A Recorded History of

CompAir Broom Wade

1898 - 1998

Contents

Founding Broom & Wade and the Early Years

You would expect someone who rose from the family farm to become an internationally respected engineer and businessman to be something of a character. No one who met Harry Skeet Broom forgot him.

The story of his early years reveals a young man full of energy, never lacking in bright ideas, and with a passion for making things and solving problems. He was born to be lucky, he would say: the seventh son, born on the seventh day of the seventh month in 1875

Harry Skeet Broom and Jethro Thomas Wade met at Paxmans in Colchester as fellow apprentices and decided to set up in business together. Establishing their new company in 1898 with few financial resources but with plenty of ingenuity, enthusiasm and a willingness to try anything, plus an extraordinary wide range of engineering experience. But no cash.

HSB would recount years later how he and his partner each thought the other had some money.

It seems they had £5 and a bag of tools each. But that did not prevent the start of the engineering business in a 36ft by 16ft shed on a cornfield at Lindsey Avenue, High Wycombe.

With no funds to purchase materials, they built with what they could find. Contacts gave them some timber, cement for the factory floor, galvanising sheets and plenty of nails.

They found an old gas engine on a scrap heap at the Gas Works, which they repaired and used for several years. They bought second hand tools from the scrapheap and made others. The 'office', one employee recalled, was scarcely big enough to keep rabbits in and was lit by candle, while the gas light in the works went up and down according to the demands on the gas engine which drove the shaft for the machine tools.

They took any job going. One of the first was to erect a refrigeration plant at the Brentford Brewery. HSB recalled "I did this while Wade built the first shop at High Wycombe with his own hands and I earned sufficient money to keep the business going." He would cycle back to High Wycombe at weekends.

They repaired a butcher's sausage machine, re-hung the bells on West Wycombe Church - though they couldn't be rung as the tower swayed - and earned a reputation for well-boring, constructing pumps and maintaining water wheels. They also took on experimental work for other engineering companies, such as cement spraying for Winget and use of coal gas instead of petrol for Ford cars.

Bank Holiday Weekends were spent doing repairs at the paper mills, with double pay keeping the books healthy for a while.

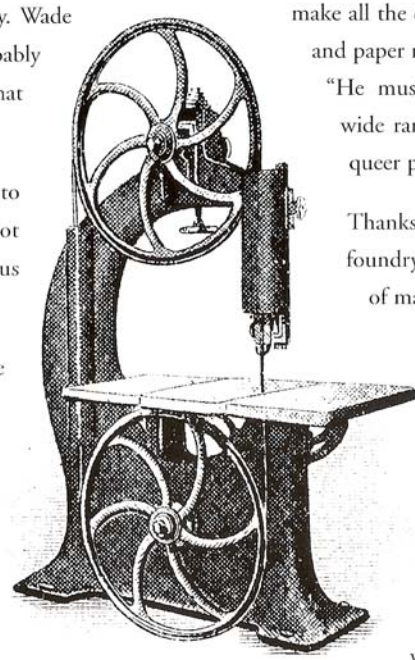
Harry Skeet Broom

Founding Broom & Wade and the Early Years

HSB recalled, "On Saturday morning I went round to the people we had done jobs for during the week, collecting sufficient money to pay our huge staff of three men and a boy. Wade drew 30/-, I drew 15/- and probably the rest drew about 45/- in all. What a salary list!

In the first year or so it was hard to keep going - although I cannot remember anyone worrying us for money."

The pair believed that the flourishing High Wycombe chair factories, at that time a totally manual industry, were ripe for woodworking machines which Broom & Wade could design and make. HSB's approach to furniture factories brought the first lesson in marketing. "I drew up a circular letter which I sent to all the chair shops and paper mills in the district. Unfortunately I dated it Sunday which was objected to by several people... A Mr Dexter came and wished us well but suggested that we should not start on a Sunday and invited us to his chapel!"



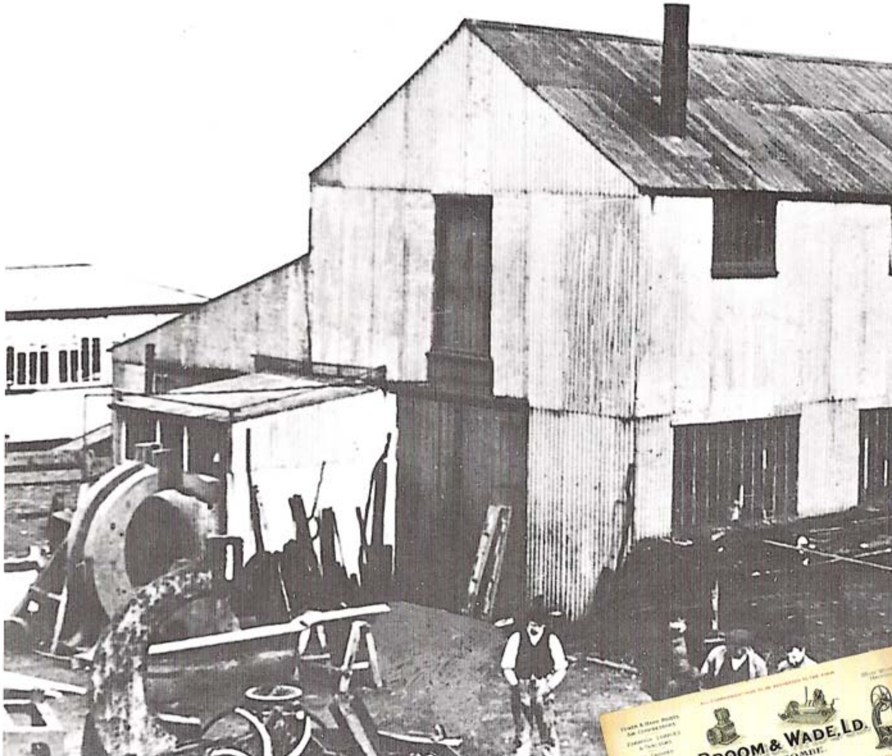
An early woodworking machine

They were soon able to buy a secondhand foundry consisting of a galvanised building about 50ft by 20ft, with the cupola on an old boiler flue. With this they could make all the cast iron for their woodworking machinery and paper mill work. HSB said of his foreman Rogers, "He must have been a magician considering the wide range of good castings we made in this very queer place."

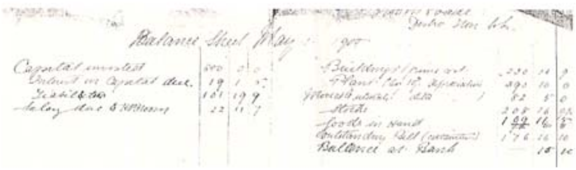
Thanks to HSB's ingenuity, this 'Heath Robinson' foundry led to grand connections. They got the job of making castings for The Hyatt Roller Bearing Company, casting hundreds of pedestals for bearings.

Then they heard that a Mr Sloan had come to London from the USA to wind up Hyatt's London office. HSB had the cheek to book into the adjoining room at the Waldorf Hotel, and when a prospective agent visited Mr Sloan in his room, HSB walked in too, "He got very angry and eventually said if I wanted the agency so badly I could have it. This not only kept our foundry busy, but the bearings sold readily."

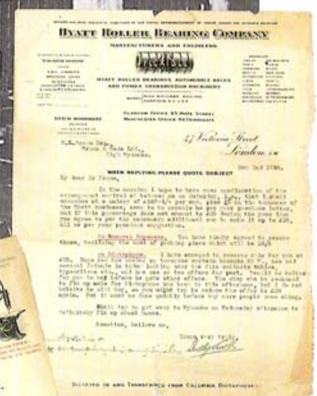
When Hyatt's was taken over by General Motors and Mr Sloan decided to take the agency away, HSB went to America. He came back with a new agreement, with



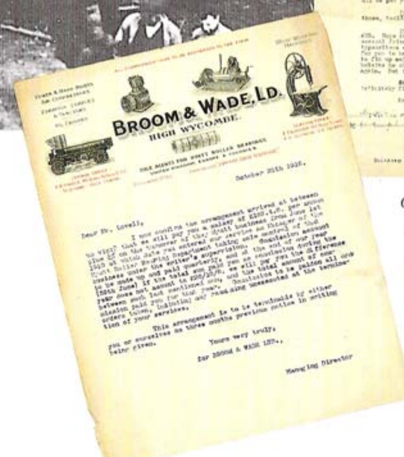
The first Broom & Wade factory



A balance sheet dated May 1st 1900



Hyatt Roller Bearing Company

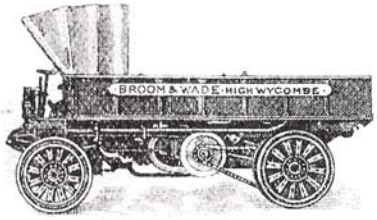


Broom & Wade, Ld.
High Wycombe

Correspondence between HSB and Mr Whaley Lovell on the acquisition of The Hyatt Roller Bearing Company, June 1910.

Founding Broom & Wade and the Early Years

General Motors taking over the stock and HSB receiving a share in General Motors in return for the right of General Motors to take over his share at par.



