



**NUTEK**

**EUROPE**

PCB handling & Traceability equipment



## Company

Nutek Europe BV is the European distributor of Nutek Board Handling & Traceability Equipment and is the leading supplier of this equipment for the European, African and Middle East PCB Assembly industry.

Our history traces back to 1992, when Nutek Europe obtained the exclusive European sales rights of Nutek Pte Ltd, Singapore. Since then a network of agents has been setup and maintained to serve customers throughout our sales region. The agents are supported by the Nutek Europe's area sales managers who are familiar with the entire production process and specialize in several specific areas.

Nutek Europe has its own customer-service department with a fast response time. Naturally, Nutek Europe has the necessary spare parts on stock for fast delivery, if required.

The Nutek Europe facility offers adequate space for customer demonstration's, technical- and sales training and has a 750 square meter warehouse, where the European stock of Nutek equipment, including spare parts and magazine racks is stored.

# Contents

|                                |           |                                              |                              |
|--------------------------------|-----------|----------------------------------------------|------------------------------|
| <b>Traceability</b>            | <b>2</b>  | <b>Buffers</b>                               | <b>37</b>                    |
| Laser marker CO2-S3            | 2         | Single magazine buffer                       | 37                           |
| Laser marker CO2-S5            | 4         | Multi magazine buffer                        | 38                           |
| Barcode labelling              | 6         | FIFO buffer                                  | 39                           |
|                                |           | LIFO buffer                                  | 40                           |
|                                |           | Vertical buffer                              | 41                           |
|                                |           | Belt FIFO buffer                             | 42                           |
|                                |           | Small capacity buffer                        | 43                           |
| <b>Loaders &amp; unloaders</b> | <b>8</b>  | <b>E-series</b>                              | <b>44</b>                    |
| Single magazine line loader    | 8         | E-series Single magazine line loader         | 44                           |
| Single magazine line unloader  | 9         | E-series Single magazine line unloader       | 45                           |
| Dual magazine line loader      | 10        | E-series Dual magazine line loader           | 46                           |
| Dual magazine line unloader    | 11        | E-series Dual magazine line unloader         | 47                           |
| Multi magazine line loader     | 12        | E-series Multi magazine line loader          | 48                           |
| Multi magazine line unloader   | 13        | E-series Multi magazine line unloader        | 49                           |
| Pusher conveyor                | 14        | E-series Destacker                           | 50                           |
| Bare board loader by-pass      | 15        | E-series Linking conveyor                    | 51                           |
| Destacker                      | 16        | E-series Inspection conveyor                 | 52                           |
| Push-up destacker              | 17        | E-series Reject conveyor                     | 53                           |
| Push-up stacker                | 18        | E-series Workstation                         | 54                           |
|                                |           | E-series Manual gate                         | 55                           |
|                                |           | E-series Inverter                            | 56                           |
|                                |           | E-series Turn conveyor                       | 57                           |
| <b>Conveyors</b>               | <b>19</b> | <b>Semicon series</b>                        | <b>58</b>                    |
| Linking conveyor               | 19        | Advance platform loader/unloader             | 58                           |
| Solder infeed conveyor         | 20        | Platform loader/unloader                     | 59                           |
| Solder outfeed conveyor        | 21        | High speed mini loader                       | 60                           |
| Inspection conveyor            | 22        | High speed mini unloader                     | 61                           |
| Reject conveyor                | 23        |                                              |                              |
| AOI rework conveyor            | 24        |                                              |                              |
| In line workstation            | 25        |                                              |                              |
| Telescopic conveyor            | 26        |                                              |                              |
| Telescopic conveyor (NC/NO)    | 27        |                                              |                              |
| Manual gate                    | 28        |                                              |                              |
| PCB cleaning conveyor          | 29        |                                              |                              |
| Coating conveyor               | 30        |                                              |                              |
| <b>Traffic controllers</b>     | <b>31</b> | <b>Applicable General PCB Specifications</b> |                              |
| Shuttle conveyor               | 31        | Weight:                                      | 2 kg*                        |
| Inverter                       | 32        | PCB thickness:                               | 0.6 mm - 2.6mm*              |
| Coating inverter               | 33        | Warpage:                                     | 0.5% of diagonal or max. 3mm |
| Lifter                         | 34        | Bow:                                         | 1% of width or max. 3mm      |
| Turn conveyor                  | 35        | Twist:                                       | 1% of diagonal or max. 2mm   |
| PCB rotator                    | 36        |                                              | * or specify                 |

*The unit is designed to accurately mark PCB's within a production line or can be used as a stand alone cell. A "flying laser" concept is used which means that the PCB is locked in the marking position while the CO<sub>2</sub> laser is moved using servo controlled X-Y axis. The number of markings and their positions are easily programmed in Windows™ based software. An optional integrated inverter is available for double-sided marking.*



#### Standard features

- CCD camera for readability check.
- Three level camera lighting (brightness)
- Large marking area.
- Controlled by industrial PC.
- Capability to mark text, barcodes, 2D codes and graphics.
- Conveyor width adjustment using hand crank.
- Rigid machine structure with large access doors.
- PCB side clamping.
- Mechanical PCB lift for constant focal point.
- Quick product change-over.
- Selectable by-pass operation.
- Uninterruptible power supply (UPS).
- Towerlight display for machine status.
- CE certified.



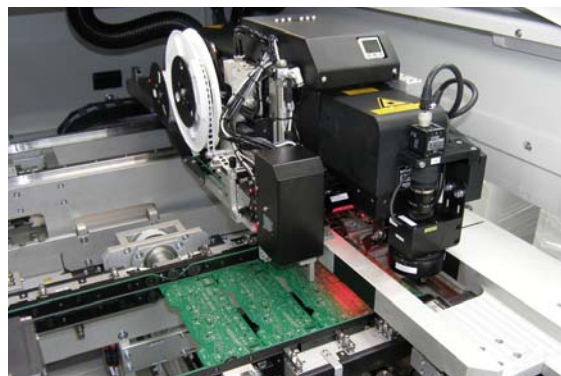
### Technical specifications

|                          |                                                                 |
|--------------------------|-----------------------------------------------------------------|
| Laser type:              | CO <sub>2</sub> , 10 Watt, air cooled                           |
| Wave length:             | 10.63 µm                                                        |
| Laser class:             | Class 4                                                         |
| Housing class:           | Class 1                                                         |
| Marking area:            | 105 mm x 105 mm per position,<br>460 mm x 460 mm total coverage |
| Cell size:               | ≥ 0,127 mm (5 mil)                                              |
| Conveyor type:           | 3 mm ESD edge belt                                              |
| Conveyor speed:          | 24 m/min.                                                       |
| System software:         | Windows 7                                                       |
| Network interface:       | Ethernet                                                        |
| Monitor:                 | 21" high-density flat screen                                    |
| PCB transfer height:     | 950 mm ± 25 mm*                                                 |
| Component clearance:     | Top 30 mm, bottom 30 mm*                                        |
| Conveyor flow direction: | Left to right*                                                  |
| Conveyor interface:      | SMEMA*                                                          |
| Colour:                  | RAL 9002*                                                       |
| Power supply:            | 230 VAC/50 Hz/1 Ph                                              |
| Power consumption:       | 1610 VA max.<br>(fume extraction included)                      |
| Air supply:              | 5 bar                                                           |
| Air consumption:         | 20 ltr/min max.                                                 |
| Noise level:             | max. 65 dB<br>* or specify                                      |

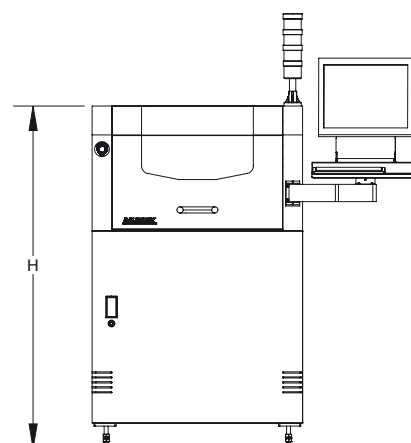
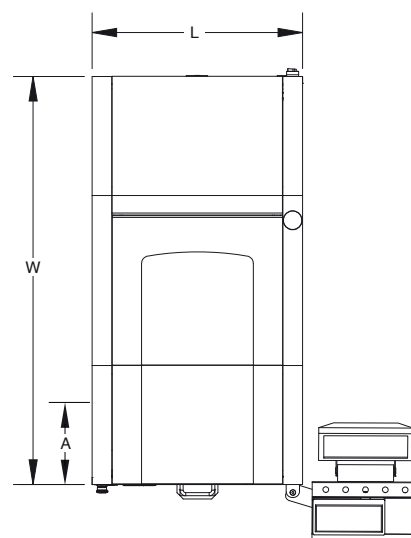
### Options

- Program controlled conveyor width adjustment
- PCB orientation check
- Fiducial recognition and position alignment
- Double-sided marking using integrated inverter
- Barcode scanner (Microscan MS4)
- Bad marking recognition
- Database- and network connection
- Fiber laser
- Fume extraction unit (external, 1000 VA max.)
- Label feeder module

Other options available on request



\* with label feeder module



|                                   | <b>LMC-S3</b>        |
|-----------------------------------|----------------------|
| Machine dimensions (l x w x h)    | 850 x 1645 x 1380 mm |
| Weight                            | 700 kg               |
| Applicable PCB length             | 80 mm - 508 mm       |
| Applicable PCB width              | 65 mm - 460 mm       |
| PCB thickness                     | 0.6 mm - 4 mm        |
| Fixed rail to front dimension (A) | 330 mm               |

*The unit is designed to accurately mark PCB's within a production line or can be used as stand alone cell. The usage of a 3-axis galvo-head provides a large marking area (350 x 350 mm) without having to use a X-Y gantry. This results in very short cycle times for a large number of markings. The type, number of markings and their positions are easily programmed in Windows™ based software. An optional integrated inverter is available for double-sided marking.*



#### Standard features

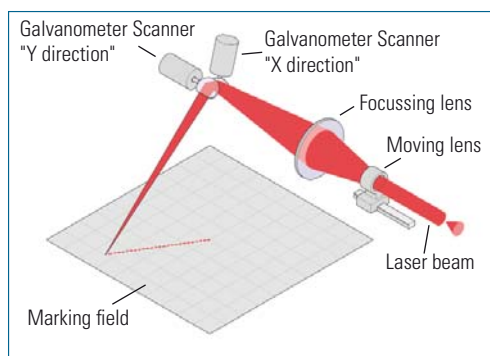
- Controlled by industrial PC.
- Capability to mark text, barcodes, 2D codes and graphics.
- Conveyor width adjustment using hand crank.
- PCB side clamping.
- Rigid machine structure with large access doors.
- Dynamic (adjustable) focal distance using software.
- Quick product change-over.
- Selectable by-pass operation.
- Uninterruptible power supply (UPS).
- Towerlight display for machine status.
- CE certified.

### Technical specifications

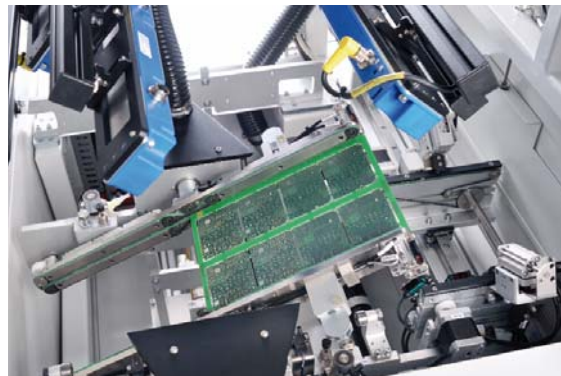
|                          |                                            |
|--------------------------|--------------------------------------------|
| Laser type:              | CO2, 10 Watt, air cooled                   |
| Wave length:             | 10.63 $\mu\text{m}$                        |
| Laser class:             | Class 4                                    |
| Housing class:           | Class 1                                    |
| Marking area:            | 350 mm x 350 mm                            |
| Cell size:               | $\geq 0,195$ mm (7 mil)                    |
| Conveyor type:           | 3 mm ESD edge belt                         |
| Conveyor speed:          | 24 m/min.                                  |
| System software:         | Windows 7                                  |
| Network interface:       | Ethernet                                   |
| Monitor:                 | 21" high-density flat screen               |
| PCB transfer height:     | 950 mm $\pm$ 25 mm*                        |
| Component clearance:     | Top 30 mm, bottom 30 mm*                   |
| Conveyor flow direction: | Left to right*                             |
| Conveyor interface:      | SMEMA*                                     |
| Colour:                  | RAL 9002*                                  |
| Power supply:            | 230 VAC/50 Hz/1 Ph                         |
| Power consumption:       | 1600 VA max.<br>(fume extraction included) |
| Air supply:              | 5 bar                                      |
| Air consumption:         | 20 ltr/min max.                            |
| Noise level:             | max. 65 dB<br>* or specify                 |

### Options

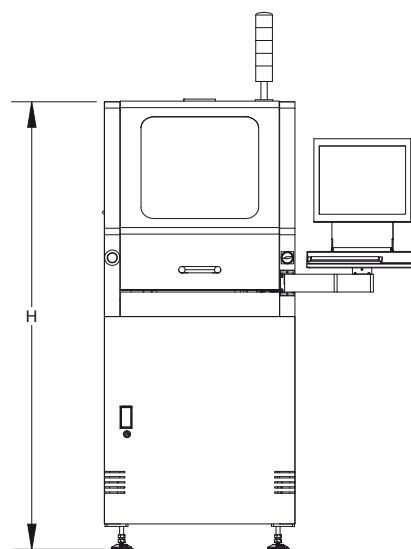
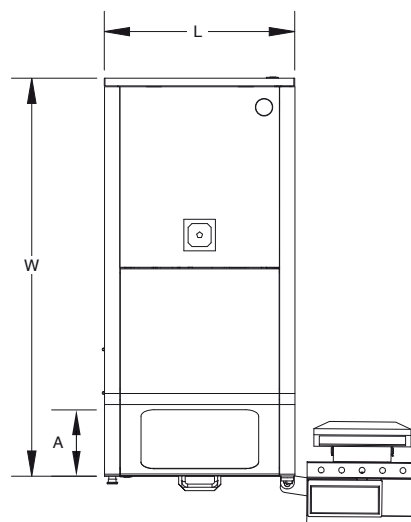
- Program controlled conveyor width adjustment
  - Double sided marking using integrated inverter
  - Code verification of one single code at PCB edge using fixed scanner (Microscan MS4)
  - Code verification, covering full marking area, using CCD camera, camera adaptor and LED bar lights
  - Database- and network connection
  - Fiber laser
  - Fume extraction (external, 1000 VA max.)
- Other options available on request



|                                   | <b>LMC-S5</b>        |
|-----------------------------------|----------------------|
| Machine dimensions (l x w x h)    | 850 x 1558 x 1752 mm |
| Weight                            | 550 kg               |
| Applicable PCB length             | 80 mm - 508 mm       |
| Applicable PCB width              | 65 mm - 460 mm       |
| Applicable PCB thickness          | 0.6 mm - 4 mm        |
| Fixed rail to front dimension (A) | 236 mm               |



\* with optional inverter



*The unit is designed to accurately apply labels on PCB's or on top of components. It uses a X-Y gantry to move the applicator head between the label printer and the placement position. The PCB is clamped in position and supported from the bottom by manual positioned magnetic support pins while one or more labels are applied at any desired position. The number of labels and their positions are easily programmed in Windows™ based software.*



#### Standard features

- Rigid machine structure with large access doors.
- Integrated 600 dpi printer.
- ZebraDesigner 2 user license.
- Slide-out mechanism (rear-side) for easy and fast label or ribbon replacement.
- Label rotation programmable in 1° step.
- Vacuum sensing of the label from pick-up to placement.
- CCD camera to read label before pick-up.
- Controlled by industrial PC.
- Conveyor width adjustment using hand crank.
- PCB side clamping.
- Active support base including 4 magnetic pins.
- Quick product change-over.
- Selectable by-pass operation.
- Uninterruptible power supply (UPS).
- Towerlight display for machine status.
- CE certified.



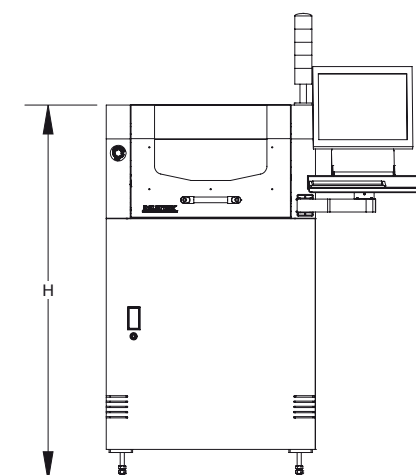
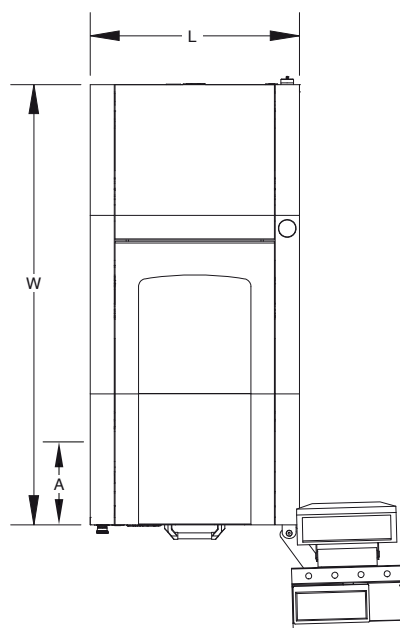
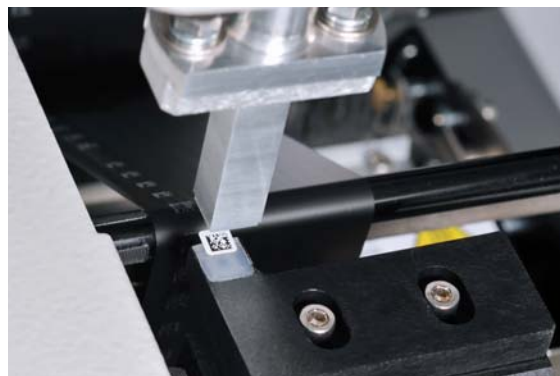
### Technical specifications

|                          |                                  |
|--------------------------|----------------------------------|
| Printer type:            | Zebra 110 x i4 (600 dpi)         |
| Minimum label size:      | 6 mm x 6 mm                      |
| Label creation software: | ZebraDesigner 2                  |
| Cycle time:              | 2.5 sec. per label (6 mm x 6 mm) |
| Labelling area:          | 460 x 460 mm                     |
| Conveyor type:           | 3 mm ESD edge belt               |
| Conveyor speed:          | 24 m/min                         |
| System software:         | Windows 7                        |
| Network interface:       | Ethernet                         |
| Monitor:                 | 21" high-density flatscreen      |
| PCB transfer height:     | 950 mm $\pm$ 25 mm*              |
| Component clearance:     | Top 30 mm, bottom 30 mm*         |
| Machine interface:       | SMEMA*                           |
| Colour:                  | RAL 9002*                        |
| Power supply:            | 230 VAC/50 Hz/1 Ph               |
| Power consumption:       | 700 VA max.                      |
| Air supply:              | 6 bar                            |
| Air consumption:         | 70 ltr/min max.                  |
| Noise level:             | Max. 65 dB                       |
|                          | * or specify                     |

### Options

- Program controlled conveyor width adjustment
- Double sided labelling using integrated inverter
- Active PCB bottom support in combination with integrated inverter
- Second thermal transfer printer
- Database- and network connection
- PCB orientation check

Other options available on request



|                                   | <b>BLC-S3</b>        |
|-----------------------------------|----------------------|
| Machine dimensions (l x w x h)    | 850 x 1680 x 1440 mm |
| Weight                            | 750 kg               |
| Applicable PCB length             | 80 mm - 508 mm       |
| Applicable PCB width              | 65 mm - 460 mm       |
| Applicable PCB thickness          | 0.6 mm - 4 mm        |
| Fixed rail to front dimension (A) | 335 mm               |

*The unit loads your production line automatically by pushing PCB's out of a magazine onto the conveyor of the downstream machine.*



#### Standard features

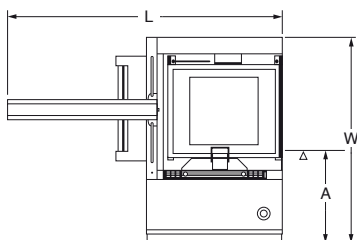
- Magazine is manually placed on the platform and clamped in position.
- Flexible platform to suit standard magazines.
- Controlled by PLC.
- Exchange magazine from the rear of the machine.
- Regulated pressure on attached pneumatic pusher.
- Pusher position adjustable to centre of the magazine.
- Towerlight display for machine status.
- Selectable pitch settings.
- CE certified.

