



CDE primo

**“GREATER RETURNS IN
SAND AND
AGGREGATES
THROUGH INSIGHT AND
PARTNERSHIP,”**

www.cdeusa.com

CDE

A NEW WORLD OF RESOURCE

Welcome to CDE Primo

A FOCUSED SECTOR ON SAND & AGGREGATES WITHIN THE CDE GROUP.

We are dedicated to engineering advanced wet processing solutions for sand and gravel, crushed rock and manufactured sands businesses.

Our expertise is central to many of the world's leading producers of construction material.

In 2014, the United Nations Environment Programme published a report titled "Sand, Rarer Than One Thinks," which concluded that the mining of sand and gravel "greatly exceeds natural renewal rates."

Our mission therefore is to create a new world of

resource in which supplies of natural Sand and Aggregates are protected, enabling producers like you to maximize your resources. We will do this by continually developing the most efficient and advanced wet processing technology available.



"THE WET PROCESSING OF SAND AND AGGREGATES HAS BEEN A CORE SECTOR FOR CDE SINCE THE COMPANY WAS FOUNDED IN 1992."

"The technology behind our compact sand plants such as the EvoWash, as well as larger modular plants such as the M-Series, has led the industry with respect to redesigning materials processing systems for quarry and mine operators to achieve optimal yield whilst respecting the environment and enhancing health and safety on site.

Looking to the future, we are now engaged with many

of the top global producers, as well as key operators in eight regions of the world, to maximize the Earth's natural resources. Our expertise in achieving **enhanced recovery of materials, reduced downtime, lower operational costs and maximizing throughput** is why our customers stay with CDE."

JJ Condon,
Head of Sector, CDE Primo



**1000+ PROJECTS
INSTALLED GLOBALLY.
CDE PRIMO +32% GROWTH
IN 2017 V 2016.**

Our North American Journey

CDE HAS BEEN AT THE FOREFRONT OF WET PROCESSING TECHNOLOGY AND CREATED SIGNIFICANT VALUE FOR ITS CUSTOMERS IN THE NORTH AMERICAN MARKET.

2013

CDE Global Inc was established and our first office was opened in Cary, North Carolina, signifying our commitment to developing the North America and Canadian markets with our world class wet processing solutions.

2014

CDE made its appearance at ConExpo in Las Vegas, Nevada where the M4500 modular wet processing plant was launched to the global market and generated huge interest.

Following an Evowash installation with Martin Marietta in North Carolina to assist with fines recovery, our first major turnkey plant installation then followed with GS Materials, setting the scene for some major developments in the marketplace.

2016

The success that followed included the launch of CDE Infinity Range™ and our AquaCycle 1500

As our business grew we set up our trusted and specialized US ProMan™ and US CustomCare in the market.

This move and investment further supported our commitment to our customers and developing the market.

2017

Proved to be a record breaking year for CDE in North America.

CDE attended ConExpo in Las Vegas again, launching the new M5500 which produces up to 550tph of washed material, and our technology continues to provide solutions for a rapidly expanding customer base.



2018

The opening of our new facility in Cleburne, Texas

Due to an increase in demand for our products and growth in our expertise, we have opened our second new facility in Cleburne, Texas. A state of the art facility and US Centre of Excellence housing our growing teams of business and marketing personnel plus parts inventory, world class laboratory services, our CustomCare team and the expansion of our Regional Service Engineering team.

Our investment is a demonstration of our commitment to the significant opportunities within North America and it forms part of our growth strategy for cementing our future in this market.

