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For additional locations, information and  
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VICTAULIC®

# INNOVATIVE PIPE JOINING SOLUTIONS

FOR THE MINING INDUSTRY



[victaulic.com](http://victaulic.com)



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# THE WORLD LEADER IN MINING PIPING SOLUTIONS

VICTAULIC® IS THE SINGLE SUPPLIER WITH UNIQUE SOLUTIONS AND A COMPREHENSIVE PRODUCT LINE FOR MINING'S MOST DEMANDING SERVICES. FOR OVER 95 YEARS VICTAULIC HAS DEVELOPED FASTER, SAFER AND MORE EFFICIENT PIPE JOINING TECHNOLOGIES. VICTAULIC SYSTEMS BENEFIT OWNERS, ENGINEERS, INSTALLERS AND MAINTENANCE PERSONNEL.

## Mine owners

- Total installed cost reduced by up to 50%
- Victaulic products are safer and faster to install reducing opportunity for injuries
- Keeps plants running more efficiently by drastically reducing the time required for scheduled and unscheduled maintenance

## Specifying engineers and system designers

- Design versatility not found in other joining methods
- Unparalleled expansion, contraction, deflection capabilities
- Visual verification of joint integrity

## Piping installers

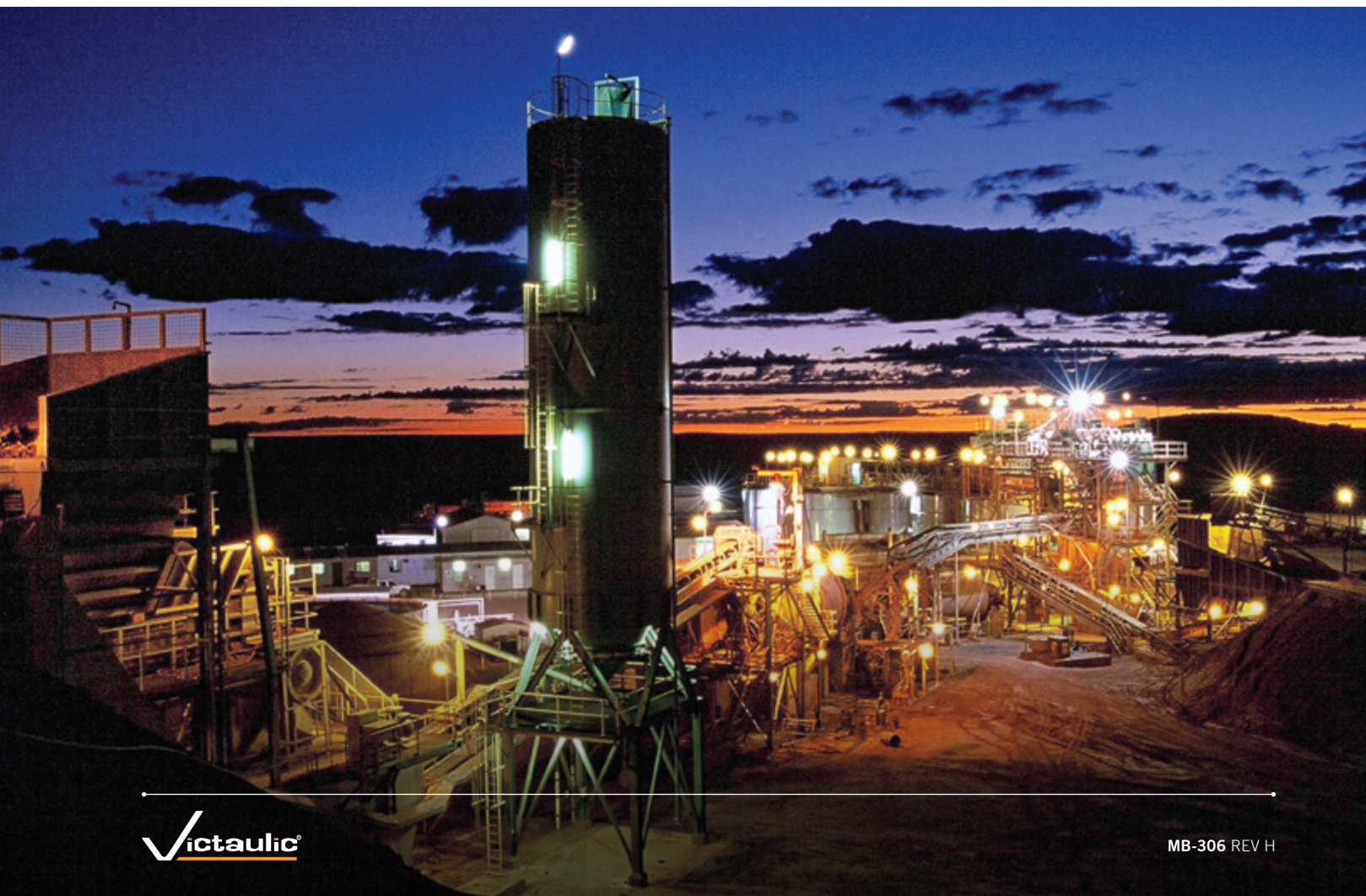
- Faster installation without the need for special tools
- Cold formed joint eliminates fire hazards and fumes associated with welded systems

## Mining maintenance personnel

- Downtime reduced by up to 50%
- Reusable parts expedite maintenance

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# THE VICTAULIC® DIFFERENCE

## GROOVED PIPE JOINING TECHNOLOGY

### How does it work?

The groove is made by cold forming or machining a groove into the end of a pipe. A gasket encompassed by the coupling housing is wrapped around the two grooved pipe ends, and the key sections of the coupling housing engage the grooves. The bolts and nuts are tightened with a socket wrench or impact wrench.

### Types of grooved couplings

- **Flexible coupling** – allows for controlled linear and angular movement, which accommodates pipeline deflection as well as thermal expansion and contraction.
- **Rigid coupling** – does not allow for movement, similar to a flanged or welded joint.

HOUSING

GASKET

GROOVE

BOLT/NUT

At the core of all the benefits that Victaulic® solutions bring to a project – such as productivity, safety, design flexibility and quality – are the unique features of our products.

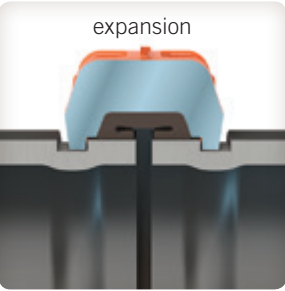
## VICTAULIC® GROOVED END PIPING SYSTEMS PROVIDE:



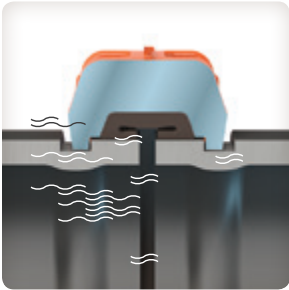
**Easy system maintenance and expansion** – through simple coupling disassembly that allows for easy access.



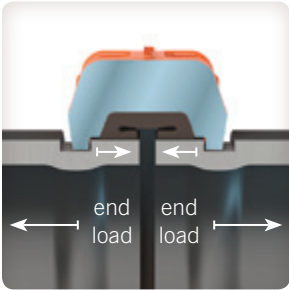
**Alignment ease** – through a design that allows for full rotation of the pipe and system components before tightening.



**Flexibility** – with the inherent axial movement and deflection properties of flexible couplings in a groove system. May be used to accommodate pipeline thermal expansion and contraction, misalignment and settlement, and seismic stress absorption.



**Noise and vibration attenuation** – by isolating the transference of vibration at each joint.



**Self restrained pipe joints** – Couplings engage the pipe grooves to hold the pipes against full pressure thrust loads without the need of supplemental restraints.



**Rigidity** – with an angled pad design that provides positive clamping of the pipe to resist torsional and flexural loads.

## Victaulic® Grooved Systems

Known by mining owners, engineers and installers as the most efficient and effective method for joining pipe, Victaulic grooved systems are recognized for being easy-to-install and reliable.

With its many benefits to piping designers Victaulic grooved systems add a level of versatility other joining systems cannot match.

Victaulic systems also continue to evolve and improve. For example the Installation-Ready™ couplings install up to twice as fast as existing grooved couplings while maintaining performance and design capabilities.





# BENEFITS OF THE VICTAULIC® JOINING SYSTEM

Victaulic is the originator and leader in pipe joining technologies specific to the needs of the mining market. Since 1919 Victaulic has developed a number of innovative pipe joining technologies designed for reliable, worry-free service under the most severe conditions imaginable. Victaulic products benefit mine owners, engineers, installers and maintenance personnel.