#### Technical specifications

|                                |                     |
|--------------------------------|---------------------|
| Transfer height:               | 950 mm $\pm$ 25 mm* |
| Colour:                        | RAL 9002*           |
| Flow direction:                | Left to right*      |
| Fixed rail:                    | Front*              |
| Machine interface:             | SMEMA*              |
| Power supply:                  | 230 VAC/50 Hz/1 Ph  |
| Power consumption:             | 350 VA max.         |
| Air supply:                    | 6 bar               |
| Air consumption:               | 10 ltr/min max.     |
| PCB loading time:              | $\pm$ 6 seconds     |
| Pitch control:                 | 1-4, 10 mm pitch    |
| Maximum total magazine weight: | 50 kg               |
|                                | * or specify        |

#### Options

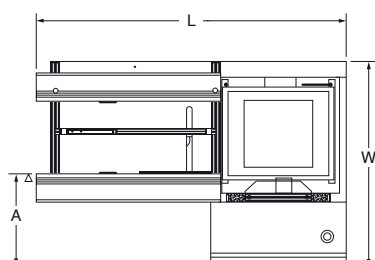
- Front-side magazine loading
  - Hybrid magazine
  - Touchscreen display
  - Alarm buzzer
- Other options available on request



|                                   | NTM 710LM            | NTM 710LL             |
|-----------------------------------|----------------------|-----------------------|
| Machine dimensions (l x w x h)    | 1080 x 845 x 1300 mm | 1330 x 1005 x 1300 mm |
| Weight                            | 170 kg               | 180 kg                |
| PCB length                        | 80 mm - 330 mm       | 80 mm - 460 mm*       |
| PCB width                         | 50 mm - 250 mm       | 50 mm - 460 mm*       |
| Magazine dimensions (max.)        | 360 x 321 x 583 mm   | 535 x 530 x 570 mm*   |
| Fixed rail to front dimension (A) | 452 mm               | 452 mm                |

\* or specify

*The PCB's are collected from upstream machine using attached conveyor and pushed into the magazine.*



## Standard features

- Magazine is manually placed on the platform and clamped in position.
- Flexible platform to suit standard magazines.
- Stopper at inlet to control PCB flow from upstream reflow oven.
- Controlled by PLC.
- Exchange magazine from the rear of the machine.
- Conveyor width adjustment using hand crank.
- Regulated pressure on pneumatic pusher.
- Towerlight display for machine status.
- Selectable pitch settings.
- CE certified.

## Technical specifications

|                                |                                               |
|--------------------------------|-----------------------------------------------|
| Transfer height:               | 950 mm $\pm$ 25 mm*                           |
| Colour:                        | RAL 9002*                                     |
| Flow direction:                | Left to right*                                |
| Fixed rail:                    | Front*                                        |
| Machine interface:             | SMEMA*                                        |
| Components clearance:          | Top 30 mm, bottom 30 mm<br>(depends on pitch) |
| Power supply:                  | 230 VAC/50 Hz/1 Ph                            |
| Power consumption:             | 350 VA max.                                   |
| Air supply:                    | 6 bar                                         |
| Air consumption:               | 10 ltr/min max.                               |
| PCB unloading time:            | $\pm$ 6 seconds                               |
| Pitch control:                 | 1-4, 10 mm pitch                              |
| Maximum total magazine weight: | 50 kg                                         |
|                                | * or specify                                  |

## Options

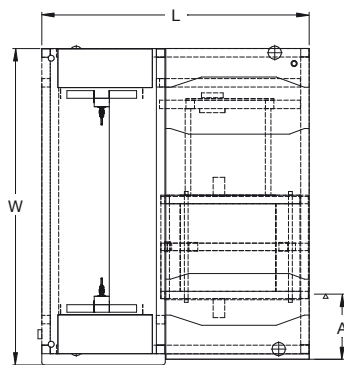
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Front-side magazine loading
- Pusher moves at ratio 1:2 to conveyor width
- Hybrid magazine
- Touchscreen display
- Alarm buzzer

Other options available on request

|                                   | NTM 710UM            | NTM 710UL             |
|-----------------------------------|----------------------|-----------------------|
| Machine dimensions (l x w x h)    | 1200 x 845 x 1300 mm | 1500 x 1005 x 1300 mm |
| Weight                            | 200 kg               | 230 kg                |
| PCB length                        | 80 mm - 330 mm       | 80 mm - 460 mm*       |
| PCB width                         | 70 mm - 250 mm       | 70 mm - 460 mm*       |
| Magazine dimensions (max.)        | 360 x 321 x 583 mm   | 535 x 530 x 570 mm*   |
| Fixed rail to front dimension (A) | 452 mm               | 452 mm                |

\* or specify

*The PCB's are extracted from the magazines onto the shuttle conveyor using puller mechanism. Shuttle conveyor moves sideways between magazines and downstream machine.*



#### Standard features

- Magazines are manually placed on the platform and clamped in position.
- Controlled by PLC.
- Tailor made to the magazine of your choice.
- Regulated pressure on the integrated pull cylinder.
- Ball screw driven positioning of shuttle conveyor.
- Conveyor width adjustment using hand wheel.
- Towerlight display for machine status.
- Selectable pitch settings.
- CE certified.

#### Technical specifications

|                                |                                                            |
|--------------------------------|------------------------------------------------------------|
| Transfer height:               | 950 mm $\pm$ 25 mm*                                        |
| Colour:                        | RAL 9002*                                                  |
| Flow direction:                | Left to right*                                             |
| Fixed rail:                    | Front*                                                     |
| Machine interface:             | SMEMA*                                                     |
| Conveyor concept:              | ESD belt*                                                  |
| Belt speed:                    | 14 m/min.                                                  |
| PCB edge support:              | 3 mm                                                       |
| Components clearance:          | Top 30 mm, bottom 30 mm<br>(depends on pitch)              |
| Power supply:                  | 230 VAC/50 Hz/1 Ph                                         |
| Power consumption:             | 550 VA max.                                                |
| Air supply:                    | 4-6 bar                                                    |
| Air consumption:               | 10 ltr/min max.                                            |
| PCB loading time:              | $\pm$ 25 seconds (rear magazine)                           |
| Pitch control:                 | 1-4, 10 mm pitch<br>5 top magazine slots must remain empty |
| Maximum total magazine weight: | 50 kg each<br>* or specify                                 |

#### Options

- Servo drive upgrade for shortened cycle time
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Rotating pull cylinder to increase magazine capacity
- Puller moves at ratio 1:2 to conveyor width
- Hybrid magazine
- Dual direction for same side loading/unloading
- Touchscreen display
- Alarm buzzer

Other options available on request

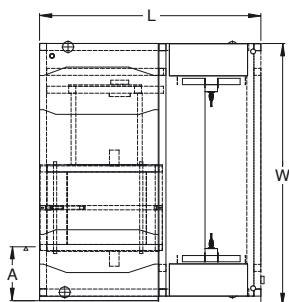
|                                   | NTM 720LM             | NTM 720LL             | NTM 720LXL            |
|-----------------------------------|-----------------------|-----------------------|-----------------------|
| Machine dimensions (l x w x h)    | 1080 x 1350 x 1750 mm | 1420 x 1680 x 1750 mm | 1420 x 1970 x 1750 mm |
| Weight                            | 330 kg                | 400 kg                | 480 kg                |
| PCB length                        | 80 mm - 330 mm        | 80 mm - 457 mm        | 80 mm - 460 mm*       |
| PCB width                         | 70 mm - 250 mm        | 70 mm - 407 mm        | 70 mm - 460 mm*       |
| Magazine dimensions (max.)        | 370 x 320 x 570 mm    | 535 x 460 x 570 mm    | 535 x 580 x 570 mm    |
| Fixed rail to front dimension (A) | 380 mm                | 380 mm                | 380 mm                |

\* or specify

# Dual magazine line unloader

NTM 720UM • NTM 720UL • NTM 720UXL

*The PCB's are collected from upstream machine onto a shuttle conveyor and pushed into designated magazine. Shuttle conveyor moves sideways between upstream machine and magazines.*



## Standard features

- Magazines are manually placed on the platform and clamped in position.
- Pneumatic stopper at inlet to control PCB flow from upstream reflow oven.
- Controlled by PLC.
- Tailor made to the magazine of your choice.
- Regulated pressure on the integrated pusher.
- Good or bad board separation.
- Ball screw driven positioning of shuttle conveyor.
- Conveyor width adjustment using hand wheel.
- Towerlight display for machine status.
- Threshold signal to protect PCB's in upstream oven.
- Selectable pitch settings.
- CE certified.

## Technical specifications

|                                |                                               |
|--------------------------------|-----------------------------------------------|
| Transfer height:               | 950 mm ± 25 mm*                               |
| Colour:                        | RAL 9002*                                     |
| Flow direction:                | Left to right*                                |
| Fixed rail:                    | Front*                                        |
| Machine interface:             | SMEMA*                                        |
| Conveyor concept:              | ESD belt                                      |
| Belt speed:                    | 14 m/min.                                     |
| PCB edge support:              | 3 mm                                          |
| Components clearance:          | Top 30 mm, bottom 30 mm<br>(depends on pitch) |
| Power supply:                  | 230 VAC/50 Hz/1 Ph                            |
| Power consumption:             | 550 VA max.                                   |
| Air supply:                    | 4-6 bar                                       |
| Air consumption:               | 10 ltr/min max.                               |
| PCB unloading time:            | ± 18 seconds (rear magazine)                  |
| Pitch control:                 | 1-4, 10 mm pitch                              |
| Maximum total magazine weight: | 50 kg each                                    |
|                                | * or specify                                  |

## Options

- Servo drive upgrade for shortened cycle time
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Pusher moves at ratio 1:2 to conveyor width
- Hybrid magazine
- Touchscreen display
- Alarm buzzer

Other options available on request

|                                   | NTM 720UM            | NTM 720UL             | NTM 720UXL            |
|-----------------------------------|----------------------|-----------------------|-----------------------|
| Machine dimensions (l x w x h)    | 880 x 1350 x 1750 mm | 1140 x 1680 x 1750 mm | 1250 x 1970 x 1750 mm |
| Weight                            | 330 kg               | 400 kg                | 480 kg                |
| PCB length                        | 80 mm - 330 mm       | 80 mm - 457 mm        | 80 mm - 460 mm*       |
| PCB width                         | 70 mm - 250 mm       | 70 mm - 407 mm        | 70 mm - 460 mm*       |
| Magazine dimensions (max.)        | 370 x 320 x 570 mm   | 535 x 460 x 570 mm    | 535 x 580 x 570 mm    |
| Fixed rail to front dimension (A) | 380 mm               | 380 mm                | 380 mm                |

\* or specify



*The unit loads your production line automatically by pushing PCB's out of the magazine onto the conveyor of the downstream machines. Full magazines are inserted at an ergonomic low level.*

#### Standard features

- Automatic magazine change-over.
- Magazine alignment by upper and lower pneumatic clamping.
- Controlled by PLC.
- Tailor made to the magazine of your choice.
- Regulated pressure on pneumatic pusher.
- Towerlight display for machine status.
- Selectable pitch settings.
- CE certified.

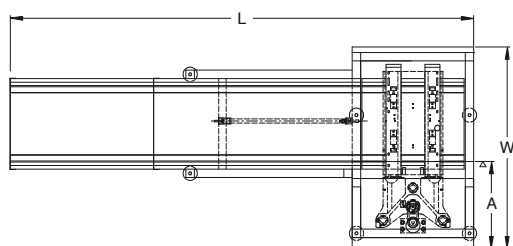
#### Technical specifications

|                                |                                                                                                                                                   |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Transfer height:               | 950 mm ± 25 mm*                                                                                                                                   |
| Colour:                        | RAL 9002*                                                                                                                                         |
| Flow direction:                | Left to right*                                                                                                                                    |
| Fixed rail:                    | Front*                                                                                                                                            |
| Machine interface:             | SMEMA*                                                                                                                                            |
| Components clearance:          | Top 30 mm, bottom 30 mm<br>(depends on pitch)                                                                                                     |
| Power supply:                  | 230 VAC/50 Hz/1 Ph                                                                                                                                |
| Power consumption:             | 550 VA max.                                                                                                                                       |
| Air supply:                    | 4-6 bar                                                                                                                                           |
| Air consumption:               | 10 ltr/min max.                                                                                                                                   |
| PCB loading time:              | ± 6 seconds                                                                                                                                       |
| Magazine change-over time:     | ± 30 seconds                                                                                                                                      |
| Pitch control:                 | 1-4, 10 mm pitch                                                                                                                                  |
| Maximum total magazine weight: | 50 kg each                                                                                                                                        |
| Total number of magazines:     | 1 magazine on the lifter platform.<br>2 empty magazines on the upper<br>magazine conveyor.<br>3 full magazines on the lower<br>magazine conveyor. |
|                                | * or specify                                                                                                                                      |

#### Options

- Width adjustable magazine conveyor(s)
- Additional magazine capacity
- Shorter magazine change-over time (±22 sec)
- Automatic pusher positioning system
- Touchscreen display
- Alarm buzzer

Other options available on request



|                                   | NTM 110LM            | NTM 110LL             | NTM 110LXL            |
|-----------------------------------|----------------------|-----------------------|-----------------------|
| Machine dimensions (l x w x h)    | 1870 x 820 x 1700 mm | 2535 x 1045 x 1700 mm | 2535 x 1095 x 1700 mm |
| Weight                            | 235 kg               | 330 kg                | 400 kg                |
| PCB length                        | 80 mm - 330 mm       | 80 mm - 457 mm        | 80 mm - 460 mm*       |
| PCB width                         | 50 mm - 250 mm       | 50 mm - 407 mm        | 50 mm - 460 mm*       |
| Magazine dimensions (max.)        | 360 x 320 x 583 mm   | 535 x 530 x 570 mm    | 535 x 580 x 570 mm    |
| Fixed rail to front dimension (A) | 380 mm               | 395 mm                | 395 mm                |

\* or specify

# Multi magazine line unloader

13

NTM 110UM • NTM 110UL • NTM 110UXL

*The unit provides automatic magazine change-over for continuous line unloading. PCB's are collected from an upstream pusher conveyor (ordered separately) and pushed into the magazine. Full magazines are offloaded at an ergonomic low level.*

## Standard features

- Automatic magazine change-over.
- Automatic magazine alignment by upper and lower pneumatic clamping.
- Controlled by PLC.
- Tailor made to the magazine of your choice.
- Threshold signal to protect PCB's in upstream oven.
- Towerlight display for machine status.
- Selectable pitch settings.
- CE certified.

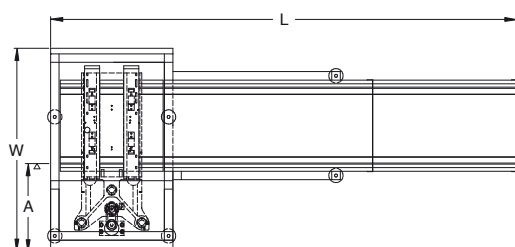
## Technical specifications

|                                |                                                                                                                                                   |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Transfer height:               | 950 mm ± 25 mm*                                                                                                                                   |
| Colour:                        | RAL 9002*                                                                                                                                         |
| Flow direction:                | Left to right*                                                                                                                                    |
| Fixed rail:                    | Front*                                                                                                                                            |
| Machine interface:             | SMEMA*                                                                                                                                            |
| Components clearance:          | Top 30 mm, bottom 30 mm<br>(depends on pitch)                                                                                                     |
| Power supply:                  | 230 VAC/50 Hz/1 Ph                                                                                                                                |
| Power consumption:             | 550 VA max.                                                                                                                                       |
| Air supply:                    | 4-6 bar                                                                                                                                           |
| Air consumption:               | 10 ltr/min max.                                                                                                                                   |
| PCB unloading time:            | ± 6 seconds                                                                                                                                       |
| Magazine change-over time:     | ± 30 seconds                                                                                                                                      |
| Pitch control:                 | 1-4, 10mm pitch                                                                                                                                   |
| Maximum total magazine weight: | 50 kg each                                                                                                                                        |
| Total number of magazines:     | 1 magazine on the lifter platform.<br>2 empty magazines on the upper<br>magazine conveyor.<br>3 full magazines on the<br>lower magazine conveyor. |
| Pusher conveyor:               | To be ordered separately<br>* or specify                                                                                                          |

## Options

- Width adjustable magazine conveyor(s)
- Additional magazine capacity
- Shorter magazine change-over time (±22 sec)
- Touchscreen display
- Alarm buzzer

Other options available on request



|                                   | NTM 110UM            | NTM 110UL             | NTM 110UXL            |
|-----------------------------------|----------------------|-----------------------|-----------------------|
| Machine dimensions (l x w x h)    | 1870 x 820 x 1700 mm | 2535 x 1045 x 1700 mm | 2535 x 1095 x 1700 mm |
| Weight                            | 235 kg               | 330 kg                | 400 kg                |
| PCB length                        | 80 mm - 330 mm       | 80 mm - 457 mm        | 80 mm - 460 mm*       |
| PCB width                         | 70 mm - 250 mm       | 70 mm - 407 mm        | 70 mm - 460 mm*       |
| Magazine dimensions (max.)        | 360 x 320 x 583 mm   | 535 x 530 x 570 mm    | 535 x 580 x 570 mm    |
| Fixed rail to front dimension (A) | 380 mm               | 395 mm                | 395 mm                |

\* or specify

*The pusher conveyor is used in combination with a multi magazine line unloader and guarantees that PCB's are completely pushed into the magazine.*



#### Standard features

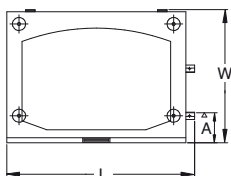
- Controlled by multi magazine line unloader.
- Conveyor width adjustment using hand crank.
- Adjustable pusher position.
- Pneumatic stopper at inlet to control PCB flow from upstream oven.
- Regulated pressure on pneumatic pusher.
- CE certified.

