



# HALLITE SEALS CAPABILITIES

2016

Hallite 

# PLEASED TO MEET YOU. WE'RE HALLITE SEALS.

For more than 110 years, Hallite Seals has been a leading supplier and pioneer of innovative sealing technologies and engineered sealing solutions for hydraulic cylinders, hydraulic systems, and the fluid power industry.

As a global organisation, we are able to leverage our expertise in engineering design, superior quality, and advanced manufacturing and production processes to meet your supply needs when and where you need them the most. From high-volume production runs, to bespoke sealing solutions, the longevity of our success in meeting the demands of OEMs, distributors, and cylinder manufacturers can be attributed to doing things the 'Hallite Way'.



## THE HALLITE WAY

Whatever you need, we can help

A robust portfolio of catalogue products and value-added engineering and manufacturing services that meet and exceed customer needs and expectations.

One high standard, everywhere

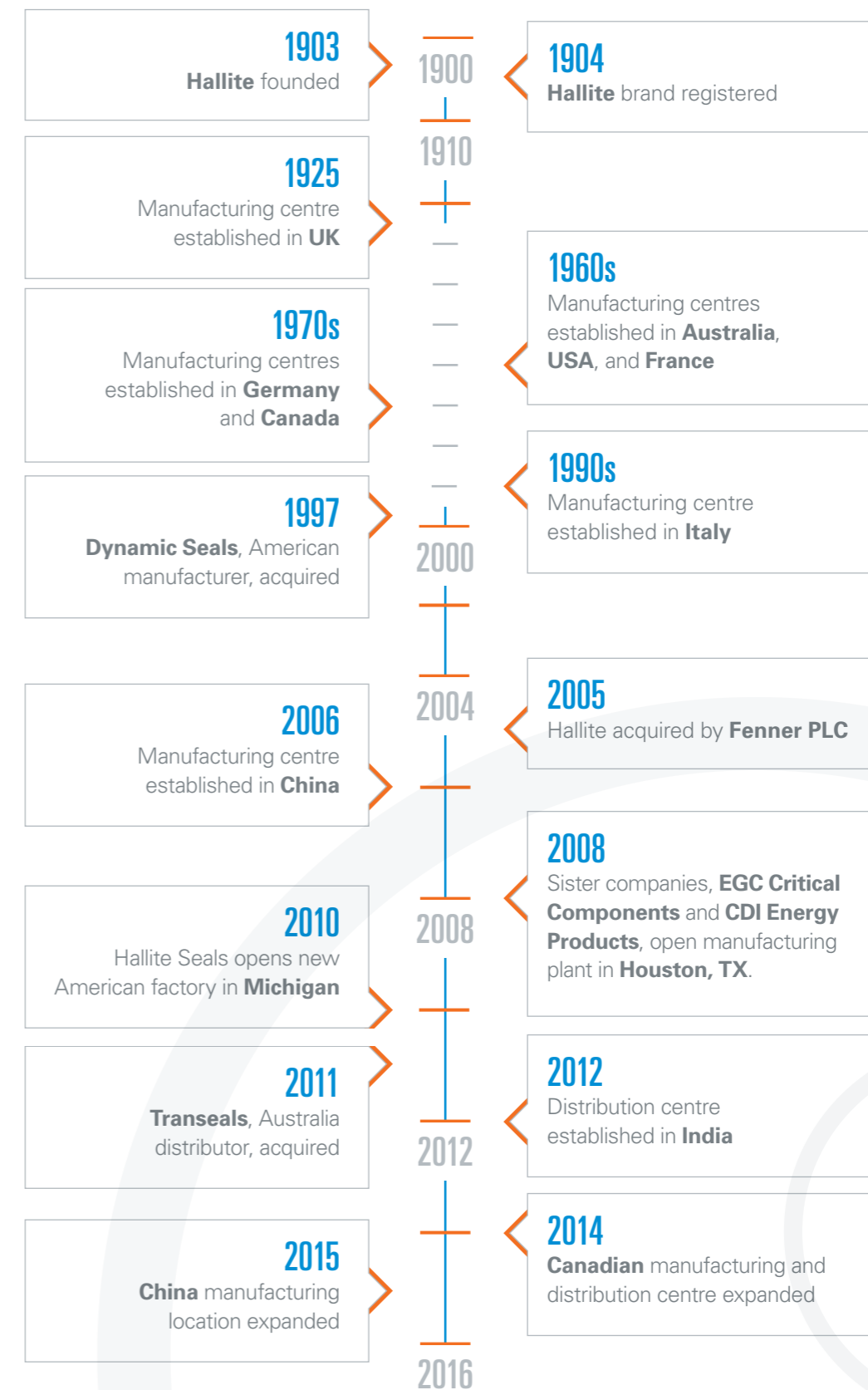
A commitment to global quality and production standards that ensure consistency everywhere in the world.

