



Unelco Trenchless Machine



Unelco opting for a Trenchless Technology

- Because of increase in the price of road base for road pavement repair works.
- Because of increase in the price of sand as supply becomes limited since the prohibition of coastal sand supply for sand bedding.
- Because of increase in the price of bitumen for re-sealing of road surface.

A “Mini” Trenchless Technology

- Trenchless technology requires the use of very minimal or no trenches at all at the surface of the road or any other pavement.
- The technology uses new techniques and equipment to install and replace underground pipes without causing any disturbance to the ground above.
- Its goal is to reduce trench cost but also to avoid and/or minimize the interference with activities on the surface, especially traffic, but also to reduce the time and cost of the works.

Our Choice of “Mini” Trenchless Technology

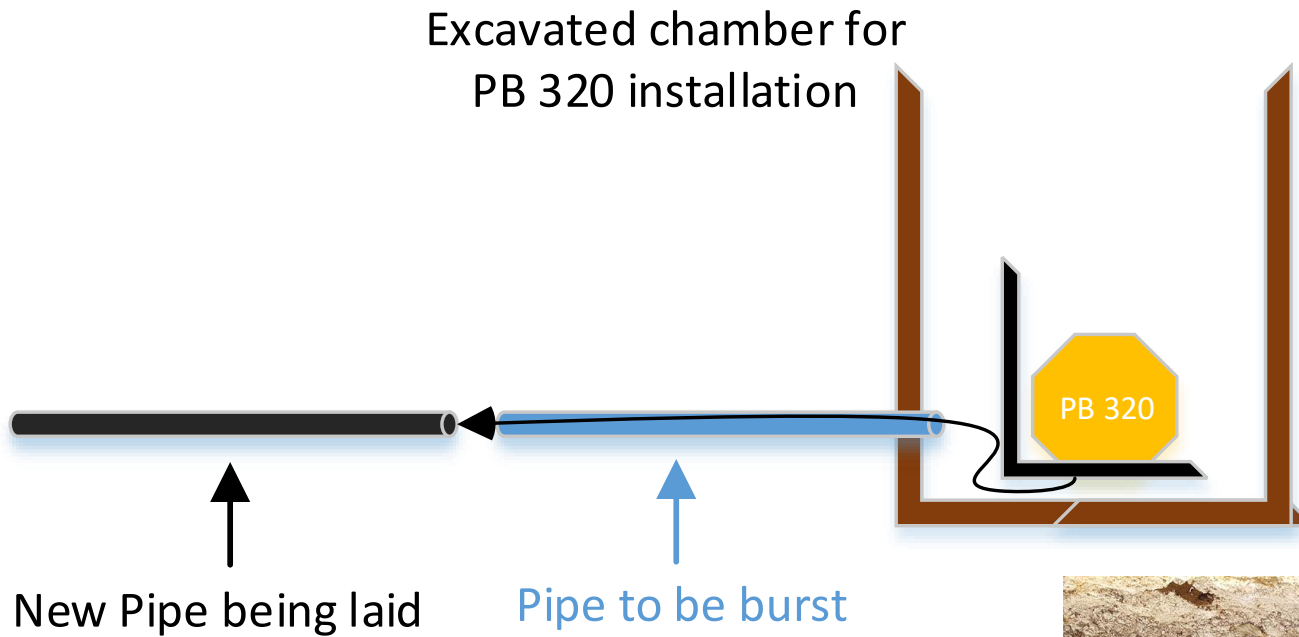
- Our choice the technology is based on us being a small utility.
- We chose a technology that is compact, it is demountable and light.
- Thus for our operations an ergonomical equipment.



