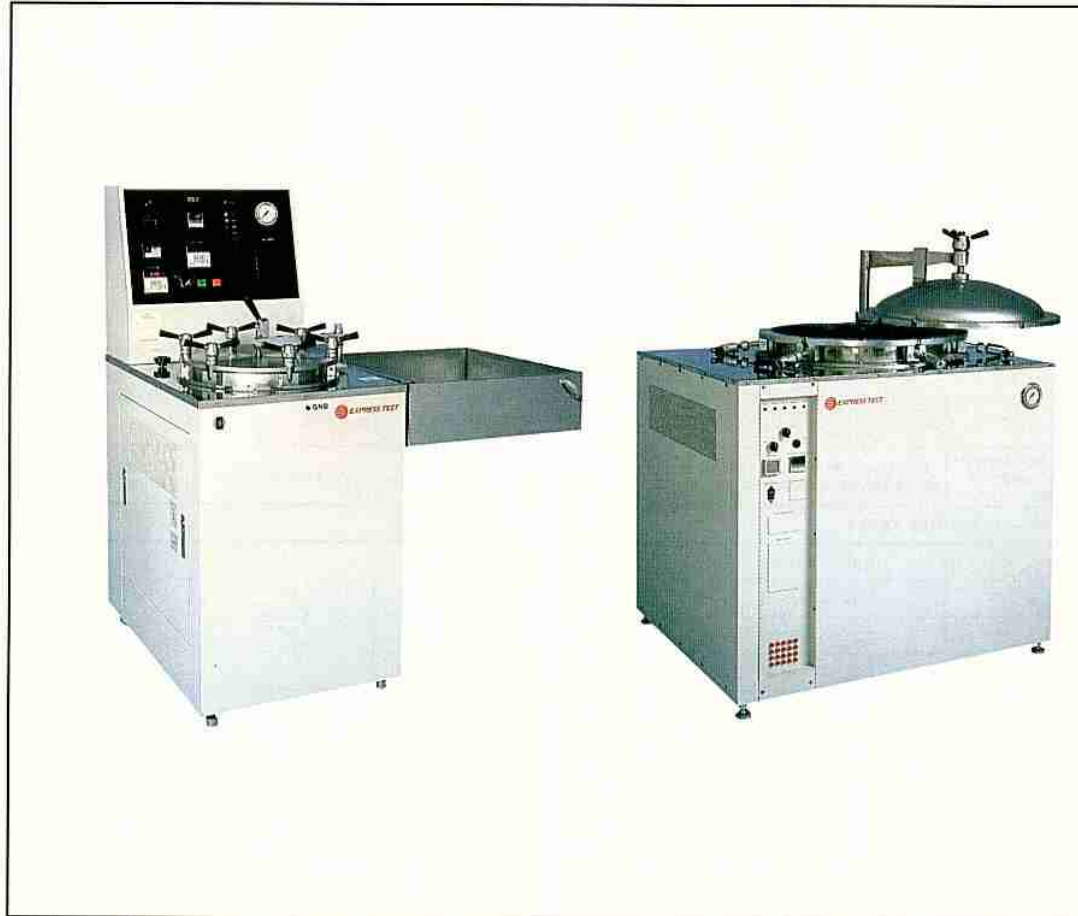




A Subsidiary of Trio-Tech International

SERIES I AND II AUTOCLAVES



EXPRESS TEST SERIES I AND SERIES II PTHB SYSTEMS HIGHLY ACCELERATED STRESS TESTING REDUCES TEST TIMES AND COSTS

Express Test Series I and Series II autoclave test systems offer a practical solution to the problems associated with do-it-yourself pressurized, humidity testing using household pressure cookers or laboratory sterilizers. Our Series I and Series II test systems provide precise, automatic environmental control and electrical testing capability at a cost below that of many unsafe, makeshift systems presently in use. Express Test Corporation is the leading manufacturer of autoclave test systems in the U.S.A., offering a wide selection of industrial quality autoclaves, specifically designed for pressure/temperature/humidity/bias (PTHB) testing of integrated circuits and other microelectronic materials.

Express Test Series I and Series II systems are invaluable wherever a need exists to evaluate humidity resistance of your product in the shortest possible timeframe. Within the autoclave environment, saturated (100% relative humidity) steam is forced under high pressures, to permeate the test samples in a fraction of the time required by conventional environmental test equipment. Express Test autoclave systems are ideal for reducing incoming inspection and new product evaluation timeframes. As an expeditious process control tool, Express Test Series I and Series II pressurized humidity test systems will yield invaluable feedback on any expected or unexpected changes in the manufacturing process, before your product is shipped to your customer.

ENGINEERED FOR MICROELECTRONIC TESTING

Express Test autoclaves are designed for safe, fully automated microelectronic materials testing. Our Series I and Series II systems offer several outstanding features at a cost comparable to many modified commercial sterilizers.