How we work

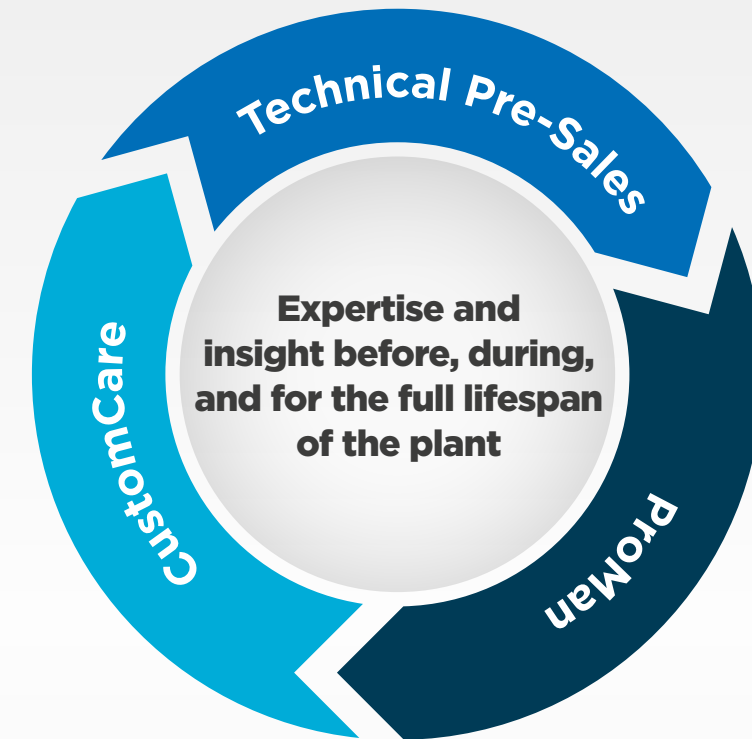
THE CDE WAY IS A FULLY CONSULTATIVE APPROACH BASED ON THE DEVELOPMENT OF LONG-TERM PARTNERSHIPS.

We have a unique delivery model for all our projects, driven by a philosophy that working directly and in conjunction with our customers will mean the delivery of a project of the highest standards and importantly, the right wet processing solution for your material and business goals.

This co-creation model capitalizes on both your knowledge and ours. We will maintain an unrivalled level of contact and consultation, from concept and design right through to final commissioning.



LONG TERM VALUABLE PARTNERSHIPS



3 distinct partnership phases

Provide specialist expert support throughout, to ensure that you get the most from your investment.

1 - Technical Pre-Sales

We co-create your system, designed specifically for your materials.

2 - ProMan™

A dedicated project team that delivers and commissions your equipment.

3 - CustomCare

Tailored CustomCare contracts that ensure maximum plant efficiency and profitability.



CDE Technical Pre Sales

YOUR JOURNEY WITH US STARTS HERE...

WE USE EXISTING PLANT & EQUIPMENT AUDITS TO EXPLORE AREAS WHERE EFFICIENCIES CAN BE INTRODUCED.

We conduct a detailed analysis of your feed material to establish the volume of commercial sand and aggregate material that can be processed.

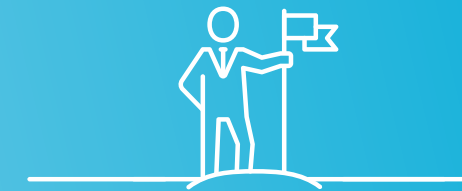
On receipt of your material CDE laboratory technicians use their expertise in the industry to run a wide range of material analysis tests, where we simulate the processes using our own bespoke equipment; both in lab and real world scale analysis.

Our lab facilities are available at any time and CDE is always excited to partake in further analysis of materials that enable the development of existing customer processes or ensure that the most suitable and optimized solution is proposed in each scenario.



WHERE OPPORTUNITIES ARE DISCOVERED.

We hold design workshops with our engineering team so you are at the heart of the design and decision making process.



Development

The systems we employ for the personal and professional development of our engineering teams are critical for our ongoing success.



Registered

We offer all our engineers a route to chartered status and have the highest volume of professionally registered engineers in our industry.



One Team

We have **100+ engineers** across our technical, project design, product development, research & development and electrical departments with a combined **experience of 600+ years**.



Experience

Combining our experience with our customers' experience ensures we create and deliver a world class, bespoke solution for your business which will maximize product yield and minimize waste from your operations.

CDE ProMan™

A DEDICATED PROJECT TEAM THAT DELIVERS AND COMMISSIONS YOUR PLANT ON TIME.



