

LAB VANE SHEAR

The Lab Vane Shear System is used to quickly calculate peak and/or residual undrained shear strength on intact or remolded specimens in the lab. Once the set-up is in place and the test conditions are selected, the Vane Shear system will run the entire test from start to finish. The Vane Shear utilizes a high speed, precision micro-stepper motor to apply the torque. An embedded control board with a dedicated CPU takes readings from the torque sensor and controls the stepper motor.

- Determine both peak and residual shear strength
- Highlighy portable and lightweight
- Built in safety features
- Smart and sophisticated technologies to simplify testing
- Repeatable, reliable, and accurate results you can trust
- Real-time and remote test parameter changes for quality control
- Convenient reporting and data export
- Faster, smarter, better: designed with full automation and manual control options
- Easy upgrade to perform additional test types
- Designed and manufactured in the USA

Applicable Test Standards

ASTM D4648

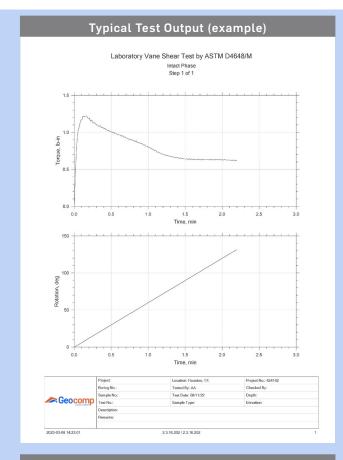


Standard Lab Vane Shear System

LAB VANE SHEAR SYSTEM



TECHNICAL SPECIFICATIONS TORQUE CAPACITY 9 lbf-in (1 Nm) **ROTATIONAL MOTOR** Micro-stepper system with built-in controls **ROTATIONAL SPEED RANGE** 0 to 8 rad/sec (customizable for higher speeds) **CONTROL** Torque or Rotation **TORQUE MEASUREMENT** Embedded torque sensor **MEASUREMENT RANGE** -1 Nm (-9 lbf-in) to 1 Nm (9 lbf-in) **MEASUREMENT ACCURACY** 61 Nm (0.0005 lbf-in) **VERTICAL TRAVEL** 6 in (152 mm) **POWER** 110/220 V, 50/60 Hz, 1 phase **DIMENSIONS** 394 x 400 x 394 mm (15.5 x 15.75 x 15.5 in) **WEIGHT** 10 kg (22 lbs) **INCLUDED** • GeoNet-U USB 2.0 network adapter and cable to link to PC/laptop • VS software module to automatically run and report tests **ACCESSORIES** • Four vane blades: 2 short and 2 long (custom lengths available) • H:D of 1:1: 12.7 x 12.7 mm (0.5 x 0.5 in) • H:D of 2:1: 12.7 x 25.4 mm (0.5 x 1.0 in) **WARRANTY** 12 month warranty; extended warranties available User Friendly Interface File View Run Calibrate Control Report Options Help Project Specimen Water Content Read Table Test Parameters Intact Table Residual Table Torque Ratio



Typcial Test Output (example)

Laboratory Vane Shear Test by ASTM D4648/M Intact Phase Step 1 of 1

Elapsed Time min	Rotation deg	Torque Ib-in	Lab Shear Strength psi	Field Shear Strength psi	
	0.000	0.000413	0.00158	0.0015	
0.017267	0.759	0.496	1.89	1.8	
0.034583		0.857	3.27	3.2	
0.05181		1.02	3.90	3.9	
0.0693	3.88	1.08	4.14	4.1	
0.086633		1.16	4.43	4.4	
0.10413		1.17	4.48	4.4	
0.11698		1.22	4.65	4.6	
0.13443		1.21	4.62	4.6	
0.15173		1.22	4.66	4.6	
0.16923		1.22	4.66	4.6	
0.1862		1.19	4.55	4.5	
0.2035		1.19	4.56	4.5	
0.22097		1.15	4.40 4.46	4.4	
0.25143		1.13	4.40	4.4	
0.2514.		1.13	4.33	4.3	
0.2686		1.13	4.32	4.3	
0.3037		1.10	4.20	4.2	
0.31678		1.10	4.20	4.2	
0.334		1.08	4.13	4.1	
0.35147		1.09	4.16	4.1	
0.36878		1.06	4.06	4.0	
0.38633		1.07	4.07	4.0	
0.40383		1.05	4.00	4.0	
0.41690		1.05	4.03	4.0	
0.43417	25.8	1.03	3.95	3.9	
0.45163	26.8	1.03	3.92	3.9	
0.46895		1.03	3.92	3.9	
0.48625	28.9	1.01	3.86	3.8	
0.50388		1.01	3.85	3.8	
0.51673	30.7	0.993	3.79	3.7	
0.53403		1.00	3.84	3.8	
0.55155		0.979	3.74	3.7	
0.56885		0.982	3.75	3.7	
0.58612		0.973	3.71	3.7	
0.6035		0.965	3.69	3.6	
0.6208		0.965	3.69	3.6	
0.63383		0.948	3.62	3.6	
0.65107		0.956	3.65	3.6	
0.66852		0.935	3.57	3.5	
0.68581 0.7031		0.940 0.921	3.59 3.52	3.5	
				3.5	
0.72033 0.73335		0.922 0.911	3.52 3.48	3.5	
0.7508		0.902	3.44	3.4	
0.7679		0.902	3.44	3.4	
0.785		0.891	3.40	3.4	
0.80272		0.895	3.42	3.4	
0.82000		0.875	3.34	3.3	
0.8200.	40.9	0.675	3.34	3.3	
	Project	Location: Houston, TX		Project No.: 424142 Checked By:	
	Boring No.: Sample No.:	Tested By: AA Test Date: 08/11/22	Checked By: Depth:		
Geocomp	Test No.:	Sample Type:	Elevation:		
	Description:				
	Remarks:				

V.3 @Geocomp 5/2024