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FANYUAN INSTRUMENT (HF) CO., LTD.
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SPIN2000 DIGITAL HAIRINESS TESTER



MODEL NO:

SPIN2000

APPLICATION:

SPIN2000 Digital Hairiness Tester is used for determining and analyzing yarn hairiness of various staple yarn like cotton, wool, linen, silk, chemical fiber and blended yarn, allows spinners to forecast how the yarn will behave in subsequent processes and how the finished fabric will look and perform.



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FEATURE:

- It adopts projection counting method to test yarn hairiness, conforming to national standard FZ/T01086-2000.
It can determine and display hairiness index in eight hairiness length categories simultaneously.
The detection system adopts industrial high-speed digital camera, consists of industrial image sensor, optical imaging system and high-speed microcontroller.
Clear images produced by optical imaging system combined with micron level image sensor improve the accuracy of hairiness length.
New technology as well as automatic adjustment of test parameters guarantee stable test condition and improve the consistency of test results.
Fully-digital processing from parameter setting to data processing.

SOFTWARE:

- Test data can be displayed according to bobbin number, test number and eight hairiness length categories, convenient to view, delete or print as needed.
When all the bobbins in a batch are finished, test result will be stored in the computer automatically, including individual test report per bobbin, statistical report per batch, hairiness curve, histogram, variation diagram, etc.

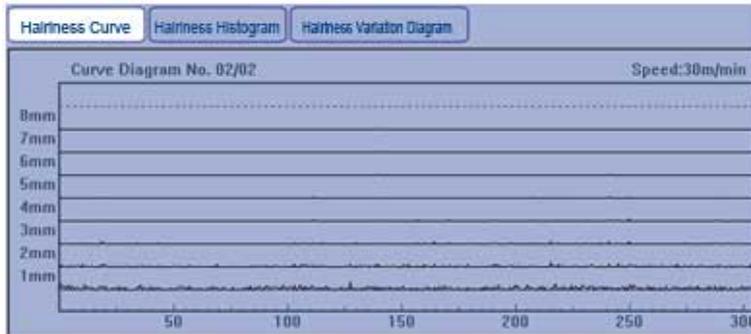
Table with 10 columns: No., 1mm, 2mm, 3mm, 4mm, 5mm, 6mm, 7mm, 8mm. Rows include individual bobbin data (1-10) and summary statistics (Mean, CVb, Max).

Test Data Report



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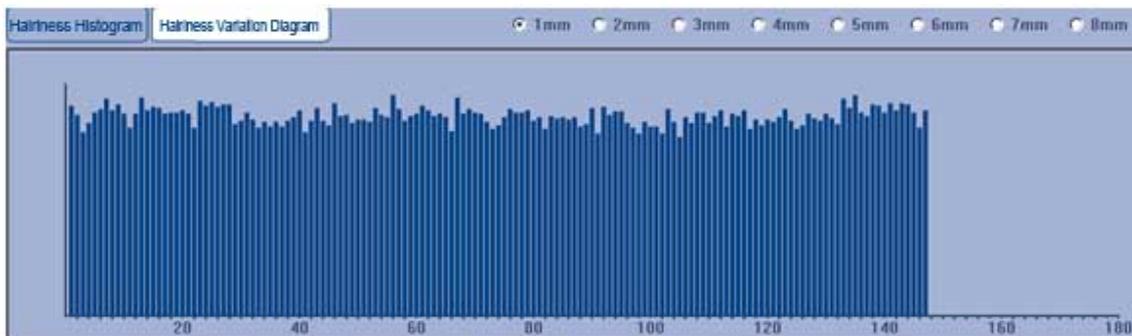
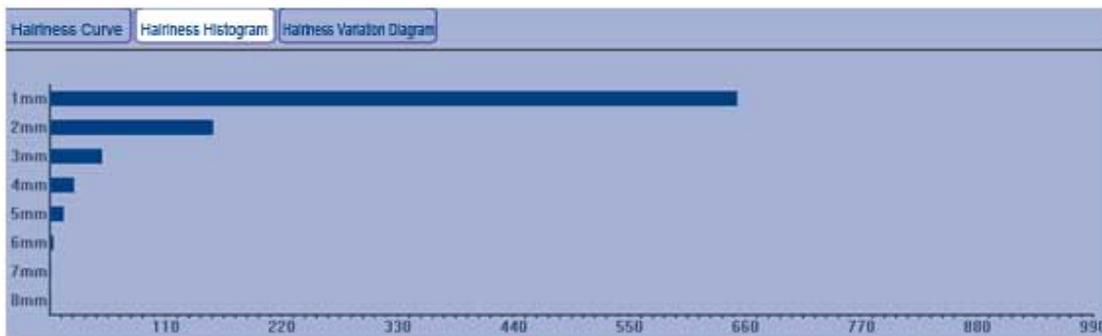
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Upper:
Hairiness Curve