#### Technical specifications

|                       |                         |
|-----------------------|-------------------------|
| Transfer height:      | 950 mm ± 25 mm*         |
| Colour:               | RAL 9002*               |
| Flow direction:       | Left to right*          |
| Fixed rail:           | Front*                  |
| Conveyor concept:     | ESD belt                |
| Belt speed:           | 14 m/min.               |
| PCB edge support:     | 3 mm                    |
| Machine interface:    | Controlled by unloader  |
| Components clearance: | Top 30 mm, bottom 30 mm |
| Power supply:         | Controlled by unloader  |
| Power consumption:    | Controlled by unloader  |
| Air supply:           | Controlled by unloader  |
| Air consumption:      | Controlled by unloader  |
| PCB cycle time:       | ± 6 seconds             |
|                       | * or specify            |

#### Options

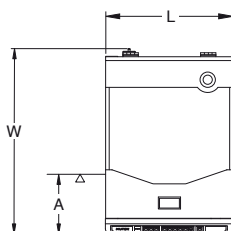
- Electrical conveyor width adjustment
  - Automatic conveyor width adjustment
  - Pusher moves at ratio 1:2 to conveyor width
  - Dual direction, used for same magazine slot, loading/unloading
- Other options available on request



|                                   | NTM 110PM           | NTM 110PL           | NTM 110PXL          |
|-----------------------------------|---------------------|---------------------|---------------------|
| Machine dimensions (l x w x h)    | 755 x 500 x 1100 mm | 950 x 660 x 1100 mm | 950 x 720 x 1100 mm |
| Weight                            | 70 kg               | 85 kg               | 100 kg              |
| PCB length                        | 80 mm - 330 mm      | 80 mm - 457 mm      | 80 mm - 460 mm*     |
| PCB width                         | 70 mm - 250 mm      | 70 mm - 407 mm      | 70 mm - 460 mm*     |
| Fixed rail to front dimension (A) | 156 mm              | 156 mm              | 156 mm              |

\* or specify

*The unit is designed for automatic loading of unpopulated PCB's onto the line using suction cups. The top PCB is lifted from stack and lowered onto belt segment.*



## Standard features

- Large stock capacity.
- Flexible suction cup positioning.
- By-pass mode selectable without removing PCB stack.
- Controlled by PLC.
- Convenient front door stack loading.
- Conveyor width adjustment using hand crank.
- Towerlight display for machine status.
- Empty stack sensor.
- CE certified.

## Technical specifications

|                                 |                         |
|---------------------------------|-------------------------|
| Transfer height:                | 950 mm ± 25 mm*         |
| Colour:                         | RAL 9002*               |
| Flow direction:                 | Left to right*          |
| Fixed rail:                     | Front*                  |
| Machine interface:              | SMEMA*                  |
| Conveyor concept:               | ESD belt                |
| Belt speed:                     | 14 m/min.               |
| PCB edge support:               | 3 mm                    |
| Components clearance (by-pass): | Top 30 mm, bottom 30 mm |
| Power supply:                   | 230 VAC/50 Hz/1 Ph      |
| Power consumption:              | 150 VA max.             |
| Air supply:                     | 4-6 bar                 |
| Air consumption:                | 90 ltr/min max.         |
| PCB cycle time:                 | ± 10 seconds            |
| Diameter suction pads:          | 15 mm                   |
| PCB thickness capability:       | 0.2 mm - 4.0 mm         |
| PCB stock capacity:             | 220 mm                  |
|                                 | * or specify            |

## Options

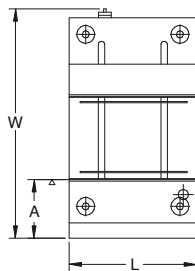
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Cantilevered input- or output conveyor (length 500 mm)
- Touchscreen display
- Alternative suction cup size
- Alarm buzzer

Other options available on request

|                                   | NTM 210BMBP         | NTM 210BLB          | NTM 210BXLBP        |
|-----------------------------------|---------------------|---------------------|---------------------|
| Machine dimensions (l x w x h)    | 500 x 730 x 1300 mm | 653 x 870 x 1300 mm | 653 x 952 x 1300 mm |
| Weight                            | 110 kg              | 140 kg              | 160 kg              |
| PCB length                        | 80 mm - 330 mm      | 80 mm - 457 mm      | 80 mm - 460 mm*     |
| PCB width                         | 75 mm - 250 mm      | 75 mm - 407 mm      | 75 mm - 460 mm*     |
| Fixed rail to front dimension (A) | 234 mm              | 234 mm              | 234 mm              |

\* or specify

**A large stack of unpopulated PCB's is placed above the ESD belt conveyor. Unique separation cams take one PCB from the bottom of the stack and lowers it onto the ESD belt conveyor.**



#### Standard features

- Short PCB cycle time.
- Controlled by PLC.
- Thin PCB capability.
- By-pass mode selectable without removing PCB stack.
- Conveyor width adjustment using hand crank.
- Towerlight display for machine status.
- Pre-warning low stack sensor.
- CE certified.

#### Technical specifications

|                                 |                         |
|---------------------------------|-------------------------|
| Transfer height:                | 950 mm ± 25 mm*         |
| Colour:                         | RAL 9002*               |
| Flow direction:                 | Left to right*          |
| Fixed rail:                     | Front*                  |
| Machine interface:              | SMEMA*                  |
| Conveyor concept:               | ESD belt                |
| Belt speed:                     | 14 m/min.               |
| PCB edge support:               | 3 mm                    |
| Components clearance (by-pass): | Top 30 mm, bottom 30 mm |
| Power supply:                   | 230 VAC/50 Hz/1 Ph      |
| Power consumption:              | 150 VA max.             |
| Air supply:                     | 4-6 bar                 |
| Air consumption:                | 5 ltr/min max.          |
| PCB cycle time:                 | ± 10 seconds            |
| PCB thickness capability:       | 0.6 mm - 4.0 mm         |
| PCB stock capacity:             | 220 mm                  |
|                                 | * or specify            |

#### Options

- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Extension 200 mm for convenient stack loading
- Cantilevered input- or output conveyor (length 500 mm)
- Touchscreen display
- Alarm buzzer

Other options available on request

|                                   | <b>NTM 220DSM</b>   | <b>NTM 220DSL</b>   | <b>NTM 220DSXL</b>  |
|-----------------------------------|---------------------|---------------------|---------------------|
| Machine dimensions (l x w x h)    | 500 x 905 x 1300 mm | 500 x 905 x 1300 mm | 653 x 960 x 1300 mm |
| Weight                            | 150 kg              | 150 kg              | 160 kg              |
| PCB length                        | 80 mm - 457 mm      | 80 mm - 457 mm      | 80 mm - 460 mm*     |
| PCB width                         | 50 mm - 250 mm      | 50 mm - 407 mm      | 50 mm - 460 mm*     |
| Fixed rail to front dimension (A) | 234 mm              | 234 mm              | 234 mm              |

\* or specify

**A large stack of unpopulated PCB's can be placed in the machine when opening the topcover. Top PCB is separated from the stack and placed onto ESD belt conveyor.**



## Standard features

- Fully enclosed design.
- Short PCB cycle time.
- Controlled by PLC.
- Thin PCB capability.
- By pass mode selectable without removing PCB stack.
- Conveyor width adjustment using hand crank.
- Towerlight display for machine status.
- Pre-warning low stack sensor.
- CE certified.

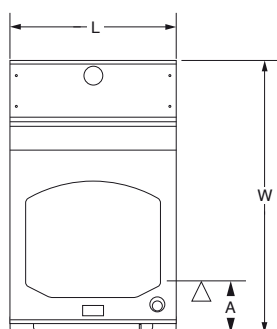
## Technical specifications

|                                 |                         |
|---------------------------------|-------------------------|
| Transfer height:                | 950 mm ± 25 mm*         |
| Colour:                         | RAL 9002*               |
| Flow direction:                 | Left to right*          |
| Fixed rail:                     | Front*                  |
| Machine interface:              | SMEMA*                  |
| Conveyor concept:               | ESD belt                |
| Belt speed:                     | 14 m/min.               |
| PCB edge support:               | 3 mm                    |
| Components clearance (by pass): | Top 30 mm, bottom 30 mm |
| Power supply:                   | 230 VAC/50 Hz/1 Ph      |
| Power consumption:              | 150 VA max.             |
| Air supply:                     | 4-6 bar                 |
| Air consumption:                | 5 ltr/min max.          |
| PCB cycle time:                 | ± 8 seconds             |
| PCB thickness capability:       | 0.8 mm - 4.0 mm         |
| PCB stock capacity:             | 220 mm                  |
|                                 | * or specify            |

## Options

- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Cantilevered input- or output conveyor (length 500 mm)
- Touchscreen display
- Alarm buzzer

Other options available on request



|                                   | NTM 225DSM           | NTM 225DSL           | NTM 225DSXL          |
|-----------------------------------|----------------------|----------------------|----------------------|
| Machine dimensions (l x w x h)    | 653 x 1110 x 1275 mm | 653 x 1110 x 1275 mm | 653 x 1110 x 1275 mm |
| Weight                            | 180 kg               | 180 kg               | 180 kg               |
| PCB length                        | 80 mm - 457 mm       | 80 mm - 457 mm       | 80 mm - 460 mm*      |
| PCB width                         | 70 mm - 250 mm       | 70 mm - 407 mm       | 70 mm - 460 mm*      |
| Fixed rail to front dimension (A) | 238 mm               | 238 mm               | 238 mm               |

\* or specify



**Designed to restack un-populated PCB's after laser marking or label placement.**



#### Standard features

- Short PCB cycle time.
- Ergonomic unloading.
- Controlled by PLC.
- Conveyor width adjustment using hand crank.
- Towerlight display for machine status.
- CE certified.

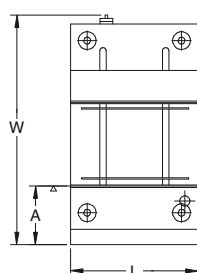
#### Technical specifications

|                                 |                         |
|---------------------------------|-------------------------|
| Transfer height:                | 950 mm ± 25 mm*         |
| Colour:                         | RAL 9002*               |
| Flow direction:                 | Left to right*          |
| Fixed rail:                     | Front*                  |
| Machine interface:              | SMEMA*                  |
| Conveyor concept:               | ESD belt                |
| Belt speed:                     | 14 m/min.               |
| PCB edge support:               | 3 mm                    |
| Components clearance (by-pass): | Top 30 mm, bottom 30 mm |
| Power supply:                   | 230 VAC/50 Hz/1 Ph      |
| Power consumption:              | 150 VA max.             |
| Air supply:                     | 6 bar                   |
| Air consumption:                | 5 ltr/min max.          |
| PCB cycle time:                 | ± 9 seconds             |
| PCB thickness capability:       | 0.6 mm - 4.0 mm         |
| PCB stock capacity:             | 250 mm                  |
|                                 | * or specify            |

#### Options

- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Touchscreen display
- Alarm buzzer
- Double stack function for re-stacking of fragile boards

Other options available on request



|                                   | <b>NTM 230PSM</b>   | <b>NTM 230PSL</b>   | <b>NTM 230PSXL</b>  |
|-----------------------------------|---------------------|---------------------|---------------------|
| Machine dimensions (l x w x h)    | 500 x 905 x 1300 mm | 500 x 905 x 1300 mm | 653 x 955 x 1300 mm |
| Weight                            | 120 kg              | 140 kg              | 180 kg              |
| PCB length                        | 80 mm - 457 mm      | 80 mm - 457 mm      | 80 mm - 460 mm*     |
| PCB width                         | 70 mm - 250 mm      | 70 mm - 407 mm      | 70 mm - 460 mm*     |
| Fixed rail to front dimension (A) | 234 mm              | 234 mm              | 234 mm              |

\* or specify

**This unit is used to link between production machines or board handling units.**



## Standard features

- Multi zone concept available, standard segment length is 500 mm.
- Conveyor width adjustment using hand crank.
- Controlled by PLC.
- CE certified.

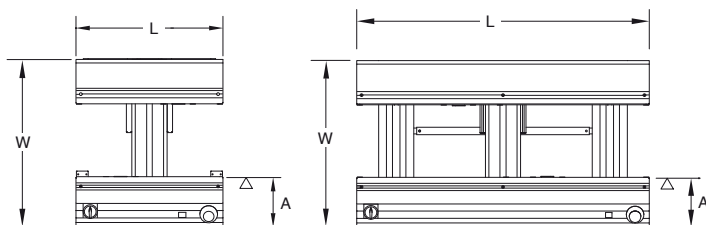
## Technical specifications

|                       |                         |
|-----------------------|-------------------------|
| Transfer height:      | 950 mm ± 25 mm*         |
| Colour:               | RAL 9002*               |
| Flow direction:       | Left to right*          |
| Fixed rail:           | Front*                  |
| Machine interface:    | SMEMA*                  |
| Conveyor concept:     | ESD belt                |
| Belt speed:           | 14 m/min.               |
| PCB edge support:     | 3 mm                    |
| Components clearance: | Top 30 mm, bottom 30 mm |
| Power supply:         | 230 VAC/50 Hz/1 Ph      |
| Power consumption:    | 100 VA max.             |
|                       | * or specify            |

## Options

- Non standard conveyor/segment lengths
- Hinged top cover
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Variable speed per segment
- Dual speed per segment
- Inspect function at exit sensor.

Other options available on request



Standard lengths (X): 500, 1000, 1500, 2000.

|                                   | NTM 410M (X)       | NTM 410L (X)       | NTM 410XL (X)      |
|-----------------------------------|--------------------|--------------------|--------------------|
| Machine dimensions (l x w x h)    | (X) x 570 x 985 mm | (X) x 727 x 985 mm | (X) x 780 x 985 mm |
| Weight                            | 50 - 80 kg         | 70 - 100 kg        | 80 - 110 kg        |
| PCB length                        | 80 mm - 457 mm     | 80 mm - 457 mm     | 80 mm - 460 mm*    |
| PCB width                         | 50 mm - 250 mm     | 50 mm - 407 mm     | 50 mm - 460 mm*    |
| Fixed rail to front dimension (A) | 168 mm             | 168 mm             | 168 mm             |

\* or specify

*This conveyor is used to feed PCB's or pallets into wave soldering machine at 6-7° angle.*



#### Standard features

- Conveyor width adjustment using hand crank.
- Two ESD belt segments of 500 mm (XL size = 600 mm).
- Second belt segment at 6-7° adjustable angle.
- Dual speed on second segment for fluent transfer.
- Controlled by PLC.
- CE certified.

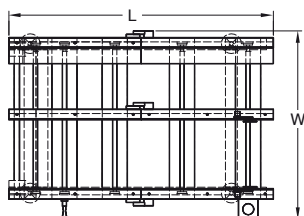
#### Technical specifications

|                       |                                                     |
|-----------------------|-----------------------------------------------------|
| Transfer height:      | 950 mm ± 25 mm*                                     |
| Colour:               | RAL 9002*                                           |
| Flow direction:       | Left to right*                                      |
| Fixed rail:           | Front*                                              |
| Machine interface:    | SMEMA*                                              |
| Conveyor concept:     | ESD belt                                            |
| Belt speed:           | Fixed in at 14 m/min,<br>variable out 0.5-14 m/min. |
| PCB edge support:     | 3 mm                                                |
| Components clearance: | Top 30 mm, bottom 30 mm                             |
| Power supply:         | 230 VAC/50 Hz/1 Ph                                  |
| Power consumption:    | 150 VA max.                                         |
|                       | * or specify                                        |

#### Options

- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Pinchain (3 mm or 5 mm pins) instead of ESD belt
- Outfeed delay timer

Other options available on request



|                                | NTM 420M 1000        | NTM 420L 1000        | NTM 420XL 1200       |
|--------------------------------|----------------------|----------------------|----------------------|
| Machine dimensions (l x w x h) | 1000 x 535 x 1000 mm | 1000 x 690 x 1000 mm | 1200 x 740 x 1000 mm |
| Weight                         | 60 kg                | 70 kg                | 85 kg                |
| PCB length                     | 80 mm - 457 mm       | 80 mm - 457 mm       | 80 mm - 460 mm*      |
| PCB width                      | 75 mm - 250 mm       | 75 mm - 407 mm       | 75 mm - 460 mm*      |

\* or specify

# Solder outfeed conveyor

21

NTM 430M 2500 • NTM 430L 2500 • NTM 430XL 2500

*This conveyor is used to unload PCB's or pallets from a wave soldering machine at 6-7° angle. Decline section presents PCB/pallet at standard height to downstream machine.*



## Standard features

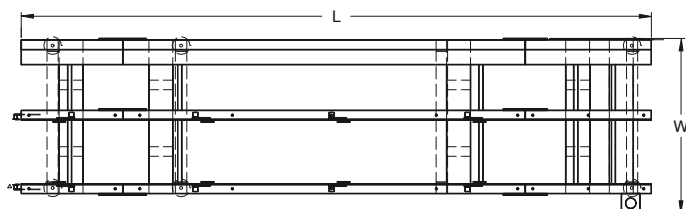
- Conveyor width adjustment using hand crank.
- Free running concept, no flow control.
- Flux protected by using 3 mm pinchain.
- Sliding resistors on decline section.
- CE certified.

## Technical specifications

|                       |                           |
|-----------------------|---------------------------|
| Transfer height:      | Specify upon order        |
| Colour:               | RAL 9002*                 |
| Flow direction:       | Left to right*            |
| Fixed rail:           | Front*                    |
| Machine interface:    | None                      |
| Conveyor concept:     | Metal pinchain            |
| Chain speed:          | Variable 0.5 mm -3 m/min. |
| PCB edge support:     | 3 mm                      |
| Components clearance: | Top 30 mm, bottom 30 mm   |
| Power supply:         | 230 VAC/50 Hz/1 Ph        |
| Power consumption     | 150 VA max.               |
|                       | * or specify              |

## Options

- Pinchain using 5 mm pins
  - Cooling fans
  - PLC package; incl. alarm buzzer, SMEMA interface, stopper and sensor
  - Electrical conveyor width adjustment
  - Automatic conveyor width adjustment
- Other options available on request



|                                | <b>NTM 430M 2500</b> | <b>NTM 430L 2500</b> | <b>NTM 430XL 2500</b> |
|--------------------------------|----------------------|----------------------|-----------------------|
| Machine dimensions (l x w x h) | 2500 x 535 x 1300 mm | 2500 x 690 x 1300 mm | 2500 x 740 x 1300 mm  |
| Weight                         | 180 kg               | 200 kg               | 220 kg                |
| PCB length                     | 80 mm - 457 mm       | 80 mm - 457 mm       | 80 mm - 460 mm*       |
| PCB width                      | 75 mm - 250 mm       | 75 mm - 407 mm       | 75 mm - 460 mm*       |

\* or specify

*The inspection conveyor is used in the PCB assembly line when frequent visual inspection of PCB's is required.*



## Standard features

- Multi zone concept available, standard segment length is 500 mm.
- Conveyor width adjustment using hand crank.
- Inspection and by-pass mode selectable.
- Centre PCB stop position.
- Controlled by PLC.
- CE certified.

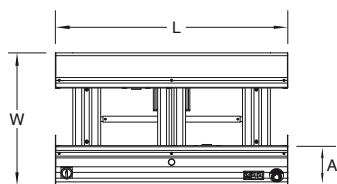
## Technical specifications

|                       |                                                |
|-----------------------|------------------------------------------------|
| Transfer height:      | 950 mm ± 25 mm*                                |
| Colour:               | RAL 9002*                                      |
| Flow direction:       | Left to right*                                 |
| Fixed rail:           | Front*                                         |
| Machine interface:    | SMEMA*                                         |
| Conveyor concept:     | ESD belt                                       |
| Belt speed:           | Fixed in 14 m/min,<br>variable out 2-14 m/min. |
| PCB edge support:     | 3 mm                                           |
| Components clearance: | Top 30 mm, bottom 30 mm                        |
| Power supply:         | 230 VAC/50 Hz/1 Ph                             |
| Power consumption:    | 100 VA max.                                    |
|                       | * or specify                                   |

## Options

- Non standard conveyor/segment lengths
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Inspection interval counter
- Outfeed delay timer
- Light fixture
- PCB release foot switch

Other options available on request



Standard lengths (X): 1000, 1500.

|                                   | <b>NTM 510ICM (X)</b> | <b>NTM 510ICL (X)</b> | <b>NTM 510ICXL (X)</b> |
|-----------------------------------|-----------------------|-----------------------|------------------------|
| Machine dimensions (l x w x h)    | (X) x 570 x 985 mm    | (X) x 727 x 985 mm    | (X) x 780 x 985 mm     |
| Weight                            | 60 - 75 kg            | 65 - 75 kg            | 80 - 90 kg             |
| PCB length                        | 80 mm - 457 mm        | 80 mm - 457 mm        | 80 mm - 460 mm*        |
| PCB width                         | 50 mm - 250 mm        | 50 mm - 407 mm        | 50 mm - 460 mm*        |
| Fixed rail to front dimension (A) | 168 mm                | 168 mm                | 168 mm                 |

\* or specify

**Used for good/bad PCB separation or visual inspection without interrupting the PCB flow. The PCB is lifted 65mm from the ESD belt using metal fingers.**



## Standard features

- Reject, inspect and by-pass mode selectable.
- Conveyor width adjustment using hand crank.
- Controlled by PLC.
- CE certified.

