



The oil & gas industry driven by David Brown.



David Brown

Africa +27 11 748 0000
Australia +61 1300 32 4327
China +86 21 6334 3322
Europe +33 3 89 37 01 13
Thailand +66 38 459044
United Kingdom +44 (0)1484 465500

Sister Companies. Cone Drive & Benzlers

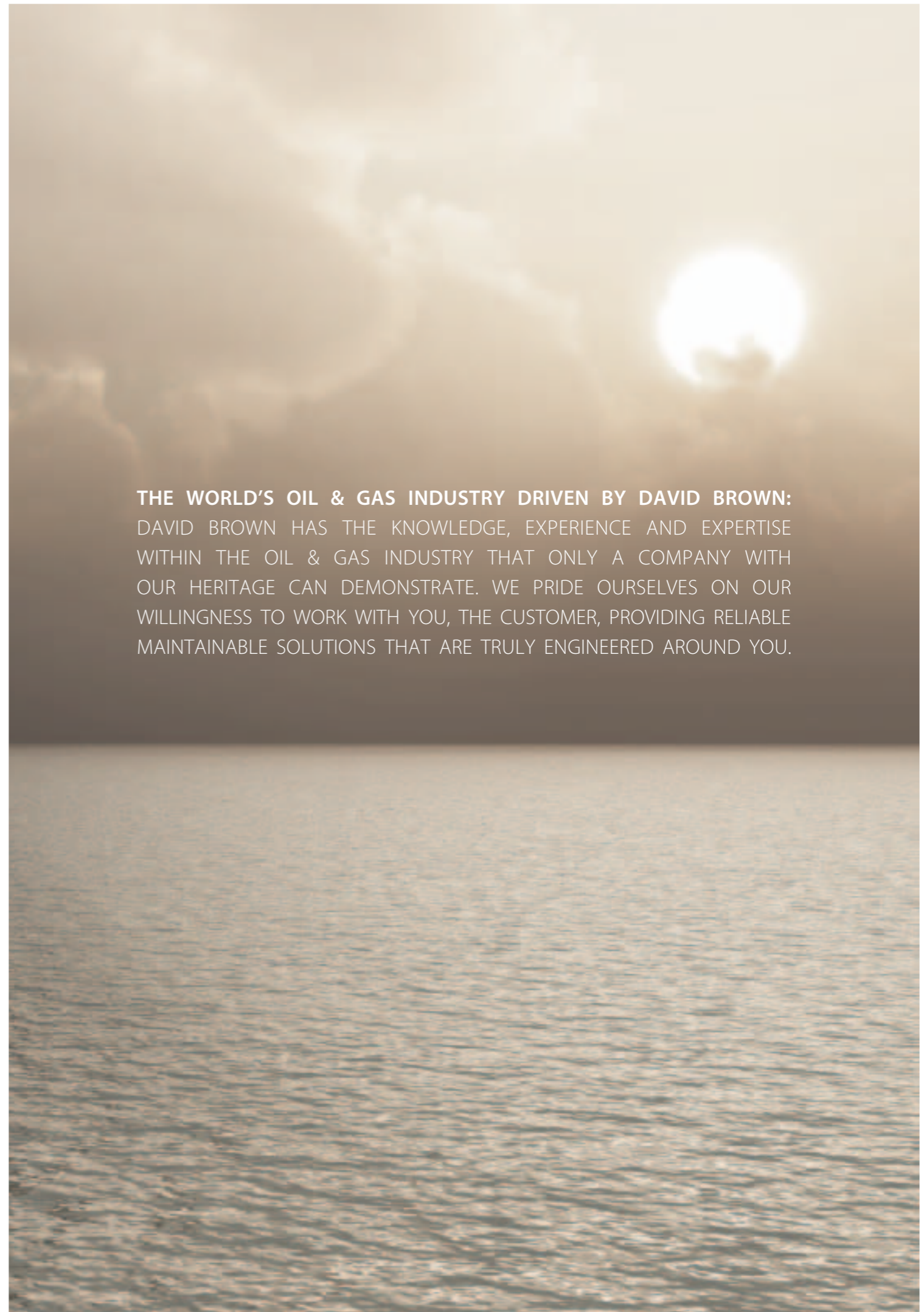
Central & South America +1 231 946 8410
North America +1 888 994 2663
Scandinavia +46 42 18 68 00



