

# FIBER ANALYSIS KNITTER SAMPLER

## LH-122 FAK-S



### FEATURES

- Precision lab knitting machine with Stitch Control System to prepare standard samples of knit fabric for quality control purposes
- Ability to knit all types of yarns, including synthetic and natural fibers as well as monofilament, filament, elastomeric and spun yarns
- The only sample knitting machine trusted with spectrophotometer for color and dye analysis
- Maintains constant course length with the Yarn Meterhead to ensure uniform loop size
- Maintains constant tension on the yarn with the Air Servo/Stitch Cam Regulator to eliminate fabric defects such as barre, which is caused by tension variation during knitting
- Features fabric take-up assembly to collect the fabric under controlled tension to ensure fabric uniformity
- Nine different cylinder sizes available to knit yarns from 10d up to 2000d (Please consult us for higher or lower denier ranges.)
- Interchangeable knitting cylinders that can be used in all Lawson Hemphill knitting machines

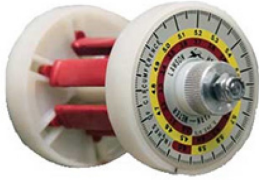
The Lawson Hemphill FAK-Sampler, FAK-S is recognized as the worldwide standard for lab knitting machines. It is a high-speed, precision knitting machine designed to check uniformity and consistency of the yarn quickly and accurately. It is ideal for use in production control and R&D labs as well as dyeing plants.

In any knitting application, the yarn tension and the yarn feed controls are critical to ensure fabric uniformity. Any changes in these variables during knitting will cause irregularities, creating a defective fabric. The FAK-S has a built-in Stitch Control System, which ensures the preparation of the standard samples of knit fabric for yarn quality control purposes. The machine also features a take-up assembly to collect the fabric under controlled tension to further ensure fabric uniformity.

The FAK-S can knit all types of yarns, including synthetic and natural fibers as well as monofilament, filament, elastomeric and spun yarns. Nine different cylinder sizes are available to knit yarns from 10d up to 2000d. All knitting cylinders are interchangeable and can be used with all Lawson Hemphill knitters. (Please consult Lawson Hemphill for knitting higher or lower denier yarns).

### ADVANTAGES

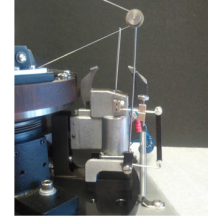
FAK-S assures 100% control of the knitting process by precise yarn length feed and automatic yarn tension control with adjustable tension on fabric take-up. This ensures that every stitch will be of the same length and knitted under the same constant tension, which is essential to have a uniform fabric when checking for dyeability, yarn irregularities and any application that requires a standard knit fabric.



**PRECISE YARN LENGTH** is achieved by Yarn Meter Head, which is a calibrated, adjustable positive yarn feed mechanism that is geared directly to the knitting cylinder. This device ensures that the same amount of yarn is let off for every single cylinder revolution.

By changing the circumference of the Yarn Meter Head, the yarn feed can be changed between 3-6 inches to achieve the required fabric tightness. Each meter has a dial, which can be adjusted to  $\pm 0.5\%$  by simply loosening the knob and turning the dial.

**AUTOMATIC YARN TENSION** is achieved by Servo System, which instantly detects any variance between the yarn feed rate and yarn consumption and maintains the two in equilibrium. It consists of two elements; Stitch Cam and Servo "sensing" Arm. The Arm detects the difference between the yarn feed and the consumption. It immediately directs the movement of the Stitch Cam through the servo mechanism. This will ensure that every stitch will be knitted under the same, exact tension, without any further adjustments required by the operator.



## CYLINDER SPECIFICATIONS & YARN COUNT

Cylinder Size	Needles per inch	Needle gauge	denier	dtex	Nm(Metric count)	Ne (English count)
88	8	18	1500-500	1667-556	6-18	3.6-10.7
120	11	24	1000-300	1111-333	9-30	5.3-17.8
160	15	36	850-250	944-278	10-36	6.3-21.3
200	18	48	550-150	611-167	16-60	9.7-35.5
220	20	54	400-100	444-111	22-90	13.3-53.3
260	24	54	300-70	333-78	30-128	17.8-76.1
320	29	70	140-40	156-44	64-finer	38-finer
380	35	75	70-10	78-11	128-finer	76-finer
420	38	75	30-10	33-11		



## MODEL

LH-123 Hot Draw Knitter

Linear Input Speed	160 m/min. (maximum)
Options	Package changer, elastomeric yarn feed option
Electrical	115/220 VAC- 50-60 Hz (consult LH for other power supply)
Air	60 psi-clean air required
Dimensions	546 x 787 x 1346mm (21.5 x 31 x 53 inches)
Weight	147kg (325 lbs)

*\*All specifications are subject to change.*

Contact us today for more information on any Lawson-Hemphill product!

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