



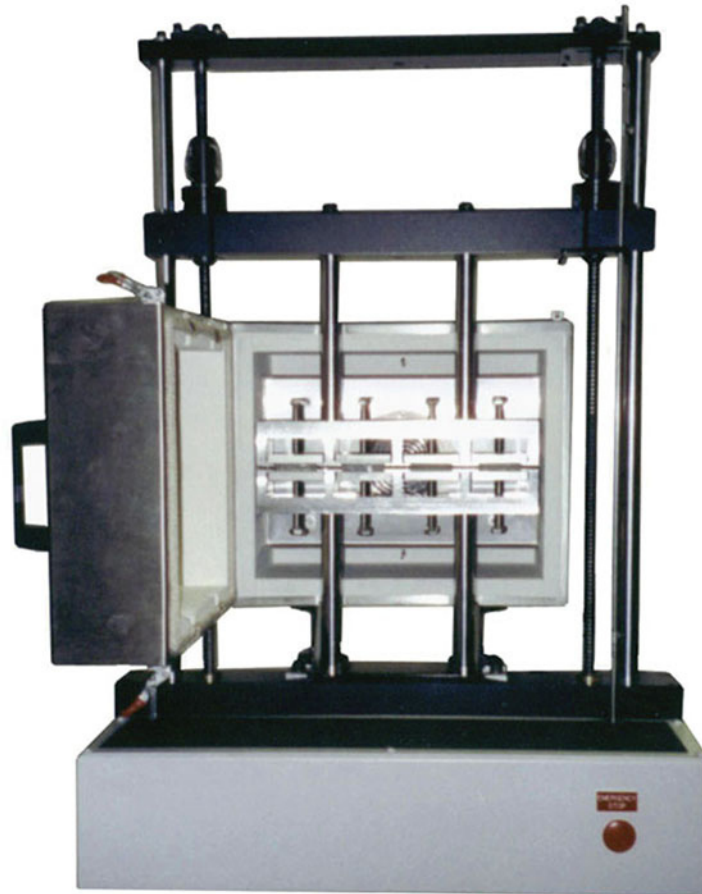
**APPLIED TEST
SYSTEMS, INC.**

***Product
Bulletin***

THE MARK OF RELIABILITY

Series 500

Sealant Testing Machines



**Cyclic Testing of Joint
Sealants, Adhesives, Coatings,
and Other Compounds**

Features

Today's architects and builders demand high-performance, long-lasting sealants for use in their structures and designs. In response to this need, ATS has developed the Series 500 line of Sealant Testing Machines, which are designed to simulate the expansion and contraction of sealant joints in actual installations, even under the extreme conditions of sweltering heat and bitter cold, for the most realistic and accurate results possible.

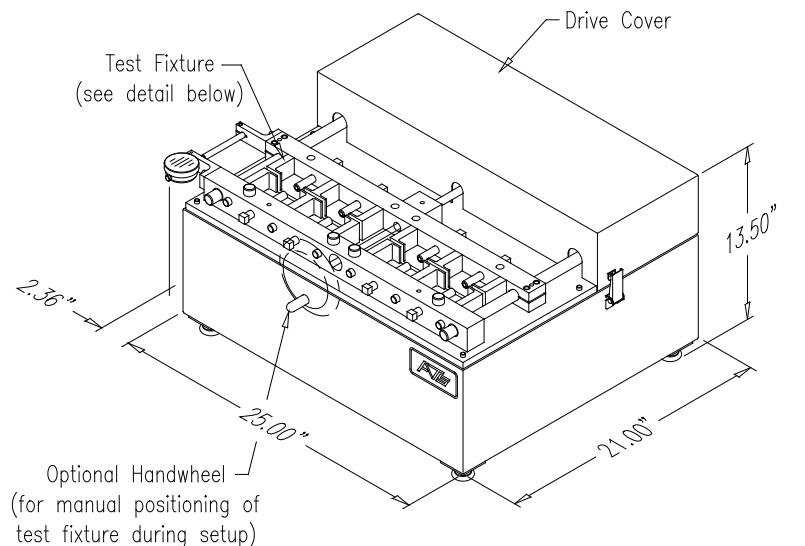
Testing is not limited to sealing compounds: construction adhesives, coatings, and other building materials are suitable for use with these systems. ATS sealant testers are also designed to conserve valuable time by handling up to 12 specimens simultaneously. Standard test methods covered by these machines include ASTM C719, C836, C910, and C920; JIS (Japanese Institute of Standards) 9010; U.S. Federal SS-S200, TT-S227, and TT-S230; and others.