“CDE PROMAN™ MANAGED OUR PROJECT ON OUR BEHALF AND SUPPLIED ALL REQUIRED INFORMATION, ENSURING WE WERE AWARE OF ALL REQUIREMENTS THROUGHOUT THE BUILD, TRANSPORT, INSTALL AND COMMISSIONING OF OUR WASH PLANT.”

MR RUSSELL, GS MATERIALS, NORTH CAROLINA

Our experience in the design of large turnkey mineral processing projects ensures your project will be designed and delivered to the highest possible standards. CDE's ProMan™ system is proven to deliver highly efficient and productive plants through a process which ensures that lines of communication are clear and everyone involved

from both your side and ours knows exactly where the project sits at any given time.

This system has been implemented effectively on numerous worldwide projects from the UK and Ireland to India, the Middle East, Africa, North America and Australasia.



A dedicated project team is appointed as soon as the project goes live. It contains all the major disciplines required to deliver a truly world class project.

Through this process you are allocated a dedicated Single Point Of Contact (SPOC) who is ultimately responsible for the delivery of your project in its entirety.

Our wish and yours is for a project that is delivered on time, on budget and

performs to the highest possible standards. ProMan™ is the methodology that has been proven to consistently deliver this outcome. The key to success here is the same as with our design philosophy – each project must be constructed individually to take into

account the individual characteristics of the site, the material, the deadline and the requirements of the process.

CustomCare

“WE PROVIDE A WORLD CLASS SERVICE TO MAXIMIZE PLANT EFFICIENCY.”

Tom Houston
CustomCare Director



DURING AND AFTER THE INSTALLATION OF YOUR SYSTEM, CDE WILL BE THERE TO SUPPORT YOUR BUSINESS IN ACHIEVING AND MAINTAINING OPTIMUM EFFICIENCY IN THE RUNNING OF YOUR PLANT.

CDE is committed to providing a world class aftersales service through CustomCare.

We will provide a world class service through every stage of the project and beyond to ensure the delivery of projects which will outperform our customers' expectations.

We will continue to work in partnership with our customers to ensure their plant continues to operate at maximum efficiency therefore ensuring maximum profitability.



How we work

We understand your business objectives and the operation of your plant

We create a CustomCare package to help you meet your objectives

We maximize uptime for optimal throughput

We make it easy to work with CDE CustomCare and are at your service 24/7

OUR CDE PRIMO PROJECT SOLUTIONS HAVE HELPED OUR CUSTOMERS TO MINIMIZE WASTE AND MINIMIZE THE ENVIRONMENTAL IMPACT OF THEIR OPERATIONS.

REDUCES
FRESH WATER
USAGE TO

5-15%



Minimizing waste and protecting the environment

Along with the elimination of lost quality fines we integrate primary stage water treatment and sludge management systems.

Our solutions effectively eliminate waste and the need for settling ponds from your operation.

All machines are powered by clean electricity, eliminating the need to store and use harmful fuels.

Compact site designs minimize the physical footprint and civils on site.

**>95% increase
in water
recycling rates**



THE AQUACYCLE THICKENER RECYCLES UP TO 90% OF YOUR PROCESS WATER BACK TO YOUR PLANT.

Maximizing Resource Yield

CDE PRIMO SOLUTIONS ARE PACKED WITH DESIGN FEATURES TO MINIMIZE TIME SPENT ON ESSENTIAL MAINTENANCE AND KEEP YOUR OPERATORS SAFE.

Getting the quickest return on your investment depends upon being up and running in the shortest time possible with a solution that maximizes your product yield while minimizing waste and essential maintenance time.

Every CDE Primo solution is pre-wired, pre-assembled and pre-tested in our factory. Whether you require a static or modular solution our pre-fabrication approach ensures the most rapid deployment of your plant.

OUR PROJECTS FEATURE CDE BESPOKE EQUIPMENT TO DELIVER THE HIGHEST STANDARD SOLUTION TO YOUR BUSINESS.

EvoWash Our signature product.

The EvoWash has a project portfolio covering 2 decades and a wide range of washing, dewatering and classification applications.



