

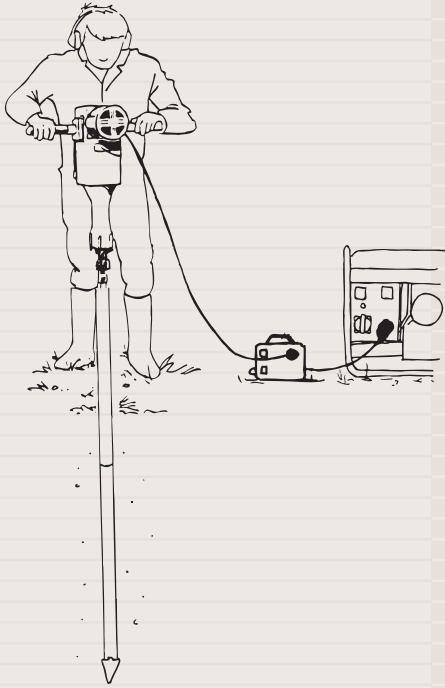


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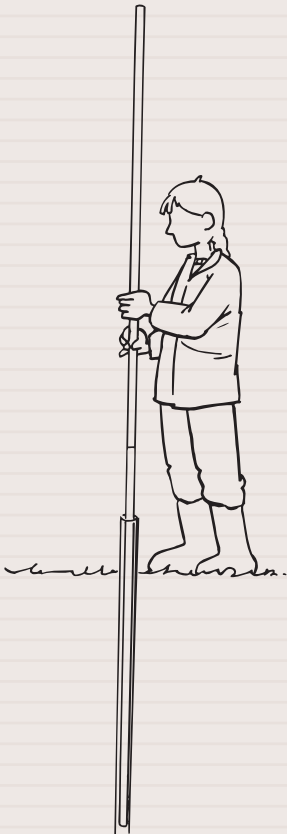
# LOST CONE DRILLING METHOD

## P1.10

Using an electrical percussion hammer and the casing the lost cone is hammered into the soil.



A filter tube is placed in the casing.



Drilling a bore hole is often combined with sampling and describing a profile.

If both these activities are not necessary during the drilling procedure then drilling can be executed fast and efficient applying the so called lost cone drilling method.

Eijkelpamp Agrisearch Equipment developed a manually controlled set using an electrical percussion hammer to hammer the lost cone and the accompanying casing into the soil.

### 10.100 Lost cone drilling set, standard set for drilling according to the lost cone method

The specially designed lost cone is hammered into the soil using an electrical percussion hammer which is placed on the casing.

The lost cone produces a very straight bore hole that is slightly wider in diameter than the casing in order to reduce the friction.

This procedure makes it easier to reach greater depth and the friction on extracting the casing is limited.

On reaching the desired depth a filter tube can be lowered through the casing or sensors can be left in the bore hole.

Subsequently the casing can be extracted using the 2-person operated rod puller in combination with the universal casing and rod pulling clamp.

This very complete set contains: an electrical percussion hammer, an aggregate with insulation guard, striking pens, drive-cone holder for percussion casing, steel casing, pulling equipment, lost cones and various accessories.

The standard set is equipped for drilling to a depth of up to 10 m.



Lost cone drilling set



Lost cones



Casing with lost cone

# LOST CONE DRILLING METHOD

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P1.10

## Applications

The lost cone drilling method is successfully applied when placing monitoring well pipes with a small diameter, for environmental research.

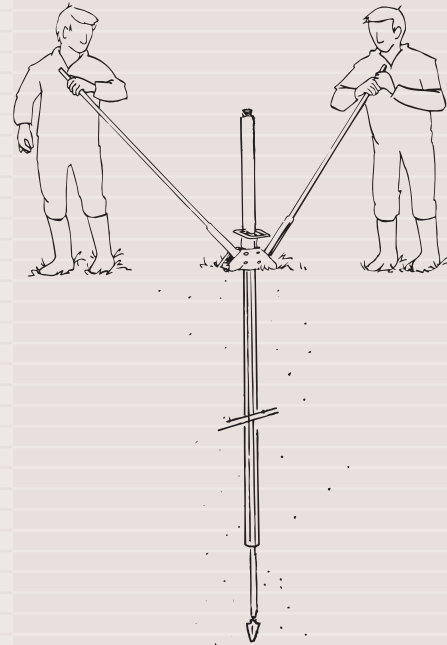
After drilling the lost cone is left in the soil. This does not cause any environmental problems as the material used is present in the soil by nature.

A completely different application of the set is making holes for the installation of explosives for seismic research.

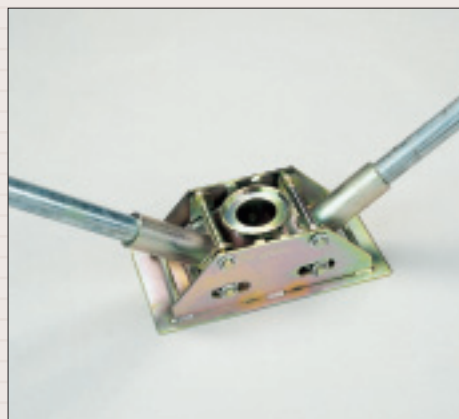
## Advantages

- Complete set.
- Fast and efficient drilling method.
- No large means of transport required allowing operation in less accessible areas.
- The special shape of the lost cones makes that there is less friction when the casing is inserted and extracted again.

