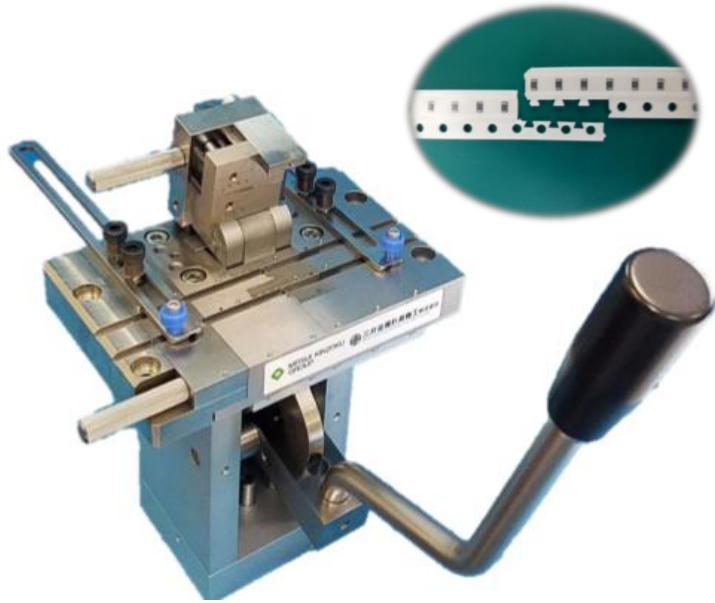


SMT Puzzle Splicer W

MKK-X0005-02



Easy work · Reduced work time

- At the time of production,
New and old tape **simultaneous cut & joint**
- Connecting Carrier Tape
Firmly fastened without tools
- **Reduce work time**
About 20 seconds without scissors

▫ Outline

This instrument enables the connection of 8 mm wide tapes to be made into a puzzle shape combination without any other instrument.

- On the instrument, it is possible to trim the ends of both carrier tapes → connect → attach the splicing tape.
- The upper tape on the new tape side is cut into a shape that is easy to separate.
- Stable splicing work is possible regardless of the skill of the individual operator.

Category	Specification	Note
Target tape	Paper tape (8mm (w) x 2mmP・8mm (w) x 4mmP) Embossed tape (8mm (w) x 2mmP・8mm (w) x 4mmP) ※ Embossed tape supports up to boss height of 2.5mm	(w) : width
Splice tape	Exclusive splicing tape	For the exclusive splicing tape, please contact our representative.
Cut position	Cut in a position shifted 0.2mm from the sprocket feed hole	Changing the cut position is possible as an option.
Operation time /1 time	About 20 seconds	From trimming of both carrier tape ends to joint and tape attachment.
Dimension (L x W x H)	Maximum Dimensions : 150 (L) x 100 (W) x 240 (H)	
Weight	5Kg	
Blade durability	About 300,000 cuts (300,000 shorts) About 6 years (200 times/day use)	Only when used according to the instructions..



“First in the world” Used in a wide range of applications from no-sweat prototyping to mass-production mounting with no special skills required!!

Patent pending (PAT.P)

SMT Puzzle Splicer Mini MKK-X00004-01

new!

Further downsizing and weight reduction while inheriting the cutting shape from the previous model!!

◆ Prototype implementation

Even small pieces of tape can be cut and jointed with zero waste

◆ Mass-production mounting

Increased work efficiency by use of a dedicated cart (optional)

◆ Dedicated seal

Increased work efficiency by positioned sticking

◆ Working time

28 seconds without requiring scissors



Power supply and pneumatic source not required!

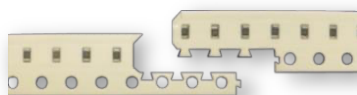
■ Overview

This jig achieves fixture-free work for 8mm-width tape jointing by using puzzle shape matching.

- The following steps can be performed on the jig: End trimming of both carrier tapes → jointing → sticking of splicing tape.
- Tape is cut in a shape that allows easy peeling of the top tape on the new tape side.
- Stable splicing work can be performed without being influenced by individual operator skills.



