Laser Welding

Practical example

Signs of wear and tear become apparent in the areas of plastic tools that are subject to high stress during mass production, which have a sustained adverse impact on the quality of the product and the functioning of the tool.

Problem description

Extensive and time-consuming assembly and disassembly work for the tools.

Solution

The HTS Mobile allows the repair welding to be undertaken directly on the operating site of the tool. Hence downtime is minimised. Locations that are difficult to access can easily be reached by the 360° swivel optics.

The joystick control allows precision traverse mobility in x/y/z direction during the welding process and permits comfortable work without fatigue.



Also effective for smaller components

Constructive application of laser welding in the manufacturing & repairing of tools and moulds, even in areas with dissimilar materials.



Basic component

Mold core for the production of bottle caps.

Tool steel 1.2343 combined with CuBe (Copper Beryllium)

First step

Edge protection by means of material coating.



Second step

Fusing mold core with insert.



Third step

Entire application of a 0.2 mm thick protection and wear-resistant coating.



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Laser Welding

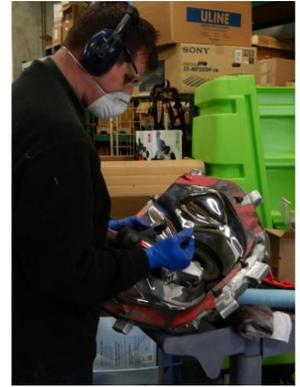
Support Equipment

Our experienced, trained technicians work with a complete range of bespoke Stones, Diamond files and Polishing Machines to work the repaired areas back to perfection. A valuable skill often overlooked in the local tooling market.

Specifications

Di-Pro machine type FXP with 3.5 mm tool-holder and power unit DPU-3.

Diprofil Reciprocating Filing Machines are designed for efficient polishing and finishing operations. The Diprofil Machines, with a wide range of tools and accessories, have been developed by careful studies of fine mechanical handwork and finishing operations. They facilitate filing, lapping, honing, polishing etc. and have become an important concept in the daily work of mould-making, die-making, tool-making and other fine mechanical precision work.



For any other enquires please feel free to drop us a
mail
Or
call for any other information needed.

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Also, check out our website www.tugwell.co.za
or follow us on twitter
https://twitter.com/TTD_Toolroom

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Physical Resources

- One 2 x 2 x 1 m VMC (Hartford HV80)
 - Medium to large tooling requirements, up to 5T
- One 1 270 x 670 x 625mm Doosan DNM 650 VMC
 - High Spec Machine for Small to Medium Tools
- One 1 500 x 650 x 620mm Eagle KM150 VMC
 - All inserts
 - Fixtures
- Various support equipment including manual Milling and Turning machines etc...



We are located in the heart of the South African Automotive Industry, at **73 Hardie Muller Street, Rosslyn.**



For further information, feel free to contact us:

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Capabilities

Competitive local tooling supply

- Short lead time requirements
- Financially pressured projects

Automation

- Custom Machines
- Robotics

Jigs & Fixtures

Fabrication

Maintenance & ECR Support

- Mechanical
- Electrical
- Plumbing/HVAC



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