



**HYDROMINE™**  
**PROJECTS INTERNATIONAL**

**Innovators in Valve Technology**



# About Hydromine™ Projects International

Hydromine™ Projects International was established in 2016 to form part of the Hydromine™ group of companies, to deal with the markets outside of South Africa, as a supplier of exclusive hi-tech equipment for water reticulation systems and fluid control applications in the mining- and other industries.

The first company in the group was Hydromine™ Projects cc, a South African based business that was established in 1994, which build the business up to a point. Hydromine™ Projects cc was a licensed manufacturer of the Hydrocore valve range (formally NGD Valves and Romtech Fluid Control) up until 2018. To become a true global, independent supplier, the group had to be restructured and some changes came about in 2018.

With over 20 years of experience, expertise and vast knowledge base in valve innovation and technology, as well ongoing research and development over the years, the group went into development of its own range of valve products, which was one of the major changes within the group. These changes have resulted in a much superior range of valve product offerings that is world class. As was part of the group's ultimate vision and mission, which is to be a true independent and global brand, the agreement to manufacture the Hydrocore products range had to come to an end.

Hydromine™ Projects International is now the global manufacturing and supplying company of the LFC™ Range of safety, isolation and control valves. HMP™ Range of Hydraulic, tapered pipe couplings, high pressure piping and related equipment. We are always coming up with new, innovative designs, products and methods of manufacturing.

The company employs a competent high skill level staff complement who design products, markets their equipment and manages the operation. Hydromine Products (Pty) Ltd which is based in Johannesburg, South Africa, is the licenced manufacturer of the LFC™ Range of products.

All the Computational fluid dynamics (CFD) modeling, Finite Element Assessment (FEA) and research and development work are being done by Hydromine Products (Pty) Ltd and various professional institutions, worldwide, who we have entered into partnerships with.

The designs and intellectual property of all its products are owned by Hydromine™ Projects International. Hydromine™ Products is doing most of our piping and steel work fabrication.

The company has grown exponentially, with clients spreading into Africa, Australia, India and the USA. With its advanced and ever increasing technical expertise, skills and resources, Hydromine™ Projects International remains confident and bold to meet any global requirement.

**Hydromine™ Projects International is an approved vendor to major mining entities, project houses and consulting companies, such as:**

- AngloGold Ashanti
- BHP Billiton
- Barrick Gold
- DRA International
- ENRC
- Hatch
- Ivanhoe Mine
- Konkola Copper Mines Plc
- Mopani Copper Mines Plc
- Murray & Roberts
- Randgold
- Read, Swatman & Voigt (Pty) Ltd (RSV)
- Rio Tinto
- Sibanye Stillwater
- Worley
- Vedanta

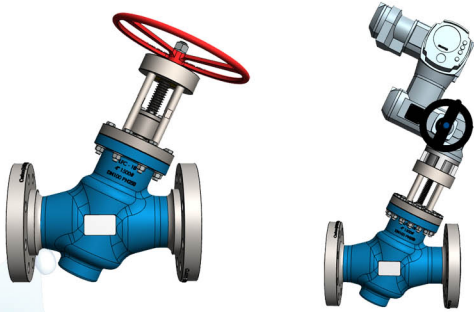
Hydromine™ Projects International Head Office is located in the Republic of Mauritius, which is part of the SADC region and has the best banking systems in the region.

**Hydromine™ Projects International manufactures, markets and maintain a variety of equipment, of which the most important products and services are the following:**

- LFC™ Range of high pressure isolating, safety & control valves.
- LFC™ Range low pressure safety & control valves.
- LFC™ Range of energy dissipaters & expansion joints.
- HMP™ Range of axial surge reduction check valves.
- HMP™ Range of strainers.
- HMP™ Hydraulic coupling range for plain-ended shaft column piping.
- HMP™ Range of air-release, ball, butterfly, diaphragm, gate, globe, non-return & pinch valves.
- HMP™\_TE ranges of tapered pipe couplings.
- Valve reconditioning of most brands.
- Piping - Supply and fabrication of piping material & systems.