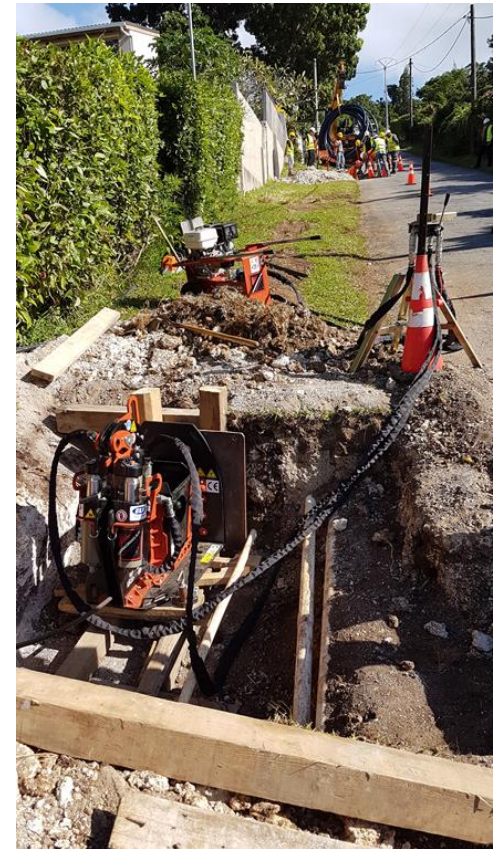
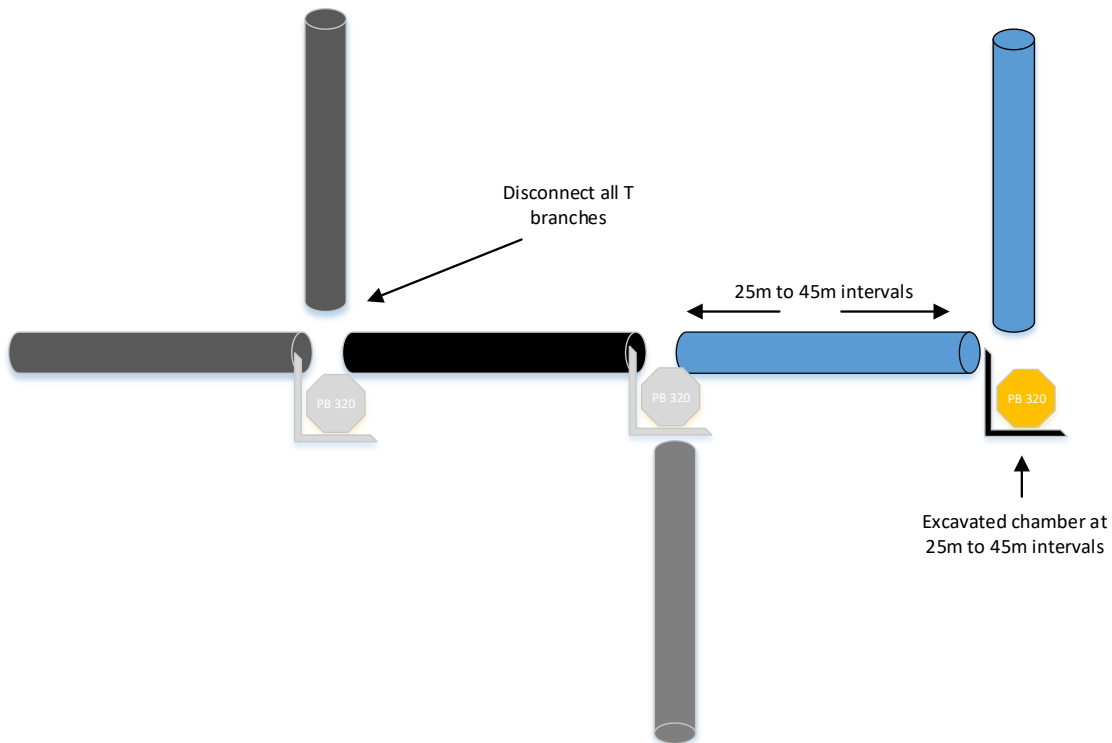
PortaBurst PB30

Hammerhead Pneumatic Piercing Tools

How the PB30 Works



How the PB30 Works



How the PB30 Works



How the PB30 Works



How the PB30 Works



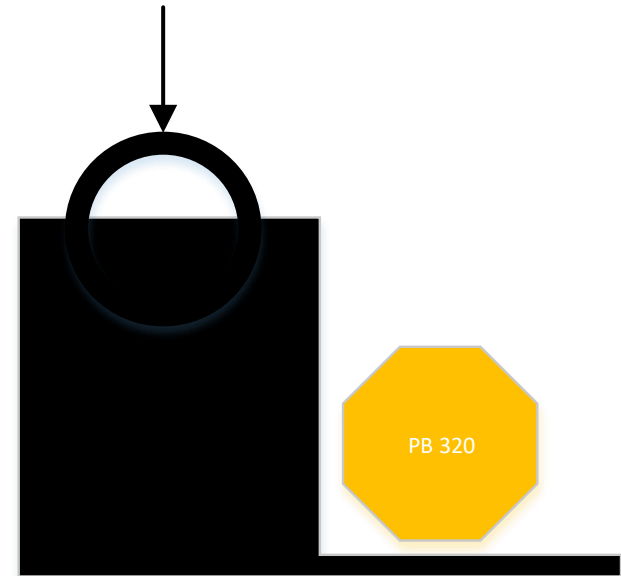
Limitation of our “Mini” Trenchless Technology

- For use only of HDPE/PVC Pipes and Galvanized pipe of less than 3 inches of diameter.
- For use on pipe stretches that have no tapping saddles and jointing saddles.
- For use only on sections where the soil stability can provide a good anchor for the machine to be able to function.

Future Improvement of our “Mini” Trenchless Technology

- Built a portable structure (that can be installed by an excavator) that will provide a better support and enable use in all soils types and reduce the time for machine mobilisation

Portable steel fabricated anchor to be installed in the excavated chamber to provide support for PB 320 installation



Limitation of our “Mini” Trenchless Technology

Replacement of PVC90 by PVC110

with trench

- 5 000 \$ for trench (2 – 3 days)
- 2 000 \$ for sand & road base
- 2 500 \$ for pipe

Total = 9 500 \$

Trenchless technology

- 3 000 \$ (2 days)
- 100 \$ for sand & road base
- 2 500 \$ for pipe

Total = 5 600 \$

- 40 %



Our Experience of the “Mini” Trenchless Technology

- Minimize excavation thus reduce cost of excavation.
- Saving on Sand bedding as new pipe is laid on the existing sand bedding.
- Road pavement, road sealing, asphalt damages reduced thus reducing cost and scope of pipe changing works.
- The machine can be adapted and upgraded to be able to work on diameters of up to DN150
- A technology providing a better prospect in our renewal and upgrading works.



Thankiu tumas