

# DXB

PUMP & POWER

AROUND YOUR CLOCK, AROUND  
YOUR WORLD®

## MINING, QUARRY & AGGREGATES



ENVIRONMENTALLY  
REDUCING YOUR COSTS



# IN THE BLOOD

QUARRY AND MINING PUMPING IS IN THE BLOOD OF DXB PUMP & POWER.



## WHY DXB PUMP & POWER

For over twenty years, the owners of the company have designed and manufactured pumpsets and solutions for quarries and mines all over the world including gold mines in West Africa, open cast mining in Scandinavia, coal mining in Mozambique, and of course building materials in the UK.

From the very first sound attenuated quarry pump that the team previously sold to Hanson Bozeat in 2004, the owners of DXB Pump & Power have focused on designing and building high efficiency, environmentally sensitive pumpsets that not only outperform all others, but cost less to run at the same time.

All the shareholders are team members that design, manufacture and support the pumps that we sell.

## THE TECHNOLOGY

Whether you are dewatering, supplying a washplant or pumping slurry, many applications require high flows and most at higher pressure. This means high energy consumption and potentially increased maintenance costs reducing your unit profitability.

DXB Pump have designed their pumpsets with many key features that reduce these costs substantially and improve the returns of your operation. Four of the most important are:

- 1** Choice of pump ends. We can choose from a high efficiency dewatering pump operating at up to 89% efficiency, or a 650BHN hard-iron slurry pump to fit in our pumpsets both with Cycloseal protection and 50cfm fast priming systems mounted directly on the engine or gearbox mounted where required.
- 2** Lower operating speeds means reduced fuel burn and lower emissions through choosing the best possible pump from Cornell Pump, our US partner.
- 3** Our well designed packages that enable us to use the smallest possible engines running at the best efficiency and speeds regardless of ambient temperatures.
- 4** Optimised control and telemetry systems that monitor the engine and pump either locally or remotely all the time the unit is operating. This ensures service times may be extended up to 1000 hours in some cases and any potential problems are seen before they become major and impact the operational efficiency of the quarry or mine.

## SLURRY PUMPING:

All DXB pumpsets are supplied with the Cycloseal protection system as standard allowing for indefinite run-dry capability, full self-priming down to 8.5m and of course, extended seal life in abrasive pumping applications.



## DEWATERING:

Whether you choose electric or engine driven, you can be sure that your new DXB Pump is the most energy efficient, environmental pumpset you will ever purchase and use.

Utilising modern engines, features such as Cycloseal and 21<sup>st</sup> century control systems, combined with the largest range of pumps and materials, really ensures the lowest possible costs for your pumping on site.

With flows up to 8000m<sup>3</sup>/hr and pressures of over 20 bar all from our Rediprime range there has never been a larger range of hard iron, duplex stainless steel and lower cost Ductile Iron pumps ever.

## PROCESS PUMPS:

Supplying water to continuously running wash plants requires outstanding reliability and superior hydraulic efficiency. Often running 8-12 hours a day and 300 tonnes or more an hour, these plants are business critical to any sand and gravel operation.

Pumping dirty water or slurry back to the settling lagoons has never been easier with the use of hard iron slurry pumps from DXB Pump complete with

Cornell Cycloseal® run dry protection and oil lubricated bearing housings.

Whatever your application on a quarry or in a mine, DXB Pump & Power have the number one solution for your application regardless of the challenge, because our business has one goal...

**AROUND YOU CLOCK,  
AROUND YOUR WORLD®**



# CLIENT REQUIREMENTS:

REDUCE  
COSTS

REDUCE  
EMISSIONS

A MODERN  
SOLUTION

RESULTING IN A 90%  
DECREASE IN HARMFUL  
EMISSIONS. OPERATING  
AT ONLY 1600RPM,  
FUEL CONSUMPTION  
AND RUNNING COSTS  
ARE REDUCED BY A  
SUBSTANTIAL LEVEL.



# BLACKWATER AGGREGATES – ESSEX, UK

**UK based Blackwater Aggregates is a joint venture between Cemex and partner Gent-Fairhead Aggregates based just north of London in Essex. Bradwell quarry is one of the largest sand and gravel quarries in the UK, supplying key customers materials for concrete production and general construction uses in the London and Eastern region markets.**



For over fifteen years they had successfully run a 140kw open pumpset, pumping around 400m<sup>3</sup>/hr at 4 bar, to feed their washplant that was running hard, so the supply of water is critical to maintain production in this quarry. With over 40,000 hours on the pumpset, it was time to upgrade and reduce costs.

