

Precise ON-LINE Process and Quality Monitoring



Real time measurement of monofilament diameter and opacity online - for a broad range of fibre types

Specification

Each instrument is custom built from standard modules to suit the particular requirements: these specifications are the maximum possible

- Fibre Speed: unlimited
- Number of Fibres in one plane: 1000
- Measurement Speed: variable, maximum 15,000 measurement per Second for each fibre
- Distance between fibre to fibre : variable, typically 2mm to 100mm
- Diameter Range: 10 micron to 5 mm (not in the one instrument)
- Accuracy: +/- 1% or +/- 2um whichever is greater for a single measurement of a fibre
- Maximum Temperature at the measurement point: 50°C
- Distance between the 2 steel rollers:>250mm
- Distance between floor and fibre: >200mm
- Dust level: normal
- Acceptable vibration of the fibre: approx. 0.2-0.5 mm

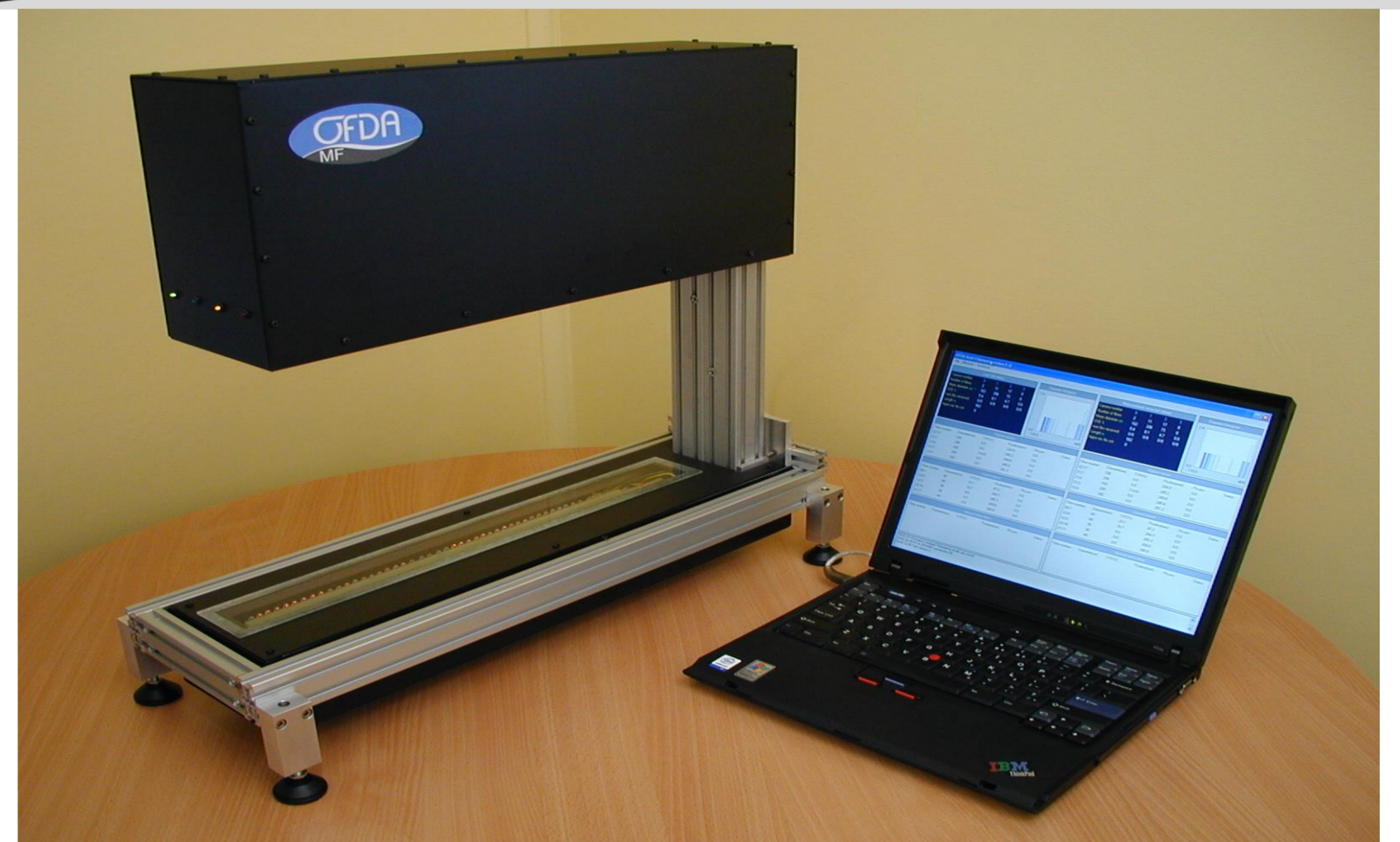
Measurements provided

- Mean value
- Value outside of Tolerances with Time declaration Defect (slub, neck, broken, mean diameter out of tolerance) counts
- Alarm from PC
- Diameter graph
- Spread sheet format with all parameter

Advantages and benefits of OFDAMF

- Customized for each application and budget
