



**NUTEK™**

PCB HANDLING EQUIPMENT  
MADE IN SINGAPORE



## Core Business

Nutek Private Limited (Nutek), a local enterprise incorporated in 1989, conceptualises, designs and manufactures automated production systems to customer specifications. Nutek is highly regarded for its world-class quality products, produced with the flexibility and agility demanded by its Fortune-500 client base.

Its products include a range of production line assembly machinery including Printed Circuit Board (PCB) Handling Equipment, Barcode Labelling Cell, Laser Marking Systems,... etc.

## Company Policy

Nutek is dedicated to making quality products that help our clients operate more efficiently and effectively. Nutek is guided by the principles of fairness to our suppliers, associates, clients and employees, and helping them achieve to the best of their potential.

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### NTE Series

39	Economical Single Magazine Loader
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41	Economical Buffer Stocker

### MFC Series

42	Automatic Loader
43	Automatic Unloader
44	Bare Board Loader (with Pass Through Mode)
45	Linking Conveyor (500 & 1000 mm)
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47	Work Station (1000 mm)

### Others

48	Conveyor Chains
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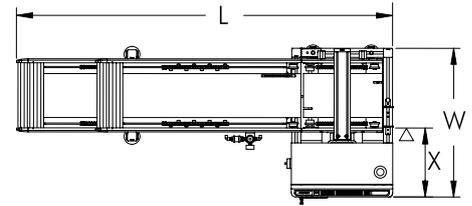
### Applicable PCB General Specifications

	PCB Length	PCB Width
M Size	80 - 330 mm	70 - 250 mm
L Size	80 - 457 mm	70 - 407 mm
PCB Weight	3 kg max	
PCB Edge Clearance	3 mm min	
PCB Thickness	0.1 - 4 mm (unless otherwise specify)	
Components Height	Top: 30 mm	Bottom: 30 mm
PCB Warpage	0.5% of PCB width max	

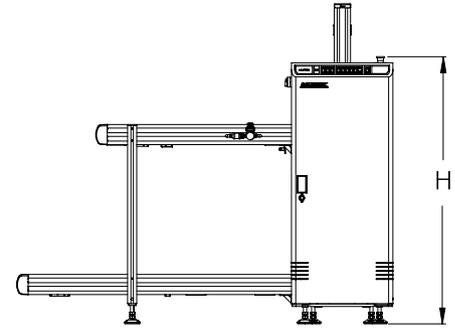
# AUTOMATIC LOADER/UNLOADER



- \* Magazine not included
- \* Pusher Conveyor not included. Please refer to page 3 for details
- \* Tower light (optional)



Plan View



Front View

Legend  
 △ : Fixed Point

## Features

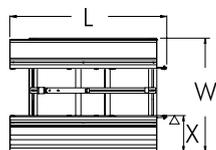
- ❖ Sturdy and stable design
- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Pneumatic clamps provided for magazine alignment
- ❖ Pneumatic pusher's pressure regulated
- ❖ High throughput with short magazine change-over time
- ❖ SMEMA compatible

### SPECIFICATIONS

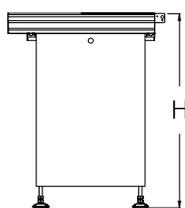
Description	This unit is used for loading or unloading of PCBs.
PCB Magazine	Specify upon order
No. of Magazines	Upper Conveyor: 2 magazines Lower Conveyor: 3 magazines
PCB Loading Time	Approx. 6 seconds or specify
Magazine Change-over Time	Approx. 30 seconds or specify
Indexing Pitch	1 - 4 (10 mm pitch) or specify
Power Source	100, 230VAC 1Ph
Power Consumption	350VA max
Air Pressure	4 - 6 bar
Air Consumption	10 ltr/min max
PCB Thickness	0.4mm min

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM0100LM (Loader)	1865 x 750 x 1330	380 mm	180 kg
L	NTM0100LL (Loader)	2545 x 970 x 1330	395 mm	250 kg
M	NTM0100UM (Unloader)	1865 x 750 x 1330	380 mm	180 kg
L	NTM0100UL (Unloader)	2545 x 970 x 1330	395 mm	250 kg

# PUSHER CONVEYOR



Plan View



Front View

Legend  
 △ : Fixed Point



## Features

- ❖ Adjustable pusher position
- ❖ Laser carved stainless steel side guide for superior quality and durability
- ❖ Pneumatic pusher's pressure regulated

### SPECIFICATIONS

Description	This unit is linked to an Unloader.
Cycle Time	Approx. 6 seconds
Power Source	From Unloader
Power Consumption	100VA max
Air Pressure	From Unloader
Air Consumption	5 ltr/min max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM1001-M	750 x 566 x 957	168 mm	60 kg
L	NTM1001-L	950 x 726 x 957	168 mm	70 kg

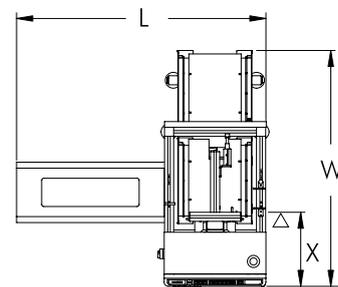
# SINGLE MAGAZINE LOADER



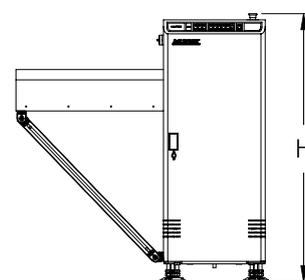
- \* Magazine not included
- \* Tower light (optional)

## Features

- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Pneumatic clamps provided for magazine alignment
- ❖ Pneumatic pusher's pressure regulated
- ❖ Adjustable pusher position
- ❖ SMEMA compatible



Plan View



Front View

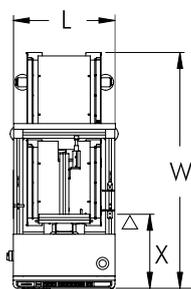
Legend  
 $\triangle$  : Fixed Point

## SPECIFICATIONS

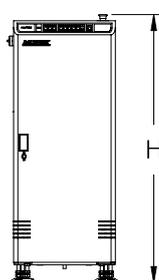
Description	This unit is used for loading of PCBs to the production line.
PCB Magazine	Specify upon order
PCB Loading Time	Approx. 6 seconds
Indexing Pitch	1 - 4 (10 mm pitch) or specify
Power Source	100, 230VAC 1Ph
Power Consumption	300VA max
Air Pressure	4 - 6 bar
Air Consumption	10 ltr/min max
PCB Thickness	0.4 mm min

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM0700LM	1210 x 1170 x 1330	380 mm	130 kg
L	NTM0700LL	1560 x 1570 x 1330	380 mm	180 kg

# SINGLE MAGAZINE UNLOADER



Plan View



Front View

Legend  
 $\triangle$ : Fixed Point



## Features

- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Pneumatic clamps provided for magazine alignment
- ❖ SMEMA compatible

- \* Magazine not included
- \* Pusher Conveyor not included. Please refer to Page 3 for details
- \* Tower light (optional)

## SPECIFICATIONS

Description	This unit is used for unloading of PCBs from the production line.
PCB Magazine	Specify upon order
PCB Loading Time	Approx. 6 seconds
Indexing Pitch	1 - 4 (10 mm pitch) or specify
Power Source	100, 230VAC 1Ph
Power Consumption	300VA max
Air Pressure	4 - 6 bar
Air Consumption	1.1 ltr/min max
PCB Thickness	0.4 mm min

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM0700UM	500 x 1170 x 1330	380 mm	180 kg
L	NTM0700UL	653 x 1460 x 1330	380 mm	220 kg

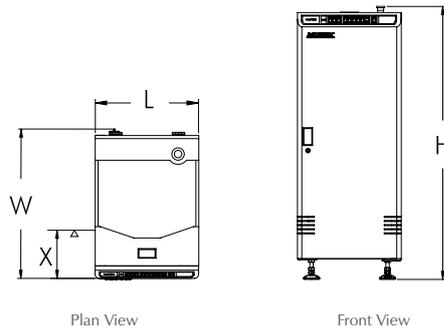
# BARE BOARD LOADER/ WITH PASS THROUGH MODE



\* Tower light (optional)

## Features

- ❖ Surrounded with covers to provide highest level of safety
- ❖ Top safety cover can be opened for easy access to hardware during maintenance
- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Adjustable suction positions provide better grips of PCBs
- ❖ Smooth and parallel width adjustment
- ❖ Small machine footprint
- ❖ SMEMA compatible



Legend  
△ : Fixed Point

## SPECIFICATIONS

Description	This unit is used for loading of bare PCBs to the production line.
Maximum PCBs Capacity	400 pcs (0.6 mm thick PCB)
Cycle Time	Approx. 10 seconds
Power Source	100, 230VAC 1Ph
Power Consumption	150VA max
Air Pressure	6 bar
Air Consumption	30 ltr/min max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM0200-M	500 x 729 x 1330	234 mm	110 kg
L	NTM0200-L	653 x 869 x 1330	234 mm	140 kg
M	NTM0200PM (Pass through)	500 x 729 x 1330	234 mm	110 kg
L	NTM0200PL (Pass through)	653 x 869 x 1330	234 mm	140 kg

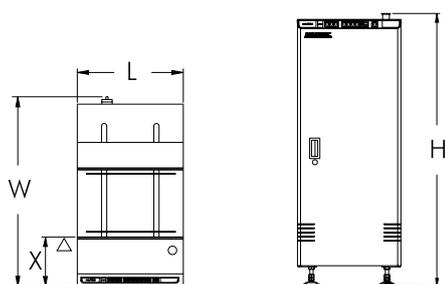
# DESTACKER

## Features

- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Uninterrupted loading
- ❖ Pass through mode provided
- ❖ Smooth and parallel width adjustment (leadscrew)
- ❖ Small machine footprint
- ❖ SMEMA compatible



\* Tower light (optional)



Legend  
△ : Fixed Point

Plan View

Front View

## SPECIFICATIONS

Description	This unit is used for loading of bare PCBs to the production line.
Maximum PCBs Capacity	400 (0.6 mm thick PCB)
Cycle Time	Approx. 11 seconds
Power Source	100, 230VAC 1Ph
Power Consumption	150VA max
Air Pressure	4 - 6 bar
Air Consumption	5 ltr/min max
PCB Thickness	0.4 mm min

