

# EASI-GRIP

PRESENTING SAFETY

Meeting the  
challenge

## AUSTRALIAN BUSINESSES ANSWERING THE CALL FOR SOVEREIGN CAPABILITY



A new concept in Occupant Safety Restraint, for Defence, Industrial, Off Highway, GSE, Construction and Agricultural applications aimed at supporting workplace safety and compliancy through the encouragement of seatbelt usage.

This innovative occupant restraint system sets a new benchmark in safety and has patents applied for in the US and Australia.

- Seatbelt is "Presented" to the operator.
  - No more searching for the Tongue/Latch Plate and Buckle.
  - Buckle arm on the access side lifts up for easy entry.
  - Soft moulding material wraps around the body for a secure, comfortable fit.
  - Special "Web Cleaning" system on retractor side will help prevent debris from entering the retractor mechanism.
  - Convenient 'moulded hand grips' ideal when using gloves or rainwear.
- Encourages Seatbelt use as the restraint.
  - Easy installation to the seat.
  - Wide range of fitment applications.
  - Supports industries OHS obligations to keep operators safe when operating mobile plant and equipment.
  - Ideally suited for Forklift, GSE and mobile plant operating equipment.
  - Certified to SAEJ 386, ISO6683, FMVSS302 and is CE Compliant.



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Harry Hickling, managing director of Australian Performance Vehicles (APV), discusses how the company has grown to become one of the country's most successful defence exporters and operates one of Australia's most advanced testing laboratories specialising in survivability, safety, industrial and dynamic testing

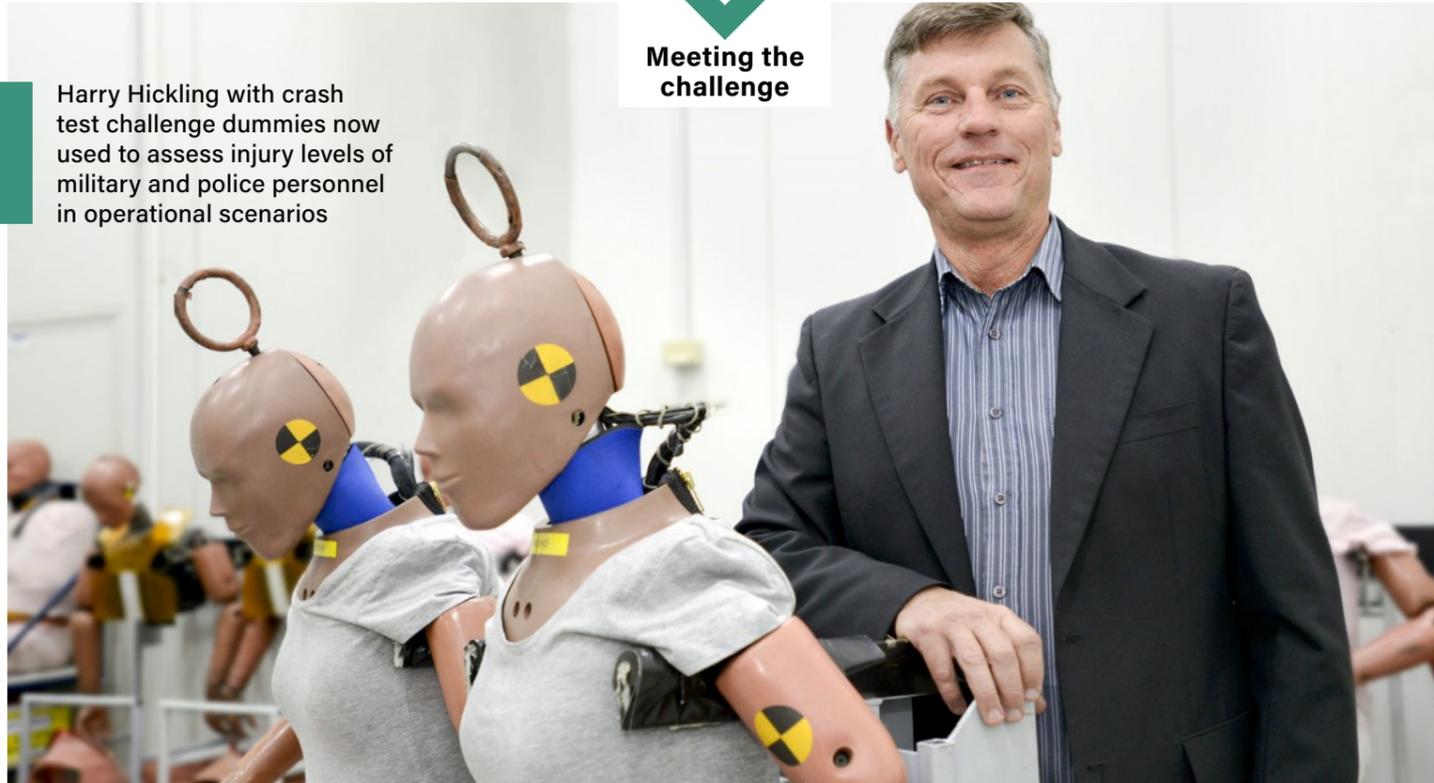
**Defence Connect: What is APV's core expertise and what sets it apart from competitors in the market?**