# Our Products

## LFC™\_1B High Pressure Range Isolating, Safety And Control Valves



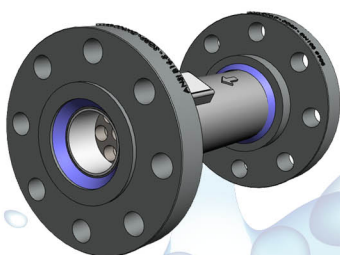
The LFC™ Range high pressure valves were designed to be energy efficient and a very good flow co-efficient (Cv), comparing to other competing globe valves, with a simple and a robust construction. They are used for liquid and gas with low content of suspended solids and ideal to be used in the Hydropower and deep mines. The range comprises of the following applications: Manual isolation valves, electrically actuated isolation valves, water hydraulic actuated valves, oil hydraulic actuated valves, pump discharge control valves, level control valves, pneumatic actuated valves with smart positioner, pressure control valves, pressure regulating (reducing) valves, flow control valves, surge relief (safety or pressure relief) valves, surge anticipation valves, pressure sustaining valves, safety isolation valves and excess flow shutdown valves.

## HMP™\_TE Range Of Tapered Pipe Couplings



The couplings are supplied with hubs prepared for standard butt welding to all pipes. The hubs create the pipes' engagement when brought together by the clamps. The taper angle, combined with smoothed taper surfaces, enable a powerful engagement force with minimum required bolting torque. The HMP™\_TE tapered coupling idea comes from the T&E (Trucking and Engineering / Robor) T&E coupling, that was re-engineered and improved upon. The coupling is fully interchangeable with the T&E coupling

## LFC\_7™ Range Of Energy Dissipaters



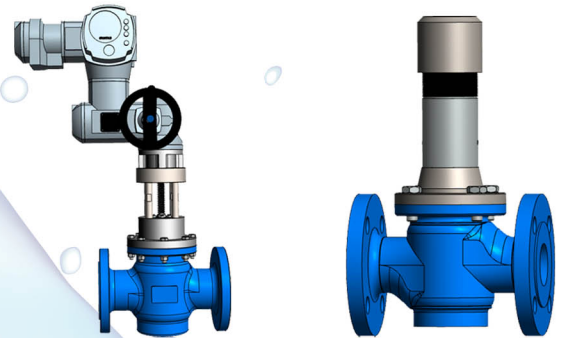
The LFC™ energy dissipaters are tailor made devices, used in open ended applications, designed to reduce the upstream pressure to a set pressure at a predetermined flow rate.

## HMP™ Range Of Hydraulic Pipe Couplings



The hydraulic couplings are designed to join plain ended pipes in a vertical shaft. This coupling acts as an expansion joint, installation is much quicker, as there is no welding and much less and smaller bolts to tighten than with flanges. The HMP™ Hydraulic coupling idea comes from the T&E (Trucking and Engineering / Robor) VJ coupling, that was re-engineered and improved upon. The coupling is fully interchangeable with the VJ coupling.

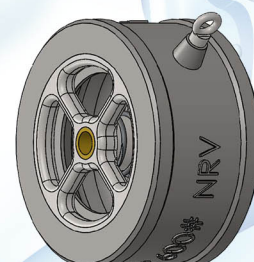
## LFC™\_3B Low Pressure Range Isolating, Safety And Control Valves



The LFC™ low pressure range isolating, safety and control valves were designed with a simple and robust construction that can compete with other low pressure control valves in the market place.

The range comprises of the following applications: Electrically actuated isolation valves, water hydraulic actuated valves, oil hydraulic actuated valves, pump discharge control valves, level control valves, pneumatic actuated valves with smart positioner, pressure control valves, pressure regulating (reducing) valves, flow control valves, surge relief (safety or pressure relief) valves, surge anticipation valves, pressure sustaining valves, safety isolation valves and excess flow shutdown valves.