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM1200-M	500 x 904 x 1330	234 mm	150 kg
L	NTM1200-L	500 x 904 x 1330	234 mm	150 kg

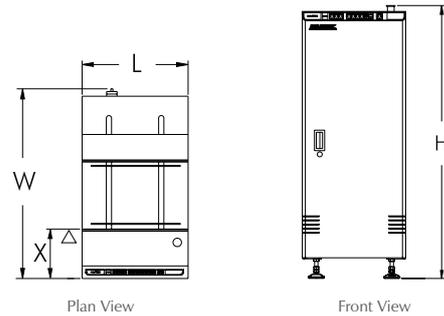
# PUSH-UP STACKER



\* Tower light (optional)

## Features

- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Pass through mode provided
- ❖ Smooth and parallel width adjustment (leadscrew)
- ❖ Small machine footprint
- ❖ SMEMA compatible



Legend  
△ : Fixed Point

## SPECIFICATIONS

<b>Description</b>	This unit is used for restacking of PCBs from the production line.
<b>Maximum PCBs Capacity</b>	400 (0.6 mm thick PCB)
<b>Cycle Time</b>	Approx. 9 seconds
<b>Power Source</b>	100, 230VAC 1Ph
<b>Power Consumption</b>	150VA max
<b>Air Pressure</b>	4 - 6 bar
<b>Air Consumption</b>	5 ltr/min max
<b>PCB Thickness</b>	0.4 mm min

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM2100-M	500 x 904 x 1330	234 mm	120 kg
L	NTM2100-L	500 x 904 x 1330	234 mm	140 kg

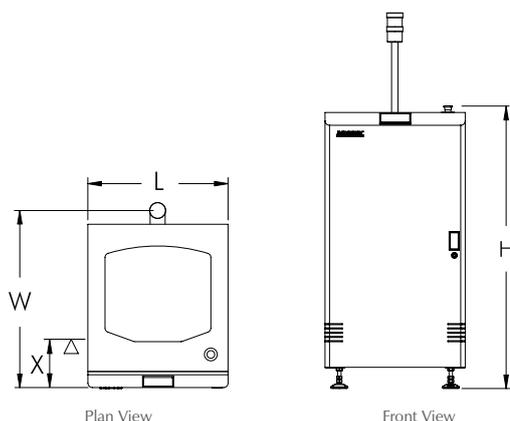
# IN-LINE PCB CLEANING MACHINE

## Features

- ❖ User friendly touch screen panel
- ❖ Preset PCB counter and warning alarm will sound as reminder to change adhesive rolls
- ❖ Double side cleaning (selectable)
- ❖ Static elimination (double sided)
- ❖ Easy access to adhesive rolls
- ❖ Internal conveyor system to buffer board before cleaning
- ❖ Smooth and parallel width adjustment (leadscrew)
- ❖ SMEMA compatible



\* Tower light (optional)



Legend  
△ : Fixed Point

## SPECIFICATIONS

Description	This unit is used for removing dust, particles, glass fiber & etc on bare PCBs surface.
Speed	2 - 14 m/min
Power Source	100, 230VAC 1Ph
Power Consumption	200VA max
Air Pressure	4 - 6 bar
Air Consumption	2 ltr/min max
PCB Thickness	0.4 mm min

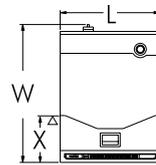
Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM5000-M	653 x 831 x 1330	249 mm	180 kg
L	NTM5000-L	750 x 1082 x 1330	249 mm	200 kg

# PCB INVERTOR

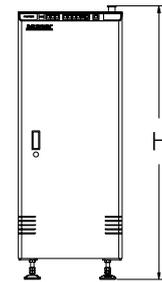


## Features

- ❖ Equipped with built-in torque limiter to ensure highest level of safety
- ❖ 'Top safety cover' can be opened for easy access to hardware during maintenance
- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Smooth and precise inverting motion
- ❖ Subsequent inversions continue from the last unloading position (short cycle time)
- ❖ Small machine footprint
- ❖ SMEMA compatible



Plan View



Front View

Legend  
△ : Fixed Point

## SPECIFICATIONS

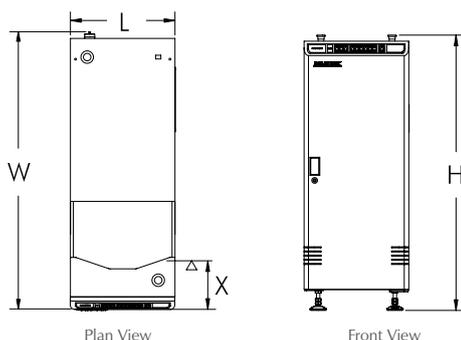
Description	This unit is used to invert PCBs (180°) for "double-sided" process.
Cycle Time	Approx. 11 seconds
Power Source	100, 230VAC 1Ph
Power Consumption	150VA max
Air Pressure	4-6 bar
Air Consumption	1.1 ltr/min max
PCB Thickness	3 mm max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM0300-M	500 x 729 x 1330	234 mm	110 kg
L	NTM0300-L	653 x 869 x 1330	234 mm	120 kg

# TRAVERSER/SHUTTLE CONVEYOR

## Features

- ❖ Surrounded with covers to provide highest level of safety
- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Swift, smooth and precise operations (frequency inverter controller)
- ❖ PCB traffic flows can be customised
- ❖ Smooth and parallel width adjustment
- ❖ SMEMA compatible



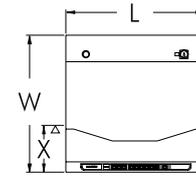
Legend  
△ : Fixed Point

## SPECIFICATIONS

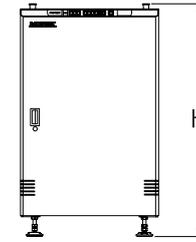
<b>Description</b>	This unit is used to redirect flow of PCBs into different channels in a production line.
<b>Cycle Time</b>	Depends on traversing distance
<b>Power Source</b>	100, 230VAC 1Ph
<b>Power Consumption</b>	250VA max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM0900-M	500 x W x 1330	234 mm	depends on traversing distance
L	NTM0900-L	653 x W x 1330	234 mm	depends on traversing distance

# TURN CONVEYOR/DIVERTER



Plan View



Front View

Legend

△ : Fixed Point

NTM1100LM & NTM1100LL : L Turn  
 NTM1100IM & NTM1100IL : I Turn  
 NTM1100TM & NTM1100TL : T Turn  
 NTM1100XM & NTM1100XL : X Turn

## Features

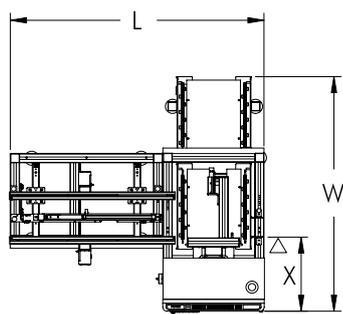
- ❖ Equipped with built-in torque limiter to ensure highest level of safety
- ❖ 'Top safety cover' can be opened for easy access to hardware during maintenance
- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Smooth and precise rotation
- ❖ Transfer gap between conveyors is minimised
- ❖ PCB traffic flows can be customised
- ❖ Smooth and parallel width adjustment (leadscrew)
- ❖ SMEMA compatible

### SPECIFICATIONS

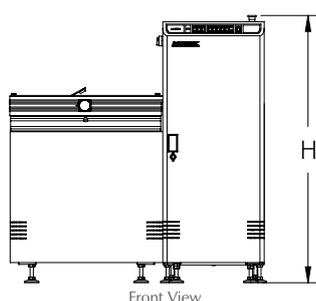
Description	This unit is used to redirect PCBs in a production line.
Cycle Time	Approx. 16 seconds
Power Source	100, 230VAC 1Ph
Power Consumption	250VA max
Air Pressure	4 - 6 bar
Air Consumption	1.5 ltr/min max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM1100LM	795 x 795 x 1240	272 mm	160 kg
L	NTM1100LL	875 x 875 x 1240	234 mm	170 kg
M	NTM1100IM	795 x 795 x 1240	272 mm	160 kg
L	NTM1100IL	875 x 875 x 1240	234 mm	170 kg
M	NTM1100TM	795 x 795 x 1240	272 mm	160 kg
L	NTM1100TL	875 x 875 x 1240	234 mm	170 kg
M	NTM1100XM	795 x 795 x 1240	272 mm	160 kg
L	NTM1100XL	875 x 875 x 1240	234 mm	170 kg

# MULTI FUNCTION BUFFER STOCKER



Plan View



Front View

Legend  
 △ : Fixed Point



\* Magazine not included  
 \* Tower light (optional)

## Features

- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ First In First Out (FIFO), Last In First Out (LIFO), loader, unloader, reject stock and pass through operating modes
- ❖ Fast, smooth and precise indexing (frequency inverter controller)
- ❖ Pneumatic clamps provided for magazine alignment
- ❖ Pneumatic pusher's pressure regulated
- ❖ Threshold system provided
- ❖ Additional magazines buffering capacity available upon request
- ❖ SMEMA compatible

### SPECIFICATIONS

Description	This unit is used as a buffer between SMD machines or testers.
PCB Magazine	Specify upon order
Cycle Time	Approx. 20 seconds
Indexing Pitch	1 - 4 (10 mm pitch) or specify
Power Source	100, 230VAC 1Ph
Power Consumption	350VA max
Air Pressure	4 - 6 bar
Air Consumption	15 ltr/min max
PCB Thickness	0.6 mm min

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM0600-M	1260 x 1135 x 1330	380 mm	260 kg
L	NTM0600-L	1560 x 1570 x 1330	380 mm	360 kg

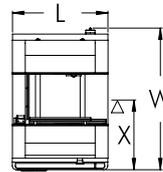
# OPEN LIFO BUFFER



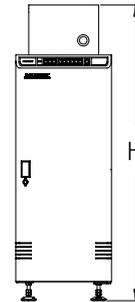
\* Tower light (optional)