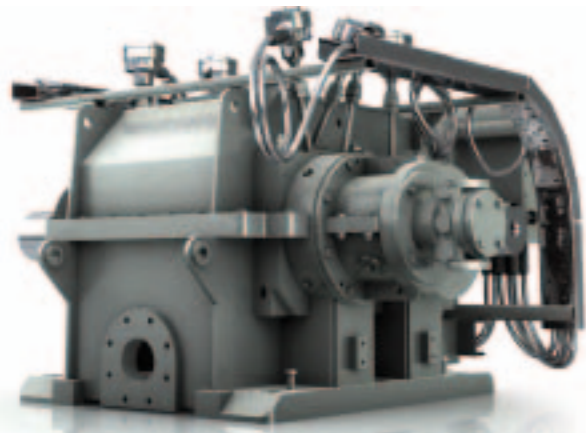
THIS IS ENGINEERING AROUND YOU: THE NAME DAVID BROWN HAS BEEN AN INTEGRAL PART OF INDUSTRY FOR NEARLY 150 YEARS. EVERYTHING WE PRODUCE IS DRIVEN BY YOUR NEEDS, WHICH IS WHY WE IMMERSE OURSELVES IN THE DEMANDS YOU FACE, BECAUSE WE'VE LEARNED THAT THE BEST WAY TO SOLVE A PROBLEM IS TO LOOK AT IT FROM EVERY POSSIBLE ANGLE. THIS IS ENGINEERING AROUND YOU.

Contents

High speed gearboxes	06
Reliable products for effective solutions	08
Global aftermarket support	12
Off shore, on site expertise prevents serious damage	14
A custom design installed to coincide with a planned shutdown	15



THE WORLD'S OIL & GAS INDUSTRY DRIVEN BY DAVID BROWN:
DAVID BROWN HAS THE KNOWLEDGE, EXPERIENCE AND EXPERTISE WITHIN THE OIL & GAS INDUSTRY THAT ONLY A COMPANY WITH OUR HERITAGE CAN DEMONSTRATE. WE PRIDE OURSELVES ON OUR WILLINGNESS TO WORK WITH YOU, THE CUSTOMER, PROVIDING RELIABLE MAINTAINABLE SOLUTIONS THAT ARE TRULY ENGINEERED AROUND YOU.



HIGH SPEED GEARBOXES

David Brown has the experience and knowledge to engineer high speed gearboxes for turbine generators, pumps and compressors that are reliable, durable and perform to the highest standards required. Our engineering experience enables us to design solutions that work for you and deliver the enhanced performance demanded by the oil & gas industry.

QUALITY ASSURED

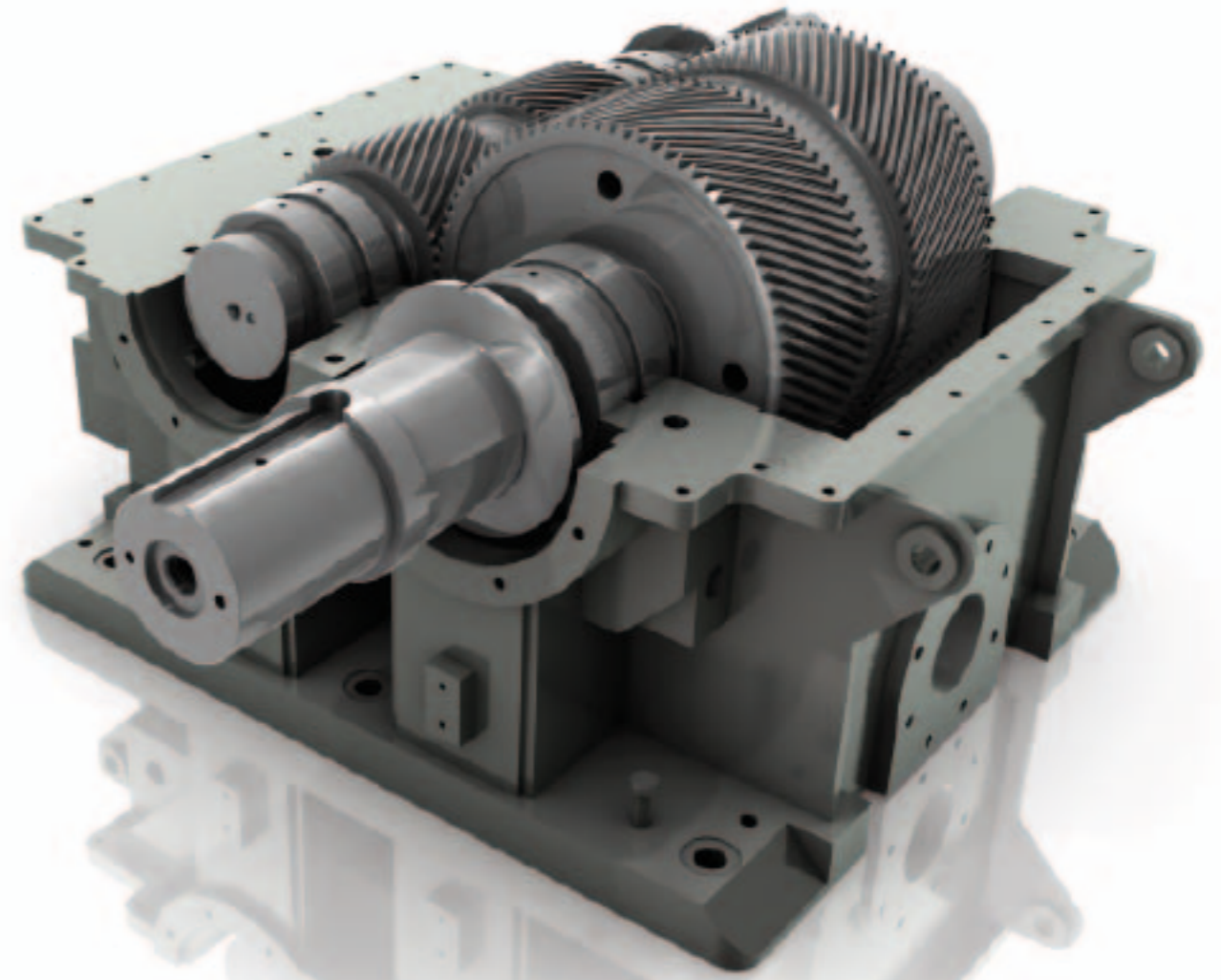
David Brown, supply high quality high speed gearboxes that operate at speeds upwards of 40,000 rpm to both OEMs and end users. Our engineering experience enables us to design and build high quality solutions to your exact specifications, solutions that you can fit and forget.