## LABOR SAVINGS

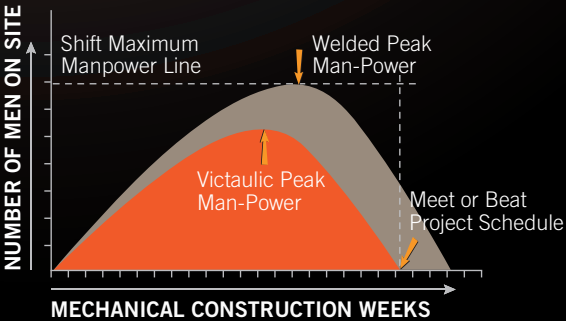
**EASIER MAINTENANCE AND SYSTEM EXPANSION**

- Reduced downtime lowers plant operating costs
- A union at every joint simplifies maintenance and system expansions
- Simple joining system that allows for flexible use of crews for maintenance and installation

## DESIGN VERSATILITY

**MORE OPTIONS AND EASILY ACCOMMODATES SYSTEM CHANGES**

System maintenance and installation completed in 50% less time than other joining methods.

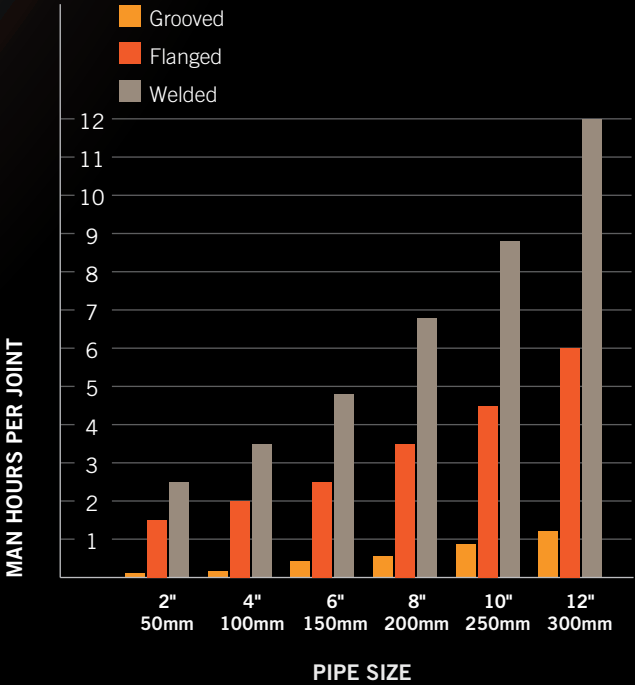


## LOWER TOTAL INSTALLED COST

Victaulic products can reduce installed costs by up to 50% when compared to other joining methods

## QUICKER, EASIER INSTALLATIONS

**3 TO 5 TIMES FASTER TO INSTALL**



## Design Flexibility

- Greatest versatility in design and performance
- Systems designed for slurry, tailings, high pressure applications, and air and water services
- Wide variety of gaskets to meet the most demanding service requirements
- Victaulic® products are designed to accommodate for system requirements such as; flexibility, rigidity, expansion and contraction or deflection



## Complete System

- Whether your system requires couplings, valves, fittings or other components, we have a solution that fits your piping needs
- Products are designed for specific use with various pipe material; HDPE, carbon steel, stainless steel, PVC, and more
- If your system requires a transition across varying pipe material or pipe end type, Victaulic technologies provide a solution for plain end, grooved end, flanged and other systems.



## Engineered Solutions

- Victaulic employs an expansive team of engineers that are continually developing new ideas, products and solutions for the mining market
- If your piping system requires something special, Victaulic engineers will work with you to develop a solution for whatever your system may need
- Customer feedback has led to many unique solutions that are now widely accepted in the mining marketplace





# BENEFITS TO MINING OPERATIONS

## LABOR SAVINGS

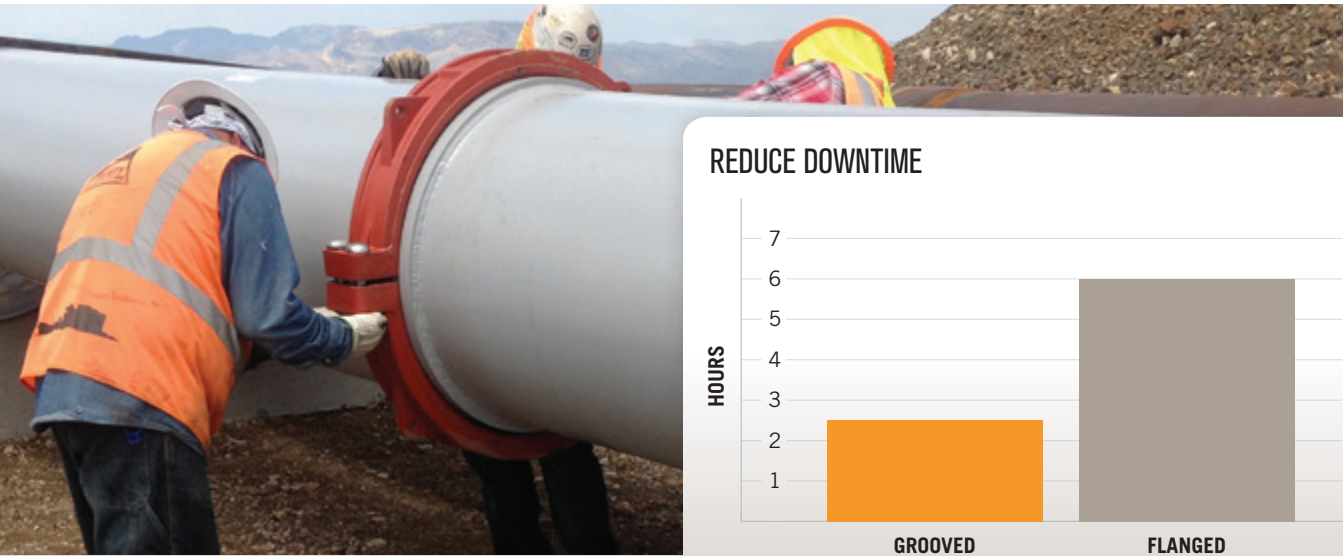
### Cut plant downtime in half

Profitable mining operators are able to minimize downtime thereby keeping production rates high. No matter how efficient the operation, routine maintenance and downtime are part of everyday life. The question really is — **“How do I minimize the time required to do the maintenance I need to keep the plant running?”**

For mine piping systems, there is only one choice that will keep downtime to an absolute minimum—the Victaulic system. Most Victaulic couplings can be dismantled by removing only two bolts and nuts as opposed to eight bolts and nuts for the same sizes in flanged systems.

When replacing a flange, the installer must scrape off the old gasket and replace it with a new gasket. With the Victaulic method, simply perform the maintenance work and replace the coupling using the existing gasket and coupling.

Piping systems converted from flanged to grooved have experienced significant time and cost savings. For example, a recent planned system shutdown that was scheduled for six hours turned into less than three hours with a Victaulic system—totaling more than 50% in savings.



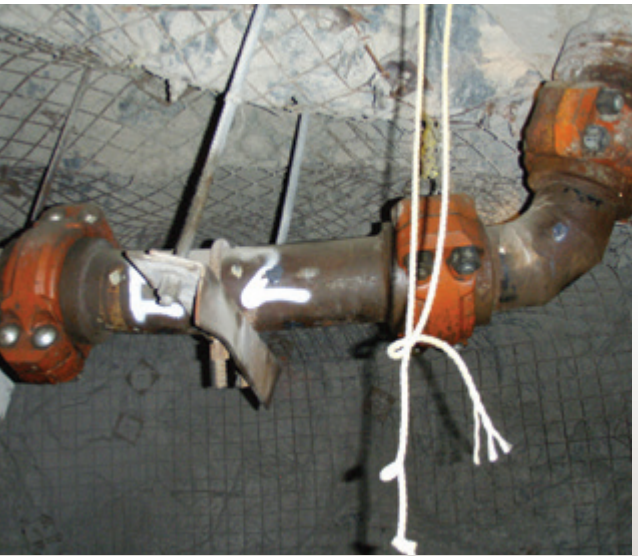
## PERFORMANCE ENGINEERING

### Solving the industry’s toughest piping challenges

Victaulic® not only manufactures couplings for joining pipe, it also provides solutions for the industry’s toughest challenges. Whether its high pressures, extreme temperatures or abrasive services, Victaulic systems create specialized solutions to address piping’s most difficult challenges.

### Extreme piping environments

To transport paste backfill, Garson Mine required a piping solution capable of handling pressures spikes up to 3200 psi | 22063 kPa | 220 bar through 8" | 200mm lines. To meet this challenge, Garson turned to Victaulic for a solution. The answer was the double-bolted Style 808 high pressure coupling which is rated to 4000 psi | 27579 kPa | 275 bar. This coupling was not only easier to install but was also more cost effective than alternative joining methods. Garson Mine has successfully been using this system for the past 15 years and has installed over 1,000 Style 808 high pressure couplings.





# BENEFITS TO MINING OPERATIONS

## IMPROVED SAFETY

**Victaulic® systems provide no-flame joining method**

Victaulic joining technologies do not require any hot works or flames, thus eliminating workers' exposure to potentially harmful fumes. In addition, our products are lighter, faster and easier to install than flanged components.

The exclusive Installation-Ready™ line of couplings allows installers to join systems without disassembling the coupling. Simply push the coupling on one pipe end, bring the other pipe end in, and tighten the bolts and nuts. It's that simple. No more potential to drop loose parts creating the opportunity for injuries and lost work time.