## HMP™\_6A Axial Range Surge Reduction Check Valves



A full range of surge reduction (non slam or nozzle) check valves reduces the effect of water hammer in a pumping system.

# Our Products

## HMP™ Range Of Valves



A full range of valves are available, including air-release, ball, butterfly, diaphragm, globe, knife gate, needle, check, pinch, resilient seal gate and wedge gate valves.

## HMP™ Pressure Gauges



A range of pressure gauges are available for all ratings and made up to specifications.

## HMP™ Range Of Strainers



A full range of strainers are available to be utilized as filters in various pipelines and systems.

## Pipe Fittings, Flanges And Fabrication



A wide variety of pipes, flanges, reducers, bends, tees and other fittings. We also offer a very versatile and diverse fabrication division to meet customer-specific requirements.

## HMP™ Expansion Joints And Bellows



Hydromine™ offers a full range of expansion joints and bellows that can be used in many applications to absorb movement and vibration.

## Spiral Wound And Ring Gaskets



The HMP™ range of spiral wound- and ring gaskets offer superior sealing properties for all types of pipe systems.

# Our Services

## Piping Design & Fabrication

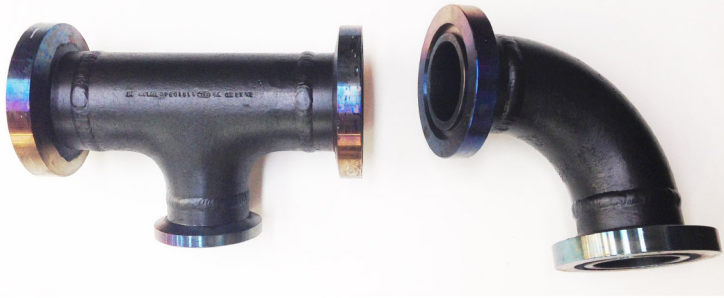
The supply and fabrication of various piping for any special piping requirements. Such as Shaft Columns, Pump Stations, Underground Haulage, Compressor Plant, Ice Plant and Fridge Plant Piping.

### Piping Design:

Hydromine™ Projects International is able to offer piping design. More specifically, we offer:

- The hydraulic design of water pipe reticulation systems, including water hammer and surge analysis, utilizing the Flowmaster transient analysis software.
- The design of high lift pump dewatering columns.
- Capability of conducting pipe stress analysis to ASME B31.3, incorporating allowable pipe stress, pipe support and anchor loading, utilizing the Caesar II pipe stress analysis software.
- The design of tailings pipelines, tailings, paste and backfill piping systems.
- Detailed drawings utilizing Solidworks software.
- CFD (Computational fluid dynamics) and FEA (Finite Element Analysis) modeling utilizing Solidworks software.

### Hydropower Fittings



### Underground Piping



### Drinking Water Cooling Jacket



### Ice Plant Piping



### Fridge Plant Piping



### Hydropower & Backfill Piping



# About Our Team & Services

Hydromine™ Projects International employs a fully competent staff to market and maintain a variety of equipment. Head Office is located in the Republic of Mauritius, which is part of the SADC region and has the best banking systems in the region. The company is managed by JurisTax.

Hydromine™ Projects International uses various reputable manufacturers worldwide, including Hydromine™ Products (South Africa) to supply and manufacture some of its equipment.



## Consulting & Turnkey Projects:

Hydromine™ Projects International offers a variety of services such as design, manufacturing, installation & commissioning of:

- Mine water reticulation systems
- Pressure reducing systems
- Flow control systems
- Pump stations
- Air cooling plants
- Energy recovery plants
- Hydro-power systems

# Projects Completed Milestones

## Rio Tinto - Arizona, USA

### Resolution Mine, No 9 shaft - Shaft piping couplings

During 2019 Hydromine™ Projects International, manufactured and supplied the couplings for 3 x +/- 2,500m / 8,203 ft long columns at Rio Tinto, no 9 shaft in Arizona USA. The installation consists of 1 x DN250 / 10" pump column and 2 x DN200 / 8" glycol columns that will be used for cooling the mine.