Service as reliable as our seals

A dedication to getting it done right and on time – the first time – ensuring products and value-added service are delivered on time and to exact specifications.

## A HISTORY OF GROWTH, EVOLUTION, AND SUCCESS

The Story of a World Class Organisation in the Making



# GLOBAL FOOTPRINT

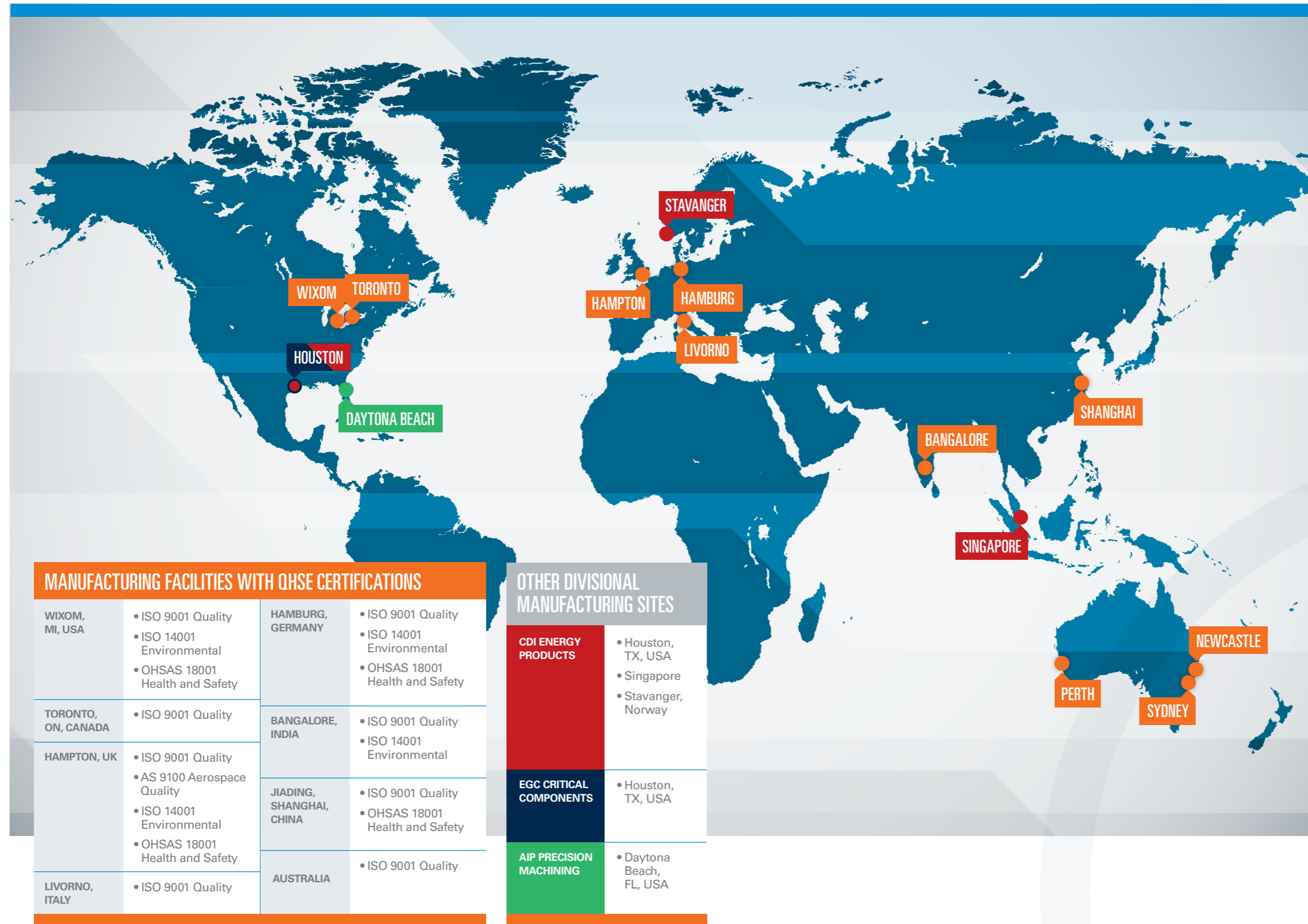
When you need us,  
we're never far away

## QUALITY, HEALTH, SAFETY, AND ENVIRONMENT

It's more than simply what we do. It's who we are.