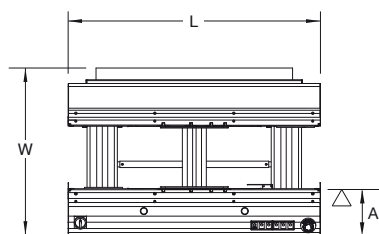
## Technical specifications

|                       |                                          |
|-----------------------|------------------------------------------|
| Transfer height:      | 950 mm ± 25 mm*                          |
| Colour:               | RAL 9002*                                |
| Flow direction:       | Left to right*                           |
| Fixed rail:           | Front*                                   |
| Machine interface:    | SMEMA*                                   |
| Conveyor concept:     | ESD belt                                 |
| Belt speed:           | Variable 2-14 m/min.                     |
| PCB edge support:     | 3 mm                                     |
| Components clearance: | Bottom 30 mm,<br>top+bottom = 65 mm max. |
| Power supply:         | 230 VAC/50 Hz/1 Ph                       |
| Power consumption:    | 150 VA max.                              |
| Air supply:           | 4-6 bar                                  |
| Air consumption:      | 10 ltr/min max.                          |
|                       | * or specify                             |

## Options

- Non standard conveyor/segment lengths
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Additional lift positions for extra buffer capacity
- Inspection interval counter
- Light fixture
- Alarm buzzer

Other options available on request

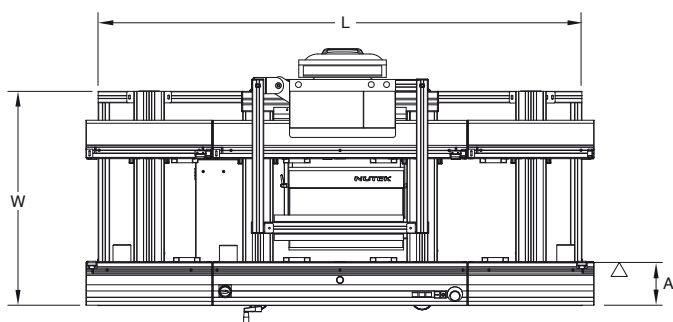


|                                   | <b>NTM 510RCM 1000</b> | <b>NTM 510RCL 1000</b> | <b>NTM 510RCXL 1000</b> |
|-----------------------------------|------------------------|------------------------|-------------------------|
| Machine dimensions (l x w x h)    | 1000 x 667 x 980 mm    | 1000 x 824 x 980 mm    | 1000 x 875 x 980 mm     |
| Weight                            | 80 kg                  | 90 kg                  | 95 kg                   |
| PCB length                        | 80 mm - 457 mm         | 80 mm - 457 mm*        | 80 mm - 460 mm*         |
| PCB width                         | 50 mm - 250 mm         | 50 mm - 407 mm         | 50 mm - 460 mm*         |
| Fixed rail to front dimension (A) | 186 mm                 | 186 mm                 | 186 mm                  |

\* or specify



*The AOI rework conveyor is designed for good/bad PCB separation. The in- and outgoing segments pneumatically move up/down allowing separation without interrupting the flow of good PCB's.*



#### Standard features

- Rework and by-pass mode selectable.
- 7 ESD belt segments, providing possibility to buffer three failed PCB's.
- Conveyor width adjustment using hand crank.
- Controlled by PLC.
- ESD bracelet connection.
- Foot rest.
- Overhead lighting.
- Flatscreen & keyboard support.
- PC stand.
- CE certified.

#### Technical specifications

|                      |                                                         |
|----------------------|---------------------------------------------------------|
| Transfer height:     | 950 mm ± 25 mm*                                         |
| Colour:              | RAL 9002*                                               |
| Flow direction:      | Left to Right*                                          |
| Fixed rail:          | Front*                                                  |
| Machine interface:   | SMEMA*                                                  |
| Conveyor concept:    | ESD belt                                                |
| Belt speed:          | 14 m/min.                                               |
| PCB edge support:    | 3 mm                                                    |
| Component clearance: | Bottom 30 mm,<br>top+bottom = 54 mm max. (belt to belt) |
| Power supply:        | 230 VAC/50 Hz/1 Ph                                      |
| Power consumption:   | 400 VA max.                                             |
| Air supply:          | 4-6 bar                                                 |
| Air consumption:     | 65 ltr/min max.                                         |
|                      | * or specify                                            |

#### Options

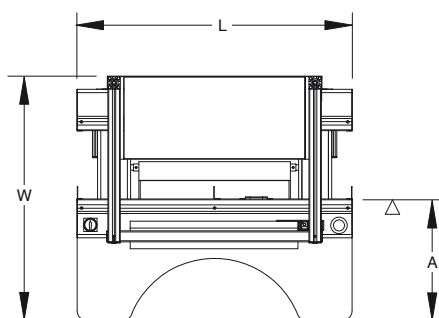
- Part shelf
- PCB release foot switch
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Variable speed per segment

Other options available on request

|                                   | NTM 520WSM 2000-7    | NTM 520WSL 2000-7    | NTM 520WSXL 2000-7   |
|-----------------------------------|----------------------|----------------------|----------------------|
| Machine dimensions (l x w x h)    | 2000 x 730 x 2190 mm | 2000 x 890 x 2190 mm | 2000 x 940 x 2190 mm |
| Weight                            | 190 kg               | 220 kg               | 250 kg               |
| PCB length                        | 80 mm - 457 mm       | 80 mm - 457 mm       | 80 mm - 460 mm*      |
| PCB width                         | 50 mm - 250 mm       | 50 mm - 407 mm       | 50 mm - 460 mm*      |
| Fixed rail to front dimension (A) | 168 mm               | 168 mm               | 168 mm               |

\* or specify

**The workstation is used where manual assembly work is performed on the PCB without removing it from the PCB assembly line.**



## Standard features

- Multi zone concept available, standard segment length is 500 mm.
- Work and by-pass mode selectable.
- Conveyor width adjustment using hand crank.
- Centre PCB stop position
- Enhanced stability.
- Controlled by PLC.
- ESD bracelet connection.
- Foot rest.
- Sliding parts shelf.
- LED overhead lighting.
- CE certified.

## Technical specifications

|                       |                                                |
|-----------------------|------------------------------------------------|
| Transfer height:      | 950 mm ± 25 mm*                                |
| Colour:               | RAL 9002*                                      |
| Flow direction:       | Left to right*                                 |
| Fixed rail:           | Front*                                         |
| Machine interface:    | SMEMA*                                         |
| Conveyor concept:     | ESD belt                                       |
| Belt speed:           | Fixed in 14 m/min,<br>variable out 2-14 m/min. |
| PCB edge support:     | 3 mm                                           |
| Components clearance: | Top 30 mm, bottom 30 mm                        |
| Power supply:         | 230 VAC/50 Hz/1 Ph                             |
| Power consumption:    | 150 VA max.                                    |
|                       | * or specify                                   |

## Options

- Non standard conveyor/segment lengths
  - Electrical conveyor width adjustment
  - Automatic conveyor width adjustment
  - Additional part shelf
  - Bin rail
  - PCB release foot switch
  - Variable speed per segment
  - Dual speed per segment
- Other options available on request

Standard lengths (X): 1000, 1500.

|                                   | NTM 530WSM (X)      | NTM 530WSL (X)       | NTM 530WSXL (X)      |
|-----------------------------------|---------------------|----------------------|----------------------|
| Machine dimensions (l x w x h)    | (X) x 887 x 2190 mm | (X) x 1044 x 2190 mm | (X) x 1095 x 2190 mm |
| Weight                            | 100 - 150 kg        | 110 - 160 kg         | 130 - 180 kg         |
| PCB length                        | 80 mm - 457 mm      | 80 mm - 457 mm       | 80 mm - 460 mm*      |
| PCB width                         | 50 mm - 250 mm      | 50 mm - 407 mm       | 50 mm - 460 mm*      |
| Fixed rail to front dimension (A) | 438 mm              | 438 mm               | 438 mm               |

\* or specify

*The unit provides a 'normal open' passage in a PCB assembly line. An integrated conveyor segment slides across the opening to deliver PCB to downstream machine.*



#### Standard features

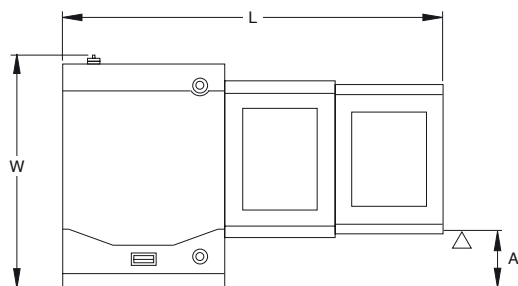
- Conveyor width adjustment using hand crank.
- Electrically driven for smooth extension and retraction.
- Fully enclosed design.
- Controlled by PLC.
- CE certified.

#### Technical specifications

|                       |                         |
|-----------------------|-------------------------|
| Transfer height:      | 950 mm ± 25 mm*         |
| Colour:               | RAL 9002*               |
| Flow direction:       | Left to right*          |
| Fixed rail:           | Front*                  |
| Machine interface:    | SMEMA*                  |
| Conveyor concept:     | ESD belt                |
| Belt speed:           | 14 m/min.               |
| PCB edge support:     | 3 mm                    |
| Components clearance: | Top 30 mm, bottom 30 mm |
| Power supply:         | 230 VAC/50 Hz/1 Ph      |
| Power consumption:    | 300 VA max.             |
| Machine cycle time:   | ± 15 seconds            |
| Passageway:           | 847 mm                  |
|                       | * or specify            |

#### Options

- Machine length 2000 mm, passageway of 1100 mm
  - Electrical conveyor width adjustment
  - Automatic conveyor width adjustment
  - Normal closed operation using second belt segment (reduces passage way to 745 mm)
  - Towerlight display for machine status
- Other options available on request



|                                           | NTM GPTM             | NTM GPTL             | NTM GPTXL            |
|-------------------------------------------|----------------------|----------------------|----------------------|
| Machine dimensions (extended) (l x w x h) | 1500 x 775 x 1100 mm | 1500 x 905 x 1100 mm | 1500 x 955 x 1100 mm |
| Weight                                    | 225 kg               | 250 kg               | 280 kg               |
| PCB length                                | 80 mm - 457 mm       | 80 mm - 457 mm       | 80 mm - 460 mm*      |
| PCB width                                 | 50 mm - 250 mm       | 50 mm - 407 mm       | 50 mm - 460 mm*      |
| Fixed rail to front dimension (A)         | 234 mm               | 234 mm               | 234 mm               |

\* or specify

***This unit provides a 'normal open' or 'normal closed' passage in a PCB assembly line. A timing belt is used to transport the PCB and extend/retract the belt guide bars.***

## Standard features

- Selectable operation; normally closed or normally open.
- Conveyor width adjustment using hand crank.
- Electrical driven for smooth extension and retraction.
- Controlled by PLC.
- CE certified.

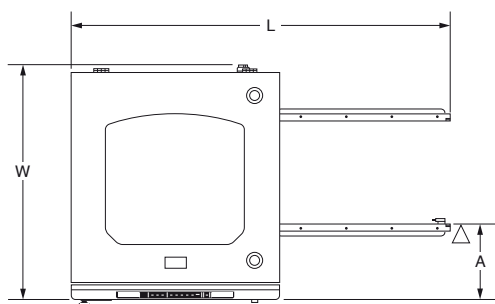
## Technical specifications

|                      |                                   |
|----------------------|-----------------------------------|
| Transfer height:     | 950 mm ± 25 mm*                   |
| Colour:              | RAL 9002*                         |
| Flow direction:      | Left to right*                    |
| Fixed rail:          | Front*                            |
| Machine interface:   | SMEMA*                            |
| Conveyor concept:    | Timing belt                       |
| Belt speed:          | Variable 2-14 m/min.              |
| PCB edge support:    | 3 mm                              |
| Component clearance: | Top 30 mm, bottom 30 mm           |
| PCB thickness:       | 0.6 mm to 4 mm                    |
| Power supply:        | 230 VAC/50 Hz/1 Ph                |
| Power consumption:   | 200 VA max.                       |
| Machine cycle time:  | ± 15 seconds (NO); 8 seconds (NC) |
| Passageway:          | 675 mm                            |
| Air supply:          | 4-6 bar                           |
| Air consumption:     | 2 ltr/min max.                    |
|                      | * or specify                      |

## Options

- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Top cover
- Towerlight display for machine status

Other options available on request



|                                   | NTM 5210M            | NTM 5210L            | NTM 5210XL           |
|-----------------------------------|----------------------|----------------------|----------------------|
| Machine dimensions (l x w x h)    | 1500 x 770 x 1100 mm | 1500 x 930 x 1100 mm | 1500 x 980 x 1100 mm |
| Weight                            | 120 kg               | 140 kg               | 150 kg               |
| PCB length                        | 80 mm - 457 mm       | 80 mm - 457m m       | 80 mm - 460 mm*      |
| PCB width                         | 50 mm - 250 mm       | 50 mm - 407 mm       | 50 mm - 460 mm*      |
| Fixed rail to front dimension (A) | 300 mm               | 300 mm               | 300 mm               |

\* or specify

**By manual lifting the conveyor section, access is gained to the rear of the line.**



#### Standard features

- Conveyor width adjustment using hand crank.
- Ergonomic air pressure supported opening and closing.
- Locking device to avoid opening during PCB transfer.
- Controlled by PLC.
- CE certified.

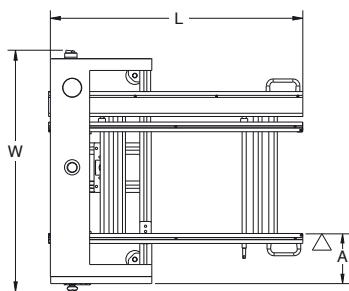
#### Technical specifications

|                       |                         |
|-----------------------|-------------------------|
| Transfer height:      | 950 mm ± 25 mm*         |
| Colour:               | RAL 9002*               |
| Flow direction:       | Left to right*          |
| Fixed rail:           | Front*                  |
| Machine interface:    | SMEMA*                  |
| Conveyor concept:     | ESD belt                |
| Belt speed:           | 14 m/min.               |
| PCB edge support:     | 3 mm                    |
| Components clearance: | Top 30 mm, bottom 30 mm |
| Power supply:         | 230 VAC/50 Hz/1 Ph      |
| Power consumption:    | 100 VA max.             |
| Passageway:           | 600 mm                  |
| Air supply:           | 4-6 bar                 |
| Air consumption:      | 35 ltr/lift max.        |
|                       | * or specify            |

#### Options

- Machine length 1500 mm, passageway of 990 mm
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Variable speed per segment
- Dual speed per segment
- Inspect function
- Top cover

Other options available on request



|                                   | <b>NTM MGM 1000</b>  | <b>NTM MGL 1000</b>  | <b>NTM MGXL 1000</b> |
|-----------------------------------|----------------------|----------------------|----------------------|
| Machine dimensions (l x w x h)    | 1000 x 790 x 1100 mm | 1000 x 920 x 1100 mm | 1000 x 970 x 1100 mm |
| Weight                            | 90 kg                | 100 kg               | 110 kg               |
| PCB length                        | 80 mm - 457 mm       | 80 mm - 457 mm       | 80 mm - 460 mm*      |
| PCB width                         | 50 mm - 250 mm       | 50 mm - 407 mm       | 50 mm - 460 mm*      |
| Fixed rail to front dimension (A) | 194 mm               | 194 mm               | 194 mm               |

\* or specify

**The machine uses specially formulated elastomer rollers to remove dust, particles, etc. from the PCB surface. This contamination is transferred from the elastomer rollers to adhesive rolls.**



## Standard Features

- Touchscreen control panel used for easy programming.
- Preset number of PCB & pre-warning counter to purge adhesive rolls.
- Password protected.
- Single sided cleaning (topside or specify if otherwise).
- Ioniser bars (double sided) for static discharge.
- Integrated conveyor able to buffer one board cleaning.
- Easy changing of adhesive rolls.
- Conveyor width adjustment using hand crank.
- Controlled by PLC.
- CE certified.

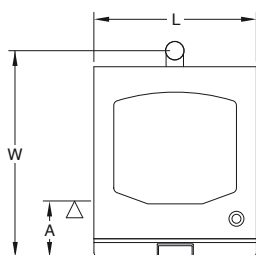
## Technical specifications

|                      |                         |
|----------------------|-------------------------|
| Transfer height:     | 950 mm ± 25 mm*         |
| Colour:              | RAL 9002*               |
| Flow direction:      | Left to right*          |
| Fixed rail:          | Front*                  |
| Machine interface:   | SMEMA*                  |
| Conveyor concept:    | ESD belt                |
| Belt speed:          | Variable 2-14 m/min.    |
| PCB edge support:    | 3 mm                    |
| Component clearance: | Top 30 mm, bottom 30 mm |
| PCB thickness:       | 0.6 mm to 3.0 mm        |
| Power supply:        | 230 VAC/50 Hz/1 Ph      |
| Power consumption:   | 310 VA max.             |
| Air supply:          | 4-6 bar                 |
| Air consumption:     | 2 ltr/min max.          |
|                      | * or specify            |

## Options

- Double sided cleaning (selectable)
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Additional ioniser bars
- Pre-cut adhesive rollers
- Towerlight

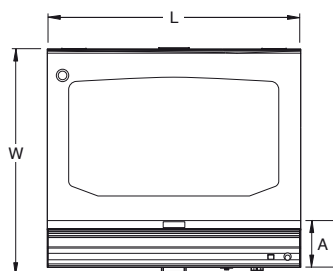
Other options available on request



|                                   | NTM TCM 650         | NTM TCL 750          |
|-----------------------------------|---------------------|----------------------|
| Machine dimensions (l x w x h)    | 653 x 800 x 1300 mm | 750 x 1050 x 1300 mm |
| Weight                            | 180 kg              | 200 kg               |
| PCB length                        | 100 mm - 330 mm     | 100 mm - 457 mm      |
| PCB width                         | 50 mm - 250 mm      | 50 mm - 407 mm       |
| Fixed rail to front dimension (A) | 220 mm              | 220 mm               |



*The coating conveyor is designed for in-line coatings operations. It guarantees a smooth PCB transfer and an environment friendly coating process.*



#### Standard features

- Multi zone concept available, standard segment length is 500 mm.
- Hinged top cover.
- Exhaust connection 6" with Dwyer differential pressure safety switch.
- Removable stainless steel drip pan.
- Controlled by PLC.
- CE certified.