Middle:
Hairiness Histogram

Lower:
Hairiness Variation Diagram



- Comparison of the mean values between two batches or two bobbins are available to acquire the rate of change.

No.	1mm	2mm	3mm	4mm	5mm	6mm	7mm	8mm
3	661.50	176.00	73.10	37.40	21.40	12.40	5.90	3.00
4	844.80	256.70	128.50	68.60	37.00	21.30	11.00	4.80
5	627.80	156.80	70.90	39.20	20.50	12.30	5.90	2.60
6	515.80	108.80	41.90	20.80	12.60	7.40	2.40	1.50
7	662.40	172.30	77.70	38.80	21.10	10.80	5.90	2.80
8	815.40	235.10	111.50	59.60	31.30	17.80	9.20	3.80
Mean	659.96	169.99	76.20	39.46	21.73	12.25	6.01	2.67
CVb	17.64	31.10	39.50	43.10	39.45	40.76	47.51	45.42
Max	844.80	256.70	128.50	68.60	37.00	21.30	11.00	4.80
Min	515.80	108.80	41.90	20.80	12.50	7.40	2.40	1.30
Index	66.80	17.00	7.62	3.95	2.17	1.23	0.60	0.27
Compared value	734.59	203.59	91.85	48.08	26.64	14.78	7.51	3.75
Rate of change	-10.16%	-16.50%	-17.04%	-17.91%	-18.44%	-17.09%	-19.97%	-20.67%

- Built-in self-test function allows user to inspect roller running and hairiness counting conveniently as needed.



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KEY SPECIFICATION:

- Applicable yarn varieties: Cotton, wool, linen, silk, chemical fiber and blended staple yarn
- Test range: 4 ~ 80tex
- Hairiness length: 1, 2, 3, 4, 5, 6, 7 and 8 mm, can determine hairiness index in eight hairiness length categories simultaneously
- Accuracy of hairiness length: 0.03mm
- Min space between fibers: 0.5mm
- Test speed: 30m/min \pm 1%
- Test fragment length: 1 ~ 100 m, can be settable
- Successive test times: 1 ~ 100bobbins, 1 ~ 100times, can be settable
- Statistical data: Mean, CVb, Max, Min, Index, Histrogram, etc. per bobbin or batch
- Power supply: AC 220V, 50Hz, 200W
- Ambient conditions: Temperature: 20 \pm 3 $^{\circ}$ C, Humidity: 65 \pm 5%RH.
No obvious vibration and ensure reliable grounding.
The temperature and humidity must be maintained stable with no frequent fluctuation, in order to avoid any influence on the test result.
- Gross weight: Approx. 85kg
- Package dimensions: 0.44cbm

STANDARD CONFIGURATION:

No.	Item	Quantity
1.	Main machine	1 set
2.	Yarn creel	1 set
3.	Computer	1 set
4.	Application software	1 set
5.	Printer	1 set



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OPTIONAL CONFIGURATION:

No.	Item	Quantity
1.	JWS-5A Hygrothermograph	
2.	L95-2 Hygrothermograph	
3.	FYI Lab air conditioning system	