K-93 Fusion Splicer

Precision measured at the core: a compact core-alignment fusion splicer on the DACAS digital analysis system, with a 6-second quick splice, typical single-mode loss of 0.02 dB, an aerospace-grade aluminium-alloy body, and a 4.3-inch colour touchscreen at 380× magnification.

A cladding can be centred while the cores inside it are not — and the loss table shows the difference. The K-93 aligns on the core itself: the DACAS digital analysis system reads the core position from the imaging system and centres both fibers core-to-core before the discharge, which is how the machine holds typical splice loss to 0.02 dB on single-mode and G.657 fiber. The frame that holds that alignment is machined aluminium alloy, so the precision set on the screen is the precision the joint keeps.



K-93 fusion splicer

Key Features

- Core alignment on the DACAS digital analysis system — the cores are read and centred directly, not inferred from the cladding, behind typical loss of 0.02 dB on single-mode and G.657 and 0.01 dB on multimode fiber (ITU-T)
- Aerospace-grade aluminium-alloy chassis: a compact metal body, 135 × 160 × 135 mm excluding the rubber bumper and 2,250 g with the battery fitted
- 6-second quick splicing and 13-second quick heating (30 seconds typical) across the five preset sleeve lengths from 20 to 60 mm
- Every joint proof-tested at 1.96 N or above with its loss estimated on screen; 20,000 splice records and 1,000 images stored on the machine, exported over Mini USB 2.0
- 4.3-inch colour touchscreen with X, Y, XY and X/Y fiber views at 380× magnification, a metal-housed keypad with glow-in-the-dark backlight, and 3 white LEDs for night work
- Automatic arc calibration by air pressure and temperature, and electrodes rated for 5,000 arcs
- Detachable multi-function fixture for varied fiber types, and a detachable 5,200 mAh battery — typically 250 splice-and-heat cycles per charge, swapped in the field

Specifications

Alignment method	Optical fiber core alignment — DACAS (Digital Analysis Core Alignment System)
Applicable fibers	SM (ITU-T G.652 & G.657) / MM (ITU-T G.651) / DS (ITU-T G.653) / NZDS (ITU-T G.655); single fiber
Compatible fiber / cable	0.25–3.0 mm; indoor cable
Cladding diameter	80–150 µm
Cleave length	5–16 mm
Splice modes	41 preset; up to 100 stored
Heating modes	5 preset (20/30/40/50/60 mm); up to 100 stored
Typical splice loss	SM 0.02 dB; MM 0.01 dB; DS 0.04 dB; NZDS 0.04 dB; G.657 0.02 dB (ITU-T)
Return loss	≥ 60 dB
Splicing time	6 s (quick mode)

Splice loss estimation	Available
Heating sleeve length	20–60 mm
Heating time	Quick 13 s; typical 30 s
Result storage	20,000 latest records; 1,000 images
Tension test	≥ 1.96 N
Lighting	3 white LEDs
Keypad	Metal keypad housing; glow-in-the-dark backlight
Display	4.3-inch colour high-resolution touchscreen; 90° bi-directional view
Fiber view	X / Y / XY / X-Y views; 380× magnification
Fiber holder	Detachable multi-function fixture
Power supply	AC 100–240 V; DC 12–15 V
Battery	5,200 mAh, detachable; typically 250 splice + heat cycles
Operating methods	Button / touch screen
Automatic calibration	Automatic arc calibration by air pressure and temperature
Electrode life	5,000 arcs
Terminal	Mini USB 2.0
Body	Aerospace-grade aluminium-alloy chassis
Dimensions	135 × 160 × 135 mm (excluding rubber bumper); 140 × 165 × 135 mm (including bumper)
Weight	2,250 g (with battery); 1,870 g (without battery)
Operating environment	Altitude 0–5,000 m; relative humidity 0–95%; −10 to +50 °C; max. wind 15 m/s

Standard Configuration

Main unit · Fiber cleaver · Battery · Power adapter · AC power line · Spare electrode · Cooling tray · Hard carrying case · Carrying strap · Fiber stripper · Drop cable stripper · Alcohol bottle · Splicing test report · User manual

The Splicer in Detail

The front of the machine is the working view: both fiber images on one colour screen, the splice mode and heater mode across the top, and the loss estimate written into the record the moment the joint is made. The battery slides out of the body for a swap without tools, and the side profile shows the alloy panel and the charge indicator that tells the crew the state of the pack before the case is opened.



Front — live splice view on the colour touchscreen



Side profile — alloy body and battery indicator

Working Notes

Splice loss figures are the machine's typical values under ITU-T fiber classes; the estimate shown after each splice is a guide, and acceptance testing is done on an OTDR. Keep the V-grooves, fiber clamps and camera lenses clean — dust on the groove is the most common cause of a drifting loss figure — and let the machine run its automatic arc calibration when the weather or the altitude changes. Electrodes are a consumable: plan a change around 5,000 arcs.

OEM & Private Label

The K-93 is supplied in neutral, unbranded stock as standard. Private labeling is made to your requirements — labels with your logo, part numbers and barcodes on the tools, the inner boxes and the outer cartons, so the goods arrive ready for your warehouse. Custom barcode & contract labeling is applied to every inner box and outer carton to your receiving specification.