

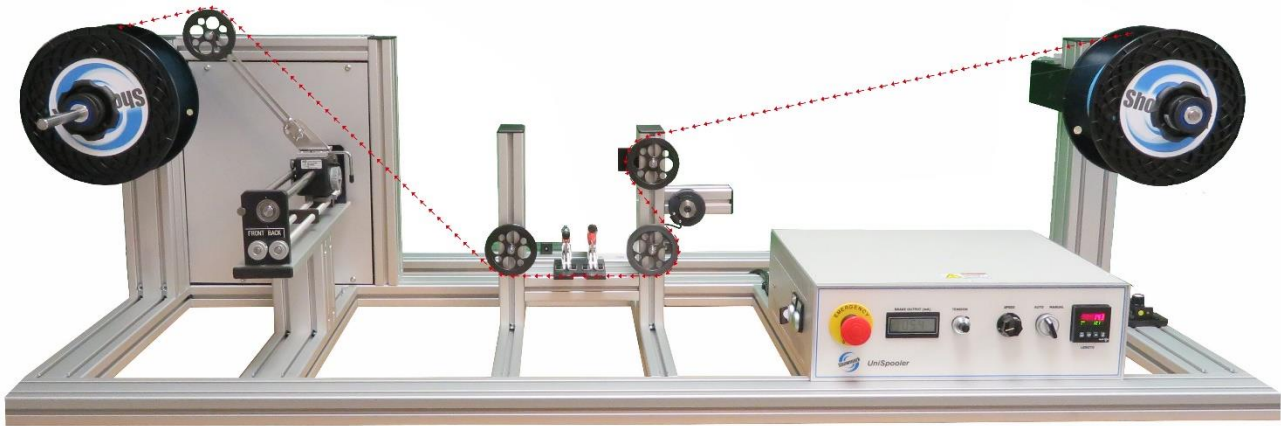
# UniSpooler

## Showmark General Purpose Optical Fiber and Fine Wire Spoolers



### The Universal Solution for your spooling needs

The Showmark UniSpooler has been designed to offer excellent flexibility for general purpose or precision wire respooling applications. It works equally well with optical fiber, fine wires, or other fine filaments. Its unique tabletop design allows it to be configured with many standard options or easily customized to meet very specific winding needs. Best of all, its simplicity and low cost allow anyone to optimize their in-house winding operations.



### A Simple Solution

The UniSpooler is a versatile yet easy-to-use tabletop system for automatically respooling fiber or wire from a supply spool to a take-up spool. No tools are required, and almost any size supply and take-up spools can be mounted in seconds with the Universal Hub System.

### Two Operating Modes

In Automatic Mode, simply enter a desired length, up to 100 kilometers, into the digital display. The UniSpooler smoothly accelerates up to the set speed and stops automatically at the set length.

In Manual Mode, all you need to do is dial in a spooling speed and the UniSpooler will smoothly accelerate up to the desired rate. The digital display provides a real time update of the spooled length. Simply turn the speed down to zero when your desired length is reached.

You can also adjust the traversing rate and total traversing stroke with easy adjustment dials. Tension is easy to set using an adjustable magnetic brake.

### Smooth Operator

Extremely low friction guide wheels direct the wire from the supply spool to the take-up spool. Along the way, an automatic traversing wheel moves the wire back and forth to evenly layer it across the take-up spool. Length is directly tracked without the use of pinch rollers. A digital readout continuously displays the current length in Metric or English units.

### Standard Features

The UniSpooler comes with an impressive list of standard features that make it a very useful machine yet help maintain simplicity of operation.



**2-Buttons** – Once a distance is entered into the length controller the basic operation of the machine is controlled by the SPEED and the MODE buttons. Length is typically tracked with .6% accuracy and can be reset at any time.

### Universal Hub System -

No tools are required to mount spools with a bore diameter of 16-53mm. Other sizes are also available. Simply grasp the inner ring with one hand and unlock the hub by twisting the outer ring.



### Any Spool –

Many spools can fit on the UniSpooler's standard payoff and take-up shafts. Diameters up to 400mm can be accommodated. Custom shafts and hub systems can be provided to meet special needs.

