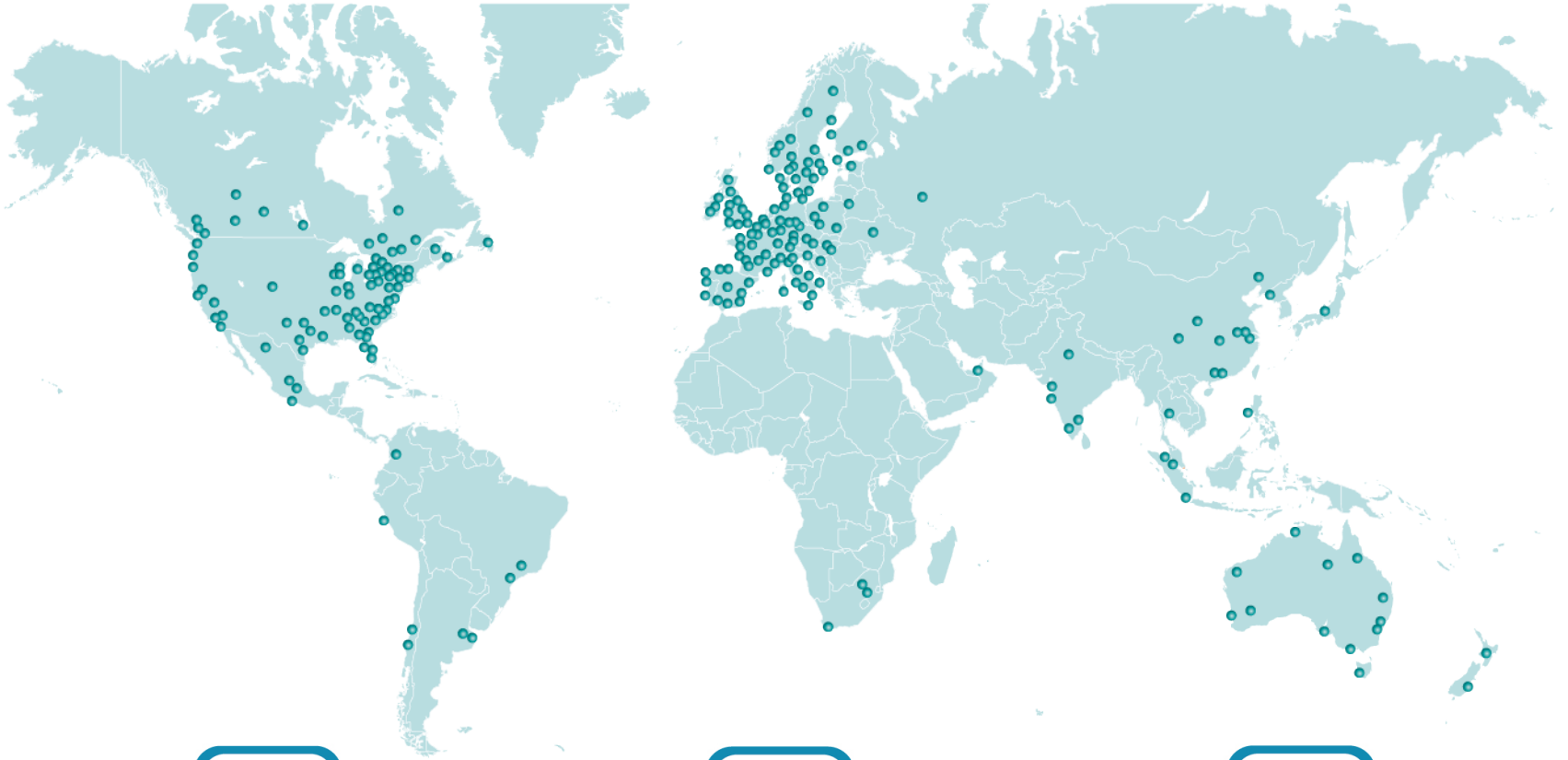




Complete Solutions for Mine Water Balance



XYLEM SERVES MINING CUSTOMERS IN MORE THAN 140 COUNTRIES



TRANSPORT



TREAT



TEST

Respected brands

AANDERAA



SI Analytics®

WEDECO®

AC FIRE PUMP



Standard **X**change®



godwin 





Company Overview



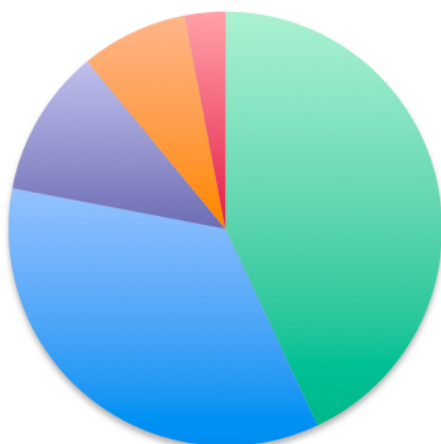


Xylem overview

- A leading water technology company
- Global presence, with 12,500 employees
- \$4 billion in revenues from 150 countries
- Advancing the smarter use of water

Xylem Balanced Portfolio

**DIVERSE
CUSTOMER BASE**



BY END MARKET

- Industrial 43%
- Public Utility 35%
- Commercial 11%
- Residential 8%
- Agriculture 3%

**SERVING
CRITICAL NEEDS**



BY APPLICATION

- Transport 46%
- Treatment 10%
- Test 8%
- Building Services 19%
- Industrial Water 14%
- Irrigation 3%

**GLOBAL MARKET
BALANCE**

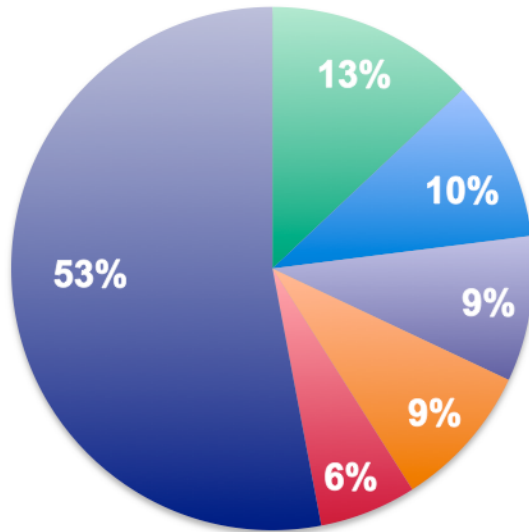


BY GEOGRAPHY

- United States 37%
- Europe 35%
- Asia Pacific 12%
- Rest of World 16%

Industrial Markets

INDUSTRIAL MARKET EXPOSURE



- Mining
- Oil & Gas
- Construction
- Food & Beverage
- Marine
- General Industry/Other

MACRO GROWTH DRIVERS

Global Commodity Demand Growth

Growth in Hydraulic Fracturing

Global Construction Recovery

Changing Dietary Habits in Emerging Market Populations

MAJOR COMPONENTS OF GENERAL INDUSTRY

- Paper
- Power
- Manufacturing
- Chemicals
- Pharmaceuticals

XYLEM ADVANTAGES

- Strong Brands
- Deep Application Knowledge
- Broad Product Portfolio