RELIABLE & TROUBLE FREE

By working closely with you the customer, we can build integral lubrication and cooling systems that ensure reliability and a trouble free solution to your problems. We will also extend these systems to supply the pump or driving motor to reduce space requirements and minimize pipe runs.

MINIMIZE DOWNTIME

The demanding nature of the power generation industry means that downtime caused by gearbox failure is not an option. That's why all David Brown gearboxes are engineered to the highest specifications and are able to cope with the demands faced on a daily basis within the oil & gas industry.



Key features of the High speed gearboxes

- Gear and lubrication systems to the highest specifications, including API, AGMA & ISO
- Lubrication systems to supply the gearbox plus the driving and driven machines
- Lubrication systems designed as an integral part of the gearbox casing
- Parallel shaft or planetary designs
- Single/double helical, to your preference
- Full instrumentation packages (RTDs, vibration probes etc.)
- Barring drives designed to match the machine's inertia.



RELIABLE PRODUCTS FOR EFFECTIVE SOLUTIONS

David Brown has extensive engineering experience in supplying high quality reliable products into the Oil & Gas Industry. Our ability to work on an individual basis with each customer to tailor a solution to their exact needs ensures all our products reach the high standards set by our customers on both quality and safety.

SPEED REDUCER GEARBOXES

Our units are available in in-line and right angle versions in single, double, triple and quadruple reduction gear stages having a maximum power capacity exceeding 8,300kW. Their modular design and construction offer many engineering and performance benefits including a high level of interchangeability of parts and sub assemblies. This results in considerable economies of production whilst maintaining the highest standards of component integrity.

JACK-UP GEARING

Jack-up rigs are costly and complex pieces of equipment and when dealing with such high-cost structures, reliability is of paramount importance. Our unrivalled technical ability to supply hardened jacking pinions for various projects throughout the world has given David Brown the experience and knowledge to supply high quality reliable jack up gearing. By working closely with our customers and engineering custom build products to match their exact specifications we supply products that are reliable and effective.

- Ability to engineer custom built products
- Products that are reliable and effective
- Experience of supplying high quality reliable jack-up gearing
- Speed Reducers with high power capacity exceeding 8,300kW.





SERVICE THAT YOU CAN COUNT ON: DAVID BROWN IS DEDICATED TO MEETING OUR CUSTOMERS' NEEDS BY PROVIDING A SERVICE THAT OPERATES LIKE YOUR BUSINESS ON A GLOBAL 24/7 BASIS. THE QUALITY OF SERVICE AND SUPPORT OFFERED BY DAVID BROWN IS A DIRECT RESULT OF OUR EXPERTISE AND EXPERIENCE BACKED BY THE QUALITY AND PRIDE OUR WORKFORCE DISPLAY EVERY DAY AS STANDARD. UTILISING THE LATEST TECHNOLOGY, OUR SERVICE ENGINEERS ARE READY AND WAITING 24 HOURS A DAY, 365 DAYS A YEAR.