Installed using standard tools, the joint provides visual verification of proper assembly. This feature greatly reduces the chances of improper installation and accidental leakage.



## INSTALLATION-READY™ COUPLINGS

LUBE IT



PUSH IT



JOIN IT



DRIVE IT



“WHEN WE TRIED THE VICTAULIC® SOLUTION ON OUR COMPRESSED AIR SYSTEM WE EXPERIENCED A 40% REDUCTION IN AIR LOSSES SAVING US THOUSANDS OF DOLLARS A YEAR IN ENERGY COSTS.”

YVON DUMOUCHEL, MAINTENANCE PLANNER  
XSTRATA COPPER, KIDD CREEK MINE, TIMMINS ONTARIO



## REDUCED OPERATING COST

**Reduce energy costs by as much as 40%**

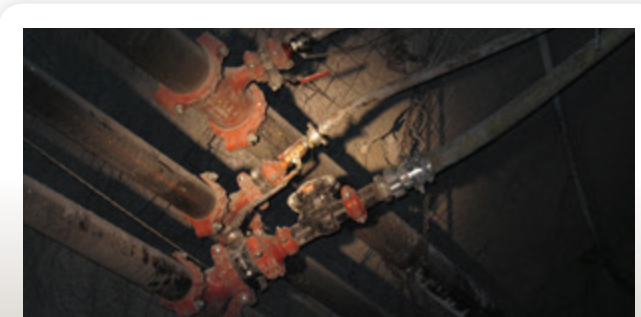
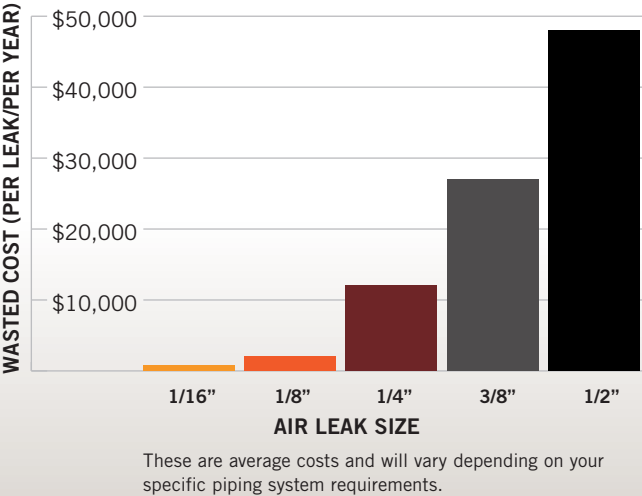
By using Victaulic systems you can reduce operating costs through ways such as: faster installation times, less downtime during scheduled maintenance, and also reduced energy costs.

Equipment connected to compressed air lines need a steady pressurized flow of air to operate properly. Oftentimes the smallest leak can lead to significant air loss adding to energy costs and creating the need for larger pumps. In fact, 15% to 30% of all energy costs in a mine are spent on air lines.

The Victaulic grooved piping system significantly impacts the energy costs of compressed air systems in mines. To connect to flanged equipment and other components Victaulic has a line of flange adapters that provides a simple transition from flanged to grooved systems.

Using a pre-lubricated nitrile gasket specifically designed to meet the requirements of compressed air systems, the Victaulic grooved system can reduce air loss in a typical system leading to energy savings totaling more than 40%. In a recent study in a typical mine during a six-month period, energy savings totaled more than \$200,000 USD.

## COMPRESSED AIR LOSS

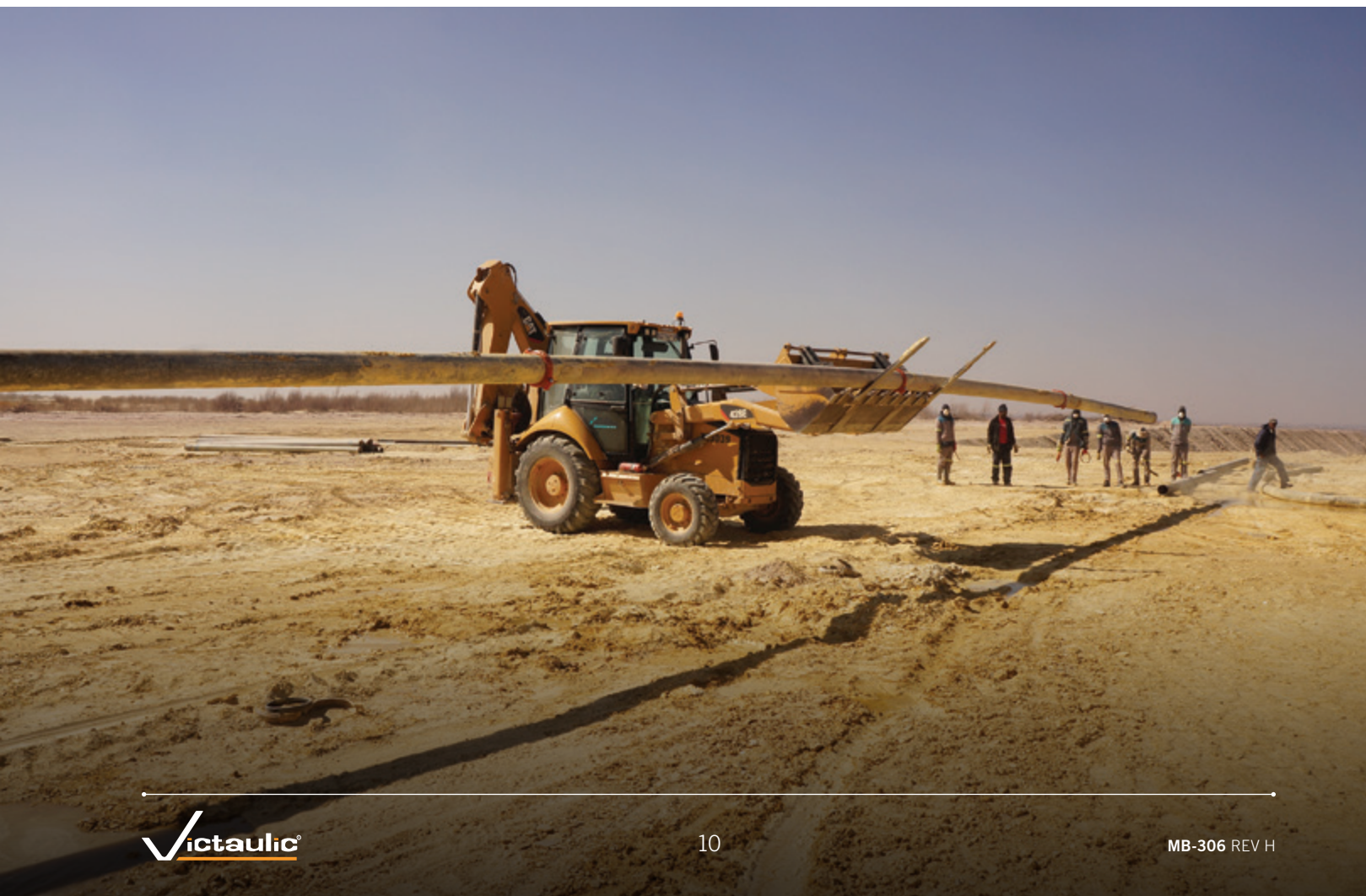




# VICTAULIC® PIPE JOINING SOLUTIONS

Victaulic products solve the world's toughest pipe joining challenges in the mining industry.

Whether it's a grooved end or plain end, carbon steel or HDPE, Victaulic has a solution that will fit your piping system needs.



## Original Groove System (OGS)

In use since the 1920's, the original groove system is widely accepted as the joining method of choice in mining piping systems. Based on a flexible coupling design that allows for system expansion, contraction and deflection, Victaulic® couplings are known the world over for their versatility. Rugged and durable original groove system flexible couplings have grown from a single product to a complete family of couplings, fittings, valves and accessories.

### FEATURES AND BENEFITS

- 50% faster to install than welded systems
- Environmentally friendly—eliminates harmful fumes and reduces energy consumption
- Deflection capabilities allow for installation over uneven surfaces
- Cut groove systems provide a smooth inner flow path that allows for even wear on abrasive systems such as slurries, tailings and hydraulic backfill
- Two-piece coupling design from ¾–24" | 20–600mm

Visit [www.victaulic.com](http://www.victaulic.com) to view:

[Publication 06.02 for Style 77 flexible coupling](#)  
[Publication 06.04 for Style 07 rigid coupling](#)  
[Publication 06.08 for Style 750 reducing coupling](#)  
[Publication 06.09 for Style 78 Snap-Joint™](#)  
[Publication 06.10 for Style 72 outlet](#)  
[Publication 06.12 for HP-70 rigid coupling](#)  
[Publication 07.01 for grooved fittings](#)



## Grooved End Valves

Victaulic grooved end valves weigh ⅓ less than equivalent flange valves for easier handling and installation. Featuring ISO standard mounting flanges Victaulic grooved valves can accept most types of actuators.