#### Technical specifications

|                       |                         |
|-----------------------|-------------------------|
| Transfer height:      | 950 mm ± 25 mm*         |
| Colour:               | RAL 9002*               |
| Flow direction:       | Left to right*          |
| Fixed rail:           | Front*                  |
| Machine interface:    | SMEMA*                  |
| Conveyor concept:     | Metal 06B chain         |
| Conveyor speed:       | 0-12 m/min.             |
| PCB edge support:     | 4 mm                    |
| Components clearance: | Top 90 mm, bottom 90 mm |
| Power supply:         | 230 VAC/50 Hz/1 Ph      |
| Power consumption:    | 200 VA max.             |
| Air supply:           | 4-6 bar                 |
| Air consumption:      | Negligible              |
| Machine cycle time:   | ± 10 seconds            |
|                       | * or specify            |

#### Options

- Non standard conveyor/segment lengths
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- External flash timer 0-60 seconds
- Inspect function at exit sensor
- Inspection interval counter
- UV-light package
- Outfeed delay timer
- Pinchain 3 or 5 mm

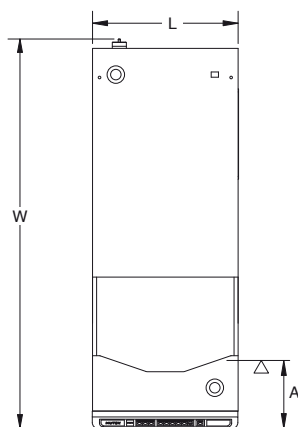
Other options available on request

Standard lengths (X): 500, 1000.

|                                   | NTM 410CM (X)       | NTM 410CL (X)       | NTM 410CXL (X)      |
|-----------------------------------|---------------------|---------------------|---------------------|
| Machine dimensions (l x w x h)    | (X) x 705 x 1135 mm | (X) x 860 x 1135 mm | (X) x 915 x 1135 mm |
| Weight                            | 50 kg               | 70 kg               | 80 kg               |
| PCB length                        | 80 mm - 457 mm      | 80 mm - 457 mm      | 80 mm - 460 mm*     |
| PCB width                         | 75 mm - 250 mm      | 75 mm - 407 mm      | 75 mm - 460 mm*     |
| Fixed rail to front dimension (A) | 186 mm              | 186 mm              | 186 mm              |

\* or specify

*The shuttle conveyor is used for transporting boards from one line into two lines or vice versa. The orientation of the board is not changed during traversing.*



## Standard features

- Traversing distance of 1500 mm (or specify).
- Conveyor width adjustment by hand crank.
- Configuration upon request.
- Controlled by PLC.
- By-pass mode selectable.
- Front and rear adjustable stop positions.
- Frequency controlled traversing speed.
- CE certified.

## Technical specifications

|                       |                         |
|-----------------------|-------------------------|
| Transfer height:      | 950 mm ± 25 mm*         |
| Colour:               | RAL 9002*               |
| Flow direction:       | Left to right*          |
| Fixed rail:           | Front*                  |
| Machine interface:    | SMEMA*                  |
| Conveyor concept:     | ESD belt                |
| Belt speed:           | 14 m/min.               |
| PCB edge support:     | 3 mm                    |
| Components clearance: | Top 30 mm, bottom 30 mm |
| Power supply:         | 230 VAC/50 Hz/1 Ph      |
| Power consumption:    | 250 VA max.             |
| Machine cycle time:   | ± 18 seconds            |
|                       | * or specify            |

## Options

- Servo drive upgrade for shortened cycle time
- Customized traversing distance (4000 mm max.)
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Cantilevered input or output conveyor (length 500 mm)
- Good- or bad board separation
- Touchscreen display
- Towerlight display
- Alarm buzzer

Other options available on request

|                                   | NTM 910TVM 1500      | NTM 910TVL 1500      | NTM 910TVXL 1500     |
|-----------------------------------|----------------------|----------------------|----------------------|
| Machine dimensions (l x w x h)    | 500 x 2500 x 1100 mm | 653 x 2700 x 1100 mm | 653 x 2800 x 1100 mm |
| Weight                            | 180 kg               | 200 kg               | 240 kg               |
| PCB length                        | 80 mm - 457 mm       | 80 mm - 457 mm       | 80 mm - 460 mm*      |
| PCB width                         | 50 mm - 250 mm       | 50 mm - 407 mm       | 50 mm - 460 mm*      |
| Fixed rail to front dimension (A) | 234 mm               | 234 mm               | 234 mm               |

\* or specify

**This unit is used to invert/flip PCB's (180°) for 'double-sided' process.**



#### Standard features

- Pneumatic stopper to keep PCB in position during inverting.
- Conveyor width adjustment using hand crank.
- Controlled by PLC.
- By-pass mode selectable.
- CE certified.

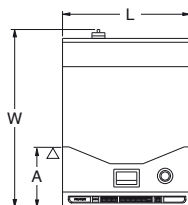
#### Technical specifications

|                       |                         |
|-----------------------|-------------------------|
| Transfer height:      | 950 mm ± 25 mm*         |
| Colour:               | RAL 9002*               |
| Flow direction:       | Left to right*          |
| Fixed rail:           | Front*                  |
| Machine interface:    | SMEMA*                  |
| Conveyor concept:     | ESD belt                |
| Belt speed:           | 14 m/min.               |
| PCB edge support:     | 3 mm                    |
| Components clearance: | Top 30 mm, bottom 30 mm |
| Power supply:         | 230 VAC/50 Hz/1 Ph      |
| Power consumption:    | 200 VA max.             |
| Air supply:           | 4-6 bar                 |
| Air consumption:      | 1.1 ltr/min max.        |
| Machine cycle time:   | ± 8 seconds             |
|                       | * or specify            |

#### Options

- Frequency control upgrade for shortened cycle time
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Cantilevered input- or output conveyor (length 500 mm)
- Top clamping to hold down board during inverting
- Touchscreen display
- Towerlight display
- Alarm buzzer

Other options available on request



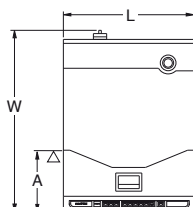
|                                   | <b>NTM 310IM</b>    | <b>NTM 310IL</b>    | <b>NTM 310IXL</b>   |
|-----------------------------------|---------------------|---------------------|---------------------|
| Machine dimensions (l x w x h)    | 500 x 735 x 1300 mm | 653 x 870 x 1300 mm | 653 x 920 x 1300 mm |
| Weight                            | 110 kg              | 120 kg              | 130 kg              |
| PCB length                        | 80 mm - 330 mm      | 80 mm - 457 mm      | 80 mm - 460 mm*     |
| PCB width                         | 50 mm - 250 mm      | 50 mm - 407 mm      | 50 mm - 460 mm*     |
| Fixed rail to front dimension (A) | 234 mm              | 234 mm              | 234 mm              |

\* or specify

**The coating inverter is designed to gently flip the PCB, creating the possibility to coat the board at both sides without manual handling. The coating inverter comes with advanced operation modes and exhaust safety system.**



\*including optional opening for return conveyor



## Standard features

- Exhaust connection 6" with dwyer differential pressure safety switch.
- Removable stainless steel drip pan.
- Controlled by PLC.
- Conveyor width adjustment using hand crank.
- Selectable operation mode:
  - Invert
  - Return and invert
  - Invert twice
  - By pass
- CE certified.

## Technical specifications

|                       |                         |
|-----------------------|-------------------------|
| Transfer height:      | 950 mm ± 25 mm*         |
| Colour:               | RAL 9002*               |
| Flow direction:       | Left to right*          |
| Fixed rail:           | Front*                  |
| Machine interface:    | SMEMA*                  |
| Conveyor concept:     | Metal 06B chain         |
| Conveyor speed:       | 0-12 m/min.             |
| PCB edge support:     | 4 mm                    |
| Components clearance: | Top 90 mm, bottom 90 mm |
| Power supply:         | 230 VAC/50 Hz/1 Ph      |
| Power consumption:    | 200 VA max.             |
| Air supply:           | 4-6 bar                 |
| Air consumption:      | Negligible              |
| Machine cycle time:   | ± 10 seconds            |
|                       | * or specify            |

## Options

- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Cantilevered input or output conveyor (length 500 mm)
- Towerlight display
- Alarm buzzer

Other options available on request

|                                   | NTM 310CM           | NTM 310CL            | NTM 310CXL           |
|-----------------------------------|---------------------|----------------------|----------------------|
| Machine dimensions (l x w x h)    | 500 x 729 x 1330 mm | 653 x 1040 x 1330 mm | 653 x 1090 x 1330 mm |
| Weight                            | 110 kg              | 140 kg               | 170 kg               |
| PCB length                        | 80 mm - 330 mm      | 80 mm - 457 mm       | 80 mm - 460 mm*      |
| PCB width                         | 75 mm - 250 mm      | 75 mm - 407 mm       | 75 mm - 460 mm*      |
| Fixed rail to front dimension (A) | 252 mm              | 252 mm               | 252 mm               |

\* or specify

*This unit is used in lines with a PCB/pallet return system. The lift brings PCB/pallet from upper level to the lower level or vice versa.*



#### Standard features

- Ball screw driven lift movement.
- Frequency controlled lift movement for gentle start/stop.
- Conveyor width adjustment using hand crank.
- Hinged top cover.
- Controlled by PLC.
- CE certified.

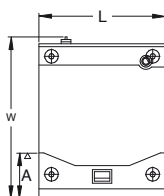
#### Technical specifications

|                       |                         |
|-----------------------|-------------------------|
| Transfer height:      | 950/250 mm ± 25 mm*     |
| Colour:               | RAL 9002*               |
| Flow direction:       | Left to right*          |
| Fixed rail:           | Front*                  |
| Machine interface:    | SMEMA*                  |
| Conveyor concept:     | ESD belt                |
| Belt speed:           | 14 m/min                |
| PCB edge support:     | 3 mm                    |
| Components clearance: | Top 30 mm, bottom 30 mm |
| Power supply:         | 230 VAC/50 Hz/1 Ph      |
| Power consumption:    | 350 VA max.             |
| Air supply:           | 4-6 bar                 |
| Air consumption:      | 1.5 ltr/min max.        |
| Machine cycle time:   | ± 25 seconds            |

#### Options

- Servo drive upgrade for shortened cycle time
- Tall version for 'up & over' solutions
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Cantilevered input- or output conveyor (length 500 mm)
- Variable speed
- Safety shutter at input- or output
- Towerlight display
- Touchscreen display
- Alarm buzzer

Other options available on request



|                                   | NTM 340LM           | NTM 340LL            | NTM 340LXL           |
|-----------------------------------|---------------------|----------------------|----------------------|
| Machine dimensions (l x w x h)    | 500 x 945 x 1350 mm | 653 x 1100 x 1350 mm | 653 x 1150 x 1350 mm |
| Weight                            | 160 kg              | 180 kg               | 200 kg               |
| PCB length                        | 80 mm - 457 mm      | 80 mm - 457 mm       | 80 mm - 460 mm*      |
| PCB width                         | 50 mm - 250 mm      | 50 mm - 407 mm       | 50 mm - 460 mm*      |
| Fixed rail to front dimension (A) | 292 mm              | 292 mm               | 292 mm               |

\* or specify

# Turn conveyor L, I, T, X-type

35

NTM 91 (L) • NTM 181 (I) • NTM 271 (T) • NTM 361 (X)

*The turn conveyor is designed to change the flow direction of a PCB assembly line. The PCB is transferred onto the built-in ESD belt conveyor, which turns either clockwise or counter-clockwise.*

## Standard features

- Conveyor width adjustment using hand crank.
- (NTM 91) Turning 90° clockwise or counter-clockwise
- (NTM 181) Turning 180° to change fixed rail position
- (NTM 271 and 361) various configurations possible
- By-pass mode available.
- Controlled by PLC.
- Unique lateral transfer system to handle small PCB's.
- CE certified.

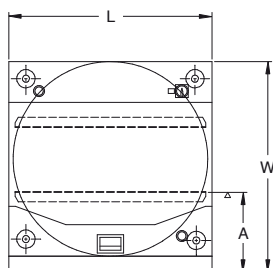
## Technical specifications

|                       |                         |
|-----------------------|-------------------------|
| Transfer height:      | 950 mm ± 25 mm*         |
| Colour:               | RAL 9002*               |
| Flow direction:       | Left to right*          |
| Fixed rail:           | Front*                  |
| Machine interface:    | SMEMA*                  |
| Conveyor concept:     | ESD belt                |
| Belt speed:           | 14 m/min.               |
| PCB edge support:     | 3 mm                    |
| Components clearance: | Top 30 mm, bottom 30 mm |
| Power supply:         | 230 VAC/50 Hz/1 Ph      |
| Power consumption:    | 200 VA max.             |
| Air supply:           | 4-6 bar                 |
| Air consumption:      | 1.5 ltr/min max.        |
| Machine cycle time:   | ± 16 seconds            |
|                       | * or specify            |

## Options

- Good or bad board separation
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Cantilevered input- or output conveyor (length 500 mm)
- Touchscreen display
- Towerlight display
- Alarm buzzer

Other options available on request



|                                   | NTM 91, 181, 271, 361M | NTM 91, 181, 271, 361L | NTM 91, 181, 271, 361XL |
|-----------------------------------|------------------------|------------------------|-------------------------|
| Machine dimensions (l x w x h)    | 795 x 795 x 1100 mm    | 875 x 875 x 1100 mm    | 975 x 975 x 1100 mm     |
| Weight                            | 160 kg                 | 170 kg                 | 200 kg                  |
| PCB length                        | 80 mm - 457 mm         | 80 mm - 457 mm         | 80 mm - 460 mm*         |
| PCB width                         | 50 mm - 250 mm         | 50 mm - 407 mm         | 50 mm - 460 mm*         |
| Fixed rail to front dimension (A) | 272 mm                 | 234 mm                 | 234 mm                  |

\* or specify

*This unit is used to rotate a PCB 90° before transfer to downstream modular placement machine. While PCB is lifted up the conveyor automatically opens according to the set PCB length. After rotation PCB is transferred out sideways. Operation can also be reversed to transfer out PCB lengthways.*



#### Standard Features

- PCB width and length are set using position indicators.
- Automatic conveyor adjustment according to (manual) set width/length.
- Stepper motor driven rotation of PCB providing following modes:  
90° turn, clockwise  
90° turn, counter-clockwise  
180° turn
- Inspection and by pass mode selectable.
- Controlled by PLC.
- CE certified.

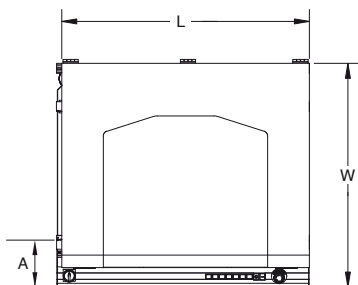
#### Technical specifications

|                      |                         |
|----------------------|-------------------------|
| Transfer height:     | 950 mm ± 25 mm*         |
| Colour:              | RAL 9002*               |
| Flow direction:      | Left to right*          |
| Fixed rail:          | Front*                  |
| Machine interface:   | SMEMA*                  |
| Conveyor concept:    | ESD belt                |
| Belt speed:          | Variable 2-14 m/min     |
| PCB edge support:    | 3 mm                    |
| Component clearance: | Top 30 mm, bottom 30 mm |
| Power supply:        | 230 VAC/50 Hz/1 Ph      |
| Power consumption:   | 900 VA max.             |
| Machine cycle time:  | ± 15 seconds            |
| Air supply:          | 4-6 bar                 |
| Air consumption:     | 2 ltr/min max.          |
|                      | * or specify            |

#### Options

- Pneumatic rotation for cost reduction
- Towerlight display for machine status
- Alarm buzzer

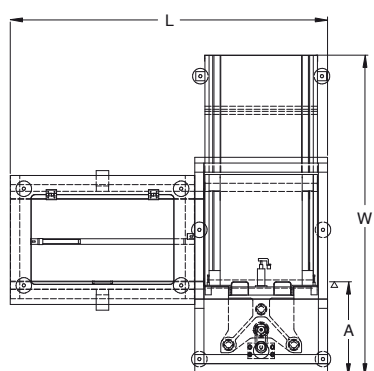
Other options available on request



|                                | <b>NTM 0410TXL</b>   |
|--------------------------------|----------------------|
| Machine dimensions (l x w x h) | 1000 x 885 x 1100 mm |
| Weight                         | 130 kg               |
| PCB length                     | 90 mm - 460 mm       |
| PCB width                      | 90 mm - 460 mm       |



*The single magazine buffer can be used as a mid-line loader or unloader, as a LIFO/FIFO buffer or as a reject buffer.*



## Standard features

- 5 operation modes available:
  - Buffer mode (LIFO/FIFO)
  - Unload mode
  - Load mode
  - Reject mode
  - By-pass mode
- Dual function pusher conveyor.
- Pressure limitation on pneumatic pushers.
- Exchange magazine from rear of the machine.
- Tailor made to the magazine of your choice.
- Threshold signal to protect PCB's in upstream oven.
- Automatic magazine alignment by upper- and lower pneumatic clamping.
- Controlled by PLC.
- Towerlight display for machine status.
- Selectable pitch settings.
- CE certified.

## Technical specifications

|                                |                                                    |
|--------------------------------|----------------------------------------------------|
| Transfer height:               | 950 mm $\pm$ 25 mm*                                |
| Colour:                        | RAL 9002*                                          |
| Flow direction:                | Left to right*                                     |
| Fixed rail:                    | Front*                                             |
| Machine interface:             | SMEMA*                                             |
| Conveyor concept:              | ESD belt                                           |
| Belt speed:                    | 14 m/min.                                          |
| PCB edge support:              | 3 mm                                               |
| Components clearance:          | Top 30 mm, bottom 30 mm<br>(depends on pitch)      |
| Power supply:                  | 230 VAC/50 Hz/1 Ph                                 |
| Power consumption:             | 580 VA max.                                        |
| Air supply:                    | 4-6 bar                                            |
| Air consumption:               | 15 ltr/min max.                                    |
| Machine cycle time:            | 10-25 seconds max.                                 |
| Pitch control:                 | 1-4, 10 mm pitch                                   |
| Maximum total magazine weight: | 50 kg each                                         |
| Total number of magazines:     | 1 magazine on the lifter platform.<br>* or specify |

## Options

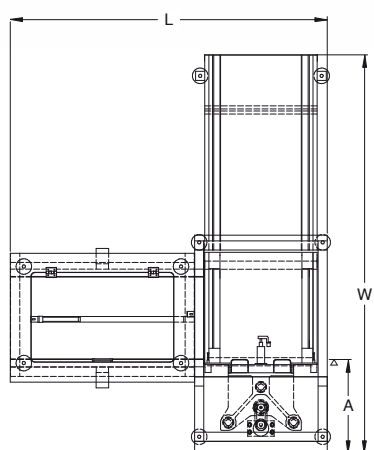
- By-pass conveyor above magazine platform
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Width adjustable magazine conveyor
- Front-side magazine exchange
- Touchscreen display
- Alarm buzzer

Other options available on request

|                                   | NTM 610SM             | NTM 610SL             | NTM 610SXL            |
|-----------------------------------|-----------------------|-----------------------|-----------------------|
| Machine dimensions (l x w x h)    | 1260 x 1170 x 1700 mm | 1560 x 1455 x 1700 mm | 1560 x 1575 x 1700 mm |
| Weight                            | 200 kg                | 250 kg                | 300 kg                |
| PCB length                        | 80 mm - 330 mm        | 80 mm - 457 mm        | 80 mm - 460 mm*       |
| PCB width                         | 75 mm - 250 mm        | 75 mm - 407 mm        | 75 mm - 460 mm*       |
| Magazine dimensions (max.)        | 360 x 320 x 583 mm    | 535 x 530 x 570 mm    | 535 x 580 x 570 mm    |
| Fixed rail to front dimension (A) | 395 mm                | 380 mm                | 380 mm                |

\* or specify

*The multi magazine buffer can be used as a mid-line loader or unloader, as a high capacity LIFO/FIFO buffer or as a reject buffer.*



### Standard features

- Automatic magazine change-over
- 5 operation modes available:
  - Buffer mode (LIFO/FIFO)
  - Unload mode
  - Load mode
  - Reject mode
  - By-pass mode
- Dual function pusher conveyor.
- Pressure limitation on pneumatic pusher.
- Threshold signal to protect PCB's in upstream oven.
- Controlled by PLC.
- Towerlight display for machine status.
- Selectable pitch settings.
- CE certified.

