



GLOBAL SOLUTIONS FOR EPC

ENGINEERING, PROCUREMENT AND CONSTRUCTION COMPANIES





YOUR SINGLE SOURCE GLOBAL PARTNER

CIRCOR is redefining what's possible in fluid handling and transfer applications for experts like you in engineering, procurement and construction firms. You're faced with demanding clients who are under increasing economic, competitive and regulatory pressures. We understand you need more than a pump. You need a partner who can help you design and deliver the most reliable, efficient and innovative solutions for both balance-of-plant and mainstream applications. A partner who can provide project management and local support for global clients with facilities around the world. That's why CIRCOR surrounds you with the:

- **People:** a team of engineering and application experts, fluent in your language, who understand your business challenges and are knowledgeable about the industry
- **Products:** a portfolio of technologies, products and systems from brands you and your clients know and trust that increase the reliability and cost efficiency of plant operations
- **Services:** a commitment to responsive, expert levels of service that give you the support you need during design, commissioning, and throughout operations

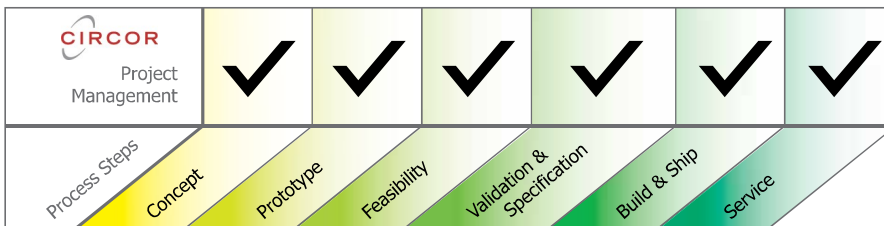
As your single-source global supplier, we call this "Total Savings of Ownership."

EXPERTS YOU CAN COUNT ON FOR PROJECT MANAGEMENT THROUGHOUT THE PROCESS

In today's economy, you and your clients are facing shortened timelines and fewer resources. CIRCOR can help you balance the need to do more with less, by working with you from the beginning of the design process, all the way through to startup and operation.

The CIRCOR team of specialists will:

- Appoint a project leader as your single point of contact for all activities throughout the process
- Engage cross-functional team members to support all aspects of design and optimization
- Use tools that simplify the design and selection process
- Focus on keeping your plant competitive in a tough global economy



CIRCOR provides project management from start to finish.

A GLOBAL REFERENCE

PROJECT:

Three Gorges Dam Hydroelectric Power Station, Yangtze River, China



CHALLENGE:

With a total capacity of over 22,400 MW, the Three Gorges Dam in China is the largest dam in the world. As an integral part of the hydropower plant, the oil pumps for the governing system are required to operate continuously, 365 days per year, and present a huge engineering problem. One unique challenge is overcoming variations in outlet pressure, which increases the potential for damage to the pump housing, bearings and rotating components. The pumps originally installed by another manufacturer did not operate as required, so CIRCOR was brought in to replace them.

SOLUTION:

CIRCOR's Allweiler three-screw pumps were selected due to their safety, quality standards and local support. After examining the existing broken pumps, we performed a modified installation, allowing us to install our pumps within the current framework. The Allweiler system proved to be more cost effective and more durable than the original pumps, running continuously since installation with no failures. With local support, including periodic site visits, the CIRCOR products are coping well under the rigorous pressure to support the production of hydroelectricity for China.

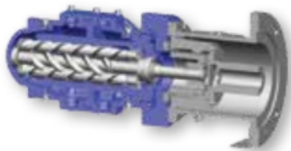
Power and Industry Products & Services

ALLWEILER® HOUTTUIN™ IMO® WARREN®

CUSTOM FLUID HANDLING SYSTEMS WITH THE RIGHT PUMPING TECHNOLOGY FOR EVERY APPLICATION

With a broad portfolio of pumping technologies and the engineering and application expertise to design innovative, customized systems, CIRCOR delivers the right solution for balance of plant process pumps and mainstream applications.

PUMP TECHNOLOGIES



THREE-SCREW PUMPS

Simple design with only three rotating parts, pulse-free flow with extremely low vibration and noise levels and high-pressure boost capabilities even when handling low-viscosity fluids.



TWO-SCREW PUMPS

Versatile self-priming horizontal and vertical screw pumps with tremendous product viscosity range for lubricating and non-lubricating liquids.



CENTRIFUGAL PUMPS

Custom designed to specific application requirements with a wide range of low viscosity aggressive and non-aggressive fluids and dynamically balanced impeller to reduce vibration.



PROGRESSING CAVITY PUMPS

Simple and economical pump design requiring only one shaft seal, able to handle fluids contaminated with large percentages of abrasive solids.



PROPELLER PUMPS

Space-saving inline pump design with large flow rates, delivery heads up to 20 meters, integrated motor and reversible flow direction.



GEAR PUMPS

CIG (Crescent Internal Gear) pumps deliver long life and maintenance-free operation. Modular, single- or multiple-stage design handles low or high pressures and viscosities as low as 0.5cst.