### FEATURES AND BENEFITS

- Grooved end valves available in butterfly, ball, check and plug configurations for carbon steel or stainless steel systems
- Valves available lined for severe services
- Original groove system valves for 1½–12" | 40–300mm sizes; AGS groove valves available for systems from 14–24" | 350–600mm

Visit [www.victaulic.com](http://www.victaulic.com) to view:

[Publication 08.20 for Vic™-300® MasterSeal™ butterfly valve](#)  
[Publication 08.05 for Series 700 butterfly valve](#)  
[Publication 08.11 for Series 712 swing check valve](#)  
[Publication 08.14 for Series 721 ball valve](#)  
[Publication 08.08 for Series 716/716H check valve](#)  
[Publication 20.06 for Vic-300 AGS butterfly valve](#)  
[Publication 20.08 for Series W715 AGS check valve](#)







### Diverter Valve

The Series 725 diverter valve is the first grooved end valve specifically designed for use on paste backfill lines. Providing 180° service the Series 725 eliminates the need to re-position fill lines reducing handling and leading to more efficient operations.

Constructed from durable ductile iron Series 725 is available in 6" | 150 mm size for systems rated up to 1000psi | 6895 kPa | 69 bar.

Designed with a standard ISO 5211 mounting flange the Series 725 diverter valve can be provided with electric actuation or with a gear operator. The gear operator provided with the Series 725 has an optional input flange.

FEATURES AND BENEFITS

- Provides 180° service on backfill paste lines for increased efficiency and reduced downtime
- Available in 6" | 150 mm
- Pressures up to 1000psi | 6895 kPa | 69 bar

Visit [www.victaulic.com](http://www.victaulic.com) to view:  
[Publication 08.40 for Series 725 diverter valve](#)



### Expansion Barrel

The Style W256 expansion barrel is specifically designed to eliminate the need for multiple, space consuming and expensive expansion loops. The style W256 can accommodate up to 42" | 1067 mm of in-line axial movement making it the only expansion joint of its kind on the market today.

FEATURES AND BENEFITS

- Reliable long life service
- Uses standard Style W07 AGS *Vic-Ring* couplings to join to the rest of the system
- Up to 42" | 1067 mm in-line (axial) of movement from a single unit
- Eliminates the need for large expansion loops
- Exterior of the inner barrel is coated to reduce the opportunity for seizing
- Designed specifically for water and abrasive services
- Integrated wipers maintain contact to shed away abrasive materials reducing seal wear
- Available for 24–42" | 600–1050 mm piping systems for pressures up to 300 psi | 2068 kPa | 21 bar

Visit [www.victaulic.com](http://www.victaulic.com) to view:  
[Publication 09.16 for Style W256 expansion barrel](#)



### Installation-Ready™ Couplings

Victaulic® *Installation-Ready* couplings use the same groove profile and have the same performance characteristics of original groove system couplings. The major difference is installation time. Installing up to 90% faster than welded systems and in 50% less time than standard groove couplings, *Installation-Ready* couplings eliminate the need for loose parts since the coupling is pre-assembled and ready to install.

FEATURES AND BENEFITS

- No loose parts to lose or drop; eliminates spare parts on job site
- The fastest way to mechanically join 2–8" | 50–200 mm systems
- Same design and pressure capabilities as original flexible and rigid couplings
- Bolt pad-to-bolt pad installation for visual verification of joint integrity

Visit [www.victaulic.com](http://www.victaulic.com) to view:  
[Publication 06.24 for Style 177N flexible coupling](#)  
[Publication 06.21 for Style 107N rigid coupling](#)



### Installation-Ready™ Shouldered System

Up to 10 times faster than other pipe joining methods, the *Installation-Ready* technology of our shouldered coupling line eliminates loose parts and the need to disassemble a coupling prior to installation. Carrying spare parts to the job site is eliminated when installing *Installation-Ready* shouldered couplings. Ideal for abrasive services since full pipe wall thickness is maintained.

FEATURES AND BENEFITS

- *Installation-Ready* shouldered couplings are flexible allowing for system expansion, contraction and deflection
- All loose parts are eliminated
- A line of shouldered fittings and valves are also available
- Shouldered fittings can be lined for abrasive and/or corrosive services
- Offered in 2–8" | 50–200 mm sizes *Installation-Ready* and traditional style for 10–12" | 250–300 mm systems

Visit [www.victaulic.com](http://www.victaulic.com) to view:  
[Publication 16.10 for the SC77 flexible shouldered coupling](#)  
[Publication 07.06 for shouldered fittings](#)  
[Publication 08.31 for SC761 shouldered butterfly valve](#)







## Advanced Groove System (AGS)

Advanced Groove System products are designed with a patented groove profile for large diameter, high pressure services. The two-piece coupling design for the full size range facilitates installation and maintenance when required. When compared to welded or flanged systems of the same size it is easy to see why AGS is the choice of designers and installers.

**FEATURES AND BENEFITS**

- Sizes range from 14–72" | 350–1825 mm for pressures up to 350 psi | 2413 kPa | 24 bar
- Full line of couplings, fittings, valves and strainers
- Flexible and rigid couplings available
- Ideal for water and non-abrasive services
- Couplings with ring available for abrasive services

Visit [www.victaulic.com](http://www.victaulic.com) to view:

[Publication 20.03 for Style W77 flexible coupling](#)  
[Publication 20.02 for Style W07 rigid coupling](#)  
[Publication 20.04 for Style W741 Vic-Flange adapter](#)  
[Publication 20.05 for AGS fittings](#)  
[Publication 20.06 for Vic™-300 AGS butterfly valve](#)  
[Publication 20.08 for Series W715 AGS Dual Disk Vic-Check valve](#)  
[Publication 20.11 for Series W730 AGS tee type strainer](#)  
[Publication 20.13 for Series W731-I AGS suction diffuser](#)  
[Publication 20.20 series W731-D AGS suction diffuser](#)  
[Publication 20.15 for Style W89 AGS rigid coupling](#)  
[Publication 20.19 for Series W732 AGS wye type strainer](#)



## AGS Vic-Ring Systems

For large diameter slurry and tailings lines Victaulic® offers the AGS *Vic-Ring* system. A ring with a patented AGS groove profile is mounted on the outside of the pipe. An AGS coupling completes the joint for the fastest and easiest way to join large diameter abrasive systems. The AGS *Vic-Ring* system maintains full pipe wall thickness while providing a smooth inner flow path to maximize pipe life.

**FEATURES AND BENEFITS**

- Installs 30% faster than flanged and 50% faster than welded systems
- Two-piece couplings from 14–48" | 350–1200 mm for pressures up to 350 psi | 2413 kPa | 24 bar
- Provides a union at every joint for maintenance or future expansions

Visit [www.victaulic.com](http://www.victaulic.com) to view:

[Publication 16.11 for Style W07 rigid coupling with Vic-Ring](#)  
[Publication 16.12 for Style W77 flexible coupling with Vic-Ring](#)  
[Publication 16.05 for OGS Style 44 Vic-Ring coupling](#)



## High Pressure Systems

Extremely high pressure applications such as backfill paste lines, chilled water lines and dewatering lines can be beyond the capabilities of standard coupling designs. Victaulic® has created three reliable solutions specifically designed for high pressure applications: Style 808 double groove system, Style 809 ring system coupling, and EndSeal™ (ES) systems.

**FEATURES AND BENEFITS**

### Style 808 Double Groove System

- Highest pressure mechanical joint on the market today
- Sizes range from 6–12" | 150–300 mm
- Double groove system installs in half the time of welded systems
- Designed specifically for high pressure systems up to 4000 psi | 27579 kPa | 275 bar such as backfill paste, chilled water and dewatering systems

Visit [www.victaulic.com](http://www.victaulic.com) to view:

[Publication 15.01 for Style 808 double groove coupling](#)



### Style 809 Ring System

- Designed specifically for high pressure systems up to 3000 psi | 20684 kPa | 207 bar that require full pipe wall thickness such as high pressure slurry lines and hydraulic systems
- Size range 6–10" | 150–250 mm
- Engages directly onto rings welded to the O.D. of the pipe without intrusion into the pipe I.D.

Visit [www.victaulic.com](http://www.victaulic.com) to view:

[Publication 15.02 for Style 809 coupling for ring systems](#)

### EndSeal™ (ES) System

- Single groove with *EndSeal* profile for systems up to 2500 psi | 17237 kPa | 172 bar
- Fittings with *EndSeal* grooves also available
- Available from 2–12" | 50–300 mm sizes
- *EndSeal* gasket specially formulated for excellent resistance to oil and extrusion
- *EndSeal* gaskets have an integral central leg which positions between the pipe ends for use with plastic-coated or cement-lined pipe

Visit [www.victaulic.com](http://www.victaulic.com) to view:

[Publication 06.13 for HP-70ES coupling](#)  
[Publication 07.03 for EndSeal fittings](#)







## Rubber-lined XL Couplings and Fittings

Victaulic® Extended Life (XL) 90° and 45° long radius elbows are specifically designed to allow for an additional ¼" | 6.4mm of rubber lining thickness. When compared to industry standard rubber lined fittings, Victaulic XL fittings will extend the life of abrasive systems by up to 4 times longer.