**Harry Hickling:** APV is Australia's leading exporter of military and defence seatbelts, delivering seatbelts for the world's most advanced land and amphibious vehicles. Currently, APV exports to BAE Systems' AMPV and ACV programs, as well as several seating programs for ArmorWorks, a leading manufacturer of blast attenuating seating in North America. APV has produced over 36,000 military restraints, of which 25,000 have been exported for use within the United States defense services. APV was awarded BAE Systems' top award for their North American Ground Vehicle and Aviation Seating division for supplier performance in 2020. These seatbelts are delivered directly into their production facilities and places APV as one of the top suppliers within BAE Systems' Global Supply Chain - so it is a truly outstanding result and demonstrates APV's ability to deliver into and support the North American market. What sets APV apart is that we also operate Australia's most advanced NATA (ILAC) [National Association of Testing Authorities] mechanical, environmental, photography and dynamic testing facilities, with a range of NATA, FIA [Federation Internationale de l'Automobile], Mil-Std and DEF (AUST) testing services, including the survivability of electronics systems, with DISP accreditation pending. The test laboratory is uniquely placed as one of the world's only commercial labs supporting OEM passenger vehicle development test programs.

**DC: APV has been recognised for its contribution to Defence Sovereign Industry Capability, having received a grant in support of a \$1.6 million project developing further testing services for the defence industry. How will this expand your capabilities?**

## Meeting the challenge

Harry Hickling with crash test challenge dummies now used to assess injury levels of military and police personnel in operational scenarios



**Harry Hickling:** APV has been operating the test facility in Melbourne for over a decade. With APV's origins in supporting the Australian automotive industry, we ambitiously diversified the lab to support the wider Australian business community. Defence was an important part of this, and we have completed a range of survivability and safety testing for CASG, DST, CSIRO and defence industry. This has ranged from high-speed photography and data acquisition for field testing and training, vibration and durability test programs, seat testing, through to assessing injury levels of military personnel in operational scenarios including underbody blast and helmet performance.

In 2020, we also completed testing of data recording equipment, electronics and military vehicle systems in crash scenarios. The SICP grant is now allowing us to expand our capabilities to provide test, evaluation, certification and systems assurance (TECSA) services. Our vision is to be a centre of excellence to meet unique defence requirements for the Australian defence industry and be their partner of choice for advanced environmental, mechanical, photography, data acquisition and dynamic engineering and testing services.

It is really exciting to be involved with test programs that are using data acquisition, accelerometers and scanning technologies to capture pre- and post-crash information, including deflation to validate the CAE analysis undertaken during product development. This will enable us to support Australia's defence industry in R&D through product certification requirements, as well as analysing in-service field issues that are often uncovered as a result of Australia's unique operating environments.

Similarly, there is a lot of interest in our new Phantom v2640 high-speed camera supporting 25,000 frames per second. The camera's outstanding light sensitivity provides it with the cleanest detail and largest dynamic range of any Phantom camera on the market today. Paired with our unique use of the US Export Controlled FAST option (which gives the camera capability to reduce exposure times down to just 142 nano-seconds), we can capture even the most challenging applications with unprecedented results. This is an outstanding addition to our military HSHD photography services and has already been used to analyse particle flow and tracking.

**DC:** APV's success and track record in securing export contracts overseas is truly remarkable. How did APV achieve this?

**Harry Hickling:** Good question, it really started with the lessons learned supporting the Australian car companies on their export programs. We worked with GM to export components into their engine plants around the world and their vehicle exports into North America. There were hard yards and interesting lessons learned by everyone. I remember one year sending a team with parts to several overseas engine plants with a quality issue – it was something we just had to do as part of the OEM customer first culture. It was here that APV developed our export culture early on within the company.

Off the success of supplying restraints for the Bushmaster, Navistar was awarded the MaxxPro MRAP vehicle contract during the Afghanistan conflict, and it was this contract that set us up for exporting military restraints into North America. Our engineering capability and having first mover advantage with the introduction of an automotive seatbelt retractor into MRAP vehicles secured this market for us. These restraints were the first automotive style restraints with retractors ever to be blast tested both here in Australia and in the US by the defence agencies. We are very proud of our track record in keeping US and Australian soldiers safe in Afghanistan with no loss of life from over 15,000 military restraints. We are also proud to support the next generation of military vehicles in the United States. It is this success in the defence sector that has helped strengthen APV's international reputation. Working with leading military forces, APV has demonstrated that our military applications are "battle proven".

**DC:** Cyber security has become an essential part of doing work for Defence. Has this formed part of your export strategy?

**Harry Hickling:** Over the past several years we have continued to work on our cyber security uplift. This year we have focused on our US cyber security methodology, CMMC (Cybersecurity Maturity Model Certification), and compliance. With the support of cyber security experts CyberCX, we now have our APV System Security Plan in place and maturity scoring within the US Supplier Performance Risk System. This has now become essential to participating within the North American Defense Global Supply Chains (GSC), and with the heightened cyber risks as well as the evolving threat landscape, this is also fundamental from a business continuity and risk perspective. For APV, we see this as absolutely essential for protecting our customers' information and remaining a trusted supplier within the GSC.

**DC:** How do you see APV building on this success into the future?

**Harry Hickling:** It is a very exciting time for us. We have major multi-year test programs scheduled through into 2022 and of course long-term military restraint contracts into North America. 2021 has also seen us set up our office in Detroit to drive our North American business development activities and customer support. This is an important milestone for APV and the next step in establishing our US capability to support our North American customers. In concert with this, we are releasing a totally new and patented concept in seatbelt design for mobile plant and equipment, including forklifts and GSE to keep operators safe by encouraging seatbelt usage, called Easi-Grip. Safety and our export culture are the foundations of APV's DNA and we see an exciting future for the company working with defence industry and contributing to the safety of our military personnel. ■