

Material Handling

MH-900 Series Loaders / Unloaders

Features and Benefits

- **Integrated dispensing and dual-lane material handling minimize footprint**
- **Extensive magazine loading capacity maximizes UPH**
- **Multiple workcell configurations include same-side load and unload, loader and unloader, and wafer film-frame handling**
- **Safe and reliable loading of a wide variety of parts, from very thin strips to large carriers and film-frame wafers**
- **Multiple sensors enable sophisticated jam detection and prevention**
- **Independent operation with other SMEMA equipment adds flexibility**

MH-912S same-side load and unload

MH-910W same-side film-frame load and load



MH-912L
loader

MH-912U
unloader

The latest generation of material handling equipment from Nordson ASYMTEK sets new standards for safe and reliable loading/unloading of everything from thin strip magazines to large pallets and film-frame wafers.

Scalability

The MH-900 series is configurable for inline or same-side load and unload operation, and supports both single or dual lane conveyors. Loader controls can be integrated with the Spectrum S-900N series dispenser or operate independently with other SMEMA equipment. The loaders easily manage a wide range of parts – from extremely thin frames or strips to large heavy boats, pallets, or film frame wafers.

Capacity is flexible; the system can handle multiple magazines for reduced loading frequency. PLC control enables future expandability when process needs change.

Changeover to different magazine and part sizes is quick and easy – no investment in different pusher tips or expensive tooling is required. An optional second shelf increases capacity for reduced loading frequency (not available on the MH-910W).



Optional dual shelf

MH-900 Series Loaders / Unloaders

Advanced Process Control

Adjustable transport speed and carrier staging maximize UPH, while multiple carrier sensors, active pinch wheels and thin strip guides ensure safe handling for the most challenging applications.

The side door slides open for loading magazines into adjustable spring-loaded trays, and a vertical elevator moves them into loading position.

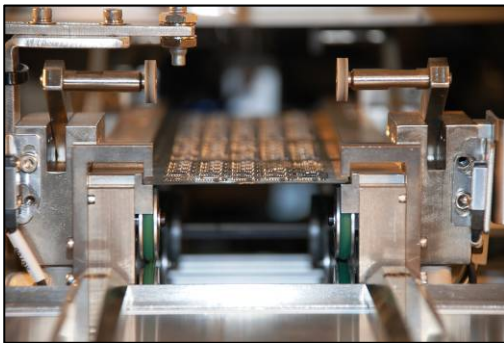
A frame sensor identifies the next available frame, significantly reducing search time for partially filled magazines. Frames are carefully pulled from the magazine and through the system by a soft-touch gripper and active pinch wheels.



Soft touch gripper and active pinch wheels

Elevator and shuttle operate independently with programmable speed to provide precise, high-speed movement.

Programmed shuttle positions simplify setup and ensure continuous dispensing by moving frames to the next available lane. The shuttle also enables processing a single magazine on multiple lanes.



Thin strip guides hold strips flat

Frame-mapping sensors eliminate time lost attempting to unload empty magazine slots and prevent double-loading in full slots. Adjustable thin strip guides ensure strips, whether flat, warped, or bent, are properly loaded into the finished magazine.

The MH-900 series loaders are fully enclosed with interlocked doors and windows for operator safety and part security. Access panels are easily removed, and built-in software maintenance tools make servicing easy. Robust system mechanics and a rigid enclosure ensure precise operation and reduced potential for jamming.

LoaderMove Touch™ Software and Control System



LoaderMove Touch main screen

Programs are easy to write with step-by-step instructions and a 147-mm color touch screen. Users can program magazines to process from the bottom or top, and to move frames to the next available lane or to a specific lane when traceability and lot control are required.

Film-frame Wafer Handling

The MH-910W same-side loader/unloader is designed for 150-mm film-frame wafer handling. When integrated with Nordson ASYMTEK's S-900N series dispenser, equipment throughput is maximized.



Unprocessed film-frame wafers are pulled from one cassette and returned to a second cassette once processed

Specifications: MH-900 Series

MH-912: Carrier/Part Dimensions Accommodated

Magazine width:	Min: 15 mm (0.59 in.) Max: 172 mm (6.8 in.)
Magazine length:	Min: 50.8 mm (2.0 in.) Max: 330 mm (13.0 in.)
Magazine height:	Min: 101.6 mm (4.0 in.) Max: 279.4 mm (11.0 in.)
Parts per magazine:	1 to 99
Part length:	Min: 50.8 mm (2.0 in.) Max: 330 mm (13.0 in.)
Part width:	Min: 15 mm (0.59 in.) Max: 160 mm (6.3 in.)
Part thickness:	Min: 100 µm (0.004 in.) Max: 18 mm (0.71 in.)
Min. frame pitch within magazine:	2.54 mm (0.10 in.)
Overboard clearance:	25 mm @ 3 mm (0.98 @ 0.12 in.) from edge of part
Underboard clearance:	25 mm @ 6.5 mm (0.98 @ 0.26 in.) from edge of part
Edge clearance required:	3 mm (0.12 in.)
Max. magazine weight:	6.8 kg (15 lb)
Max. carrier weight:	0.9 kg (2 lb)
Max. elevator payload:	40 kg (88 lb)

