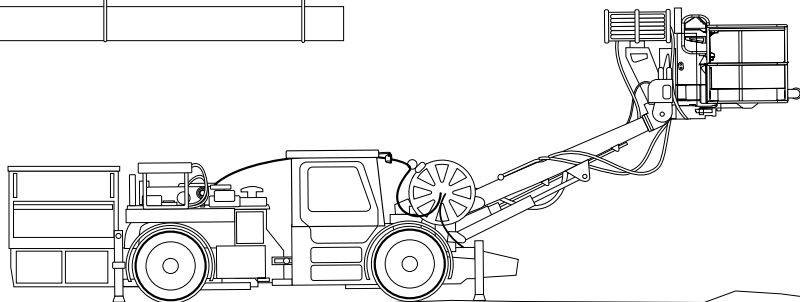
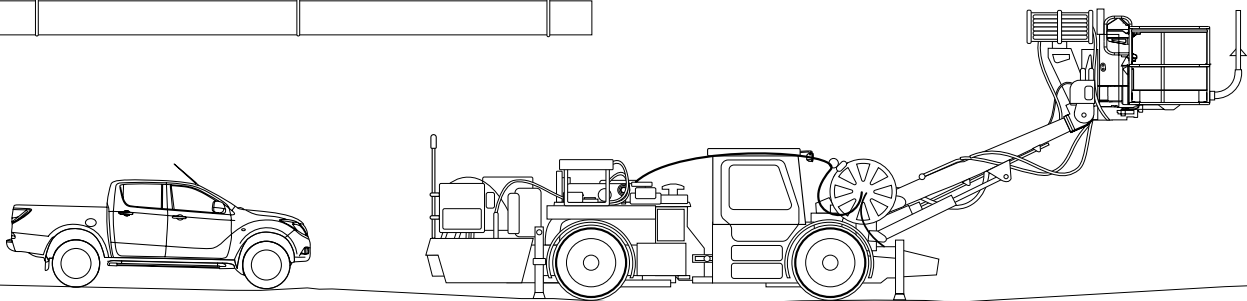


Your underground blasting solutions



DBS 
A Downer Company

Downer 
Relationships creating success

“We have vast experience in underground blasting and know that success will flow from creating positive relationships at all business levels.”



Current and recent underground services

Operation	Region	Production charging	Development charging	Initiating systems
Challenger	South Australia	✓	✓	×
Carrapateena	South Australia	✓	✓	✓
Cosmo	Northern Territory	×	×	✓
St Ives	Western Australia	✓	✓	×
Jundee	Western Australia	✓	✓	×
Karari	Western Australia	✓	×	×
Granny Smith – Wallaby	Western Australia	✓	✓	×



Innovation - Performance - Success

At Downer Blasting Services (DBS), we provide a flexible customer-focused offering of underground blasting products and services.

Innovation

DBS offers underground mines advanced, first-rate charging technology developed and continuously improved through our partnership with Scandinavian explosives manufacturer, Forcit, and market-leading underground equipment manufacturer, Normet.

Performance

We are committed to delivering superior results and strive to exceed our customers' expectations. We pride ourselves on providing the highest quality equipment and services to deliver the best results, in a safe and efficient manner.

Success

Our proven track record in blasting combined with our leading underground technology allows us to offer a specialised, high quality service. DBS aims to reduce operating expenses, minimise risk and improve productivity in both development and production blasting applications to deliver success at each operation.

Our partnerships

The partnerships DBS has established with Normet and Forcit enable us to offer underground mines a new option – leading-edge underground technology delivered by a trusted Australian blasting services provider.



Drawing on over 100 years' experience in explosives manufacturing, Forcit provides an unparalleled emulsion and delivery system technology designed specifically for underground mining markets.



Well established as a leading underground heavy equipment provider, Normet incorporates Forcit technology in building and commissioning DBS' mobile processing units (MPUs) and emulsion delivery systems. They are also our key partners in providing scheduled maintenance and ongoing mechanical support.



We have drawn on our substantial underground charging experience to combine these technologies specifically for Australian underground mines. The result is a series of reliable and superior underground charging solutions implemented by an experienced, professional and friendly team.

What we do

At DBS, we understand that every mine faces unique challenges and has differing requirements from its explosives supplier. That is why we offer a flexible range of services and products which can be tailored to provide customers with exactly what they need.

Emulsion delivery systems

DBS offers equipment designed for customer operation and can provide a complete MPU solution in our Integrated DBS Charmec. Alternatively, for customers seeking to outfit their existing carriers, we provide a DBS Bolt-on System (BOS) which can be retrofitted to customers' existing Normet carriers.