At Hallite, quality, health, safety, and environmental concerns are more than checklist items. Our focus on QHSE is engrained into our company culture and is an integral component of corporate responsibility. A safe, healthy work environment positions our global team to provide the highest quality, on-time delivery, and service excellence. Industry standards such as the **ISO 14001**, **ISO9001:2010**, and the **OHSAS 18001** management systems help us continuously improve on all elements of HSE while ensuring regulatory compliance.

In addition to our regional locations and manufacturing centres, we boast a worldwide network of service providers and distributors to ensure a full range and supply of Hallite products are readily available anywhere in the world. See our website for a distributor near you.



# 105,000+ FLUID POWER SEALING COMPONENTS. (YES, WE HAVE YOURS)



Having a diverse range of fluid power products and sealing solutions when you need them is a critical component of doing the things the 'Hallite Way'. Our ability to seamlessly manage inventory and stock enables us to quickly respond to your most urgent requests.

With over 105,000 products available in standard and metric sizes, we have a portfolio of sealing solutions available off-the-shelf, as well as those that can be customised for your specific application.

Over the years, we have refined our business approach to provide services to customers that are searching for both engineered solutions and off-the-shelf products such as:

- Rod
- Single acting rod and piston seals
- Double acting rod and piston seals
- Unitised piston
- Vee packing sets
- Wear bands
- Wipers
- Bearings
- Swivel seals

- Pneumatic seals
- Static seals
- Buffer seals
- Additional products and custom components

We are constantly adding to our range of profiles and sizes for ISO standard and Asian housings.

Please review our online seal selector for a complete list of products or contact your nearest Hallite sales office or Official Hallite Distributor for further information.

Coming in many shapes and sizes, seals are critical components that are found in all major industrial applications and related equipment. By performing a range of functions, such as energy and shock absorption, media separation, pressure containment, and wiping and scraping, seals ensure applications operate properly through correct material selection and design. Our engineers and material scientists can also work with you to determine the best material to use for your application.

## MATERIALS

<b>ELASTOMERS</b>	NBRH NBR FKM (Viton®, Fluorel®) FFKM EPM	EPDM FEPM (Aflas®) FVMQ (Fluorosilicone) TPE (Hythane®) TPU
<b>PLASTICS</b>	PF (Phenolics) PA (Nylon) PFA PVDF (Kynar®) CTFE PEI (Ultem®) PI (VespeI®) PE, UHMW POM (Acetal, Delrin®)	ETFE (Tefzel®) ECTFE (Halar®) Polypropylene PPS (Ryton®) PEEK, PEK, PEKEKK PTFE (Armorlene®) Filled PTFE M-PTFE
<b>COMPOSITES</b>	Patented SinterMesh™ XPC Componds™ Carbon-fibre composites Nano-composites Elastomer-coated fabrics	Plastic-to-metal bonding Rubber-to-plastic bonding Rubber-to-metal bonding Rubber-to-rubber bonding



# IT'S NOT JUST THE SEALS

Our customer relationships last for decades. Here's why.

Hallite is more than a manufacturer of catalogue seals and components. We also work closely with you to create unique products that are fit for purpose, offering comprehensive solutions designed to your specifications. When you need sustained technical support, quick turnarounds, and engineering and design expertise, we step in as versatile partners capable of offering an immediate response and providing extended services when needed.

**Some of these include:**

- Advanced prototyping and engineering and design services
- Materials development support services
- Rapid turnaround capabilities
- Non-standard seal dimensions
- Supply of spare parts

## GLOBAL QUALITY, RIGHT ON YOUR DOORSTEP

Companies operating in the fluid power and process industries draw confidence from a supplier's ability to serve them promptly through worldwide supply, quick delivery, and technical support. At Hallite, we pride ourselves on providing flexible and responsive service that easily adapts to the changing needs of an evolving industry.

A comprehensive range of stocked moulded products and inventory of parts in a variety of sizes are readily available through our manufacturing hubs or satellite Hallite distribution points. By maintaining these diverse sources of supply, we are able to combine our worldwide manufacturing and production expertise with local content and rapid turnaround machining cells to

meet your delivery requirements. With facilities located on multiple continents, offering this unique blend of capabilities allows Hallite to serve as your one-stop, global source for premium sealing solutions.