### Technical specifications

|                                |                                                                                                                                                   |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Transfer height:               | 950 mm ± 25 mm*                                                                                                                                   |
| Colour:                        | RAL 9002*                                                                                                                                         |
| Flow direction:                | Left to right*                                                                                                                                    |
| Fixed rail:                    | Front*                                                                                                                                            |
| Machine interface:             | SMEMA*                                                                                                                                            |
| Conveyor concept:              | ESD belt                                                                                                                                          |
| Belt speed:                    | 14 m/min.                                                                                                                                         |
| PCB edge support:              | 3 mm                                                                                                                                              |
| Components clearance:          | Top 30 mm, bottom 30 mm<br>(depends on pitch)                                                                                                     |
| Power supply:                  | 230 VAC/50 Hz/1 Ph                                                                                                                                |
| Power consumption:             | 800 VA max.                                                                                                                                       |
| Air supply:                    | 4-6 bar                                                                                                                                           |
| Air consumption:               | 15 ltr/min max.                                                                                                                                   |
| Machine cycle time:            | 12-30 seconds max.                                                                                                                                |
| Pitch control:                 | 1-4, 10 mm pitch                                                                                                                                  |
| Maximum total magazine weight: | 50 kg each                                                                                                                                        |
| Total number of magazines:     | 1 magazine on the lifter platform.<br>2 empty magazines on the upper<br>magazine conveyor.<br>2 full magazines on the lower<br>magazine conveyor. |

\* or specify

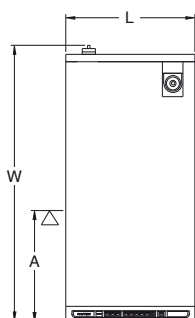
### Options

- By-pass conveyor above magazine platform
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Width adjustable magazine conveyor(s)
- Magazine conveyors located at front-side.
- Touchscreen display
- Alarm buzzer

|                                   | NTM 620SM             | NTM 620SL             | NTM 620SXL            |
|-----------------------------------|-----------------------|-----------------------|-----------------------|
| Machine dimensions (l x w x h)    | 1260 x 2145 x 1700 mm | 1560 x 2825 x 1700 mm | 1560 x 2975 x 1700 mm |
| Weight                            | 230 kg                | 280 kg                | 330 kg                |
| PCB length                        | 80 mm - 330 mm        | 80 mm - 457 mm        | 80 mm - 460 mm*       |
| PCB width                         | 75 mm - 250 mm        | 75 mm - 407 mm        | 75 mm - 460 mm*       |
| Magazine dimensions (max.)        | 360 x 320 x 583 mm    | 535 x 530 x 570 mm    | 535 x 580 x 570 mm    |
| Fixed rail to front dimension (A) | 395 mm                | 380 mm                | 380 mm                |

\* or specify

**The FIFO buffer is designed to buffer PCB's in FIFO mode. The PCB's are transferred by special ESD rollers onto the pick-up location. Metal support bars lift the PCB carefully from the conveyor segment and stores them until downstream request.**



## Standard features

- Selectable FIFO, LIFO and by-pass mode.
- Controlled by PLC.
- Conveyor width adjustment using hand crank.
- Selectable pitch settings.
- Threshold signal to protect PCB's in upstream oven.
- Towerlight display for machine status.
- CE certified.

## Technical specifications

|                       |                                                                     |
|-----------------------|---------------------------------------------------------------------|
| Transfer height:      | 950 mm $\pm$ 25 mm*                                                 |
| Colour:               | RAL 9002*                                                           |
| Flow direction:       | Left to right*                                                      |
| Fixed rail:           | Front*                                                              |
| Machine interface:    | SMEMA*                                                              |
| Conveyor concept:     | ESD roller                                                          |
| Conveyor speed:       | 8 m/min.                                                            |
| PCB edge support:     | 3 mm                                                                |
| Components clearance: | Top 30 mm, bottom 30 mm<br>(depends on pitch)                       |
| Power supply:         | 230 VAC/50 Hz/1 Ph                                                  |
| Power consumption:    | 350 VA max.                                                         |
| Air supply:           | 4-6 bar                                                             |
| Air consumption:      | 2 ltr/min max.                                                      |
| Machine cycle time:   | 12-30 seconds max.                                                  |
| Pitch control:        | 1-4, 20 mm pitch<br>(component height -5 mm<br>from selected pitch) |
| Buffer capacity:      | Max. 26 pcb's at pitch 1<br>* or specify                            |

## Options

- High speed operation reducing cycle time to 20 sec.
- Cantilevered input- or output conveyor (length 500 mm)
- Adjustable threshold counter
- Cool down timer or package
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Reject mode for buffering bad boards
- Touchscreen display
- Alarm buzzer

Other options available on request

|                                   | NTM 640SM           | NTM 640SL            | NTM 640SXL           |
|-----------------------------------|---------------------|----------------------|----------------------|
| Machine dimensions (l x w x h)    | 500 x 980 x 1700 mm | 653 x 1080 x 1700 mm | 653 x 1130 x 1700 mm |
| Weight                            | 210 kg              | 240 kg               | 260 kg               |
| PCB length                        | 80 mm - 330 mm      | 80 mm - 457 mm       | 80 mm - 460 mm*      |
| PCB width                         | 50 mm - 250 mm      | 50 mm - 407 mm       | 50 mm - 460 mm*      |
| Fixed rail to front dimension (A) | 425 mm              | 425 mm               | 425 mm               |

\* or specify

*The LIFO buffer is designed to buffer PCB's in LIFO mode. The PCB's are buffered using four special chains. The open design allows operator to manually remove the PCB's when used as good/bad separator or line unloader.*



#### Standard features

- Buffer in LIFO mode.
- Controlled by PLC.
- Conveyor width adjustment using hand crank.
- Selectable pitch settings.
- Threshold signal to protect PCB's in upstream oven.
- Towerlight display for machine status.
- Good or bad board separation.
- CE certified.

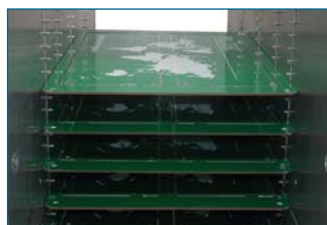
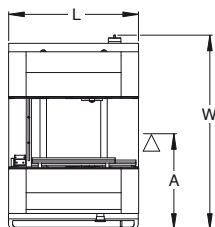
#### Technical specifications

|                       |                                                                      |
|-----------------------|----------------------------------------------------------------------|
| Transfer height:      | 950 mm ± 25 mm*                                                      |
| Colour:               | RAL 9002*                                                            |
| Flow direction:       | Left to right*                                                       |
| Fixed rail:           | Front*                                                               |
| Machine interface:    | SMEMA*                                                               |
| Conveyor concept:     | ESD belt                                                             |
| Belt speed:           | 14 m/min.                                                            |
| PCB edge support:     | 3 mm                                                                 |
| Components clearance: | Top 30 mm, bottom 30 mm<br>(depends on pitch)                        |
| Power supply:         | 230 VAC/50 Hz/1 Ph                                                   |
| Power consumption:    | 250 VA max.                                                          |
| Machine cycle time:   | ± 15 seconds                                                         |
| Pitch control:        | 1-4, 9.5 mm pitch<br>(component height -3 mm<br>from selected pitch) |
| Buffer capacity:      | Max. 49 pcb's at pitch 1<br>* or specify                             |

#### Options

- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Cantilevered input- or output conveyor (length 500 mm)
- Adjustable threshold counter
- Touchscreen display
- Alarm buzzer

Other options available on request



|                                   | NTM 650SM           | NTM 650SL           | NTM 650SXL          |
|-----------------------------------|---------------------|---------------------|---------------------|
| Machine dimensions (l x w x h)    | 500 x 750 x 1565 mm | 500 x 905 x 1565 mm | 653 x 960 x 1565 mm |
| Weight                            | 170 kg              | 200 kg              | 230 kg              |
| PCB length                        | 80 mm - 457 mm      | 80 mm - 457 mm      | 80 mm - 460 mm*     |
| PCB width                         | 70 mm - 250 mm      | 70 mm - 407 mm      | 70 mm - 460 mm*     |
| Fixed rail to front dimension (A) | 234 mm              | 234 mm              | 234 mm              |

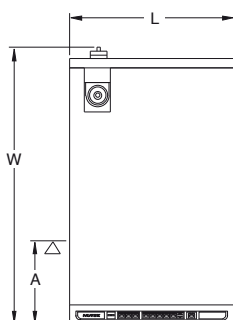
\* or specify

# Vertical buffer

41

NTM VB-VM • NTM VB-VL • NTM VB-VXL

*The vertical buffer is used when PCB's are to be buffered in Last In First Out (LIFO) mode. The PCB's are transferred onto the built-in ESD belt conveyor where the PCB's are lifted from the conveyor using a special chain.*



## Standard features

- Buffer in LIFO mode.
- Controlled by PLC.
- Conveyor width adjustment using hand crank.
- Selectable pitch settings.
- Threshold signal to protect PCB's in upstream oven.
- Towerlight display for machine status.
- CE certified.

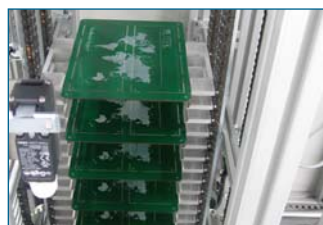
## Technical specifications

|                       |                                               |
|-----------------------|-----------------------------------------------|
| Transfer height:      | 950 mm $\pm$ 25 mm*                           |
| Colour:               | RAL 9002*                                     |
| Flow direction:       | Left to right*                                |
| Fixed rail:           | Front*                                        |
| Machine interface:    | SMEMA*                                        |
| Conveyor concept:     | ESD belt                                      |
| Belt speed:           | 14 m/min.                                     |
| PCB edge support:     | 3 mm                                          |
| Components clearance: | Top 30 mm, bottom 30 mm<br>(depends on pitch) |
| Power supply:         | 230 VAC/50 Hz/1 Ph                            |
| Power consumption:    | 250 VA max.                                   |
| Machine cycle time:   | $\pm$ 15 seconds                              |
| Pitch control:        | 1-2, 25.4 mm pitch                            |
| Buffer capacity:      | Max. 20 pcb's at pitch 1<br>* or specify      |

## Options

- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Additional capacity of 30 PCB's at 25.4 mm pitch
- Additional capacity of 40 PCB's at 25.4 mm pitch
- Touchscreen display
- Alarm buzzer

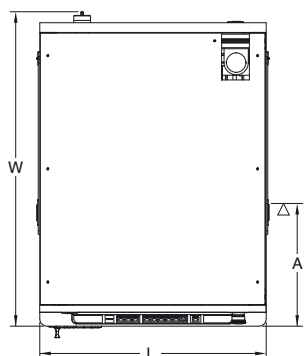
Other options available on request



|                                   | NTM VB-VM           | NTM VB-VL            | NTM VB-VXL           |
|-----------------------------------|---------------------|----------------------|----------------------|
| Machine dimensions (l x w x h)    | 500 x 885 x 1730 mm | 653 x 1040 x 1730 mm | 653 x 1095 x 1730 mm |
| Weight                            | 250 kg              | 300 kg               | 350 kg               |
| PCB length                        | 80 mm - 330 mm      | 80 mm - 457 mm       | 80 mm - 460 mm*      |
| PCB width                         | 75 mm - 250 mm      | 75 mm - 407 mm       | 75 mm - 460 mm*      |
| Fixed rail to front dimension (A) | 260 mm              | 260 mm               | 260 mm               |

\* or specify

*This unit allows buffering of PCB's in FIFO mode. It uses belt segments to hold the PCB over its complete length. When adding or extracting a PCB to/from the buffer a drive mechanism engages with the belt segment to smoothly transfer the PCB in- or out.*



### Standard features

- Selectable FIFO and LIFO mode.
- Controlled by PLC.
- Conveyor width adjustment using hand crank.
- Selectable pitch settings.
- Threshold signal to protect PCB's in upstream oven.
- Towerlight display for machine status.
- CE certified.

### Technical specifications

|                       |                                               |
|-----------------------|-----------------------------------------------|
| Transfer height:      | 950 mm ± 25 mm*                               |
| Colour:               | RAL 9002*                                     |
| Flow direction:       | Left to right*                                |
| Fixed rail:           | Front*                                        |
| Machine interface:    | SMEMA*                                        |
| Conveyor concept:     | ESD belt                                      |
| Conveyor speed:       | 14 m/min.                                     |
| PCB edge support:     | 3 mm                                          |
| Components clearance: | Top 30 mm, bottom 30 mm<br>(depends on pitch) |
| Power supply:         | 230 VAC/50 Hz/1 Ph                            |
| Power consumption:    | 600 VA max.                                   |
| Air supply:           | 4-6 bar                                       |
| Air consumption:      | 2 ltr/min max.                                |
| Machine cycle time:   | 8-30 with average of ~ 15 seconds.            |
| Pitch control:        | 1-4, 27 mm pitch                              |
| Buffer capacity:      | 20 pcb's at pitch 1<br>* or specify           |

### Options

- Servo drive upgrade for shortened cycle time
- Cantilevered input- or output conveyor (length 500 mm)
- Buffer capacity of 12 PCB's at 27mm pitch
- Buffer capacity of 30 PCB's at 20 mm pitch
- Adjustable threshold counter
- Cool down timer or package
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Reject mode for buffering bad boards
- Touchscreen display
- Alarm buzzer

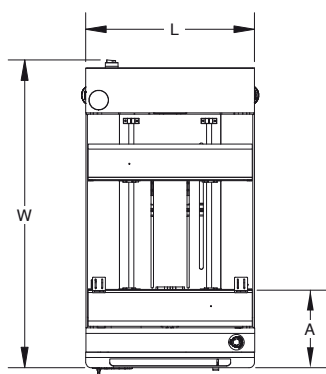
Other options available on request

|                                   | NTM 660SM            | NTM 660SL            | NTM 660SXL           |
|-----------------------------------|----------------------|----------------------|----------------------|
| Machine dimensions (l x w x h)    | 500 x 1050 x 1700 mm | 653 x 1210 x 1700 mm | 700 x 1260 x 1700 mm |
| Weight                            | 210 kg               | 240 kg               | 260 kg               |
| PCB length                        | 80 mm - 330 mm       | 80 mm - 457 mm       | 80 mm - 460 mm*      |
| PCB width                         | 50 mm - 250 mm       | 50 mm - 407 mm       | 50 mm - 460 mm*      |
| Fixed rail to front dimension (A) | 354 mm               | 354 mm               | 354 mm               |

\* or specify



***This unit allows buffering of PCB's in FIFO mode. It uses belt segments to hold the PCB over its complete length.***



## Standard features

- Selectable FIFO and LIFO mode.
- Controlled by PLC.
- Conveyor width adjustment using hand crank.
- Selectable pitch settings.
- Frequency controlled lifter motor.
- Towerlight display for machine status.
- CE certified.

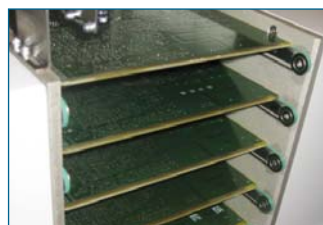
## Technical specifications

|                       |                                               |
|-----------------------|-----------------------------------------------|
| Transfer height:      | 950 mm ± 25 mm*                               |
| Colour:               | RAL 9002*                                     |
| Flow direction:       | Left to right*                                |
| Fixed rail:           | Front*                                        |
| Machine interface:    | SMEMA*                                        |
| Conveyor concept:     | ESD belt                                      |
| Conveyor speed:       | 14 m/min.                                     |
| PCB edge support:     | 3 mm                                          |
| Components clearance: | Top 25 mm, bottom 25 mm<br>(depends on pitch) |
| Power supply:         | 230 VAC/50 Hz/1 Ph                            |
| Power consumption:    | 350 VA max.                                   |
| Air supply:           | 4-6 bar                                       |
| Air consumption:      | 2 ltr/min max.                                |
| Machine cycle time:   | <10 seconds                                   |
| Pitch control:        | 1-2, 50 mm pitch                              |
| Buffer capacity:      | Max. 5 pcb's at pitch 1<br>* or specify       |

## Options

- Cantilevered input- or output conveyor (length 500 mm)
- Cool down timer
- Electrical conveyor width adjustment
- Automatic conveyor width adjustment
- Touchscreen display
- Alarm buzzer

Other options available on request



|                                   | NTM 670SM           | NTM 670SL            |
|-----------------------------------|---------------------|----------------------|
| Machine dimensions (l x w x h)    | 500 x 985 x 1100 mm | 653 x 1200 x 1100 mm |
| Weight                            | 130 kg              | 150 kg               |
| PCB length                        | 80 mm - 330 mm      | 80 mm - 457 mm       |
| PCB width                         | 50 mm - 250 mm      | 50 mm - 460 mm       |
| Fixed rail to front dimension (A) | 300 mm              | 300 mm               |

\* or specify



*The unit loads your production line automatically by pushing PCB's out of a magazine onto the conveyor of the down-stream machine.*



#### Standard features

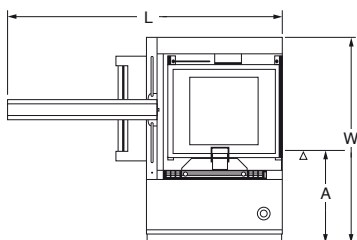
- The magazine is manually placed on the platform and clamped in position.
- Flexible platform to suit standard magazines.
- Controlled by PLC.
- Exchange magazine from the rear of the machine.
- Regulated pressure on attached pneumatic pusher.
- Pusher position adjustable to center of the magazine.
- Towerlight display for machine status.
- Selectable pitch settings.
- CE certified.

#### Technical specifications

|                                |                    |
|--------------------------------|--------------------|
| Transfer height:               | 950 mm $\pm$ 25 mm |
| Colour:                        | RAL 9002           |
| Flow direction:                | Left to right      |
| Fixed rail:                    | Front              |
| Machine interface:             | SMEMA              |
| Power supply:                  | 230 VAC/50 Hz/1 Ph |
| Power consumption:             | 240 VA max.        |
| Air supply:                    | 4-6 bar            |
| Air consumption:               | 10 ltr/min max.    |
| PCB loading time:              | $\pm$ 7 seconds    |
| Pitch control:                 | 1-4, 10 mm pitch   |
| Maximum total magazine weight: | 50 kg              |

#### Options

No options available



|                                   | <b>NTE 0710LL</b>     |
|-----------------------------------|-----------------------|
| Machine dimensions (l x w x h)    | 1330 x 1005 x 1300 mm |
| Weight                            | 180 kg                |
| PCB length                        | 80 mm - 460 mm        |
| PCB width                         | 50 mm - 460 mm        |
| Magazine dimensions (max.)        | 535 x 530 x 570 mm    |
| Fixed rail to front dimension (A) | 452 mm                |

NTE 0710UL

*The PCB's are collected from upstream machine using attached conveyor and pushed into the magazine.*

## Standard features

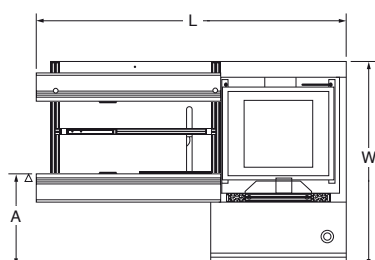
- The magazine is manually placed on the platform and clamped in position.
- Flexible platform to suit standard magazines.
- Stopper at inlet to control PCB flow from upstream reflow oven.
- Controlled by PLC.
- Exchange magazine from the rear of the machine.
- Conveyor width adjustment using hand crank.
- Regulated pressure on pneumatic pusher.
- Towerlight display for machine status.
- Selectable pitch settings.
- CE certified.

