



The Humboldt H-4212MH Pocket Shear Vane Tester comes with 3 vanes and an L-wrench to attach them to the unit. The small vane is pre-attached to the unit and the standard and large vanes are attached by sliding them over the small vane, aligning the set screw with the indent on the small vane and securing them with the set screw.

To Use:

- 1) Mount the desired vane to the unit and make sure it is secure.
- 2) Align the "0" on the inner dial on top of the unit with the mark on the outer ring using a counter-clockwise rotation while holding the outer ring.
- 3) The test surface should be at least two inches in diameter and relatively flat.

- 4) Press the unit into the soil sample until the blades are covered.
- 5) While maintaining a constant pressure, rotate the outer ring of the unit. Turn the outer ring until failure occurs. (The speed of rotation should be a speed that accomplishes failure within 5 to 10 seconds.)
- 6) Release the outer ring, slowly, once failure has occurred. The mark on the outer ring will remain in place indicating the shear value at failure.
- 7) Multiply readings by 0.2 when using large vane and 2.5 when using small vane.

Vane	Stress Range	Usage
Standard	0 to 1 kg/cm ²	Fully saturated cohesive soils with undrained strength independent of normal pressure
Large	0.2 kg/cm ²	Remolded samples
Small	2.5 kg/cm ²	Stiffer clays

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