

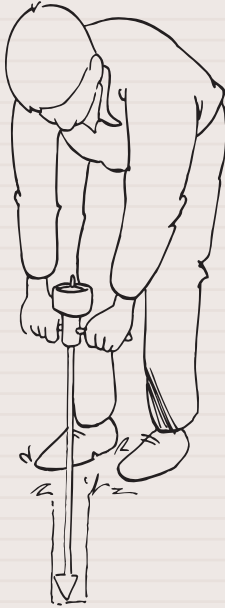


You will return to the contents of P1 SOIL by clicking the pictogram

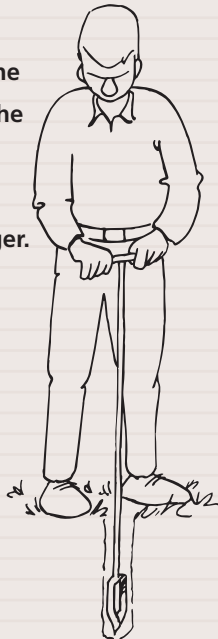
# HAND PENETROMETER EIJKELKAMP

## P1.50

The penetrometer is pushed perpendicular into the soil at a speed of approximately 2 cm per sec. applying equal pressure on both grips.



To be able to determine the resistance to penetration of the lower layers in the soil the hole is pre-drilled using the Edelman auger.



## BENEFITS

### 06.01 Hand penetrometer

- Accurate hydraulic reading dial
- Perfect for agronomists and contractors
- Can be operated with full body weight
- Dial equipped with drag pointer
- Comes with all rods and cones 1-5 cm<sup>2</sup>
- Set B for depths up till 3 m
- Cone check to check quality of cones
- Auger to remove hard layers
- Very simple operation

Penetrometers are used to determine the resistance to penetration (bearing capacity) of a soil. The Eijkelkamp penetrometer is delivered in two different sets:

**06.01.SA** Hand penetrometer Eijkelkamp, set to a depth of 1 meter

**06.01.SB** Hand penetrometer Eijkelkamp, set to a depth of 3 meter

Both sets can be used for probing to a dept of between 1 and 3 meter. Both sets contain various cones, probing- and extension rods, a measuring instrument with a pressure gauge, tool set, a cone check, a calibration certificate and an instruction manual.

The measuring range of the pressure gauge is 10000 kN/m<sup>2</sup> (=10000 kPa).

The scale range runs from 0 up to 1.0 kPa. The accuracy is +/- 8% in the advised measuring range.

The sets have been packed in compact aluminium carrying cases.

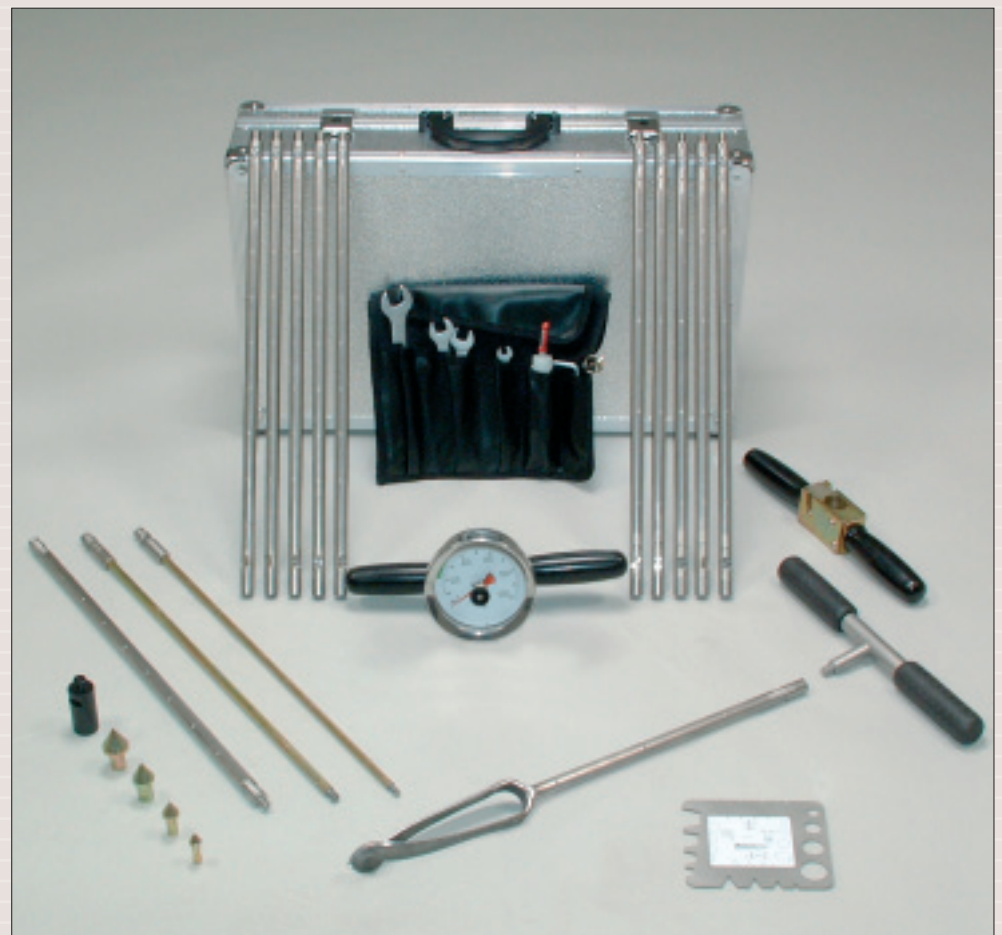
to execute research of a soil profile as well, or to penetrate a tougher layer in the soil.