PERISTALTIC PUMPS

Peristaltic pumps are dry self-priming, sealless, valveless rotary displacement pumps for pumping or dosing liquids with high solids content in the wastewater engineering, food industry, chemical and petrochemical industries.



ENGINEERED SYSTEMS

Design and manufacturing of Lube, Seal and Packaged Systems according to API, Non-API and client / project specified requirements.



SMART TECHNOLOGY

Fully automated electronic monitoring and control system that provides Total Savings of Ownership by preventing hazardous running conditions, optimizing processes, and lowering maintenance and spare parts cost.



P
PULP
& PAPER



APPLICATIONS

PG POWER GENERATION

- Fuel Uploading/
Forwarding/ Transfer
- Rotor Jacking
- Lubrication
- Fuel or Burner Injection
- Chemical Metering
- Hydrogen Cooled
Generation Seal Oil
- Oil Service
- NOx Reduction

H HYDRO

- Bearing Lift
- Hydraulic Governor
- Turbine Blade
Pitch Control
- Hydraulic Wicket
Gate Control

S SOLAR

- Heat Transfer Fluids

M MINING

- Chemical Treatment
- Fuel Oil Transfer
- Rotating Equipment
Lubrication
- Explosives Transfer
- Waste Treatment
- Ball Mill Lubrication
- Flocculant Addition

W WASTE WATER

- Primary Treatment
- Sludge Treatment
- Final Treatment
- Industrial Wastewater
Treatment
- Communal
Clarification
Plants

C CHEMICAL PROCESSING

- Reactor Vessel Transfer
- Chemical Dosing
- Process Support
- High Temperature Fluids
- Extrusion

P PULP & PAPER

- Impregnation
- Powerhouse
- Cooking
- Recovery Process
- Coating Kitchen
- Calendaring
- Rotating Equipment
Lubrication



REDEFINING WHAT'S POSSIBLE

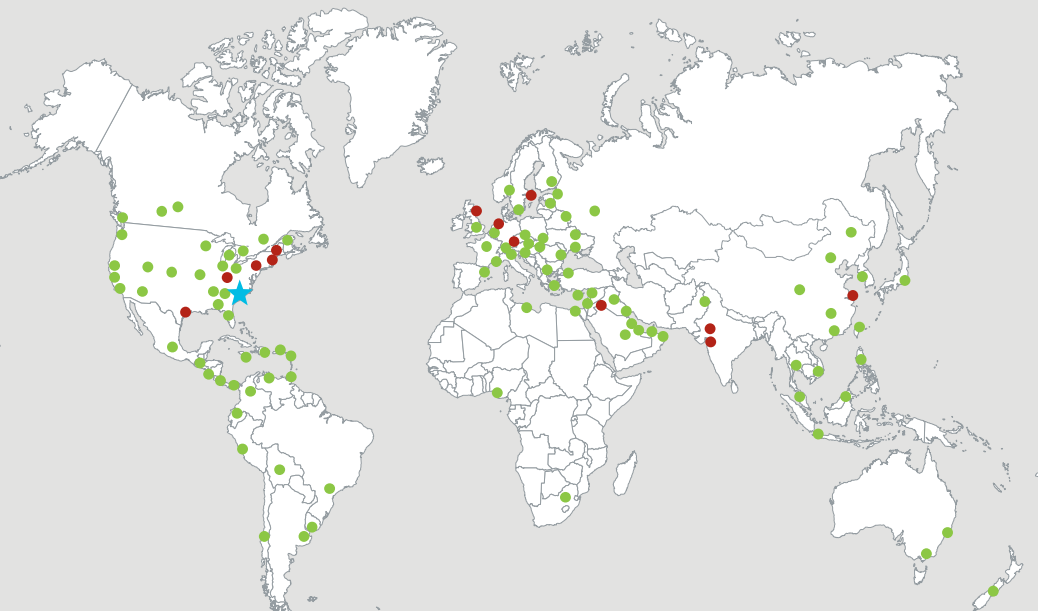
A PARTNER IN YOUR SUCCESS

Your CIRCOR team focuses on developing and delivering the best solution for your customers, whatever their challenges, wherever they are in the world. We call this “Total Savings of Ownership.” Savings from CIRCOR begins with a fair price. But Total Savings of Ownership involves an understanding of what it takes to optimize profitability throughout the life of the plant, including:

- **Technology:** providing the right pumping & system solution for every application
- **Reliability:** maintaining performance of the system regardless of conditions
- **Availability:** maximizing the time for power production
- **Uptime:** ensuring run-time consistency without fail
- **Compliance:** sustaining the commitment to environmental responsibility

Partner with CIRCOR for our deep base of industry knowledge, engineering experience, and application expertise that allows us to optimize system performance while ensuring your team has the knowledge and training it needs. With the tools to simplify your design and engineering processes and the global presence to ensure you have what you need when you need it, we are committed to being a partner in your success by redefining what’s possible for you and your customers.

REDEFINING GLOBAL SOLUTIONS



CIRCOR maintains regional engineering and manufacturing facilities to support you around the world and around the clock.

- ★ Global Headquarters
- Regional Manufacturing and Engineering Support Facilities
- Global Distributor Network

CIRCOR

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Power and Industry Products & Services

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