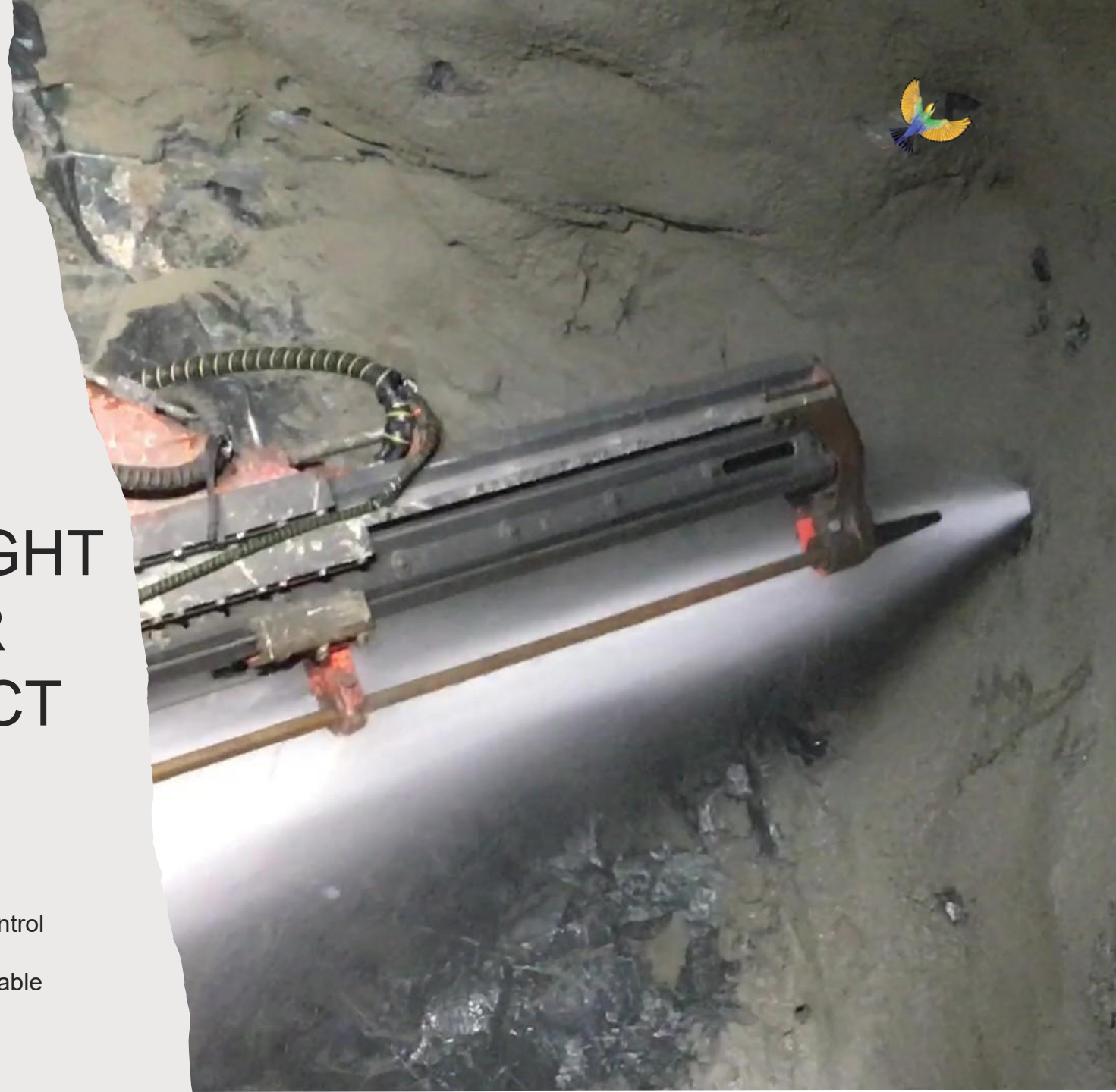
MINERIGHT PACKER PRODUCT RANGE

Underground Water control Devices

Jumbo Installed, Groutable



Uncontrolled water inflows underground can be stopped.