Only Victaulic Styles XL77 and XL79 couplings will connect with XL fittings avoiding any concern about improper installation. Style XL77 couplings are used for a fitting-to-pipe connection and Style XL79 is used for a fitting-to-fitting connection.

**FEATURES AND BENEFITS**

- Reduces the need for scheduled maintenance
- Sizes 3–12" | 80–600mm 1½D and 3D elbows
- Grooved systems do not compromise the lining during installation
- XL 77/79 and XL fittings are rated up to 1000psi | 6985kPa | 69 bar
- XL fittings can accommodate up to an extra ¼" | 6mm of rubber versus standard lining

Visit [www.victaulic.com](http://www.victaulic.com) to view:

[Publication 07.07 for XL flexible couplings and fittings](#)



## Long Radius 3D, 5D and 6D Bends

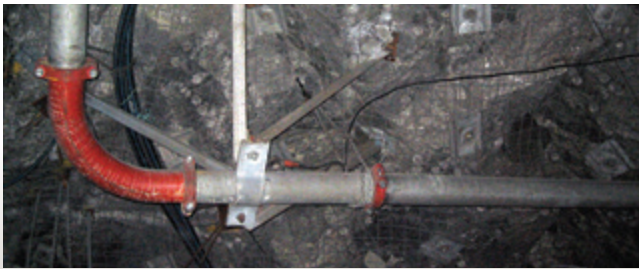
Long radius bends with grooved ends weigh substantially less than flanged bends and install in ⅓ the time of weld bends. A variety of linings and coatings can be applied to grooved 3D, 5D and 6D bends. Grooved bends with linings and coatings are not compromised during installation since no heat is generated during the joining process.

**FEATURES AND BENEFITS**

- Grooved end fittings can be lined for abrasive and/or corrosive services
- Pre-grooved bends eliminate on-site preparation and reduce scheduled maintenance time by up to 65%
- Available linings include rubber-lined, urethane-lined, ceramic-lined and many others
- Epoxy and other customer specified coatings can also be applied
- Integrity of the lining is not compromised during installation
- Pressure rating matches the coupling used to install the elbow

Visit [www.victaulic.com](http://www.victaulic.com) to view:

[Publication 07.02 for long radius 3D/5D/6D bends](#)



## Plain End Steel System

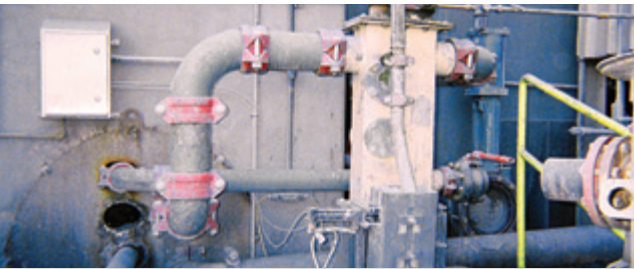
Where pipe preparation is impractical or where a quick repair may be required the Victaulic® plain end piping system is the choice of many installers. The plain end coupling has hardened, sharpened teeth that firmly grip the outside diameter (O.D.) of the pipe. A full line of plain end fittings completes the system.

**FEATURES AND BENEFITS**

- No special pipe end preparation necessary
- Teeth bite into outside diameter (O.D.) of pipe
- Sizes from 1–12" | 25–300mm for pressures up to 750psi | 5171 kPa | 52 bar
- No torque requirements for installation
- Full line of plain end fittings also available

Visit [www.victaulic.com](http://www.victaulic.com) to view:

[Publication 14.02 for Style 99 Roust-A-Bout coupling](#)  
[Publication 14.04 for plain end fittings](#)



## HDPE Plain End System

Butt fusing HDPE pipe is a labor intensive and expensive process. Victaulic HDPE plain end products eliminate the need for special equipment and crews. Using standard socket wrenches HDPE couplings can be installed in a matter of minutes. No special pipe end preparation is required and once the coupling is installed you have visual verification of proper installation.

**FEATURES AND BENEFITS**

- Provide a union at every joint for maintenance and/or system expansions
- Sizes from 2–20" | 50–500mm
- HDPE plain end couplings are stronger than the pipe they join
- Flange adapter allows an easy transition from equipment to the piping system
- Transition coupling available for joining HDPE to steel piping

Visit [www.victaulic.com](http://www.victaulic.com) to view:

[Publication 19.02 for Style 995N coupling](#)  
[Publication 19.03 for Style 997 transition coupling](#)  
[Publication 19.04 for Style 994 Vic-Flange adapter for HDPE](#)







### Aquamine™ Reusable PVC Piping System

The *Aquamine* system is a reusable PVC system for water supply, dewatering and leaching lines or where rapid deployment of pipe is needed. A full line of pipe, fittings, valves and transition couplings complete the system. Transition couplings are available for PVC to HDPE and PVC to steel systems. To minimize downtime a repair coupling is also available.

**FEATURES AND BENEFITS**

- Portable and reusable *Aquamine* products deploy in a matter of seconds
- Sizes from 2–12" | 50–300mm for pressures up to 350psi | 2413kPa | 24bar
- System includes a repair coupling and transition couplings for PVC to HDPE and PVC to steel transitions and a ball and butterfly valve for on-off services

Visit [www.victaulic.com](http://www.victaulic.com) to view:  
[Publication 50.01 for Aquamine products](#)



### Vic-Press™ for Schedule 10S Stainless Steel

This small diameter stainless steel system joins Schedule 10S pipe in just seconds using a hand-held pressing tool. *Vic-Press* systems are ideal for water, compressed air, instrument air, eye wash stations and a variety of other systems.

Unlike welded systems *Vic-Press* is environmentally friendly, completely eliminating the noxious fumes and hazardous conditions associated with welding.

**FEATURES AND BENEFITS**

- Uses standard Schedule 10S stainless steel pipe
- IPS size system for better flow and performance
- *Vic-Press* products install in a matter of seconds
- Sizes from ½–2" | 15–50mm for pressures up to 300psi | 2068kPa | 21bar
- Complete system includes couplings, valves, fittings and hand-held pressing tool

Visit [www.victaulic.com](http://www.victaulic.com) to view:  
[Publication 18.11 for Vic-Press 304](#)  
[Publication 18.12 for Vic-Press 316](#)



### Hole Cut Products

Victaulic® mechanical outlets are easily installed with just a wrench. Victaulic outlet products feature saddle designs that ensure proper seating on the pipe.

**FEATURES AND BENEFITS**

**Style 920 Mechanical-T outlet**

- Provide a direct connection at any location along the pipe
- Available with either grooved or female threaded outlets
- Sizes from 2–8" | 50–200mm for pressures up to 500psi | 3447kPa | 34bar

**Style 923 Vic-Let outlet**

- Fast, easy-to-install outlet does not require a strap
- Fire hazard eliminated since no welding is required
- Available for 4" | 100mm and larger systems for pressures up to 300psi | 2068kPa | 21bar

**Style 72 Outlet coupling**

- Coupling and outlet all in one component

Visit [www.victaulic.com](http://www.victaulic.com) to view:  
[Publication 11.02 for Style 920 Mechanical-T outlet](#)  
[Publication 11.05 for Style 923 Vic-Let outlet](#)  
[Publication 06.10 for Style 72 outlet](#)



### Vic-Flange Adapters

*Vic-Flange* adapters allow an easy transition from flanged pipe and equipment to grooved systems. Available in ANSI CL125 and CL150, Australian Standard Table "E" and PN10 and PN16 configurations, *Vic-Flange* adapters incorporate small teeth in the key shoulder to prevent pipe rotation.

**FEATURES AND BENEFITS**

- Pipe sizes from 2–24" | 50–600mm
- Pressures up to 720psi | 4964kPa | 50bar
- Two-piece hinged design eases installation

Visit [www.victaulic.com](http://www.victaulic.com) to view:  
[Publication 06.06 for Style 741/743 Vic-Flange adapter](#)  
[Publication 20.04 for Style W741 AGS Vic-Flange adapter](#)







## Fire Protection Systems

Victaulic® was the first grooved piping system manufacturer to receive approval for use on fire protection systems. Since the 1950's Victaulic has been developing and manufacturing products for the fire protection industry. From our revolutionary NXT devices to our full line of sprinkler products Victaulic is a single source for fire protection systems in mines.

**FEATURES AND BENEFITS**

**FireLock NXT™ Devices**

- Lower operating pressure requirements
- Ultra-fast trip time and water delivery
- Reduced trim footprint
- Lightweight design

**Victaulic FireLock™ Automatic Sprinklers**

- Full line of sprinklers for any application
- Available in upright, pendent and horizontal side wall configurations

Visit [www.victaulic.com](http://www.victaulic.com) to view:

[Publication 30.80 for dry systems](#)

[Publication 30.81 for deluge systems](#)

Visit the [Victaulic web site](http://www.victaulic.com) for information on individual sprinklers or request [Publication G-105](#)



## Victaulic Vortex™ Systems

The *Victaulic Vortex* Fire Suppression System is designed to protect critical machine control rooms from costly clean up or equipment replacement in the event of a fire. The system is unique in that unlike CO<sup>2</sup> foam and chemical systems, it can be safely discharged with people present in the room. Comprised of a homogenous balance of water droplets and nitrogen gas it does not require post discharge cleanup and is easily recharged with minimal facility downtime.

