



Alfons Haar
AUSTRALIA



ALFONS HAAR MASCHINENBAU GMBH & CO KG

MILITARY REFUELLING SOLUTIONS AND EQUIPMENT

PRODUCT OVERVIEW, 2012



- AVIATION REFUELLING - MILITARY FUELLING - COMMERCIAL FUELLING - BULK FUEL DISTRIBUTION - FUEL LOADING & DISCHARGE SYSTEMS -

MOBILE FUELLING SPECIALISTS

Mobile fuelling equipment must be light and it must be built for a rugged environment to operate reliably over time.

WEIGHT

In 1949 Alfons Haar started an obsession with weight loss that would remain a constant focus of the business. By weighing less you can carry more!

We constantly strive to use innovative materials and designs that allow us to remove weight from our equipment.

Our pumps are a great example. Made from cast steel, they are almost half the weight of a standard aluminium fuel pump for the same flow rate. This enables us to achieve an ATEX certification, and its strength also allows us to remove excess material from the design. By putting the right amount of material in the right places and removing it from where it doesn't serve any purpose, we achieve very strong designs that are light.

You will find barely a straight line on the body of our pumps. We have used sophisticated computer modeling to remove restrictions from the fuel flow path to reduce noise and improve flow, and you can see this on the body of the pump because we have removed the excess material from around this flow path on the outside of the pump.

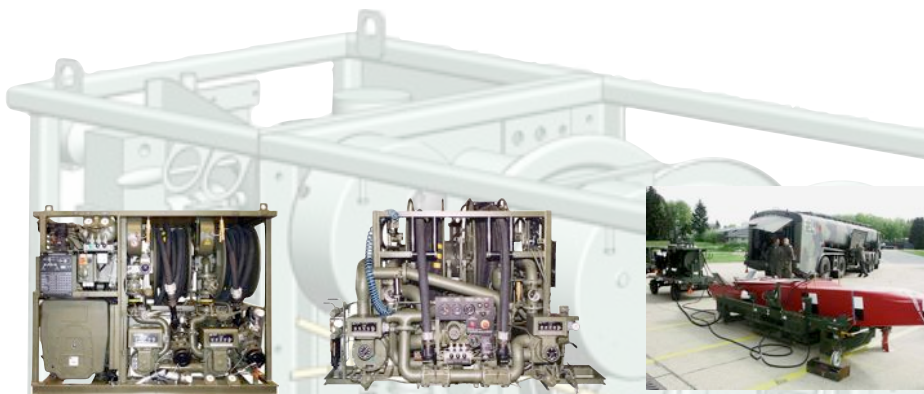
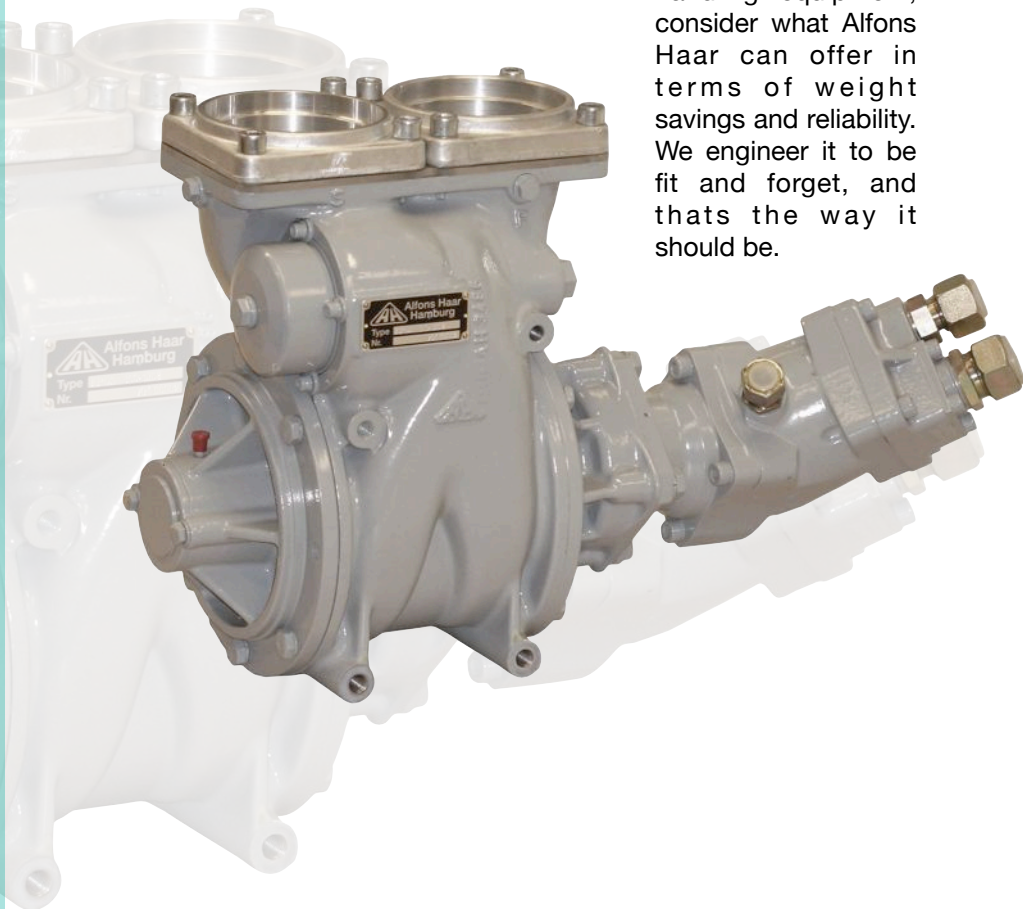
RELIABILITY