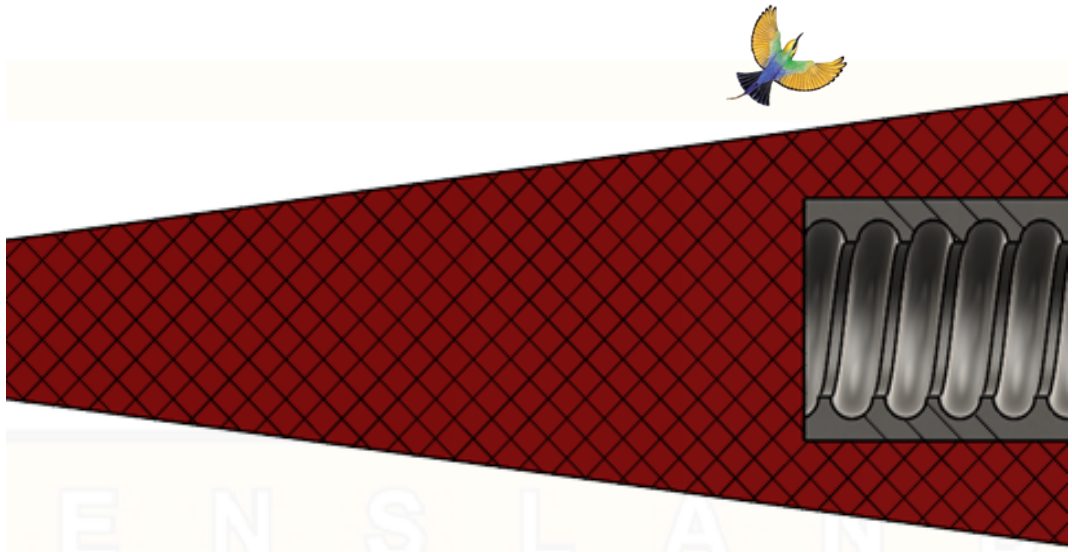
High pressure, high volume and high temperature water can become uncontrolled very quickly in an underground mine. Particularly in decline development.

To control any unexpected water intersections Mineright has developed a range of products.

- **Mineright Tapered Plug** to STEM the flow. These should be carried on all jumbos as the first line of defense.
- **Mineright Packer** is then installed into the hole to STOP the water. The Mineright packer can then be grouted through to seal the water inflow.
- **Mineright Stabilizer** is recommended in holes of high water pressure or high water temperature. It is designed to deflect the water and to protect the Mineright packer on installation.

MINERIGHT TAPERED PLUGS.

First line of defense



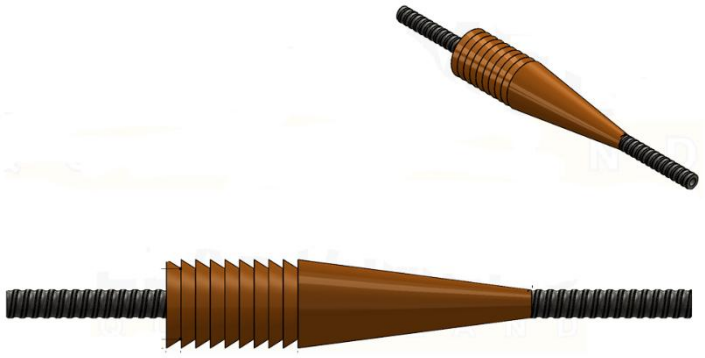
- The Tapered plug is a molded flexible polyurethane water stopping plug with a T38 thread that can be installed on a jumbo steel and inserted into a hole that has intersected high-volume, high-pressure water. It effectively acts as a “bung”.
- The Tapered plug is used to stem the flow until a pump system can be upgraded and a suitable water stopping packer can be located. They are designed to give the operation time to make effective decisions on the way forward without panic.
- They are a re-use item and are not designed to be hammered into the hole as a permanent water stopping device.

MINERIGHT PACKER

- The Mineright Packer can be used without a Mineright stabilizer depending on the expected pressures and application.
- The Mineright packer is installed using a specific designed installation dolly.
- There is no equivalent option available to stop high-volume, high-pressure water.
- If diamond drill hole intersections are expected which are connected to an existing pit or underground aquifers, then the Mineright Packer is used to stop the water from the safety of the Jumbo cab.

MINERIGHT STABILIZER

- The Mineright stabilizer is coupling joined to the leading end of the Mineright Packer and is specifically machined for the hole size drilled. There is multiple size ranges from 64mm to PQ (123mm).
- The stabilizer allows the operator a guide for installation, diminishes the water output from the hole and protects the Mineright packer from high velocity water on installation.
- The Mineright stabilizer is recommended for water pressures above 10 Bar.
- The stabilizer is also used for low-pressure high-volume holes as a quick response plug.
- It can be pushed deep into the hole if required using R32 hollow bar and couplings.
- In high pressure holes the stabilizer must be installed in front of a Mineright Packer.