GLOBAL AFTERMARKET SUPPORT

The support and service offered by David Brown is backed up by 150 years of expertise and experience. Dedicated aftermarket and support teams are based throughout the world. Giving you the vital support that you and your business demand on a global 24/7 basis.



○ Full service centres
Africa
Australia
China
Europe
Thailand
UK
USA

○ Support centres
Brazil
Czech Republic
Indonesia
India
Netherlands
Russia

WE OPERATE AT THE VERY CORE OF YOUR BUSINESS

David Brown has established a stand alone aftermarket business to take care of David Brown branded or any other geared installations on a global basis. With the backing of a dedicated proposals, engineering and purchasing team, our products and services are truly engineered around you.

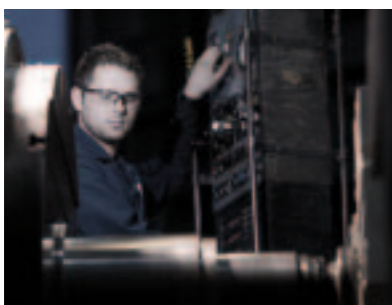
Services offered

- On-Site Services
- Repairs, overhauls & upgrades
- Service & Repair
- Retrofit Replacement Gearboxes
- Asset Management
- Strategic Spares Management

David Brown field service engineers are primed to deal with any problem you may encounter in the oil & gas industry, anywhere in the world. Utilising the latest technology, they are ready and waiting 24 hours a day, 365 days a year.

Their specialist knowledge in the oil & gas industry ensures that they can drive value into your process and keep your business running eliminating downtime and lowering your costs. They have the technology to provide fast, effective, repair and support services anytime, anywhere in the world.





OFF SHORE, ON SITE EXPERTISE PREVENTS SERIOUS DAMAGE

When an oil cooler failure caused sea water to enter a gearbox lubrication system, only a swift response by a David Brown engineer and good teamwork with Shell prevented serious damage to the unit.

Whilst working on the Shell Nelson platform off the coast of Aberdeen on a GEC Alstom high speed unit, attention soon switched to another high speed unit. It was noticed that an oil cooler failure was causing sea water to enter the gearbox lubrication system. A fast response by the team as a whole was essential to prevent damage to the gearbox.

The David Brown engineer removed the oil feed pipe work and manifold cover plate to let out the seawater. A water displacement solution was washed over the internals to remove all traces of seawater and guard against corrosion and all instrumentation was disconnected and removed together with the top cover of the unit. Further cleaning then took place to eliminate seawater residue.

With this work completed the engineer then returned to his original task of replacing RTDs on both the duplex high speed bearing probes and on the simplex device on the high speed thrust bearing. After a full systems check, joint faces were cleaned of old sealant and the unit closed once more, ready for operation. All work was carried out within a confined space, with many vendors and associated work parties from the platform working simultaneously, a great team effort.

David Brown engineers regularly perform routine and extraordinary maintenance offshore and have a good understanding of the technical issues as well as the procedures that are unique to this challenging environment. This incident is just one example of David Brown's determination to take ownership of any problems that arise on-site and quickly provide an effective solution.

- Swift response from an experienced and dedicated engineering team
- Effective action to ensure that no costly downtime occurred
- David Brown engineers working alongside business partners to great effect
- Reliability and expertise in a very demanding environment.

A CUSTOM DESIGN INSTALLED TO COINCIDE WITH A PLANNED SHUTDOWN

David Brown showed that it can bring its unique brand of service to the offshore industry in a critical contract for a major energy company.

David Brown manufactured a custom-designed set of high speed gears for a competitor's gearbox which drives a vital compressor, in order to meet the installation schedule during a planned shutdown of an North Sea oil rig.

To prepare for the onerous task of installation, two David Brown service engineers underwent offshore safety training involving simulated helicopter crashes into the sea while manufacture went ahead.

The manufacture of the gears was completed on time enabling the project to proceed to the installation stage which involved nearly a hundred site engineers from a number of partner companies.

The rig outage, which included the gear installation, was completed on time with a David Brown employee being named as Man of the Shutdown in a very complimentary letter from the platform's owner. "The David Brown men displayed 100% commitment during severe adverse weather conditions and took ownership of the project to get it completed on time."

- High speed gears for a competitor gearbox
- All manufacturing completed on time
- David Brown employee named man of the shutdown
- David Brown "own" the project to ensure on time completion.