Alfons Haar equipment performs quietly in the background, not requiring an undue amount of support, parts or attention. Highly engineered, our equipment has built an enviable reputation for quality and longevity in service.

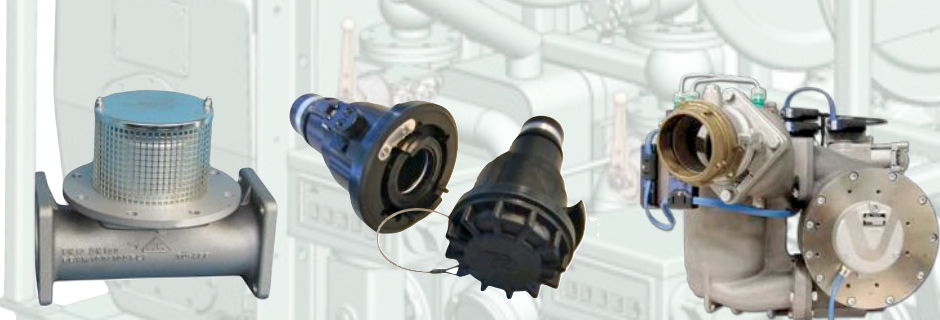
Astute buyers know that the best equipment can cost a little more to purchase initially but always saves you money in the long term.

Unreliable or short lived equipment always costs more in downtime, lost reputation and labour to repair than well built equipment. That's why our equipment is designed to last the life of the vehicle or system. In these days of "throw away" equipment, many manufacturers design equipment to be thrown away rather than repaired. Not at Alfons Haar. Take for example our humble air controls. Every little part of the valve is individually replaceable. And they operate for decades like all Alfons Haar equipment.

Next time you purchase fuel handling equipment, consider what Alfons Haar can offer in terms of weight savings and reliability. We engineer it to be fit and forget, and that's the way it should be.



Alfons Haar fuelling systems are used by military forces worldwide. We have a MOTS solution for almost any fuelling situation.



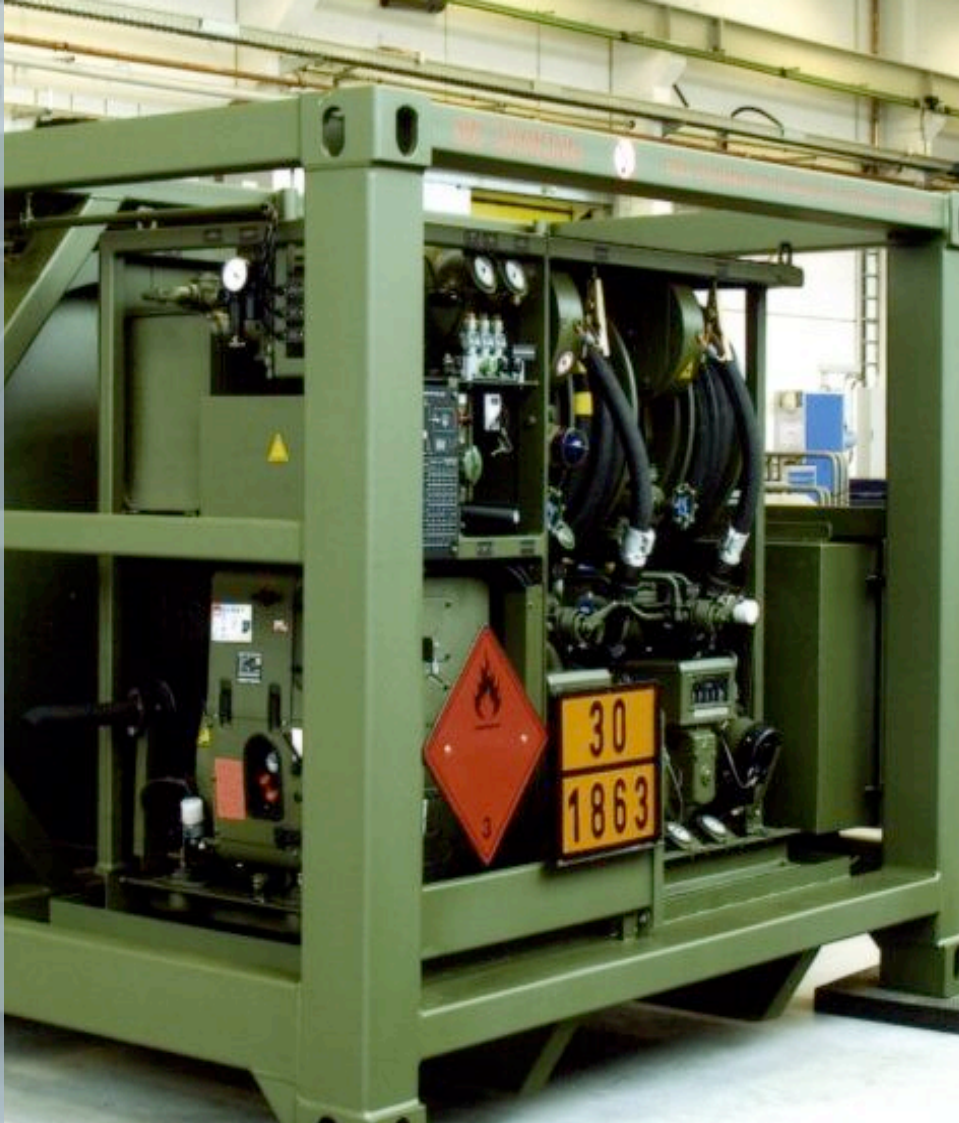
Alfons Haar manufacture a wide range of fuelling components which are used in our own systems and available to other systems integrators. We have over 4200 NSN codified items in our range.

