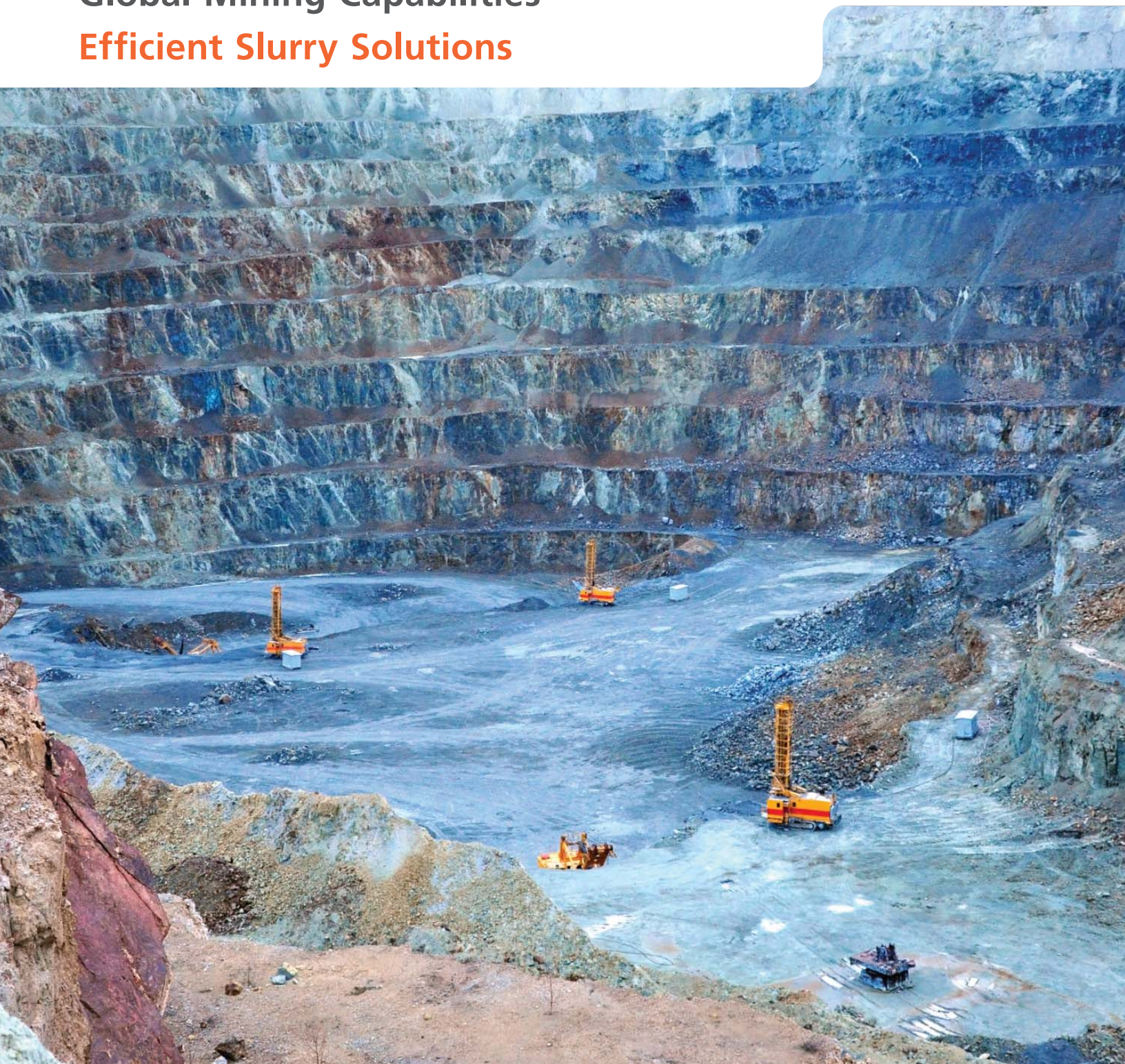
GIW® Minerals

Global Mining Capabilities

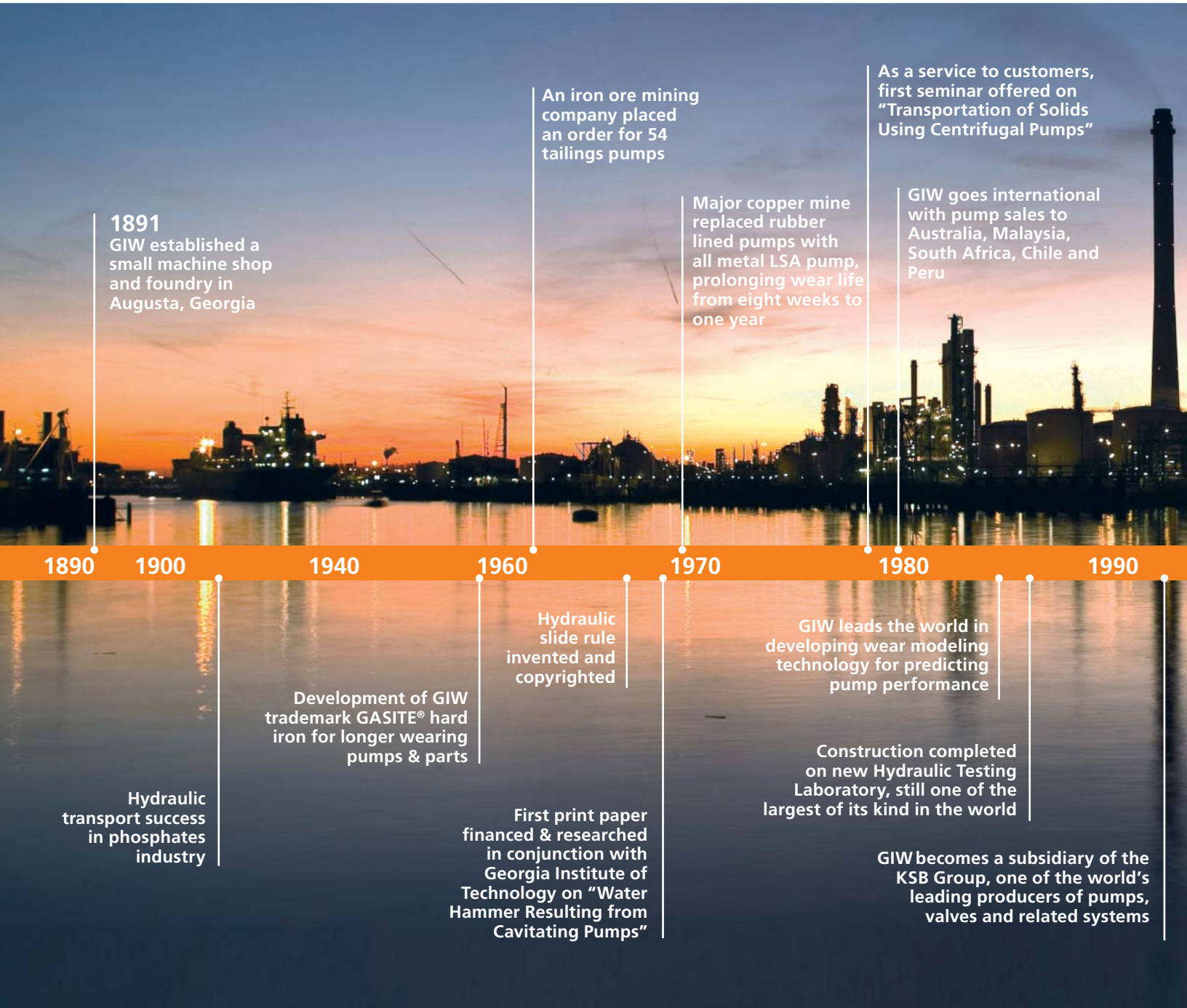
Efficient Slurry Solutions



Meet the Slurry Experts

With its GIW® Minerals slurry products line, GIW has the know-how and the infrastructure to deliver first class slurry solutions and excellent service. This makes GIW your undisputed first choice as a provider of minerals processing and slurry pump solutions.

Renowned worldwide as the leader in the design, manufacture and application of heavy duty, centrifugal slurry pumps, we offer customer tailored solutions. And through our network of sales and service centers, we strive to be a trusted global partner.



A Tradition of Excellence

GIW pumps transport phosphate rock in Florida, oil sands in Canada, dredged material in China and a whole spectrum of materials all over the globe. Wherever mining, dredging and industrial companies have challenging slurry transport needs, we can help. More than just a pump manufacturer, we are a solution provider and lend total customer support.

We provide exclusive services such as full scale lab testing, wear modeling, estimation and application engineering for proper equipment selection and site studies. All these are offered to give our customers the lowest total cost of ownership possible.

Industry Solutions, Around the Globe

Bring KSB your transport problems and the result will be a solution that works and works better.

1 Transforming the Oil Sands

In the Canadian Oil Sands, mechanical equipment was used to transport the soil from near the mine face to the processing plants. The large trucks and the conveyor belts system used were expensive and difficult to install, operate and maintain. Asked to provide an alternate solution in the late 1980s, GIW pumps successfully replaced the conveyor belt system. Robust GIW slurry pumps have been hydrotransporting millions of tons of oil sands directly to the plant's separation vessels and the tailings back to the outlying ponds for the last 30 years.

