CleanSpace™
wearable protective masks

SMART COMPANIES IMPROVE THEIR BUSINESSES IN TOUGH TIMES

Declining commodity prices have had a material impact on Australia's mining industry with the industry rapidly re-structuring for profitability. Australia has held a leading global position in mining from operations, logistics, skilled workforce and safety. In this new world, Australian miners are showing their strength and agility in adopting change to improve operating efficiencies and mine site safety.

With pressure for improved productivity, sites that are aggressively targeting respiratory protection avoid absenteeism (from acute or chronic lung conditions) and optimise their staff's personal working environment by minimising heat stress, breathing resistance, restrictions in movement and equipment compatibility.

Compounding cost pressures mean miners need to be out in the field, not on the bench because they have failed their fit test.

Challenges in mask compliance in mining operations:

- High exertion tasks
- Long shifts'
- Hot conditions
- Fogging
- Tight spaces
- Mining equipment compatibility (lamp caps and radios)

ABOUT MINERS LUNG

Major health issues and lung diseases can develop from respirable coal mine dust including coal workers pneumoconiosis, emphysema, silicosis, and bronchitis known collectively as black lung.

Black lung disease is a debilitating and incurable occupational lung disease. Miners afflicted with the painful disease slowly suffocate over a period of years.

CLEANSPACE™ SAFE | WEARABLE | SMART

Under Australia and NZ Standards, everyone using a mask in the workplace must be fit tested before use, and re-tested at least annually thereafter. Without an enforced, documented fit testing program, your organisation could be found legally liable as an unsafe workplace.

The standout safety culture over the last decade has elevated the Australian Mining sector to become world leaders in site safely practices. Maintaining safety practices in these challenging times can come under strain when reviewing operating costs.

The good news is that occupational respiratory solutions are hugely cost effective – with mining and other companies saving 40-90% on respirator consumables.

Smart management have adopted technology in safety to achieve a safe workplace, improved productivity and cost management. Examples of technology in safety are ERP devices, glasses that predict micro-sleeps, remotely operated underground vehicles, autonomous trucks, sensor networks, mobile apps and touch screen information kiosks.

There has been little innovation in respiratory protection over the last 20 years until now. In the past companies have been forced to choose sub-optimal solutions with poor fit, offer inadequate protection and high levels of discomfort leading to poor compliance. The latest in innovation from an Australian company out of the medical device industry, has created the world's smallest powered respirator – CleanSpace.

Miners globally now have access to the next generation in personal respiratory technology. CleanSpace powered respirators solve many of the inherent problems in mask technology. Open cut and underground miners can work effortlessly and comfortably over long periods with assured high (P3) protection. Mining operations can deploy remotely at high volume to significantly reduce upfront and long term costs. By adopting high protection and a comfortable light weight device, they ensure staff productivity and effective cost management.

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SAFE – The CleanSpace PAPRs are a positive pressure P3 certified mask. The inbuilt pressure sensors adjust the air-flow to prevent contamination during heavy breathing, talking or strenuous movement. The breath activated operating system ensure CleanSpace Respirators maximise filter life by only filtering the air miners breathe when they need it. The soft silicone masks in different sizes fit a wide range of face shapes with high portacount fit tests ensuring protection. For underground mining operations, the company has released an intrinsically safe CleanSpace PAPR with all the same features and certified for use in potentially explosive or ignitable atmospheres - CleanSpace EX PAPR.

WEARABLE – CleanSpace's lightweight design (only 500g) and silicone masks are easy to wear effortless and comfortable over long periods in hot, dusty and humid conditions. There are no hoses or heavy waist mounted battery packs and the award winning technology delivers clean fresh air for up to 8 hours. Miners report the compatibility with existing equipment (lamp caps and belt mounted radios) and it easier to move around small spaces around large mine equipment.

SMART – CleanSpace respirators are tough, reliable and cost effective. There are no servicing or maintenance requirements and the respirators are simple to disassemble and clean. The simple cleaning and care, user friendly one button system and online training enables miners to deploy the CleanSpace respirators quickly and at volume to remote and busy sites. Designed by engineers from the medical device industry, CleanSpace is made to the highest quality control standards.

"The introduction of CleanSpace respirators is timely in the face of the mining downturn. When upgrading their respiratory protection, miners can choose safety and operational cost savings" says CEO Dr Alex Birrell. "Smart mining companies are introducing assured respiratory protection to improve productivity and comfort while concurrently driving financial benefits in direct savings and the long term performance in health and safety records for investors."

Our customers Health and Safety officers reinforce this point. "CleanSpace is a game changer. Staff and site managers have peace of mind on their staff being protected and wearing the respirator. Staff are less fatigued and the masks are remarkably comfortable. The fit testing results are consistently high with CleanSpace when previously we were seeing significant fail rates with traditional passive respirators. Long term cost analysis of the CleanSpace demonstrated the economic benefits for adoption.

"Comfort and ease of use are the two important factors in compliance with mandatory PPE requirements. We also wanted to make it easier for management to implement and support the use of respirators" said Dr Birrell.

Safety is a serious business and companies need cost effective solutions that provide the highest level of protection. The multi-award winning CleanSpace Powered Respirators deliver high protection, wearability, and a smart solution for a range of mining applications including underground coal, oil and gas, petrochemical, asbestos, chemical handling and welding.

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