## Technical specifications

|                                |                                               |
|--------------------------------|-----------------------------------------------|
| Transfer height:               | 950 mm $\pm$ 25 mm                            |
| Colour:                        | RAL 9002                                      |
| Flow direction:                | Left to right                                 |
| Fixed rail:                    | Front                                         |
| Machine interface:             | SMEMA                                         |
| Components clearance:          | Top 30 mm, bottom 30 mm<br>(depends on pitch) |
| Power supply:                  | 230 VAC/50 Hz/1 Ph                            |
| Power consumption:             | 270 VA max.                                   |
| Air supply:                    | 4-6 bar                                       |
| Air consumption:               | 10 ltr/min max.                               |
| PCB unloading time:            | $\pm$ 7 seconds                               |
| Pitch control:                 | 1-4, 10mm pitch                               |
| Maximum total magazine weight: | 50 kg                                         |

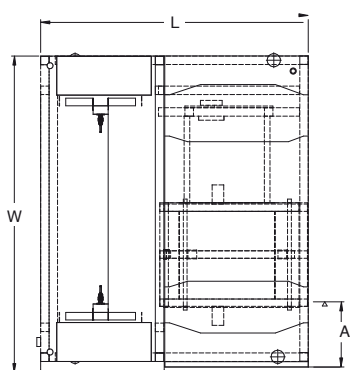
## Options

No options available



|                                   | <b>NTE 0710UL</b>     |
|-----------------------------------|-----------------------|
| Machine dimensions (l x w x h)    | 1500 x 1005 x 1300 mm |
| Weight                            | 230 kg                |
| PCB length                        | 80 mm - 460 mm        |
| PCB width                         | 70 mm - 460 mm        |
| Magazine dimensions (max.)        | 535 x 530 x 570 mm    |
| Fixed rail to front dimension (A) | 452 mm                |

*The PCB's are extracted from the magazines onto the shuttle conveyor using a puller mechanism. Shuttle conveyor moves sideways between magazines and downstream machine.*



#### Standard features

- Magazines are manually placed on the platform and clamped in position.
- Conveyor width adjustment using hand wheel.
- Safety shutter between conveyor and lifter platform.
- Controlled by PLC.
- Tailor made to the magazine of your choice.
- Regulated pressure on the integrated pull cylinder.
- Pneumatic cylinder used for positioning shuttle conveyor.
- Towerlight display for machine status.
- Selectable pitch settings.
- CE certified.

#### Technical specifications

|                             |                                            |
|-----------------------------|--------------------------------------------|
| Transfer height:            | 950 mm $\pm$ 25 mm*                        |
| Colour:                     | RAL 9002*                                  |
| Flow direction:             | Left to right*                             |
| Fixed rail:                 | Front*                                     |
| Machine interface:          | SMEMA*                                     |
| Conveyor concept:           | ESD belt                                   |
| Belt speed:                 | 14 m/min.                                  |
| PCB edge support:           | 3 mm                                       |
| Components clearance:       | Top 30 mm, bottom 30 mm (depends on pitch) |
| Power supply:               | 230 VAC/50 Hz/1 Ph                         |
| Power consumption:          | 450 VA max.                                |
| Air supply:                 | 4-6 bar                                    |
| Air consumption:            | 20 ltr/min max.                            |
| PCB loading time:           | $\pm$ 27 seconds (rear magazine rack)      |
| Pitch control:              | 1-4, 10 mm pitch                           |
|                             | 5 top magazine slots must remain empty     |
| Max. total magazine weight: | 50 kg each                                 |
|                             | * or specify                               |

#### Options

- Alarm buzzer
- Other options available on request

|                                   | <b>NTE 0720LL</b>     |
|-----------------------------------|-----------------------|
| Machine dimensions (l x w x h)    | 1420 x 1970 x 1750 mm |
| Weight                            | 400 kg                |
| PCB length                        | 80 mm - 460 mm        |
| PCB width                         | 70 mm - 460 mm        |
| Magazine dimensions (max.)        | 535 x 530 x 570 mm    |
| Fixed rail to front dimension (A) | 380 mm                |

NTE 0720UL

*The PCB's are collected from the upstream machine onto a shuttle conveyor and pushed into the designated magazine. Shuttle conveyor moves sideways between upstream machine and magazines.*



## Standard Features

- Conveyor width adjustment using hand wheel.
- Magazines are manually placed on the platform and clamped in position.
- Safety shutter between conveyor and lifter platform.
- Controlled by PLC.
- Tailor made to the magazine of your choice.
- Regulated pressure on the integrated pusher.
- Pneumatic cylinder used for positioning shuttle conveyor.
- Towerlight display for machine status.
- Threshold signal to protect PCB's in upstream oven.
- Selectable pitch settings.
- CE certified.

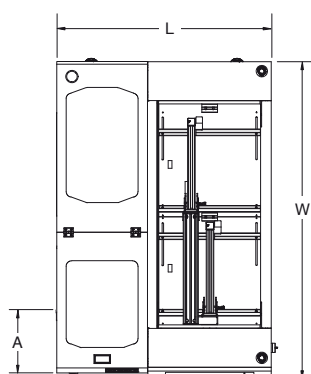
## Technical specifications

|                             |                                               |
|-----------------------------|-----------------------------------------------|
| Transfer height:            | 950 mm $\pm$ 25 mm*                           |
| Colour:                     | RAL 9002*                                     |
| Flow direction:             | Left to right*                                |
| Fixed rail:                 | Front*                                        |
| Machine interface:          | SMEMA*                                        |
| Conveyor concept:           | ESD belt                                      |
| Belt speed:                 | 14 m/min.                                     |
| PCB edge support:           | 3 mm                                          |
| Components clearance:       | Top 30 mm, bottom 30 mm<br>(depends on pitch) |
| Power supply:               | 230 VAC/50 Hz/1 Ph                            |
| Power consumption:          | 350 VA max.                                   |
| Air supply:                 | 6 bar                                         |
| Air consumption:            | 20 ltr/min max.                               |
| PCB unloading time:         | $\pm$ 20 seconds (rear magazine rack)         |
| Pitch control:              | 1-4, 10 mm pitch                              |
| Max. total magazine weight: | 50 kg each                                    |
|                             | * or specify                                  |

## Options

- Pneumatic stopper at inlet to control PCB flow from upstream reflow oven
- Good- or bad board separation
- Alarm buzzer

Other options available on request



|                                   | <b>NTE 0720UL</b>     |
|-----------------------------------|-----------------------|
| Machine dimensions (l x w x h)    | 1250 x 1970 x 1750 mm |
| Weight                            | 400 kg                |
| PCB length                        | 80 mm - 460 mm        |
| PCB width                         | 70 mm - 460 mm        |
| Magazine dimensions (max.)        | 535 x 530 x 570 mm    |
| Fixed rail to front dimension (A) | 380 mm                |

*The unit loads your production line automatically by pushing PCB's out of the magazine onto the conveyor of the downstream machines. Full magazines can be inserted at an ergonomic low level.*



#### Standard features

- Automatic magazine change-over.
- Automatic magazine alignment by upper and lower pneumatic clamping.
- Controlled by PLC.
- Tailor made to the magazine of your choice.
- Regulated pressure on pneumatic pusher.
- Towerlight display for machine status.
- Selectable pitch settings.
- CE certified.

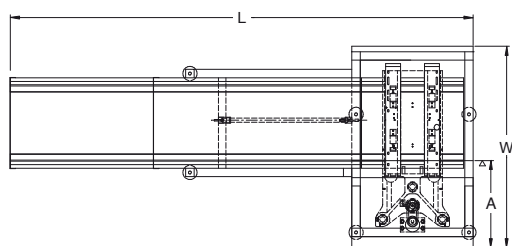
#### Technical specifications

|                                |                                                                                                                                             |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Transfer height:               | 950 mm $\pm$ 25 mm*                                                                                                                         |
| Colour:                        | RAL 9002*                                                                                                                                   |
| Flow direction:                | Left to right*                                                                                                                              |
| Fixed rail:                    | Front*                                                                                                                                      |
| Machine interface:             | SMEMA*                                                                                                                                      |
| Components clearance:          | Top 30 mm, bottom 30 mm<br>(depends on pitch)                                                                                               |
| Power supply:                  | 230 VAC/50 Hz/1 Ph                                                                                                                          |
| Power consumption:             | 580 VA max.                                                                                                                                 |
| Air supply:                    | 4-6 bar                                                                                                                                     |
| Air consumption:               | 10 ltr/min max.                                                                                                                             |
| PCB loading time:              | $\pm$ 7 seconds                                                                                                                             |
| Magazine change-over time:     | $\pm$ 40 seconds                                                                                                                            |
| Pitch control:                 | 1-4, 10 mm pitch                                                                                                                            |
| Maximum total magazine weight: | 50 kg each                                                                                                                                  |
| Total number of magazines:     | 1 magazine on the lifter platform.<br>2 empty magazines on the upper magazine conveyor.<br>3 full magazines on the lower magazine conveyor. |
|                                | * or specify                                                                                                                                |

#### Options

- Width adjustable magazine conveyor(s)
- Additional magazine capacity
- Shorter magazine change-over (22 sec)
- Alarm buzzer

Other options available on request



|                                   | <b>NTE 0110LL</b>    |
|-----------------------------------|----------------------|
| Machine dimensions (l x w x h)    | 2480 x 975 x 1700 mm |
| Weight                            | 300 kg               |
| PCB length                        | 80 mm - 460 mm       |
| PCB width                         | 50 mm - 460 mm       |
| Magazine dimensions (max.)        | 535 x 530 x 570 mm   |
| Fixed rail to front dimension (A) | 385 mm               |

*The unit provides automatic magazine change-over for continuous line unloading. PCB's are collected by the cantilevered pusher conveyor and pushed into the magazine. Full magazines are taken off at an ergonomic low level.*



## Standard features

- Automatic magazine change-over.
- Automatic magazine alignment by upper and lower hand crank.
- Conveyor width adjustment using hand crank.
- Hinged top cover on pusher conveyor.
- Controlled by PLC.
- Tailor made to the magazine of your choice.
- Threshold signal to protect PCB's in upstream oven.
- Towerlight display for machine status.
- Selectable pitch settings.
- CE certified.

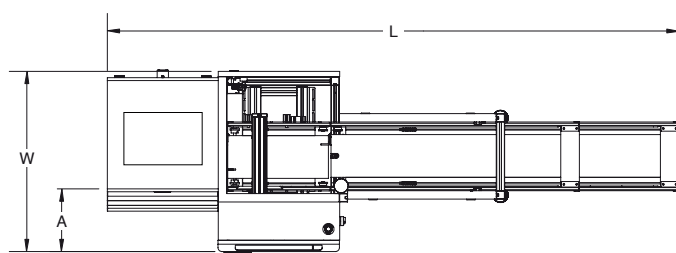
## Technical specifications

|                                |                                                                                                                                             |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Transfer height:               | 950 mm $\pm$ 25 mm*                                                                                                                         |
| Colour:                        | RAL 9002*                                                                                                                                   |
| Flow direction:                | Left to right*                                                                                                                              |
| Fixed rail:                    | Front*                                                                                                                                      |
| Machine interface:             | SMEMA*                                                                                                                                      |
| Components clearance:          | Top 30 mm, bottom 30 mm (depends on pitch)                                                                                                  |
| Power supply:                  | 230 VAC/50Hz/1 Ph                                                                                                                           |
| Power consumption:             | 600 VA max.                                                                                                                                 |
| Air supply:                    | 4-6 bar                                                                                                                                     |
| Air consumption:               | 10 ltr/min max.                                                                                                                             |
| PCB unloading time:            | $\pm$ 6 seconds                                                                                                                             |
| Magazine change-over time:     | $\pm$ 40 seconds                                                                                                                            |
| Pitch control:                 | 1-4, 10 mm pitch                                                                                                                            |
| Maximum total magazine weight: | 50 kg each                                                                                                                                  |
| Total number of magazines:     | 1 magazine on the lifter platform.<br>2 empty magazines on the upper magazine conveyor.<br>3 full magazines on the lower magazine conveyor. |

\* or specify

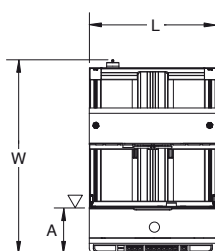
## Options

- Pneumatic stopper at inlet to control PCB flow from upstream reflow oven
- Cooling fans on pusher conveyor
- Width adjustable magazine conveyor(s)
- Additional magazine capacity
- Shorter magazine change-over (20 sec)
- Alarm buzzer



|                                   | NTE 0110UL           |
|-----------------------------------|----------------------|
| Machine dimensions (l x w x h)    | 3075 x 975 x 1700 mm |
| Weight                            | 310 kg               |
| PCB length                        | 80 mm - 460 mm       |
| PCB width                         | 70 mm - 460 mm       |
| Magazine dimensions (max.)        | 535 x 530 x 570 mm   |
| Fixed rail to front dimension (A) | 386 mm               |

**A stack of bare boards is placed above the ESD belt conveyor by the operator. Using separation cams one board is separated from the bottom of the stack and dropped on edge belt conveyor.**



#### Standard features

- Conveyor width adjustment using sliding mechanism.
- Controlled by PLC.
- Thin PCB capability.
- By-pass mode selectable.
- Towerlight display for machine status.
- CE certified.

#### Technical specifications

|                                |                         |
|--------------------------------|-------------------------|
| Transfer height:               | 950 mm $\pm$ 25 mm*     |
| Colour:                        | RAL 9002*               |
| Flow direction:                | Left to Right*          |
| Fixed rail:                    | Front*                  |
| Machine interface:             | SMEMA*                  |
| Conveyor concept:              | ESD belt                |
| Belt speed:                    | 14 m/min.               |
| PCB edge support:              | 3 mm                    |
| Component clearance (by-pass): | Top 30 mm, bottom 30 mm |
| Power supply:                  | 230 VAC/50 Hz/1 Ph      |
| Power consumption:             | 100 VA max.             |
| Air supply:                    | 4-6 bar                 |
| Air consumption:               | 5 ltr/min max.          |
| PCB cycle time:                | $\pm$ 5 seconds         |
| PCB thickness:                 | 0.6 mm - 4 mm           |
| PCB stock capacity:            | 200 mm (max. 20 kg)     |
|                                | * or specify            |

#### Options

- Alarm buzzer

|                                   | <b>NTE 0220DSL</b>  |
|-----------------------------------|---------------------|
| Machine dimensions (l x w x h)    | 500 x 810 x 1185 mm |
| Weight                            | 150 kg              |
| PCB length                        | 80 mm - 460 mm      |
| PCB width                         | 50 mm - 460 mm      |
| Fixed rail to front dimension (A) | 180 mm              |



*This unit is used to link between production machines or board handling units.*



## Standard features

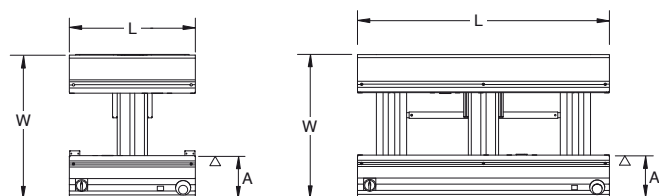
- Conveyor width adjustment using hand crank.
- Inspect function at exit sensor.
- Controlled by PLC.
- CE certified.

## Technical specifications

|                      |                         |
|----------------------|-------------------------|
| Transfer height:     | 950 mm ± 25 mm          |
| Colour:              | RAL 9002                |
| Flow direction:      | Left to Right           |
| Fixed rail:          | Front                   |
| Machine interface:   | SMEMA                   |
| Conveyor concept:    | ESD belt                |
| Belt speed:          | 14 m/min.               |
| PCB edge support:    | 3 mm                    |
| Component clearance: | Top 30 mm, bottom 30 mm |
| Power supply:        | 230 VAC/50 Hz/1 Ph      |
| Power consumption:   | 100 VA max.             |

## Options

- Belt segment divided into 2 x 500 mm



|                                   | <b>NTE 0410L 500</b> | <b>NTE 0410L 1000</b> |
|-----------------------------------|----------------------|-----------------------|
| Machine dimensions (l x w x h)    | 500 x 745 x 980 mm   | 1000 x 745 x 980 mm   |
| Weight                            | 40 kg                | 70 kg                 |
| PCB length                        | 80 mm - 460 mm       | 80 mm - 460 mm        |
| PCB width                         | 70 mm - 460 mm       | 70 mm - 460 mm        |
| Fixed rail to front dimension (A) | 186 mm               | 186 mm                |

*The inspection conveyor is used when frequent visual inspection of PCB's is required in the PCB assembly line.*

#### Standard features

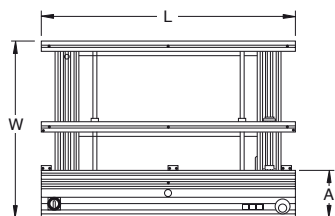
- Conveyor width adjustment using hand crank.
- Inspect and by pass mode selectable.
- Controlled by PLC.
- CE certified.

#### Technical specifications

|                      |                                                |
|----------------------|------------------------------------------------|
| Transfer height:     | 950 mm ± 25 mm                                 |
| Colour:              | RAL 9002                                       |
| Flow direction:      | Left to Right                                  |
| Fixed rail:          | Front                                          |
| Machine interface:   | SMEMA                                          |
| Conveyor concept:    | ESD belt                                       |
| Belt speed:          | Fixed in 14 m/min.<br>variable out 2-14 m/min. |
| PCB edge support:    | 3 mm                                           |
| Component clearance: | Top 30 mm, bottom 30 mm                        |
| Power supply:        | 230 VAC/50 Hz/1 Ph                             |
| Power consumption:   | 100 VA max.                                    |

#### Options

- Belt segment divided into 2 x 500 mm



|                                   | <b>NTE 0510ICL 1000</b> |
|-----------------------------------|-------------------------|
| Machine dimensions (l x w x h)    | 1000 x 750 x 980 mm     |
| Weight                            | 50 kg                   |
| PCB length                        | 80 mm - 460 mm          |
| PCB width                         | 70 mm - 460 mm          |
| Fixed rail to front dimension (A) | 186 mm                  |

NTE 0510RCL 1000

**Used for good or bad PCB separation or visual inspection without interrupting the PCB flow. The PCB is lifted 35mm from the ESD belt using metal fingers.**

## Standard features

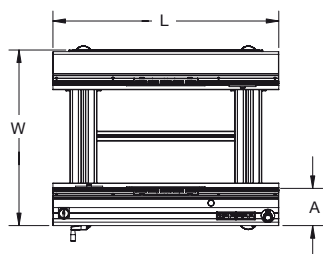
- Reject, inspect and by-pass mode selectable.
- Conveyor width adjustment using hand crank.
- Controlled by PLC.
- CE certified.