Express Test Autoclaves vs. Commercial Sterilizers

Material:	Stainless steel (SUS-304)	Aluminum vessel and/or vessel lid
Test Duration:	Continuous up to 500 hours (approx.)	24 hours (approx.) on single fill
Temperature Range:	100 – 158°C (regulated by proportional temperature controller)	100 – 121°C (regulated by pressure release valve)
Temperature Control:	±0.3°C	±4°C (air pockets remain due to incomplete air evaluation)
Safety Features:	Ten electromechanical safety functions, including operator safety cover and overheat/overpressure shut-off	Pressure release valve only
Operator Features:	Fully automated operation assures test repeatability	Requires manual on/off, repeated water fill, manual air purge, and frequent replacement of heat coils
Electrical Tests:	Bias wires standard equipment; test boards & fixturing optional Series II systems feature a preheat function to avoid condensation	Holes drilled & wires glued into place ("You're on your own") Not available
Service:	Field service and customer support staff provided; includes one year warranty	Not available



ET-362P



ET-242S

Express Test offers two types of autoclave test systems — our standard "S" series and the preheating "P" series. Our model ET-362P (above left) features a raised operator panel, a hinged stainless steel cover and secondary, external preheaters. Two flexible heaters are wrapped around the test chamber to preheat test samples before moisture is created in the test vessel, thereby minimizing moisture condensation on test samples. The model ET-242S (above right) is a very popular, economical, standard "S" series system in a low profile cabinet, and is ideal for nonelectrical storage testing.

SPECIFICATIONS: SERIES I AND SERIES II 100% RELATIVE HUMIDITY AUTOCLAVES

STANDARD FEATURES: Digital timer (999.9 hrs.); psi pressure gauge; all stainless steel autoclave (SUS 304, SUS 316 on ET604S and P); performance accuracy of ±0.3°C at 100% R.H.; four electrical connections (20 AWG teflon); fully fused controls and other safety devices; thermocontroller with temperature indicator. NOTE: Safety covers are installed only on systems rated for operation above 133°C(2 atm). Butterfly handles are standard for 2 atm systems (ET-242 and ET-302 series). On all other systems, separate bolt-down lid handles are required and safety covers are included as a standard item.

MODEL	CHAMBER DIMENSIONS DIAMETER x DEPTH IN (CM)	TESTING TEMPERATURE MAXIMUM PRESSURE PSIG	SHIPPING WEIGHT LB (KG)	POWER CONSUMPTION	WATER SUPPLY	OUTSIDE DIMENSIONS W x D x H IN (CM)
SERIES I STANDARD SERIES — STORAGE TESTS						
ET-242S	9 x 18 (24 x 45)	100 – 133/28	154 (70)	2KW	4 liters	25 x 18 x 44 (63 x 46 x 112)
ET-245S	9 x 24 (24 x 60)	100 – 158/70	254 (112)			
ET-302S	12 x 24 (30 x 60)	100 – 133/28	264 (120)	3KW	5 liters	23 x 35 x 57 (59 x 90 x 145)
ET-305S	12 x 24 (30 x 60)	100 – 158/70	279 (127)			
ET-362S	14 x 24 (36 x 60)	100 – 133/28	305 (139)			
ET-364S	14 x 24 (36 x 60)	100 – 151/56	320 (146)	4.3KW	20 liters	44 x 36 x 57 (110 x 92 x 145)
ET-365S	14 x 24 (36 x 60)	100 – 158/70	330 (150)			
ET-604S	24 x 24 (60 x 60)	100 – 151/56	450 (204)			
SERIES II PREHEAT ANTI-CONDENSATION SERIES — ELECTRICAL BIAS TESTS						
ET-242P	9 x 18 (24 x 45)	100 – 133/28	176 (80)	3KW	4 liters	25 x 18 x 44 (63 x 46 x 112)
ET-245P	9 x 24 (24 x 60)	100 – 158/70	261 (119)			
ET-302P	12 x 24 (30 x 60)	100 – 133/28	279 (127)	4KW	5 liters	23 x 35 x 57 (59 x 90 x 145)
ET-304P	12 x 24 (30 x 60)	100 – 151/56	286 (130)			
ET-305P	12 x 24 (30 x 60)	100 – 158/70	294 (134)			
ET-362P	14 x 24 (36 x 60)	100 – 133/28	321 (146)	5.3KW	20 liters	44 x 36 x 57 (110 x 92 x 145)
ET-364P	14 x 24 (36 x 60)	100 – 151/56	336 (153)			
ET-365P	14 x 24 (36 x 60)	100 – 158/70	345 (157)			
ET-604P	24 x 24 (60 x 60)	100 – 151/56	465 (211)			



REVISED

MODELS AND SPECIFICATIONS

SERIES I AND II AUTOCLAVES

MODEL	CHAMBER DIMENSIONS DIA x DEPTH (IN)	TEMPERATURE RANGE (DEG C)	MAX PRESSURE (PSIG)	POWER CONSUMPTION (KW)	WATER SUPPLY (GAL)	OUTSIDE DIMENSIONS W x D x H (IN)	SHIPPING WEIGHT (LB)
SERIES I STANDARD SERIES - STORAGE TESTS							
ET-244S	9.5 x 24	100 - 151	56	2	1.2	25 x 18 x 44	175
ET-364S	14.3 x 24	100 - 151	56	3	1.5	23 x 35 x 57	320
ET-604S	24 x 24	100 - 151	56	5	5.5	44 x 36 x 57	500
SERIES II PREHEAT ANTI-CONDENSATION SERIES - ELECTRICAL BIAS TESTS							
ET-244P	9.5 x 24	100 - 151	56	2	1.2	25 x 18 x 44	180
ET-364P	14.3 x 24	100 - 151	56	3	1.5	23 x 35 x 57	330
ET-604P	24 x 24	100 - 151	56	5	5.5	44 x 36 x 57	515