LAND REFUELLING VEHICLE MOUNTED SYSTEMS

With thousands of fuelling systems in use, Alfons Haar's range of battle hardened and proven systems have been delivering fuel to military forces for decades.

From the deserts of the middle east, to the snowy ice fields of Europe, Alfons Haar military fuelling systems are used with confidence by NATO military forces and their allies around the world.

The modular system construction enables mobility and protects critical components and because Alfons Haar manufacture most of the major components, the integrity and quality of the assembled engineered solution is ensured. Compliant with STANAG/MIL and NSN codified, Alfons Haar military fuelling solutions are an easy choice for military refuelling requirements.



HELICOPTER REFUELLING ONBOARD SYSTEMS

Alfons Haar helicopter refuelling systems (HRS) are used and preferred by military forces around the world, including on the ANZAC Class Frigates.

Built on a very compact footprint with weight reduced components and a rugged user friendly PreciFUEL interface, the Alfons Haar HRS incorporates ready made modules as building blocks for a fully scalable system. A flexible modular design presents five classes of Pump Filter Modules from 100 l/min to 2360 l/min and three classes of Refuelling Modules. All modules are available with numerous options and can be individually combined.

Each module has its own "ARU-Master" microprocessor control interface screen making it independent from the others, while at the same time all modules are seamlessly interconnected with each other through a master bus system. The structure allows full scalability and features from remote control up to full redundancy.



In 1949 German engineer Alfons Haar opened a small machinery workshop in Hamburg. He had a simple vision to build highly engineered machinery and provide exceptional whole of life value for customers.

More than 60 years later and still firmly grounded with the three pillars of **Tradition Precision** and **Innovation**, the Alfons Haar brand fully embodies this vision. Synonymous with robust, well engineered, value for money transfer solutions, Alfons Haar is a trusted mobile applications leader in the global fuel, LPG and powder transport industries. Managed by the second and third generations of the Haar family, the Haar Group employs over 500 staff with company owned manufacturing and sales operations in 18 countries across Europe, South Africa, USA, Australia and Singapore.

In 2012 the Haar Group welcomed a new addition -- Haar Australia Pty Ltd. Based in Melbourne, the business provides sales and support across Australia, New Zealand and the Pacific Islands. Haar Australia promotes the Alfons Haar range pumps, meters and fuelling components and systems for aviation refuelling and bulk fuel transfer.

Haar Australia also provides technical and logistics support to Australian military users of our Military Off The Shelf (MOTS) Helicopter Refuelling Systems (HRS) as used in the ANZAC class frigates, the Helicopter In Flight Refuelling (HIFR) systems, the skid, trailer and vehicle mounted aircraft refuelling units, tactical refuelling systems including the TAR and CST systems, UAV refuellers and more.

The Alfons Haar brand has been well supported and respected in Australia over many years and we look forward to working with you.

Thomas Haar
Group CEO



TRADITION - INNOVATION - PRECISION

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