## Technical specifications

|                       |                                          |
|-----------------------|------------------------------------------|
| Transfer height:      | 950 mm ± 25 mm*                          |
| Colour:               | RAL 9002*                                |
| Flow direction:       | Left to right*                           |
| Fixed rail:           | Front*                                   |
| Machine interface:    | SMEMA*                                   |
| Conveyor concept:     | ESD belt                                 |
| Belt speed:           | 14 m/min.                                |
| PCB edge support:     | 3 mm                                     |
| Components clearance: | Bottom 30 mm,<br>top+bottom = 35 mm max. |
| Power supply:         | 230 VAC/50 Hz/1 Ph                       |
| Power consumption:    | 150 VA max.                              |
| Air supply:           | 4-6 bar                                  |
| Air consumption:      | 10 ltr/min max.                          |
|                       | * or specify                             |

## Options

- Variable speed per segment
  - Dual speed per segment
  - Alarm buzzer
- Other options available on request



|                                   | <b>NTE 0510RCL 1000</b> |
|-----------------------------------|-------------------------|
| Machine dimensions (l x w x h)    | 1000 x 780 x 980 mm     |
| Weight                            | 70 kg                   |
| PCB length                        | 80 mm - 460 mm          |
| PCB width                         | 50 mm - 460 mm          |
| Fixed rail to front dimension (A) | 165 mm                  |

*The workstation is used where manual assembly work is performed on the PCB without removing it from the PCB assembly line.*



#### Standard features

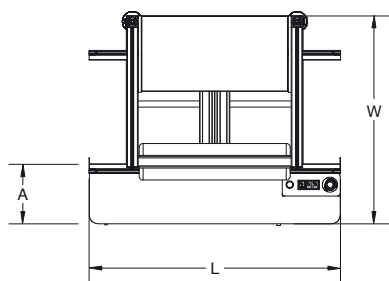
- Conveyor width adjusting using hand crank.
- Work and by-pass mode selectable.
- Controlled by PLC.
- ESD bracelet connection.
- Centre PCB stop position.
- Sliding parts shelf.
- Overhead lighting.
- CE certified.

#### Technical specifications

|                      |                         |
|----------------------|-------------------------|
| Transfer height      | 950 mm ± 25 mm*         |
| Colour               | RAL 9002*               |
| Flow direction       | Left to right*          |
| Fixed rail           | Front*                  |
| Machine interface    | SMEMA*                  |
| Conveyor concept     | ESD belt                |
| Belt speed           | 14 m/min.               |
| PCB edge support     | 3 mm                    |
| Components clearance | Top 30 mm, bottom 30 mm |
| Power supply         | 230 VAC/50 Hz/1 Ph      |
| Power consumption    | 150 VA max.             |
|                      | * or specify            |

#### Options

- Belt segment divided into 2 x 500 mm (work-buffer)
- Conveyor length of 1500 mm
- Foot rest
- Additional part shelf
- Variable speed per segment
- Dual speed per segment



|                                   | <b>NTE 0530WSL 1000</b> |
|-----------------------------------|-------------------------|
| Machine dimensions (l x w x h)    | 1000 x 830 x 2190 mm    |
| Weight                            | 80 kg                   |
| PCB length                        | 80 mm - 460 mm          |
| PCB width                         | 50 mm - 460 mm          |
| Fixed rail to front dimension (A) | 215 mm                  |

**By manual lifting the conveyor section, access is gained to the rear of the line.**



## Standard features

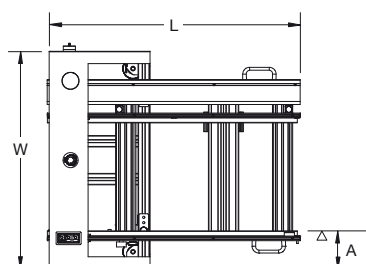
- Conveyor width adjusting using hand crank.
- Gas spring supported opening and closing.
- Locking cylinder to avoid opening during PCB transfer.
- Controlled by PLC.
- CE certified.

## Technical specifications

|                       |                         |
|-----------------------|-------------------------|
| Transfer height:      | 950 mm ± 25 mm*         |
| Colour:               | RAL 9002*               |
| Flow direction:       | Left to right*          |
| Fixed rail:           | Front*                  |
| Machine interface:    | SMEMA*                  |
| Conveyor concept:     | ESD belt                |
| Belt speed:           | 14 m/min.               |
| PCB edge support:     | 3 mm                    |
| Components clearance: | Top 30 mm, bottom 30 mm |
| Power supply:         | 230 VAC/50 Hz/1 Ph      |
| Passageway:           | 600 mm                  |
| Power consumption:    | 100 VA max.             |
| Air supply:           | 4-6 bar                 |
| Air consumption:      | negligible              |
|                       | * or specify            |

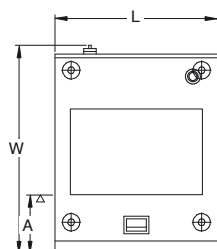
## Options

- Variable speed per segment
- Dual speed per segment
- Inspect function



|                                   | <b>NTE MGL 1000</b>  |
|-----------------------------------|----------------------|
| Machine dimensions (l x w x h)    | 1000 x 860 x 1100 mm |
| Weight                            | 80 kg                |
| PCB length                        | 80 mm - 460 mm       |
| PCB width                         | 50 mm - 460 mm       |
| Fixed rail to front dimension (A) | 127 mm               |

*This unit is used to invert/flip PCB's (180°) for 'double-sided' process.*



#### Standard features

- Rotation using pneumatic cylinder.
- Conveyor width adjustment using hand crank.
- Pneumatic stopper to keep PCB in position during inverting.
- Controlled by PLC.
- By-pass mode selectable.
- CE certified.

#### Technical specifications

|                       |                         |
|-----------------------|-------------------------|
| Transfer height:      | 950 mm ± 25 mm*         |
| Colour:               | RAL 9002*               |
| Flow direction:       | Left to right*          |
| Fixed rail:           | Front*                  |
| Machine interface:    | SMEMA*                  |
| Conveyor concept:     | ESD belt                |
| Belt speed:           | 14 m/min.               |
| PCB edge support:     | 3 mm                    |
| Components clearance: | Top 30 mm, bottom 30 mm |
| Power supply:         | 230 VAC/50 Hz/1 Ph      |
| Power consumption:    | 150 VA max.             |
| Air supply:           | 6 bar                   |
| Air consumption:      | 1.1 ltr/min max.        |
| Machine cycle time:   | ± 15 seconds            |
|                       | * or specify            |

#### Options

- Towerlight display
- Alarm buzzer
- Cantilevered input- or output conveyor (length 500 mm)

|                                   | <b>NTE 0310IL</b>   |
|-----------------------------------|---------------------|
| Machine dimensions (l x w x h)    | 653 x 965 x 1300 mm |
| Weight                            | 110 kg              |
| PCB length                        | 80 mm - 460 mm      |
| PCB width                         | 50 mm - 460 mm      |
| Fixed rail to front dimension (A) | 234 mm              |

**The unit is designed to change the flow direction of a PCB assembly line. The PCB is transferred onto the built-in ESD belt conveyor, which turns either clockwise or counter-clockwise.**



## Standard features

- Conveyor width adjustment using hand crank.
- (NTE 091) Turning 90° clockwise or counter-clockwise
- (NTE 0181) Turning 180° to change fixed rail position
- (NTE 0271 and 0361) various configurations possible.
- By-pass mode available.
- Controlled by PLC.
- Unique lateral transfer system to handle small PCB's.
- CE certified.

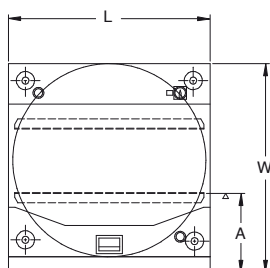
## Technical specifications

|                       |                         |
|-----------------------|-------------------------|
| Transfer height:      | 950 mm ± 25 mm*         |
| Colour:               | RAL 9002*               |
| Flow direction:       | Left to right*          |
| Fixed rail:           | Front*                  |
| Machine interface:    | SMEMA*                  |
| Conveyor concept:     | ESD belt                |
| Belt speed:           | 14 m/min.               |
| PCB edge support:     | 3 mm                    |
| Components clearance: | Top 30 mm, bottom 30 mm |
| Power supply:         | 230 VAC/50 Hz/1 Ph      |
| Power consumption:    | 200 VA max.             |
| Air supply:           | 4-6 bar                 |
| Air consumption:      | 1.5 ltr/min max.        |
| Machine cycle time:   | ± 18 seconds            |
|                       | * or specify            |

## Options

- Good- or bad board separation
- Cantilevered input- or output conveyor (length 500 mm)
- Towerlight display
- Alarm buzzer

Other options available on request



|                                   | <b>NTE 091, 0181, 0271, 0361L</b> |
|-----------------------------------|-----------------------------------|
| Machine dimensions (l x w x h)    | 875 x 875 x 1100 mm               |
| Weight                            | 180 kg                            |
| PCB length                        | 80 mm - 460 mm                    |
| PCB width                         | 50 mm - 460 mm                    |
| Fixed rail to front dimension (A) | 234 mm                            |



**Used to either load or unload substrates, leadframes and carriers. System uses a pneumatic pusher and integrated conveyor for loading or unloading of the line.**



## Standard features

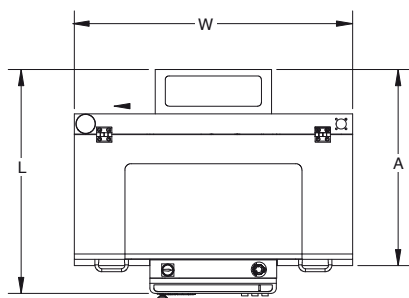
- Caters for different magazine types/dimensions.
- Magazine capacity depends on external magazine dimensions.
- Touch screen operation panel for swift adjustment of magazine change over/settings.
- Stores up to 10 different types of magazine dimensions.
- Servo motor drive for flexible positioning and precise indexing.
- Controlled by PLC.
- Tailor made to the magazine of your choice.
- Regulated pressure on pneumatic pusher.
- Conveyor width adjustment using hand crank.
- Towerlight display for machine status.
- CE certified.

## Technical specifications

|                    |                    |
|--------------------|--------------------|
| Transfer height:   | 950 mm ± 25 mm*    |
| Colour:            | RAL 9002*          |
| Flow direction:    | Left to right*     |
| Fixed rail:        | Front*             |
| Machine interface: | SMEMA*             |
| Indexing pitch:    | 6 mm*              |
| Conveyor concept:  | ESD belt           |
| Belt speed:        | 14 m/min.          |
| PCB edge support:  | 3 mm               |
| Power supply:      | 230 VAC/50 Hz/1 Ph |
| Power consumption: | 850 VA max.        |
| Air supply:        | 4-6 bar            |
| Air consumption:   | 1 ltr/min max.     |
|                    | * or specify       |

## Options

- Alarm buzzer
- Other options available on request



|                                   | <b>NTM 44IOLM (loader)</b> | <b>NTM 44IOUM (unloader)</b> |
|-----------------------------------|----------------------------|------------------------------|
| Machine dimensions (l x w x h)    | 885 x 1100 x 1300 mm       | 885 x 1100 x 1300 mm         |
| Weight                            | 165 kg                     | 165 kg                       |
| Magazine length                   | 100 mm - 280 mm            | 100 mm - 280 mm              |
| Magazine width                    | 30 mm - 250 mm             | 30 mm - 250 mm               |
| Magazine height                   | < 330 mm                   | < 330 mm                     |
| Fixed rail to front dimension (A) | 450 mm                     | 450 mm                       |

Used to either load or unload substrates, leadframes and carriers.  
System uses a pneumatic pusher and integrated conveyor for loading or unloading of the line.



## Standard features

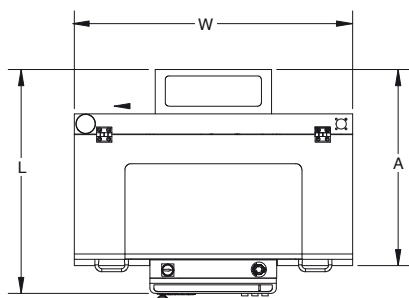
- Caters for one magazine type/size only.
- Magazine capacity depends on external magazine dimensions.
- Controlled by PLC.
- Frequency inverter control for precise indexing.
- Tailor made to the magazine of your choice.
- Regulated pressure on pneumatic pusher.
- Conveyor width adjustment using hand crank.
- Towerlight display for machine status.
- CE certified.

## Technical specifications

|                    |                    |
|--------------------|--------------------|
| Colour:            | RAL 9002*          |
| Flow direction:    | Left to right*     |
| Fixed rail:        | Front*             |
| Machine interface: | SMEMA*             |
| Indexing pitch:    | 6 mm*              |
| Conveyor concept:  | ESD belt           |
| Belt speed:        | 14 m/min.          |
| PCB edge support:  | 3 mm               |
| Power supply:      | 230 VAC/50 Hz/1 Ph |
| Power consumption: | 450 VA max.        |
| Air supply:        | 4-6 bar            |
| Air consumption:   | 1 ltr/min max.     |
|                    | * or specify       |

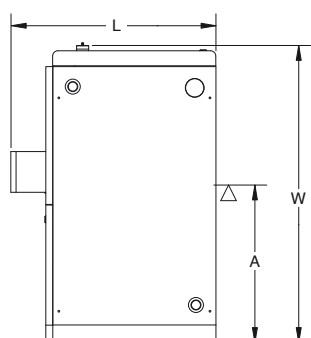
## Options

- Alarm buzzer
- Other options available on request



|                                   | NTM 441LM (loader)   | NTM 441UM (unloader) |
|-----------------------------------|----------------------|----------------------|
| Machine dimensions (l x w x h)    | 885 x 1100 x 1300 mm | 885 x 1100 x 1300 mm |
| Weight                            | 165 kg               | 165 kg               |
| Magazine length                   | 100 mm - 280 mm      | 100 mm - 280 mm      |
| Magazine width                    | 30 mm - 250 mm       | 30 mm - 250 mm       |
| Magazine height                   | < 330 mm             | < 330 mm             |
| Fixed rail to front dimension (A) | 450 mm               | 450 mm               |

*The high speed mini loader is used to load substrates, lead-frames, carriers onto the line. The full magazine is automatically picked up from the lower magazine conveyor. When in position a pneumatic pusher is used to push the product out of the magazine starting at the bottom magazine slot. When the magazine is empty it is placed on the upper magazine conveyor.*



#### Standard features

- Operation by touch screen panel.
- Stores up to 10 different type of magazines.
- Swift change-over between different magazine types.
- Multi magazine capacity, quantity depends on external magazine dimensions.
- Stainless steel magazine guide.
- Servo controlled lifter motor.
- High speed and precise indexing according to the selected magazine.
- Regulated pressure on pneumatic pusher.
- Controlled by PLC.
- Towerlight display for machine status.
- CE certified.

#### Technical specifications

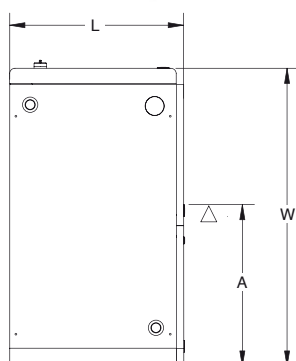
|                            |                          |
|----------------------------|--------------------------|
| Transfer height:           | 950 mm $\pm$ 25 mm*      |
| Colour:                    | RAL 9002*                |
| Flow direction:            | Left to right*           |
| Fixed rail:                | Front*                   |
| Machine interface:         | SMEMA*                   |
| Power supply:              | 230 VAC/50 Hz/1 Ph       |
| Power consumption:         | 850 VA max.              |
| Air supply:                | 4-6 bar                  |
| Air consumption:           | 10 ltr/min max.          |
| Product loading time:      | $\pm$ 5 seconds          |
| Magazine change-over time: | $\pm$ 20 seconds         |
| Indexing pitch:            | 1-4 (5 mm pitch)*        |
| No. of magazines:          | Depends on magazine type |
|                            | * or specify             |

#### Options

- Alarm buzzer
- Other options available on request

|                                   | <b>NTM 4412LM</b>   |
|-----------------------------------|---------------------|
| Machine dimensions (l x w x h)    | 753 x 989 x 1571 mm |
| Weight                            | 210 kg              |
| Magazine length                   | 165 mm - 305 mm     |
| Magazine width                    | 25 mm - 127 mm      |
| Magazine height                   | < 330 mm            |
| Fixed rail to front dimension (A) | 530 mm              |

*The high speed mini unloader is used to unload substrates, lead-frames, carriers from the line. The empty magazine is automatically picked up from the upper magazine conveyor. Via the mini conveyor the product is transferred into the magazine, starting at the top magazine slot. A pneumatic pusher extends to push the product completely inside the magazine before magazine indexes to the next position. When the magazine is full it is transferred on to the lower magazine conveyor.*



## Standard features

- Operation by touch screen panel.
- Stores up to 10 different type of magazines.
- Swift change-over between different magazine types.
- Multi magazine capacity, quantity depends on external magazine dimensions.
- Stainless steel magazine guide.
- Servo controlled lifter motor.
- High speed and precise indexing according to the selected magazine.
- Regulated pressure on pneumatic pusher.
- Hand crank width adjustment belt conveyor
- Controlled by PLC.
- Towerlight display for machine status.
- CE certified.

## Technical specifications

|                            |                          |
|----------------------------|--------------------------|
| Transfer height:           | 950 mm $\pm$ 25 mm*      |
| Colour:                    | RAL 9002*                |
| Flow direction:            | Left to right*           |
| Fixed rail:                | Front*                   |
| Machine interface:         | SMEMA*                   |
| Power supply:              | 230 VAC/50 Hz/1 Ph       |
| Power consumption:         | 850 VA max.              |
| Air supply:                | 4-6 bar                  |
| Air consumption:           | 10 ltr/min max.          |
| Product loading time:      | $\pm$ 5 seconds          |
| Magazine change-over time: | $\pm$ 20 seconds         |
| Indexing pitch:            | 1-4 (5 mm pitch)*        |
| No. of magazines:          | Depends on magazine type |

\* or specify

## Options

- Alarm buzzer
- Other options available on request

|                                   | NTM 4412UM          |
|-----------------------------------|---------------------|
| Machine dimensions (l x w x h)    | 535 x 956 x 1571 mm |
| Weight                            | 210 kg              |
| Magazine length                   | 165 mm - 305 mm     |
| Magazine width                    | 25 mm - 127 mm      |
| Magazine height                   | < 330 mm            |
| Fixed rail to front dimension (A) | 530 mm              |



# NUTEK



## Worldwide Offices

### **EUROPE**

Bliek 23  
4941 SG Raamsdonksveer  
The Netherlands  
Tel: (31) 162 578 578  
Fax: (31) 162 578 579  
E-mail: [info@nutek-europe.com](mailto:info@nutek-europe.com)  
Website: <http://www.nutek-europe.com>

### **UNITED KINGDOM**

Lodge Park  
Lodge Lane, Langham  
Colchester, Essex CO4 5NE  
United Kingdom  
Tel: (44) 1206 233 538  
Fax: (44) 1206 233 539  
E-mail: [info@nutek-uk.com](mailto:info@nutek-uk.com)  
Website: <http://www.nutek-uk.com>

### **AUSTRALIA**

75-77, Westgate Drive  
Altona North, Victoria 3025  
Australia  
Tel: (61) 3 8369 6600  
Fax: (61) 3 8368 2699  
E-mail: [gcp@hrltd.com.au](mailto:gcp@hrltd.com.au)

### **ASIA** (Main Design & Manufacturing Centre)

39, Joo Koon Circle  
Singapore 629105  
Tel: (65) 6862 0255  
Fax: (65) 6862 0040  
E-mail: [info@nutek-sg.com](mailto:info@nutek-sg.com)  
Website: <http://www.nutek-sg.com>

### **CHINA**

Room 1016, Huaihai China Tower  
885, Ren Min Road  
Shanghai 200010, China  
Tel: (86) 21 6355 3926/27  
Fax: (86) 21 6355 3933  
E-mail: [info@nutek-china.com](mailto:info@nutek-china.com)

### **AMERICAS**

1831, Lefthand Circle, Suite A  
Longmont, Colorado 80501  
United States of America  
Tel: (1) 303 684 0400  
Fax: (1) 303 684 9886  
E-mail: [info@nutekamericas.com](mailto:info@nutekamericas.com)  
Website: <http://www.nutekamericas.com>