## Features

- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Last In First Out (LIFO) and pass through operating modes
- ❖ Open concept provides easy access to the PCBs
- ❖ 'Threshold' system provided
- ❖ Smooth and parallel width adjustment (leadscrew)
- ❖ Small machine footprint
- ❖ SMEMA compatible



Plan View



Front View

Legend  
△ : Fixed Point

## SPECIFICATIONS

Description	This unit is used as a buffer between SMD machines.
Maximum PCBs Capacity	49 pcs
Maximum Load	1.5 kg/PCB
Cycle Time	Approx. 15 seconds
Indexing Pitch	1 - 4 (9.525 mm pitch)
Power Source	100, 230VAC 1Ph
Power Consumption	250VA max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM2700-M	500 x 746 x 1565	234 mm	170 kg
L	NTM2700-L	500 x 903 x 1565	234 mm	200 kg

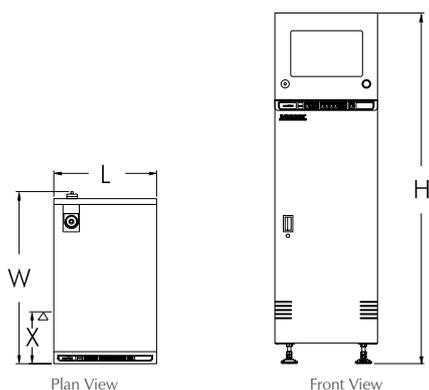
# LIFO VERTICAL BUFFER

## Features

- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Last In First Out (LIFO) and pass through operating modes
- ❖ Threshold system provided
- ❖ Smooth and parallel width adjustment (leadscrew)
- ❖ Small machine footprint
- ❖ SMEMA compatible



\* Tower light (optional)



Legend  
△ : Fixed Point

## SPECIFICATIONS

Description	This unit is used as a buffer between SMD machines.
Maximum PCBs Capacity	20 pcs or specify
Maximum Load	1 kg/PCB
Cycle Time	Approx. 15 seconds
Indexing Pitch	1 & 2 (25.4 mm pitch) or specify
Power Source	100, 230VAC 1Ph
Power Consumption	250VA max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM1300-M	500 x 846 x 1730	260 mm	190 kg
L	NTM1300-L	653 x 1040 x 1730	260 mm	245 kg

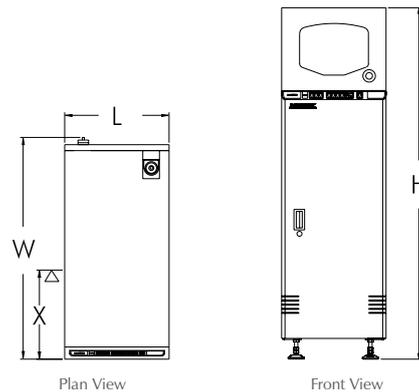
# MULTI FUNCTION VERTICAL BUFFER



\* Tower light (optional)

## Features

- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ First In First Out (FIFO), Last In First Out (LIFO) and pass through operating modes
- ❖ Flexible repositioning of 'fingers' (support bars) to accommodate jagged edge PCBs
- ❖ Durable rollers as conveying medium (no replacement of belts needed)
- ❖ Fast, smooth and precise indexing (frequency inverter controller)
- ❖ Threshold system provided
- ❖ Smooth and parallel width adjustment (leadscrew)
- ❖ Small machine footprint
- ❖ SMEMA compatible



Legend  
△ : Fixed Point

## SPECIFICATIONS

Description	This unit is used as a buffer between SMD machines.
Maximum PCBs Capacity	25 pcs or specify
Maximum Load	2 kg/PCB
Cycle Time	Approx. 19 seconds
Indexing Pitch	20 mm or specify
Power Source	100, 230VAC 1Ph
Power Consumption	350VA max
Air Pressure	4 - 6 bar
Air Consumption	1.5 ltr/min max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM1400-M	500 x 970 x 1700	425 mm	210 kg
L	NTM1400-L	653 x 1070 x 1700	425 mm	240 kg

# LINKING CONVEYOR

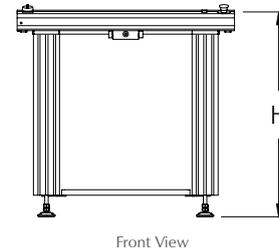
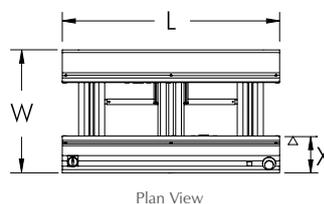
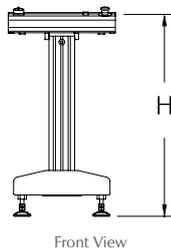
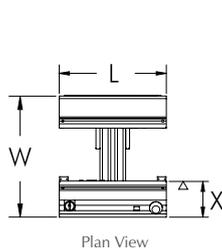
## (500 & 1000 MM)

### Features

- ❖ Modular design
- ❖ Stability enhanced by 'robust design'
- ❖ Laser carved stainless steel side guides for superior quality and durability
- ❖ Ergonomically designed arm rest
- ❖ Smooth and parallel width adjustment
- ❖ Multi-zone concept available upon request
- ❖ Different lengths available upon request
- ❖ SMEMA compatible
- ❖ Patented (SG Patent No.: 91261)



Legend  
△ : Fixed Point



### SPECIFICATIONS

Description	This unit is used to link between SMD machines or board handling units.
Conveyor Concept	Belt
Conveyor Speed	14 m/min or specify
Power Source	100, 230VAC 1Ph
Power Consumption	100VA max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM0401-M	500 x 570 x 988	168 mm	45 kg
L	NTM0401-L	500 x 727 x 988	168 mm	50 kg
M	NTM0401-M	1000 x 570 x 988	168 mm	60 kg
L	NTM0401-L	1000 x 727 x 988	168 mm	70 kg

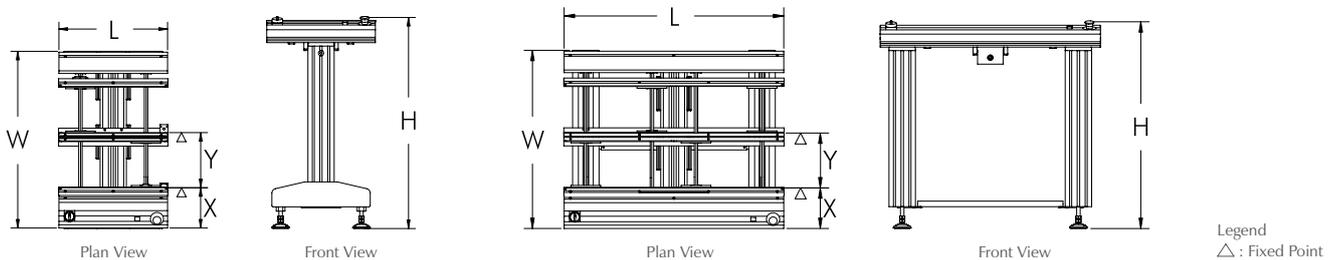
# DUAL TRACK LINKING CONVEYOR

## (500 & 1000 MM)



### Features

- ❖ Modular design
- ❖ Stability enhanced by 'robust design'
- ❖ Laser carved stainless steel side guides for superior quality and durability
- ❖ Ergonomically designed arm rest
- ❖ Smooth and parallel width adjustment
- ❖ Width adjustment for individual track can be independently controlled (optional)
- ❖ Inspection Mode (optional)
- ❖ Two independently controlled belt segment
- ❖ Multi-zone concept available upon request
- ❖ Different lengths available upon request
- ❖ SMEMA compatible
- ❖ Patented (SG Patent No.: 91261)



### SPECIFICATIONS

<b>Description</b>	This unit is used to link between SMD machines or board handling units in dual track PCB assembly lines.
<b>Conveyor Concept</b>	Belt
<b>Conveyor Speed</b>	14 m/min or specify
<b>Fixed to Fixed Rail Distance (Y)</b>	251 mm or specify
<b>PCB Width</b>	50 - 216 mm
<b>Power Source</b>	100, 230VAC 1Ph
<b>Power Consumption</b>	100VA max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM0401DM-500-1	500 x 745 x 975	186 mm	60 kg
L	NTM0401DL-1000-1	1000 x 745 x 975	186 mm	110 kg

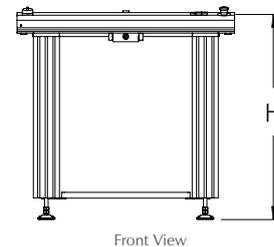
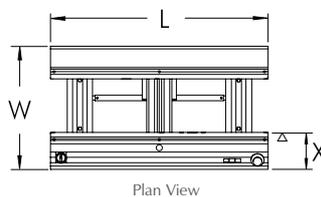
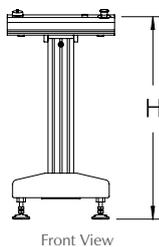
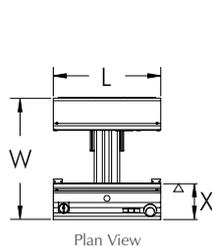
# INSPECTION CONVEYOR (500 & 1000 MM)

## Features

- ❖ Modular design
- ❖ Stability enhanced by 'robust design'
- ❖ Laser carved stainless steel side guides for superior quality and durability
- ❖ Ergonomically designed arm rest
- ❖ Smooth and parallel width adjustment
- ❖ Multi-zone concept available upon request
- ❖ Different lengths available upon request
- ❖ Variable speed control
- ❖ SMEMA compatible
- ❖ Patented (SG Patent No.: 91261)