- Cutting Edge New Technologies



Mining Capabilities



What Solving Water Means to Xylem

WATER NEEDS

WATER PRODUCTIVITY

More efficient movement, treatment and use of clean water and process water

XYLEM SOLUTIONS

- Highly efficient pumps, for transport, dewatering, boosting, etc.
 - Sensors for water quality, leaks, and waste
-

WATER QUALITY

More efficient renewal of wastewater to protect the environment

- Efficient wastewater pumps and M&C
 - Process optimization, treatment equipment, environmental monitoring
-

WATER RESILIENCE

Reduction of water-related risks, e.g. floods or scarcity

- Water reuse, desalination technologies
- Flood monitoring, drainage and pumping systems, and dewatering services



Applications



SOURCE WATER & CAMP WATER

CHALLENGE

- Mining often located in water-stressed areas with distribution requirements over a wide geographic area and at varying quality levels

SOLUTION

- Pumps and systems for water supply, transport, camp water treatment, and water quality monitoring



EQUIPMENT OFFERING

Standard & Advanced Treatment Processes

Booster & Transport Pumps

Source Water Pumps Flow

Meters for Water Quality Measurement

GOULDS WATER TECHNOLOGY VERTICAL TURBINE PUMP

EQUIPMENT OFFERING

Standard & Advanced Treatment Processes

Booster & Transport Pumps & Packages

Wastewater Pumps

Flow Meters

Water Quality Measurement

Mixers



WASTE WATER & WATER RE-USE

CHALLENGE

- Mining often face restrictions on usage and strict effluent quality regulations

