



# Manual Tape Applicator MTA-II

Information Folder

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Figure 1

## Description

The 3M™ Manual Tape Applicator (MTA-II) is a simple, two-wheeled, push-type device for applying 3M™ Stamark™ and Scotch-Lane™ pavement marking tapes. (Figure 1)

The device is specifically designed to apply pavement marking tapes precoated with pressure sensitive adhesive during and immediately following asphalt resurfacing operations as well as on new concrete surfaces. It can also be used to apply pressure sensitive adhesive coated marking tapes on existing surfaces for temporary use in construction work zones.

The 75kg aluminium and steel applicator can be partially disassembled by removing the pointer for transporting in a van, truck or station wagon.

## Product Width and Spacing

Two 100mm (4") lines can be applied at the same time, with 100mm (4") spacing between the lines. Combinations of solid and skip lines may be applied simultaneously with the US version only. Single lines of widths up to 300mm (12") wide can also be installed as solid or skip lines.

The MTA-II can be used to apply all Stamark and Scotch-Lane pavement marking tapes at maximum standard roll length.

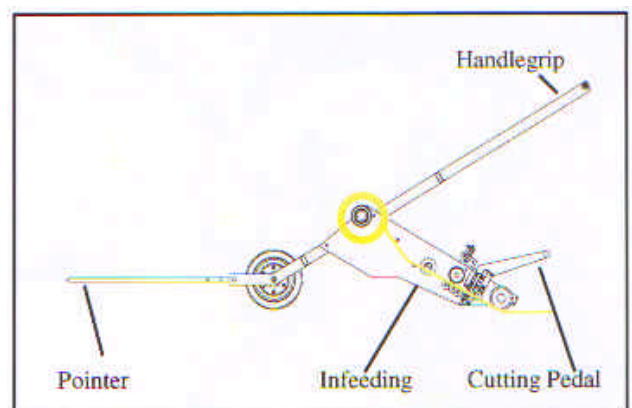
Note: If special ordering tape, the maximum roll diameter can not exceed 50cm (20") if the material is to be applied with a Manual Tape Applicator.

## Operation

The MTA-II can be operated by one person.

Note: Roll changing should be supported by a second person due to the weight of a tape roll to avoid extensive work-load for a single operator.

The application rates depend on the individual application conditions and environment so no specific application speed rates can be calculated.



## Procedures for Adjusting Machine and Tape

Load the tape roll and move tape through the system as shown in figure 2. Adjust all TAPE GUIDES, infeeding roll and pointer like shown in figures 3-7. Machine is ready for application.

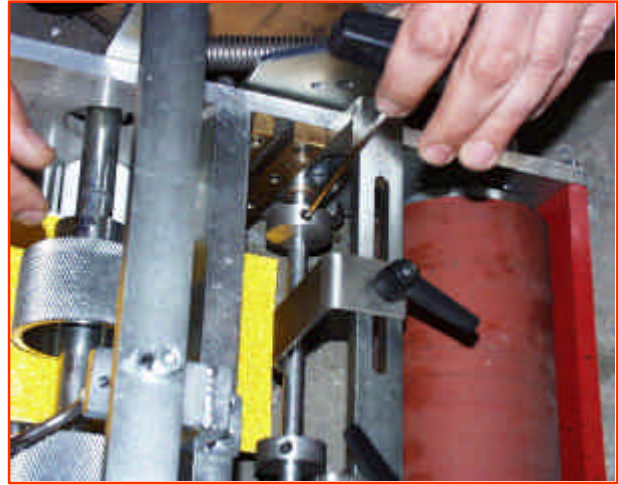
**Caution:** Do not activate the cutting knife with

For 10,12,15cm tape widths use 1 of the infeeding rolls in the middle of tape.

For tapes wider than 20cm use both infeeding rolls centered in the middle of tape.