**FEATURES AND BENEFITS**

The only hybrid nitrogen-water fire suppression system with:

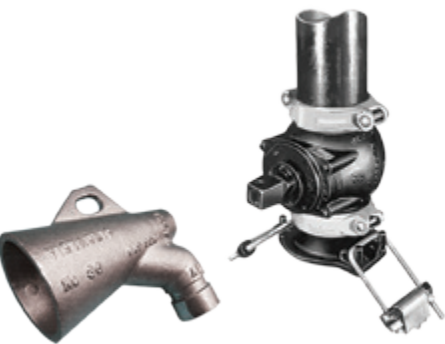
- Nearly zero wetting of protected areas; no need for costly clean up or equipment replacement
- Green design that is safe for the environment and personnel
- Quick system recharge; minimal facility downtime
- No need for tight room integrity
- Turn-key systems available based upon customer requirements

Visit [www.victaulic.com](http://www.victaulic.com) to view:

[Publication 70.01 for Victaulic Vortex 500](#)

[Publication 70.02 for Victaulic Vortex 1000](#)

[Publication 70.03 for Victaulic Vortex 1500](#)



## Mining Speciality Products

For over 95 years Victaulic® has been solving the toughest piping problems of the mining industry. Where needs are very specific Victaulic is the only company with the resources and experience to develop products to address application challenges.

- Style 926 *Mechanical-T* Spigot Assembly was developed to provide an easy-to-install outlet assembly for large diameter tailings lines
- No. 36 *Vic-Blast* nozzle uses an efficient mixture of air and water to suppress dust and is commonly used for blast dust suppression

Visit [www.victaulic.com](http://www.victaulic.com) to view:

[Publication 11.07 for the Style 926 Mechanical-T spigot assembly](#)

[Publication 07.05 for the No. 36 Vic-Blast nozzle](#)



## Pipe Preparation Tools

Victaulic has been in the tool business since 1945 offering various solutions to prepare your pipe ends for joining systems together.

**FEATURES AND BENEFITS**

**Roll Grooving Tools**

- Enhanced Tracking Rolls avoid pipe walk-off
- Available in manual, field and shop models
- Direct groove pipe sized ¾–72" | 20–1800mm

**Cut Grooving Tools**

- Best method for pipe preparation on abrasive systems such as tailings, slurries and hydraulic fill lines
- Cut grooves maintain smooth inner flow path while removing less metal than threaded joints
- Direct groove pipe sized ¾–24" | 20–600mm

**Hole Cutting Tools**

- Permits hole placement where needed along the pipe line
- Hot tap unit allows tapping into steel pipe systems under pressures up to 500 psi | 3447 kPa | 34 bar

Visit [www.victaulic.com](http://www.victaulic.com) to view:

[Publication 24.01](#)





## Metal Mine Piping Applications

## BENEFITS

- Able to install under adverse conditions (i.e. low light, dry, hot, cold, etc.)
- Victaulic® gaskets can reduce air loss in systems by up to 40%
- No fire, fume or hazard costs
- Flexible couplings accommodate misalignment and tunnel curvature
- Minimize time required for change-outs and scheduled maintenance

## APPLICATIONS

## Above Ground

Mill Water
Slurry (coarse/fine, thickened/carbon pulp)
Tailings
Conveyor Dust/Fire Suppression
Compressed Air
Vacuum Systems
Instrument Air
Solutions (barren, pregnant, SO <sub>2</sub> , soda ash)
Chemical/Heap Leach (mains, spraying)
Acids (cyanide, sulfuric)
Flotation (air, oils, collectors)
Slimes
Reclaim Water

## Underground

- Air Lines (compressed, equipment)
- Water Supply Lines (drilling, potable)
- Sumpage/Dewatering Lines
- Backfill/Paste Lines
- Pump Stations
- Pressure Reducing Stations
- Dust Suppression
- Fire Protection (conveyors)
- Mine Cooling

Couplings					
06.20	Style 177N Installation-Ready™ Flexible				
06.02	Style 77 Flexible				
06.21	Style 107N Installation-Ready Rigid				
06.04	Style 07 Rigid				
06.06	Style 741/743 Vic-Flange Adapter				
06.09	Style 78 Snap-Joint™				
06.12	Style HP-70 Rigid				
06.13	Style HP-70ES EndSeal™ Rigid				
14.02	Style 99 Plain End for Carbon Steel				
15.01	Style 808 Double Groove				
15.02	Style 809 for Ring Systems				
16.10	Style SC77 Installation-Ready Shouldered				
19.02	Style 995N for HDPE				
19.04	Style 994 HDPE Vic-Flange Adapter				
19.03	Style 997 HDPE-to-Steel				
23.03	Style 307 Transition				
07.07	Style XL77 Flexible				
07.07	Style XL79 Flexible				
20.02	Style W07 AGS Rigid				
16.11	Style W07 AGS Rigid with Vic-Ring				
20.03	Style W77 AGS Flexible				
16.12	Style W77 AGS Flexible with Vic-Ring				
20.04	Style W741 AGS Vic-Flange Adapter				
20.15	Style W89 AGS for Stainless Steel				
17.24	Style 89 Rigid for Stainless Steel and Carbon Steel				
17.03	Style 77S Flexible for Stainless Steel				
17.25	Style 489 Rigid for Stainless Steel				
06.10	Style 72 Outlet				
11.02	Style 920 Mechanical-T Outlet				
11.05	Style 923 Vic-Let Outlet				
11.06	Style 924 Strapless Outlet				

# METAL MINE PIPING



Metal Mine Piping Applications

- BENEFITS**
- Able to install under adverse conditions (i.e. low light, dry, hot, cold, etc.)
  - Victaulic® gaskets can reduce air loss in systems by up to 40%
  - No fire, fume or hazard costs
  - Flexible couplings accommodate misalignment and tunnel curvature
  - Minimize time required for change-outs and scheduled maintenance

**APPLICATIONS**

Above Ground

- Mill Water
- Slurry (coarse/fine, thickened/carbon pulp)
- Tailings
- Conveyor Dust/Fire Suppression
- Compressed Air
- Vacuum Systems
- Instrument Air
- Solutions (barren, pregnant, SO<sub>2</sub>, soda ash)
- Chemical/Heap Leach (mains, spraying)
- Acids (cyanide, sulfuric)
- Flotation (air, oils, collectors)
- Slimes
- Reclaim Water

Underground

- Air Lines (compressed, equipment)
- Water Supply Lines (drilling, potable)
- Sumpage/Dewatering Lines
- Backfill/Paste Lines
- Pump Stations
- Pressure Reducing Stations
- Dust Suppression
- Fire Protection (conveyors)
- Mine Cooling

Fittings										Valves/Strainers										Valves/Strainers										Expansion			Tools			Specialty							
<a href="#">07.01</a>	Grooved End Fittings									<a href="#">08.05</a>	Series 700 Butterfly Valve									<a href="#">08.40</a>	Series 725 Diverter Valve									<a href="#">09.16</a>	Style W256 Expansion Barrel			<a href="#">24.01</a>	Roll Grooving			<a href="#">11.07</a>	Series 926 Mechanical-T Spigot Assembly				
<a href="#">07.02</a>	Long Radius Bends (3D, 5D, 6D)									<a href="#">10.81</a>	Series 705 FireLock™ Butterfly Valve										<a href="#">08.11</a>	Series 712 Swing Check Valve									<a href="#">09.05</a>	Style 155 Standard Expansion Joint				<a href="#">24.01</a>	Cut Grooving			<a href="#">07.05</a>	No. 36 Vic-Blast Nozzle		
<a href="#">07.07</a>	Rubber-lined XL Fittings									<a href="#">08.20</a>	Vic™-300 MasterSeal™ Butterfly											<a href="#">08.08</a>	Series 716/716H Check Valve									<a href="#">20.12</a>	Style W155 AGS Expansion Joint										
<a href="#">14.04</a>	Plain End Fittings																																										
<a href="#">07.06</a>	Shouldered Fittings																																										
<a href="#">07.03</a>	EndSeal™ (ES) Fittings																																										
<a href="#">20.05</a>	AGS Groove Fittings																																										
<a href="#">18.11</a>	Vic-Press™ 304/316 Plain End Stainless Steel																																										
<a href="#">18.12</a>																																											
<a href="#">50.01</a>	Aquamine™ Reusable PVC System																																										

METAL MINE PIPING



# ABOVE GROUND

## METAL MINE APPLICATIONS



### TAILINGS PONDS

The Style 926 mining spigot is an easy-to-install outlet for tailing pond feeds. Strapped on to the outside diameter of the main tailings line the outlets have valves included in the feed assembly for on/off service. Available with HDPE or steel outlets the Style 926 is a ready-made solution for tailings pond piping.



