



World's Fastest New Splicer "63-1J" for Corrugator

PAPER & PRINTING MACHINERY DIVISION
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To operate a corrugator at constant high speed is a basic need of the industry for realizing higher productivity and higher quality sheets.

Hitherto, it has been necessary to reduce the production speed of the corrugator to below its splicing limit performance when splicing the preceding paper roll with the following new paper roll, and such speed reduction has been a factor that impedes high productivity and degrades the cardboard quality due to production speed fluctuation.

In order to eliminate such problems, a high-speed splicer that does not require production speed restriction at time of splicing has been developed.

1. Outline of the product

This is the world's highest-speed splicer capable of paper splicing without reducing the production speed, featuring the world's fastest production speed for a corrugator of 400 m/min.

2. Main characteristics

2.1 High-speed splicing

- (1) Splicing at a cardboard medium speed of 640 m/min was achieved (the web speed of the medium for cardboard to be corrugated in wave pattern is approx. 1.6 times faster (max.) against the top and bottom liner.) with a corrugator operating speed of 400 m/min.

The new splicer, which enables splicing at a constant high operating speed, will contribute to improvement of both productivity and quality of cardboard, preventing warp by production speed fluctuation and so forth.

- (2) Since its machine length is the same as that of conventional splicers, this splicer is able to upgrade the splicing web speed by approximately 1.5 times (ratio as attained by Mitsubishi Heavy Industries, Ltd.).

2.2 Tension controller

Since it has a built-in tension controller, the web tension fluctuation at time of splicing can be limited to within $\pm 15\%$ of its set tension value (at splicing web speed of 640 m/min).

Medium fracture and delamination in single facer cardboard hitherto caused by web tension fluctuation at time of splicing as well as poor bonding in double facer cardboard have now been eliminated.

2.3 Easier operation for splicing preparation

This splicer automatically removes slackness of the new paper roll at time of the splicing preparation work, and also shortens the time required for the splicing preparation work.

3. Outline specifications

The outline specifications are shown in **Table 1**.

Table 1 Outline specifications

M/C type		Type I	Type II	Type III
Max. splicing web speed (m/sec)	Machine length (mm)	6 660	5 150	4 560
	Dancer roll no.			
	4	640	529	479
	3	562	468	427
	2	461	387	354
Max. paper roll diameter (mm)		1 300		
Machine width (mm)		1 800, 2 000, 2 200, 2 500		
Used paper roll spec.	Paper roll basic weight	110 – 440 g/m ²		
	Tension strength	55 N/cm (5.5 kgf/cm)		
Splicing		Overlap splicing (lap: 75 mm, tape width: 50 mm)		
Tension controller		Tension fluctuation kept within $\pm 15\%$ (at splicing web speed of 640 m/min)		