R-Series
(PRIMARY SCALPING
SCREENS)

The most efficient delivery system when dealing with difficult materials like clay bound sand & gravel or crushed rock.



Feed Hoppers

Integrated to our wet-processing equipment or available as stand alone units, we offer a range of hoppers with capacities designed to suit the specific requirements of your project.



M-Series
(MATERIALS WET
PROCESSING SYSTEMS)

Produce up to 5 types of material on a single machine. The M-Series integrates feeding, screening, fine material washing and stockpiling on a compact chassis. Intelligent process integration ensures the efficient transfer of material from one processing phase to another and reduces the space required to accommodate your wet processing plant.



AggMax
(MODULAR LOGWASHER)

The AggMax integrates scrubbing, sizing, trash removal, fine material recovery and stockpiling on a compact chassis. With 4 machines in the range you can produce up to 250 tons per hour from a single machine.



**Counter Flow
Classification Unit**

The CFCU provides an efficient system for removal of lightweight contamination from your fine material, including silica sand processing, lignite removal, specialist sports sand production.



AquaCycle
(PRIMARY STAGE WATER
TREATMENT & RECYCLING)

Our AquaCycle thickener allows you to recycle up to 90% of the process water, immediately available for reuse in the system. This significantly reduces the space required to accommodate settling ponds or tailing dams.

The AquaCycle thickener design maximizes the settlement of solids in the smallest possible area through a number of design features and innovations.



**Filter press &
Decanter centrifuge**
(SLUDGE MANAGEMENT)

The introduction of a filter press or decanter centrifuge eliminates waste from your wet processing plant - removing the requirement for tailings dams or settling ponds.

Each decanter centrifuge or filter press is custom built to the specific requirements of your project after extensive material testing.

This approach allows us to deliver successful, efficient sludge management and tailings dewatering project.

Infinity Screens™

SCREEN DESIGN REIMAGINED

The development of our patented Infinity screening technology allows us to bring you a revolutionary range of elliptical, circular and linear motion screens with application in the sand & aggregates, mining, industrial sands and C,D&E waste recycling sectors.



P-Line inclined sizing screens
H-Line horizontal sizing screens
D-Line dewatering screens
F-Line fine material screens

Power in the right place

Unique drive systems across the Infinity range ensure best in class performance.

Performance and efficiency

A catalogue of features and design innovations across the Infinity range embody the CDE commitment to innovation and engineering excellence.

Safety first

A safer, happier workforce is a more productive workforce. That is why the Infinity range is designed with your operators in mind and is packed with features which minimize the time required for essential equipment inspection and maintenance.

BUT DON'T JUST TAKE OUR WORD FOR IT...



GS MATERIALS



C.O. WILLIAMS



METROPLEX SAND & GRAVEL



LATTIMORE MATERIALS

“WE APPROACHED CDE WITH A NUMBER OF KEY REQUIREMENTS IN TERMS OF EFFICIENCY, PERFORMANCE AND MODULARITY.”

It was crucial to us that we would have a water treatment facility and that we could recover the fine sand we were losing with our previous system. The result is in-specification products that are ready for sale and reduced costs in terms of the amount of water required

to operate the plant, and significant savings in the management of the sludge lagoons.”

**Ronnie Kirkpatrick,
Owner,
GS Materials**

“THE SPACE AVAILABLE AT THE QUARRY WAS THE STUMBLING BLOCK FOR US WHENEVER WE WERE EXPLORING A SOLUTION TO THE VOLUME OF CRUSHED LIMESTONE DUST THAT WE WERE PRODUCING.”

It was only as a result of seeing the CDE equipment at ConExpo in Las Vegas that we started to see a solution to this problem, and the ability to integrate closed-circuit water recycling as part of the plant allowed us to move to a situation where we are now maximizing our product yield from the quarry. Not only does this make our

operation more profitable, but it ensures the most efficient extraction and processing of the quarry reserves and makes our operation more sustainable in the long term.”

**Neil Weekes,
General Manager,
C.O. Williams**

“TRULY REMARKABLE

The quality of equipment design and the strength of its manufacturing is truly remarkable... as is the precision with which the plant fits together.