Charging information from each blast hole is digitally recorded and can be used for quality assurance and quality control analysis, technical reporting and safety investigations.

Integrated DBS Charmec

Equipped with both production and development emulsion charging capabilities, the Integrated DBS Charmec is designed to deal with the harsh conditions encountered in underground charging operations.

For over a decade, Normet has specifically manufactured the Charmec LC 605 VE (C) to fully integrate the Forcit emulsion delivery system. Now, through our partnership with Forcit, DBS has exclusive access to this technology in the Australian market.

DBS Bolt-on System

The BOS emulsion delivery system has the capacity to meet all underground development and production charging requirements. Designed and manufactured by Normet, the BOS is specifically designed for the customer's operation and is able to be mounted onto Normet carriers ranging from 1614, MC 605, LC 605 and the MF series.

DBS' BOS is fitted with the same hose handling and control systems as our Integrated DBS Charmec, offering flexibility to your requirements with equally high accuracy and charging capability.

The second control screen in the basket allows operators to control the system via a hand-held remote. This allows our customers to access the benefits of an Integrated DBS Charmec – like pre-set functions, pumping capabilities and automatic hose-handling – but mounted on their carrier.

Our services

Supply service

DBS' supply service includes the manufacture, supply and delivery of emulsion explosives using state-of-the-art charging equipment. This option provides our customers with a flexible alternative which can be tailored to meet site-specific requirements to include initiating systems.

Total loading service

In addition to a standard product supply service, DBS offers a total loading service (TLS) encompassing all the associated underground charging work. This service includes the supply of trained and competent operators experienced in DBS' delivery system, who will measure hole depth, prime the hole and charge each hole in-line with the provided charge sheet.





“The DBS system uses technology that caters for both the novice and highly experienced operator, and ensures the highest standards of quality control to deliver a consistently superior outcome each and every time.”

***“We build trust
by delivering on
our promises with
excellence and
understand the
importance of
maintaining strong
relationships with our
customers.”***





Our expertise

DBS provides a unique option to our customers by offering cutting-edge underground charging equipment as a customer-operated unit. Both our integrated DBS Charmec and BOS are fully equipped with advanced development and production charging systems.

DBS understands that many of our customers prefer operating charging equipment themselves. We aim to provide a flexible service offering by supplying our integrated DBS Charmec and BOS with multiple support options around maintenance and training. This is made possible by our simple, user-friendly control system. It has been designed with significant input from charge-up operators, making it the easiest system to operate in the market.

Value in development

Our development charging system is designed for the charge hose to be mechanically inserted into, and extracted from, the charge hole through a hydraulic driven control system and hand-held remote.

This unique handling system is extremely accurate thanks to the on-board NorSmart program. Our system utilises this accuracy to achieve different levels of decoupled charges to be applied in development, which we call lace loading.

Lace loading allows perimeter and easer holes to be loaded at the optimum ratio to control perimeter blasting. Multiple pre-sets can be programmed into the unit and easily selected at the charge face without the need to change gasser streams.

Lace loading generates value by eliminating the need for packaged perimeter products, as the decoupling ratio can be tailored to the mine's requirements. It can also be constantly refined for local geology to effectively control overbreak and advance with a simple, user-friendly system.

Value in production

Eliminating all manual handling of the charge hose, the production hose reel is strategically located for ease and movability. The reel is mounted at the front of the cabin on the carrier boom and is capable of holding 60 metres of hose.

The hose pusher can be operated by a hand-held remote from either the ground or in the basket, reducing the physical toll of production charging for a safer, more efficient operator experience. This functionality is managed via the NorSmart system and is capable of accurate, pre-set density ranges with the touch of a button.

This level of accuracy achieved by our system, combined with the unique emulsion formula, provides best-in-class up-hole retention. We have proven results across a range of hole diameters (from 76 millimetres to 102 millimetres) and mining conditions, with our system providing reliable and enduring charge columns.

Our products

DBS HEAT®9000 - underground emulsion

DBS HEAT®9000 delivers significantly more energy than other products in the market. It is a proven and tested ammonium nitrate emulsion (ANE) formulation currently used in Scandinavia and Australia for underground development and production blasting.

Our specialised emulsion formulation utilises a single gassing chemical to produce a site-sensitised pumpable product with a full range of densities. This need for a single gassing chemical is unique to DBS and has several advantages including the reduction of chemical handling risks and procurement management.

HEAT®9000 is suitable for use in a variety of applications and hole orientations, including vertical up-holes. Consistent accuracy in the delivery of our products is achieved through the NorSmart control system, which manages products' sensitisation.

Coupled with the specialised development charging system, HEAT®9000 provides unprecedented customisation of production and development charging.

