

# MODEL 300SL

## Hydraulic Materials Testing Machine



The Model 300SL is designed for tension, compression, flexure and shear strength testing on materials and assemblies. The robust design incorporates quality materials and components to ensure that our reputation for superior system performance, ease of use and longevity is maintained.

### Features and benefits

- Suitable for tension, compression, transverse, shear and other tests to a maximum force of 300kN/60,000lbf.
- Four-column rugged design allows larger samples to be tested.
- Friction-free piston operation allows smooth, controlled operation and minimal downtime.
- Different system control options are available, from a handheld wireless Bluetooth interface, or a tethered handheld interface running with a virtual machine interface application on a connected PC.



**Familiar handheld interface that is tethered to the machine. With its larger, tactile, sealed keypad, this interface is ideal for operators who use gloves to load and unload specimens and prefer a push button keypad. It requires virtual machine control software running on a connected PC to operate the basic machine functions and report basic numerical test data.**

**Wireless handheld interface that is connected to the machine by a Bluetooth link. The interface features an Android-based operating platform and can be used to control the machine by itself or in conjunction with Tinius Olsen's Horizon software**



### OPTIONS AND ACCESSORIES

- Crossheads can be closed/semi-open/or fully open for easier specimen loading and unloading.<sup>1</sup>
- In-head pocket grips can be supplied to accommodate flat or round tensile specimens.
- External grips and fixtures can be easily mounted securely.
- Full range of precision extensometers and deflectometers are available using video, laser, encoder, strain gage and/or LVDT technologies.
- Columns can be extended by up to 914mm/36in to increase test area size.<sup>1</sup> Note – screw extensions require holes in the floor.
- Top crosshead can be made adjustable and columns can be notched to allow the adjustable top crosshead to be repositioned for more comfortable working heights.<sup>1</sup>
- Safety enclosures with interlocks can be installed to protect operators from violent specimen breaks.
- Furnaces and environmental chambers can be installed for tests at high or low temperatures.
- Tinius Olsen's Horizon software can be connected to the tester by the operator.

<sup>1</sup> Supplied at the time of order

# Specifications



## MODEL 300SL SPECIFICATIONS

### FRAME SPECIFICATIONS

Tension compression load capability	Yes	
Frame capacity	kN	300
	kg	30,000
	lbf	60,000
Proof tested	To frame capacity	
Floor or table mounting	Floor mounting	
Test zones	Two	
Number of columns	Four	
Column material	Steel	
Column finish	Chrome	
Column color	Chrome	
Base material	Mild Steel	
Base finish	Pre-primed, top coat powder coat paint	
Base color	TO Cool Grey Web # E6 30 27	
Crosshead material	Mild Steel solid	
Crosshead finish	Pre-primed, top powder coat paint	
Crosshead color	TO Green Web # 00 4C 45	
Base cover	ABS recyclable	
Base cover color	Cal Black Web # 11 18 20	
Distance between screws	mm	317.5
	in	12.5
Maximum piston stroke travel	mm	152
	in	6
Maximum travel of adjustable crosshead	mm	648
	in	25.5
Stiffness	kN/mm	550
	klbf/in	3,065
Height	mm	1842
	in	72.5
Width	mm	737
	in	29
Depth	mm	483
	in	19
Weight	kg	1180
	lb	2600
Optional extension to crosshead screws	305, 610, or 914mm 12, 24 or 36in	
Optional extension to column heights	305, 610, or 914mm 12, 24 or 36in	
Adjustable top crosshead and adjustable columns	Optional	
Pit mountable	No	
Screw cover/protection	Optional	
Feet material	Mild steel with provision for anchor bolts	
Noise at full crosshead speed 2m radius	68db	

### CONTROLLER SPECIFICATIONS

Max data processing rate	168MHz
Data acquisition rate at PC	1000Hz

## MODEL 300SL SPECIFICATIONS

Number of instrument device connections – external	Four
Number of instrument device connections – internal	Three
Bluetooth enabled	v4.0 with A2DP, LE, EDR
External PC connection	USB
User interface connectivity	TO HMC, Proterm, Horizon

### FORCE MEASUREMENT

Force measurement device	Pressure transducer
Resolution	One part in 8,388,608
Accuracy	+/- 0.2% of applied force across load range
Range	0.2-100%
Calibration standard	+/- 0.5% per ISO 7500-1 ASTM E4
Internal sampling rate	1000Hz

### EXTENSION MEASUREMENT

Resolution	0.1µm
Accuracy	+/-10µm
Range	+/- 217m
Calibration standard	ISO 9513, ASTM E83
Internal sampling rate	2.73kHz

### POSITION CONTROL

Test speed	mm/min	0.001-76
	in/min	0.00004-3
Resolution	µm	0.1
	in	0.000004
Accuracy	µm	+/- 10
Crosshead positioning speed	mm/min	500
	in/min	20
Resolution	µm	0.1
	in	0.000004
Accuracy	µm	+/- 10
Home function	Yes	

### POWER REQUIREMENTS

Supply voltage options	208-500V
Frequency	50/60Hz

### ATMOSPHERIC REQUIREMENTS

Operating temperature	10-40°C
Operating humidity	10-90% non-condensing
Storage temperature	10-69°C
Storage humidity	10-90% non-condensing

### CONSOLE DIMENSIONS

Width	mm	750
	in	29.5
Depth	mm	699
	in	27.5
Height	mm	865
	in	34
Oil reservoir volume	liters	66
	US gal	15