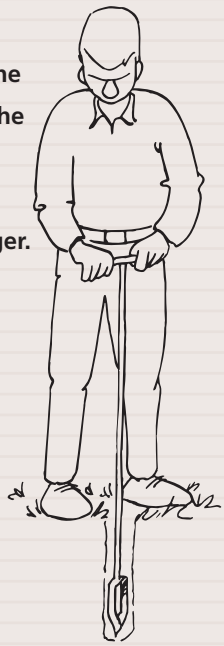
EL PENETROMETRESI

YENER analitik
YENER ANALİTİK CİHAZLAR SAN. ve TİC. LTD. ŞTİ.

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.



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.

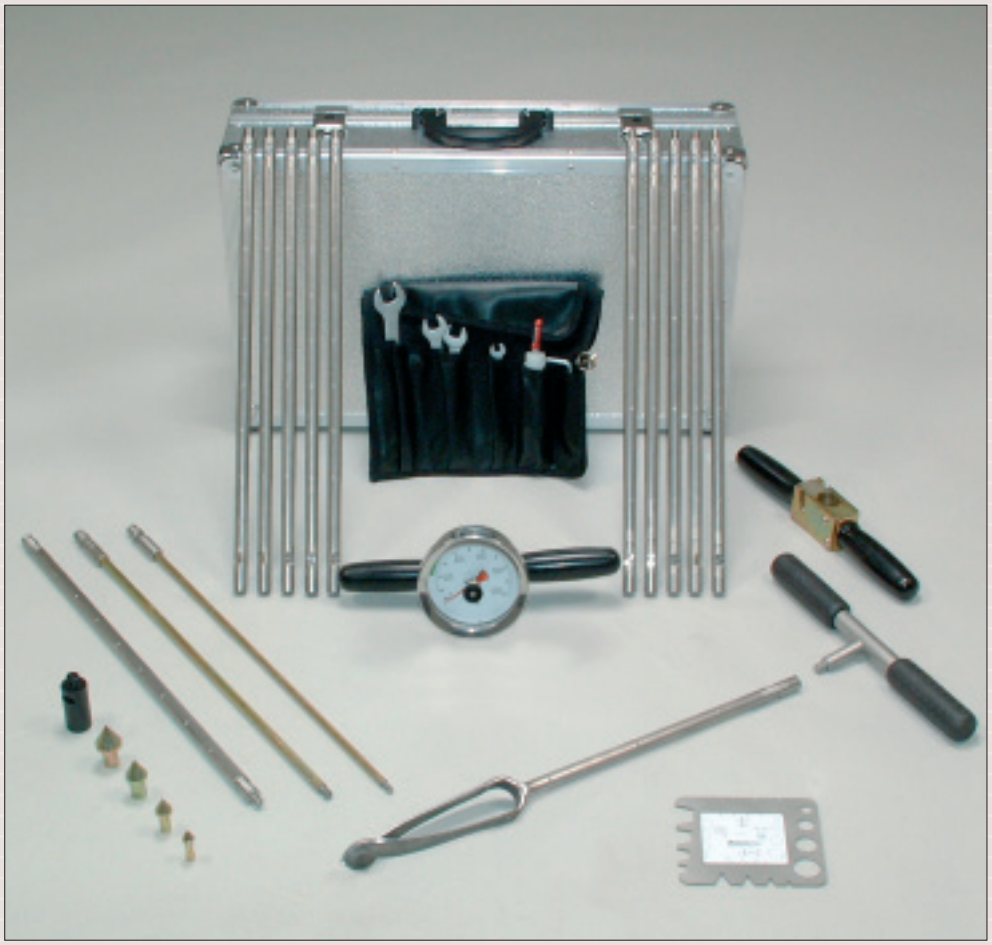
The measuring range of the pressure gauge is 10000 kN/m^2 (=10000 kPa).
The scale range runs from 0 up to 1.0 kPa. The accuracy is +/– 8% in the advised measuring range. The sets have been packed in compact aluminium carrying cases.

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)

BENEFITS

06.01 Hand penetrometer

- Accurate hydraulic reading dial
- Perfect for agronomists and contractors
- Can be operated with full body weight
- Dial equiped with drag pointer
- Comes with all rods and cones 1-5 cm2
- Set B for depths up till 3 m
- Cone check to check quality of cones
- Auger to remove hard layers
- Very simple operation

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The resistance to penetration (kPa/cm²) 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

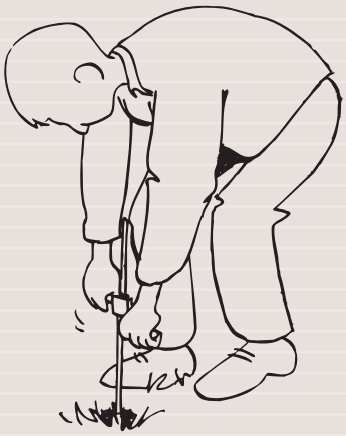
- ❒ Compact and complete.
- ❒ Easy to operate.
- ❒ Little maintenance.

Applications

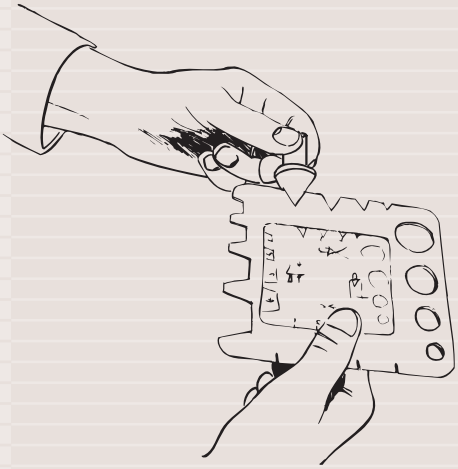
Because of their depth range the devices can be applied for the following:

- ❒ General soil research.
- ❒ Basic advise 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.