- Measure 1 to 1000+ fibres in one plane
- Fibre opacity measurement possible for some clear fibres
- high speed
- Many output options including alarm and spread sheet
- Good dust rejection

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Online Monofilament measurement - Up to 15,000 measurements per second

OFDAMF is a technology that allows rapid, high resolution diameter and opacity measurement of 1 to 1000+ monofilament fibres online.

OFDAMF is based on intelligent image analysis of a line scan digital video sensor to greatly improve accuracy over previous laser and shadow based technology. A diameter change of the Extruded Monofilament results in a signal change in the sensor and this is translated into a diameter increase or decrease. Software is provided to enable recording of data and generating trending information of the monofilaments as they are produced.

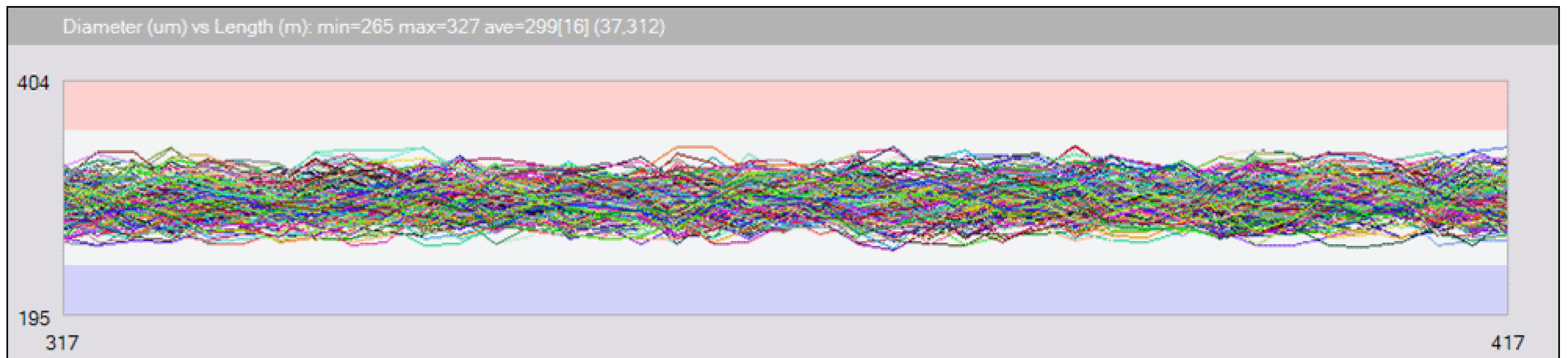
Upper and lower diameter limits can be set to give an alarm allowing correction to be made to the process before a large amount of fibre is wasted.

A profound technical knowledge, experience in the market as well as close collaboration with the customers guarantee the professional handling of every project.

