

# Mackley Pumps



Products & Services

At the Heart of Industry

# about

Located at the Clarke Chapman headquarters in the North East of England

Mackley Pumps, a division of the Clarke Chapman Group Limited, is a respected supplier of high-pressure water pumping systems and associated consultancy services, providing pumping solutions for long-term deployment to a vast range of industry and stressful environments where the need for high reliability and low maintenance are paramount.

Founded in 1910 to design and manufacture positive displacement pumps for de-watering collieries, our reputation as an industry expert in fluid handling technology was quickly established, supplying quality engineered centrifugal pumps, to a diverse range of industry world-wide.

All products are designed and manufactured to the highest standards at our Clarke Chapman group manufacturing facility. In addition, we can upgrade and refurbish existing pumps for increased reliability and performance. Every contract is undertaken under the control of our engineers ensuring the integrity of the product.



The Clarke Chapman Group Ltd headquarters.



11 Stage RSH2 Ferralium Pump.

## market sectors

Our range of pumps are installed in many key industry sectors including; mining, water supply & sewage, power generation, chemical & process, gas & petroleum, irrigation and firefighting.

A leader in pumping technology, manufacture and consultancy



Mining.



Irrigation.



Oil and Gas.



Water and Sewage.

### **Mining**

We supply pumping systems to the mining industry, gaining experience over many years in the provision of complex application solutions to meet the needs of individual mines, including comprehensive consultancy services.

As well as de-watering, mine pumps must be robust and reliable enough to handle the corrosive and abrasive fluids typical in mining operations, which is why Mackley is a preferred supplier to the mining industry.

### **Water Supply and Irrigation**

We provide pumping solutions for a wide range of water supply and sewage applications, including pumps for source water, water transmission, water treatment and distribution.

Our solids-handling DW (dirty water) pump systems have been specifically designed for long life in pumping industrial waste, water and wastes with solids in solution and suspension.

### **Power Generation**

In the generation of power, Mackley pumping systems are deployed across all areas of Clean Coal Technology (IGCC), steam, nuclear, geothermal and combined cycle power production and are also being used to pioneer alternative energy solutions.

### **Gas and Petroleum Industry**

For over 50 years, we have been at the forefront of design, manufacture and deployment of onshore and offshore pumping and processing applications for the global Gas and Petroleum Industry.

### **Chemical and Process Industry**

The enhancement of existing processes and the development of new ones is crucial to the operation of the chemical and process industry and Mackley products have proven continuously reliable in these varied and extreme conditions.



# products

Expert knowledge  
at the heart  
of every pump

Constructed in any machinable alloy, from cast iron to acid-resistant bronze and duplex stainless steels, there is a Mackley product for every conceivable industrial pumping need.

## Products

- **Multistage ring section pumps**
- **Split case pumps**
- **End suction pumps**
- **Vertical end suction pumps**

### Multistage Ring Section Pump

– RSH, JSH, KSH, SM, SI, SH, SB

These pumps are designed specifically for moderate flow rates and high heads. Pumps which achieve differential pressures greater than 150psid between suction and discharge are costly to design and construct, which makes multistage pumps, with multiple impellers on a common shaft inside the same pump casing, the ideal solution.

### Split Case Pump – SC, TSC & HTSC

These large capacity pumps serve a wide variety of applications and are ideally employed in situations demanding a higher level of performance but without the need for mixed flow or multi-stage properties. Split case pumps bring together simple mechanical operation with intelligent hydraulic design. They are of the highest quality and efficiency and provide a very long life cycle. Compact in design, they are easy to install and require very little maintenance.

### End Suction Pump – CW, DW

These multi-purpose pumps are suitable for a wide variety of applications. The 5 main fields of application are water supply, industrial pressure boosting, industrial liquid transfer, heating & air conditioning and irrigation. Mackley end suction pumps are all non-self priming, single stage centrifugal pumps with axial suction, radial discharge ports and horizontal shafts.



Vertical Pump.



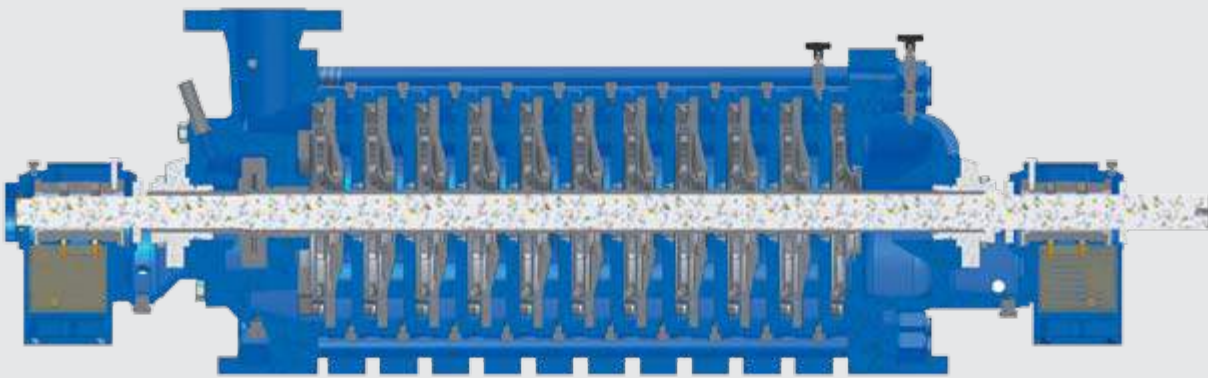
Potable Water Pump.



