S184 3-Phase Wide Area Plasma Splicer Series

FLAME POLISH
The 3-Phase technology featured on the S184 provides an extremely stable, controllable, and repeatable heat zone. This can be used in a post-splice annealing process that significantly increases the tensile strength of the fusion splice. The flame polish removes internal stresses and surface imperfections in the silica created during the fusion process, increasing the tensile strength of the splice.

CORE DIFFUSION
The improved stability, wide heat zone, and extended dynamic range of the 3-phase plasma fi eld on the S184 provide superior results with Thermally Expanded Core (TEC) splicing processes. This method of core diff usion can be utilized pre or post splice to achieve signifi cantly lower optical loss of fibers with mismatched mode field diameters (MFD).

3-PHASE ARC - "RING OF FIRE"
The S184 is the world's only splicer with 3-phase wide area arc technology, which allows for splicing of > 1mm fibers and unprecedented results for high strength and specialty fusion splicing. The "Ring of Fire" allows FITEL to take splicing to the next level and achieve results that have previously been impossible to achieve with 2-electrode systems.

DESCRIPTION
The S184 3-Phase Wide Area Plasma Splicer series includes groundbreaking technology that separates it from all other fusion splicers. In a standard fusion splicer, the heat source is a plasma generated by an electrical discharge between two electrodes. The fibers being fused are directly exposed to the plasma field with a very narrow heat zone. The heat zone produced is very narrow - the temperature can drop dramatically only 200um from the arc center. Furthermore, 2-electrode systems have a maximum practical fiber diameter of 500um, due to the limited spatial extent of the plasma. Conversely, the S184 3-Phase Wide Area Plasma Splicer has three electrodes in a "T" configuration. This 3rd electrode combined with an advanced self-balancing arc discharging unit (ADU) allows for a significantly more stable thermal profile where radiation is the primary means of heat transfer to the spliced fibers. This resulting heat zone cross-section is significantly larger then a 2-electrode system, with consistent heating within the entire zone. This performance is obtained across a broad range - from temperatures lower than a standard splicer can produce to heat sufficient to fuse 1mm+ fibers. The result is incredible splicing versatility for specialty fibers, large diameter fibers, high strength applications, and high yield production processes.