SOLUTION

- Packaged systems for water supply, wastewater treatment, water reuse

WEDECO OZONE SYSTEM

DEWATERING

CHALLENGE

- Water removal from mine shafts, open pits and active dewatering around mines

SOLUTION

- Reliable and efficient dewatering solutions across the mine dewatering applications

EQUIPMENT OFFERING

Diesel Dewatering Pumps

Electric Dewatering Pumps

Vertical Turbine Pumps

Single & MultiStage Pumps

Pump rental and services



FLYGT BIBO SUBMERSIBLE PUMP

EQUIPMENT OFFERING

MultiStage Booster Pumps

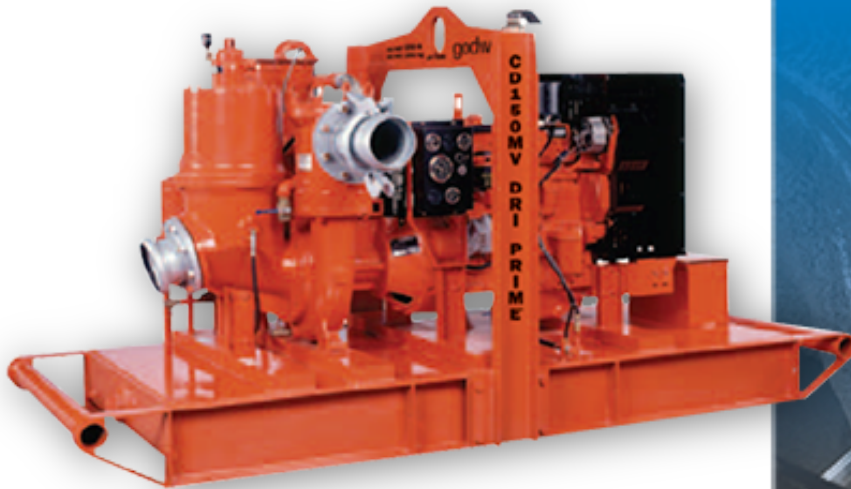
Single Stage Transport Pumps

Vertical Turbine Pumps

Booster Set Packages

Portable Diesel Pumps

Submersible Pumps



WATER TRANSPORT & BOOSTING

CHALLENGE

- Water transport and boosting applications vary widely

SOLUTION

- Pumps and systems for any application



GODWIN DIESEL DRY PRIME PUMP

Environmental Monitoring

CHALLENGE

- Mines are coming under pressure to monitor their water consumption and impact

SOLUTION

- Environmental monitoring solutions to track quality and flow parameters in real time

EQUIPMENT OFFERING

Environmental Monitoring Equipment

Water Quality

Turbidity & Flow Meters

Multi Parameter Sondes



ENVIRONMENTAL MONITORING STATION

EQUIPMENT OFFERING

Cyanide Monitoring

Ozone Treatment

Pumps and Drives

Water Quality Sensors for Effluent



OI CYANIDE ANALYZER

OZONE PROCESS SOLUTIONS

CHALLENGE

- Cyanide use is expensive, toxic, and increasingly regulated

SOLUTION

- Process analysis to optimize use
- Ozone-based leachate management

DUST & FIRE SUPPRESSION

CHALLENGE

- High pressure, high flow pumping requirements for dust & fire suppression

SOLUTION

- Certified fire pump systems offered globally, and high pressure booster pumps for dust suppression systems



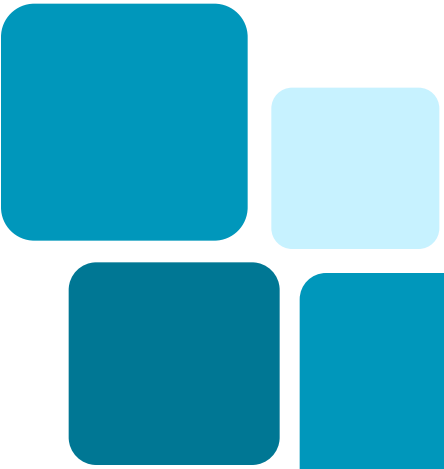
EQUIPMENT OFFERING

Fire Suppression Pumps & Systems

Booster Pumps

Booster Packages

VOGEL MULTI STAGE PUMP



CALL TO ACTION !

WHAT CAN XYLEM HELP YOU SOLVE?

