



Driving the water
treatment industry

Reliably driving the sewage treatment industry



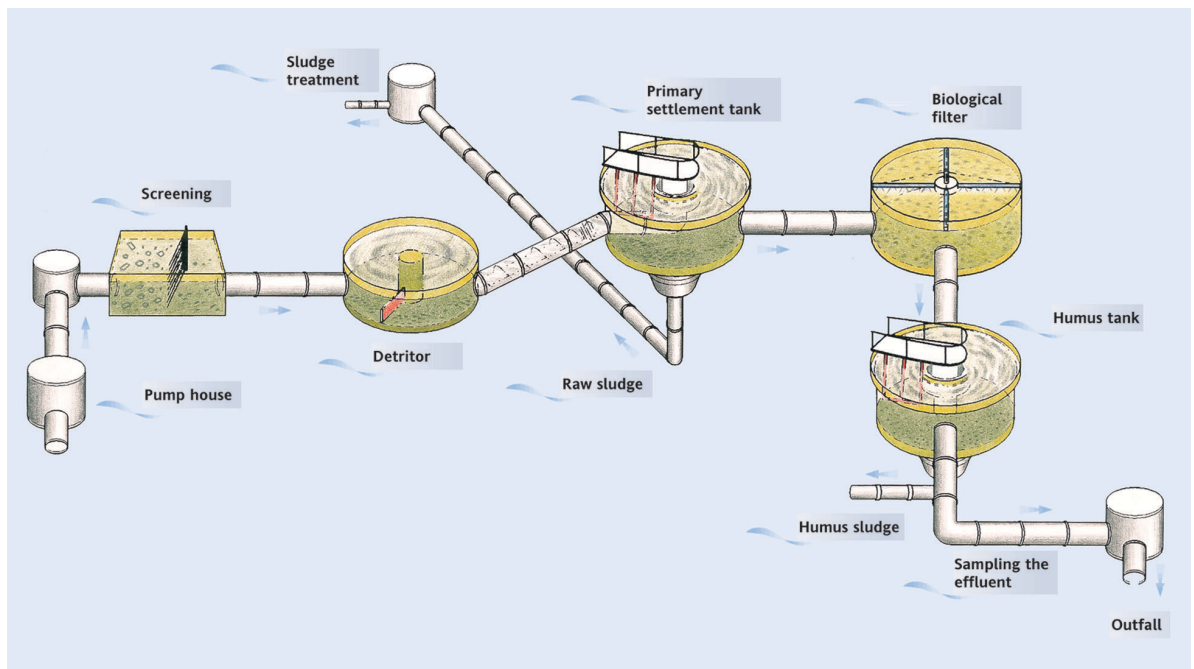
Shepshed Treatment Works, Severn Trent

Reliability is considered one of the most critical factors within the sewage process.

The arduous duty and hostile environment commonly found on an aerator application can, in many cases, prove to be a challenge to equipment suppliers. However, the high quality of build and proven robustness of the Brook Crompton 'W' motor is ideally suited to the harsh environments and its performance exceeds the required standards. Increasing numbers of companies now specify 'W' motors when placing orders upon equipment manufacturers, which in turn ensures the total package fully complies to the required specification.

Brook Crompton 'W' motors are ideal for the sewage treatment industry as they are quiet and reliable with the flexibility to suit a wide range of applications. Typical examples of these include high flow screens, sewage screening inlets, brush aerators, common aerators, screw pumps and the many other varieties of associated pump applications.

Typical sewage treatment plant



Worsborough site, Yorkshire Water
Photograph courtesy of Three Star Engineering



Bedford Sewage Works, Anglian Water
Photograph courtesy of Jones and Attwood Limited

Efficiently driving the water treatment industry

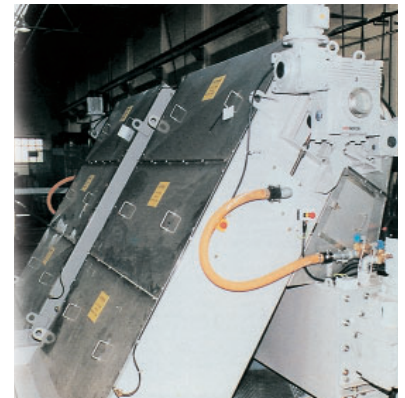


Over 90% of all industrial electrical energy consumed within the water industry drives an electric motor. With the majority of equipment delivering the clean water process operating continuously, the efficiency of the process is critical to maintaining low energy costs.

Therefore, it is becoming more and more common for water companies to specify equipment with minimum efficiencies when either upgrading existing plant or installing new processes. The high efficiency levels of the 'W' motor meet these standards and ensure that operating costs are kept to a minimum.