## NIMBLE RESPONSE, QUICK DELIVERY

Our ability to seamlessly manage inventory and stock enables us to serve as responsive suppliers who can quickly fulfil your most urgent requests.

Our experience in stocking control, warehousing, and coordination of complex logistics helps us ensure on-time delivery and excellent lead times. This refined process and unique approach to business eases supply chain demands and supply concerns, giving you the confidence you need in a responsive, adaptable supplier.

## SINGLE SUPPLIER SOLUTION? NO PROBLEM

We understand the increasing need for quality control, supply guarantee, and cost-savings associated with vendor rationalisation exercises across the industrial manufacturing space. Hallite is uniquely placed to offer advanced product assembly, kitting services, and performance testing for our customers. The turnkey solutions we offer enable our customers to work with Hallite as a single-source supplier. Being responsible for the entire manufacturing process ensures the integrity and quality of the finished part. With advanced quality processes and detailed documentation, we are able to quickly pull a portfolio of parts together which are packaged directly from production.



**OUR 110 YEAR HISTORY OF LONGSTANDING CUSTOMER RELATIONSHIPS PROVE OUR PRODUCTS WORK. BUT HERE'S A SECRET: IT'S ABOUT OUR SERVICE, TOO**



# MATERIAL TESTING AND DEVELOPMENT

## Premium materials with performance you can rely on

With an extensive history of product innovation and material development, our team understands how critical material selection is to sealability. The right combination of materials is a critical factor that can mean the difference between success and failure when a seal is installed in a given application.

Our full range of sealing products and components is complemented by sustained technical support in material selection and development, as well as custom compounding that can be tailored to meet your specific needs.

To produce products that are capable of surviving the harsh conditions and operating envelopes of fluid power applications, our

team of engineering experts and specialists regularly evaluates material compatibility and performance scenarios to offer the optimal sealing solution.

Proprietary material formulations such as our in-house manufactured Hythane® TPE, Armordene® PTFE, and other custom blends can be developed using our material development and testing facilities.

As part of this knowledgebase, our in-house material library contains current and historical data on custom blends and formulations that document distinctive performance characteristics for the full range of sealing products we offer worldwide.



## MATERIAL TESTING TO ENSURE OPTIMAL PERFORMANCE

We've invested heavily in validating the quality of our products and robust assemblies, testing to ensure the materials selected are capable of meeting or exceeding your performance requirements. Our materials specialists are able to perform a range of testing services to

ensure quality and optimal performance. Whether in-house testing or field trials, we are able to reproduce ideal and worst-case operating conditions, recording seal integrity, as well as monitoring pressure, speed, temperature, and a number of other performance factors.

## STANDARD MATERIALS TESTING

Material Type	Testing Performed
Elastomers & Thermoplastics	<p><b>Compressive properties:</b> Helpful in determining pressure resistance of various materials. When used with other data can help determine overall mechanical properties.</p> <p><b>Hardness:</b> The relationships between hardness and fundamental physical properties are increasingly complex, and as such, durometer testing is used for purposes related to process control. This testing is useful</p> <p>for "first approximation," for narrowing the field of potential candidate materials.</p> <p><b>Heat aging:</b> Provides materials with resistance to long-term dry heat exposure.</p> <p><b>Immersion testing:</b> Evaluates and provides information on a material's resistance and chemical compatibility in various media within certain operating parameters, such as time, temperature, pressure, and concentration.</p> <p><b>Specific gravity:</b> The ratio of the density of a material to the density of water. Used primarily as a quality assurance measurement to ensure lot-to-lot consistency.</p> <p><b>Stress-strain properties:</b> Testing of physical properties for tensile strength, elongation, modulus, and tear. Used for material selection and quality control.</p>
Elastomers	<p><b>Tensile stress-strain properties:</b> Fundamental mechanical properties derived from the stress-strain curve for use in analytical and FEA calculations needed to complete product design and for quality control of incoming batches.</p> <p><b>Compressive stress-strain properties:</b> Testing which complements the tensile stress-strain curve and offers complete understanding of the range of deformations. Distinct focus on identifying the compressive failure of materials, especially hard plastics.</p> <p><b>Thermal:</b> Because ideal, room temperature testing scenarios are incompatible with realworld operating environments, elasticity and viscoelasticity of materials and additional thermal properties become critical factors in harsh environments where temperature or thermal limits are a concern.</p> <p><b>Compression or permanent set:</b> Quantifies relative determination of the residual seal force after subjecting a material to prolonged deflections.</p> <p><b>Rheology:</b> Used to optimise the vulcanisation process, most often in rubber or elastomer materials. For plastics, rheological characterisation is required to optimise mould designs and manufacturing processes.</p> <p><b>Specific gravity:</b> Measuring the density of a material to the density of water supports quality assurance and lot-to-lot consistency.</p> <p><b>Chemical resistance and heat aging tests:</b> This testing also helps in identifying resistance and chemical compatibility of material with various media at operational parameters such as time, temperature, pressure, and concentration.</p> <p><b>Wear:</b> Useful in determining the wear resistance and abrasivity of materials under single direction sliding or in reciprocating dynamics, under specific pressures, velocities, lubrication modes, temperatures, and abrasives. Important in dynamic applications, where single direction or reciprocating dynamics are involved, we perform both dry and lubricated wear tests.</p> <p><b>Tear resistance:</b> This measures a material's resistance to crack, propagation, and tear.</p> <p><b>Compression set:</b> This measures permanent deformation after aging in a compressed state.</p> <p><b>Adhesion:</b> This serves primarily as a quality control test for the bonding of dissimilar materials.</p>
Thermoplastics	<p><b>Thermoplastics Deflection Temperature:</b> The temperature at which a plastic beam will deflect with a given load to a predetermined distance.</p>

