

## BLACK DIAMOND DRILLING GROUND SUPPORT COMBI PLATES

Black Diamond Drilling manufactures high load bearing capacity combi plates that provide optimum support in a wide range of rock conditions.

Combi plates are available in a range of sizes to suit most bolt types and sizes and come with or without the hanger loop. Galvanised for extended durability and load rated from 150 to 200kN

Combi plates are primarily used in the securing strata in underground mining. It is essential to have a quality product reinforcing the dangerous surfaces of an underground mine. Black Diamond Drilling Combi Plates have been rigorously tested to provide the best protection for Underground Mining applications



### KEY ADVANTAGES

Galvanised Combi plates offer several benefits in ground support applications in underground mining, where ensuring the stability and safety of rock structures is critical.

- **Corrosion Resistance** - Galvanisation significantly improves resistance to rust and corrosion, especially important in wet, humid, or chemically aggressive underground environments. Extends the lifespan of the ground support system, reducing the need for early replacement.
- **Increased Safety** - Corrosion-resistant plates help maintain structural integrity over time, ensuring long-term support of the rock mass. Reduces risk of plate failure, which can lead to loose rock or fall-of-ground (FOG) incidents.
- **Lower Maintenance Costs** - Galvanised plates require less inspection and replacement, translating into reduced maintenance and labour costs over the life of the mine. Important in remote or high-cost access areas underground.
- **Enhanced Load Distribution** - The Combi design helps spread the load over a broader area of the rock surface. Helps to stabilise larger surface areas, especially where rock is fractured or irregular.
- **Compatibility** - Designed to be compatible with various types of rock bolts, including resin bolts and split sets. Useful in multi-layered support systems (e.g., mesh + plate + bolt).
- **Durability During Installation** - Galvanised coating protects the plate during handling and installation, reducing damage from impact or abrasion. Maintains effectiveness even if the coating is scratched, due to zinc's sacrificial protection of exposed steel.

## TECHNICAL DATA

PRODUCT CODE	GR-CPLATE-SS33-300/240-G	GR-CPLATE-SS39-300/280-G	GR-CPLATE-SS47-300/280-G	GR-CPLATE-SS47-400/280-G
Bolt Type	GR-SSET-33-GALV	GR-SSET-39-GALV	GR-SSET-47-GALV	GR-SSET-47-GALV
Plate Dimension	300x240mm	300x280mm	300x280mm	400x280mm
Plate Thickness	4mm	4mm	4mm	4mm
Height	18mm	25mm	25mm	35mm
Hole Size	34mm	38mm	50mm	50mm
Yield Strength	230-330MPa	230-330MPa	230-330MPa	230-330MPa
Tensile Strength	360-430MPa	360-430MPa	360-430MPa	360-430MPa
Max Plate Load	200kN	180kN	150kN	150kN
Weight	1.7Kg	2.1Kg	2.5Kg	2.2Kg

## TYPICAL APPLICATIONS

Black Diamond Drilling Galvanised Combi Plates are a premium component for multi layered ground support systems and are used for:

- Development headings, declines and drifts.
- Reinforcement of mesh for surface control in underground mining.
- Areas subject to high humidity or corrosive water.
- Long-life mines or infrastructure areas such as refuge chambers and conveyor drives.

If you're specifying or supplying ground support products for underground mining, using galvanised Combi plates adds long-term value by improving safety, performance, and cost-effectiveness in challenging underground conditions.

## CONTACT INFORMATION

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