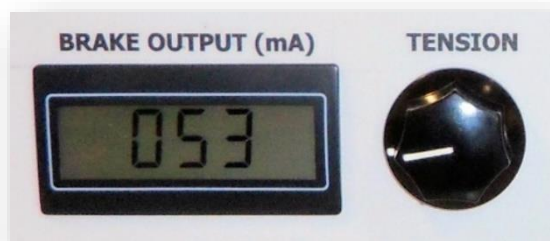


**Adjustable Traverse & Wire Guide** – The UniSpooler features a precision traversing unit that is automatically synchronized with the rotation of the take-up spool. This creates evenly spaced rows of wire across the take-up spool. The winding pitch is easily adjusted within a range of 200-2000 microns. The traversing stroke can be quickly adjusted from 0-150mm.

**Adjustable Magnetic Brake** – Tension control on the standard UniSpooler is provided by a magnetic brake coupled to the payoff shaft. The output of the brake can be quickly adjusted and provides a tension range of approximately 25-500 grams (dependent on the diameter of the payoff spool).

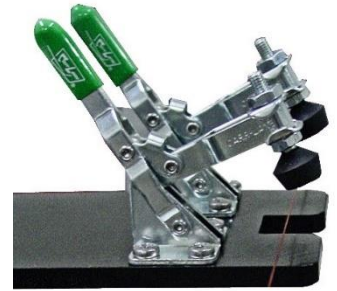
**Add the Options You Need** – Options are available for tailoring the UniSpooler to your exact needs.

**Constant Tension Control System** – A closed-loop tension control system can be added to the UniSpooler in place of the Adjustable Magnetic Brake. The system



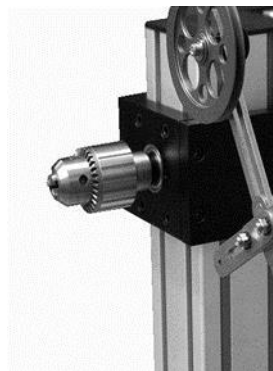
uses an electronic hysteresis brake in conjunction with a sensor to apply a constant amount of tension to the wire regardless of the change in size of the payoff spool. A brake output meter is included on the machine control panel. The tension level is set by an adjustment knob on the control panel.

**Wire Clamps** – A pair of manually operated or electronic clamps can be positioned in the path of the wire to facilitate cutting and to increase production. While spooling, the clamps do not interfere with the motion of the wire. They can be lowered before a cut is made so that both ends of the wire are held in place after the cut is complete. This is especially helpful to users making wire coils that must be removed from a winding mandrel or collapsible spool. It allows the operator to maintain control of both ends of the wire so that the coil can be processed and removed. The new end can be quickly secured to the mandrel for the next coil to be made.



**Wire Break Detection** – A sensor monitors the presence of wire or fiber running through the machine. If the wire breaks or if the payoff spool runs out of material, the machine will automatically stop. A switch is provided on the control panel for overriding the function if desired.

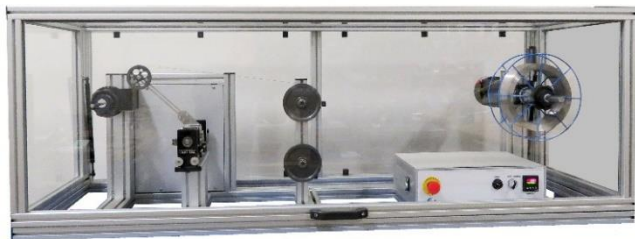
**Chuck Option** – This is a precision chuck similar to ones found on milling machines. The chuck provides flexibility for mounting a variety of spool types on the take-up of the UniSpooler. Standard sized spools can be mounted with the included 10mm diameter stub shaft. Also, very small shafts can be mounted in the chuck for creating small diameter coils.



**Double Wide Payoff** – Some manufacturers provide their material on what are sometimes referred to as "Double Wide Spools." A

longer payoff shaft is required to accommodate these spools. In addition, the length of the UniSpooler is increased slightly to ensure that the material is not damaged as it comes off the far edges of the wider payoff spool.