Key benefits include:

- High velocity of detonation (VOD) maintained in small diameter holes with a critical diameter of 17 millimetres
- Single gassing agent, which reduces the possibility of NOx generated gas, allowing quicker re-entry post blast
- Unprecedented up-hole product retention in holes up to 102-millimetre diameter.

Initiating systems

DBS has its own range of initiating systems and can offer a complete range of detonators including long period (LP), millisecond (MS) and electric, as well as packaged emulsion and cast boosters, to meet your operational requirements.

We have agreements in place for the supply of electronic detonators and work with our customers to refine its application.



DBS HEAT®9000 requires a single gassing agent to vary its final in-hole density





“DBS HEAT®9000 is a proven and tested ammonium nitrate emulsion (ANE) formulation currently used in Scandinavia and Australia for underground development and production blasting.”

At Downer, sustainability means not only being environmentally sustainable, but it also includes the safety of our people, sustainable growth, improving internal, supplier and customer relationships and ensuring we have a diverse and inclusive workforce.

Downer's sustainability strategy is shaped by our four Pillars; Safety, Delivery, Relationships and Thought Leadership. Our commitments to Environment and Sustainability are outlined in our Environmental Sustainability Policy.

We recognise that it is not possible to provide our diverse products and services without having some impacts on the environment. However we have sought to identify and respond to these through our management systems, risk management approach and materiality assessment to minimise harm and maximise value to our customers where possible.

We are committed to transitioning to a low carbon economy and pride ourselves on developing industry leading, environmentally sustainable solutions for our customers.

Downer is focused on developing solutions to reduce our energy consumption and greenhouse gas emissions associated with our operations and activities while at the same time increasing our cost competitiveness.

We will continue to cultivate robust environmental management systems and resource efficiency programs to sustain the natural and built environment for future generations.





Health, safety and environmental sustainability

Zero Harm is embedded in our culture and is fundamental to our future success. We are committed to achieving our goal of Zero Harm.

At Downer, Zero Harm means sustaining a work environment that supports the health and safety of our people, and conducting our operations in a manner that is environmentally responsible and sustainable.

Our Zero Harm culture is built on leading and inspiring, verifying the effective management of risks that have the potential to cause serious harm. It is about rethinking processes, continuously improving our management systems, applying lessons learnt and adopting and adapting practices which aim to achieve zero work-related injuries and unintentional harm to the environment.

Through embracing thought leadership, Downer's underground and open cut mining teams are the first to partner with an external provider to assist in facilitating the Downer Enabling Safety Transformation Program. This program is designed to introduce the leadership team to behavioural safety thinking and explore how to best identify and implement Enabling Safety principles, tactics and practices that enhance Downer's operational safety, efficiency and productivity, and evolve these into appropriate and repeatable safety behaviours and culture.

This unique program integrates with existing systems, including:

- Senior management Visible Active Leadership process when visiting each project
- Critical Risk Engagement tools
- Supervisor Capability program
- Task Observation process
- Assessment Familiarisation process
- Safe Behavioural Observations
- Pre-Start and Toolbox meetings
- Trialling peer-on-peer behavioural observation tool for employees to use.

Enabling Safety Transformation program

Downer is embarking on an Enabling Safety Transformation program. The program is a multi-staged approach to defining and empowering sites to embed behavioural safety cultures through all levels of site participation, which includes:

- Senior management undertaking a full-day Master Class – Enabling Safety
- Project management and supervision teams attending Safer Together workshops, followed by Enabling Safety workshops
- Leading Hands, Supervisors and employee delegates trained and coached in becoming effective safety leaders and coaches in their own right
- Employees and sub-contractors attending Safer Together workshops as part of their inductions.

The mantra of this project is that safety happens when work is well planned, resourced and delivered.

This will only happen if everyone, regardless of who they work for or the position held, works together in a way that builds trust, values people's expertise and encourages people to make the best decisions, drawing on a shared safety management system that is simple and easy to use.



Downer EDI Limited

ABN 97 003 872 848

Trinity Business Campus
39 Delhi Road
North Ryde NSW 2113

T: 1800 DOWNER (1800 369 637)
T: (02) 9468 9700

www.downergroup.com
www.downercareers.com
www.downerblasting.com



Brisbane office

Level 11, 135 Coronation Drive
Milton, QLD 4064
PO Box 1352, Milton QLD 4064

P: +61 7 3564 5000
F: +61 7 3564 5660

Western Australian office

Level 1, 130 Fauntleroy Avenue
Redcliffe WA 6104
PO Box 120, Burswood WA 6100

P: +61 8 6212 9500
F: +61 8 6212 9680