Series 510/520

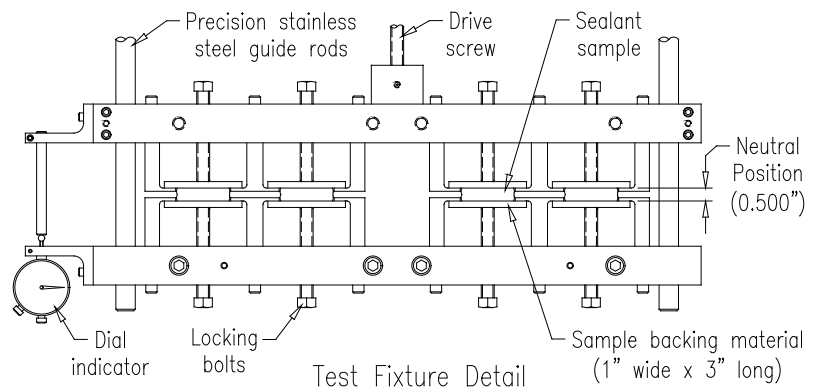
ATS Series 510 and 520 Sealing Compound Testers have been designed to test the durability of joint sealants in load capacities up to 1,000 lbf. (4.44kN). Both machines are capable of determining Aymar durability and performing other constant-speed tests per ASTM and U.S. Federal specifications. The Series 520 also performs variable-speed testing per JIS and other standards.

Easy-to-use controls are housed in a separate cabinet and include a predetermining cycle counter with reset. A dial indicator provides precise setting of amplitude, extension, and compression. Construction features include precision stainless steel guide rods, electric clutch, and an optional handwheel for manual positioning and setup of the test fixture. An optional cooling chamber is also available to chill specimens to temperatures as low as -30°F (-34°C) during testing.

SERIES 510/520
Sealing Compound Testers



Note: System controls are furnished in a separate cabinet, approximately 17.00" wide x 13.12" deep x 5.75" high.



Features

Series 540

The most versatile system in this line of products is by far the ATS Series 540 Computer-Controlled Sealant Tester, designed for load capacities of up to 4,000 lbf. (17.7kN). All tester functions are accessed and controlled through a Windows™-based personal computer. Displacement, speed, and cycle count are fully adjustable. Numeric displays provide continuous feedback on all test parameters.

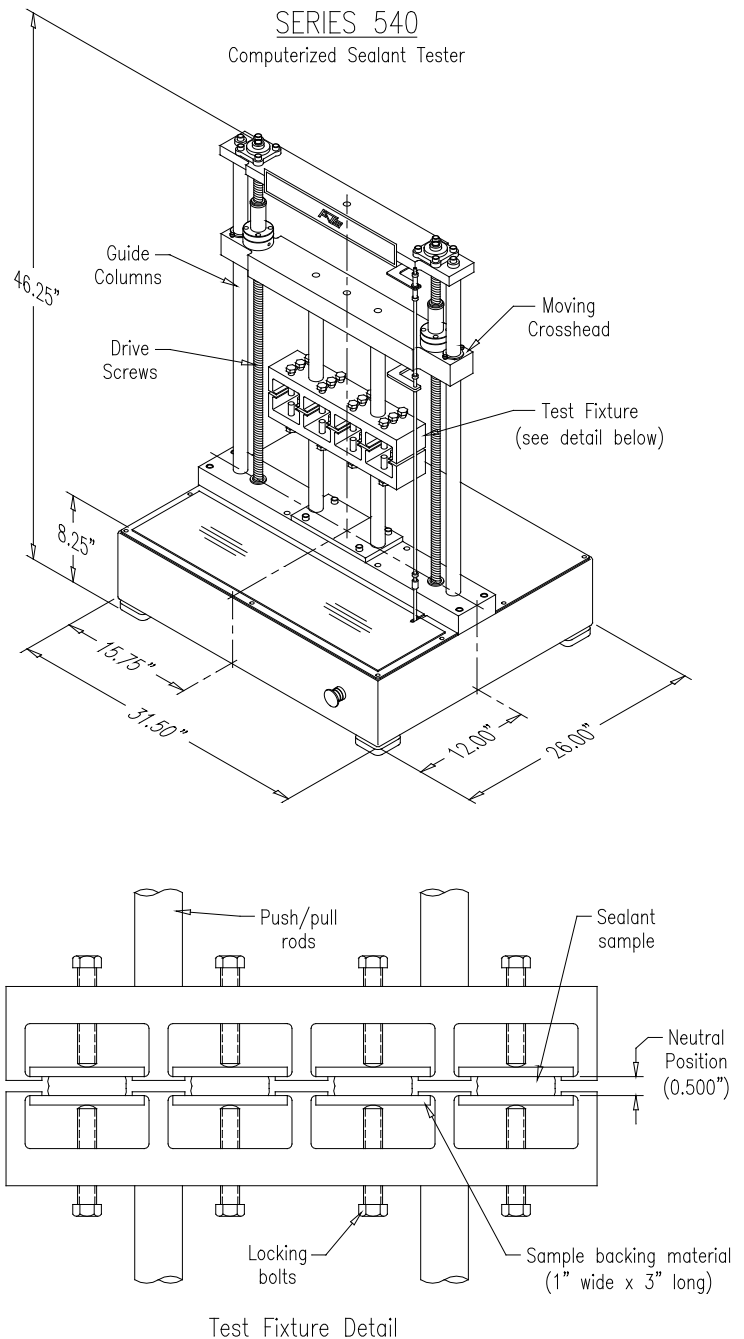
Construction features include a compact bench-top test frame with smooth servomotor drive, twin pre-loaded ball screws with minimal backlash (less than 0.001 in. [0.025mm]), and an operator-friendly stainless steel test fixture that is designed for easy specimen access and alignment and offers greater stability of the specimen area. Standard features include an emergency stop system, overtravel limits, and a high level of crosshead speed accuracy ($\pm 0.05\%$ of indicated speed).