DXB Pump & Power was invited to tender for the supply of a brand new pumpset with a modern engine and new pump technology. DXB won the tender, which included additional accessories recommended by DXB Pump to reduce running costs even further for the quarry.

The end result is an 8×6 pump delivering the same performance as the previous set with power reduced from 140kw to 95kw, supplied by a Stage 5 engine, with everything enclosed in a fully bunded sound attenuated canopy resulting in a 90% decrease in harmful emissions. Operating at only 1600rpm, fuel consumption and running costs are reduced by a substantial level.

With further upgrades planned in 2022, to include remote management and control by phone or tablet, the whole operation has become a model 21<sup>st</sup> century solution to a leading quarry water management system here in the UK.

# CASE STUDY 1

# THE ECO SIDE



THE PUMPS THAT RESET  
THE ENVIRONMENTAL  
STANDARD & PUMPING  
PERFORMANCE

GLOBALLY THERE IS A HUGE FOCUS ON CLIMATE CHANGE. A KEY ELEMENT OF THIS FOCUS IS EMISSIONS REDUCTION.

One of the cornerstones of our sustainability strategy is utilizing the very latest Stage V compliant engines from Deutz, Scania and CAT. This very latest technology combined with the most efficient pump-end selection enables DXB Pump & Power to offer a solution that is the most efficient and cleanest on the market.

We believe that this focus will enable our customers to meet their own emission reduction targets without compromising performance.

All DXB pumpsets including Stage 5 are HVO fuel compliant where required.



**REDUCED**  
FUEL CONSUMPTION  
**REDUCED**  
OPERATING COSTS  
**REDUCED**  
POLLUTION & NOISE



Exceeds  
**NRMM**  
Standards



# PUMPSET FEATURES

ULTRA  
QUIET,  
FULLY  
BUNDED

AND OPTIONS...



## SOUND ATTENUATED FOR ENVIRONMENTAL PROTECTION

Multiple and large access doors allow for easy maintenance on site ensuring our equipment can be easily maintained and monitored at all times.



## FUEL MANAGEMENT

With modern engines requiring emission compliance, the need to monitor the system is critical which is why the custom in-house panel from DXB Pump monitors not only the oil and water but also the fuel and DEF (AdBlue) on the pumpset.



## STAGE 5 AFTER TREATMENT

Pumpsets up to 550kW (740HP) are designed with separate exhaust after-treatment compartments easing access for maintenance whilst increasing the cooling performance inside the pumpset.



# CASE STUDY 2

## MOTA-ENGIL MINING – MOZAMBIQUE

**DXB Pump & Power was approached by a European mining focused buying house to supply twelve high flow pumpsets for an international mining company based in the Tete region of Mozambique and delivery was required in under three months.**



Whilst other pump manufacturers balked at the short delivery period, DXB spoke with key suppliers such as Cornell Pump and Caterpillar, to identify whether this was possible and after confirmation, quoted the twelve pumpsets with three months delivery.

Following the successful tendering process, an order was placed on DXB Pump & Power with strict penalties as part of the finance agreement and the company immediately began the process of designing the pumpsets for Mota-Engil.

With twelve CAT and Perkins engines to be ordered and twelve pumps to source from Cornell on the West Coast of the USA, design time was limited to a single week so that orders could be placed swiftly to ensure on-time-delivery.

DXB Pump worked six days a week, twelve hours a day for six weeks to build all the pumpsets. They were required to be designed as trailers complete with suction booms, Storm & Stone protection systems and the safety equipment included fire extinguishers in addition to safety lighting.

All the pumpsets capable of over 500m<sup>3</sup>/hr at heads up to 100m were shipped on time and on budget for the mine to install and operate within the twelve-week time frame.



# CLIENT REQUIREMENTS:

**SUPPLY WITHIN  
3 MONTHS**

**12  
HIGH FLOW  
PUMPSETS**

**ROBUST  
BUILD  
OF MATERIALS**

**RELIABLE  
SUPPLIER  
WITH ZERO  
BREAKDOWNS**

**ALL THE PUMPSETS  
CAPABLE OF OVER  
500M<sup>3</sup>/HR AT HEADS UP  
TO 100M SHIPPED ON  
TIME AND ON BUDGET  
FOR THE MINE TO  
INSTALL AND OPERATE  
WITHIN THE TWELVE-  
WEEK TIMEFRAME.**



# PUMP TYPES



## CLEAR LIQUIDS

DXB's clear liquid pumpsets are known around the world as the most durable, most reliable, highest efficiency pumps in the industry. We offer a large selection of clear liquids pumps that meet or exceed optimum efficiency standards for centrifugal pumps. These can be found in a variety of applications in the industrial, municipal & construction markets and are available in Close-Coupled, SAE Engine Mounted, Horizontal, and Vertical configurations.