In addition to the tests listed above, Hallite can conduct other tests to meet your specific needs and requirements.



# MANUFACTURING AND PRODUCTION CAPABILITIES

We can make what you need. (And quickly too).

To fully meet the demands of your application environment, we offer you a versatile global resource capable of meeting high-volume demand, single production runs, and short lead times. Our commitment and focus to providing premium products worldwide is greatly benefited by regional manufacturing and support centres with onsite specialists that ensure exceptional quality, and security of supply.

Our production and manufacturing process, combined with our material processing capabilities, enable us to control consistency of both product and material standards across our global manufacturing sites. From injection moulding, to our state-of-the-art material feed system, we also have fully tooled CNC capabilities, and machining expertise. Hallite is capable of manufacturing large diameter seals up to 103 inches (279.4 cm).

GLOBAL MANUFACTURING CAPABILITIES			
CASTING	Pour Casting Open Mould Casting Spin Casting Other Casting	MACHINING	Milling Turning Ball Grinding Metal Grinding
	FORMING		Thermoforming (Hot Forming) Press Forming (Cold Forming) Die Forming
MOULDING		Injection Moulding Transfer Moulding Open Press Moulding Compression Moulding Auto Moulding Large Diameter Moulding (>26")	SECONDARY PROCESSES
	RAW MATERIAL PROCESSING		
EXTRUSION	Pre-form Extrusion Melt Extrusion Ram Extrusion Over Extrusion Rubber Extrusion Pultrusion	RAW MATERIAL DEVELOPMENT	Polymerisation

# CUSTOM-MACHINED SEALS



In addition to our extensive range of stocked moulded products we offer custom designed sealing solutions incorporating extensive engineering support, CAD/CAM software, and an experienced team of technicians. When an immediate response is required, we are able to machine seals in your local region to address your sealing need. Such scenarios might include:

- Breakdown situations
- Low Volume, quick-turns
- Rapid prototyping and first articles
- Seal dimension modifications
- Non-Standard Metal Dimensions
- Custom shapes
- Material changes
- Discontinued service parts

With sizes ranging from 0.25" to 52" (6.35 mm to 1320 mm), we use a variety of materials, from basic seal grade materials (TPU, NBR, FKM, PTFE, TPE, polyester, and POM) to highly engineered (Torlon®, Ryton®, PEEK) or proprietary materials.

Using the latest CAD/CAM and machining technology, our expert CNC teams have the ability to machine and manufacture rubber or plastic components to customer drawings or use one of the many standard computerised profiles we have available.



# LET'S WORK TOGETHER

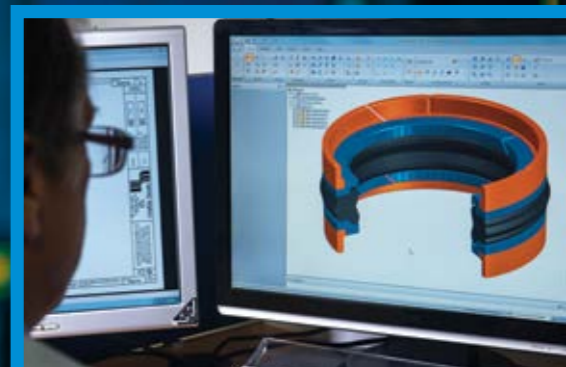
## Engineered to Maximise Equipment Productivity

Our team of design, manufacturing, and materials engineers works hand-in-hand with global distribution networks, OEMs, and aftermarket specialists. From design to production we are experts in fluid power sealing solutions for a variety of applications.