An optional heat/cool chamber, featuring precise digital temperature control and liquid N₂ or CO₂ cooling, allows testing to be performed at temperatures ranging from -76°F to 248°F (-60°C to 120°C).



Environmental Chambers

The comfortable environment inside a laboratory does not well represent the harsh extremes of heat and cold that are experienced outdoors. ATS sealant testers can therefore be supplied with environmental chambers to simulate these conditions. The modified freezer unit shown at left houses an entire 510/520 system, while an efficient heat/cool chamber is mounted to the lower crosshead of a Series 540 tester.



Specifications

LOAD FRAME

	510	520	540
Capacity	1,000 lbf. (4.44kN)	1,000 lbf. (4.44kN)	4,000 lbf. (17.7kN)
Frame Type	Bench top, horizontal		Bench top, vertical
Fixture Alignment	Parallel guide rods		Precision columns
Drive Type	Single-screw, single-motor	Single-screw, user-selectable dual-motor	Dual-screw, single-motor, computer-controlled
Constant-Speed Testing	0.125 in./hour (3.2 mm/hour)	0.125 in./hour (3.2 mm/hour)	.002-20 in./min (0.1-500.0 mm/min)
Variable-Speed Testing	n/a	0.11-2.5 in./min (2.8-63.5 mm/min)	.002-20 in./min (0.1-500.0 mm/min)
Maximum Travel	0.125 in. (3.2mm) (extension & compression)		1.0" (50.8mm) (extension)
Specimen Capacity	4 (Standard) 8 or 12 (Optional)		12 (Standard)
Power Requirements	115VAC 60Hz or 230VAC 50/60Hz		230VAC 60Hz

ENVIRONMENTAL CHAMBERS (Optional)

Internal Dimensions	43 in. W x 23 in. D x 30 in. H (110cm W x 58cm D x 76cm H)	16.2" W x 6" D x 13.2" in. H (41cm W x 15cm D x 34cm H)
External Dimensions	48 in. W x 30 in. D x 35 in. H (122cm W x 76cm D x 89cm H)	19.5" W x 17" D x 16" H (50cm W x 43cm D x 40cm H)
Temperature Range	Ambient to -30°F (-34°C)	-76°F to 248°F (-60°C to 120°C)
Refrigerant/Cooling System	HFC-404a (non-toxic, CFC-free)	Liquid N ₂ or CO ₂
Power Requirements	8A @ 115VAC 60Hz or 4A @ 230VAC 50Hz	4A @ 230VAC 60Hz

Specifications subject to change without notice.



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