

3SAE LENS FORMING STATION (LFS)



The 3SAE Lens Forming Station (LFS) uses our patented Ring of Fire Technology® to process a cleaved fiber end into a ball lens of a specified diameter.

Utilizing precision mechanics, integrated high contrast optics and automatic fiber alignment, the LFS is the only commercially available system specifically designed for high-volume manufacturing targeting ease of use, high-accuracy and process repeatability.

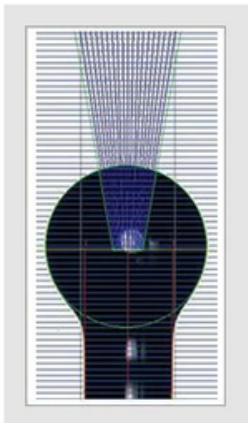
The LFS control software allows users to easily optimize a recipe to achieve a desired ball lens diameter by setting the target diameter and arc controls. Programmable pass/fail criteria including ball lens diameter, ball lens center and 3SAE's Effective Area Radius (EAR)™ measurement can be adjusted on a per program basis. Additional limits can be set to ensure that a prepared fiber of proper diameter is being loaded by the operator before allowing the process to begin. All adjustable parameters can easily be locked out, offering simple "one button" control to the operator while allowing ultimate customization of recipes from an engineer level.

Real time image processing allows the user to view the lensing of a fiber during the process. When lensing process is completed, the user is automatically alerted of pass/fail status based upon program specific criteria.

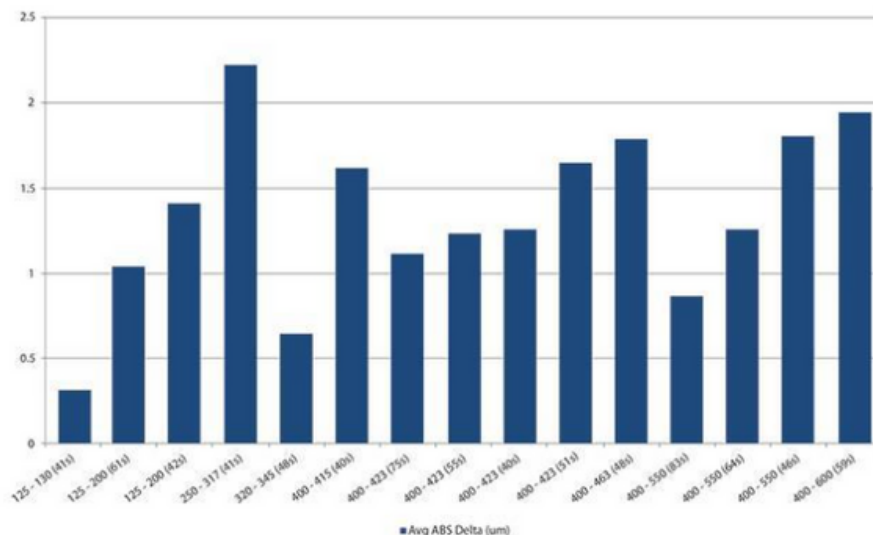
The 3SAE Lens Forming Station accommodates fiber diameters from 125 μm to 500 μm (clad O.D.), with coating diameters up to 900 μm .

3SAE Average Delta (ABS) from Target Diameter (μm)

Fiber Diameter - Ball Diameter (Cycle Time)



3SAE's Effective Area Radius (EAR)™ measurement displays the radius along the surface where the light exits the ball lens



Fully Processed Ball Lens

Key Features: Lens Forming Station™ (LFS)

- Patented Ring of Fire® repeatability and stability is ideally suited for manufacturing or large scale production
- 3SAE proprietary-alloy electrodes couple extended life with high thermal power generation and low maintenance/cost
- The electrodes generate negligible tungsten deposits and require no specialized shielding gas or external vacuum
- 3SAE's Effective Area Radius (EAR)™ measurement displays the radius along the surface where the light exits the ball lens
- LFS can be rotated to accommodate multiple applications

Standard Package

Part Number	Product	Includes
LFS-01-0100	3SAE Lens Forming Station (LFS)	PC with all necessary software, 23" monitor and accessories. Qty (1) ea - 250um/400um/900um right fiber holders. Accessory kit including length gauge, spare electrode set, qty (2) electrode cleaning discs, all necessary PC and LFS. Interconnect cables, power supply, electronic user's manual. Manufacturer's 1-year parts and labor warranty.

Accessories and Consumables

Part Number	Product
ACC-01-0168	Fiber Holder 250um, Right - 3SAE
ACC-01-0170	Fiber Holder 400um, Right - 3SAE
ACC-01-0172	Fiber Holder 900um, Right - 3SAE
ACC-01-0299	LFS Fiber and Electrode Length Gauge
ACC-01-0147	Power Supply 200W 24V 8.33A 8-pin (CMS/LDS/LFS/LPS/PFS)
ACC-01-0175	Power Supply 108W/12V/9A (BPT/CSL/FPU/LTT/USC)
CON-10-0022	Electrode Cleaning Discs - Black (Pack of 25)
CON-06-0006	Fitel Electrode Cleaning Disc (ea)
CON-10-0025	Electrode (FPU II/LDS/LFS/PWS) (Requires qty 3)



Technical Specifications

Feature	Specification
Dimensions	333 (W) x 224 (D) x 353 (H) mm (without adjustable feet)
Weight	kg
Power Source	(1) 12VDC@100W, (1) 24VDC@200W
Compressed Air	External compressor, 95 psi - 5 SCFM flow
Vision	2 Megapixel, camera with dual telocentric 2X lens and intensity controllable LED backlight
Alignment	Automatic X, Y & Z alignment, rotational fiber holder (theta) and fixed vacuum v groove
Control / Operation	Each system ships with PC system with Microsoft Windows 10 Operating System, Serial communication to 3SAE Lens Forming Station motherboard, USB 2.0 video, LFS Executable Software and a 23" – 1920 x 1080 monitor.