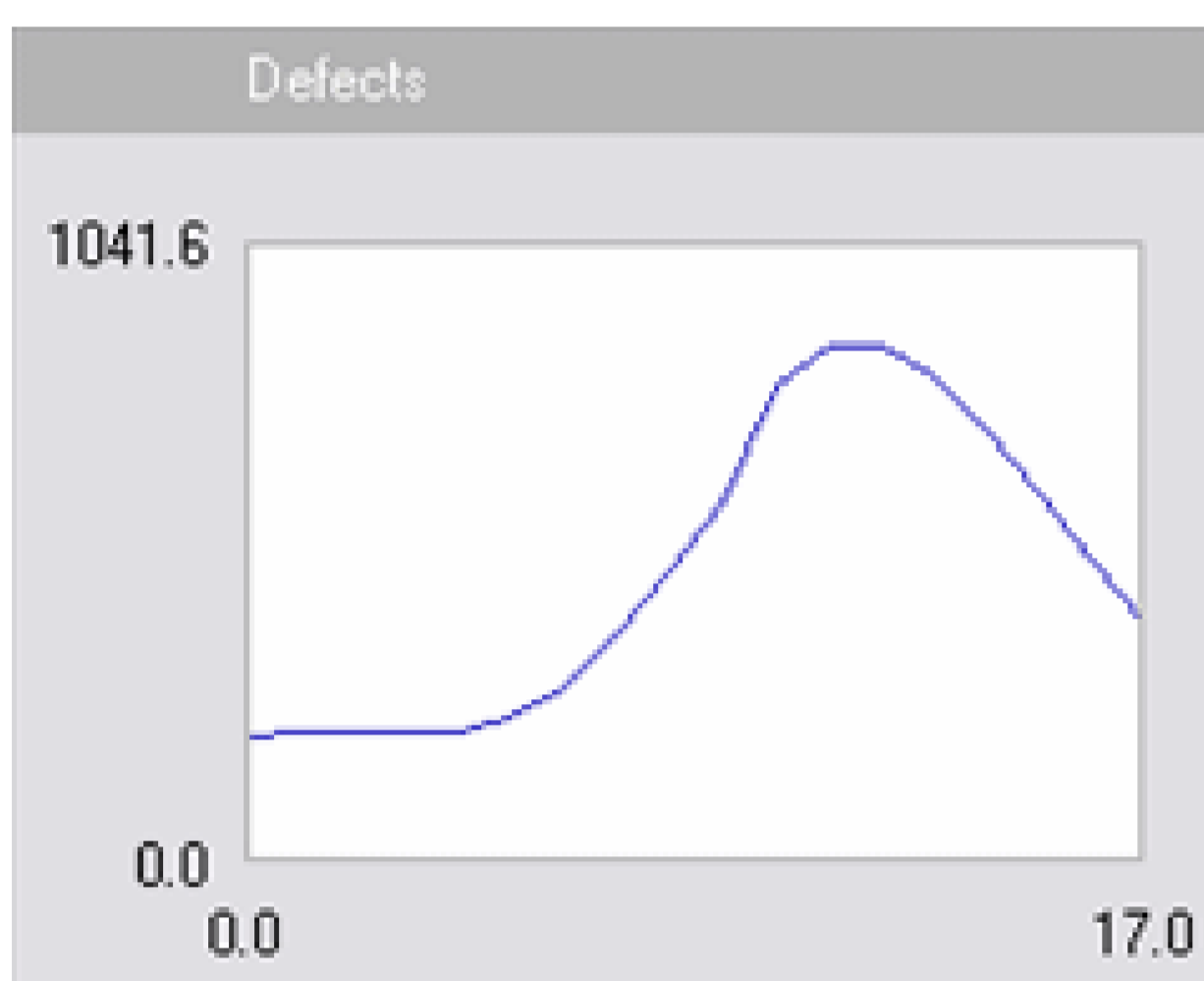
Statistical values

- Mean value (mean fibre diameter in mm, denier or decitex)
- Standard deviation s
- graph of diameter
- Defect counts
- Histogram of diameter
- All data can be exported to spread sheets for research

Production Visualisation



Monitor hundreds of fibres at the same time from a convenient diameter graph.