MINERIGHT EMERGENCY WATER STOPPING KIT

- The Mineright emergency water stopping kit consists of all the equipment required if water is intersected underground. It is recommended to be placed at the entrance to the mine so that it can be easily accessed in an emergency.
- The kit consists of a range of Tapered plugs, Packers, stabilizers and installation dollies as well as grout injection nozzles packed in a weatherproof steel box.

DESCRIPTION

- The **Mineright Stabilizer and Packer** is a mechanical packer assembly that can be installed into a predrilled hole with a Jumbo Drill to stop high pressure, high volume, high temperature water inflows. It can then be used to grout through to stop the water and seal the inflow.
- The **Mineright Stabilizer** is molded polyurethane on hollow R32 threaded rod. The polyurethane is machined to the hole tolerance to hold back the bulk of the water and to protect the following packer on installation from high velocity water.
- The **Mineright Packer** is a hollow rubber grommet on a hollow R32 rolled threaded steel rod. The unit is installed into the drilled hole using an installation dolly and the grommet is tightened in the hole by spinning the backing nut to the desired pressure.
- A non-return valve is incorporated into the packer to stop the water flow from exiting the hole through the packer.
- The **Mineright Packer** can be a single head or a double head assembly, depending on water pressure encountered. They have been successfully pressure tested to 40 Bar.
- The **Mineright Packer** is designed for use in ground conditions that are producing high-volume, high-pressure water inflows, as a device to initially stop water and then to grout through with a high-pressure grout pump.
- Commonly a 45mm ,64mm or 76mm head would be used, but any size can be tailored to the mine site's needs. The sizes are colour coded for easy identification of size required.
- A **grout injection nozzle with a safety restraint** is screwed onto the packer to allow high pressure grout to be injected through the packer, into the hole.

MINERIGHT PACKER SIZES

Packer Name	Grommet Diameter (mm)	Stabiliser Diameter (mm)	Minimum Hole size (mm)	Maximum hole size(mm)	Colour
45mm Packer	43	46	**45**	48	BLACK
54mm Packer	51	n/a	**54**	57	ROYAL BLUE
64mm Packer	61	64	**64**	67	BLUE
76mm Packer **NQ**	72	77	**75.9**	79	YELLOW
89mm Packer	86.5	90	**89**	92	GREY
96mm Packer **HQ**	92	97	**95.8**	100	ORANGE
102mm Packers	97	103	**102**	104	GREEN
123mm Packer **PQ**	117	124	**122.3**	125	NATURAL

Tapered Plug Name	Lead diameter (mm)	Max Diameter (mm)	Minimum Hole size (mm)	Maximum hole size(mm)	
T38 30-112mm	30	112	35	96	RED
T38 30-150mm (RC)	30	150	35	140	TAN

MINERIGHT PACKER COLOUR CHART

T38 TAPERED PLUG RED 30mm-112mm	T38 TAPERED PLUG TAN 30mm-150mm
45mm HOLE BLACK	54mm HOLE ROYAL BLUE
64mm HOLE BLUE	76mm HOLE YELLOW NQ
89mm HOLE GREY	96mm HOLE ORANGE HQ
102mm HOLE GREEN	122.3 mm HOLE NATURAL PQ

APPLICATIONS

- Particularly important for decline development in water bearing country , mining close to old workings full of water or below open pits full of water.
- Important for stopping diamond drill hole intersections at depth.
- A must if pumping capacity in the mine is not fully dependable.
- In conditions with high volume and high-pressure water inflows.

MINERIGHT PACKER TECHNICAL INFORMATION

- Rated to 80 degree Celsius
- Pressure tested to 40 Bar
- Safety restraint
- Rated SDA rolled thread rod used.
- Common thread for U/G mining (R32_L/H)
- Removes operator from the firing line.
- Safer method of installation of a water stopping device.
- No manual handling on installation
- It does not require the pressure of water to set it in the hole. It relies solely on straight installation and forward rotation of the jumbo to set it.
- Stops water inflow quickly and safely using the same equipment that drilled the hole.
- Can be tailored to each mine's requirements.
- Can be joined onto rod string or MIA SDA systems for different applications.
- Can be adapted to any jumbo drifter.
- Can be set at any location in the hole.
- Can be installed at any location in the face without the need for lifting equipment.
- Robust.
- Minimal installation training and easy to install
- Australian Patented Designed
- Proudly Australian Made

Case Study application:
Jumbo intersects a Diamond drill hole connected to U/G aquifer with 180 m of static head.

