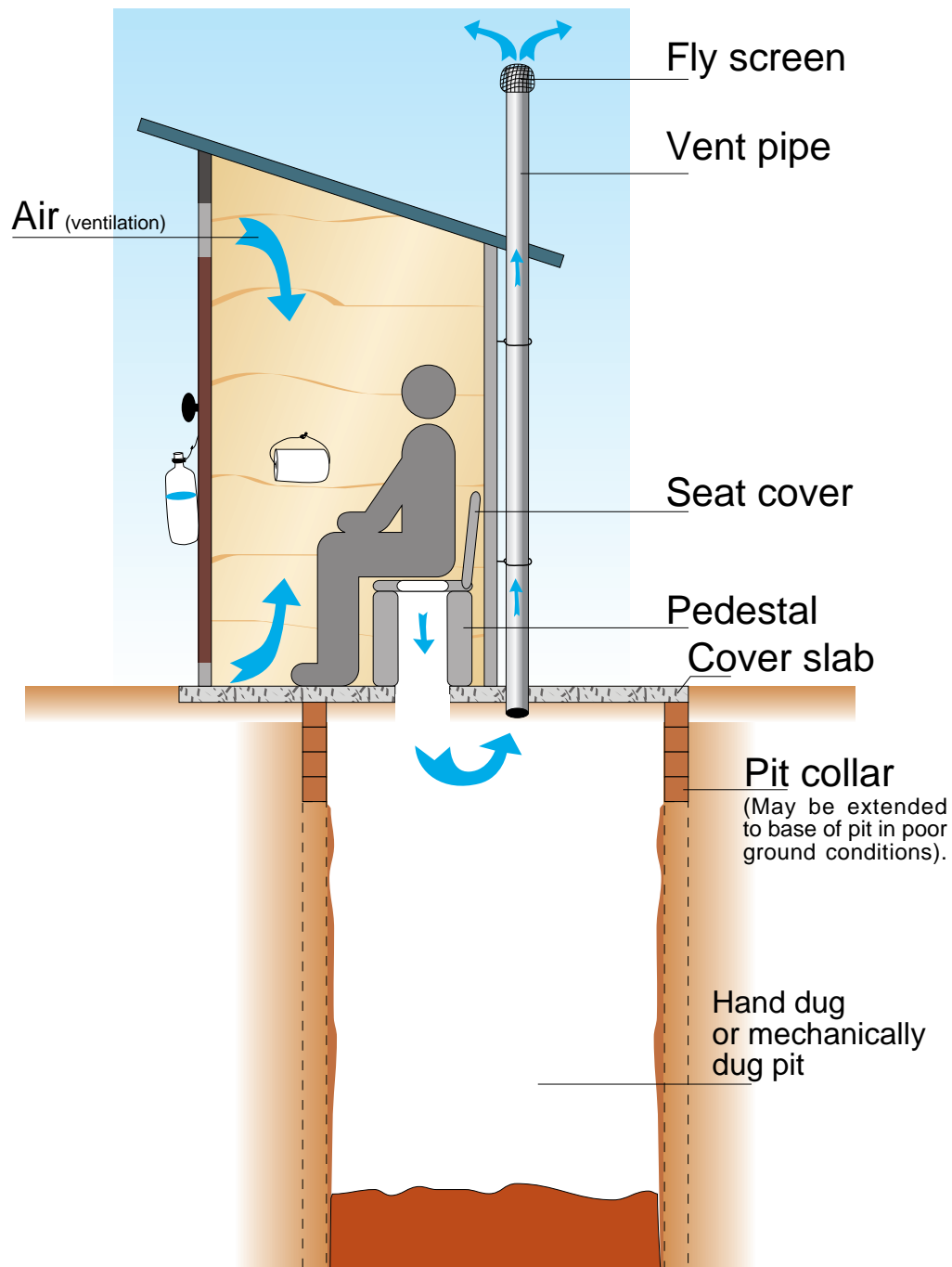


Dry on-plot systems

Ventilated Improved Pit (VIP) toilet



A top-structure over a pit. The pit is vented by a pipe over which a fly-screen is fixed. The pit may be lined (recommended where emptying is required), or unlined where soil conditions allow.

| Principles of operation | Operational and institutional requirements | Costs | Experience and comment |
|--|--|--|---|
| Waste drops into the pit where organic material decomposes and liquids percolate into the surrounding soil. Continuous airflow through the top-structure and above the vent pipe removes smells and vents gases to the atmosphere. A darkened interior is maintained causing insects entering the pit to be attracted towards the light at the top of the vent pipe and trapped by the fly screen. A separate hand washing facility is required. | Locate to prevent ingress of storm water to pit, as well as in consideration of local groundwater use and conditions. Does not accept domestic wastewater. Cannot be placed inside house. Ensure access for mechanical pit-emptying and availability of sludge treatment and disposal where required. Ensure repair/replacement of damaged/worn materials. | Capital: may range from R600-R3000, depending on householder input and choice of materials. Operating: R60 per year if emptied once in 5 years. | Widely used internationally and in rural and peri-urban areas of South Africa. Most successful in water-scarce environments. Failures generally due to inadequate user education and/or poor design and construction. Costly adaptations can result where shallow rock or shallow water tables occur. |