Soon HSB was drawing £5,000 a year and a further agreement was made. "This time I was made a director of three companies, Vauxhall, Frigidaire and Delco-Remy-Hyatt with a salary of £1,000 a year. This continued until I resigned at Christmas 1948. The salary was not much, but I learnt a great deal during my association with them."

"I had many trips to the States and visits to the motor factories of General Motors and had many offers to take over the manufacture of their products, but I always avoided tying my hands to them. Where it would have landed me I don't know, but I am always glad I continued to run Broom & Wade on my own and not become their paid servant."

Before long the first brick shop was built costing £1,700. It was 200ft long and 36ft wide, with a crane gantry and offices in the front.

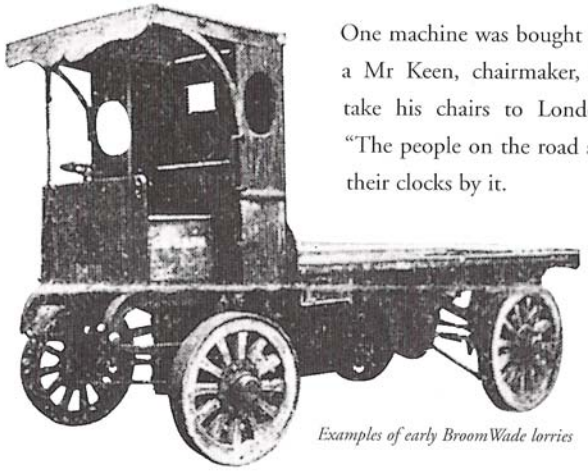
They borrowed £12,000 from a Mr Peache and formed a private company.

They were now making several types of woodworking machines for the chair trade and the prospects looked good. But soon the chair factories faced a slump. Broom and Wade had another idea, they would design and build a motor wagon.

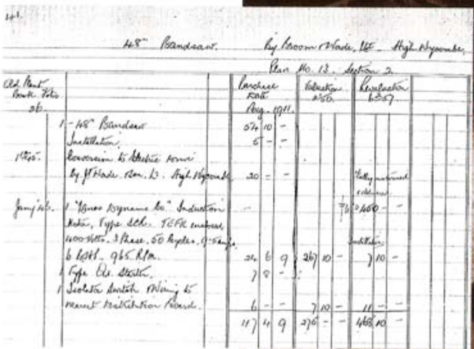
It had a single cylinder engine running on paraffin, with iron tyres, and its appeal was that it had the lowest cost per ton mile of any type of vehicle - one penny per mile.

The design was soon overtaken by faster rubber-tyred vehicles. But not before a few adventures had been enjoyed.

One machine was bought by a Mr Keen, chairmaker, to take his chairs to London "The people on the road set their clocks by it.



Examples of early BroomWade lorries


48" Bandsaw. By Broom Wade, Ltd – High Wycombe.
Plan No. 13. Section 2.

Old Plant Book Folio 36		Purchase 1911 Aug. 1911.			Valuation 1950.			Revaluation 1957.		
	1 – 48" Bandsaw	57	10	–						
	Installation.	5	–	–						
1935.	Conversion to Electric Power									
	By J. Wade Bros. Ltd. High Wycombe	20	–	–						
Jan'y 1946.	1 "[illegible] Dynamo Co." Induction Motor, Type [illegible] TEFR enclosed, 400 Volts. 3 Phase. 50 Cycles. [illegible] 6 [illegible] 965 R.P.M.	26	6	9	267	10	–	7	10	–
	1 Type [illegible] Starter.	7	8	–						
	1 Isolator Switch Wiring to [illegible] Board.	6	–	–	7	10	–	11	–	–
		117	4	9	276	–	–	468	10	–

A Broom Wade bandsaw with accompanying purchase invoice acquired by William Bartlett of High Wycombe in 1911. It is still in use today!

History in the making

Founding Broom & Wade and the Early Years

Before this the chairs went by horse drawn cart, a man taking three days to do the round trip against Keen's trip a day."

A number of Broom & Wade motor wagons were sold to Turkey for making a road over a pass. The driver they sent out with them was captured by Turks!

And in 1908 a number were ordered by a copper mine in Chile to replace their wagons, drawn by teams of eight mules - some of which had recently fallen off the precipitous mountain tracks!

Then in 1909 the War Office offered a prize of £10,000 for a machine to pull a load of 10 tons over any type of country, plus an order for 50 of the machines. Broom & Wade's paraffin motor wagon machine competed against 36 others, most of them steam driven. "Day after day we went out over snow and sand and were always last home by many hours, but we got there. On the last day of the trials there was only a Thornycroft machine and ourselves left in and we had to get our load of shells over a bog." HSB borrowed a coil of wire rope and a snatch block from a timber wagon, put the snatch block on a tree the other side of the bog, and pulled the load over. It was the only machine to finish the course.

But the towing led to disqualification and the Thornycroft machine got the prize, though HSB was guest of honour at dinner that night. "That was the wind up of our lorry business and it very nearly wound up Broom & Wade."

A BroomWade lorry working a Chilean mine, Circa 1908.

A 1910's view of the foundry

From 1910 and The Great War Years

By 1910 Broom and Wade were thinking of giving up making woodworking machines. But the final decision seems to have been decided on a whim. HSB recalled, "The climax came when Mr Glenister bought a machine for £60 less 5% and when I asked for payment insisted on taking off another 5% for cash. I told him if he did I would not make any more chair machines. He insisted so I burnt all the drawings and patterns and went all out for air compressors."

It was in this field - designing and building the newly developing air compressors - that the company was to become a world leader. Their first application was for paint spraying in the furniture industry.

In about 1913 a crisis loomed when Mr Peache asked for the return of his investment, giving them three months to raise the money. This was an impossibility. However, help was at hand - a former business colleague gave them a Bank Guarantee, they obtained the money and retained control of the business.

HSB recorded briefly, "It was just about that time that I finally severed my connection with my old friend Jethro Wade, who had helped me to found the business, and for whom I have nothing but kind thoughts, sound mechanic and good friend that he was. He started his own business making deep well pumps in High Wycombe." Wade's company later moved into the manufacture of valves at West Wycombe Road.

At the outbreak of war in 1914, HSB whilst holidaying received a wire from the Admiralty. He immediately returned to High Wycombe and within a day the factory started making both steam-driven compressors for ship repairs and salvage work and 4.5" shells for Naval Command, Dover.

All these orders gave welcome new impetus for the business and several new buildings were erected.

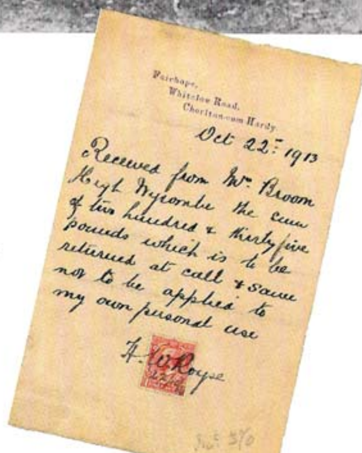
Jethro Wade came back to join HSB for the war period and ran the Shell Shop.

As in most companies, women were brought in to replace the men at the front. The Shell Shop employed fifty women "and a few men for the heavy jobs".

Amazingly, HSB tried to reduce the profit he was now making from war work. "Lloyd George was paying £3 for the work we were doing to the shells and our cost was 7/6d. The Government refused to reduce their payments which resulted in them subsequently levying £100,000 in Excess Profit Tax. They also put me on various boards to try and make people get their costs down."

The first two decades had been exciting but tough. Looking back, HSB wrote "It was during the decade beginning with the year 1919 that I really began to enjoy the fruits of my labours."

A group from the fifty women shell workers pose beside shell casings



Fairhope,
Whitelow Road,
Chorlton-cum Hardy.

Oct 22nd 1913

Received from Mr Broom
High Wycombe the sum
of two hundred & thirty five
pounds which is to be
returned at call & same
not to be applied to
my own personal use

H. W. Royse

A receipt for £235 investment from HSB

From 1910 and The Great War Years

Christopher Broom Smith, the founder's nephew, joined the company in 1916 at the age of 17 as an apprentice.

The founder's son Dick Broom joined the company soon afterwards. He gained an Engineering Degree and worked for a while at General Motors in the USA.

They both later joined the Board, eventually becoming joint Managing Directors. After his father's death, Dick Broom became chairman. Like his father, he led an active social life, at one time piloting his own plane and winning yacht races.

Dick Broom with HSB

Chris Broom Smith relaxing near a portrait of HSB

Expansion in the 1920's

The Lindsey Avenue factory was by now very overcrowded. HSB turned his attention to a building at Bellfield, High Wycombe, which had been used for the manufacture of aircraft. In 1928 he paid £25,000 for the disused factory and an acre or two of land.

The building was huge - the men would play football in an empty corner. Yet it showed foresight to buy a site with such room for expansion - in time it was to become overcrowded with 2,000 people working there.

The new Bellfield building

But at that time, with three gantries and cranes running the whole length of the 500ft building, the new works made it possible to create an efficient layout for easy flow through from the foundry to the rough stores to the machine shop, inspection, finishing stores, erection, testing and packing.

Soon after this the company bought the business of Chadwick Patent Bearing Company, which made road breakers, rivetting hammers and bearings, and Broom & Wade started designing and developing its own complete range of pneumatic tools.

