KRK KUMAGAI RIKI KOGYO

# Bristow Tester
# (Liquid Dynamic Absorption Tester)

## Model No. 2072-I

Transfer of ink to the paper and absorption of ink by the paper through the printing process, including penetration of colors in coating, are important factors, especially when paper and paperboard are coated. Other important factors in processing papers are penetration of bond into inner cores and bonding to liners at the corrugators.

This behavior of liquid penetrating the paper layer is considerably different from that of the liquid penetrating the paper with a time span of several seconds or several tens of seconds, in the status of the paper being in static contact with liquid, as known in the conventional testing methods such as “Stockigt” and “Cobb” methods.

To grasp this behavior, the Bristow type tester is designed for the purpose of measuring absorption speed of liquid in the processes of coating, box making and printing, when the liquid is at normal pressures or pressurized.

In the status of normal pressure or pressurized, the measurement principle is as follows; the specimen is applied on the circumferential surface of a rotation disc and made to rotate at different speeds, contacting with a head box filled with a certain amount of liquid on the specimen. The specimen is rotated at a certain speed until the liquid leaking out from a slit in the head box is completely absorbed by the paper. Absorption by the specimen is evaluated with a liquid transfer area recorded.

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| **Specimen** | A: 25mm wide×1,000mm long (newspaper, general wood-free paper)<br>B: 25mm wide×1,500mm long (coated paper) |
| **Specimen Disc** | A: 25mm wide×318.5mm in diameter<br>B: 25mm wide×477.5mm in diameter |
| **Rotation Speed of Disc** | 0.5, 1.25, 2.5, 5.0, 12.5, 25.0, 50.0, 250mm/sec. |
| **Circumferential Velocity Display** | digital circumferential velocity meter, 4 digits |
| **Head Box** | 15mm wide, slit width 1mm |
| **Contact Pressure** | about 0.1MPa |
| **Liquid Added** | 40 microliters (sampling with a micro syringe) |
| **Motor** | 100/110VAC 50/60Hz 0.2kW |
| **Accessory** | micro syringe 50 microliters |
| **Referential Literature** | Science for paper making. Dr. Kadoya<br>p. 268 to 273 |
| **Referential Standard** | J. TAPPI No. 51-2000 |
| **Power Source** | 100/110VAC 50/60Hz 4A |
| **Outer Dimensions** | 510x540x750mm |
| **Instrument Weight** | 89kg |