Legend  
△ : Fixed Point

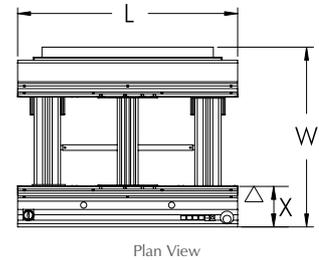


## SPECIFICATIONS

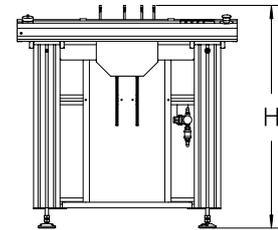
<b>Description</b>	This unit is used as a visual inspection station between SMD machines.
<b>Conveyor Concept</b>	Belt
<b>Conveyor Speed</b>	0.5 - 14 m/min or specify
<b>Power Source</b>	100, 230VAC 1Ph
<b>Power Consumption</b>	100VA max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM0501-M	500 x 570 x 988	168 mm	45 kg
L	NTM0501-L	500 x 727 x 988	168 mm	50 kg
M	NTM0501-M	1000 x 570 x 988	168 mm	70 kg
L	NTM0501-L	1000 x 727 x 988	168 mm	80 kg

# PCB REJECT CONVEYOR



Plan View



Front View

Legend  
 Δ : Fixed Point

## Features

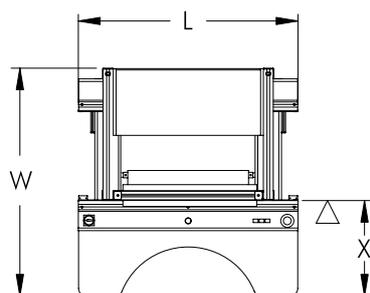
- ❖ Includes 'reject', 'inspect' and 'pass through' modes
- ❖ Modular design
- ❖ Stability enhanced by 'robust design'
- ❖ Ergonomically designed arm rest
- ❖ Smooth and parallel width adjustment
- ❖ Different lengths available upon request
- ❖ Variable speed control
- ❖ SMEMA compatible
- ❖ Patented (SG Patent No.: 91261)

### SPECIFICATIONS

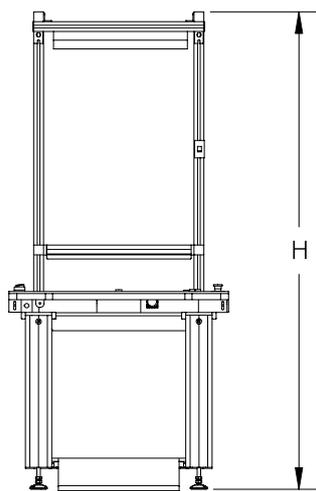
<b>Description</b>	Faulty boards can be lifted up for visual inspection without interrupting the PCBs flow.
<b>Conveyor Concept</b>	Belt
<b>Conveyor Speed</b>	0.5 - 14 m/min or specify
<b>Power Source</b>	100, 230VAC 1Ph
<b>Power Consumption</b>	100VA max
<b>Air Consumption</b>	10 ltr/min max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM2500-M	1000 x 538 x 1020	186 mm	80 kg
L	NTM2500-L	1000 x 695 x 1020	186 mm	90 kg

# WORK STATION



Plan View



Front View

Legend  
 △ : Fixed Point



## Features

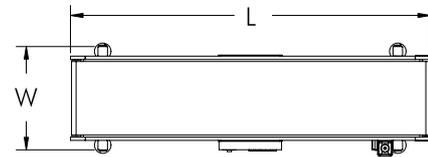
- ❖ Modular design
- ❖ Stability enhanced by 'robust design'
- ❖ Laser carved stainless steel side guides for superior quality and durability
- ❖ PCB inspection mode provided
- ❖ Smooth and parallel width adjustment
- ❖ Different lengths available upon request
- ❖ Multi-zone concept available upon request
- ❖ Equipped with lighting features, single layer part tray and adjustable foot rest
- ❖ Variable speed control
- ❖ SMEMA compatible
- ❖ Patented (SG Patent No.: 91261)

### SPECIFICATIONS

SPECIFICATIONS	
<b>Description</b>	This unit is used to link between SMD machines or board handling units. It also allows manual assembly work to be carried out.
<b>Conveyor Concept</b>	Belt
<b>Conveyor Speed</b>	0.5 - 14 m/min or specify
<b>Conveyor Length</b>	1000 mm or specify
<b>Power Source</b>	100, 230VAC 1Ph
<b>Power Consumption</b>	200VA max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM1800-M	1000 x 887 x 2190	438 mm	110 kg
L	NTM1800-L	1000 x 1044 x 2190	438 mm	120 kg

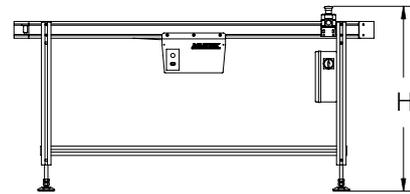
# FLAT BELT CONVEYOR



Plan View

## Features

- ❖ ESD belt
- ❖ Stability enhanced by 'robust design'
- ❖ Available in 300, 400, 500 mm belt width or specify
- ❖ Available in 1000, 2000, 3000 and 6000 mm length or specify
- ❖ Lighting feature, work table, instruction holder and part tray (optional)
- ❖ Variable speed control
- ❖ PLC control (optional)



Front View

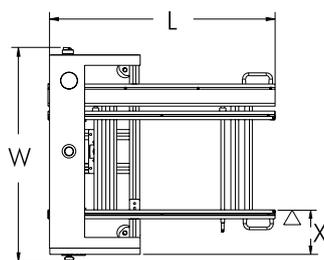
Legend  
 △ : Fixed Point

## SPECIFICATIONS

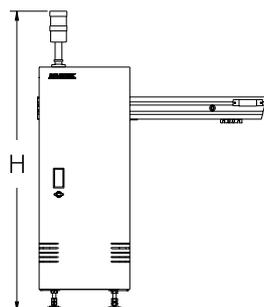
SPECIFICATIONS	
<b>Description</b>	This unit is used for transferring of PCBs/pallets in the production line.
<b>Machine Length</b>	1500 mm or specify
<b>Belt Material</b>	ESD Polyurethane
<b>Belt Width</b>	300, 400, 500 mm or specify
<b>Conveyor Speed</b>	0 - 8 m/min
<b>Power Source</b>	100, 230VAC 1Ph
<b>Air Consumption</b>	100VA max

Size	Model No.	Machine Dimension (mm) L x W x H	Height (mm)	Weight (Approximately)
F	NTM3500-F	Specify upon order	950 or specify	Depends on length

# MANUAL LIFT GATE CONVEYOR



Plan View



Front View

Legend

△ : Fixed Point



## Features

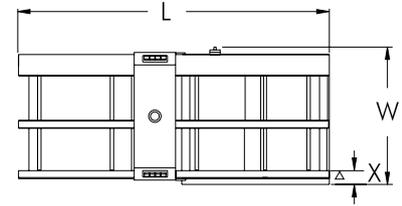
- ❖ 600 mm passage way or specify
- ❖ Cylinder assisted lifting motion
- ❖ Pneumatic locking device installed to enhance safety
- ❖ Smooth and parallel width adjustment (leadscrew)
- ❖ SMEMA compatible

### SPECIFICATIONS

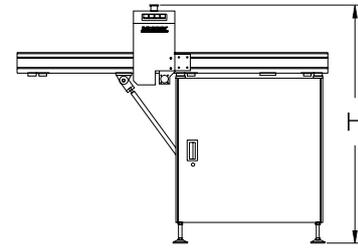
SPECIFICATIONS	
<b>Description</b>	This unit is used when a passage way is required in a production line.
<b>Cycle Time</b>	Approx. 8 seconds
<b>Power Source</b>	100, 230VAC 1Ph
<b>Power Consumption</b>	100VA max
<b>Air Pressure</b>	2 - 3 bar
<b>Air Consumption</b>	20 ltr/min max
<b>PCB Thickness</b>	0.6 mm min

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM1500-M	1000 x 790 x 1335	194 mm	90 kg
L	NTM1500-L	1000 x 920 x 1335	194 mm	100 kg

# LOWERING GATE CONVEYOR



Plan View



Front View

Legend  
 △ : Fixed Point

## Features

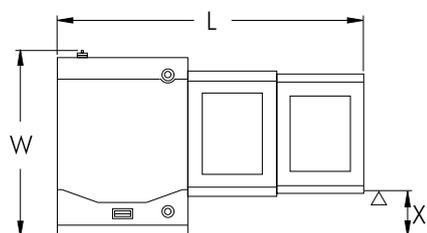
- ❖ 600 mm passage way or specify
- ❖ Lowering and lifting of gate conveyor (push buttons control)
- ❖ Safety sensor installed to enhance safety
- ❖ Smooth and parallel width adjustment (leadscrew)
- ❖ SMEMA compatible

### SPECIFICATIONS

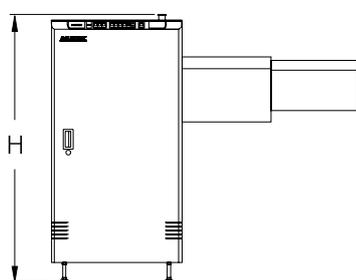
SPECIFICATIONS	
Description	This unit is used when a passage way is required in a production line (semi automatic).
Cycle Time	Approx. 7 seconds
Power Source	100, 230VAC 1Ph
Power Consumption	200VA max
Air Pressure	4 - 6 bar
Air Consumption	48 ltr/min max
PCB Thickness	0.6 mm min

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM1600-M	1500 x 545 x 1110	65 mm	115 kg
L	NTM1600-L	1500 x 675 x 1110	65 mm	135 kg

# TELESCOPIC GATE CONVEYOR (NORMALLY OPENED)



Plan View



Front View

Legend  
△ : Fixed Point



## Features

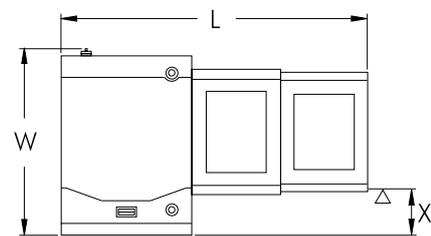
- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Passage way 'Normally Opened' (850 mm)
- ❖ Swift and smooth retraction/extension of conveyor (frequency inverter controller)
- ❖ Safety sensor installed to enhance safety
- ❖ Smooth and parallel width adjustment (leadscrew)
- ❖ SMEMA compatible