FSI 80 Pumps for Mining.



RSH4 II Stage Pumps for Copper Mine.



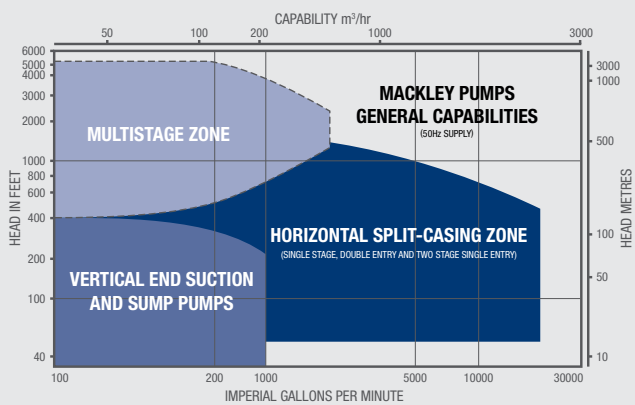
11 Stage pump assembly.

### Vertical End Suction Pump – VCW, VDW

The SV Deepwell pump has a hydraulic end supported on a single pipe down which the drive shaft passes, with pumped liquid flowing up this same pipe. This pump is suitable for cleaner liquids and can be multistage. Alternatively, VCW/VDW sump pumps are single stage machines in which the driveshaft and liquids pass through separate support pipes. This is more appropriate for dirtier liquids and/or lower heads.

Between these two basic types, a vast range of combinations are possible, all of which require only minimal floor space. Typical examples would be under-floor discharge branches, integral positive lubrication systems, and vapour barrier seals.

We also offers a wide range of mechanical options, particularly in bearing and stuffing boxes, as well as a wide selection of prime movers.



# facilities, design & maintenance

We have the resources to design and manufacture entire solutions

## Manufacturing

Mackley products and a wide range of associated components are manufactured at our Clarke Chapman groups's headquarters and works in Gateshead in the North East of England, situated on a 3.5 hectare site. Our production facilities are fully equipped with an extensive range of machine tools to design and produce entire pump solutions in-house, including pumps, motors, pipework, valves and control systems. In addition, a formal management system is in operation, compliant with BS EN ISO 9001 2008, to ensure complete design integrity.

## Test Facilities

Prior to delivery all Mackley products are thoroughly tested in a dedicated test facility where they undergo a variety of quality control assessments and, as appropriate, pressure testing, performance testing as well as N.P.S.H and vertical tests.

## Materials of Construction

We are skilled in manufacturing with special materials such as nickel alloys and stainless steels as well as reactive alloys such as super duplex, zirconium and titanium. Pumps are manufactured in the machinable alloy best suited to both the liquid to be pumped and their operational environment.

An in-house pattern shop produces precision crafted patterns for a wide variety of cutting edge moulding processes, enabling highly customised solutions for any specific requirement.



Pump manufacturing bay.



Castings.



5 axis CNC mill-turn machine.



## services & support



Firefighting pump.



Support services to complement the highest of manufacturing standards

### Aftermarket Support

We offer a high level of customer support for the entire life cycle of our products; keeping pumps as close as possible to their original specification and performance. This also includes the installation and the service and repair of non-Mackley manufactured systems and components.

Through the global reach of the Clarke Chapman group, support teams can be put into place wherever they may be needed. Our engineers can conduct regular assessments using advanced monitoring techniques to identify potential operational or efficiency problems and if necessary, provide overhauls or upgrades to existing equipment.

### Specialist Refurbishments

Mackley is a recognised refurbishment specialist – a cost-effective alternative to purchasing new equipment. We can reverse engineer pumps to repair or replace worn or obsolete parts either on site, or at our Gateshead factory. By bringing machines up to modern standards using the latest materials, we can significantly extend their working life and reduce operating costs.

### Special Linings

Where required, we can glass flake line customer products resulting in improved performance. This reduces through-life power usage so higher operating efficiencies can be achieved on new equipment as well as refurbished pumps.

### Spares and Service

We provide a spare parts back up service as well as overhaul and repair facilities. This includes reconditioning of components to 'as-new' standards. Our engineers are trained to provide complete audits of pump systems and can quickly identify and resolve operational issues to restore pumps to their original specification and performance.

### Training

Training is paramount and we hold frequent training programmes for engineers, plant operators and maintenance personnel, to enhance and grow their industry knowledge. Here, you can develop your individual skills and gain specific understanding of Mackley products and pump technology in general.

# Mackley Pumps

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