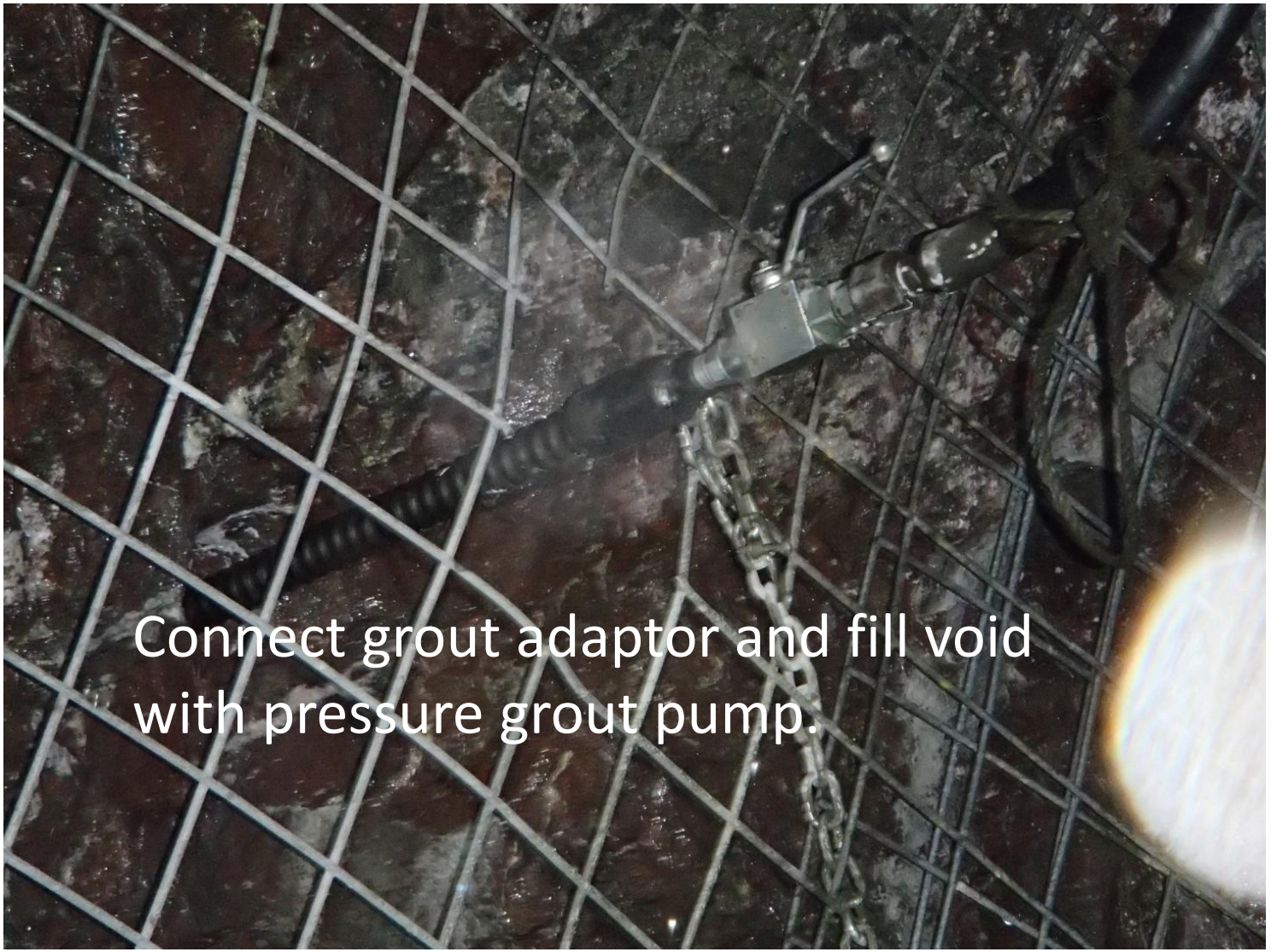

Remove tapered plug and install
Mineright Packer


Visibility is obscured by water spray.
Gentle movments to install.


Push Mineright Packer to depth.


Packer is in the hole. Forward rotation to lock it in.


Packer is seated. Hole sealed.
Ready to grout.


Connect grout adaptor and fill void
with pressure grout pump.