### SPECIFICATIONS

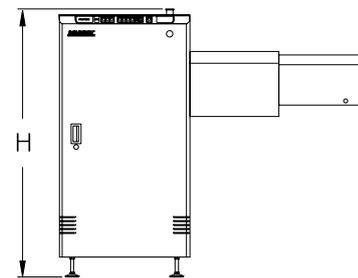
SPECIFICATIONS	
<b>Description</b>	This unit is used when a passage way is required in a production line (fully automatic).
<b>Cycle Time</b>	Approx. 15 seconds
<b>Power Source</b>	100, 230VAC 1Ph
<b>Power Consumption</b>	200VA max
<b>PCB Thickness</b>	0.6 mm min

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM1700-M	1500 x 775 x 1330	234 mm	225 kg
L	NTM1700-L	1500 x 905 x 1330	234 mm	250 kg

# TELESCOPIC GATE CONVEYOR (NORMALLY CLOSED)



Plan View



Front View

Legend  
 $\Delta$  : Fixed Point

## Features

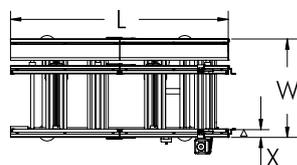
- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Passage way 'Normally Closed' (745 mm)
- ❖ Swift and smooth retraction/extension of conveyor (frequency inverter controller)
- ❖ Additional built-in buffer zone
- ❖ Safety sensor installed to enhance safety
- ❖ Smooth and parallel width adjustment (leadscrew)
- ❖ SMEMA compatible

### SPECIFICATIONS

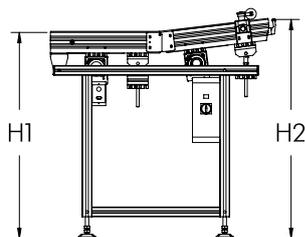
Description	This unit is used when a passage way is required in a production line (fully automatic).
Cycle Time	Retract: 12 seconds Extend: 12 seconds
Power Source	100, 230VAC 1Ph
Power Consumption	250VA max
Air Pressure	4 - 6 bar
Air Consumption	16 ltr/min max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM3600-M	1500 x 780 x 1330	292 mm	230 kg
L	NTM3600-L	1500 x 930 x 1330	292 mm	250 kg

# INFEED CONVEYOR



Plan View



Front View

Legend  
 △ : Fixed Point



## Features

- ❖ Robust design
- ❖ Two belt segments
- ❖ Adjustable inclined angle ( $4^{\circ}$  -  $7^{\circ}$ ) or specify
- ❖ Variable speed control to synchronise with wave soldering machine
- ❖ PLC controlled (optional)
- ❖ SMEMA compatible

### SPECIFICATIONS

SPECIFICATIONS	
<b>Description</b>	This unit is used for transferring of PCBs/pallets into the soldering machine.
<b>Conveyor Speed</b>	0.5 - 14 m/min
<b>PCB Edge Support</b>	3 mm
<b>Power Source</b>	100, 230VAC 1Ph
<b>Power Consumption</b>	100VA max
<b>PCB Thickness</b>	0.6 mm min

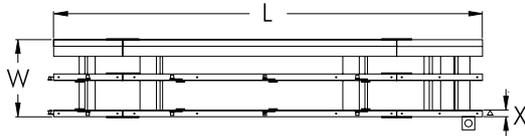
Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM2300IM	1000 x 530 x H1, H2 (specify upon order)	50 mm	60 kg
L	NTM2300IL	1000 x 630 x H1, H2 (specify upon order)	50 mm	70 kg

# OUTFEED CONVEYOR

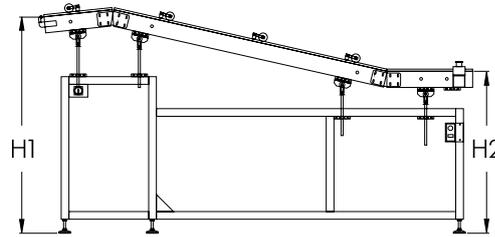


## Features

- ❖ Robust design
- ❖ Sliding regulator provided
- ❖ PLC controlled (optional)
- ❖ Cooling fans (optional)



Plan View



Front View

Legend  
△ : Fixed Point

## SPECIFICATIONS

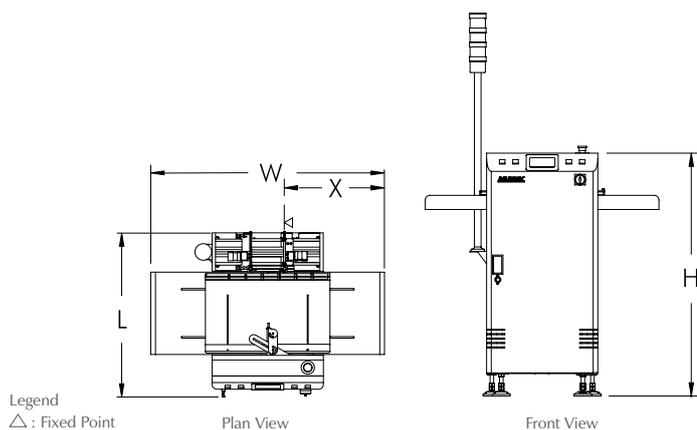
<b>Description</b>	This unit is used for transferring of PCBs/pallets from the soldering machine.
<b>Conveyor Speed</b>	0.5 - 3 m/min or specify
<b>PCB Edge Support</b>	3 mm
<b>Power Source</b>	100, 230VAC 1Ph
<b>Power Consumption</b>	100VA max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM2300-M	2500 x 530 x H1, H2 (specify upon order)	50 mm	110 kg
L	NTM2300-L	2500 x 630 x H1, H2 (specify upon order)	50 mm	200 kg

# ADVANCE PLATFORM LOADER

## Features

- ❖ Touch screen panel enables swift adjustment for various types of magazines in operation
- ❖ Multi-magazine type manual loading (quantity depends on dimension of magazine)
- ❖ Stores up to 10 different types of magazine dimensions
- ❖ Suitable for 'high-mix', 'low-volume' operations
- ❖ Servo motor drive for precise indexing
- ❖ Pneumatic pusher's pressure regulated
- ❖ SMEMA compatible



## SPECIFICATIONS

Description	This unit is used for loading of substrates, leadframes or carriers.		
Magazine		Min (mm)	Max (mm)
	Width	25	254
	Length	100	330
	Height	less than 330mm	
Indexing Pitch	6 mm pitch or specify		
Power Source	100, 230VAC 1Ph		
Power Consumption	850VA max		
Air Pressure	4 - 6 bar		
Air Consumption	1.1 ltr/min max		

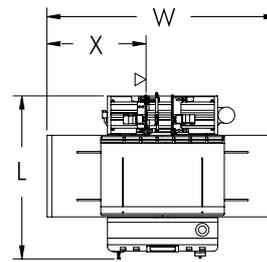
Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM4410LM	760 x 1050 x 1150	450 mm	165 kg

# ADVANCE PLATFORM UNLOADER

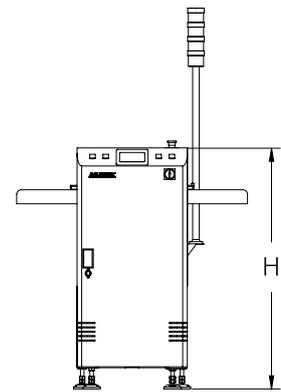


## Features

- ❖ Touch screen panel enables swift adjustment for various types of magazines in operation
- ❖ Multi-magazine type manual loading (quantity depends on dimension of magazine)
- ❖ Stores up to 10 different types of magazine dimensions
- ❖ Suitable for 'high-mix', 'low-volume' operations
- ❖ Servo motor drive for precise indexing
- ❖ Pneumatic pusher's pressure regulated
- ❖ SMEMA compatible



Plan View



Front View

Legend  
△ : Fixed Point

## SPECIFICATIONS

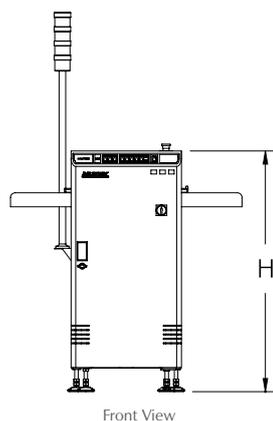
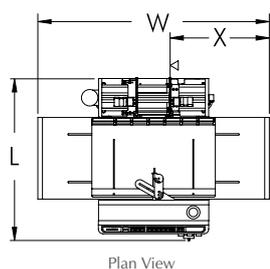
Description	This unit is used for unloading of substrates, leadframes or carriers.		
Magazine		Min (mm)	Max (mm)
	Width	25	254
	Length	100	330
Height	less than 330mm		
Indexing Pitch	6 mm pitch or specify		
Power Source	100, 230VAC 1Ph		
Power Consumption	850VA max		
Air Pressure	4 - 6 bar		
Air Consumption	0.9 ltr/min max		

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM4410UM	760 x 1050 x 1150	450 mm	165 kg

# PLATFORM LOADER

## Features

- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Single-magazine type manual loading (quantity depends on dimension of magazine)
- ❖ Frequency inverter control for precise indexing
- ❖ Pneumatic pusher's pressure regulated
- ❖ SMEMA compatible



Legend  
 △ : Fixed Point



## SPECIFICATIONS

Description	This unit is used for loading of substrates, leadframes or carriers.
Magazine	Specify upon order
Indexing Pitch	6 mm pitch or specify
Power Source	100, 230VAC 1Ph
Power Consumption	450VA max.
Air Pressure	4 - 6 bar
Air Consumption	1.1 ltr/min max.

