

# LLOYD INSTRUMENTS™

## SP Series

### Servo Pneumatic Dynamic Testing Machine

The SP Series servo pneumatic testing machine offers highly efficient, rapid and reliable testing and is ideally suited to laboratory, production or clinical environments where efforts to restrict noise and contamination levels are paramount. Ideal for investigating the fatigue properties of a sample when applying cyclic loading, the system is capable of performing rigorous fatigue tests at up to 40 Hz at 2 kN (450 lbf), 10 Hz at 10 kN (2248 lbf). The machine consists of a sliding, fully adjustable crosshead which is clamped by pinch bolts to twin chromed solid steel columns. The crosshead is set prior to testing and can accommodate samples of varying dimensions. A servo pneumatic actuator is mounted to the cross head, with a specially designed loadcell which can be fixed to either the base or the crosshead. The sample is secured between the solid base and actuator rod by a comprehensive range of grips, jigs and fixtures. The system is controlled by a personal computer (not included), using specialist MICROSOFT WINDOWS® compatible testing software, and also contains its own embedded RISC processor and digital controller ensuring dynamic tests continue to run even in the absence of a computer. By using durable components and ensuring test routines run quietly and smoothly, maintenance is kept to a minimum. Integral safety features include an adjustable safety collar to prevent the crosshead from falling when slackened, large base mounted emergency cut-off switch and an optional splinter shield is available. The machine uses its compressed air supply to dissipate heat generated during prolonged testing.

#### Features

- Efficient, responsive servo grade pneumatic actuator, runs from filtered workshop or bottled air supply
- 10 kN Frame with twin solid steel, chromed columns designed for tension, compression and flexure tests
- Fatigue rated loadcell with sideload and torque resistance
- Integral loadcell amplifier with high signal to noise ratio
- Integral displacement transducer working directly on rear end of actuator rod
- Digital controller with an embedded RISC processor providing operational stability
- Safety features including crosshead stopping collar, optional splinter shield and emergency isolator switch
- Extensive range of grips and fixtures
- Full Computer integration with WINDOWS® compatible control and data acquisition software

#### Specifications

Standard Force Range	SP2 - 2 kN (450 lbf) SP5 - 5 kN (1100 lbf) SP10 - 10 kN (2248 lbf)
Stroke	50 mm (2.0 in) 100 mm (4.0 in)
Pneumatic Supply	Between 5 and 10 bar
Standard Column Length	1200 mm (47 in)
Maximum Working Width	405 mm (16 in)
Maximum Working Length	650 mm (26 in)
Dynamic Frequency	From static up to 40 Hz
Data Outputs	Digital - RS232
Measuring System	Meets all common fatigue testing standards within constraints of machine capacity
Software	NEXYGEN™ Data Analysis Software WINDOWS® Dynamic Testing Software
Supply Voltage	115/230 V ac ± 10% 50 - 60 Hz
Weight:	235 Kg (518 lbs)
Operating Temp	5° to 35°C (40°F to 95°F)
Warranty:	1 Year



SPECIFICATION  
SS-MT-6261-0301  
March 2001

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[www.chatillon.com](http://www.chatillon.com)  
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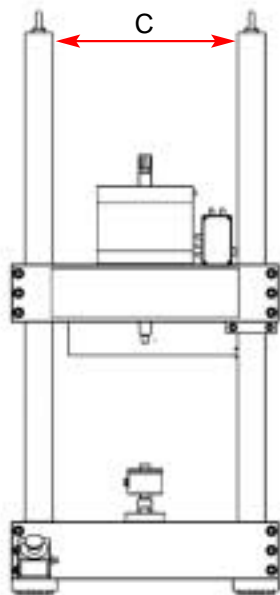
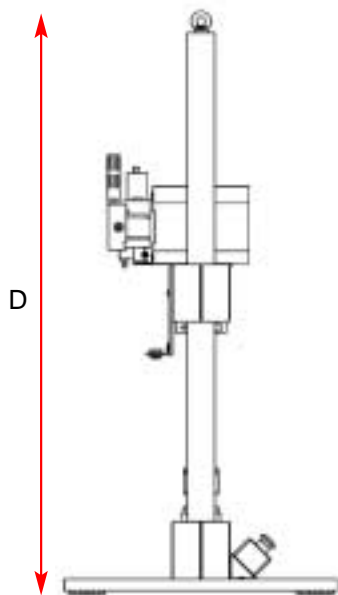
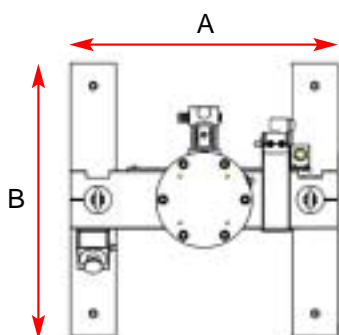
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INSTRUMENTS™  
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## Ordering Information

Model	Part No.	Description
SP2	01/3022	2 kN (450lbf) 50mm (2.0 in) stroke Servo Pneumatic Bench Top System
SP2	01/3023	2 kN (450lbf) 100mm (4.0 in)stroke Servo Pneumatic Bench Top System
SP5	01/3024	5 kN (1124 lbf) 50mm (2.0 in) stroke Servo Pneumatic Bench Top System
SP5	01/3025	5 kN (1124 lbf) 100mm (4.0 in)stroke Servo Pneumatic Bench Top System
SP10	01/3026	10 kN (2248 lbf) 50mm (2.0 in) stroke Servo Pneumatic Bench Top System
SP10	01/3027	10 kN (2248 lbf) 100mm (4.0 in)stroke Servo Pneumatic Bench Top System

## Product Dimensions

	mm	in
A	585	23
B	600	24
C	405	16
D	1272	50



## Standard Accessories

Item	Part No.
<b>SOFTWARE:</b>	
WINDOWS® Compatible Dynamic test software (supplied)	
NEXYGEN™ Software Package	40/0658
ONDIO Application Builder (Use With NEXYGEN)	40/0683
NEXYGEN/ONDIO Software Suite	40/0695
<b>GRIPS &amp; FIXTURES:</b>	
All grips up to a capacity of 10 kN (2200 lbf) can be fitted.	
5/8 in adaptor (supplied)	
1 1/4 in adaptor (supplied)	
Safety Shield	01/3013
Woods Melt Pot	01/3070

**AMETEK**  
TEST AND CALIBRATION INSTRUMENTS

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ISO 9001  
Manufacturer