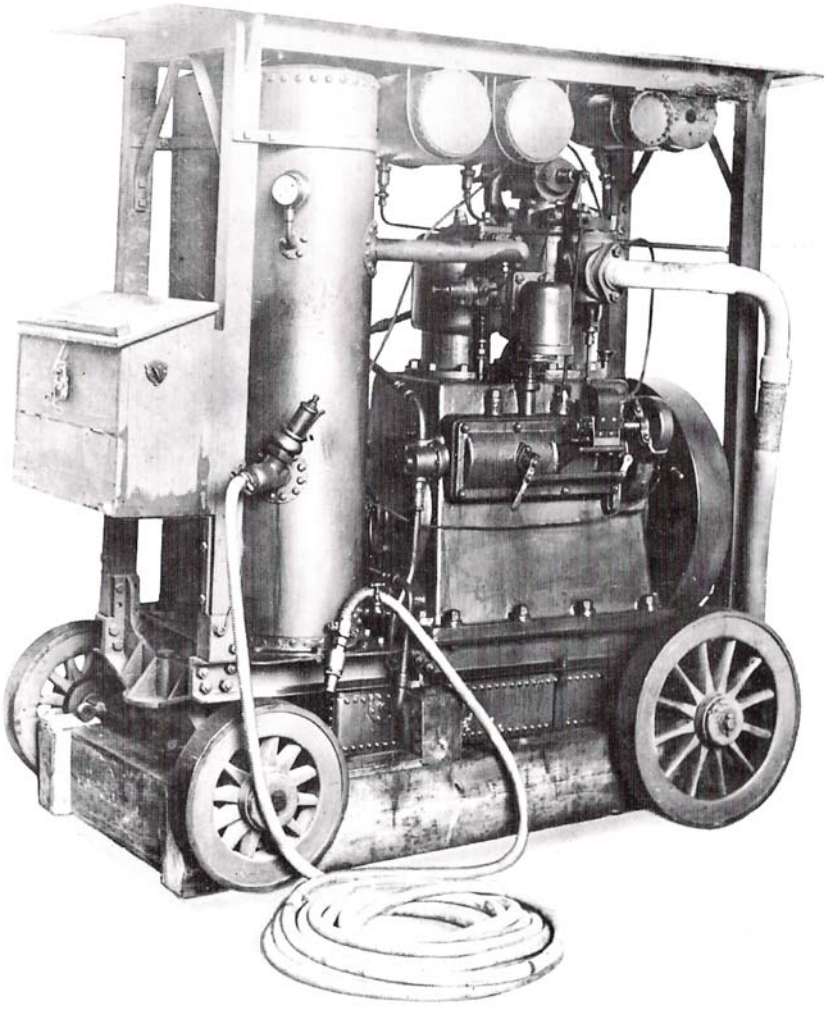
With demand for portable compressors with pneumatic tools growing, a subsidiary company was formed, BroomWade Compressor Hirers, to hire plant.

About this time the Board voted to give the employees a £500 Profit Sharing Bonus. This was to be shared amongst them, a practice which was to continue for many years.

25th anniversary invitation

News of a major road building programme in Germany in 1929 led to sales of a good number of portable compressors. The company designed a special portable set for the German market.

A High Wycombe street scene about 1920



An early BroomWade portable compressor.

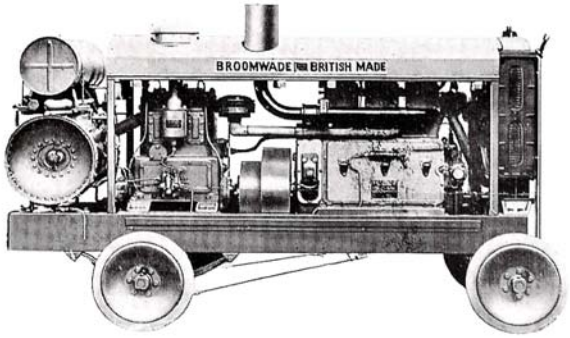
The 1930's and The Great Depression

In 1930 HSB met a Mr Prestage, who had patented a design for a sleeve valve type compressor for refrigerators, and wanted an engineering company to develop it.

The engineering problems were formidable, but the company developed the BroomWade Sleeve Valve Compressor which was the leader in its field for many years.

The world trade slump was affecting business badly. Although the government set up road making and repairing schemes, many municipal authorities were importing machinery from the United States.

The company considered petitioning the Board of Trade to prohibit such imports during the crisis. Then the sales director, Dick Clay, had another idea. He had a large enamel plate fitted prominently on every portable compressor with a Union Jack and the slogan 'Buy British'. Every tender had a bright label attached, with the Union Jack and the invitation to buy British and save unemployment.



A 1930's compressor showing the BroomWade - British Made signage

Around this time the company registered BroomWade as its trade mark. When Clay realised that it rhymed with 'British made', equipment bearing the slogan 'BroomWade, British Made' began to appear on the streets of the nation.

Although this helped, the slump worsened. Then help came from an unexpected quarter.

Russia was well into a five-year plan for industrialisation and machinery of all kinds was in great demand by its London buying organisation, Arcos Ltd. The City however had no confidence in the Russians, because they had failed to honour some of the financial obligations of the former Czarist government.

HSB made enquiries and discovered that Arcos had plenty of compressor orders ready to place. Other engineering firms, he checked, had had their accounts met promptly.

He eventually negotiated export insurance, haggled over prices with the Arcos office, and obtained an order for £50,000 worth of plant.

A 1930's view of the foundry showing an array of moulds

The 1930's and The Great Depression

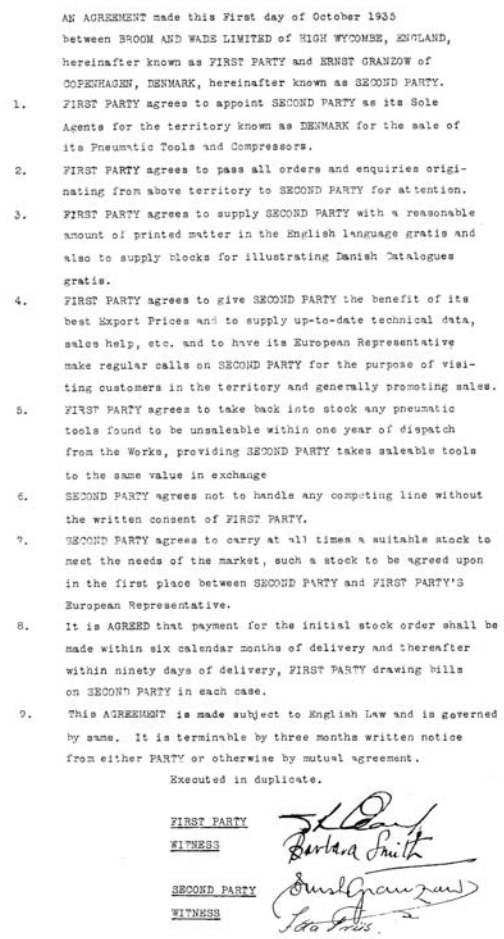
The next few years saw many visits to Russia and men coming over from Russia for training. Among items ordered were large thrust bearings to take 21" shafts for the Russian Navy.

He later recalled, "This Russian business filled our Works up very nicely during the whole of the depression period and gradually we filled up with other work and avoided the need to go on short time."

Broom & Wade also looked to other countries for outlets to keep the factories going. HSB travelled widely, making links with other companies and appointing selling agents throughout the world.

In 1931 the company looked for another product in case the slump proved to be a long one. It entered into an agreement with a French company, gaining the right to manufacture and sell its patent rotary compressor. Though not as successful as the sleeve valve machine, it brought in more work.

The company was now making reciprocating compressors, sleeve valve compressors, rotary compressors, compressors with mechanical or automatic valves, double acting compressors, single stage and compound machines, steam driven machines and more, each designed for some particular purpose. They were used for anything from filling sausage skins to raising sunken ships.



AN AGREEMENT made this First day of October 1935
between BROOM AND WADE LIMITED of HIGH WYCOMBE, ENGLAND,
hereinafter known as FIRST PARTY and ERNST GRANZOW of
COPENHAGEN, DENMARK, hereinafter known as SECOND PARTY.

1. FIRST PARTY agrees to appoint SECOND PARTY as its Sole Agents for the territory known as DENMARK for the sale of its Pneumatic Tools and Compressors.
2. FIRST PARTY agrees to pass all orders and enquiries originating from above territory to SECOND PARTY for attention.
3. FIRST PARTY agrees to supply SECOND PARTY with a reasonable amount of printed matter in the English language gratis and also to supply blocks for illustrating Danish Catalogues gratis.
4. FIRST PARTY agrees to give SECOND PARTY the benefit of its best Export Prices and to supply up-to-date technical data, sales help, etc. and to have its European Representative make regular calls on SECOND PARTY for the purpose of visiting customers in the territory and generally promoting sales.
5. FIRST PARTY agrees to take back into stock any pneumatic tools found to be unsaleable within one year of dispatch from the Works, providing SECOND PARTY takes saleable tools to the same value in exchange
6. SECOND PARTY agrees not to handle any competing line without the written consent of FIRST PARTY.
7. SECOND PARTY agrees to carry at all times a suitable stock to meet the needs of the market, such a stock to be agreed upon in the first place between SECOND PARTY and FIRST PARTY'S European Representative.
8. It is AGREED that payment for the initial stock order shall be made within six calendar months of delivery and thereafter within ninety days of delivery, FIRST PARTY drawing bills on SECOND PARTY in each case.
9. This AGREEMENT is made subject to English Law and is governed by same. It is terminable by three months written notice from either PARTY or otherwise by mutual agreement.