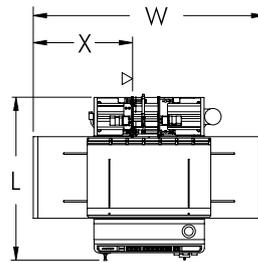
Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM4411LM	760 x 1050 x 1150	450 mm	165 kg

# PLATFORM UNLOADER

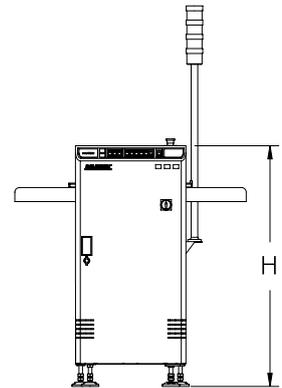


## Features

- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Single-magazine type manual loading (quantity depends on dimension of magazine)
- ❖ Frequency inverter control for precise indexing
- ❖ Pneumatic pusher's pressure regulated
- ❖ SMEMA compatible



Plan View



Front View

Legend  
 △ : Fixed Point

## SPECIFICATIONS

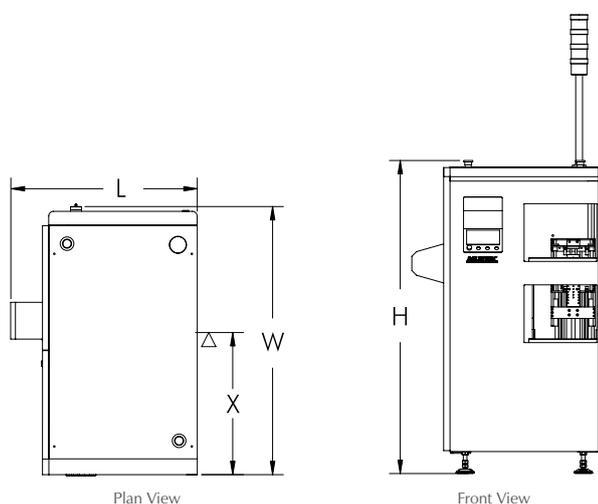
<b>Description</b>	This unit is used for unloading of substrates, leadframes or carriers.
<b>Magazine</b>	Specify upon order
<b>Indexing Pitch</b>	6 mm pitch or specify
<b>Power Source</b>	100, 230VAC 1Ph
<b>Power Consumption</b>	450VA max
<b>Air Pressure</b>	4 - 6 bar
<b>Air Consumption</b>	0.9 ltr/min max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM4411UM	760 x 1050 x 1150	450 mm	165 kg

# HIGH SPEED MINI LOADER

## Features

- ❖ Applicable to various substrates, leadframes or carriers
- ❖ 'Servo control' lifting motion
- ❖ High speed and precise indexing
- ❖ Machine size depends on the type of magazine used
- ❖ Stores up to 10 different types of magazine dimensions
- ❖ Stainless steel magazine guide
- ❖ Pneumatic pusher's pressure regulated
- ❖ Easy loading or unloading of magazines
- ❖ User friendly touch screen panel
- ❖ SMEMA compatible



Legend  
 △ : Fixed Point



## SPECIFICATIONS

Description	This unit is used for loading of substrates, leadframes or carriers.
Magazine	Specify upon order
No. of Magazines	Depends on magazine type
Loading Time	Approx. 5 seconds
Magazine Change-over Time	Approx. 20 seconds
Indexing Pitch	1 - 4 (5mm pitch) or specify
Power Source	100, 230VAC 1Ph
Power Consumption	850VA max
Air Pressure	4 - 6 bar
Air Consumption	10 ltr/min

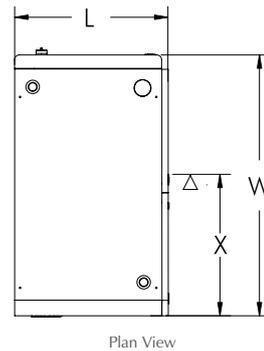
Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM4412LM	820 x 1200 x 1390	630 mm	210 kg

# HIGH SPEED MINI UNLOADER

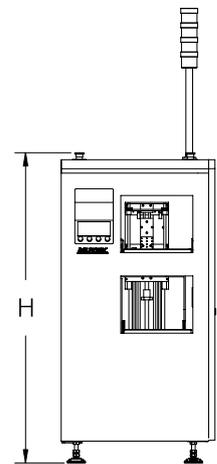


## Features

- ❖ Applicable to various substrates, leadframes or carriers
- ❖ 'Servo control' lifting motion
- ❖ High speed and precise indexing
- ❖ Machine size depends on the type of magazine used
- ❖ Stores up to 10 different types of magazine dimensions
- ❖ Stainless steel magazine guide
- ❖ Pneumatic pusher's pressure regulated
- ❖ Easy loading or unloading of magazines
- ❖ User friendly touch screen panel
- ❖ SMEMA compatible



Plan View



Front View

Legend  
 △ : Fixed Point

## SPECIFICATIONS

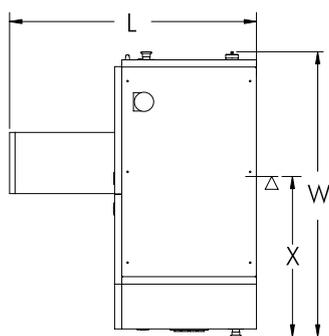
Description	This unit is used for unloading of substrates, leadframes or carriers.
Magazine	Specify upon order
No. of Magazines	Depends on magazine type
Loading Time	Approx. 5 seconds
Magazine Change-over Time	Approx. 20 seconds
Indexing Pitch	1 - 4 (5mm pitch) or specify
Power Source	100, 230VAC 1Ph
Power Consumption	850VA max
Air Pressure	4 - 6 bar
Air Consumption	10 ltr/min

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM4412UM	685 x 1200 x 1390	630 mm	210 kg

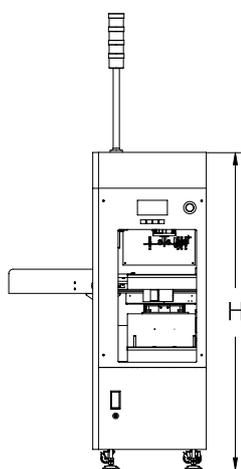
# STACK LEADFRAME/MAGAZINE LOADER

## Features

- ❖ Applicable to various substrates, leadframes or carriers
- ❖ Applicable to handle magazine of various sizes
- ❖ 'Servo Control' lifting/traversing motion
- ❖ High speed and precise indexing
- ❖ Easy loading or unloading of magazines
- ❖ Stores up to 10 different types of magazine dimensions
- ❖ Operation selectable between magazine or stack
- ❖ User friendly touch screen panel
- ❖ Fast product change-over cycle
- ❖ SMEMA compatible



Plan View



Front View



Legend  
 △ : Fixed Point

## SPECIFICATIONS

Description	This unit is used for loading of substrates, leadframes or carriers.
Magazine	Specify upon order
No. of Magazines	Depends on magazine type
Loading Time	Approx. 8 seconds
Magazine Change-over Time	Approx. 20 seconds
Indexing Pitch	1 - 4 (5mm pitch) or specify
Power Source	100, 230VAC 1Ph
Power Consumption	1000VA max
Air Pressure	4 - 6 bar
Air Consumption	15 ltr/min

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM4413LM	955 x 1120 x 1540	790 mm	340 kg

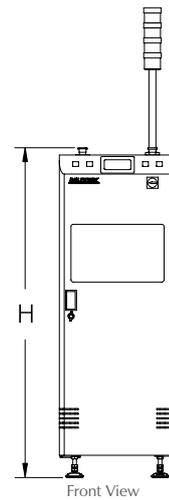
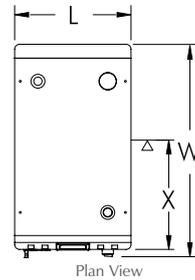
# STACK LOADER



## Features

- ❖ Applicable to various leadframes and substrates
- ❖ 'Servo control' traversing motion
- ❖ High speed and precise indexing
- ❖ Adjustable picking position (using vacuum cup)
- ❖ Fast product change-over cycle
- ❖ SMEMA compatible

Legend  
△ : Fixed Point



## SPECIFICATIONS

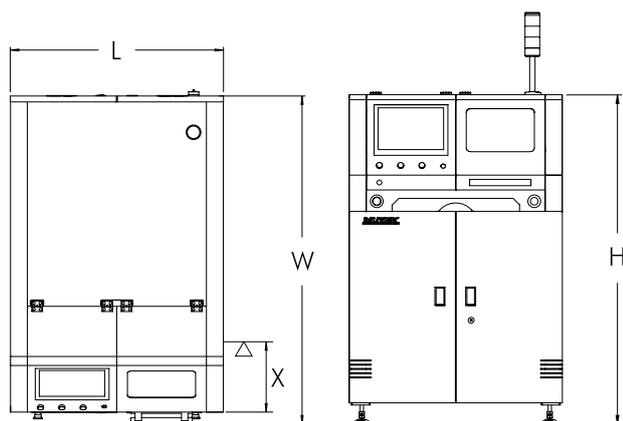
<b>Description</b>	This unit is used for loading of leadframes and substrates.
<b>Maximum Capacity</b>	300 pieces (based on 0.3mm thickness)
<b>Loading Time</b>	15 seconds
<b>Power Source</b>	100, 230VAC 1Ph
<b>Power Consumption</b>	300VA max
<b>Air Pressure</b>	4 - 6 bar
<b>Air Consumption</b>	15 ltr/min

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTM4414LM	500 x 920 x 1430	473 mm	300 kg

# BARCODE LABELLING CELL

## Features

- ❖ Rigid machine frame with large access door
- ❖ Integrated 600dpi Brady printer
- ❖ Codesoft user licence
- ❖ Slide out mechanism (rear side) for easy and fast label and ribbon replacement
- ❖ Label placement rotation of 0° or 90°
- ❖ Vacuum sensing of label from pick-up to placement
- ❖ Scanner for value verification after printing
- ❖ Industrial PC & 17" LCD monitor
- ❖ User friendly software
- ❖ ESD edge belt segment mounted on X-Y table
- ❖ Automatic width adjustment conveyor
- ❖ PCB side clamping
- ❖ Active PCB support
- ❖ Short product change-over time
- ❖ Selectable by-pass operation
- ❖ SMEMA compatible



Plan View

Front View

Legend  
△ : Fixed Point

## SPECIFICATIONS

Description	This unit is used to print, pick and apply labels onto bare PCBs or on top of components.
Minimum Label Size	5 x 5 mm
Cycle Time	4.5 seconds per label (Print/Scan/Pick & Placed)
Transfer Time	8 seconds (Load, unload & shuttle doors)
Conveyor Speed	18 m/min
PCB Width	65 - 407 mm
PCB Length	80 - 407 mm
Power Source	100, 230VAC 1Ph
Power Consumption	950VA max
Air Pressure	4 - 6 bar
Air Consumption	30 ltr/min max