Global Average											
Mean	SD	Min	Max	Thin	Thick	Defect thin	Defect thick (stub)	Fibres detected	CF	Sample rate	
336.6	3.8	60.2 (148)	798.0 (69)	54 54	43 43	0	0 (97)	238	1.00	13876	
1 774 [5.6] 0 0		36 398 [3.1] 0 0		71 113 [2.7] 0 0		106 402 [3.2] 0 0		141 114 [2.7] 0 0		176 136 [3.2] 0 0	211 786 [5.2] 0 2
2 68 [2.9] 2 0		37 773 [5.2] 0 0		72 402 [4.1] 0 0		107 793 [4.6] 0 2		142 393 [3.9] 0 0		177 398 [4.3] 0 0	212 65 [2.4] 2 0
3 116 [3.3] 0 0		38 69 [2.9] 2 0		73 788 [5.7] 0 2		108 77 [2.3] 0 0		143 775 [5.6] 0 0		178 782 [7.8] 0 2	213 114 [2.6] 0 0
4 397 [3.6] 0 0		39 114 [2.6] 0 0		74 65 [2.4] 2 0		109 117 [2.7] 0 0		144 70 [2.2] 0 0		179 62 [2.7] 2 0	214 401 [3.5] 0 0
5 770 [5.1] 0 0		40 394 [3.8] 0 0		75 116 [2.8] 0 0		110 406 [3.9] 0 0		145 117 [2.5] 0 0		180 110 [3.1] 0 0	215 779 [5.5] 0 2
6 66 [3.0] 2 0		41 771 [5.2] 0 0		76 398 [3.9] 0 0		111 796 [4.7] 0 2		146 401 [4.4] 0 0		181 390 [6.3] 0 0	216 64 [2.4] 2 0
7 118 [2.8] 0 0		42 64 [2.2] 2 0		77 791 [6.2] 0 2		112 69 [2.2] 2 0		147 786 [8.2] 0 2		182 402 [4.1] 0 0	217 116 [2.9] 0 0
8 404 [3.7] 0 0		43 119 [2.7] 0 0		78 63 [2.9] 2 0		113 114 [2.4] 0 0		148 60 [2.9] 2 0		183 775 [6.3] 0 0	218 401 [3.9] 0 0
9 783 [5.4] 0 2		44 393 [3.8] 0 0		79 112 [2.8] 0 0		114 409 [3.3] 0 0		149 120 [3.4] 0 0		184 67 [2.6] 2 0	219 775 [6.2] 0 0
10 66 [2.6] 2 0		45 767 [7.1] 0 0		80 404 [4.0] 0 0		115 792 [4.8] 0 2		150 405 [4.0] 0 0		185 114 [2.9] 0 0	220 63 [3.4] 2 0
11 119 [2.8] 0 0		46 63 [2.9] 2 0		81 787 [6.5] 0 2		116 68 [2.3] 2 0		151 68 [2.5] 2 0		186 398 [3.2] 0 0	221 110 [2.9] 0 0
12 402 [3.6] 0 0		47 116 [3.0] 0 0		82 64 [2.6] 2 0		117 117 [2.5] 0 0		152 118 [2.4] 0 0		187 774 [4.8] 0 0	222 389 [4.3] 0 0
13 786 [4.8] 0 2		48 399 [4.2] 0 0		83 119 [3.0] 0 0		118 405 [3.4] 0 0		153 404 [4.1] 0 0		188 65 [2.1] 2 0	223 772 [7.5] 0 0
14 67 [2.6] 2 0		49 787 [5.9] 0 2		84 399 [4.2] 0 0		119 790 [6.3] 0 2		154 793 [7.5] 0 2		189 112 [2.4] 0 0	224 61 [2.8] 2 0
15 112 [2.7] 0 0		50 70 [3.2] 2 0		85 784 [6.8] 0 2		120 68 [2.5] 2 0		155 69 [2.5] 2 0		190 403 [3.7] 0 0	225 106 [3.2] 0 0
16 396 [3.2] 0 0		51 113 [3.3] 0 0		86 63 [2.6] 2 0		121 116 [2.4] 0 0		156 114 [2.3] 0 0		191 775 [5.3] 0 0	226 392 [4.7] 0 0
17 786 [4.8] 0 2		52 399 [3.9] 0 0		87 119 [3.1] 0 0		122 404 [3.5] 0 0		157 405 [3.6] 0 0		192 66 [2.4] 2 0	227 766 [7.3] 0 0