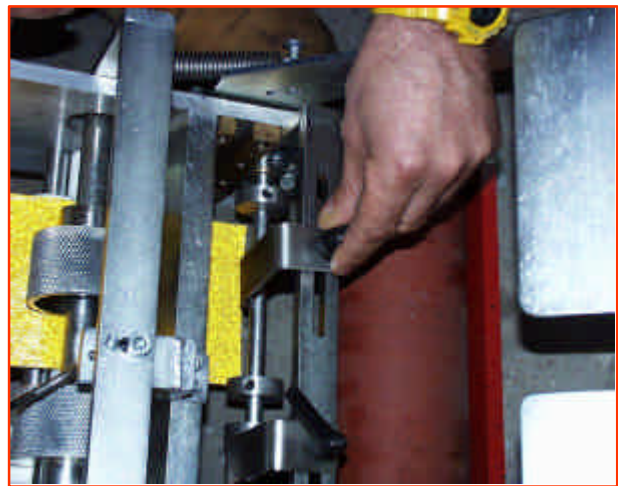
**Figure 2:** Infeeding of Tape



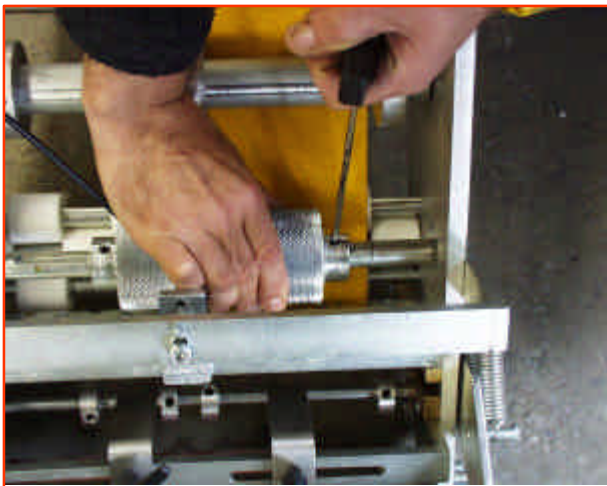
**Figure 5:** Adjustment of lower tape guide rolls



**Figure 3:** Adjustment of upper tape guide rolls



**Figure 6:** Adjustment of lower vertical tape



**Figure 4:** Adjustment of infeeding roll to tape center



**Figure 7:** Adjustment of pointer system

## Tape Application

1. Determine where the first skip or long line starts by measuring from the last existing skip or reference mark and the side of the road.
2. Adjust the pointer to the pre-marking. Best case is when the pre-marking and the later tape position are inbetween the wheels of the applicator.
3. If primer is used apply tape exact on primer.
4. For starting the application pull handgrip down and watch tape being moved by infeeding-transportation roll. Position tape start at start of pre-marking. Push applicator forward and keep handle grip pulled until tape appears on other side of rubber application roll. Release handle-grip and keep pushing applicator.



Figure 8: Infeeding Handle Grip

## Tape Cutting

Bring the applicator to a complete stop. Keep tape under slight tension

Cut tape with one strong and fast movement of foot pedal. Release the pedal slowly. Do not attempt to cut the tape while moving. Cutting the tape in motion will stretch and tear the tape, causing the next line to start off center.



Figure 9: Cutting of tape

## Tamping

When applying pavement markings on new asphalt surfaces, tamp the markings during final compaction (finishing roller) of the new asphalt layer.

If aluminum based pavement marking tapes are applied on new asphalt, pass once over the tape by using the 3M™ Roller Tamber Cart (RTC-3) without the 2 weights, before the final compaction will be done.

After application of markings on existing surfaces, tamp with the tape thoroughly with the RTC-3 with a minimum **90kg** (200lb.) load.

When using the RTC-3 Roller Tamber Cart:

- Do not twist or turn the tamping device on the tape.
- Make three passes back and forth over each part of the tape
- Move the RTC-3 slowly (4-5 km/h) over the tape
- Make sure all edges are firmly adhered
- Open road to traffic as soon as **tamping is completed**

**Tamping is most important !**

## Maintenance

### Keep all Fasteners Tight

**Lubrication:** The pivot points and sliding areas should be kept lubricated with light oil.

**Cleaning:** The rubber application roller wheels and cutting mechanism must be kept clean.

Mineral spirits, fuel oil or any other light oil cleaners may be used on the wheels and knives.

Check knife blades from time to time to prevent adhesive build-up.

Solvents may be used occasionally for difficult cleaning problems. A spray bottle of cleaner or silicone spray is useful to prevent asphalt and dirt pickup on the wheels and adhesive buildup on the knives during operation.

**Caution:** Do not use solvents or petroleum products on the silicone application roller when working on new, hot asphalt surfaces.

To prevent asphalt buildup around the roller, additional clearance can be provided by loosening the scraper mounting screws and sliding the scraper back. Tighten the screws.

## Adjustments

The KNIFES are pre-adjusted by the manufacturer to slide across each other with a minimum of friction in a scissors action. Adjustment is needed when foil construction tapes are not cleanly cut.

Either the STATIONARY KNIFE or the SLIDING KNIFE may be adjusted. To adjust the stationary knife, loosen the mounting screws slightly. Turn the set screws to bring the cutting edge down, and retighten the mounting screws. The same procedure is followed to adjust the sliding knife. Each knife has two cutting edges. The knives may be removed and new cutting edges exposed. The knives may be sharpened after the cutting edges are dull.

## **Trouble Shooting**

**Tape Does Not Cut:** The tape will not cut cleanly if cutting is done while the applicator is in motion. If the knife edges are dull or out of alignment, the knives should be sharpened and adjusted. (See Adjustments) Clean adhesives build up from knives. (See Maintenance)

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