Executed in duplicate.

FIRST PARTY
WITNESS

SECOND PARTY
WITNESS

Distributor agreement signed with Granzow of Copenhagen, Denmark

Making castings in the foundry

The 1930's and The Great Depression

By delving into every possible outlet for products, the company rode the slump and in 1935 was floated on the Stock Market. HSB set to on the task of learning about finance and working out a valuation - as always, he wanted to be in control of what was happening.

The flotation raised £48,000 additional working capital. At the end of the first year as a public company, it showed profits of £25,000. By 1937 trading profit had risen to £65,000, and by 1939 to nearly £100,000.

In 1936 they bought BEN Patents Ltd for £100,000 as an entree to the automotive and paint spraying business. They also developed the pneumatic tool and rock drill side of the factory.

By 1938 the foundry at the works was producing 50 to 60 tons of cast iron a week. Raw materials were brought onto the site in railway wagons and stored in heaps alongside the railway siding.

At this time the company began issuing a smart bi-monthly publication, BroomWade News Bulletin, to keep staff and customers informed of developments in the world of air compression and pneumatic tools. The latest installations at the Rolls Royce motor car factory, for example, would be proudly described and illustrated.

BROOM AND WADE

LIMITED

ISSUE OF

115,000 6 per cent. Cumulative Preference Shares of £1 each at pa

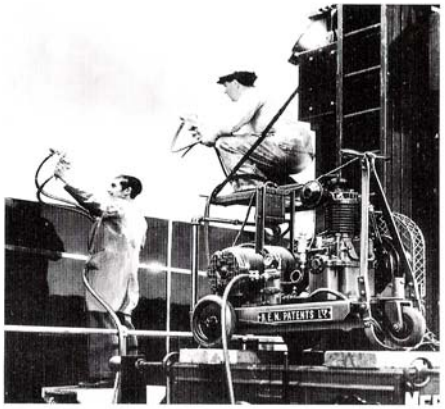
and

115,000 Ordinary Shares of 5s. each at 6s. per Share.

PROSPECTUS.

The 1935 stockmarket floatation prospectus (section)

The factory from Hamilton Hill looking to Downley



BEN Patents automotive paint spraying compressor in operation

1940's and The Second World War

As industry focused on the needs of the war effort, Broom & Wade was already in a good position. Its pneumatic rivetting equipment which was already widely used in the aircraft construction industry was now in great demand.

There were many new users for the company's products.

Compressed air equipment was needed for operating air raid sirens, digging trenches and tunnels for shelters, spraying paint for camouflaging factories, filling sand bags, pumping water for emergency water supplies, and for demolition squads and rescue parties. The Tube Shelter Sanitation Service used compressors to raise sewage up from the Underground to the drainage system.

A 1940's compressor

After the first year or so of the war period, all Oil Tanker Vessels carried two self-contained Compressor Plants and many were able to keep afloat and reach port even after being badly holed and set on fire by enemy action.

Much of the production was now directly or indirectly for the government.

The workshops received the regulation coating of camouflage paint, while blast and splinter-proof shelters were erected with seating accommodation for all employees. First aid teams and auxiliary fire services were organised and equipped.

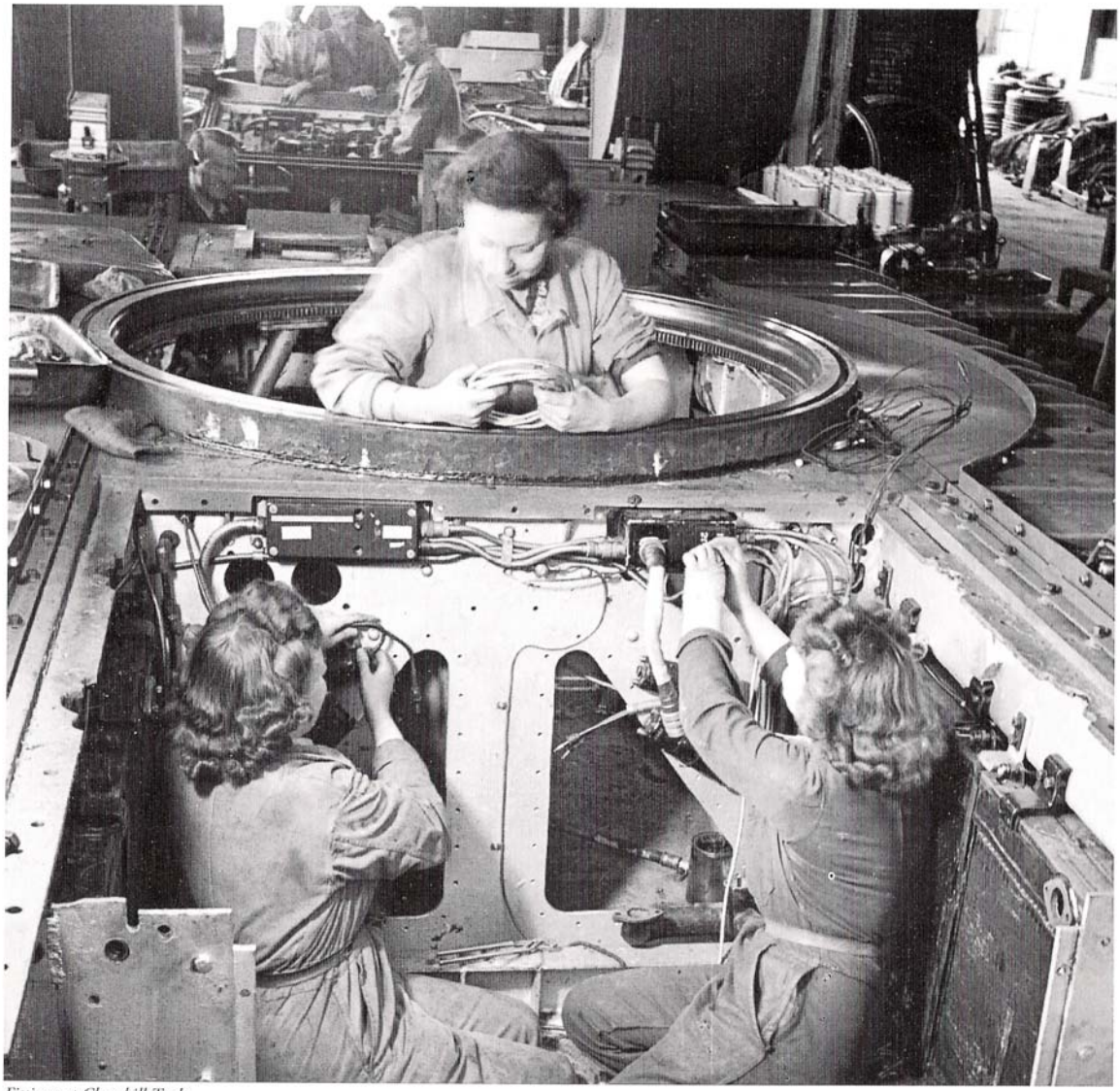
Whilst traditional export markets in Europe were closed, new demands enabled the company to maintain production levels. Indeed the production capacity was expanded with the completion of new buildings, increasing workshop areas by more than 50% between 1937 and 1941.

By early 1941 all departments were working six days a week and overtime, with two shifts in some machine shops.

More air raid shelters were built close to each workshop. A spotter located in a 'crow's nest' above the highest point of the roof operated klaxons, enabling work to continue during 'alert' periods. A new works canteen which opened in 1940 staged ENSA variety concerts each Monday dinner time.

The company was the first in the area to encourage employees to 'Save for Victory' by deducting savings from wages.

Churchill tanks were manufactured at the works, and according to the chairman's report for 1946 "We actually offered to do this work without any profit at all, but the offer was declined."



Fitting out Churchill Tanks

1940's and The Second World War

The Directors Report that year read "It can now be disclosed that during the War, the Company apart from achieving a vastly increased output of our standard product, was engaged to a considerable extent in the manufacture of Churchill Tanks."

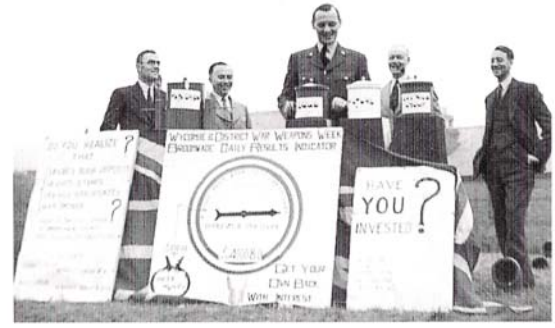
BroomWade Stationary and Portable Compressors and BroomWade Pneumatic Tools were manufactured twenty-four hours per day, and for a long period of the War seven days per week, as these were a vital and essential factor in the rapid and economical production of Aircraft, Guns, Tanks, Fighting Vehicles, Ships, Rail Rolling Stock, and practically every type of Munitions of War. Wherever the British Armies and Navies fought, BroomWade Compressors and Tools were with them for construction and demolition duties.