**Safety Enclosure (CE Mark Preparation)** – The UniSpooler can be upgraded to meet CE Mark standards for shipment to countries in the European Union.



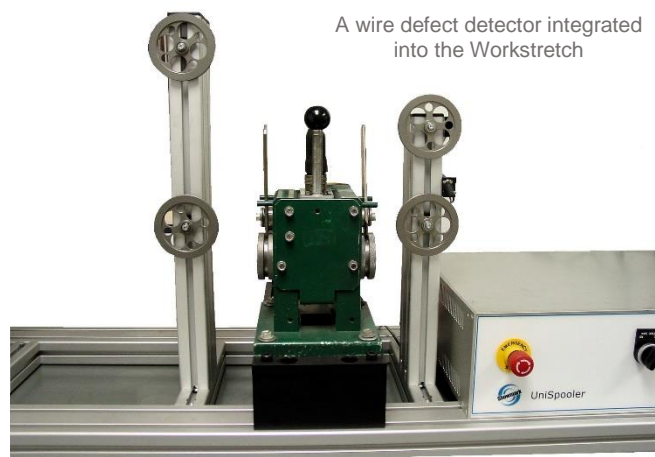
A safety enclosure with a sturdy aluminum frame and clear Plexiglas panels is added to the machine. The enclosure is hinged and includes gas struts for lifting assistance and holding it in place. The enclosure allows full access to the machine controls in the open and closed position. An electronic safety interlock switch is coupled to the enclosure. The machine will not operate with the enclosure in the open position. Additional electronics are added to meet CE safety, electrical noise, and electrical immunity requirements.

**Reversed Operation** – The standard UniSpooler is set up to operate in a right-to-left orientation. The payoff spool is mounted on the right side of the machine and the wire travels to the take-up spool on the left side of the machine. The orientation can be reversed for operations requiring a left-to-right flow of material.

**Easy Customization** – The design of the UniSpooler is easily adjusted to meet special needs. Let us know if you do not see a feature that you require. Following are some examples of what can be done to meet special requirements.

**Incorporate your process or sensor** – The UniSpooler can be modified to accommodate a coating or marking process or an inspection sensor. This is done by adding a “Workstretch” into the center of the machine. The Workstretch can be any length up to four feet.

The wire travels in a straight and level path through the Workstretch. Showmark can mount your equipment and even integrate your process with the motion controls of the UniSpooler.

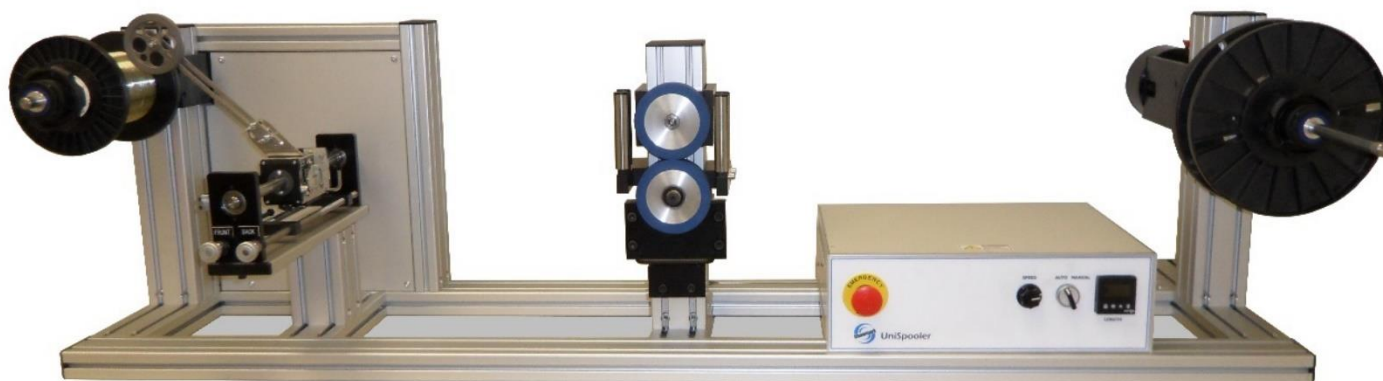


**Other possibilities** – Other customizations that have been employed include:

- Smaller or larger shafts to accommodate very small or heavy spools
- Shorter or longer traversing stroke
- Sheaves can be made larger or smaller to meet special bend radius needs. They can also be made from selected materials such as plastic or UHMW

**Accessorize** – The following accessories are available to further customize the UniSpooler for your unique application.

