



Multicrete Raise Robot

Technical Data Sheet

Product Description

The Multicrete Raise Robot is a remotely controlled robotic assembly for the spraying of shotcrete used in shafts and raises of subterranean excavations. Together with the raise ranger, these robotic units are designed for use in mines and on large civil construction projects. Standard Multicrete Raise Robot are designed for use in raises with minimum of 1.5 meters in diameter – up to a maximum of 10 meters in diameter. Hydraulic retractable arms stabilize the Raise Robot and allow for undulations along the interior surface of the raise.

In 2008 Multicrete completed a 3.5-meter diameter by 300-meter raise. A second raise of over 400 meters in depth was completed in 2009.

Application

The Multicrete Raise Robot is used in conjunction with the ALIVA electric powered shotcrete machine mounted on a Multicrete Integral Predampener. Predampened material is conveyed through a 50-65mm diameter heavy-duty hose from the remote application of shotcrete via the Raise Robot. At surface level, technicians monitor the progress of the Raise Robot via video display. This allows for the rate of application to be modified without personnel entering the raise.

NOTE – All required equipment, spares and accessories can be compacted for shipment into a 20' sea container, collapsable to just 1.98 meters in height, 2.7 meters in length and 1.8 meters in width for ease of transports

Operations

The Raise robot is lowered by means of a heavy-duty incremental winching system. This system allows for variable speeds from 5cm per minute, up to 6m per minute. During its descent the Raise Robot hydro-blasts the interior surfaces as well as videotaping the entire raise. On its return, the unit commences spraying shotcrete in a uniform single pass. The electric motor on the spray head allows for 360° non-stop rotation.