The auger is also applied to drill-out the probing hole to avoid adhesion between the probing rods and the shaft wall.

Basically the penetrometer consists of a measuring instrument, a probing rod and a cone.

The device is pushed perpendicular into the soil by applying equal pressure on both grips. Jerking pushes yields values which are too high and which do not represent the soil.

The resistance measured by the cone can be read from the pressure gauge as indicated by the black pointer. The maximum resistance recorded during measurement is indicated by the red dragging pointer.



Hand penetrometer Eijkelkamp (SB)

# HAND PENETROMETER EIJKELKAMP



P1.50

The resistance to penetration (kPa/cm<sup>2</sup>) of the soil can now be determined by dividing the reading value by the surface of the cone. The value of the resistance to penetration to be expected determines the surface of the cone to be used.

For high values the small cone is used and for low values the larger cones are applied. The larger the cone the more accurate the value of the resistance to penetration can be determined.

## Advantages

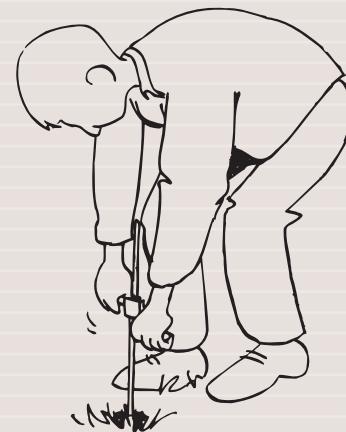
- Compact and complete.
- Easy to operate.
- Little maintenance.

## Applications

Because of their depth range the devices can be applied for the following:

- General soil research.
- Basic advice for foundations.
- Checking artificial compaction of the soil.
- Research of the growing circumstances (to be expected) of plants in the soil.
- Tracing compacted layers in the soil.

Applying the pull/push handle the extension- and probing rods can be extracted from the soil.



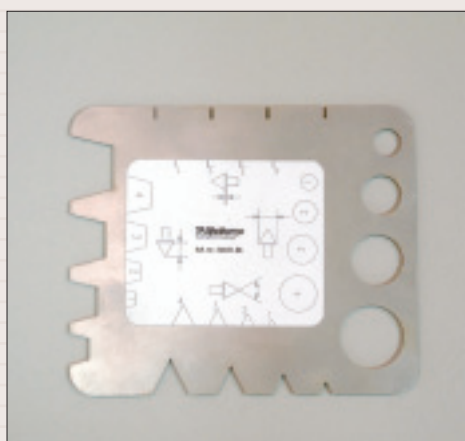
The cone check is used to inspect the wear of the cones.



Measuring instrument with manometer



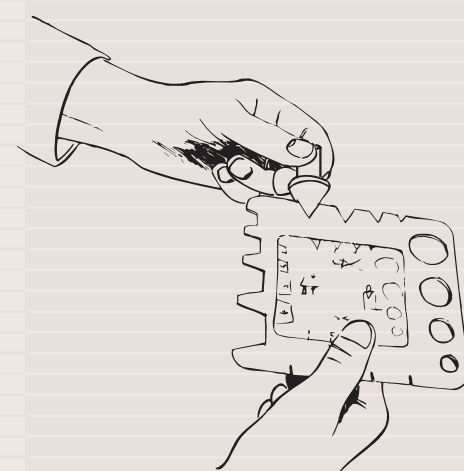
Cones and probing rods



Cone check



Hand penetrometer Eijkelkamp (SA)