2 Bringing Copper to the World

High in the mountains of Northern Chile lies the Atacama Desert. It is also home to one of the richest copper deposits in the world. The copper companies here mine and process over 350 million tons of material every year. GIW pumps work in the heart of these extraction plants and concentrators, transporting aggressive slurry without missing a beat. This enables our customers to keep the copper flowing smoothly from the Chilean mountains to customers around the world.

3 Partners in Phosphate

Phosphate deposits in central Florida were formed 10 to 15 million years ago. Today, over 75% of America's phosphate supply is produced in Florida. The phosphate mixture found underground is removed to a slurry pit where high-pressure water guns turn the mixture into slurry to be pumped to the plant. GIW developed the WBC pit pump to improve suction lift and reduce spikes in hydrotransport across a ten-mile matrix pumping system. The result is an extremely broad range of high efficiencies, illustrating how a partnership and progress can grow hand in hand.

4 Dredge on a Grand Scale

A Chinese Harbor Bureau was tasked to cut a passage for a new bridge. They needed pumps that could endure the area's extremely harsh conditions. The cutter suction dredges handled excessive amounts of rock and hardened soil and had to pump the slurry to the shore six kilometers away. GIW's Double Wall Dredge pumps were chosen for their excellent wear life, lower fuel costs and robust mechanical construction. A successful project of this size and scope is a testament to the expertise and value that GIW provides, crossing international barriers to ensure a customer's success.

■ Manufacturing Centers ● Service Centers

GIW delivers technology and solutions to your industry every day.
We are here to serve you. Wherever you may be.

Industrial Commodities	Industry	Other Markets	Power	Hard Rock Mining
▪ Phosphates	▪ Chemical	▪ Sugar	▪ FGD	▪ Copper
▪ Oil Sands	▪ Process	▪ Industry	▪ Fuel Storage	▪ Iron Ore
▪ Dredge	▪ Metal	▪ Pulp & Paper	▪ IGCC	▪ Gold / Silver
▪ Coal	▪ Refineries	▪ Steel	▪ Bottom Ash	▪ Zinc & Nickel
▪ Aggregate	▪ Oil & Gas			

Breakthroughs in Slurry Transport

Countless hours invested in Research & Development have led to the generation of products and materials including everything from white and ductile irons to natural rubber.

With the world's largest, most sophisticated slurry test facility in the world, we are able to outshine the competition by identifying problems in the design phase, before construction begins. Application testing predicts real world performance while pipeline testing provides information needed for the design of solids transport systems.

Wear life is the most important feature in the design of slurry pumps. GIW leads the world in wear life technology, with over 40 technical papers and over 30 years of research. Our testing procedures, experience and expertise provide you with the information to properly implement an effective and energy efficient pump/pipeline system.

Contact jennifer.belgin@ksb.com for more information.

Skilled Service and Repair

Service Centers

Choosing GIW means getting around-the-clock service for any and all of your equipment needs.

GIW Service Centers provide the opportunity to extend the life and increase the efficiency of your slurry pumping equipment. Service Centers offer one-stop, total customer support for GIW products. Pump and bearing assemblies are restored to OEM specifications using the latest designed OEM parts.

Service Centers will disassemble and inspect your equipment and provide a fast, accurate quote for restoring it to like-new condition, including return freight. Benefits of using Service Centers include reduced maintenance costs, reduced parts inventory and upgrades to new technologies. GIW is dedicated to increasing your production efficiencies and lowering your total costs.

Understanding the Industry,
Understanding our Customers.

Downtime is one thing we don't do at GIW. Downtime costs money. It means lost profits. That's why we work hard to design systems that will match your operation maintenance cycle.

GIW's expert staff is available to diagnose and solve field problems. All employees are trained in quality control techniques and the manufacturing facilities operate under a quality system certified to ISO-9001 standards. We offer a multitude of technical training seminars and service agreements, as well as operation and maintenance expertise. We collaborate with you to design solutions to improve your business. We're here to meet your specific needs, wherever and whenever you need us.

Severe Duty Slurry Solutions

MDX

Q [m3/h]	max. 14,000
H [m]	max. 90
p [bar]	max. 16
T [°C]	max. + 120

The latest technology from GIW® Minerals provides superior wear life and increased uptime handling your most aggressive slurry applications. Ideal for grinding circuits, SAG and Ball Mill discharge and cyclone feed.

