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COMPANY MINING PROFILE

Scope of Work

ON₂ Solutions builds, supplies and services complete Mine Refuge Systems. Our Refuge chamber provides a "Safe Haven" for miners in an underground emergency. ON₂'s mobile refuge chamber, The TommyKnocker includes a breathable air unit; The Refuge One Air Centre which works independently despite the loss of mine power or compressed air. Our refuge systems are designed to keep miners alive while they safely await rescue operations.

Purchase of RANA

ON₂ Solutions purchased RANA Manufacturing in 2016 from Rimer Alco NA. We are committed to providing the same quality products and service that RANA was renowned for worldwide, with systems deployed in over 25 countries worldwide. ON₂'s forbearers pioneered the innovation of the Internationally Award Winning Refuge One Air Centre, and ON₂ continues to strictly adhere to the

same rigid design and operational standards during the development and manufacturing of our entire product line.

Industry Reputation

The Refuge One Air Centre is recognized both nationally and internationally with top honours in the international field of applied research and was awarded Canada's OHS Innovative Product Award of Excellence in Occupational Health and Safety. It is ON₂'s mission to continue to excel in finding innovative SOLUTIONS in Mine Safety equipment and technology Worldwide!

Product Line Expansion

ON₂ is now able to supply Mine Lifeline products as part of our Gold Seal Standard commitment to providing what Miners Need, when and where they need it Most!

TEAM DIRECTORY



Owner/General Manager
Jim Duff



Sales Manager
Duncan Patterson



Sr Technician
Steve Terichow



Sr Technician
Dan Yager



Technician
Victor Kovtan



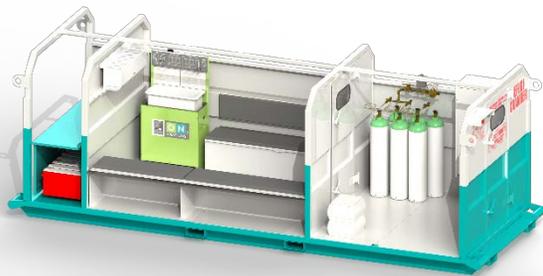
Media Relations
Debra Amos



A "Safe Haven"
with customized capacity

Reliable Source of Breathable Air
when you need it most

*TK2 ~ 20-foot chamber, providing
refuge for up to 10 people with a source
of breathable air for up to 96 hours*



The TommyKnocker

The TommyKnocker mobile mine refuge chamber is available in 14-24 ft lengths, accommodating 8-20 persons. The portable design allows for the TommyKnocker to be easily deployed anywhere within the mine and can be pushed, pulled, lifted, or dragged. The TommyKnocker is constructed using fire-resistant materials and 12-gauge steel making the chamber extremely rugged and reliable. The double door airlock entryway with marine latches ensure an airtight seal and eliminates ingress of external toxic gasses into the chamber. Miners have peace of mind while seeking refuge in an ON₂ TommyKnocker.

*The Refuge One Air Centre is
available in two sizes (single and
double bed) to better meet the
specific needs of the mine.*



The Refuge One Air Centre

The TommyKnocker typically includes the ON₂ Refuge One Air Centre which can also provide breathable air to permanent refuge stations within the mine. Dangerous air quality results when carbon dioxide levels in sealed refuge chambers rise and oxygen levels decrease due to human occupancy. The Refuge One Air Centre scrubs the carbon dioxide from the internal chamber air and replenishes oxygen at a metered rate from the high pressure oxygen cylinders. The Refuge One Air Centre works independently to save lives if the compressed air pipeline and/or external power supply are disrupted in an emergency. There are two sizes available to better meet the specific needs of each mine. The Air Centres are compact in design with limited fragile instrumentation to allow for easy and reliable operation. There are over 300 Refuge One Air Centres installed Worldwide.



SAFETY- RELIABILITY- LONGEVITY

ON2 believes that although cost is always important and must be considered, we will not sacrifice safety, reliability, or longevity.

GOVERNMENT AND MINER APPROVED

Two Canadian government agencies conducted underground performance tests to prove our equipment maintains a safe environment for miners. Both the TommyKnocker and Refuge One successfully passed these tests and all mining participants expressed a high level of acceptance and confidence in our system.

SAFETY AND COMFORT PARAMOUNT

In an effort to provide the best product for miners' safety, ON2 is continually looking for new technologies and products that will enhance the safety and comfort of the miners that seek refuge in the event of an underground emergency. The TK2 will include all of the redesign upgrades while maintaining the rugged reliability and easy operation of the original TommyKnocker.

GOLD SEAL STANDARD

ON2 Mine Refuge System components are "Best in Class"; ON2 only uses parts from reputable companies who supply products that have withstood the test of time and have replacement parts that are consistently and readily available. The components must be CRN approved and/or meet CSA Electrical.

CUSTOMIZED SOLUTIONS

ENGINEERING and DESIGN

ON2 engineers will custom design and build a Mine Refuge System to accommodate any need, function, and economic condition. ON2 technicians and engineers have over 40 years of combined experience and they are constantly exploring new technology and innovations.

THINKING "INSIDE" the BOX

ON2 has custom built the TommyKnocker chamber for more than Refuge. The TK1 provides miners with a safe, clean and comfortable place to rest and enjoy their lunch. The TK1 not only provides the standard comfortable bench seating but it can also be outfitted with air-conditioning, and a portable fridge.

KEEPING AHEAD OF THE CURVE

ON2 has made structural design changes to the TommyKnocker to extend the airlock entryway, which will ensure a fast unobstructed entry into the chamber in the case of an emergency. At the same time, we added a shrouded external battery compartment that will be capable of providing up to 96 hours of power. With the miners' comfort in mind, and to eliminate any additional heat buildup within the chamber, ON2 has made the decision to only use high output dimmable LED lighting to ensure cool operation with maximum LED life. These design changes not only enhance the safety of the miners, but also provide an increased level of comfort to those miners who seek a Safe Haven.

OUR Vision - OUR Mission - OUR Values

VISION

To be known worldwide as a supplier of innovative, leading-edge technologies and equipment for medical, industrial, and mining facilities

MISSION

We are applications specialists for on site gas systems that generate savings in gas storage and production; we are leaders in the development of mine refuge systems that secure miners' safety

VALUES

Caring

- Genuine concern for our customers and striving to meet their needs
- Demonstrating respect and fairness in all that we do
- Commitment to the safety of customers and staff
- Being timely in responding to our customers' requests

Relationships

- Trust, respect and honesty
- Partnerships with customers and market leading suppliers to achieve cost effective solutions to needs
- A work environment that promotes kindness and understanding
- Providing staff with challenging and rewarding work

Leadership

- Leaders in our area of responsibility, with a deep commitment to deliver leadership results
- A clear vision of where we are going
- A focus on established goals to achieve leadership objectives and strategies

Quality

- Fostering an environment of innovation and continuous learning
- Commitment to offer technologically superior products
- Promoting professional and excellence
- Seeking improved methods to achieve improved outcomes

Accountability

- Being honest and ethical in all activities
- Being timely in completing tasks
- A commitment to seeking solutions
- Offering unsurpassed service and after sales support
- Respectful use of resources to ensure ongoing sustainability

Teamwork

- Valuing the contributions of each staff member
- Supporting each other is service delivery
- The open exchange of ideas, knowledge and experience
- Co-existence of work and fun in the workplace