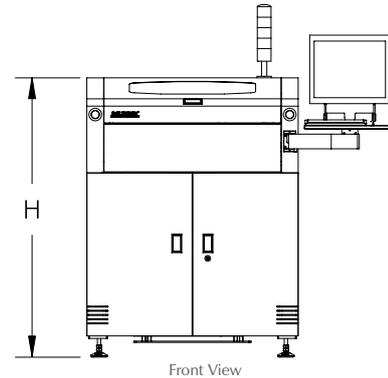
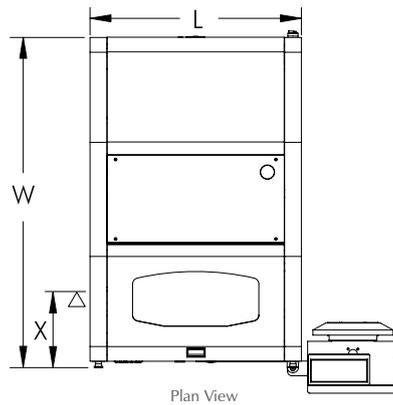
Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
XL	NTM5110XL	1000 x 1542 x 1555	332.5 mm	650 kg

# LASER MARKING CELL



## Features

- ❖ 10 Watt CO<sub>2</sub> (Class 4)
- ❖ Class 1 laser protected housing
- ❖ Air cooling system
- ❖ Fume extraction device
- ❖ User friendly software
- ❖ Digitally controlled linear axis for x & y movements
- ❖ Selectable by-pass operation
- ❖ Automatic width adjustment conveyor
- ❖ PCB side clamping
- ❖ PCB lifting system for constant focal point
- ❖ Short product change-over time
- ❖ Barcode scanner or camera for readability check
- ❖ Industrial PC & 17" LCD monitor
- ❖ SMEMA compatible



Legend  
△ : Fixed Point

## SPECIFICATIONS

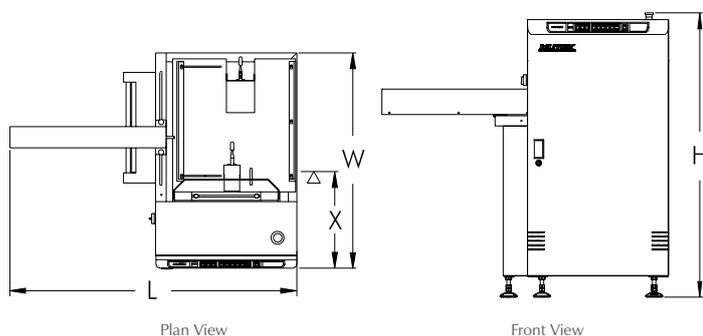
Description	This unit is used to mark text, barcode, 2D code & graphic onto PCBs.
Marking Area	70 x 70mm per position 508 x 460mm total coverage
Marking Speed	225 characters/sec max
Conveyor speed	18 m/min
PCB transfer time	±5 secs
PCB Width	65 - 460 mm
PCB Length	80 - 508 mm
Power Source	100, 230VAC 1Ph
Power Consumption	750VA max
Air Pressure	4 - 6 bar
Air Consumption	2 ltr/min max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
XL	NTM4910XL	1000 x 1532 x 1330	338 mm	640 kg

# ECONOMICAL SINGLE MAGAZINE LOADER

## Features

- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Toggle lever clamps provided for magazine alignment
- ❖ Adjustable pusher position
- ❖ Pneumatic pusher's pressure regulated
- ❖ 'Threshold' system provided
- ❖ The 'L' model has an adjustable platform which can accommodate both 'M' and 'L' size magazines
- ❖ SMEMA compatible



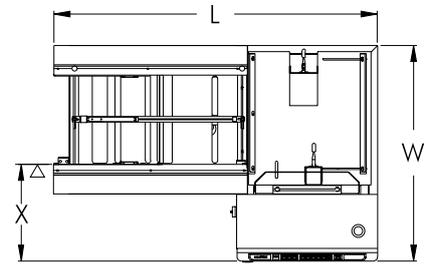
Legend  
 △ : Fixed Point

## SPECIFICATIONS

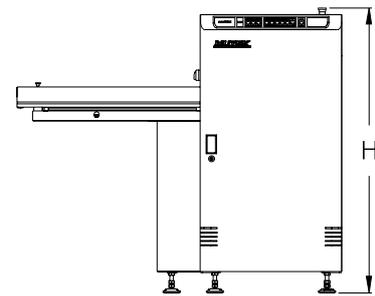
Description	This unit is used for loading of PCBs to the production line.
PCB Magazine	One
PCB Loading Time	Approx. 6 seconds
Indexing Pitch	1 - 4 (10 mm pitch)
Power Source	100, 230VAC 1Ph
Power Consumption	350VA max
Air Pressure	4 - 6 bar
Air Consumption	10 ltr/min max
PCB Thickness	0.4 mm min

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTE0700LM	1080 x 855 x 1330	452 mm	170 kg
L	NTE0700LL	1330 x 1015 x 1330	452 mm	180 kg

# ECONOMICAL SINGLE MAGAZINE UNLOADER



Plan View



Front View

Legend  
△ : Fixed Point

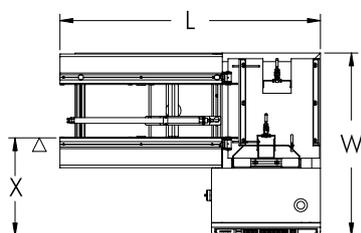
## Features

- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Toggle lever clamps provided for magazine alignment
- ❖ Adjustable pusher position
- ❖ Pneumatic pusher's pressure regulated
- ❖ 'Threshold' system provided
- ❖ The 'L' model has an adjustable platform which can accommodate both 'M' and 'L' size magazines
- ❖ SMEMA compatible

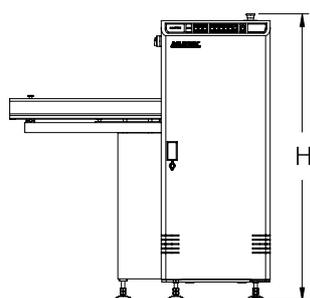
SPECIFICATIONS	
Description	This unit is used for unloading of PCBs from the production line.
PCB Magazine	One
PCB Loading Time	Approx. 6 seconds
Indexing Pitch	1 - 4 (10 mm pitch)
Power Source	100, 230VAC 1Ph
Power Consumption	300VA max
Air Pressure	4 - 6 bar
Air Consumption	10 ltr/min max
PCB Thickness	0.4 mm min

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTE0700UM	1200 x 855 x 1330	452 mm	200 kg
L	NTE0700UL	1500 x 1015 x 1330	452 mm	220 kg

# ECONOMICAL BUFFER STOCKER



Plan View



Front View

Legend  
 $\triangle$  : Fixed Point



## Features

- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ First In First Out (FIFO), Last In First Out (LIFO), loader, unloader, reject stock and pass through operating modes
- ❖ Adjustable pusher position
- ❖ Pneumatic pusher's pressure regulated
- ❖ Fast, smooth and precise indexing (frequency inverter controller)
- ❖ 'Threshold' system provided
- ❖ The 'L' model has an adjustable platform which can accommodate both 'M' and 'L' size magazines
- ❖ SMEMA compatible

SPECIFICATIONS	
<b>Description</b>	This unit is used as a buffer between SMD machines or testers.
<b>PCB Magazine</b>	One
<b>Cycle Time</b>	Approx. 20 seconds
<b>Indexing Pitch</b>	1 - 4 (10 mm pitch)
<b>Power Source</b>	100, 230VAC 1Ph
<b>Power Consumption</b>	350VA max
<b>Air Pressure</b>	4 - 6 bar
<b>Air Consumption</b>	10 ltr/min max
<b>PCB Thickness</b>	0.4 mm min

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	NTE0600-M	1200 x 855 x 1330	452 mm	200 kg
L	NTE0600-L	1500 x 1015 x 1330	452 mm	240 kg

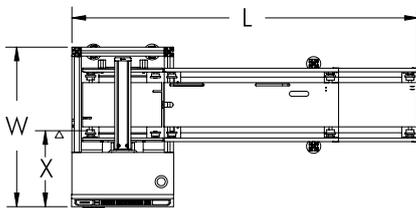
# AUTOMATIC LOADER



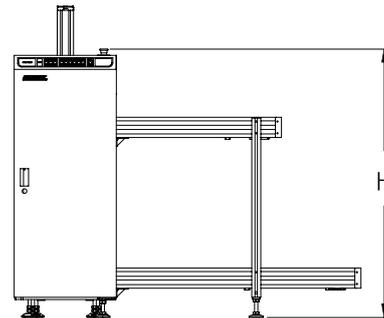
\* Magazine not included

## Features

- ❖ Sturdy and stable design
- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Pneumatic clamps provided for magazine alignment
- ❖ Pneumatic pusher's pressure regulated
- ❖ High throughput with short magazine change-over time
- ❖ SEMEA compatible



Plan View



Front View

Legend  
△ : Fixed Point

## SPECIFICATIONS

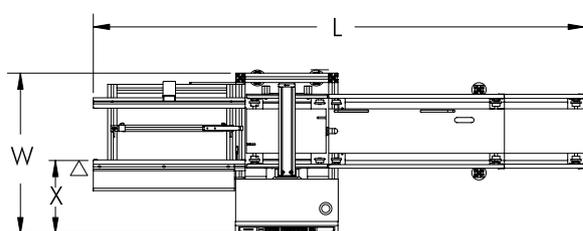
Description	This unit is used for loading of PCBs.
PCB Magazine	Specify upon order
No. of Magazines	Upper Conveyor: 2 magazines Lower Conveyor: 3 magazines
PCB Loading Time	Approx. 6 seconds
Magazine Change-over Time	Approx. 30 seconds or specify
Indexing Pitch	1 - 4 (10 mm pitch) or specify
Power Source	100, 230VAC 1Ph
Power Consumption	350VA max
Air Pressure	4 - 6 bar
Air Consumption	10 ltr/min max
PCB Thickness	0.4mm min

