



**SELF-BORING PRESSUREMETER
OPERATED WITH A TEXAM CONTROL UNIT
SIMPLE, RUGGED CONSTRUCTION**

The BOREMAC is a self-boring pressuremeter probe used to determine strength and stiffness properties of silt and sand.

Description

The self-boring pressuremeter system is used for the in situ measurement of mechanical properties of silt and sands. It utilizes a standard N size monocellular TEXAM probe which bores its way into place through soils.

The BOREMAC is comprised of:

Desintegrator module

This module is at the base of the probe and consists of a cutting shoe and a cutting tool. The position of the cutting tool is adjustable with respect to the leading edge of the shoe.

Probe module

A standard N-size TEXAM monocellular probe with modified outer metallic rings and jam nuts.

Probe-to-outer-rod adapter

This adapter is used to link the probe with the outer rod string and contains 4 large openings to allow the return of the drilling fluid and cuttings to the surface.

The tubing

A high-pressure single conduit fitted with a shut-off quick connect to keep the probe and tubing saturated.

Advantages & Limitations

- Can help reducing soil disturbance
- Operated with a TEXAM control unit
- The BOREMAC is not suited for very dense or hard soils. Also, it can only tolerate little amount of clay and gravel.

Applications

- Bearing capacity estimation of shallow and deep foundations
- Settlement estimation of all types of foundations
- Deformation of laterally loaded piles and sheet piles

Specifications

PROBE

Diameter (deflated)	73 mm
Overall length	180 cm
Maximum working pressure of the probe	4000 kPa
Weight	17 kg

RODS

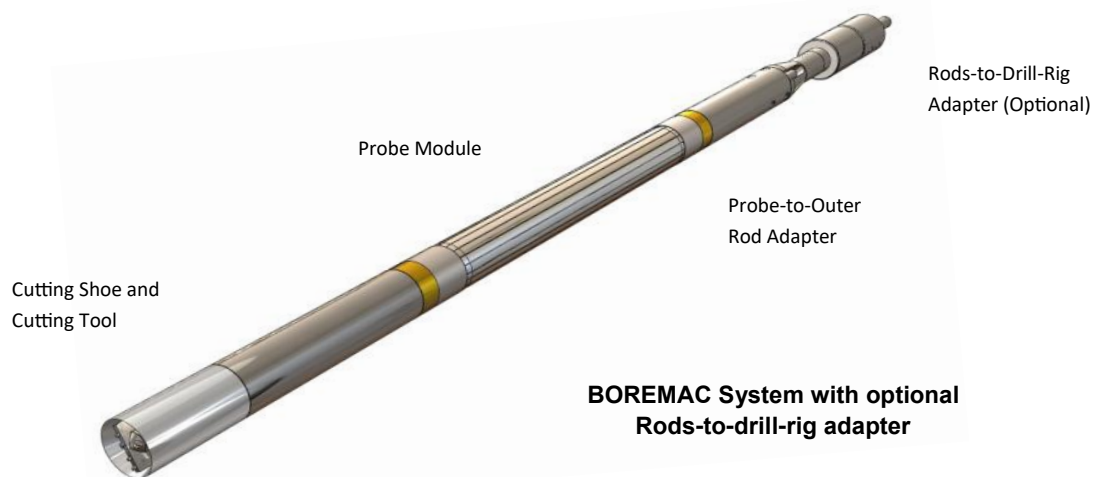
Outer rods OD	46 mm (1 13/16")
Outer rods ID	38 mm (1 1/2")
Inner rods OD	12.6 mm (1/2")
Inner rods ID	6.3 mm (1/4")

CUTTING TOOL REQUIREMENTS

Supply requirements for the hydraulic motor: 19 l/m (5 gpm) at 17500 kPa

Cutter rotation: 50 to 200 rpm

Drilling fluid requirements : 2 to 5 gpm at 700 kPa (water or drilling mud)



Test Procedure

A drill rig must be used for providing the insertion force required to push the probe into place, for providing the hydraulic force driving the cutting tools, and for injecting drilling fluid. As material enters the cutting shoe, it is broken up by the cutter and brought up to the surface with the drilling fluid in the annular space formed by the outer rod and the borehole walls. When the probe reaches the test depth, the self-boring operation is stopped and the pressuremeter test is carried out, after which the descent of the probe is resumed. Lengths of inner and outer rods are added as needed. Should a layer of gravel have to be traversed or tested, conventional drilling techniques are used to advance the hole. The test can be carried out using self-boring probe assembly in the pre-drilled hole.

Ordering Information

Please specify:

- Tubing length
- Quantity of rods

Optional Accessories

- Rods-to drill adapter