The couplings supplied are the HMP™ Hydraulic coupling that is used on plain ended pipes. The couplings not only joins the pipes, each coupling also acts as an expression joint. Allowing for contraction and expansion when temperatures changes. The use of the HMP™ hydraulic coupling reduces installation time of the pipes and cuts all welding cost of flanges, sleeves or tapered couplings. The HMP™ Hydraulic coupling is 25 MPa / 2326 psi rated and the best solution for vertical shaft piping.



## Ivanhoe Kipushi Project - DRC

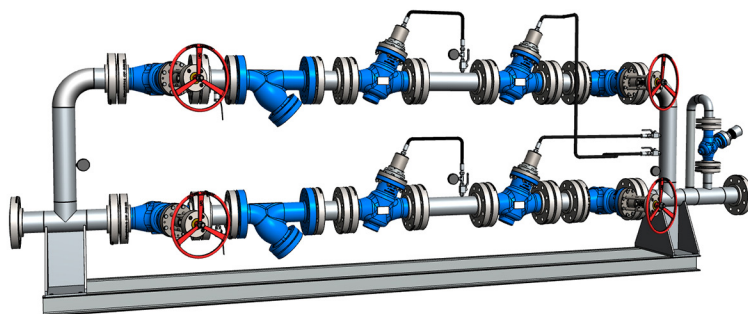
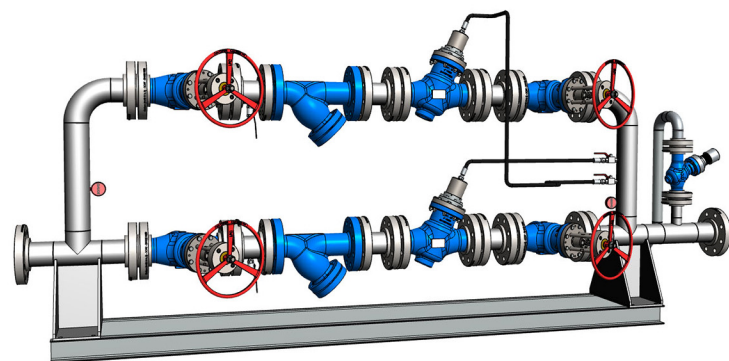
Supply and fabrication of a high pressure pump column for Ivanhoe Kipushi Project in the DRC.



## Vedanta - Hindustan Zink, India

### Rampura Agucha Mine - Pressure Reducing Stations

Hydromine™ Projects International manufactured and supplied all the potable water and service water pressure regulation stations for the underground mine.



### Shaft coupling installation

Hydromine™ Projects International manufactured and supplied 1 x DN300 and 1 x DN250 dewatering columns for the newly sunk shaft of approximately 1000m / 3,281 ft deep. The columns were successfully commissioned & the client is very happy with the product.



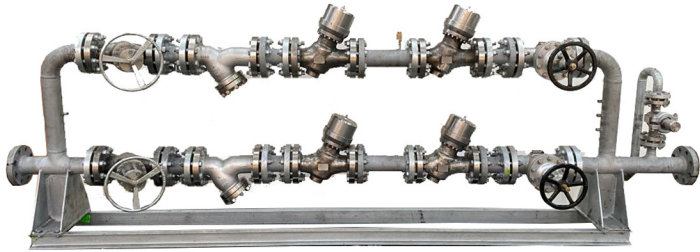
# Projects

## Completed Milestones

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### Hindustan Zinc, Rajpore-Dariba Mine - India

Hydromine™ Products manufactured a 4" 600lbs pressure regulating station for the mine's underground service water. The system is designed to reduce the upstream pressure from 55 bar / 798 psi to a downstream pressure of 6 bar / 87 psi at a maximum flow of 50 l/sec / 793 gal/min. Because of its dual streams design, the system can be used 24 hours a day / 7 days a week / 365 days a year without shutting the water down for maintenance. All the valves in this system are fully stainless steel and the piping system is hot dipped galvanized, with a thickness of 120 microns, to provide corrosion protection against the highly corrosive condition of the mine.



