INDUSTRIALS GROUP

Reavell

Gardner Denver

HIGH PRESSURE SOLUTIONS



STRONG UNDER PRESSURE

High Pressure Solutions for Naval Defence Applications

STRONG UNDER PRESSURE



Reavell 5437

NAVAL DEFENCE IS VITAL FOR A NATION'S SECURITY. OUR LIFETIME APPROACH, FOCUS ON MAINTAINABILITY AND BESPOKE DESIGNS MEAN WE ARE THE PARTNER OF CHOICE FOR MANY OF THE WORLD'S LEADING NAVIES.

OFFERING LIFETIME VALUE, MAINTAINABLE, DESIGNED TO YOUR SPECIFICATION

Be strong under pressure with Reavell

STAYING AHEAD WITH REAVELL

Building on a 120 year heritage, Reavell continues to maintain its position at the leading edge of compressed air technology. The engineers behind the first Scott-Reavell steam engine, patented in 1894, probably wouldn't recognise our current high pressure compressor range, but they would certainly identify with our relentless drive for technical excellence and quality customer service.

As part of the global Gardner Denver High Pressure Division, Reavell continually invests in research and development, with the goal of continuously improving the reliability and efficiency of our machines.

Our compact compressor solutions are designed to offer market leading, maximum output with minimum size and weight. They deliver unrivalled performance and peace of mind for customers operating in some of the world's most demanding environments - at sea, on land and underground.

YOUR LIFETIME PARTNER

Reavell has built its reputation on ensuring that we actively support our solutions throughout their lifetimes. Whether it's through routine maintenance kits, life extending scheduled factory refurbishment or immediate support whenever required, we pride ourselves on being your reliable lifetime partner.

Our machines are manufactured to ensure reliability in the most demanding of conditions, guaranteeing that you can rely on your compressor, whatever environment it's operating in. And when the time for routine maintenance comes, the Reavell design allows easy access for maintenance, ensuring downtime is kept to an absolute minimum.

Reavell's compressor solutions are designed to each client's specification at our UK Centre of Excellence. Whatever your requirement – rest assured, Reavell can handle the pressure.



Weapon Guidance Systems
- Torpedo Charging
- Ballast and Stabilisation Tanks
- Centralised Air Systems
- Breathing Air
- Non-Magnetic Signature for minesweepers
- Engine Start

VALUE UNDER PRESSURE

IT IS USUALLY THE CASE THAT THE COST OF OWNERSHIP OF HIGH PRESSURE MACHINES OUTWEIGHS THE INITIAL COST OF PURCHASE. HOWEVER, IN COMPARISON TO COMPETITOR MACHINES, REAVELL COMPRESSORS ARE PROVEN TO DELIVER SIGNIFICANT SAVINGS OVER THEIR TOTAL LIFETIME.



LIFETIME COSTS

When it comes to a nation's defence, quality and reliability are paramount. However, for publicly funded naval operations, where the focus must be on sourcing reliable and cost-effective solutions, this can be a difficult balance to achieve.

SERVICING VALUE

When calculating the lifetime costs of a compressor, one of the biggest considerations is the cost of servicing. Reavell's transparent service strategy not only offers peace of mind in an area which can otherwise lead to significant unexpected costs, but more importantly, delivers proven cost savings.

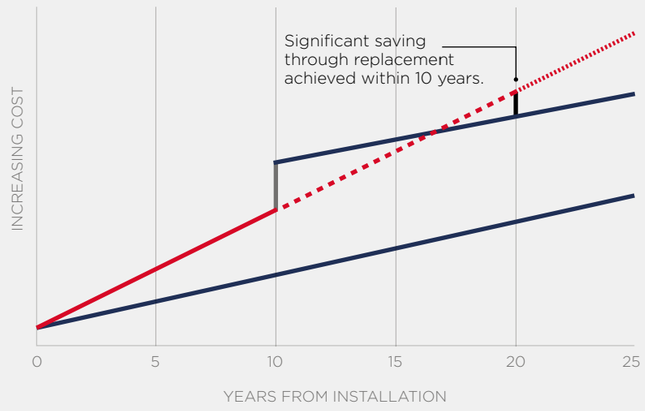
PROVEN VALUE

A recent decade long study conducted by a major NATO partner resulted in its decision to replace all competitor High Pressure Air Compressors (HPACs) with the Reavell 5417N.

The purpose of the study, which commenced in 2007, was to calculate the overall running costs of Reavell HPACs versus a competitor's machines.

The independent study indisputably concluded that the competitor's machines were outperformed by Reavell's in terms of reliability and cost of maintenance.

Because the through-life costs of a Reavell machine are significantly lower, even after the complex decommissioning process of the rival's compressors, cost savings to the navy and to taxpayers will be considerable.