18 71 [2.8] 0 0		53 777 [5.1] 0 0		88 404 [4.5] 0 0		123 792 [5.2] 0 2		158 794 [5.2] 0 2		193 115 [3.2] 0 0	228 63 [2.5] 2 0
19 114 [2.2] 0 0		54 61 [2.4] 2 0		89 781 [9.7] 0 2		124 66 [2.3] 2 0		159 65 [2.3] 2 0		194 395 [4.0] 0 0	229 119 [2.9] 0 0
20 398 [3.5] 0 0		55 196 [5.7] 0 0		90 66 [2.4] 2 0		125 116 [3.1] 0 0		160 117 [2.7] 0 0		195 776 [5.2] 0 0	230 397 [4.3] 0 0
21 784 [4.5] 0 2		56 399 [3.2] 0 0		91 110 [2.9] 0 0		126 411 [3.6] 0 0		161 403 [3.9] 0 0		196 63 [2.3] 2 0	
22 67 [2.4] 2 0		57 786 [5.9] 0 2		92 400 [5.2] 0 0		127 795 [5.8] 0 2		162 794 [6.6] 0 2		197 115 [2.2] 0 0	
23 114 [2.8] 0 0		58 69 [2.2] 2 0		93 68 [2.7] 2 0		128 66 [2.5] 2 0		163 68 [2.7] 2 0		198 398 [3.2] 0 0	
24 398 [3.0] 0 0		59 114 [2.5] 0 0		94 122 [3.1] 0 0		129 112 [2.8] 0 0		164 117 [4.0] 0 0		199 784 [4.4] 0 2	
25 777 [4.9] 0 0		60 409 [3.4] 0 0		95 402 [3.5] 0 0		130 397 [4.1] 0 0		165 403 [4.1] 0 0		200 66 [2.6] 2 0	
26 63 [2.4] 2 0		61 793 [5.3] 0 2		96 785 [5.2] 0 2		131 793 [7.4] 0 2		166 783 [5.9] 0 2		201 124 [2.3] 0 0	
27 118 [2.6] 0 0		62 64 [2.5] 2 0		97 63 [2.7] 2 0		132 62 [3.0] 2 0		167 63 [5.9] 0 0		202 449 [3.1] 0 0	
28 400 [3.2] 0 0		63 129 [5.1] 0 0		98 118 [2.5] 0 0		133 120 [3.1] 0 0		168 115 [2.8] 0 0		203 781 [4.2] 0 2	
29 781 [5.3] 0 2		64 406 [3.2] 0 0		99 403 [3.8] 0 0		134 403 [5.0] 0 0		169 401 [4.2] 0 0		204 62 [2.1] 2 0	
30 66 [2.4] 2 0		65 791 [5.0] 0 2		100 793 [5.6] 0 2		135 787 [8.0] 0 2		170 781 [7.3] 0 2		205 116 [2.2] 0 0	
31 117 [3.0] 0 0		66 71 [2.3] 0 0		101 66 [2.5] 2 0		136 66 [3.6] 2 0		171 65 [2.7] 2 0		206 401 [3.3] 0 0	
32 399 [3.5] 0 0		67 126 [2.3] 0 0		102 414 [4.2] 0 0		137 197 [4.2] 0 0		172 117 [3.0] 0 0		207 781 [4.4] 0 2	
33 781 [5.2] 0 2		68 413 [3.4] 0 0		103 795 [5.4] 0 2		138 397 [5.2] 0 0		173 401 [4.5] 0 0		208 68 [2.5] 2 0	
34 67 [2.4] 2 0		69 799 [5.8] 0 2		104 64 [2.3] 2 0		139 782 [8.1] 0 2		174 782 [7.0] 0 2		209 113 [2.5] 0 0	
35 136 [2.8] 0 0		70 66 [2.4] 2 0		105 116 [2.6] 0 0		140 70 [2.7] 0 0		175 63 [2.8] 2 0		210 401 [3.0] 0 0	

Ultra high speed cameras captures defects as short as 1 mm to produce premium products with confidence.



Global data accessible on a single screen with coloured highlights of fibres requiring attention.

References and Research Papers

Contact your agent or visit www.hornik.cc to receive the latest papers in electronic form

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