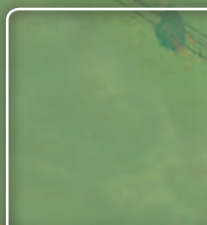
### SLURRIES/TAILINGS

Abrasive slurry and tailings lines are ideal for using Victaulic® products. Groove system products create a union at every joint allowing access to the pipeline at multiple points. Plus the deflection capabilities of our flexible couplings accommodate pipe on uneven surfaces and where angular deflection is needed for less than straight runs.



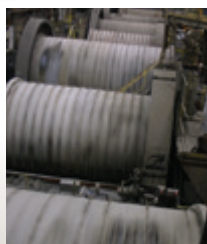
### WASTEWATER TREATMENT

Victaulic has a complete line of products designed specifically for wastewater treatment services. Whether its stainless couplings, valves, and fittings for aeration piping or high pressure couplings for effluent and untreated water Victaulic products meet the demanding design specifications for these services.



### BALL AND ROD MILL

Piping semi-solid abrasive material from the ball mill to the tailings line is one of the most demanding services in mine piping. The ability to easily maintain and replace worn pipe is paramount. With only two bolts and nuts to remove there is no faster way to replace worn pipe. What is that worth to your mining operation?



### PROCESS PIPING

Process piping within a mine is critical to the ongoing operation and profitability of a mine. Downtime, whether scheduled or unplanned, is extremely expensive. With a union at every joint, Victaulic joining systems are the ideal choice for regular maintenance on any type of system. Providing a full line of couplings, valves, and fittings Victaulic is your single source for process piping systems.



### FLOTATION CELLS

Whether its air, water or waste services Victaulic® products are designed to meet the challenges of this application. A full line of fittings, valves and accessories creates a complete single source solution.



### SOLUTIONS PIPING

When acids and other harsh chemicals need to be introduced to the process to separate metal from tailings Victaulic grooved couplings are used. Gasket materials are available for a wide variety of services.



# UNDERGROUND

METAL MINE APPLICATIONS



### WATER AND AIR LINES

Water and air supply lines can be installed in seconds using Installation-Ready™ couplings. Since the coupling is not disassembled before installation carrying spare parts to the site can be eliminated. Victaulic® offers a line of butterfly valves for on/off and dead-end services, plus ball and check valves as needed.



### DUST SUPPRESSION

Victaulic products create a single source solution for dust suppression systems. From the specialty nozzle to the grooved end couplings, fittings, and valves Victaulic products are designed to control flow on both air and water inlets. *Vic-Blast* nozzles use the minimum air and water necessary to quickly capture and suppress dust.



### MINE COOLING

As mines go deeper the need for reliable mine cooling systems and the piping to support them grows. Victaulic products offer the design capabilities required for this application. Whether it is deflection, expansion or contraction, Victaulic systems give designers the flexibility they need to design, construct and install mine cooling piping systems.



### BACKFILL PASTE SYSTEMS

The Series 725 diverter valve is the first grooved end valve specifically designed for use on paste backfill lines. Providing 180° service the Series 725 eliminates the need to re-position fill lines reducing handling and leading to more efficient operations.



### PUMPING STATION

Victaulic® products are used on dewatering systems caused by naturally occurring water or hydraulic fill. From high pressure single lift pumps to multi-stage pumping stations Victaulic has couplings, fittings, valves and strainers to provide a single source for pumping stations.



### DEWATERING SYSTEMS

Mine dewatering systems vary by depth and type of mine. No matter what the need Victaulic has a complete piping solution for dewatering systems. Grooved end couplings are designed for pressures up to 4000 psi | 27579 kPa | 275 bar to meet the most demanding system requirements.



### PRESSURE REDUCING STATION

Pumping water into deep shaft mines requires head pressures to be reduced at various stages for the process water lines. Head pressures need to be reduced to match the capabilities of the piping. Victaulic manufactures a full line of couplings, fittings and valves that are designed to match the service requirements of pressure reducing stations and can be ordered as a pre-fabricated unit.



Coal Mine Piping Applications

BENEFITS

- Able to install under adverse conditions (i.e. low light, dry, hot, cold, etc.)
- Victaulic® gaskets can reduce air loss in systems by up to 40%
- No fire, fume or hazard costs
- Flexible couplings accommodate misalignment and tunnel curvature
- Minimize time required for change-outs and scheduled maintenance

Above Ground

Cyclone Piping, Bends

Slurry Lines

Water Supply Lines (mill water)

Water Supply Lines (wash)

Clarifier Piping

Air Lines, flotation

Pump Stations

Dust Suppression

Fire Protection (conveyors)

Wastewater

Underground

Pressure Reducing Stations

Water Supply Lines

Sumpage/Dewatering Lines

Air Lines

Pump Stations

Dust Suppression

Fire Protection

Couplings														Couplings						Outlet																						
<a href="#">06.20</a>	Style 177N Installation-Ready™ Flexible	<a href="#">06.02</a>	Style 77 Flexible	<a href="#">06.21</a>	Style 107N Installation-Ready Rigid	<a href="#">06.04</a>	Style 07 Rigid	<a href="#">06.06</a>	Style 741/743 Vic-Flange Adapter	<a href="#">06.09</a>	Style 78 Snap-Joint™	<a href="#">06.12</a>	Style HP-70 Rigid	<a href="#">06.13</a>	Style HP-70ES EndSeal™ Rigid	<a href="#">14.02</a>	Style 99 Plain End for Carbon Steel	<a href="#">16.12</a>	Style W77 AGS Flexible with Vic-Ring	<a href="#">16.11</a>	Style W07 AGS Rigid with Vic-Ring	<a href="#">16.10</a>	Style SC77 Installation-Ready Shouldered	<a href="#">19.02</a>	Style 995N for HDPE	<a href="#">19.04</a>	Style 994 HDPE Vic-Flange Adapter	<a href="#">19.03</a>	Style 997 HDPE-to-Steel	<a href="#">23.03</a>	Style 307 Transition	<a href="#">07.07</a>	Style XL77 Flexible	<a href="#">07.07</a>	Style XL79 Flexible	<a href="#">06.10</a>	Style 72 Outlet	<a href="#">11.02</a>	Style 920 Mechanical-T Outlet	<a href="#">11.05</a>	Style 923 Strapless Outlet	
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GOAL MINE PIPING



Coal Mine Piping Applications

- BENEFITS**
- Able to install under adverse conditions (i.e. low light, dry, hot, cold, etc.)
  - Victaulic® gaskets can reduce air loss in systems by up to 40%
  - No fire, fume or hazard costs
  - Flexible couplings accommodate misalignment and tunnel curvature
  - Minimize time required for change-outs and scheduled maintenance

**APPLICATIONS**

Above Ground

Cyclone Piping, Bends

Slurry Lines

Water Supply Lines (mill water)

Water Supply Lines (wash)

Clarifier Piping

Air Lines, flotation

Pump Stations

Dust Suppression

Fire Protection (conveyors)

Wastewater

Underground

Pressure Reducing Stations

Water Supply Lines

Sumpage/Dewatering Lines

Air Lines

Pump Stations

Dust Suppression

Fire Protection

Fittings										Valves/Strainers										Valves/Strainers										Tools			Specialty																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
<a href="#">07.01</a>	Grooved End Fittings	<a href="#">07.02</a>	Long Radius Bends (3D, 5D, 6D)	<a href="#">07.07</a>	Rubber-lined XL Fittings	<a href="#">14.04</a>	Plain End Fittings	<a href="#">07.06</a>	Shouldered Fittings	<a href="#">07.03</a>	EndSea™ (ES) Fittings	<a href="#">20.05</a>	AGS Groove Fittings	<a href="#">18.11</a>	Vic-Press™ 304/316 Plain End Stainless Steel	<a href="#">50.01</a>	Aquamine™ Reusable PVC System	<a href="#">08.05</a>	Series 700 Butterfly Valve	<a href="#">10.81</a>	Series 705 FireLock™ Butterfly Valve	<a href="#">30.80</a>	Series 768 FireLock Dry System Check Valve	<a href="#">08.20</a>	Vic™-300 MasterSeal™ Butterfly	<a href="#">20.06</a>	Vic™-300 AGS Butterfly Valve	<a href="#">08.14</a>	Series 721 Ball Valve	<a href="#">08.11</a>	Series 712 Swing Check Valve	<a href="#">08.08</a>	Series 716/716H Check Valve	<a href="#">20.08</a>	Series W715 AGS Dual Disk Vic-Check Valve	<a href="#">23.06</a>	Series 365 AWWA Vic-Plug Valve	<a href="#">09.02</a>	Series 730 Tee Strainer	<a href="#">09.03</a>	Series 732 Wye Strainer	<a href="#">24.01</a>	Roll Grooving	<a href="#">24.01</a>	Cut Grooving	<a href="#">24.01</a>	Hole Cut	<a href="#">07.05</a>	No. 36 Vic-Blast Nozzle	<a href="#">10.01</a>	Sprinkler Heads (general)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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GOAL MINE PIPING



# ABOVE GROUND

## COAL MINE APPLICATIONS



### TAILINGS LINES

Coal tailings are extremely abrasive and need innovative piping solutions thanks to frequent scheduled maintenance of the line. Using Victaulic® couplings for HDPE pipe provide a union at every joint so downtime is kept to a minimum. No special tools or pipe end preparation is needed to install these plain end couplings on HDPE systems.



