

Industry Solutions: Fiber Optics

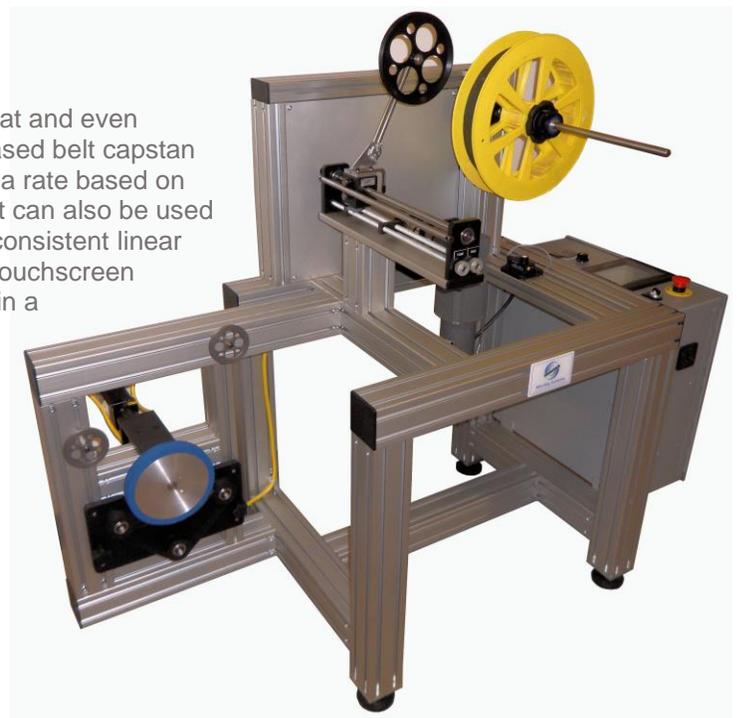
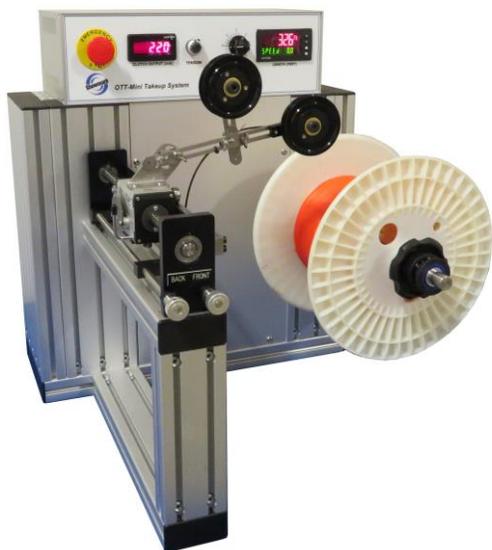
Spooling Systems for Optical Fiber Production and Processing



Showmark got its start building respooling machines for the fiber optics industry. Our first machines were optical fiber coilers for producing Erbium Doped Fiber Amplifiers (EDFA's). We now offer spooling machines for several key areas of optical fiber manufacturing and post production work. For production of optical fiber, we provide: Draw Tower Take-up Units, Proof Testers, and Fiber Respoolers. For production of optical fiber-based products we offer spooling solutions that assist in the manufacturing of EDFA's, Delay Coils, Fiber Piezo Coils, Downhole Sensors, Fiber Bragg Gratings, Fiber Optic Gyroscopes, and other custom solutions.

Draw Tower Take-up Systems

The Draw Tower Take-up System produces spools with neat and even layers of fiber at a settable tension. It has a servo motor-based belt capstan that controls the fiber diameter within microns by pulling at a rate based on analog feedback from a tower mounted laser micrometer. It can also be used without micrometer feedback to pull the material at a very consistent linear speed. Most settings can be adjusted on the fly through a touchscreen interface. The capstan can be oriented to receive the fiber in a direction as required by the process.



Post Production Take-up Systems

Showmark's standard take-up units match up nicely with extruders in fiber jacketing applications. They automatically synchronize with the rate from the process and maintain a desired tension as they neatly wind the material onto a spool without snags or tangles. Our take-ups also function well in cable marking or inspecting applications. A Showmark OTT-Mini is pictured at left. An OTT-Medium and OTT-Max are also available for accommodating spools up to 40 inches in diameter, weighing up to 300 pounds.

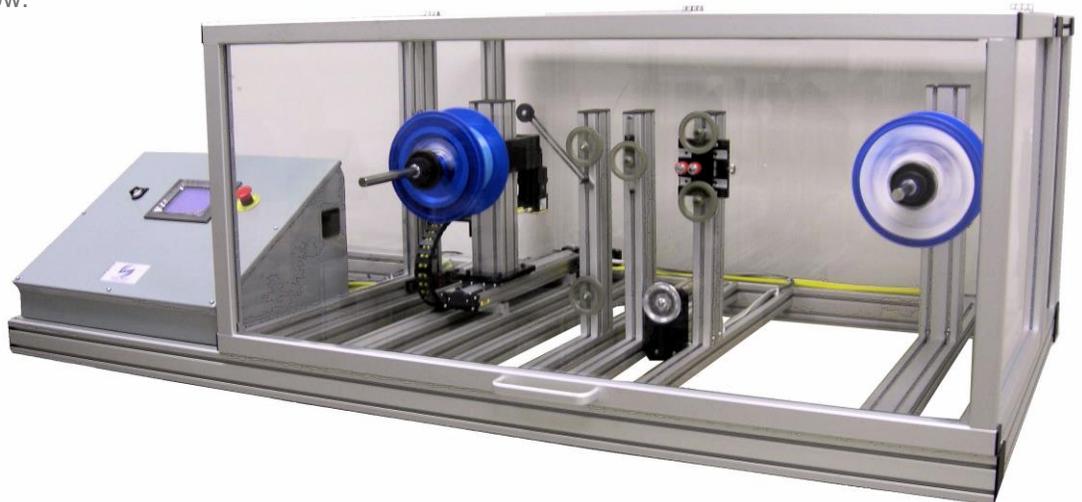
Proof Testers

The PT-5KG is an economical and easy-to-use solution for meeting optical fiber proof testing requirements. The 1-meter long proof test zone uses dual servo motor driven capstans to provide continuous tension testing with a settable range up to 5Kg. The winding speed can be as high as 200 meters/minute. Separate tension control is provided in the payoff and take-up sections. The system also doubles as a general purpose fiber respooler.



Respooling and Coiling Systems

Showmark has many solutions for simple spool to spool transferring or more complicated coiling requiring precise tension control and fiber placement. We manufacture simple to use general purpose rewinders and fully programmable respoolers for more sophisticated applications. They are used for production of EDFA's, Delay Coils, Fiber Piezo Coils, Downhole Sensors, Fiber Bragg Gratings, Fiber Optic Gyroscopes, and other specific applications. A fully programmable DigiSpooler I is shown below.



A sampling of spools and coils wound on Showmark optical fiber respooling machines.