- Your toughest water treatment challenge...
- Conduct an energy audit in your most energy intensive operation...
- Pilot one of our Flygt or Godwin or e-SV pumps in an application of your choice...
- Set up environmental monitoring at your riskiest mine...

Australia Gold Mine

Case Study 1:



The Australian gold mining industry began in 1851, increasing the country's population significantly within a few years. As the world's second largest producer of gold and a major player in the extraction of Iron Ore, Nickel, Opal and Zinc, mining remains one of the Australia's primary industries.

Dewatering is an important part of the mining industry and for gold mining in particular, open saline pit dewatering is key to the continued and efficient extraction of precious metals.

GOING FOR GOLD

For one large scale gold mine in Western Australia, investing in a dewatering system that could effectively remove the continual influx of saline ground water and precipitation, was vital in keeping the mine running at its optimum level of production.

Like most open pits, extracting water from this site required a dewatering system that was capable of processing low flow fluids through extremely high heads, in order to pump the saline water up the pit face and out of the mine.

For maximum efficiency, Xylem suggested using submersible multistage pumps. When installed horizontally into low flow fluids, this can produce much higher heads than the single stage pumps that are readily available in Australia.

Vogel multistage pumps are manufactured in Austria and enabled the team to offer extremely competitive lead time in delivering a Duplex TVS pump unit to the mine in Western Australia, much to the relief of the site manager.

Other important considerations for the purchase of a new system was ease of installation and maintenance. In very large open pits, having access to the equipment for planned maintenance can reduce the need for excessive retrieval equipment and man power, which offers further monetary savings on the life of the pump.

A MARKET LEADING SOLUTION

Drawing on the experience and product portfolio of the wider Xylem Corporation has given this gold mine the perfect combination of equipment. A combination of two Vogel duplex multistage submersible pumps that can provide heads of up to 500m, plus two floatation modules from Flygt, another leading Xylem brand, has given the mine the very best in market leading technology from across the globe.



The Xylem Vogel duplex multistage submersible pump delivers heads of up to 500m, which is enough to propel the saline water out of the gold mine.

Xylem's role: Xylem worked with the mine to produce a package of equipment from across leveraging knowledge and expertise from across the company.

Barrick Goldstrike Tailings Basin

Case Study 2: Carlin, NV



ISSUE

On Christmas Eve 2011, at the Barrick Goldstrike Tailing Basin, a floating turbine pumping system failed and sank. Godwin distributors Pac Machine and S&G Electric Motor Repair, along with the Xylem branch in Helena, MT, mobilized Godwin Dri-Prime pumps. The diesel and VFD-controlled electric driven pumps would get the needed process water flowing to the mill. Within two days post-failure, the system was set up and running and the plant was once again operational.

Barrick requested a quote for a permanent portable pumping solution with 4160V power to deliver 4000 GPM to the autoclave and 7000 GPM to the Roaster. The system needed to be portable; since the water level in the tailings basin rises approximately ten feet every four months, the power control system needs to be raised 30 feet per year.

SOLUTION

Early in the design review, Xylem evaluated the use of 4160V power to meet the mine's demands. We determined that using 480V power would result in a million dollar savings to the operation. After this decision, we worked to redesign the system plans to accommodate this voltage step-down.

Xylem designed a complete portable E-House (electric control building) to step the voltage down from 4160V to 480V, distribute the 480V power, monitor and deliver power to three 400HP VFDs, and power three Godwin Dri-Prime HL250M 400HP pumps. The pumpsets have extended skids to support the loading of floating 16" HDPE suction pipe in a dynamic environment.

RESULT

The project had a very successful installation and startup of the equipment, due in large part to the cooperation between Xylem, our Godwin distributors, and Barrick. Our plan to utilize 480V power, while not the original request from the customer, proved to be an ideal solution for the project

Barrick was so pleased with the final product we were asked to supply a design for the next phase of the project, and sold them three additional Godwin Dri-Prime pumps.



Customer: Barrick Goldstrike

Order date: 07/03/2012

Completion: 02/22/2013

Xylem's role: Designer, fabricator, installer, engineering review, commissioning

Xylem's scope:

- HL250M 400HP Dri-Prime
- 5kV Arch-flash rated disconnect
- 1500kVA Substation Class 4160V/480V transformer
- 480V Distribution Panel
- Power, voltage monitoring
- 400HP VFD
- Specific pumps/products used and service/people on the job

Thank you!

Let's Solve Water