

GRUNDORAM - Pipe rammers



Ramming technique

Without abutment, the open steel pipes are pushed forward with dynamic ramming energy. The soil gathering in the pipe is pressed or bored out with air and/or water after installation. The installation lengths depend on the soil conditions and the pipe OD. Rule-of-thumb: installation length = pipe \varnothing x 100 (i.e. pipe \varnothing ND 400 = 40 m. Thrust can be controlled, but is not steerable



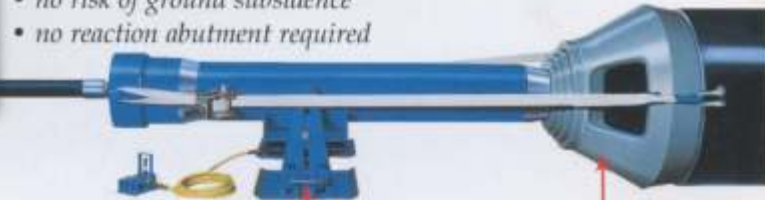
... in pipeline construction



... in tunnelling

Specifics

- applicable in all soil conditions except for mud, marshes and non-displaceable solid rock
- for installing steel pipes underneath roads, railway tracks, parks, trees, buildings up to ND 4000, lengths up to 100 m
- extremely robust with thrust forces up to 40.000 kN (4.000 t)
- acknowledged technique, Ruhrgas: "Rating recommendable"
- no measures are required for keeping the front pit wall from collapsing
- no risk of ground subsidence
- no reaction abutment required



Pneum. lifting cushion
for simple alignment

Ramming cones and soil removal cones for adaption to the pipe \varnothing . Saves intermediate soil removal.



Housing with ramming head
made of solid material, without weld, shrink or screw connections.

GRUNDORAM - Special applications

- Vertical applications, e.g. for foundations or sheet piling using a special adapter
- Construction of pipe roofs for tunnels, underpasses etc.
- Support of HDD bores (HDD Assist), e.g. for loosening stuck drill rods or installing casing pipes for HDD bores



Vertical steel pipe installation



Construction of a pipe roof



HDD-Assist application: Bore inside a casing pipe



HDD-Assist application: Loosening of stuck drill rods