Using the 2-man operated mechanical rod puller the casing is pulled from the bore hole.



Casing with striking pen



2-man operated mechanical rod puller



Casing/rod puller clamp + clamping jaw

## BENEFITS

### Lost cone drilling set

- Solves problems installing wells in stony soils
- Also the safest way to lower explosives
- Bentonite plugs will repair layers perfectly
- Ideal in combination with Direct Well
- Tested for ten-thousands of drilling meters
- Non-toxic iron lost point copes with analysis



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## PARTS LIST

Art.no.	Description	Qty. in set	Art.no.	Description	Qty. in set
<b>P1.10</b>	<b>Lost-point drilling method</b>		10.80.32	Drive cone, steel, patented design, patent no.1005899, Ø 70 mm, for rotating and/or hammering augering according to the displacement principle	
<b>10.100</b>	<b>Lost cone drilling set, standard set for lost-cone drilling method to a depth of 10 m</b>		10.94	Bentonite plugs, Ø 34 mm, patent nr 1001708 length 50 cm, seals a borehole with a Ø of 70 mm maximum pack of 20 pieces (10 m total)	
**04.18.81	Percussion hammer (HM 1800), electric, 220 V, beating power 36.4 Joule, inclusive chisel 400 mm	1			
**99.13	Generator, max. power 3700 W, continuous power: 3300 W, 230V 50 Hz, tank capacity 17 l, run duration 8.8 hrs. Dimensions 580x477x508 mm. Incl. oil level guard	1		<b>Consumables which are used in combination with the lost-cone drilling set only for installation of groundwater monitoring wells:</b>	
*99.13.03	Collector box, synthetic, to place generator when working in the field (to prevent petrol- and oil leakage). Dimensions: 80x60x12 cm	1	10.01.21	Perforated pipe, natural HDPE, Ø 32x25 mm, length 100 cm, with horizontal slits (0.3 mm), with screw thread socket 10.01.22 (same Ø) and leakproof till min. 3.0 bar, tensile strength max. 250 kg, set of 5 pcs., with KIWA 10.01.21 certificate	
**99.13.01	Insulation guard to protect electrical apparatus which are connected to a generator Obligated acc. to NEN1010 for generator 2000 VA or more. Not suitable for mains voltage with rim earthing. Incl. adapter cable with europlug (DIN49441/CEE7)	1	10.01.27	Plain pipe, natural HDPE, Ø 32x25 mm, with screw thread socket (same Ø) and leakproof till min. 3.0 bar, tensile strength max. 250 kg, length 100 cm, set of 5 pcs., with KIWA certificate	
**10.80.03	Striking pen for electric percussion hammer (04.18.81), SW 28 mm x screw thread percussion casing 54 mm	2	10.01.24	Cap, natural PE, for pipes 32 mm, set of 20 pcs.	
**10.80.04	Drive cone-holder for percussion casing, Ø 54 mm	1	10.01.26	Bottom cap, POM, screwable, pointed model, Ø 32 mm, set of 10 pcs.	
**10.80.07	Steel percussion casing, Ø 54x40 mm, length 1 m	10	10.01.25	Top cap, PE, with gate cap and de-aeration, Ø 32 mm, set of 10 pieces	
**10.80.12	Scraper for percussion casing Ø 54 mm	1		<b>Accessories for pulling out the casings hydraulically:</b>	
**04.18.55	Casing and rod puller clamp, universal, for use of clamping jaw, Ø 22-80 mm, excl. clamping jaw	1	04.18.68	Hydraulic extractor, pulling force 80 kN. Complete set with extracting cylinder (Ø 65 mm), hydraulic aggregate with electric hydraulic extractor tube set. Automatic switching of extracting cylinder (excl. ball clamp and excl. bottom plate 04186801)	
**04.18.55.03	Clamping jaw, Ø 50-54 mm	1	04.18.68.01	Bottom plate with handle for hydraulic extraction system	
**04.18.50	Mechanical rod puller, 2-man operated, pull-up force 40 kN, useful length of stroke about 70 mm, excl. 2 crow bars	1		Optional striking pens when using other types of percussion hammers:	
**04.18.56	Filling ring for use of casing and rod puller clamp (04.18.55) in mechanical rod puller (04.18.50)	1	10.80.01	Striking pen for petrol percussion hammer Cobra 248, 22 mm hexagon x screw thread percussion casing 54 mm	
**04.18.07.01.01	Crow bar, length 1.9 m, for rod pullers 20 and 40 kN	2	10.80.02	Striking pen for electric percussion hammer (04.18.80), SW 30 mm x screw thread percussion casing 54 mm	
**99.51.30	Ring-nut spanner 30 mm	1	10.80.06	Striking pen for gasoline powered percussion hammer Cobra TT, 32 mm hexagon x screw thread percussion casing 54 mm	
**10.80.90.02	Pipe wrench, Swedish design, till Ø 76 mm, length 58 cm	2			
**10.80.32	Drive cone, steel, patented design, patent no.1005899, Ø 70 mm, for rotating and/or hammering augering according to the displacement principle	50			
**01.10.21	Steel brush (stainless)	1			
**01.11.03	Work gloves, pair, oil- and grease resistant, sturdy, with short sleeve	2			
	<b>Consumables which are used in combination with the lostcone drilling set for seismic and environmental drilling:</b>				