

SCS-4000 PM Fiber Fused Biconic Tapering System



Model No: SCS-4000-P

Technical Specifications (For Standard Tapering System)

● Main frame

- Drawing precision: 0.2 μ m
- Drawing speed: 0.2—10000 μ m/s
- Drawing distance(max): 50mm
- Holding fiber diameter ϕ 0.1—0.5mm (// o r X f i b e r p l a c e d)
- Dimensions: 700mmx470mmx250mm

● Heating Unit

- Torch scanning range 0-20mm
- Moving Speed 0-4 mm/s
- Gas used Hydrogen (or Oxygen)
- Hydrogen flowing 0-500SCCM
- Oxygen flowing 0-200SCCM

● Optics Unit

- Detector : InGaAs: 1100- 1 700nm
- Optional : Si : 400-1000nm, Ge:1000-1800nm
- Laser Source (Optional) : 1310/1550nm benchtop laser source (1mW)
- LED

● Package Unit

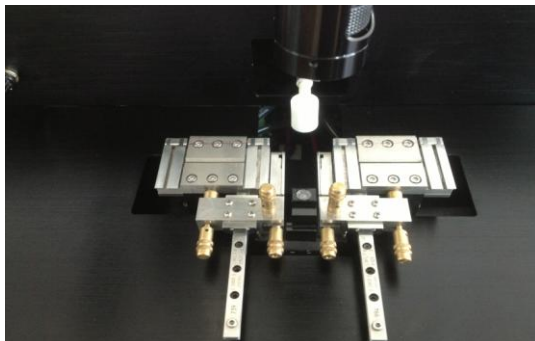
- Package Temperature : 0~130°C
- Package Mode: Once packing
- Power supply
- Working voltage 220V
- Working current 6A

Software Features

- Parameters storage and printing in format
- Expand to torch head scanning range in order to satisfy this tapering length
- Drawing speed setting according to tapering length
- Control this flowing of oxygen and hydrogen according to tapering length
- Smaller Splitting ratio exactly collecting

Hardware Features

- Designing hybrid Torch head with inner oxygen input and outer hydrogen input, in order to assure heating stably and increase heating temperature
- Custom-made fiber holder for fiber tightly holding
- LED built-onto the package units
- Flow meter chosen on fiber diameter used
- Detector chosen on working wavelength used
- Torch head size and fixture made on tapering requirements
- Platform Size designing on tapering length, in order to assure max heating Length
- 2 kinds of Integrated functions Station available
Standard Fiber Coupler Station + PM fiber Coupler Station
Standard Fiber Coupler Station + LMA fiber Combiner Station
- Optional: CCD imaging collecting system integrated , which is for assisting in inspecting the fiber axis alignment or fiber tapering process



Parallel fiber holder+ LED lamp

Specification For Fused Components

● PM fiber coupler

- Working wavelength: 1310nm, 1550nm
- E.R: $\geq 20\text{Db}$
- Coupling Ratio: 1—99% , Error: $\pm 2\%$
- Packaging Size : 30-40mm
- Coupler configuration: 1x2, 2x2 and 1x3
- Used PM fiber: 125/250um (standard), 80/165um (optional)

Ordering information

SCS-4000-XXX:

P: PM fiber coupler station

B: larger core size fiber coupler station

ST: SM fiber tapering station

Attachment: PM fiber Coupler Fabrications keynotes

- 1) Open the vacuum pump, then put two pieces of fiber into the parallel fixture slot, finally close the platen on the parallel fixture .
- 2) Make two pieces of fiber fixed onto the rotating fixture separately, then close the vacuum pump. Make sure two pieces of fiber put into two slots. Please dot some matching gel on the fiber itself, it will facilitate to inspect the fiber axis clearly.
- 3) Open the image collection system and the LED light. Move the universal adjustable shelf to make the fiber above the CCD ;adjust the rotating fixture and observe the changes in the fiber until find the suitable place, then stop it. Once again ,adjust the other fiber with the same way after accomplishing the adjustment of one piece of fiber. Finally, close the LED light after the adjustment.
- 4) Adjust one side of the parallel fixture first, adjust the rising knob of the parallel fixture gently, at the same time observe the image on the computer screen, make sure it just can jack the fiber up.
- 5) Adjust the two tighten knobs above the parallel, make the two pieces of fiber draw close slowly.
- 6) After accomplish the adjustment of one side, then get the other side adjusted with the same way .
- 7) After the fiber fixed ,observe the two pieces of fiber with CCD again. Make sure two parallel optical fibers have been snapping. Then remove the CCD, enter into next step: the pulling process of the coupler.