Another trend within the industry is the use of variable speed drives within many of the water processes. This can help process control and potentially save energy, particularly on pump applications where the speed can be regulated to match demand.

The 'W' motor is a design that has been successfully used with many types of stand-alone inverter and the range has now been updated to include a variant with an integrated inverter. This ability of the 'W' motor makes it an ideal choice for reducing energy costs.



Davyhulme Waste Water Treatment Works,
North West Water
Photograph courtesy of Bechtel Water Technology



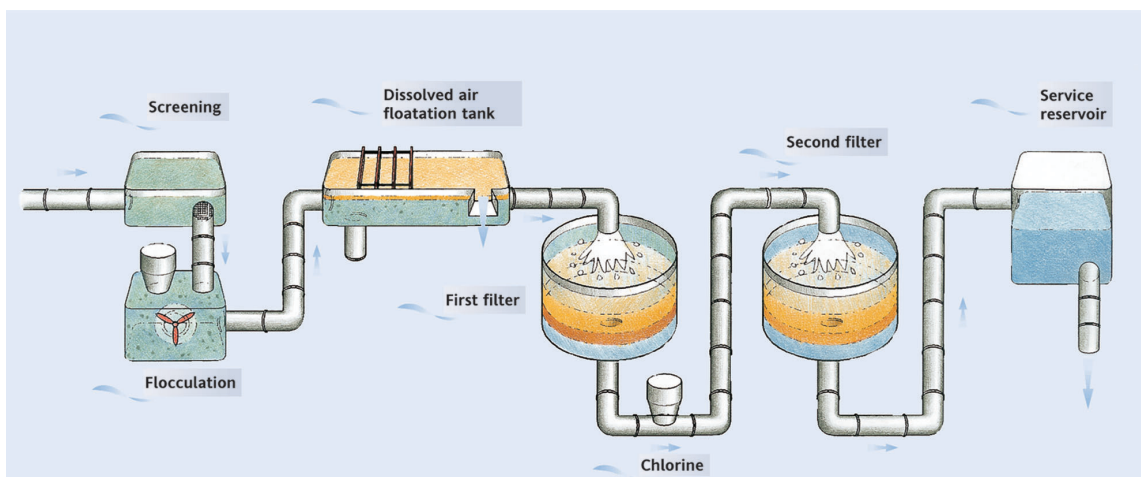
New Joyce Road Water Processing Plant,
New Zealand



Mafraq Treatment Plant, Abu Dhabi

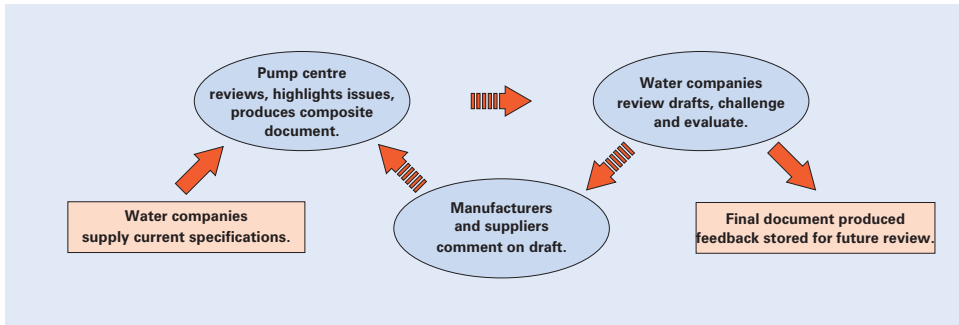
Brook Crompton not only supplies 'W' motors to the UK water industry, but to water industries world-wide. The Mafraq Treatment Plant in Abu Dhabi is such an example, as is the New Joyce Road Water Processing Plant at Tauranga, New Zealand. The Brook Crompton 'W' motors used to drive the water pumps contributed to the setting of new standards for water quality for that country and produce almost three times more water than the old water supply.

Typical water treatment plant





and the WIMES 3.03 specification



Water companies involved with the WIMES 3.03 specification include:



East of Scotland Water



Sewern Trent Water



The Water Industry Mechanical and Electrical Specification (WIMES) 3.03 defines minimum standards of performance and construction of low voltage motors, and was drawn up with the assistance of water companies, manufacturers and suppliers.

