

Selecting the Right Toilet for Underground Tunnelling & Underground Construction

Sanitation and hygiene are critical to maintaining a healthy workplace. However, underground environments present additional challenges that need to be factored into the final purchase decision.

This list identifies key points to consider when purchasing a toilet for underground construction projects



Size of the Site

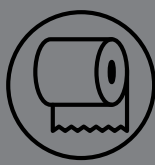
The bigger the tunnelling project or Tunnel Boring Machine (TBM), the more toilets. This is a more general view but can help lay the groundwork.



Location of Personnel

The size of the project can give an overall view of numbers, but not all locations may be active. Because underground toilets are portable, they can be moved with the progression of the tunnel or remain on the TBM.

Toilets in inactive areas, where there are no staff, can be relocated for re-use.



Frequency of Use

How often a toilet is going to be used will impact the suitability of the available options. More frequently used toilets will require emptying more often which will add additional costs to the purchase whether emptying is provided in-house or through an external contractor.

Knowing the number of people per shift will help determine the frequency of use, and therefore the frequency of cleaning.



Access to Utilities

Will the toilet be able to connect to existing utilities or does it need to be self-contained?

Power, water and compressed air may not be readily available; where the toilets will be located will determine what utilities are accessible.



Physical Structure

The natural layout of the mine can restrict available options, especially height requirements. Some industrial toilets can be customised and are modular with their design, whereas others are fixed.

Ease of access must also be considered. Toilets will be transported into location and removed for waste disposal, the rock formations surrounding the entry and exit can impact the design.



Gender Requirements

Accommodating the needs of both sexes underground is essential. Tunnelling projects must consider how they can satisfy these requirements through the supply of single-sex, unisex or dual capacity toilets as well as additional sanitary options.

Gender may also have an impact on the frequency of use during each shift.



Service & Maintenance

Underground toilets require upkeep and ongoing servicing to ensure they are in optimal working condition. Performing regular checks on the internal mechanisms will add to the life of the toilet, but there are costs and labour requirements to do this. As with cleaning and emptying, this is completed by an external contractor or internally managed.



Cleaning & Emptying

Defining who is responsible for the toilets once in place. Cleaning consists of removal of waste (pump out), thorough cleaning of the unit inside, as well as replenishment of all fresh water, paper and chemicals. Companies can opt to use outside contractors to manage the ongoing clean-up and emptying of each toilet; this option may come with the purchase. Alternatively, this can be led by the company itself.



Life of the Project

The life-cycle of a tunnelling project may impact choice. A project with a shorter life cycle may opt to hire toilets rather than purchase.



Budget

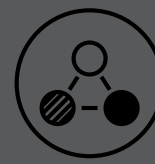
Cost is the main area of focus; available expenditure can broaden or reduce the available options. Factors such as budget allocation (i.e. if the purchase is an operating expense or a capital expense) impact the amount of funds available and processes that need to be met.

Reviewing costs beyond the initial out-of-pocket expenses is essential. Labour, emptying, consumables, maintenance and servicing are all additional costs that can add up over the toilets lifetime.



Environmental Factors

Not all toilets comply with environmental standards. Depending on company policies, a site may consider sourcing a portable underground toilet which is sustainable and uses biodegradable products.



Cultural Requirements

With more diverse workforces and international operations, it is important to consider cultural factors when sourcing the right facilities.

Eastern and Western counterparts can have slight variations in toilet design. Depending on the location of the project, cultural needs may need to be addressed.