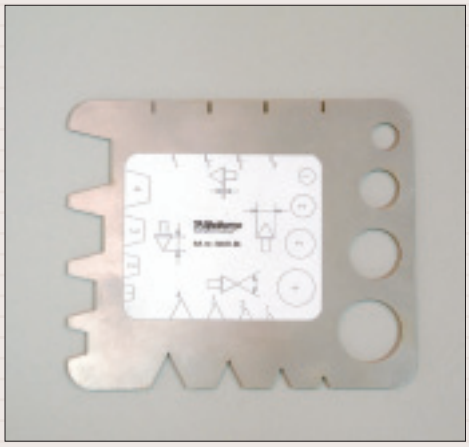


The cone check is used to inspect the wear of the cones.



Measuring instrument with manometer

Cones and probing rods



Cone check

Hand penetrometer Eijkelkamp (SA)

Eijkelkamp Agrisearch Equipment

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EL PENETROMETRESi PARCA LiSTESi

Art.no.	Description	Qty. in set
P1.50	**Hand penetrometer Eijkelkamp**	
	The hand penetrometer Eijkelkamp is supplied in two standard sets.	
06.01.SA	**Hand penetrometer Eijkelkamp, minimal design, for measurements to a depth of 1 m**	
**06.01.02.01	Cone, base area 1 cm^2, angle 60 deg.	1
**06.01.03.02	Cone, base area 2 cm^2, angle 60 deg.	1
**06.01.04.03	Cone, base area 3 1/3 cm^2, angle 60 deg.	1
**06.01.05.04	Cone, base area 5 cm^2, angle 60 deg.	1
**06.01.08.1A	Probing rod, Ø 8 mm, length 50 cm, (for cone 1 cm^2)	1
**06.01.09.2A	Probing rod, Ø 10 mm, length 50 cm (for cone 2 cm^2)	1
**06.01.10.3A	Probing rod, Ø 15 mm, length 50 cm, (for cone 3 1/3 cm^2 to cone 10 cm^2)	1
**06.01.11.3B	Extension rod, Ø15 mm, length 50 cm	1
**06.01.14	Measuring instrument with manometer for measurements till max. 1000 N/cm^2. Incl. calibration certificate. The advised measuring range with an accuracy of +/- 8 % is between 200 and 700 N/cm^2	1
**06.01.21	Bag of tools	1
**06.01.13	Aluminium carrying case, dim. 56x18x29 cm	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	
06.01.SB	**Hand penetrometer Eijkelkamp, standard design, for measurements to a depth of 3 m**	
**06.01.02.01	Cone, base area 1 cm^2, angle 60 deg.	1
**06.01.03.02	Cone, base area 2 cm^2, angle 60 deg.	1
**06.01.04.03	Cone, base area 3 1/3 cm^2, angle 60 deg.	1
**06.01.05.04	Cone, base area 5 cm^2, angle 60 deg.	1
**06.01.08.1A	Probing rod, Ø 8 mm, length 50 cm, (for cone 1 cm^2)	1
**06.01.09.2A	Probing rod, Ø 10 mm, length 50 cm (for cone 2 cm^2)	1
**06.01.10.3A	Probing rod, Ø 15 mm, length 50 cm, (for cone $3^1/_3$ cm^2 to cone 10 cm^2)	1
**06.01.14	Measuring instrument with manometer for measurements till max. 1000 N/cm^2. Incl. calibration certificate. The advised measuring range with an accuracy of +/- 8 % is between 200 and 700 N/cm^2	1

Art.no.	Description	Qty. in set
**06.01.11.3B	Extension rod, Ø15 mm, length 50 cm	5
**06.01.12	Synthetic quick coupling part	1
**06.01.19	Push-/pull handle, Ø 15 mm	1
**01.02.02.05.M	Edelman auger, bottom part, comb.type, M-10 thr., Ø 5 cm	1
**06.01.30	Stainless steel handle, M-10 thr.	1
**06.01.31	Stainless steel extension rod, Ø 15 mm, 50 cm, M-10 thr.	5
**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
**06.01.20	Aluminium carrying case, dim. 58x35x14 cm	1
**06.01.21	Bag of tools	1
	To be used optionally with both penetrometer sets:	
06.01.28	Handle for probing rod.	
06.01.15.1B	Probing rod, Ø 8 mm, length 100 cm, (for cone 1cm^2)	
06.01.22.07	Cone, base area 1 cm^2, angle 30 deg.	
06.01.22.08	Cone, base area 2 cm^2, angle 30 deg.	
06.01.22.09	Cone, base area 3 1/3 cm^2, angle 30 deg.	
06.01.22.10	Cone, base area 5 cm^2, angle 30 deg.	
06.01.22.11	Cone, base area 7,5 cm^2, angle 30 deg.	
06.01.22.12	Cone, base area 10 cm^2, angle 30 deg.	
	To be used optionally for repairs	
06.01.25	Calibration of hand penetrometer: making an inspection/calibration certificate and eventual a repair advice when deviations occur	
06.01.20.02	Bottle of spare oil	