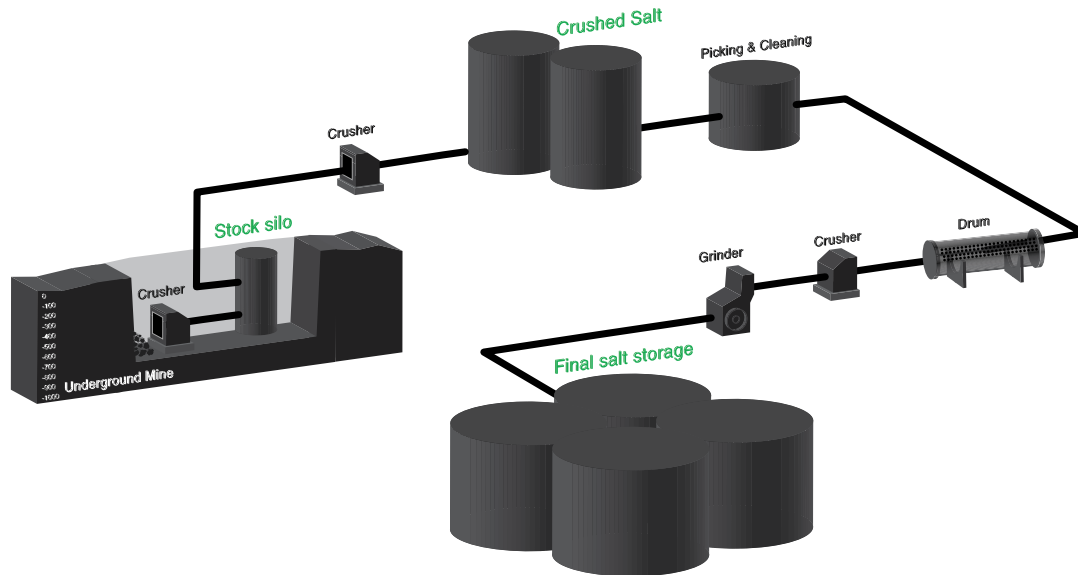




# Chemicals

## Salt Production - Rock Salt



### Stock Silo

**Application:** Primary crushed salt rocks are crushed in an underground mine and then stored in large underground silos prior to being further processed.

**Challenges:** The primary crushed rock storage silo holds material from the initial stage of salt production, feeding a secondary crusher, and therefore needs to be monitored to enable smooth production downstream. The silo is generally underground and is usually created by controlled explosions. Therefore, the walls of the stock silo are not always smooth and the crushed salt rocks stored in the silo are also of varying shapes, making it difficult to measure the volume of salt rocks available for production. Early detection of buildup inside the silo is important so that the end user can reduce the risk of material collapsing on the bottom of the silo, which could cause damage to the silo, the crusher, and other mechanical parts. The optional mapping technology employed by the BinMaster 3DLevelScanner alerts to potential problems by displaying a 3D image of the stored content that can allow early detection of buildup. It provides actual, real-time level and volume measurements of the stored material in these complex silos.



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## Crushed Salt

**Application:** Smaller-sized, secondary crushed salt rocks (less than one inch or 2 cm in diameter) from the secondary crusher are stored in large silos before entering the final production process.

**Challenges:** The secondary crushed salt storage silo is outside of the mine feeding material to the final production process, so its contents must be monitored to allow for uninterrupted production. The end user needs to monitor the level and volume of the silo to ensure there is adequate inventory to meet production requirements. Early detection of buildup that can form inside the silo is important to the end user to plan for timely maintenance and avoid unexpected interruptions in production. BinMaster's 3DLevelScanner's sophisticated measuring and mapping technology provides accurate, real-time level and volume measurement of the silo contents. An optional 3D image of the material topography allows for early detection of buildup.

## Final Salt Storage

**Application:** The final product – ground salt – is stored in large silos prior to shipment to consumers in various industries.

**Challenges:** The salt storage silos are wide (often exceeding 80 feet or 25 m in diameter) and the end user faces constant difficulties trying to closely monitor the salt's inventory levels. Understanding the accurate volume of salt stored in each silo can help end user's regulate production, while ensuring there is adequate finished goods on hand for shipping. The BinMaster 3DLevelScanner system provides highly accurate, real-time level and volume measurements. For extremely large bins or domes, more than two 3DLevelScanners may be installed in a single vessel as part of an MVL system that combines the data from multiple sensors for a more accurate inventory in large silos. The optional 3D visualization tool allows the end user to see how the material is distributed inside the silo, contributing to improved management and control over inventories and related costs.



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