## SOLIDS HANDLING

DXB's solids handling pumps are available in discharge sizes from 50mm to 750mm and are designed to handle difficult solids handling applications. A range of mounting configurations are available, from close-coupled, SAE engine-mount, and horizontal frame-mount, to vertical and vertical coupled. Featuring enclosed impeller (50mm to 250mm solids, and flows up to 8100m<sup>3</sup>/hr), N-series can also be fitted with a delta impeller to handle stringy materials, rags, etc. Robust and reliable, the N-series has more than 30 years' of service as a waste-water handling favourite of the industry.

<b>SIZES 50MM TO 250MM</b>	<b>FLOWS UP TO 1570M<sup>3</sup>/HR</b>
<b>PRESSURES UP TO 24 BAR</b>	<b>EFFICIENCIES UP TO 89%</b>

### FEATURES

- Full GGG40 Ductile Iron Pump
- CA6NM Stainless steel impellers
- Cycloseal® seal protection
- CD4MCu Stainless Steel (option)
- Replaceable wear rings
- Oversized bearings
- High efficiency, fully-machined impellers
- Heavy walled castings
- Two-year warranty

<b>SIZES 50MM TO 750MM</b> <small>IN OPEN SETS OR ENCLOSED CANOPIES</small>	<b>FLOWS UP TO 8100M<sup>3</sup>/HR</b>
<b>PRESSURES UP TO 21 BAR</b>	<b>EFFICIENCIES UP TO 83%</b>

### FEATURES

- Full GGG40 Ductile Iron Pump
- CA6NM Stainless steel impellers
- Cycloseal® seal protection
- Solids handling 76-250mm
- Replaceable wear rings
- Oversized bearings
- High efficiency, fully-machined impellers
- Robust Mount Frame with mounting surfaces
- Two-year warranty



## SELF PRIMING

DXB's self-priming range of pumps are specifically designed for tough applications where solids are in the fluids. Capable of handling these solids up to 3" in size, the pump is manufactured in a tough Ductile Iron offering far greater wear resistance to cheaper cast iron models from other manufacturers.

With the Cornell Cycloseal® system and heavy-duty rotating assembly, these pumps are perfect for those tough operations such as wheel wash plants and concrete batch mixing plants which use small self-primers instead of troublesome submersible pumps.

With full access to maintain the pump with no need for cranes, chains and submerged strainers, these pumps are perfect for lower cost self priming applications.

**SIZES 50MM  
TO 250MM**

**FLOWS UP TO  
1000M<sup>3</sup>/HR**

**PRESSURES  
UP TO 8 BAR**

**EFFICIENCIES  
UP TO 81%**

### FEATURES

- Full GGG40 Ductile Iron Pump
- 17-4PH Stainless Steel shaft
- Cycloseal® seal protection
- Solids handling 76mm
- Fully serviceable when installed
- Self priming to 7.5m
- High efficiency, fully-machined impellers
- Five-year warranty

## SLURRY

DXB's range of slurry pumps expand our line of standard dewatering pumping solutions to the more abrasive applications in the drilling, construction, mining & quarrying, industrial & municipal industries. With the patented Cycloseal® technology, our slurry pumps are built to operate without flush water.

### FEATURES

- 650BHN Hard Iron construction
- Wear resistant shaft
- High efficiency impeller design
- Cycloseal® seal protection
- Oversized bearings
- Rubber lined option
- Two-year warranty

**SIZES 50MM  
TO 300MM**

**FLOWS UP TO  
3180M<sup>3</sup>/HR**

**PRESSURES  
UP TO 24 BAR**

**EFFICIENCIES  
UP TO 79%**

**SP Series** pumps bring patented Cycloseal® technology to the mining process industry. Adding to the diverse range of mine dewatering pumps, the SP Series slurry pump offers a DXB solution to abrasive applications throughout the mill process. Available in rubber and metal lined configuration to handle various particle sizes, and pH requirements.



**MP Series** pumps are designed to provide a world-class, robust service life in any slurry pump. Cornell's Mining Pump Series combines 70 years of innovation in pump manufacturing and design, with the highly regarded patented Cycloseal® technology. Capable of operating at high pressures, the MP pumps are specifically designed for coarse abrasive slurry applications such as sand, gravel, coal, manure and mine dewatering.

**SM Series** pumps are hard metal slurry pumps. All SM pumps have a standard pressure rating of 200 BAR for high head and multi-stage series pumping applications. High chrome white iron alloy is the standard material of construction for all wet end components. A unique adjustable suction wear plate incorporates the newly patented Cycloguard™ feature to reduce recirculation for longer wear life.



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