After the war BroomWade was well placed to meet peacetime demand for compressors and pneumatic tools. The buildings put up for manufacture of tanks were re-equipped to increase output of standard products, to meet the demands at home and to increase business abroad.

The aftermath of war entailed much rebuilding work, from pulling down pillboxes to recreating city centres and erecting power stations.

A compressed air motor was redesigned to run on steam for use in steaming out explosive in unexploded bombs.

In 1946 the company created a Works Training Department to give refresher courses to ex-service men, and initial training to young people before entering the works. Two years later, 91 men and 106 youths had completed the training.



Richard 'Stinker' Murdoch selling war bonds at BroomWade

By 1947 demand for compressors was insatiable, but production was limited by a shortage of cast iron. The company set about updating and mechanising its foundry to more than double its output. Throughout the works machine tools and plant were upgraded.

Although there was plenty of land at BroomWade's site, expansion of the works was hampered in the late 1940's by shortages of materials, labour and the necessary building licences.

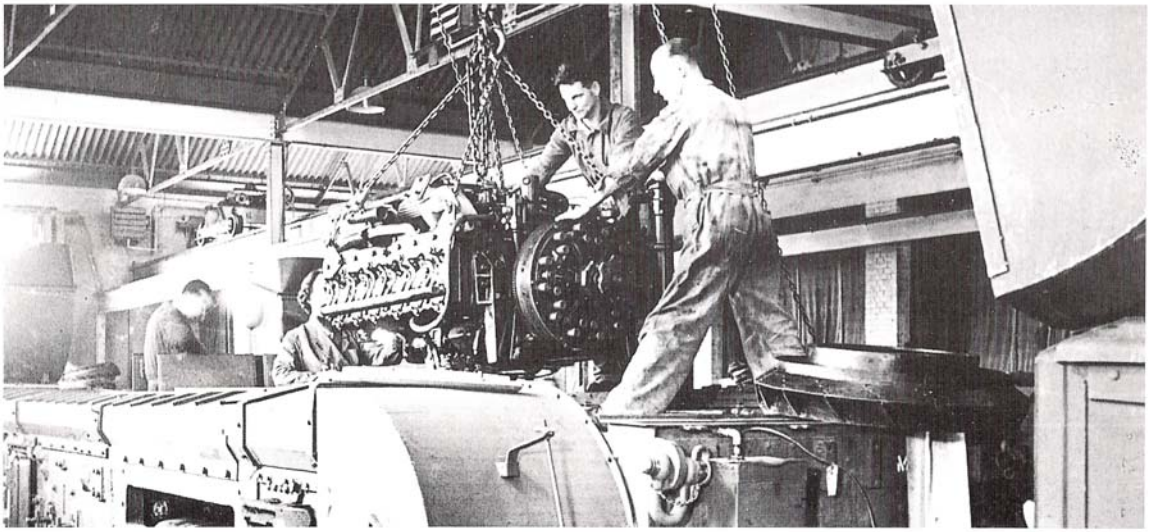
The team pose beside a completed tank

1940's and The Second World War

In 1948 the company celebrated 50 years in business. The news bulletin writer paid a tribute to the Chairman and Managing Director -'the Skipper still on the bridge'. The success of the company, he wrote, was the result of his very genuine and lasting concern for the well-being of the Company's employees, as instanced by the Profit Sharing Bonus, and Pension Schemes which he has instituted.

There were now branch offices and works-trained district engineers in every region of the UK, subsidiary companies in Australia and South Africa, and nearly 50 accredited BroomWade agents with branch offices and service facilities throughout the world.

A shop window in High Wycombe



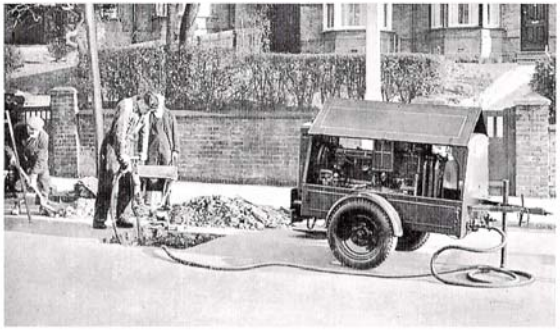
Installing a tank engine

The works cricket team pose with trophy

Expansion and Export - The 1950's

The constant need to keep ahead of competition led to a steady stream of innovations.

BroomWade was in the forefront of developing sliding vane portable compressors. For use with these compressors, a completely new range of road breakers was developed, the RB440, a revolutionary lightweight machine, weighing, without steel, only 44lb, economical to run, and designed for easy manipulation and freedom from back-kick.



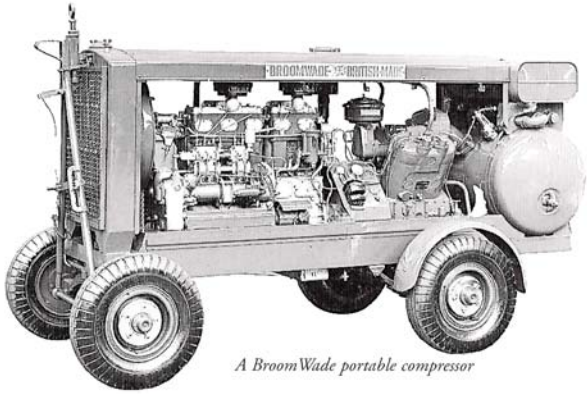
A BroomWade roadbreaker in action

The export scene had changed by the 1950's. While Australia had long been the biggest export market, India was now second, followed by South Africa and Brazil. In 1951 goods were shipped to more than 90 countries.

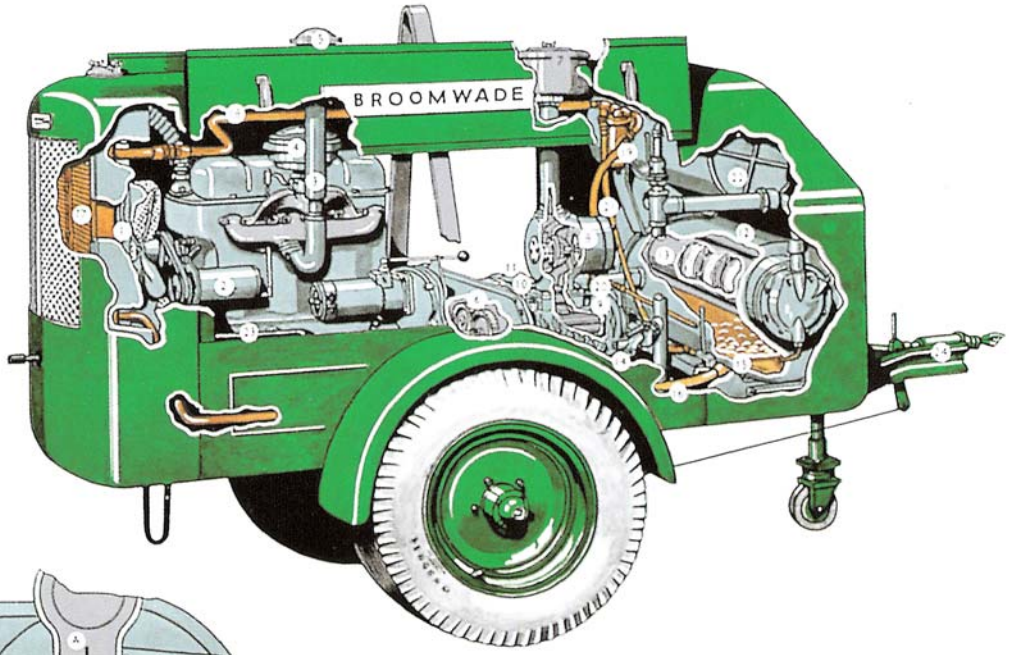
Much of the success of overseas sales was due to the policy of sending out factory-trained sales engineers, either on a temporary basis or as residents. BroomWade Directors also made many overseas visits. In 1950 HSB travelled 35,000 miles. By 1951 sales of portable compressors were well into four figures, with half the output going overseas.

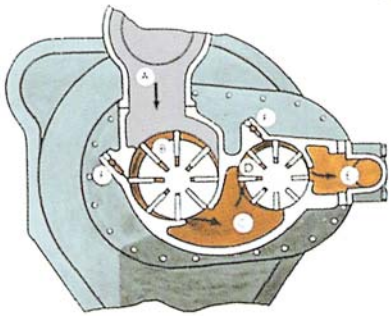
In India a BroomWade member of staff spent a year training Indian personnel for their agents, leaving them with a sound knowledge of sales techniques and with confidence to offer technical advice on installation, service and maintenance.

In 1957 with the product population growing rapidly the company realised that if its reputation was not to suffer it needed to ensure that localised service for its products was always at hand and the first so called Spares and Service Agents were appointed. These were independent businesses strategically placed around the country and their function was to provide spares and service for the BroomWade product population



A BroomWade portable compressor





TYPE WR120 DIESEL COMPRESSOR

The BroomWade portable sliding vane compressor

Expansion and Export - The 1950's

leaving BroomWade personnel to concentrate on the sale of new products.