## PARTS LIST

Art.no.	Description	Qty. in set	Art.no.	Description	Qty. in set
<b>P1.50</b>	<b>Hand penetrometer Eijkelkamp</b>		**06.01.11.3B	Extension rod, Ø15 mm, length 50 cm	5
	<b>The hand penetrometer Eijkelkamp is supplied in two standard sets.</b>		**06.01.12	Synthetic quick coupling part	1
			**06.01.19	Push-/pull handle, Ø 15 mm	1
<b>06.01.SA</b>	<b>Hand penetrometer Eijkelkamp, minimal design, for measurements to a depth of 1 m</b>		**01.02.02.05.M	Edelman auger, bottom part, comb.type, M-10 thr., Ø 5 cm	1
**06.01.02.01	Cone, base area 1 cm <sup>2</sup> , angle 60 deg.	1	**06.01.30	Stainless steel handle, M-10 thr.	1
**06.01.03.02	Cone, base area 2 cm <sup>2</sup> , angle 60 deg.	1	**06.01.31	Stainless steel extension rod, Ø 15 mm, 50 cm, M-10 thr.	5
**06.01.04.03	Cone, base area 3 1/3 cm <sup>2</sup> , angle 60 deg.	1	**06.01.26	Inspection jig for cones 06.01.02.01, 06.01.03.02, 06.01.04.03 and 06.01.05.04 according to NEN 3680 and NEN 5140	1
**06.01.05.04	Cone, base area 5 cm <sup>2</sup> , angle 60 deg.	1	**06.01.20	Aluminium carrying case, dim. 58x35x14 cm	1
**06.01.08.1A	Probing rod, Ø 8 mm, length 50 cm, (for cone 1 cm <sup>2</sup> )	1	**06.01.21	Bag of tools	1
**06.01.09.2A	Probing rod, Ø 10 mm, length 50 cm (for cone 2 cm <sup>2</sup> )	1		<b>To be used optionally with both penetrometer sets:</b>	
**06.01.10.3A	Probing rod, Ø 15 mm, length 50 cm, (for cone 3 1/3 cm <sup>2</sup> to cone 10 cm <sup>2</sup> )	1	06.01.28	Handle for probing rod.	
**06.01.11.3B	Extension rod, Ø15 mm, length 50 cm	1	06.01.15.1B	Probing rod, Ø 8 mm, length 100 cm, (for cone 1cm <sup>2</sup> )	
**06.01.14	Measuring instrument with manometer for measurements till max. 1000 N/cm <sup>2</sup> . Incl. calibration certificate. The advised measuring range with an accuracy of +/- 8 % is between 200 and 700 N/cm <sup>2</sup>	1	06.01.22.07	Cone, base area 1 cm <sup>2</sup> , angle 30 deg.	
**06.01.21	Bag of tools	1	06.01.22.08	Cone, base area 2 cm <sup>2</sup> , angle 30 deg.	
**06.01.13	Aluminium carrying case, dim. 56x18x29 cm	1	06.01.22.09	Cone, base area 3 1/3 cm <sup>2</sup> , angle 30 deg.	
**06.01.26	Inspection jig for cones 06.01.02.01, 06.01.03.02, 06.01.04.03 and 06.01.05.04 according to NEN 3680 and NEN 5140	1	06.01.22.10	Cone, base area 5 cm <sup>2</sup> , angle 30 deg.	
			06.01.22.11	Cone, base area 7,5 cm <sup>2</sup> , angle 30 deg.	
			06.01.22.12	Cone, base area 10 cm <sup>2</sup> , angle 30 deg.	
				<b>To be used optionally for repairs</b>	
<b>06.01.SB</b>	<b>Hand penetrometer Eijkelkamp, standard design, for measurements to a depth of 3 m</b>		06.01.25	Calibration of hand penetrometer: making an inspection/calibration certificate and eventual a repair advice when deviations occur	
**06.01.02.01	Cone, base area 1 cm <sup>2</sup> , angle 60 deg.	1	06.01.20.02	Bottle of spare oil	
**06.01.03.02	Cone, base area 2 cm <sup>2</sup> , angle 60 deg.	1			
**06.01.04.03	Cone, base area 3 1/3 cm <sup>2</sup> , angle 60 deg.	1			
**06.01.05.04	Cone, base area 5 cm <sup>2</sup> , angle 60 deg.	1			
**06.01.08.1A	Probing rod, Ø 8 mm, length 50 cm, (for cone 1 cm <sup>2</sup> )	1			
**06.01.09.2A	Probing rod, Ø 10 mm, length 50 cm (for cone 2 cm <sup>2</sup> )	1			
**06.01.10.3A	Probing rod, Ø 15 mm, length 50 cm, (for cone 3 1/3 cm <sup>2</sup> to cone 10 cm <sup>2</sup> )	1			
**06.01.14	Measuring instrument with manometer for measurements till max. 1000 N/cm <sup>2</sup> . Incl. calibration certificate. The advised measuring range with an accuracy of +/- 8 % is between 200 and 700 N/cm <sup>2</sup>	1			