



SPS 1000T "high boy" primarily for piece part inspection.



SPS 1000L "low profile" gage for piece part and stack prediction.

## Features & Benefits

- Enables the operator to inspect individual engine components in a typical compressor assembly predicting the stack alignment of the parts to achieve a final tolerance.
- Acceptable system stack will minimize the unbalance in a final balance procedure significantly reducing the overall time spent in final assembly.
- Equipped with standard modular components which consist of a precision air bearing spindle, heavy duty tilt and centering worktable, rigid gage posts and gage arms.
- Utilizes an industrial grade computer, digital I/O interface, gaging board and monitor housed within an air-conditioned electrical cabinet for dependable operation even under shop floor conditions.
- All components are secured to a toolroom grade granite plate for dampening floor vibrations.
- Adjustable isolation mounts are attached to the granite plate for leveling purposes.
- Windows® based software measures each piece part for concentricities, perpendicularities and runouts which is stored and serialized for use in a stack prediction. The result data is recalled from memory, and a final piece part angular orientation of the stack is calculated on the monitor to the operator. All guesswork for stacking individual parts is removed using this method for stack prediction of a compressor or rotor assembly.
- Utilizes four or more gages to measure simultaneously out-of-roundness, concentricity, perpendicularity, runout, flatness and parallelism of a part which reduces set-up time and unnecessary handling of the gages.
- Two gages are mounted to each gage post 180° apart from one another and are identified in the part edit program configuration.
- An encoder within the rotary table displays angular orientation of the piece parts being inspected and is used for alignment of the final stack prediction.
- Gage posts swing out for ease of part loading and lock into position for the inspection process.
- Standard programs include:
  - Tilt Center, which guides the operator through several steps that level and center the part to acceptable tolerances so a piece part inspection can be performed.
    - Piece Part Inspection, which inspects the part for acceptable geometry parameters
    - Stack Prediction, which calculates a group of parts to optimize the final stack.
  - Part Edit program is used to create and modify parts for inspection. Part diameters, heights, gage orientations and serial numbers are entered into this program file.
  - Diagnostics program included for evaluating spindle encoder counts, encoder channels and calibration reports.

## Specifications

### SPS-1000L "low profile" Part Number A10507

RT270/270-A10 Air Bearing Spindle:  
Air Bearing Bolted to Granite Plate  
Radial/Axial accuracy 10 $\mu$ " (0.25mm)  
Angular (coning) accuracy 1 $\mu$ "/ inch (0.025 $\mu$ m/25mm)  
Filter System: Air Filter/Regulator and Oil Water Trap

Tilt/ and Centering Worktable:  
18" (455mm) Diameter 4-knob  
Capacity: 1000 lbs. (455 kg)  
Tilt Adjustment: +/- 0.100" (2.5mm)  
Centering Adjustment: +/- 0.125" (3.125mm)  
Neutral Plane: 3.8" (95mm) above worktable

Measuring Range:  
Maximum Diameter: 32"(800mm)  
Minimum Diameter: 0.5"(12.5m)  
Maximum Height: 52"(1300mm)

Granite Plate:  
Color: Grey  
Size: 24" W x 60" L x 8" Thick (600 x 1500 x 200mm)  
Frame: Welded Low Profile with(4) Leveling Screws and Shock Mounts

Gage Posts and Gage Arms:  
Gage Posts (2) 48" (1200mm) Tall  
Gage Arms (2) 24" (600mm) Lg.  
(2) 18" (450mm) Lg.

Gage Heads:  
Measuring Length: +/- 0.010" (0.25mm)  
(2) LVDT Cartridge Type and (2) Lever Type

Gage Dimensions including Gageposts  
Gage Arms and Air Bearing Spindle:  
Size: 66.5"H x 24"W x 63"Lg (1660x600x1575mm)  
Weight: 1740 Lbs (790 Kg)

Electrical Cabinet:  
Fan Cooled with filters  
Computer and Monitor.  
CE Approved  
Size: 60"x38"x46" (1500x950x1150mm)  
Weight: 515 lbs. (235 Kg)

Miscellaneous: Printer, Keyboard, (2) Operators Manuals and (1) CD-ROM Software Package

Utilities:  
Power: 120VAC-50/60HZ or 220VAC-50/60HZ  
Power Consumption: 500VA  
Operating Pressure: 30-70PSIG (2-5Kgf/cm<sup>2</sup>)  
Air Pressure and Consumption: 1.55SCFM (0.040m<sup>3</sup>/m @ 60PSIG (5Kgf/cm<sup>2</sup>))

### SPS-1000T "tall boy" Part Number A10730

RT270/270-A10 Air Bearing Spindle:  
Air Bearing Bolted to Granite Plate  
Radial/Axial accuracy 10 $\mu$ " (0.25mm)  
Angular (coning) accuracy 1 $\mu$ "/ inch(0.025 $\mu$ m/25mm)  
Filter System: Air Filter/Regulator and Oil Water Trap

Tilt/ and Centering Worktable:  
18" (455mm) Diameter 4-knob  
Capacity: 1000 lbs. (455 kg)  
Tilt Adjustment: +/- 0.100" (2.5mm)  
Centering Adjustment: +/- 0.125" (3.125mm)  
Neutral Plane: 3.8" (95mm) above worktable

Measuring Range:  
Maximum Diameter: 39"(1000mm)  
Minimum Diameter: 0.5"(12.5mm)  
Maximum Height: 36"(800mm)

Granite Plate:  
Color: Grey  
Size: 24" W x 60" L x 8" Thick (600 x 1500 x 200mm)  
Frame: Welded Steel with (4) Leveling Srews and Shock Mounts

Gage Posts and Gage Arms:  
Gage Posts (2) 36" (900mm) Tall  
Gage Arms (4) 18" (450mm) Lg.

Gage Heads:  
Measuring Length: +/- 0.010" (0.25mm)  
(2) LVDT Cartridge Type and (2) Lever Type

Gage Dimensions including Gageposts  
Gage Arms and Air Bearing Spindle:  
Size: 66.5"H x 24"W x 63"Lg (1660x600x1575mm)  
Weight: 1740 Lbs (790 Kg)