These companies provided the basis of today's BroomWade Distributor Network which has over the years taken on the responsibility for the sales and service of virtually all the companies standard products, building a reputation for sales and service second to none in the compressed air industry.

Workmen using a BroomWade portable compressor

Work study was introduced to improve productivity. As was commonly the case, it was not universally welcomed, though most workers ended up better off. It included introducing a piecework scheme, with average earnings rising from £2.11.4d to £4.19.9d.

WYCOMBE LOSES LEADER OF INDUSTRY

HSB's obituary in 1958

It was the end of an era when HSB, 'The Skipper', died on 12 September, 1958. He was 83 and was still at the helm both on his yacht and at his company.

BroomWade had been very much a family firm. For the founder's great-nephew John Broom Smith, who joined the firm in 1953, Broom Wade was already part of family life. He recalls, "My father used to come to the factory every day of the week, and I would come with him at the weekend from when I was four or five years old.

It was obviously very much a family business, although it became a public company in 1935. It was run by the founder, his son Dick Broom, and my father Christopher Broom Smith."

The founder's grandsons Harry and Robert Craig both joined the company - Harry is now with CompAir Hydrovane and Robert with CompAir Reavell.

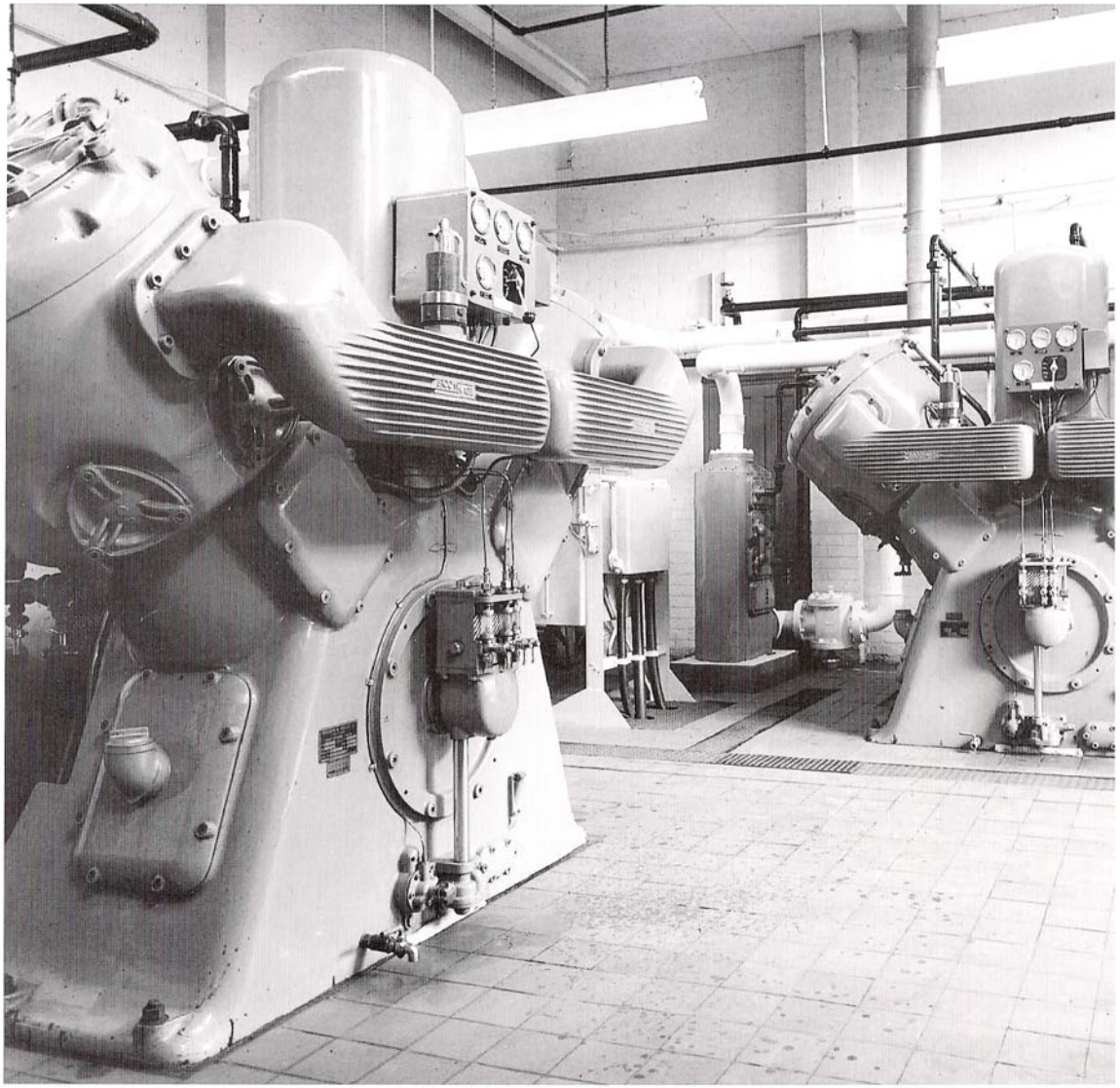
Harry Craig recalls his grandfather as "a very vigorous man, a resolute leader, proud of the companies products and very supportive of his workforce.

His friends called him Pirate - some said it was because he was so aggressive in yacht racing, others because he was good at pinching business from rival companies!

He remained vigorous and competitive to the end of his life."

"BROOMWADE"

The Company logo in the 1950's

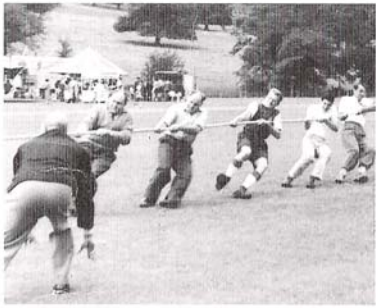


The mighty 'V' compressors

The 1960's

Staff at BroomWade, the town's biggest employer, could enjoy a wide range of social activities. There were soccer teams, an angling club with angling rights at Bisham, Cliveden and elsewhere, old time dancing section, socials, dances and discos and an annual challenge cricket match between the BroomWade Apprentice Association and the management. There was also a charity fund, with employees' donations matched by the company.

A piece of land in Hughenden Park was bought to create the BroomWade Sports Club, with cricket, football, tennis, bowls and a club house, a facility widely used by employees and non-employees. Before that, sports facilities had been leased in Totteridge.



BroomWade Social Club members have some fun!

Company Gala Days offered fun for all, with egg and spoon races and tug-o-war contests, while the BroomWade Horticultural Society's annual show was quite an event.

There was also an active Quarter Century Club for those with more than 25 years service - and a gold watch to prove it. At the 1962 annual dinner, 108 members sat down at the Red Lion Hotel, with 3,581 years' service between them. The longest serving member, Charlie Pitfield, was still at the firm after 50 years and 8 months.

In 1966 BroomWade installed its first computer, an ICT 1902, used initially for production control.

In 1968 the company invested in a new Design and Development Centre at High Wycombe, a three-storey building with the latest in testing equipment, enabling greater use of analytical techniques.

In the same year the company merged with Holman Bros of Cornwall, to create a British-based organisation with the resources and product range to compete effectively in world markets. A merger had been discussed back in 1958, but negotiations had been called off by HSB.

The name of the new group was International Compressed Air Corporation. Four years later the name was changed to CompAir, the title acquired from the BroomWade apprentices - it was the title of their magazine. They were paid the handsome sum of £50 for the name.

Power tool and product finishing production, which had been ongoing at High Wycombe since the 1930's, was transferred to a purpose-built factory in Ystalyfera, South Wales, under the new name of BroomWade Power Tools.

A later view of the factory from Hamilton Hill looking to Downley

The new power tools factory in Ystalyfera, South Wales

The 1970's

Rotary screw machines were introduced in the early 1970's. They possessed a number of compelling advantages over the earlier reciprocating design: compact dimensions, extreme ease of installation and maintenance,

Margaret Thatcher pays a visit to BroomWade during the 1970's

simplicity of operation, effective sound insulation. The company looked to these new designs to help it forge ahead despite the recession and growing international competition in the air compressor industry.

By the early 1970's industry was becoming more energy conscious and BroomWade realised that it needed a more efficient product as a successor to its highly successful and reliable range of single stage water cooled stationary compressors.

And so the V-Compact was born.

It comprised four basic machines from 100 to 300 cfm which were high speed, two stage air-cooled compressors with a high degree of component interchangeability to which oil free and single stage variants were added later.