Aims of WIMES 3.03

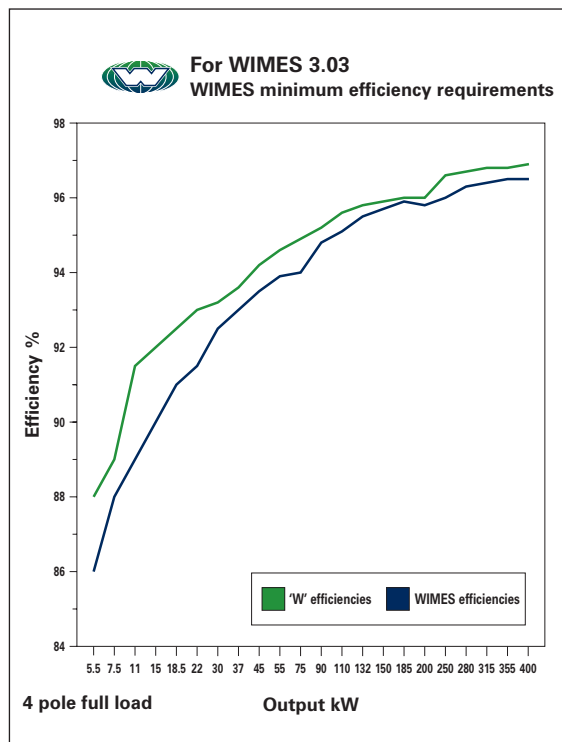
- to achieve lowest lifetime costs
- to achieve competitive initial purchase price
- to determine subsequent operating and maintenance expenditure
- to specify fit for purpose plant and equipment
- to allow individual manufacturers to compete on an equal footing

Benefits of WIMES 3.03

- clearly indicates water company's requirements
- defines minimum acceptable standards
- concentrates on functionality and lifetime performance
- reduces project timescales due to standardisation
- provides a forum for exchange of ideas and experiences
- avoids duplication of effort by water companies' contractors, consultants and suppliers

Roger Marlow, WIMES co-ordinator at The Pump Centre, said:

"The technical assistance and guidance given by Brook Crompton throughout the compiling of the WIMES 3.03 specification was invaluable. We thank them for their co-operation."



'W' and WIMES

The 'W' motor not only complies with the WIMES efficiencies but in many cases exceeds them, as shown in the table above. The energy cost benefits that can be gained from using high efficiency 'W' motors are shown on the page opposite.

For further information on the WIMES 3.03 low voltage AC electric motor specification please contact either:

| | | | |
|----------------|-----------------|-------------------|-------------------|
| Roger Marlow | the PUMP CENTRE | Tel. 01925 252061 | Fax. 01925 252579 |
| Eriks Zvaigzne | Brook Crompton | Tel. 01484 557200 | Fax. 01484 557201 |



Reducing lifetime costs

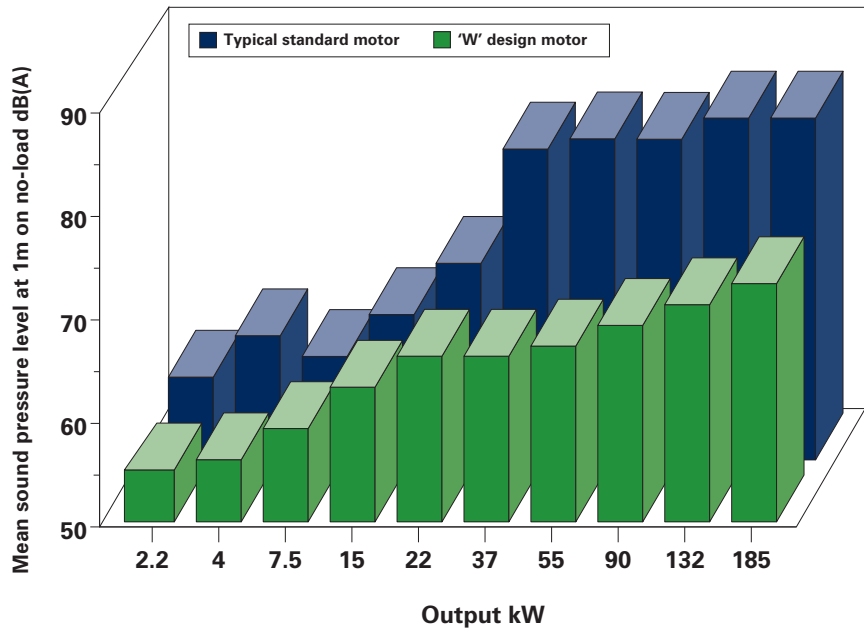
A typical motor consumes 100 times its purchase price in electricity cost within its lifetime. Typical annual energy savings of a high efficiency motor compared to a standard motor, based on continuous running at 4 pence per unit are:

4kW – £53, 110kW – £1193

When you consider the purchase price is only 10% of the first year's continuous running cost, the choice of a 'W' motor will quickly pay for itself.

Reduced running costs, reduced noise levels, total adaptability, complete reliability and minimal maintenance; the 'W' range of motors represents the latest in electric motor technology – and the last word in cutting your energy costs.