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	MFC0100LM	1700 x 790 x 1330	377 mm	145 kg
L	MFC0100LL	2480 x 940 x 1330	388 mm	250 kg

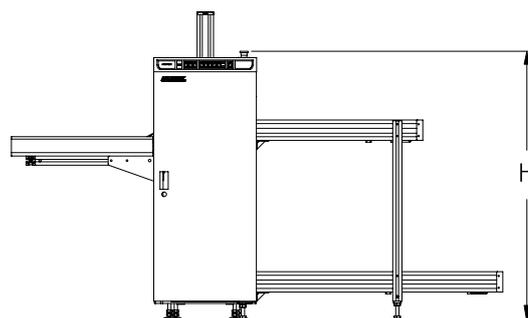
# AUTOMATIC UNLOADER

## Features

- ❖ Includes pusher conveyor
- ❖ Adjustable pusher position
- ❖ Pneumatic pusher's pressure regulated
- ❖ Sturdy and stable design
- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Pneumatic clamps provided for magazine alignment
- ❖ High throughput with short magazine change-over time
- ❖ SMEMA compatible



Plan View



Front View

Legend

△ : Fixed Point

## SPECIFICATIONS

Description	This unit is used for unloading of PCBs.
PCB Magazine	Specify upon order
No. of Magazines	Upper Conveyor: 2 magazines Lower Conveyor: 3 magazines
PCB Loading Time	Approx. 6 seconds
Magazine Change-over Time	Approx. 30 seconds or specify
Indexing Pitch	1 - 4 (10 mm pitch) or specify
Power Source	100, 230VAC 1Ph
Power Consumption	350VA max
Air Pressure	4 - 6 bar
Air Consumption	10 ltr/min max
PCB Thickness	0.4mm min

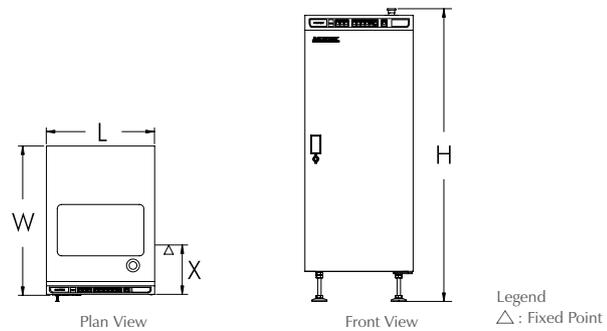
Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	MFC0100UM	2400 x 790 x 1330	377 mm	180 kg
L	MFC0100UL	3380 x 940 x 1330	388 mm	280 kg

# BARE BOARD LOADER (WITH PASS THROUGH MODE)



## Features

- ❖ Enclosed design ensures highest level of safety
- ❖ Top safety cover can be opened for easy access to hardware during maintenance
- ❖ User friendly 'soft touch' LED membrane control panel
- ❖ Adjustable suction cup positions provide better grips of PCBs
- ❖ Smooth and parallel width adjustment
- ❖ Small machine footprint
- ❖ SMEMA compatible



## SPECIFICATIONS

Description	This unit is used for loading of bare PCBs to the production line.
Maximum PCBs Capacity	400 pcs (0.6 mm thick PCB)
Cycle Time	Approx. 10 seconds
Power Source	100, 230VAC 1Ph
Power Consumption	150VA max
Air Pressure	4-6 bar
Air Consumption	30 ltr/min max

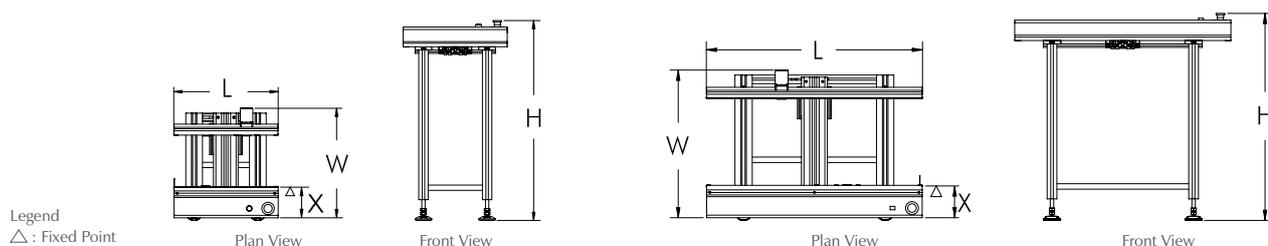
Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	MFC0200PM	500 x 720 x 1380	234 mm	110 kg
L	MFC0200PL	653 x 880 x 1380	234 mm	140 kg

# LINKING CONVEYOR

## (500 & 1000 MM)

### Features

- ❖ Modular design
- ❖ Stability enhanced by 'robust design'
- ❖ Ergonomically designed arm rest
- ❖ Smooth and parallel width adjustment
- ❖ Multi-zone concept available upon request
- ❖ Different lengths available upon request
- ❖ SMEMA compatible
- ❖ Patented (SG Patent No: 91261)

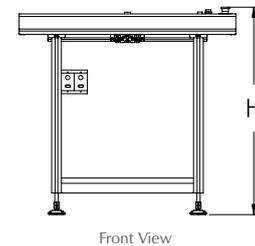
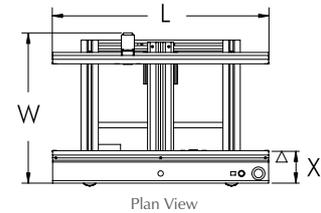
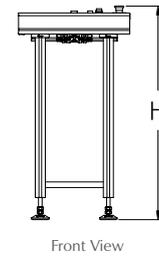
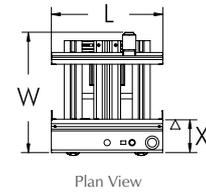


### SPECIFICATIONS

<b>Description</b>	This unit is used to link between SMD machines or board handling units.
<b>Conveyor Concept</b>	Belt
<b>Conveyor Speed</b>	14 m/min or specify
<b>Power Source</b>	100, 230VAC 1Ph
<b>Power Consumption</b>	100VA max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	MFC0401-M	500 x 540 x 990	145 mm	27 kg
L	MFC0401-L	500 x 700 x 990	145 mm	30 kg
M	MFC0401-M	1000 x 540 x 990	145 mm	60 kg
L	MFC0401-L	1000 x 700 x 990	145 mm	70 kg

# INSPECTION CONVEYOR (500 & 1000 MM)



Legend  
△ : Fixed Point

## Features

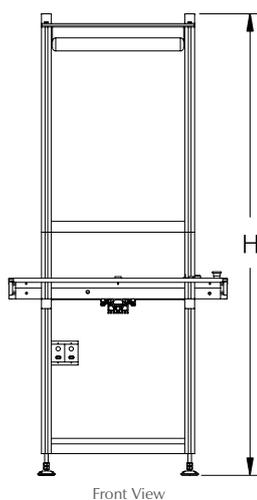
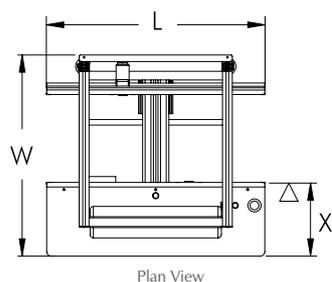
- ❖ Modular design
- ❖ Stability enhanced by 'robust design'
- ❖ Ergonomically designed arm rest
- ❖ Smooth and parallel width adjustment
- ❖ PCB inspection mode and bypass mode provided
- ❖ Multi-zone concept available upon request
- ❖ Different lengths available upon request
- ❖ Variable speed control
- ❖ SMEMA compatible
- ❖ Patented (SG Patent No: 91261)

## SPECIFICATIONS

SPECIFICATIONS	
Description	This unit is used as a visual inspection station for operators between SMT machines or board handling units.
Conveyor Concept	Belt
Conveyor Speed	0.5 - 14 m/min or specify
Power Source	100, 230VAC 1Ph
Power Consumption	100VA max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	MFC0501-M	500 x 540 x 990	145 mm	27 kg
L	MFC0501-L	500 x 700 x 990	145 mm	30 kg
M	MFC0501-M	1000 x 540 x 990	145 mm	70 kg
L	MFC0501-L	1000 x 700 x 990	145 mm	80 kg

# WORK STATION (1000 MM)



Legend  
 △ : Fixed Point



## Features

- ❖ Modular design
- ❖ Stability enhanced by 'robust design'
- ❖ PCB inspection mode and bypass mode provided
- ❖ Different lengths available upon request
- ❖ Multi-zone concept available upon request
- ❖ Equipped with lighting feature and bins bar
- ❖ Variable speed control
- ❖ SMEMA compatible
- ❖ Patented (SG Patent No: 91261)

### SPECIFICATIONS

SPECIFICATIONS	
<b>Description</b>	This unit allows manual assembly work to be carried out.
<b>Conveyor Concept</b>	Belt
<b>Conveyor Speed</b>	0.5 - 14 m/min or specify
<b>Conveyor Length</b>	1000 mm or specify
<b>Power Source</b>	100, 230VAC 1Ph
<b>Power Consumption</b>	200VA max

Size	Model No.	Machine Dimension (mm) L x W x H	Fixed Point to Front Dimension (X)	Weight (Approximately)
M	MFC1800-M	1000 x 745 x 2150	315 mm	90 kg
L	MFC1800-L	1000 x 905 x 2150	315 mm	100 kg

# CONVEYOR CHAINS

Pin Chain



Plastic Roller Chain



06B Slip Roller Chain



06B Chain







## Worldwide Offices

### ASIA (Main Design & Manufacturing Centre)

Nutek Private Limited  
 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 1110, 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

1811, Lefthand Circle, Suite B  
 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>

### EUROPE

Blik 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

Unit D4, The Seedbed Centre  
 Colchester Business Park  
 Colchester, Essex CO4 9HT  
 United Kingdom  
 Tel: (44) 1206 844 555  
 Fax: (44) 1206 844 554  
 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)



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