(Image drawing of an operation cart set)



(Paper cutting shape)

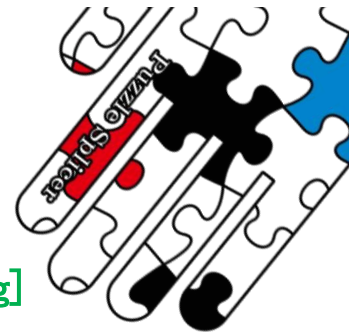
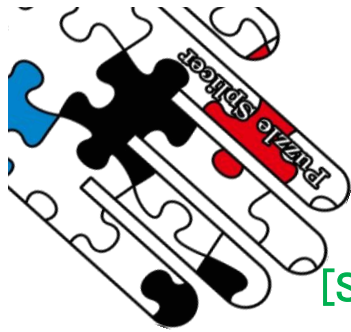


(Emboss cutting shape)

Item	Specification	Remarks
Target taping	Paper tape (width 8mm x 2mmP - width 8mm x 4mmP) Emboss tape (width 8mm x 2mmP - width 8mm x 4mmP)* * Supports emboss tape with a boss height of up to 2.8mm	
Splicing tape	One-side sticking-dedicated splicing tape (with positioning holes)	Please ask our sales representative for dedicated splicing tapes.
Cutting position	Cut at the position shifted by 0.2 from the sprocket feed hole	Change of cutting position is available as an optional specification.
Working time/1 time	Approx. 28 seconds.	From the trimming of both carrier tapes to application of joint tape.
Dimensions (L x W x H)	Max. dimensions: 310 (L) x 100 (W) x 190 (H)	(L) includes lever length.
Weight	4kg	
Blade durability	Approx. 300,000 cuts (300,000 shots) Approx. 6 years (when used 200 times/day)	Only when used as described in the instruction manual.



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[Small- to medium-lot prototyping and mounting]

In the small- to medium-lot board mounting market, surface mounting is frequently performed by means of very short strip-shaped carrier tapes (strip tapes). However, it is very difficult to set stripped carrier tapes on tape feeders, as it poses many problems.

◆ Prototyping mounting: customers' voices (problems)

- We have no other choice but to discard valuable electronic components on dispensed tape headers so as to secure the length of the leader section!
⇒As the splicing of strip tape is possible, it enables mounting of the dispensed tape head (chip-less tape, etc.) without connection waste.
- Sufficient strength cannot be achieved when an empty carrier tape is connected with conventional methods. The connection section is damaged by the tape setting operation.
⇒The connection section cannot be damaged as it is rigidly jointed using a unique jigsaw-puzzle shape.
- The use of mounting machines is abandoned and prototyping is done by manual mounting → Increase in prototyping costs! → Impossible to evaluate as the technique is different from those of mass production. There is a limit in manual mounting depending on the chip size!
⇒The use of mounting machines is enabled without requiring manual mounting, resulting in substantial improvement of evaluation reliability at the prototyping stage.
- Due to the high frequency of strip tape mounting, the time taken for arrangement is much longer than the machine operating time, leading to reduced efficiency.
⇒It is completed in about 28 seconds from cutting to tape sticking, contributing to improving the machine operation rate.

[Mass-production mounting]

Splicing is performed in mass-production mounting so as to reduce machine stoppage time caused by tape replacement operation. Major challenges, however, still exist, such as tape splicing work time and machine stoppage time due to problems at junctions (caused by unfamiliarity). Further challenges are expenses for fixings and cost of tapes as a running cost, etc.

◆ Mass-production mounting: customers' voices (problems)

- The working time and the way tapes are connected greatly vary from one operator to another, and it takes time for them to gain the skills. (See the following [1] Table of working time)
⇒By setting the positioning pin, it is completed in about 28 seconds from cutting to seal sticking.
- Trouble with machine stoppage due to frequent problems caused by the top tape peeling. (See the following [2] Table of failure rate)
⇒A unique trapezoid cut eliminates the need for pre-peeling the tape end, contributing to decreasing problems in connection sections.
- A large amount of splicing operations increases the running costs. (See the following [3] Table of running costs)
⇒ It contributes to reducing the running costs by enabling one-side seal sticking for both paper and emboss.

◆ Common to both prototyping and mass-production: customers' voices (problems)

- As we use fixings, machine stoppage occurs due to problems such as hooking, etc.
⇒Because fixings are not required, problems such as those caused by hooking, etc. are reduced.
- It takes some effort to cut by visually aligning the pitch.
⇒The pitch is aligned by setting it on the positioning pin, resulting in preventing any deviation.

Our company's demonstrated values

Actual values

Reference values