When assessing your application needs, we evaluate a number of factors, such as:

- Media compatibility
- Temperature
- Pressure
- Environment (wet or dry)
- Continuous or cyclical loads
- Static stress or dynamic conditions
- Fluid compatibility

This in-depth knowledge about your application ensures we can provide the best guidance for the design of your sealing solution.



### CAD DOWNLOAD ACCESS

As part of our commitment to support design engineers, the Hallite CAD Service offers you access to 11,000+ 3D CAD models to download for free in over 150 different file formats – ready to import directly into all of the most popular computer aided design software.

You can now easily search, select, and download high-quality 3D CAD models direct from our online catalogue.

Find your seal part using our advanced product finder tool or browse through our product range.

Hover over your seal part and click on 'Download CAD.'

**Preview the 3D CAD model before downloading. Download the exact CAD file format you need.**



# WHERE WE WORK

A record we are proud of

## YOU'LL FIND OUR COMPONENTS KEEPING FLUID POWER SYSTEMS RUNNING IN SOME OF THE WORLD'S TOUGHEST WORKING CONDITIONS.

We have supplied products and critical components for hydraulic systems and cylinders across a broad base of markets.

In addition to our knowledge and expertise in providing products for market-specific applications, our people and our commitment to quality and service excellence set us apart.

Each Hallite employee takes pride in demonstrating their commitment to

helping keep the 'Hallite Way' a culture of excellence.

Our fluid power hydraulic and pneumatic seals, wiper seals, O-rings, rod and piston seals, bearings, and other high performance rubber and plastic parts can be found in a range of industries all across the world. The longstanding customer relationships we've established span the range of hydraulic applications, including mobile hydraulics, mining, off-highway, construction, agriculture, mechanical handling, and automation.

### WE HAVE CUSTOMERS IN

- Construction and Infrastructure
- Mining
- Agriculture
- General Industrial and Material Handling
- Oil and Gas
- Aerospace

### MARKETS SERVED

## CONSTRUCTION AND INFRASTRUCTURE

The construction and infrastructure space has a growing need for off-highway and heavy-duty equipment capable of carrying out labour-intensive mechanical activity. Site reclamation, decommissioning and decontamination, and large-scale construction projects are just a few worksite examples where equipment is expected to provide optimal performance during long operating cycles. Whether being used to steer, lift heavy materials, or stabilise equipment during operation, the hydraulic systems and cylinders found in this equipment push operating parameter limitations and specifications.

As construction managers improve worksite efficiencies to meet productivity requirements and streamline operations, the level of demand on critical equipment and related sealing components increases. The wipers, bearings, and barrier components

found in robust hydraulic systems are essential in keeping hydraulic fluids contained and safeguarding against external contamination. Each of these components becomes critical to ensuring seamless operations that protect equipment and personnel from disaster.

At Hallite, we are well versed in providing high-performance seals, bearings, and ancillary components designed to survive critical-service operations in construction and infrastructure. As hydraulic systems are pushed to their limit, our products are fully capable of withstanding temperature, pressure, and shock load levels that might otherwise jeopardise seal performance. Made from materials proven to handle vibration, rough surface finishes, and dynamic temperatures, we have supplied products for leading OEMs and cylinder manufacturers.

When site schedules are tight, machines get pushed to the limit. We won't let you down.

### COMMON PRODUCTS

ROD SEALS	605, 621, 663
WIPER	38, 844, 864
PISTON SEALS	714, 735, 754, 780
BUFFER SEALS	653
BEARINGS	506, 533

### COMMON APPLICATIONS

- Backhoes
- Compaction
- Cranes and Lifting Platforms
- Crawlers and Dozers
- Dump Trucks
- Excavators
- Forklift Trucks
- Heavy Duty Earth Moving Machinery
- Heavy Duty Mechanical Handling
- Heavy Duty Presses
- Heavy Duty Off-Road Vehicles
- Heavy-Duty Tipper/Telescopic
- Hydraulic Swivels
- Implements and Attachments
- Light Duty Off-Road Vehicles
- Mini-Excavators
- Motor Graders
- Road Paving Equipment
- Scrapers
- Skid Steer Loaders
- Telehandlers
- Waste Equipment
- Wheeled Excavators and Loaders



# MINING

Technological advancements continue to push the limits of surface and underground mining. From increasing leg bore cylinder diameters and cutting heights, to maximising the rate at which longwall shearers operate, productivity and efficiency are paramount to minimising downtime and unscheduled maintenance. Densely packed coal and potash formations and cavity roof loads place extreme performance requirements on shearers, longwall roof support systems, and related equipment.