Since the first Reavell machine was installed on a British naval ship in 1905, the brand has been synonymous with providing reliable and maintainable products, while building longterm, trusting partnerships with the world's leading navies.

RELIABILITY UNDER PRESSURE



RELIABLE BEYOND LIMITS

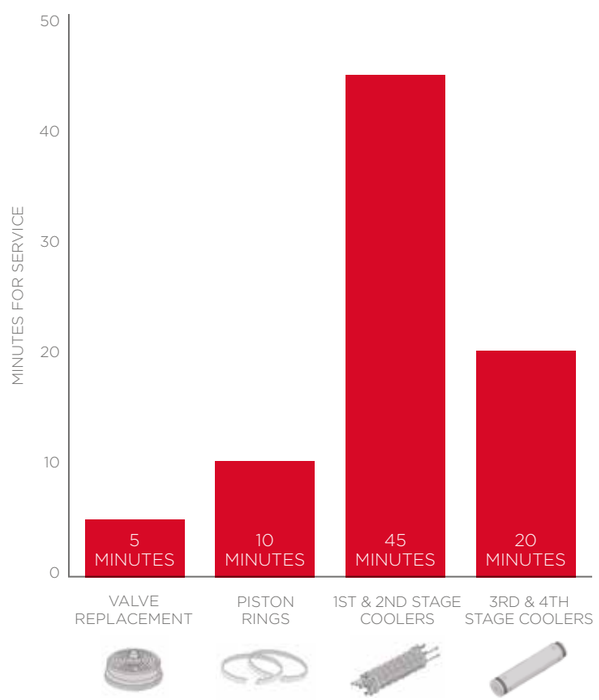
Testament to the reliability of our machines is the fact that we have maintained relationships with some of our naval partners for more than 100 years.

Our focus on continuous development means the reliability of those first machines is built in to today's leading-edge models. Our 5437N, for example, has its roots in the original VHP36, and although there have been several upgrades to meet the demands of today's leading navies, the underpinning reliability remains.

MINIMUM DOWNTIME

Reavell's dedicated engineering team ensure that our compressor designs have the ideal balance of a compact footprint, whilst ensuring that critical components are easily accessible. This guarantees that downtime during servicing and maintenance is kept to a minimum, as illustrated in the graph on the right.

OUTSTANDING ACCESSIBILITY



1,500 HOUR SERVICE INTERVALS

Reavell compressors come with market leading service intervals of up to 1,500 hours. We provide preventative maintenance kits that are specifically designed to minimise costs, that cover everything from minor air end servicing down to running gear overhauls. Not only will your machine run longer between services, but it will also be running long after competitor machines have had to be replaced.



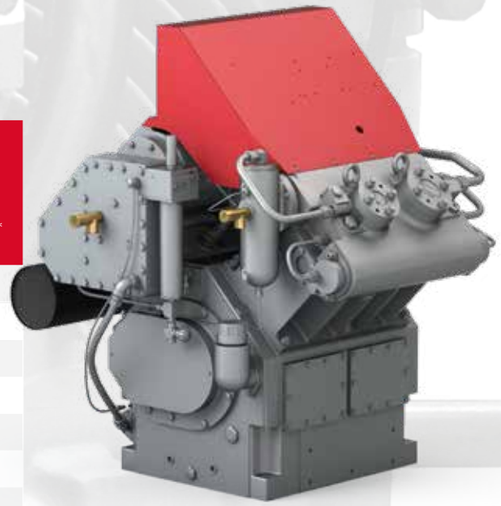
SINGLE TOOL
VALVE REPLACEMENT

COMPONENT	EXPECTED LIFE HOURS
1ST STAGE PISTON RINGS	12,000
2ND STAGE PISTON RINGS	9,000
3RD STAGE PISTON RINGS	5,000
4TH STAGE PISTON RINGS	4,000
1ST STAGE VALVES	12,000
2ND STAGE VALVES	12,000
3RD STAGE VALVES	9,000
4TH STAGE VALVES	4,000