Controls

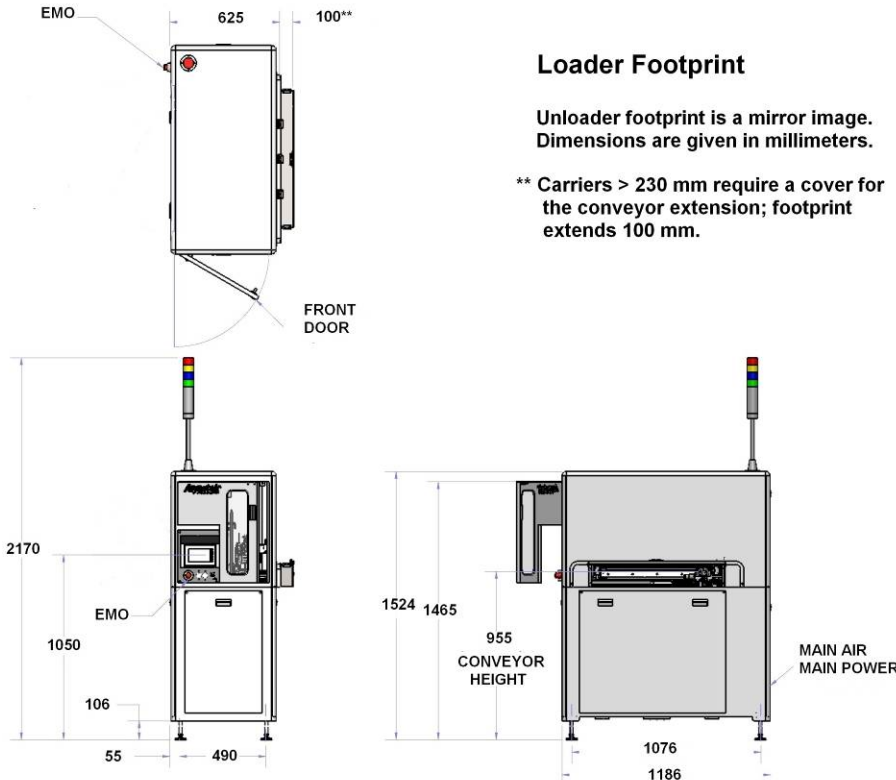
Stepper motor drive
 LoaderMove Touch™ software:
 PLC and 147-mm (5.8 in.) touchscreen
 10-program storage
 Standards compliance:
 SEMI-S2; SEMI-S8; SMEMA; CE

S-910W Film-frame Wafer Handler

Max. Frame Width (1): 216 mm (8.5-in.)
 (1) Contact factory regarding other frame widths.

Facility Requirements

Footprint: 625 x 1250 mm (24.6 x 49.2 in.)
 Voltage: 110-240 VAC, 50/60 Hz
 Amperage: 1.0A nominal, 1.5A peak @ 120 VAC
 Air supply: 552 kPa (80 psi) 1 SCFM @ 80 psi
 Weight: 308 kg (680 lb)



**For more information,
speak with your local
representative or
contact your regional
office.**

Nordsonasymtek.com

North America

Headquarters
Carlsbad, CA, USA
+1.760.431.1919
info@nordsonasymtek.com

China

info@asymtek.cn

Shanghai
+8621.3866.9166

Beijing
+8610. 8453.6388

Guangzhou
+8620.8554.0092

Europe

Maastricht, Netherlands
+31. 43.352.4466
cs.europe@asymtek.com

Japan

Tokyo
+81.3.5762.2801
Info-ip@nordsonasymtek.com

Korea

Seoul
+82.31.765.8337
info@nordsonasymtek.com

India

Chennai
+91. 44.4353.9024
info@nordsonasymtek.com

S.E. Asia/Australia

Singapore
+65.6796.9514
info@nordsonasymtek.com

Taiwan

+886.229.02.1860
info@nordsonasymtek.com

Nordson ASYMTEK
+1.760.431.1919 Phone
info@nordsonasymtek.com Email
2747 Loker Avenue West
Carlsbad, CA USA 92010-6603
www.nordsonasymtek.com

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