Operating requirements and service-duty dictate the design of hydraulic systems and cylinders in the mining space. Fluid compatibility, lubricity, and contamination are all critical concerns for the optimal performance of mining

equipment and applications. The components within hydraulic systems must be built to ensure extended lifecycles under extreme conditions.

Surface or underground, our parts are built for long, long hours.

Timing and delivery are critical factors to successful operations. At Hallite Seals, we have decades of experience in designing and manufacturing polymer components for a broad range of activities in the mining industry. We work with you to ensure you mitigate your risk and protect your personnel, your assets, and the environment.

## COMMON PRODUCTS

ROD SEALS	605, 621, 652, 744
STATIC SEALS	155
WIPER	38, 520, 820, 842, 860, 862
PISTON SEALS	714, 730, 735, 754, 755, CT
BEARINGS	506, 533, 708

# AGRICULTURE

Rapid growth in global agriculture has resulted in the widespread cultivation of land and natural resources. As consumption and productivity levels increase, the hydraulic systems in light-duty and heavy-duty equipment face the threat of premature failure. The likelihood of fluid leakage increases as seals wear and other ancillary components fatigue due to longer operating cycles and hostile environmental conditions, such as extreme temperature and external contaminants.

Improvements in the processing capacity of equipment such as harvesters, feeders, and sorters have resulted in technological advancements that give equipment prolonged service life and durability. Enhancements to planter and seeder equipment and foraging technology now allow farmers and developers to work with improved

accuracy and greater productivity. As such, the performance requirements for the seals, bearings, guides, and wipers used in this equipment must compliment in both design and performance.

From bailers to rice pullers, we keep our customers growing.

At Hallite Seals, we have a wealth of experience in providing solutions that are designed to enhance performance in the hydraulic systems found in agricultural machinery and equipment. Whether used to prepare the earth, carry the stresses of hauling heavy materials, or handle extreme front load duty, we have a portfolio of products that are designed and engineered to application-specific parameters.

## COMMON PRODUCTS

ROD SEALS	R16, 513, 605, 620, 621, 658, 663
STATIC SEALS	
WIPER	520, 521, 831, 839, 860, 862, 864
PISTON SEALS	P54, 606, 659, 714, 754, 755, 764, 770, 775, 780, CT, PFR
UNITISED PISTONS	720
BEARINGS	87, 506, 533
BUFFER SEALS	635

## COMMON APPLICATIONS

- Advancing Ram
- Base Lift Ram
- Crushing Equipment
- Cutting Machines
- Double Telescopic Legs
- Drilling Equipment
- Drilling Machines
- Excavators
- Longwall Roof Support Systems
- Mining Haul Trucks
- Rock-Breaker Attachments
- Roof Bolters
- Scoop Trams
- Shearers
- Shield Ram
- Shuttle Cars
- Surface Mining Equipment
- Tunnelling Machines
- Underground Vehicles
- Wash Plants



## COMMON APPLICATIONS

- Bailers
- Combine, Harvesting Equipment
- Cultivators
- Cutters and Shredders
- Excavators
- Hay and Forage
- Heavy-Duty Off-Road Vehicles
- Hydraulic Swivels
- Irrigation Systems
- Light-Duty Off-Road Vehicles
- Livestock Feeding Systems
- Livestock Handling
- Material Handling
- Planting and Seeding
- Rephasing Cylinder Systems
- Rice Pulling Machine
- Scrapers
- Seeding Equipment (Hydraulic and Air)
- Self-Propelled Sprayers
- Skid Steer
- Tillage
- Tillage and Tilling Equipment
- Tractor
- Wind Rower



# GENERAL INDUSTRIAL AND MATERIAL HANDLING

As an enabler for all other markets, the industrial and material handling equipment industries has a growing need for automation and modernisation of production processes. Storage and handling equipment, engineered systems, industrial trucks, and bulk material handling equipment are just a few examples where equipment is expected to maintain peak performance during long operating cycles of repetitive tasks. Whether being used to move, store, control, or protect, the hydraulic systems and cylinders found in this equipment need to automate production and facilitate the efficient flow of goods.