SOLUTIONS UNDER PRESSURE

Find your Reavell defence solution

			DELIVERY PRESSURE		FLOW RATE		MAXIMUM MOTOR POWER	ELEVATED COMPRESSOR INLET		MAXIMUM BOOSTER INLET PRESSURE *
			Minimum	Maximum	Minimum delivery pressure	Maximum delivery pressure		Maximum Inlet Pressure	Flow rate at maximum delivery pressure	
			BARG	BARG	M3/HR	M3/HR	KW	BARG	M3/HR	BARG
LPAC	AIR COOLED	5207	16	40	12.5 › 26.0	11.5 › 24.4	7.5	0.03	11.8 › 25.1	n/a
		5209	16	40	26.0 › 43.5	24.1 › 40.7	11	0.03	24.8 › 41.9	6
		5211	20	45	26.0 › 62.0	24.0 › 57.1	15	0.03	24.7 › 58.8	n/a
		5213	16	31	27.9 › 66.5	26.5 › 64.0	15	0.03	27.3 › 65.9	n/a
	WATER COOLED	5212	10	35	25.1 › 63.7	22.3 › 57.9	15	0.14	25.4 › 65.9	n/a
		5217	10	40	57.5 › 136.0	50.5 › 125.6	30	0.14	57.5 › 143.0	7
		5236	10	40	135.0 › 313.0	125.0 › 291.0	75	0.14	142.3 › 331.2	7
MPAC	AIR COOLED	5307	40	80	15.6 › 28.0	14.7 › 26.5	11	0.03	15.1 › 27.3	6
		5309	40	80	24.2 › 43.5	23.3 › 42.0	18.5	0.03	24.0 › 43.2	4
	WATER COOLED	5317	40	85	27.8 › 67.1	26.7 › 64.6	18.5	1	53.1 › 128.4	6
HPAC	AIR COOLED	5404	85	350	6.4 › 8.3	5.4 › 7.3	4	0.07	5.8 › 7.8	n/a
		5405	85	350	9.3 › 12.2	8.1 › 11.0	5	0.03	8.3 › 11.3	n/a
		5405E	85	350	9.2 › 16.4	8.3 › 15.0	7.5	0.03	8.5 › 15.4	n/a
		5407	160	350	12.4 › 26.8	11.8 › 25.5	15	0. 4	16.5 › 35.6	5
		5407H	160	414	12.4 › 26.8	11.8 › 20.8	15	0.03	12.1 › 21.4	5
		5409**	150	350	19.9 › 44.0	19.2 › 42.5	22	0.4	26.8 › 59.3	4
		5409H	160	414	19.9 › 43.3	19.2 › 41.8	22	0.03	19.8 › 43.0	4
	WATER COOLED	5417	140	350	27.0 › 67.6	25.0 › 65.5	30	1	49.7 › 130.2	6
		5437	140	350	65.0 › 159.2	64.1 › 156.9	90	1	127.4 › 311.8	6.5
		5437H	160	414	75.8 › 157.3	64.1 › 133.0	75	1	127.4 › 264.3	6.5



UNRIVALLED HERITAGE

The class- leading Reavell 5437N offers unparalleled reliability, maintainability and performance density. So whether your requirement is for low vibration submarine operation, high quality breathing air supply, weapons systems, or radar masking, the 5437 offers the ideal solution.

*Booster supplied without first stage cylinder, not suitable for running at atmospheric inlet pressure.

**400mbar inlet pressure up to 1500 rpm only, limited to 200 mbar if above.

SPECIALISTS UNDER PRESSURE



CUSTOM ENGINEERED PROJECTS

At Reavell, we work to your specifications. We understand that our naval clients require complex solutions that guarantee continuous operation in harsh environments. Our compressors are designed to meet defence shock requirements as standard, so whatever your application demands, Reavell can deliver.

MOBILE, FLEXIBLE, RELIABLE

This robust solution is used by militaries across the globe. The heavy duty axles and dependable diesel engine, combined with a weatherproof enclosure ensure that this compressor can function at optimum levels in any environment.

The breathing air quality filtration and extra length delivery hose deliver air that can be used across a wide range of applications.



LOWEST FOOTPRINT, NOISE AND VIBRATION MAXIMUM PERFORMANCE

Built from our ultra-reliable and maintainable H5437 compressor block, this solution was configured for a customer with demands for the smallest possible footprint and the lowest noise and vibration signature available.

This specialist solution delivers a maximum of 142 Nm^3/hr at 275 barg from a footprint of only $4.32m^2$.

With noise and vibration levels below 85 dBA and 90 dBref 1e-5 m/s^2, and shock tested to ISO EN 60068-2-27 at 15g in all directions – this HPAC unit is truly a market leading solution. What's more, breathing air delivery of -20°C dew point, less than 0.5 mg/m^3 lubricant and absolutely no water particles mean this air can be used for a wide range of applications.

ADVANCEMENT UNDER PRESSURE

REAVELL TRAINING DAYS

At Reavell we're proud of our products - and proud to share our expertise!

We offer a comprehensive range of factory training days. Our courses cover everything from important health and safety considerations and defence basics, to in-depth machine maintenance training, and market and application focussed sales training.

We can also design a bespoke training course to meet your specific requirements. So whether it's sales training centred on technical features and USPs or hands-on maintenance training for your engineers, we can deliver the course you need.