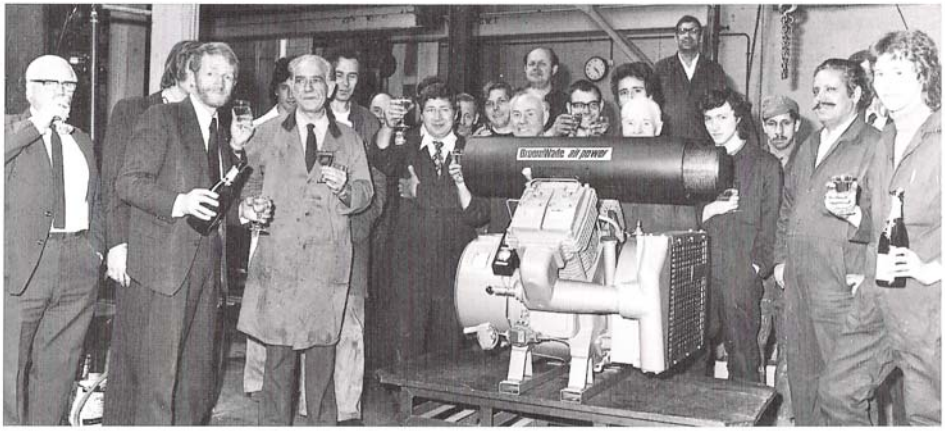
Many thousands of these compressors have been built and sold all over the world.

The companies within the CompAir Group were then re-organised under product divisions:

- CompAir Industrial, manufacturing BroomWade and Reavell industrial compressors, tools and other equipment
- CompAir Construction and Mining, manufacturing BroomWade and Holman portable compressors and all contractors and mining tools
- Compair Maxam, manufacturing controls and pneumatic circuitry
- Compair International, which unified the overseas operations

By 1975 the CompAir Group was the largest manufacturer of air compressors and pneumatic equipment in the UK. World sales for 1975 totalled £86m, with pre-tax profit of £7.3m.

The group employed more than 8,000 people, ran seven manufacturing locations in the UK and had subsidiary companies active in 16 markets overseas.



A production landmark is reached

An aerial view of the factory

The Air Power 79 Exhibition

The 1980's

In the 1980's the capital equipment industry had seen a two year recession and reduced orders.

In 1980 BroomWade ceased manufacturing small Light Range compressors and opened a division, CompAir AutoPower, in Watford supplying factored product to the Automotive market.

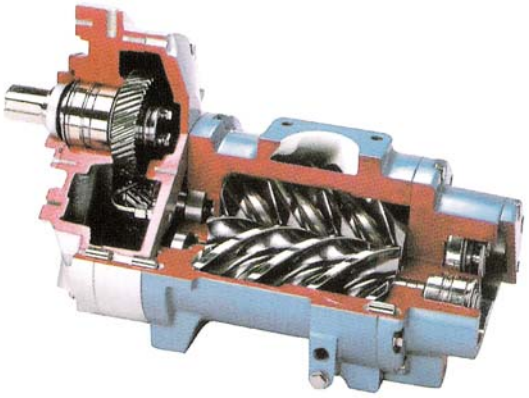
View of computerised control panel

Air Power '81 saw the company's products exhibited adjacent to the works. The exhibition was attended by sister company personnel, overseas visitors, distributors and their customers with a 'Family' day for employees.

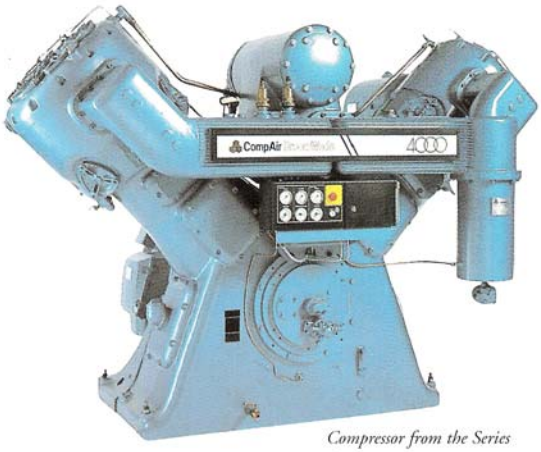
The Imperial Continental Gas Association (ICGas) made a bid worth more than £63m for CompAir, offering financial stability and new markets worldwide. CompAir continued to operate as a separately managed enterprise.

Considerable investment was made in BroomWade, but in 1985 ICGas decided it had greater profit potential by concentrating its resources in its traditional fields. It sold CompAir to Siebe plc, a British-based company. Siebe was formed in the 1820's through the inventiveness and business skills of Augustus Siebe, whose best known invention was the first diving suit.

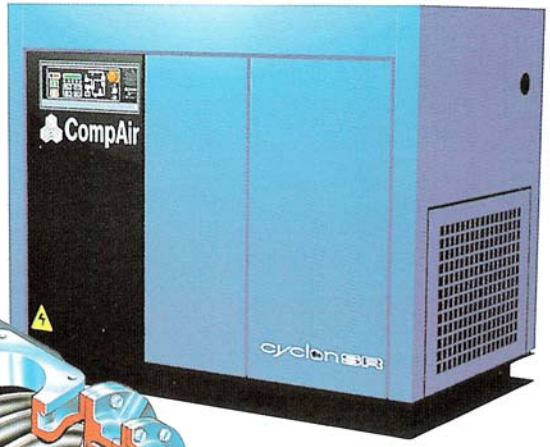
CompAir BroomWade was now able to draw on the top class international image and financial strength of its new parent. Financial controls were strengthened and investment put into new machinery and, in particular, heavy investment in rotor cutting equipment for screw compressors. It continued to increase its product range offering, with the expansion of its screw compressor range, the launch of oil-free compressors, electronic compressor controls and 'special project' packages for offshore use. During this time, the new Cyclon profile Screw Air End was developed and proved to be an immediate success.



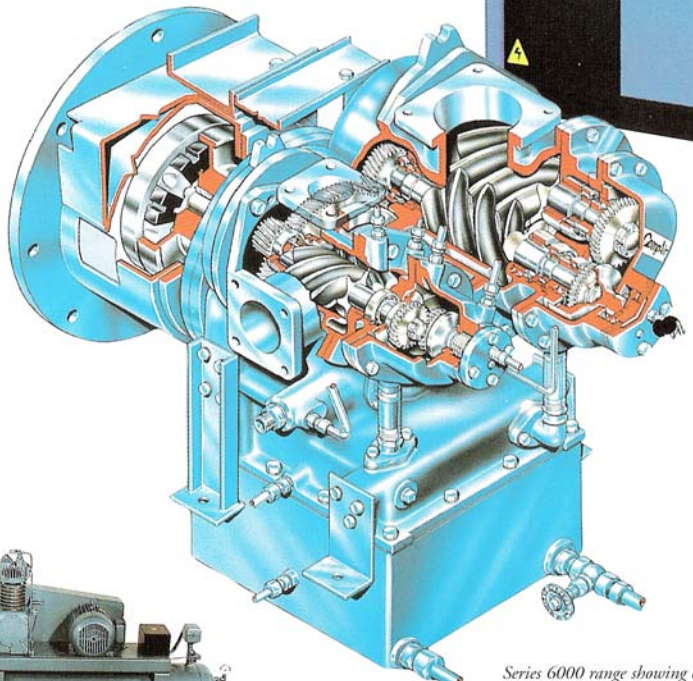
Cut-away of the Cyclon 4 with gearbox



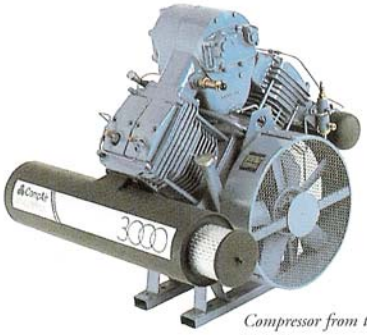
Compressor from the Series 4000 range



Compressor from the Series 6000 range



Series 6000 range showing cut-away of compression section



Compressor from the Series 3000 range

Compressor from the Series 2000 range

The 1990's - Looking to the Future

BroomWade continues to be innovative. It recently launched the variable speed Cyclon 475SR using unique Switched Reluctance Drive technology, which is one of the biggest steps forward in energy saving in the generation of compressed air.

One of CustomAir's many package machines

CompAir AutoPower transferred from Watford to High Wycombe and eventually amalgamated with CompAir Power Tools to become CompAir Tools & Equipment, a division of BroomWade, supplying both industrial and automotive sectors from one source. While the Ystalyfera site continues to manufacture power tools, all sales, order processing etc are handled from High Wycombe.

One of the CompAir Group's acquisitions, Demag in Simmern, Germany, transferred its UK sales operation to the High Wycombe site, becoming CompAir Demag UK.

At BroomWade the foundry has gone - the last chimney was removed in 1997 and the company buys in many of the parts, such as electric motors, starters, electronic components and pressure vessels. But the heart of the machine, the compression element, is still designed and made in High Wycombe.

While 90% of the output is of standard products, the CustomAir department has the expertise to develop advanced custom-built projects for specialist applications. These include multi-million pound projects such as a power station in Singapore or gas drilling platforms in the North Sea.

Many of the world's key construction companies are Japanese, and BroomWade often uses electronic media such as video conferencing and the Internet to facilitate negotiation, allowing draughtsmen and engineers in High Wycombe to confer with the Japanese clients in their boardroom.

Air compressors are perhaps the unsung heroes of industry. There are very few manufacturing industries that don't make use of them - in fact 10% of all electricity consumed in Britain is used for powering compressed air equipment.

The last casting

The 1990's - Looking to the Future

It is a versatile, reliable, efficient and very safe method of transmitting power. The basic simplicity of the compression mechanism ensures simple maintenance and demands no special skills from the user.