Noise level reduction

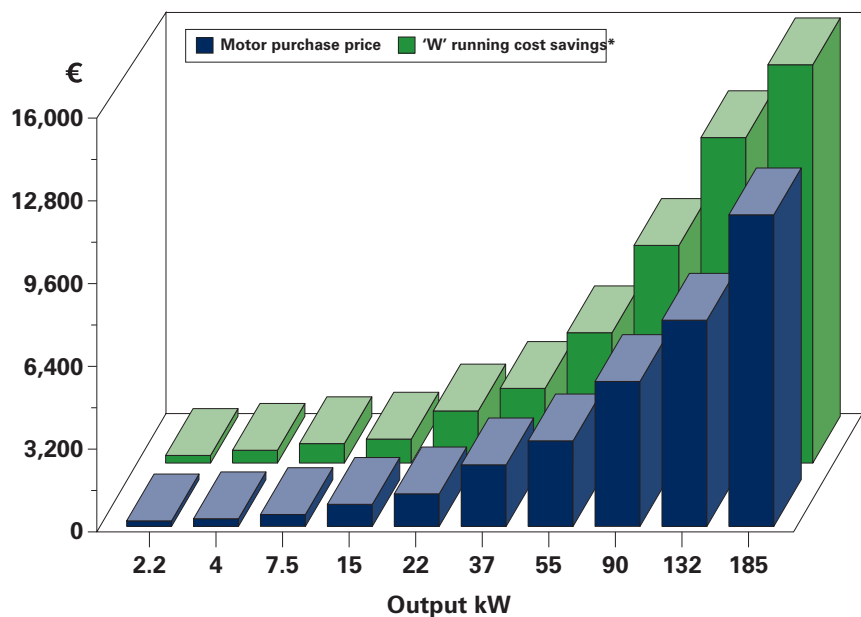


Benefits to the water industry

- low running costs due to high efficiency and power factor
- ability to handle a wide variety of applications due to high torque and low current
- improved reliability due to IP55 protection and high quality of build BS/EN/ISO 9001:1994
- reduced maintenance costs due to high build specification
- ease of installation due to high degree of mechanical flexibility
- peace of mind due to full 2 year warranty
- ability to offer fully integrated drive packages including associated gear units, transmission products and control gear (including variable speed drives)

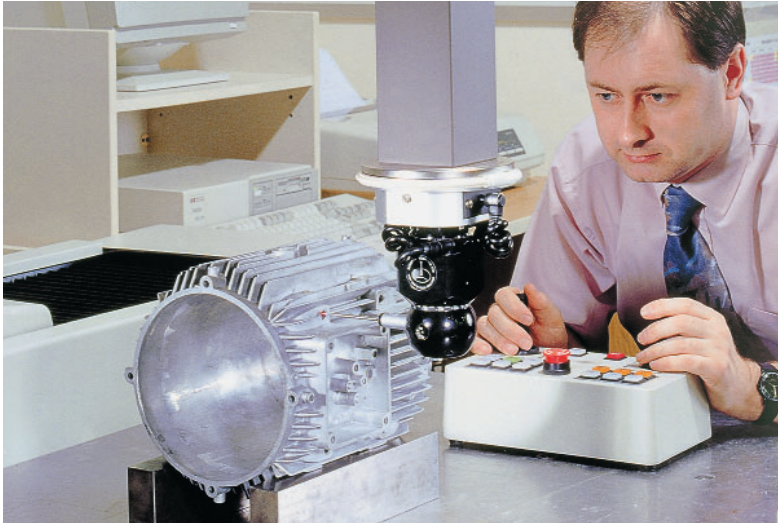
'W' running cost savings

Typical 5 years savings compared with motor purchase price



Running 8000 hours per annum @ full load, 4p/kWh
 **'W' design over standard motor

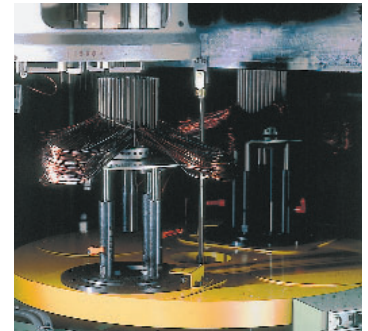
Global expertise



Brook Crompton

The Brook Crompton name has long been recognised as representing innovation and quality in the design and manufacture of electric motors. Part of the Invensys group, Brook Crompton operates worldwide, employing 5000 people.

The company's policy of customer-focused research and development, together with a real understanding of the requirements of the markets it serves, has contributed towards an unrivalled international leadership in cutting-edge technology, design and manufacture.



Brook Crompton "W" motors are used worldwide in sectors as diverse as food processing, oil and gas exploration, industrial manufacturing and building and property services.

Rotating Electrical Machines

Every care has been taken to ensure the accuracy of the information contained in this publication, but, due to a policy of continuous development and improvement the right is reserved to supply products which may differ slightly from those illustrated and described in this publication



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