From the design phase, engineering, and installation - the professionalism and

expertise of CDE's personnel clearly matches the quality of their equipment.”

**Keith Newell,
Vice President,
Metroplex Sand & Gravel**

“I WOULD ABSOLUTELY LOOK TO USE CDE AGAIN ON ANY POSSIBLE PROJECT IN THE FUTURE.”

We are extremely pleased. The communication with CDE team was excellent and the project totally met all of the defined goals.”

**Sean O'Leary,
Project Manager,
Lattimore Materials**

Case Studies

WE ARE PROUD OF THE PERFORMANCE OF THE PROJECTS WE DELIVER.

That's why we have collected together a set of case studies about the success enjoyed by clients who use the CDE product range in a number of different ways.

“We were concerned with reducing costs, increasing efficiency and reducing our environmental impact. The AquaCycle system guarantees that we can achieve all three of these goals while complying with environmental requirements.”

Jean-Charles Gillet,
Managing Director, S.A. André Boureau



CDE introduces AquaCycle water treatment technology to France with S.A. André Boureau

A new mobile CDE washing plant is operational at S.A. André Boureau's new sand and gravel pit located at Lanty-sur-Aube, France and is successfully producing commercial products while recycling almost all of the water used in the plant.

In 2014, CDE successfully installed an M2500 E4 mobile washing plant and an AquaCycle A200 thickener - significantly reducing the area required for ponds onsite and enabling the recycling of more than 90% of the water used in the

washing plant which lead to a substantial reduction in the volume of water that has to be provided for the system.

Another important issue for S.A. André Boureau is the health and safety of its employees and the CDE

solution has been designed to minimize spillage which ensures a clean and safe site.

“The design phase, engineering, and installation – the professionalism and expertise of CDE’s personnel clearly matches the quality of their equipment.”

Keith Newell,
President, Metroplex Sand & Gravel



CDE installs Sand Washing Plant; Metroplex Sand & Gravel, Texas

In 2015, CDE installed 5 machines at the Metroplex Sand & Gravel pit in Texas; the M4500 modular wash plant, the AggMax portable logwasher, the Counter Flow Classification Unit (CFCU), EvoWash fines recovery unit and the AquaCycle thickener.

This tailored sand washing plant alleviated the issues at the plant. Delivering in-spec finished products in a single pass, reducing environmental footprint through lower water consumption, and performing all functions in a smaller footprint with lower operating heights.

The CDE equipment installed now produces C33 Concrete Sand, Asphalt Sand, Masonry Sand, Cushion Sand, Concrete Rock and Pea Gravel that are being sold to highway contractors, concrete producers, asphalt

producers and landscape companies in Dallas-Fort Worth metropolitan area.

“CDE were able to recover the fine sand previously lost to the ponds and produce an additional fine sand product for the company and reduced their monthly energy costs by approximately 75%.”

Tiff Mc Mullan,
CDE Business Development Executive



CDE Sand Washing Plant Project, Matthew Sand & Gravel, North Carolina, USA.

Matthew Sand & Gravel provide aggregate materials to the construction industry. The company was experiencing a number of issues with their existing sand washing plant such as lost fines to the pond, increased pond maintenance and wet product which required time to dry. By

operating on diesel it was costly to run.

CDE identified that the solution to improve their production efficiency and increase their return on investment would be the installation of the M3500 wash plant. The M3500 allowed for the feeding,

aggregate screening sand washing and stockpiling of materials on a compact chassis.

With the implementation of the CDE equipment the company were able to produce a concrete sand to the desired specification as well as a new product,

a residual fine sand, which had previously been lost to the pond. Integration of the CDE machine also resulted in significant cost savings for the company, by eliminating unnecessary double handling of the material and reduction of the vehicle movements on site.



A NEW WORLD OF RESOURCE

With the exception of water and air

**SAND IS THE MOST
USED RESOURCE IN
THE WORLD.**

**15 BILLION
TONS**

**OF SAND USED
EACH YEAR
AROUND THE
WORLD.**

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