Its uses are diverse: filling and capping beer bottles, spraying paint, inflating tyres, lubricating equipment, maintaining power stations, running food packaging machinery, rivetting car bodies, drilling and tunnelling in every major and minor construction site, curing tobacco, treating sewage.... and many more.

It's said that wherever industry needs to blow, lift, push, rotate, hammer and squeeze, compressed air is the power for the job.

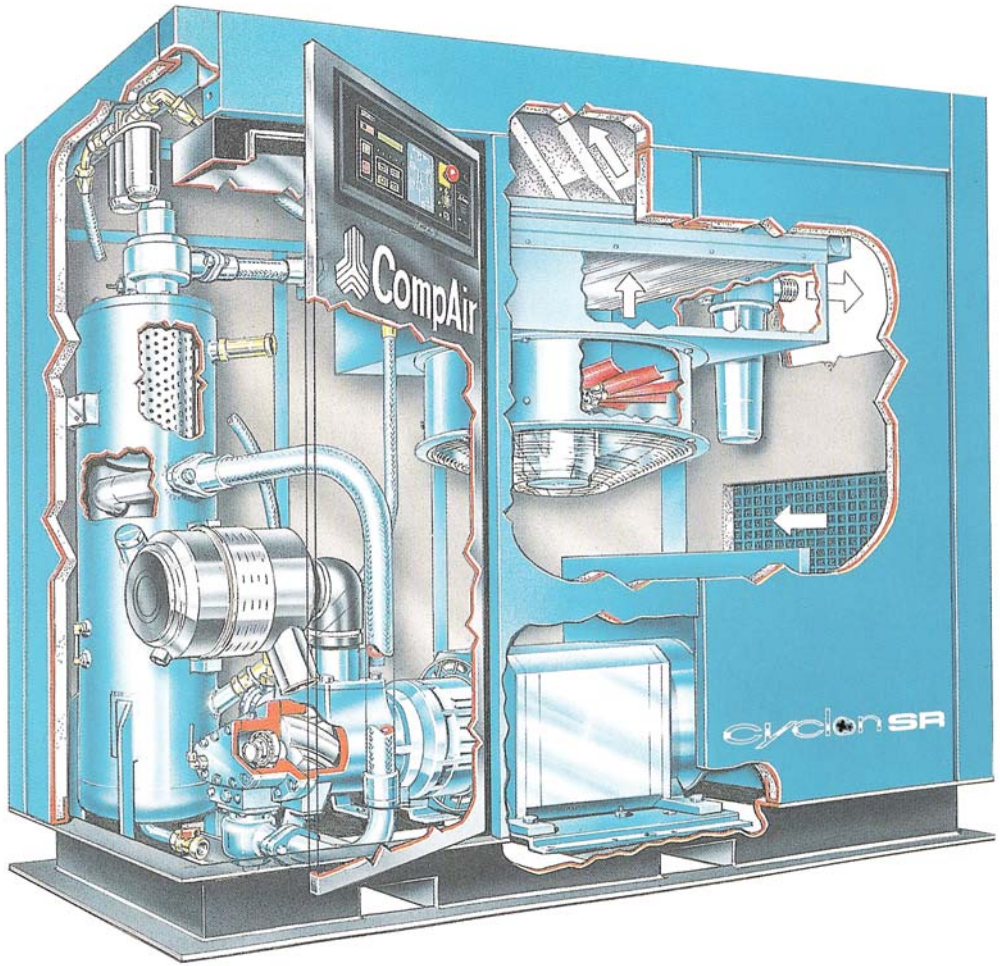
Air compressors are exported to virtually every country in the world.

And the future? Compressed air will always be in demand, though its uses change. As manufacturing processes have become cleaner and more automated - in CD production, electronic component manufacture or food packaging, for instance - cleaner and ever more reliable air compressors have been developed.

Future developments will include greater degrees of automation in its applications, ever more accurate control, greater emphasis on energy saving, and flexibility in application and air cleanliness.

Throughout the decades and the revolutionary changes in compressor design, BroomWade has adapted, has invested in the latest manufacturing technologies and still remains Britain's biggest compressor manufacturer. It looks forward to its next 100 years with pride....

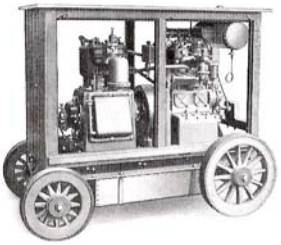
A computer designed air-end



A Cyclon SR unit cut-away showing internal components

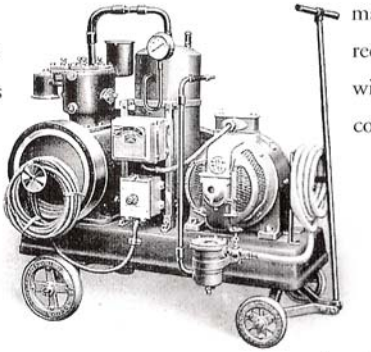
A History of Compressors

Broom & Wade manufactured its first air compressor in 1910, quickly establishing a reputation as a manufacturer of reliable and long lasting products.

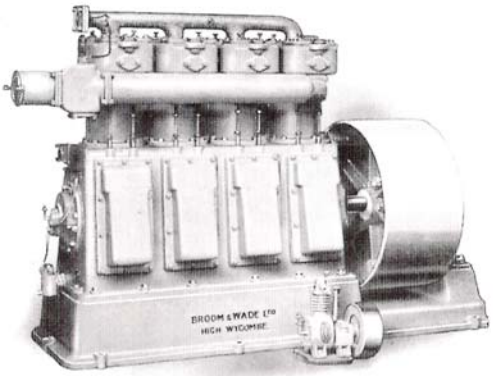


Nearly all compressors in those days were piston type reciprocating machines. BroomWade achieved reliability by designing low-speed water-cooled compressors with rotational speeds rarely exceeding 300/400rpm. The heart of a reciprocating compressor is its valve gear. These designs used large low-lift valves.

The company's competitors majored on higher-speed air-cooled machines which, with the materials available in those days, proved notoriously unreliable.

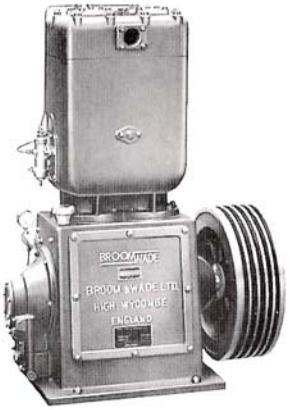


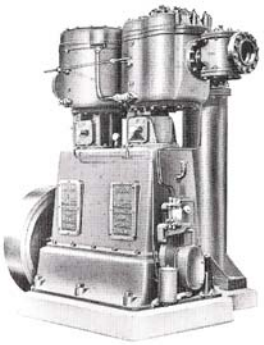
BroomWade was always looking for new technology. In the early 1930's it secured the patent for the manufacture of a sleeve-valve compressor. This design was to dominate the portable compressor market for almost 30 years.



Petrol and then diesel engine speeds had over the years increased at a faster rate than those of conventional compressors. The sleeve valve design was able to match these speeds without the expensive reduction gears necessary with other reciprocating compressors.

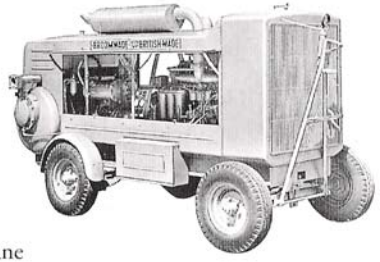
In the industrial field, BroomWade heavy duty compressors dominated the British market and also brought in valuable export orders, mainly from the Commonwealth countries of

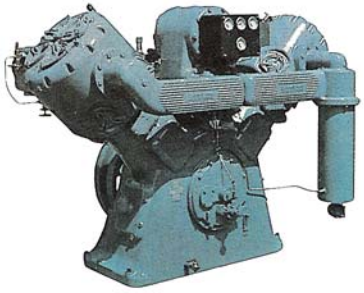




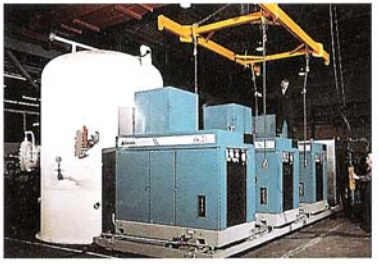
Australia, South Africa, New Zealand and later Canada. The product changed very little over the 15 years before and the 15 years after World War II.

In the portable compressor field, however, the post-war development of the high-speed diesel engine meant that new compressor technology was required. The 1950's saw the introduction of the oil-injected sliding vane compressor. Because of its rotary design, it could be direct-coupled to these engines resulting in very much smaller and lighter portable compressors.





The 1960's saw the volume introduction of the 'screw' compressor, firstly into portable compressors and then, following a major increase in efficiency, into industrial equipment in the form of the packaged screw compressor. This now dominates the market and is produced by all the major compressor manufacturers.



Oldest Known Working Machine

A BroomWade reciprocating compressor purchased in 1939 by Denys Edwards (Pty) Limited of Port Elizabeth, South Africa. It is still in use today!

With thanks to

Sandra Carter
Author

CompAir Australasia
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History in the making