**Custom spools and mandrels** – Do you require a non-standard spool for your application? Showmark can design and manufacture a spool or winding mandrel for your exact needs. Whether you require custom materials, a special size, or a collapsible design, contact Showmark for assistance.



UniSpooler for heavier gage wire and cable. Includes PRC1 high accuracy length tracker

# Common UniSpooler Option Numbers

Please consult Showmark for Assistance

## Examples:

US-CL85-DW-MCL

USHD-OL40-PRC1-20mm-WB-CE-200V

UniSpooler	US	Std Traverse Model	Base Model (Choose 1)
	USHD	Heavy Duty Traverse (ARG3-15)	
Tension Control	<b>OL20</b>	Magnetic Brake (527 brake) .003-.14 Nm (.03-1.25 in-lb)	
	<b>OL80</b>	Magnetic Brake (655 brake) .014-.56 Nm (.12-5.0 in-lb)	
	<b>OL640</b>	Magnetic Brake (610 brake) 20-640 oz-in (Incl 20mm shaft & Hubs)	
	<b>OL192</b>	Magnetic Brake (523-0192 brake) .03-1.36Nm (.3-12 in-lb)	
	<b>OL85</b>	Electronic Brake - Manually Adj. 3-85 oz-in	
	<b>OL140</b>	Electronic Brake - Manually Adj. 5-140 oz-in	
	<b>CL85</b>	Closed-Loop Electronic Brake 3-85 oz-in	
	<b>CL140</b>	Closed-Loop Electronic Brake 5-140 oz-in	
	<b>CL250</b>	Closed-Loop Electronic Brake 17.6-350 oz-in	
	Options	<b>DWP</b>	Accommodate double wide spools on payoff shaft
<b>DWT</b>		Accommodate double wide spools on takeup shaft	
<b>LR</b>		Left-to-Right Orientation Payoff on Left, Takeup on Right	
<b>MCL</b>		Manually Actuated Clamps	
<b>WB</b>		Wire Break Sensor	
<b>DS</b>		Dampener Sheave	
<b>CE</b>		Safety enclosure with gas spring assists and Electronic Interlock	
<b>WSXX</b>		Work Stretch XX in. Incl. 2 extra Sheaves + post	
<b>WS0</b>		Infinite Work Stretch (2 part frame)	
<b>SXX</b>		Plain Frame Stretch	
<b>SLS</b>		Round Rail Bearing Supports (Only for USHD)	
<b>TSP/TST</b>		Tailstock on Payoff or Takeup	
<b>CHKT or CHKP</b>		Chuck on Takeup or Payoff	
<b>10mm</b>		10mm Shafts w/Easy Locks	
<b>20mm</b>		20mm Shafts w/Easy Locks	
<b>30mm</b>		30mm Shafts w/Easy Locks	
<b>200V</b>		200-240VAC, 50Hz	
<b>MP</b>		Minimum Pitch (100-1000µm) (=.003-.030")	
<b>MQS</b>		Manual Quick Slide (for batch spooling)	
<b>RT</b>		Reduced Traverse (~10mm)	
<b>PRC1</b>		Pinch Roller Counter (Std) for large or stiff wires (.06% Repeatability)	
<b>LTR2</b>		Encoder Based Counter for fine wires and filaments (.06% Repeatability)	
<b>LS5</b>		5-inch diameter Plastic Sheaves	
<b>LS100</b>		Precision 100mm Root Dia Sheaves	
<b>LS150</b>		V13 Precision Large Sheaves	
<b>LC</b>		Legs w/Locking & Leveling Casters	

(Select only one)

(Select any number with dashes in between or blank if none) - (All combinations may not be possible)  
The most common options are highlighted in green.