

## AUTOMATIC FINISH ANALYZER ALFA 300



The ALFA 300 determines the content of finish on yarn and oil pick up by a highly automated procedure. Apart from the efficiency of handling automation, the measurement takes place in approximately 3 minutes per sample. That offers your operator time to take care of other jobs, it reduces the possibility of errors and makes the results more reliable. In case of necessity you can easily increase the frequency of measurements for a more detailed production control or for specific problem analysis without requiring additional equipment or staff.

ALFA 300 is an automated spin finish analyzer which permits a flexible and reliable production control. Its automation reduces decisively sample preparation workload and increases the reliability of the results. 28 samples are tested without direct operator control and the preparation time is much less than it used to be with other systems. By using water as a dissolvent it saves time and costs for waste disposal and will meet even in future possible obligatory ecological demands. Alfa 300 uses hot deionized water as finish dissolvent. Its application as dissolvent has been successfully proven with the Alfa 300 in long years of implementation in production control with most different spin finish types. Thus no expensive disposal of chemical dissolvents is required anymore.

### Scope

Determination of spin finish content of filament yarns and staple fibers. Suitable for all organic oil, fat and carbon based finishing agents.

### Method

A known amount of fibers or filament yarn is put into a measuring vessel. Hot deionized water is added as dissolvent and through constant stirring the finish is extracted from the fibers. The resulting emulsion is now pumped to the Total Carbon Analyzer where its carbon content is determined. Based on the amount of organic carbon the % OPU (Oil Pick Up) or % FOY (Finish On Yarn) is calculated and printed.

The results can be stored in a data base for further evaluations. Data transfer (ASCII-format) to a host computer is possible.

## Specifications

- **Dimensions**  
Height: 680 mm  
Length: 1140 mm  
Width: 650 mm
- **Weight**  
72 kg
- **Power supply**  
110 to 240 V ~50/60Hz 1 kVA
- **Testing time**  
3 minutes per sample
- **Measurement range**  
0-200 ppm Total carbon  
corresponding to approx. 0% to 5%FOY, OPU
- **Accuracy**  
± 0,02% FOY, OPU depending on spin finish
- **Repeatability**  
Better than ± 1,5% standard calibration solution
- **Sample size**  
Typically approx. 2 g fibers or 100m (dtex), 90 m (den) of filament yarn depending on titer and finish content.
- **Gas supply**  
Synthetic Air, HC free  
O<sub>2</sub> = 20 ± 1%  
N<sub>2</sub> = 80 ± 1%  
H<sub>2</sub>O < 5ppm  
C nHm < 0,1ppm
- **Gas consumption**  
Approx. 200 ccm at 3,5 bar during measurement
- **Dissolvent**  
Deionized water at a temperature of >60° C (It is not to be understood to extract 100% of finish, but to extract finish in a reproducible way by using a certain fixed and reproducible procedure)