LSA-S

Q [m3/h]	max. 14,000
H [m]	max. 90
p [bar]	max. 16
T [°C]	max. + 120

Premium design, hard iron pumps for long wear life while handling severe slurries. The basic, single wall construction and heavy suction, hard metal wet end combined with the cartridge bearing assembly provides maximum reliability and easy maintenance.

TBC

Q [m3/h]	max. 18,200
H [m]	max. 90
p [bar]	max. 37
T [°C]	max. + 120

A high-pressure design, these pumps are constructed as horizontal, end suction centrifugal pumps to give maximum resistance to wear while simplifying maintenance. The conventional single-wall design transfers stress loads to non-wearing side plates in high-pressure applications.

WBC

Q [m3/h]	max. 16,000
H [m]	max. 80
p [bar]	max. 32
T [°C]	max. + 120

Patented design incorporates state-of-the-art hydraulic and wear technologies for heavy duty, high pressure applications. The pump shell is designed to reduce bending movements and associated stresses that can cause a structural failure during a pressure surge.

LHD

Q [m3/h]	max. 21,600
H [m]	max. 65
p [bar]	max. 17
T [°C]	max. + 120

High flow/low head design with balanced NPSHR and sphere passage for high volume transportation over short distances. Ideal for sand & gravel, severe mining, dredge ladder and booster pumps.

MHD

Q [m3/h]	max. 32,000
H [m]	max. 80
p [bar]	max. 28
T [°C]	max. + 120

Designed to provide high flow/medium head with high efficiency for high volume transportation in long pipelines. Ideal for pipeline booster stations and severe mining duties. Also for hopper dredges or as main pump on cutter dredges.

Hydrocyclone and Apex Kits

Hydrocyclone

T [°C]	max. + 120

GIW® Minerals' line of hydrocyclones features a patented long wearing design that can reduce rebuild time by up to 75%. Diameters available up to 840 mm.

Heavy Duty Slurry Solutions

LCC-R

Q [m3/h]	max. 2,455
H [m]	max. 42
p [bar]	max. 16
T [°C]	max. + 65

Interchangeable rubber and metal design allows best material choice for any application. Easy wet end change can adapt existing pumps to new applications. Pumps are suitable for moderate discharge heads, fine particles and highly corrosive slurries.

LCC-M

Q [m3/h]	max. 3,405
H [m]	max. 90
p [bar]	max. 16
T [°C]	max. + 120

The hydraulic wet end consists of three components: a shell or casing, an impeller and a suction plate/liner to permit easy removal for maintenance and inspections. Reliable pumps for high discharge head, mildly corrosive slurries and a wide range of particle sizes.

Other Pump Products

HVF (High Volume Froth) Pump

Q [m3/h]	max. 8,175
H [m]	max. 50
p [bar]	max. 10
T [°C]	max. + 120

GIW® Minerals' HVF pump provides continuous operation without shutdown or operator intervention. The new hydraulic design removes air from the impeller eye while the pump is running, and the pump can be retrofit into any existing application. It is environmentally friendly and cost effective.

ZW

Q [m3/h]	max. 400
H [m]	max. 30
p [bar]	max. 10
T [°C]	max. + 120

Vertical cantilever, rugged hard metal sump pumps with top and bottom suction and no submerged bearings. Replaceable wet end parts in metal alloys with a durable mechanical end.

LCV

Q [m3/h]	max. 2,045
H [m]	max. 38
p [bar]	max. 10
T [°C]	max. + 120

Vertical cantilever, rugged hard metal sump pump with bottom suction and no submerged bearings. Includes replaceable wet end parts in metal alloys with a durable mechanical end. Ideal for industrial process pumping, tailings disposal in mining and pit use.

FGD

Q [m3/h]	max. 22,700
H [m]	max. 45
p [bar]	max. 17
T [°C]	max. + 120

High flow/low head design metal pumps with a single-wall shell design. High efficiency impeller. Suction side liner is equipped with integral mounting plates. Ideal for absorber recirculation and ancillary process pumps.

Mega CPK

Q [m3/h]	max. 1,160
H [m]	max. 162
p [bar]	max. 25
T [°C]	max. + 400

Horizontal, radially split volute casing pump in back pull-out design to EN 22 858 / ISO 2858 / ISO 5199, single-stage, single-entry, with radial impeller. Also available as variant with “wet” shaft. ATEX-compliant version available.

Serving You at these GIW Service Locations

Support Services:

Technical Services

Tel. +1 706-434-0683
Fax +1 706-210-5967
GIW-WarrantyClaims@ksb.com

Parts Sales and Customer Service

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Fax +1 706-210-5985
GIW-Parts@ksb.com

After Hours Breakdown Rush - 24/7

Cell +1 706-513-0585
(For emergencies only)

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