Our training courses can be delivered at our new Factory Training Centre that was opened in 2017. Alternatively we can deliver bespoke training at a location and venue to suit you. To find out more about our training courses, or to book a course, speak to your local Reavell sales representative.

CENTRE OF EXCELLENCE

We're extremely proud of our UK manufacturing heritage. In 2012 Gardner Denver opened our Centre of Excellence in Redditch, UK, which features world-class manufacturing facilities and employs 300+ Gardner Denver staff.

Our Reavell machines are constructed entirely on site at the Centre, where they undergo rigorous quality testing to ensure that each machine meets the exemplary quality standards that modern navies require.

REFURBISHMENT

Depending on the planned lifetime of your naval systems, replacing compressor units is not always a viable option. That's where our high pressure factory refurbishment centre comes into its own. It is the only major high pressure refurbishment centre in the United Kingdom and it has supported customers across industry and military applications for many decades.

The Centre enables us to offer full diagnostic evaluations and can also recommend maintenance programs, designed to bring your existing high pressure system back to its optimum operating performance level. With a dedicated team to deal with your refurbishment requirements, Reavell are uniquely positioned to add extended lifetime onto your compressor machines – delivering considerable savings.



VERSATILE UNDER PRESSURE

ANCILLARY OPTIONS

CONDITIONAL MONITORING

Where reliability is absolutely critical we can complement our comprehensive preventative maintenance kits with condition monitoring systems designed to your requirements. We have extensive experience in active temperature, vibration and noise level monitoring.

INTEGRATION

Not only do we manufacture market leading compressors, our systems engineering team are experts in integrating specialist machinery into a compact space, whilst ensuring minimum impact on surrounding equipment and allowing room for effective maintenance.

FILTRATION/DRYERS

Most applications come with air treatment requirements. At Reavell our extensive experience ranges from basic particulate filtration to carbon filtration and dew point control – so whatever your application needs, you can be sure we have the expertise to help.

ACOUSTIC ENCLOSURES

Whether it's noise dampening or weatherproofing, our bespoke acoustic enclosures are designed to meet your demands.

COMPLETE AIR SOLUTIONS

For the last 100+ years, Reavell has maintained close relationships with defence organisations worldwide. As part of the Gardner Denver Group, we now share this expertise with other Gardner Denver brands that have similar experience in the defence industry.
As part of the Gardner Denver Group, Reavell is in a unique position to offer total package solutions, incorporating high pressure, low pressure & vacuum pumps into one complete air solution.



Gardner Denver

HIGH PRESSURE SOLUTIONS

YOUR **CUTTING** EDGE

High Pressure Solutions for Naval Defence Applications

PERFECT WITH PRESSURE

Offering lifetime value, maintainable, designed to your specification. Be strong under pressure with Reavell.

A LIFETIME APPROACH

- Reavell compressors are proven to deliver significant savings over their total lifetime.

MINIMUM DOWNTIME

- Trusted naval partner for over 100 years, continuous development means the reliability of those first machines is built in to today's models.
- Our designs have the ideal balance of a compact footprint, while ensuring that critical components are easily accessible.

LEADING REFURBISHMENT CAPABILITIES

- Only major Refurbishment Centre in the UK.
- Offering a full diagnostic evaluation and recommend maintenance programs which will bring your existing High Pressure system back to optimum operating specification.

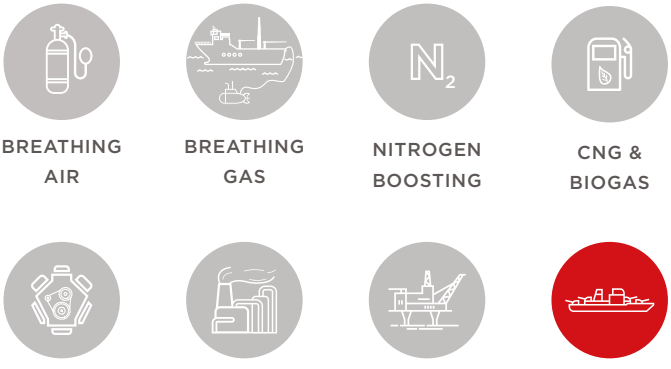
oneair™

SINGLE SOURCE INDUSTRIAL AIR SOLUTIONS

For more than 155 years, Gardner Denver has been a leading global provider of compressors, blowers and vacuum pumps. OEMs and end-users from every corner of the world rely on us for their business solutions.

With global teamwork, strong customer focus, and vast application knowledge, our brands provide reliable, energy-efficient products that serve a wide range of manufacturing and process industries.

GARDNER DENVER REAVELL OFFER SOLUTIONS FOR:



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