K-V1 Fusion Splicer

The trunk-line splicer built for pace: core alignment, a 6–10 second splice with typical single-mode loss of 0.02 dB, a 4.3-inch touchscreen, and a 5,200 mAh battery good for more than 250 splice-and-heat cycles per charge.

Alignment decides the splice before the arc fires. On the K-V1 the dual cameras watch the fibers from two axes and centre them on their cores in X, Y or the combined X/Y view at up to 380× magnification — checked on the 4.3-inch touchscreen before every arc, which is how the machine holds typical splice loss to 0.02 dB on single-mode fiber. The arc then calibrates itself: discharge power adjusts automatically to the air pressure and temperature around the machine, so the tenth joint of the day matches the first, from a valley floor to a site at 5,000 m.



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Key Features

- Core alignment with dual 90° cameras: X, Y and combined X/Y views at up to 380× magnification — the fibers are centred and checked on screen before every arc
- A 6–10 second splice and 15–30 second heat: the cycle pace a trunk crew works at, joint after joint, with the loss estimate shown for every splice
- The arc calibrates itself: discharge power adjusts automatically to air pressure and temperature, holding joints consistent in wind up to 15 m/s and at altitude up to 5,000 m
- 4.3-inch color touchscreen with physical buttons as well — operate it the way the job demands, with two high-power LED work lights and blue backlit keys for night and cabinet work
- A full day on one charge: the 5,200 mAh battery runs more than 250 splice-and-heat cycles, and the electrodes are rated for 5,000 discharges before they need changing
- Records that stay with the job: 10,000 splice results and 10,000 splice images stored on the machine, 41 preset splice modes and room for 100 of your own, exported over Mini USB 2.0

Specifications

Alignment	Core alignment
Applicable fibers	SM / MM / DS / NZDS / BI, single fiber
Fiber diameter	0.25–0.3 mm / indoor cable
Coating diameter	0.125–1 mm
Cleave length	5–16 mm
Typical splice loss	SM 0.02 dB; MM 0.01 dB; DS 0.04 dB; NZDS 0.04 dB; BI 0.02 dB (ITU-T)
Return loss	≥ 60 dB
Splicing time	6–10 s
Heating	Multiple heating modes; typical heating time 15–30 s; sleeves 20–60 mm
Splice modes	41 preset modes; up to 100 modes stored
Display	4.3-inch 480 × 272 color LCD touchscreen; dual cameras
Fiber view	X / Y / X-Y views; up to 380× magnification

Result storage	10,000 splice records; 10,000 splice images
Tension test	1.96–2.25 N
Adaptive discharge	Automatic ARC calibration by air pressure and temperature
Electrode life	5,000 discharges
Battery	5,200 mAh lithium; over 250 typical splice + heating cycles per charge
Power supply	AC 100–240 V; DC 12–15 V
Interface	Mini USB 2.0
Operating conditions	−10 °C to +50 °C; relative humidity 0–95%; altitude 0–5,000 m; wind up to 15 m/s
Dimensions	140 × 165 × 126.5 mm (incl. rubber bumpers)
Weight	1.36 kg (battery 0.38 kg)

The Splicer in Detail

The green field housing is ringed with rubber bumpers that take the knocks of trunk work, and the battery level reads off the side of the machine at a push — the charge state is known before the case is opened at the next closure. The carry strap clips to the body for pole and ladder work, and the machine weighs 1.36 kg with its bumpers on; the battery adds 0.38 kg.



Front — keypad and display



Side — strap 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 discharges.

OEM & Private Label

The K-V1 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.