Material handling manufacturers must comply with a number of regulatory requirements due to rising environmental

concerns and demand for eco-friendly equipment. Hallite design and material engineers work with OEMs to develop components which ensure that their products are safe to use, and meet environmental considerations.

We'll help you build machines that are safe, reliable, and kind to the environment.

Hallite's high-performance seals, bearings, and ancillary components are designed to protect equipment that needs to handle the stress of long performance cycles, repetitive motions, and heavy loads.

## COMMON PRODUCTS

ROD SEALS	605, 621, 663
WIPER	38, 844, 864
PISTON SEALS	714, 735, 754, 780
BUFFER SEALS	653
BEARINGS	506, 533

# AEROSPACE

The aerospace industry is known for enforcing the most stringent performance requirements. Fail-proof sealability, cleanliness, and reliability of products made to exacting specifications are critical success factors in aerospace fluid power and hydraulic systems. Seals and sealing components are responsible for helping landing gear absorb shock and dampen vibration, as well as help control braking and steering functions. Stick-slip, side-loading issues, or leakage can cause instability and compromise equipment performance.

In the aerospace sector, polymeric components have many advantages over metallic parts, such as being lightweight, resistant to erosive environmental conditions (rain, jet fuel, and other lubricants), and natural lubricity.

Many of the materials used in our product designs are proven to withstand the harsh conditions found in aerospace applications, such as cryogenic and elevated temperatures.

The highest global standards – wherever you touch down.

Our dedicated aerospace manufacturing cell supplies some of the leading aerospace equipment manufacturers with a range of moulded products and components made from high-performance materials, such as advanced thermoplastics and composite materials. The activities of this production cell are in compliance with the **AS9100** standard and all products are custom-made for your application.



## COMMON APPLICATIONS

- Automatic Guided Vehicles
- Control and Robot Equipment
- Fabrication Plants
- Forklift Trucks
- Foundry and Metal
- Injection Moulding Machines
- Lifting Equipment
- Lifting Platforms
- Machine Tools
- Mechanical Handlings
- Packaging Equipment
- Presses
- Truck Mounted Cranes



# OIL AND GAS

Technology continues to advance with the sole goal to maximise returns in exploration and evaluation, completions and production, and drilling exercises. Well formations have become more difficult to reach and well architecture has become increasingly complex, which pushes the conventional operating parameters of critical components and sealing elements.

The harsh environments, temperatures, media, and pressures of oil and gas expeditions all pose a threat to sealing elements. For fluid power and hydraulic systems in the oil and gas industry, these severe conditions require that each component is designed and manufactured for optimal performance and to mitigate risk during routine operations.

In response to the increasing complexity of extracting hydrocarbons, energy operators and service companies alike look for innovative engineering design that will protect assets, personnel, and the environment.

Temperature, pressure, and no margin for error... we love it when our customers put us to the test

Our technical team investigates material requirements and operating parameters to meet your application requirements. We offer a range of seal profiles and unique geometries that are application specific.

## COMMON APPLICATIONS

- Bumper Plates
- Hydraulic (Mechanical) Roughnecks
- Hydraulic Valve Actuators
- Motion Compensation Systems
- Rig Tensioners
- Riser Tensioners
- Skidding Systems
- Subsea Ploughs
- Winching Systems
- Wire Tensioner Systems
- Position Compensators



**Disclaimer:** The descriptions, design and performance information, and recommended uses for the products described herein are based on our design and manufacturing experience, product testing in specific conditions, and industry standards. As such, this information is for general guidance only. Our products are accompanied with their own warranty which is given in writing at the time of sale.

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# HALLITE SEALS

As a global provider of high-performance sealing solutions, Hallite's reputation is backed by 100 years of excellence in engineering, manufacturing, sustained technical support, and customer service. With some of the industry's shortest lead times, we bring to market a diverse portfolio of catalogued and customised sealing solutions made from materials that are formulated for performance-critical environments.

From the off-highway equipment used in construction and infrastructure, to the landing gear used in aerospace, Hallite fluid seals are key components utilised in the most demanding applications. To meet growing worldwide demand, Hallite combines carefully chosen and managed

inventory in local markets, supported by fast-track moulding and machining capabilities, to provide high service levels. Hallite offers a broad range of catalogue products, OEM custom-moulded and machined designs and custom on-demand machining capabilities from design to shipment.

Hallite operations can be found in strategic geographies throughout Asia Pacific, Western Europe, and North America. Combining an expansive global footprint with a dense network of strategic service partners completes our global presence – ensuring that the full range of Hallite products, capabilities and expertise are always available when and where you need them most.



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