### WASTEWATER TREATMENT

Victaulic products are also found on wastewater treatment applications. The same supplier that provides all your mine piping needs can do the same for your wastewater treatment system. The full line of couplings, valves and fittings for wastewater applications provide all the same benefits as the products used on your mine piping systems.



### COAL PREPARATION

Coal preparation plants use HDPE pipe to handle extremely abrasive coal dust. HDPE is difficult and costly to join when butt fused. Victaulic® couplings for HDPE pipe provide a union at every joint allowing access to the piping system for maintenance and/or pipe rotation thereby extending the life of the pipe.



### CYCLONES

Cyclones need to be maintained regularly. The two-bolt design of Victaulic couplings allow fast easy access to each of the cyclone lines greatly reducing downtime required for maintenance.



### WATER SUPPLY

Water supply piping for the dewatering, tailings lines and plant equipment needs to be reliable and easy to maintain. Victaulic offers a number of joining methods, whether its grooved steel, plain end HDPE and steel, or our splined reusable PVC Aquamine™ system.



### VORTEX

Victaulic Vortex™ systems protect critical machine control rooms from costly clean up or equipment replacement in the event of a fire. Its green design makes it safe for the environment and personnel even during system activation allowing quick system recharge and minimal facility downtime.

System works the same in both open or closed spaces. Each system provides calibrated performance for the size of the space it is protecting.



# UNDERGROUND

## COAL MINE APPLICATIONS



### EQUIPMENT WATER SUPPLY

Victaulic® has multiple solutions for providing supply water. With our steel pipe system you have the advantages of no loose parts with our Installation-Ready™ couplings and a full line of valves for on/off and dead-end service. Where you need to move and redeploy pipe our Aquamine™ reusable PVC system is ideal. This lightweight, yet durable plastic system is offered with valves and transition couplings for easy transitions from steel and other types of pipe.



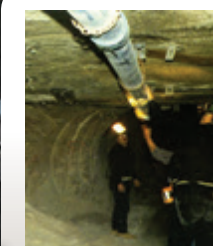
### DUST SUPPRESSION

Victaulic provides an easy-to-install and use dust suppression *Vic-Blast* nozzle. Grooved to easily adapt to the water supply line, *Vic-Blast* sprays a wide area without using large amounts of water.



### FIRE PROTECTION

Victaulic® sprinklers and devices provide fire protection to underground mining operations. *Victaulic FireLock™* devices have the smallest footprint of any valve on the market today. With automatic resets the valve is easy to operate and maintain. A full line of sprinklers allows system designers flexibility to meet the requirements of their system.



### WATER SUPPLY

Water supply for underground coal mines requires moving pipe frequently. The reusable Aquamine™ PVC system can be added to or picked up and moved very easily. And with a line of transition couplings and valves *Aquamine* can easily adapt to HDPE and steel piping systems.



# SPANNING THE GLOBE

## MINING PROJECTS

**GARSON MINE**  
Garson, Ontario, Canada

**Application:** Backfill paste line  
**Solution:** Victaulic® Style 808 double groove coupling for high pressure systems



**MILLER CREEK MINE**  
Logan, West Virginia

**Application:** Machine control room  
**Solution:** Victaulic Vortex™ Fire Suppression System will protect expensive machine control room equipment from fire damage



**BRAUNKOHLBAGGER MINE**  
Garzweiler, Germany

**Application:** Fire Protection system  
**Solution:** For the retrofit of a 20 year-old brown coal excavator, Victaulic galvanized couplings were chosen for speed of installation and rubber gasket components that provided vibration attenuation within the piping system.



**CAYELLI COPPER MINE**  
Rize City, Turkey

**Application:** Fire Protection system  
**Solution:** Victaulic® grooved couplings speed and ease of installation for fire protection systems



**ANHUI HUAINAN DINGJI MINING**  
Anhui, Huainan, China

**Applications:** Compressed air, dewatering, water supply, nitrogen, pastefill, underground cooling, and water  
**Solution:** Victaulic flexible couplings deflection capabilities over uneven surfaces



**SIERRITA MINE**  
Green Valley, Arizona

**Application:** Tailings line  
**Solution:** Victaulic large diameter AGS Vic-Ring system maintains full pipe wall thickness and provide a union at every joint



**TIMBOPEBA MINE**  
Mariana, Brazil

**Application:** Scheduled plant maintenance  
**Solution:** Victaulic grooved products reduced downtime required to replace this long radius bend from 6 hours to 2 hours versus flanged systems



**FRASER ALEXANDER MINE**  
Randfontein, South Africa

**Application:** Water transmission lines  
**Solution:** Victaulic large diameter (AGS) couplings reduced installation time by 2/3 compared to flanging; flexible couplings were installed to accommodate system deflection due to rough terrain



**KALGOORLIE NICKEL SMELTER**  
Kalgoorlie, Western Australia

**Application:** Fire ring main  
**Solution:** Aquamine™ reusable PVC piping system requires no special tools to join and does not require a special finish to be used in buried applications





# CASE STUDIES

Victaulic® products can be found across the globe in a wide variety of mining applications and in all types of mines. Here are just a few examples of how Victaulic technologies have solved some of mining's toughest challenges.

For a complete list of references please visit the mining solutions page on [victaulic.com](https://victaulic.com).



## Mina Aguablanca

In June 2010, Rio Narcea Recursos and Lundin Mining finished the first phase of the expansion and upgrade of the piping system in the open pit Aguablanca nickel-copper mine, located in Spain.

To have an easy and fast installation, Rio Narcea Recursos and Lundmin Mining employed Victaulic® products in their tailing and rewash nickel lines. Another reason why they opted for Victaulic, is to provide easy accessibility for maintenance and ease system expansion at a later stage, thus reducing future system downtime.

Replacing their traditional system with the Victaulic piping system, enabled the mine to stay operational, with cost-efficient, easy and speedy transitions from one system to another. Installing Victaulic couplings, like Style 995 plain-end couplings and Style 77 flexible couplings, also allows them to reduce system downtime and save time during daily and scheduled maintenance.



## Kidd Creek Mine

Kidd Creek Mine is a leading producer of copper, zinc, and other base metals since 1966. With a current depth of 9,100ft | 2,774m a solution was required to ensure underground process water is distributed throughout the mine at reasonable working pressures.

To meet this need, 12 Victaulic Pressure Reducing Valve (PRV) assemblies were installed complete with strainers and 4" | 100mm Style 726 ball valves to isolate and protect the systems. The units were prefabricated off-site to allow for fast on-site installation. The couplings and fittings were galvanized to ensure against corrosion. In addition to the PRV assemblies, Kidd Creek has utilized Victaulic products on multiple systems over the years for their ease and speed of installation and their ability to minimize downtime during scheduled maintenance.



## Goldcorp Red Lake

To improve productivity, Goldcorp had interest in automating their paste backfill operations. At the time, directing paste to needed areas was done manually, and required two miners to go to multiple underground paste transfer stations and move a heavy schedule 80 5D elbow to redirect flow. Labour-intensive and timing consuming, this process could take up to one full day.

In response to Goldcorp's needs, Victaulic created the first grooved end valve specifically designed for use on paste backfill lines – the Series 725 diverter valve. Providing 180° service, the valve greatly reduced the effort involved to re-position the paste backfill lines. With a rugged ductile iron body and a 5D bend profile the valve ensures smooth, continuous flow and durable, reliable service to 1000psi | 6895kPa | 69 bar.

Following the successful installation of two Victaulic diverter valves with gear operators in 2013, Goldcorp added five more valves in 2014, equipped with electric actuators to enable fully automated control by operators from a remote control room. Faster and safer, this Victaulic solution allows Goldcorp to backfill efficiently and move to new production areas quicker.



## Fraser Alexander Mine Dumps

When retrofitting the 8" | 219mm high pressure water lines in the Fraser Alexander Mine, owners, AngloGold went looking for a solution that allows them to easily add and remove pipes to and from the system.

The Victaulic Style SC77HP high pressure shouldered coupling is especially designed for mine dump and waste solutions and with a pressure rating up to 725psi | 4998kPa | 50 bar, it could easily handle the high operating pressure of the water lines. Because the piping system continuously needs to be replaced to accommodate the location of the water cannons, AngloGold also needed a solution that allows for easy system assembly and dismantling.

This is exactly what the Style SC77HP coupling provides. The coupling design allows to easily remove a piece of 9 meter long pipe from the middle of the line by taking the housing apart, rolling the gasket over one pipe end creating the space necessary to roll the free pipe away from the others and not having to pull the surrounding pipes in any direction.