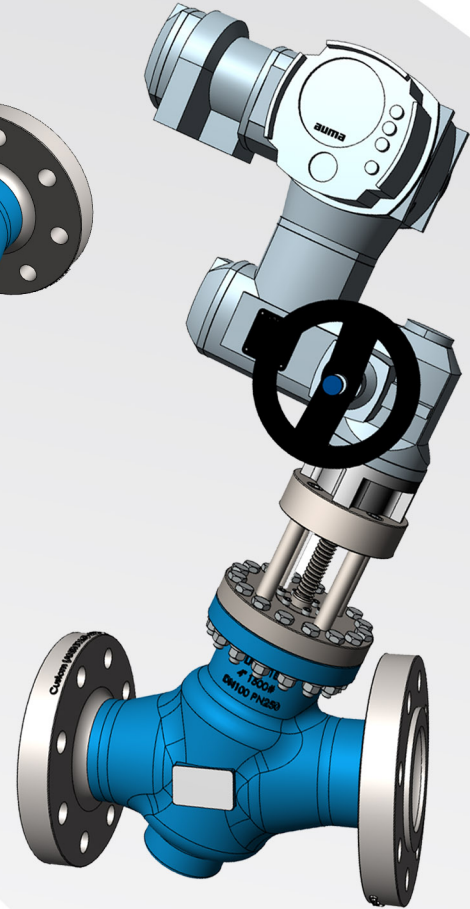
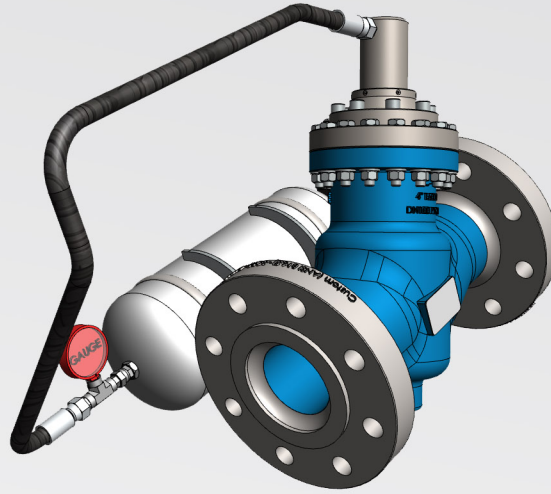
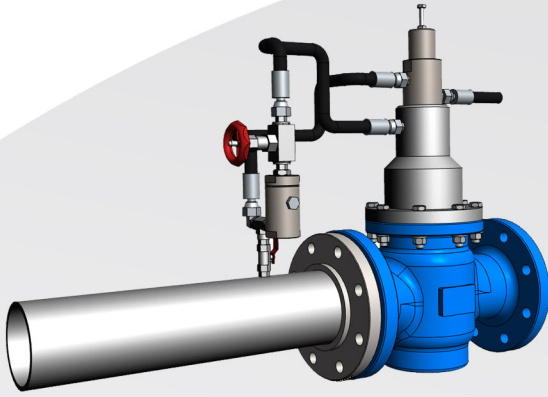
### AngloGold Ashanti, Obuasi Gold mine - Ghana

Hydromine™ Products manufactured some high-pressure isolation valves for the mine's dewatering system.





## Innovators in Valve Technology



Distributor & agent for Hydromine™ Projects International throughout Australia, New Zealand & the rest of Asia Pacific from their base in Perth, Western Australia.

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