

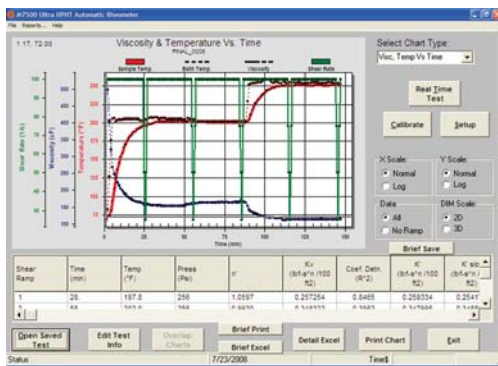
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The **Grace Instrument M7500 Ultra HPHT Rheometer** is a coaxial cylinder, rotational, high pressure, and high temperature rheometer. It is engineered to measure various rheological properties of fluids (including API HPHT tests) under a range of pressures and temperatures, up to 30,000 psi and 600 °F. An optional cement module is also available for testing the rheology of cements.

- The M7500 is built with a thick-walled steel pressure cell, which is surrounded by a fail-safe steel containment vessel to ensure operator safety.
- It is designed for easy test set up, sample loading and post-test cleaning.
- Cool-down after tests can be sped up by connecting a tap water supply or a chiller into the M7500's cooling fluid loop.
- Innovative patented design ensures against contamination of test sample with pressurization fluid.
- Recently patented design eliminates the need for fragile and expensive "V" jewel bearings.



### M7500 Software - PC Screen Image:



Address	Comments	Units	Bit Number
0	Temperature	°F	15
1	Pressure	psi	16

- report generated by clicking on "Detail Excel" button in **M7500daq™**

Step No.	Time (Min)	Temp (°F)	Pressure (psi)	Shear Rate (1/s)	Speed (RPM)	Shear Stress (dyn/cm <sup>2</sup> )	Viscosity (cP)	GM (mm/Deg)	Friction FT (Deg)
1	25	117	0	102.38	600	210.0	41.2	69.9	41.2
2	27.2	110	0	102.38	600	388.1	36.1	71	70.1
3	28.6	120	0	102.38	600	202.7	39.7	69.8	39.1
4	29.6	110	0	340.45	200	101.2	44.4	80	29.9
5	31	110	0	102.38	600	368	38.6	29.9	19.2
6	32.4	130	0	102.38	600	26.9	20	19.9	5.1
7	34.6	142	0	102.38	600	31.7	31.7	5	25.1
8	46	149	0	102.38	600	202.8	28.7	57.5	57.3
9	47.5	150	0	102.38	600	177.9	34.8	57.5	34.8
10	48.5	150	0	340.45	200	107.1	43.3	34.9	26.8
11	49.5	150	1450	102.38	600	30.4	34.9	26.9	18.3
12	51	150	0	102.38	600	217	310.4	18.3	6.1
13	52.2	150	0	102.38	600	26.7	30.2	6.6	6.1
14	53.9	150	2382	102.38	600	394	34.7	89.9	89.3
15	55.2	150	2384	102.38	600	233	41.7	69.4	41.7
16	56.4	151	2387	340.45	200	160.4	47.1	42.1	31.4
17	57.6	150	2391	102.38	600	186	62.4	31.9	21.1
18	58	150	2387	102.38	600	36	34.7	21.1	6.4
19	60	151	2391	102.38	600	27.8	34.4	21.2	6.4
20	62.4	150	2384	102.38	600	207.9	34.8	62.4	62.8
21	63.6	150	2384	102.38	600	207.9	34.8	62.4	62.8
22	64.8	150	2384	102.38	600	207.9	34.8	62.4	62.8
23	66	150	2384	102.38	600	207.9	34.8	62.4	62.8
24	67.2	150	2384	102.38	600	207.9	34.8	62.4	62.8
25	68.4	150	2384	102.38	600	207.9	34.8	62.4	62.8
26	69.6	150	2384	102.38	600	207.9	34.8	62.4	62.8
27	70.8	150	2384	102.38	600	207.9	34.8	62.4	62.8

### Measurement Range (B1, B5 bob):

- Sample size: 132 mL
- Speed: 0.01 to 600 rpm continuous
- Shear Rate: 0.0082 to 1020 S<sup>-1</sup>
- Temperature: Ambient (20 °F w/chiller) to 600 °F
- Pressure: Atm to 20,000 psi or 30,000 psi
- Viscosity: 0.5 to 5,000,000 Centipoise
- Torque: 7 μN.m to 10 mN.m
- Shear Stress: 2 to 1,600 dyne/cm<sup>2</sup>
- Resolution: 0.3% of full scale range or better
- Repeatability: ±1% of torque span or better

### Mechanical Specifications:

- Dimensions / Footprint: 22" tall x 12" wide x 24" deep (tower)
- Weight: 250 lbs 12" tall x 25" wide x 15.5" deep (cab)

### Electrical Supply:

- Voltages: 120 VAC or 240 VAC

### Misc. Supply Specification:

- Coolant supply: Tap water or chiller
- Compressed air: 120 psi

### Includes:

- R1 sleeve • B1 bob • 1 gal. High Pressure Oil • 16 oz 100 cP cal. oil • 16 oz 200 cP cal. oil • USB/Serial adaptor • Operation manual

**M7500 geometries conform to API test specifications**