

KRK KUMAGAI RIKI KOGYO

Experimental Gate Roll Coater

Model No. 2219

Intensified demand for diversification and quality upgrading of printing papers requires printing modes to change more versatily, with higher printing speed and higher printing quality. In recent years, coated papers for printing have been diversified in kinds, widely ranging from high-gloss papers to slightly coated papers. Equipped with the function of a practical roll coater, this coater offers the possibility to examine coater troubles in the laboratory by setting the various conditions that affect coating results.

Coating amount	0.5 to 10g/m ²
Coating viscosity	max. 3,000mPa·s(cps)
Concentration	max. 65%
Coating speed	0 to 350m/min.
Effective coating width	220mm
Specimen width	260mm
Coating length	550, 1,500mm (by cam change)
Power source	three-phase 200/220VAC 50/60Hz 20A
Air source	0.5MPa
Outer dimensions	main unit: 1,800×1,350×1,950mm weight 980kg control box: 965×570×1,185mm weight 141kg
Instrument weight	260mm

Uses and Performance

- 1) This gate roll coater, featuring high concentration coating, is used as a size press and able to apply a large amount of coating.
- 2) The coater can check the impregnation of coat liquid in the paper sheet to make it stay on the surface, thereby making papers of high printability. This machine is also used as a primer coater.
- 3) The size press involves problems such as spattering of coat liquid when the specimen carrier plate enters between the rollers. However, with the gate roll coater, it is possible to implement beautiful coating, because of a liquid dam formed between the low speed fountain roll and the metering roll.
- 4) When used as a sheet coater, this machine can make coating at a speed of 350m/min or more, so the user can investigate the behaviors of colors and coating.
- 5) There are two kinds of coating liquids, pigment-based and non-pigment-based. Coating volumes and concentrations are as follows:
Coating amount: pigment 0.8 to 10g/m², non-pigment 0.4 to 2.5g/m²
Coating concentration: pigment 20 to 65%, non-pigment 5 to 20%
- 6) Using the unwinding and winding unit (optional), it is possible to examine the aptitude of paints and papers at high speeds.

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Rolling speed:	50 to 350m/min., speed shifting with inverter, synchronized with coater for speed shifting
Paper cylinder inner diameter:	70 to 100mm
Paper cylinder outer diameter:	100mm (minimum)
Maximum winding diameter:	500mm
Paper width:	250mm
Tension:	0.4kg/cm (maximum), total tension 10kg
Winding brake:	water-cooled electromagnetic powder brake
Winding clutch:	water-cooled electromagnetic powder clutch
Tension regulation in winding and unwinding:	current regulation of brake and clutch (manual)
Power source:	three-phase 200/220VAC 50/60Hz 25 A
Machine dimensions:	3800 x 1300 x 2300mm



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