



# Automatic Pallet Changer System with Light Curtain Guarding

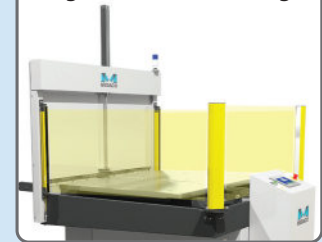
Increase productivity and eliminate idle time by changing parts **OUTSIDE** the VMC on a Pallet Changer while the spindle is cutting.



Optional Trunnion System  
for 4th-Axis Milling on VMC



Light Curtain Guarding

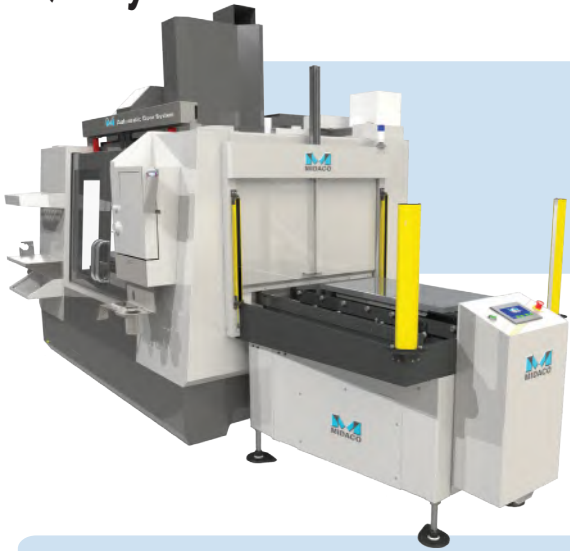


Retrofits to Any **NEW** or **EXISTING**  
Vertical Machining Center



## AUTOMATIC PALLET SYSTEMS

*Quality control tested with over 250,000 pallet changes before bringing product to market.*



- Load, unload, inspect parts and set up jobs while alternate pallet is in the machine.
- Reduce set up time on repeat jobs by dedicating tooling onto pallets.
- Exchange pallet in seconds with +/- .0001" (.0025 mm) repeatability.
- Pallets easily interchanged between machines or departments.
- Fully integrated with CNC machine by using two M-Functions.



- Heavy/large workpieces easily loaded outside the machine.
- Single shuttle systems up to 8000 lb (3636 kg) capacity\*
- Dual Shuttle systems up to 32,000 lb (14,528 kg) capacity\*
- Jobs can be easily interrupted for emergency.
- Increase machine and operator productivity.
- Equipped with Mitsubishi controls.

\*with part weight evenly distributed

## STATE OF THE ART VERSATILITY



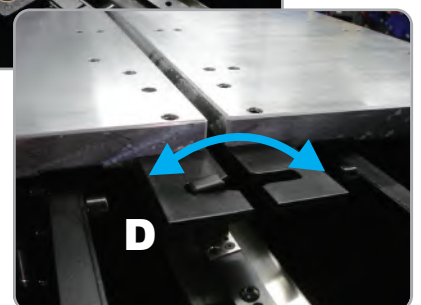
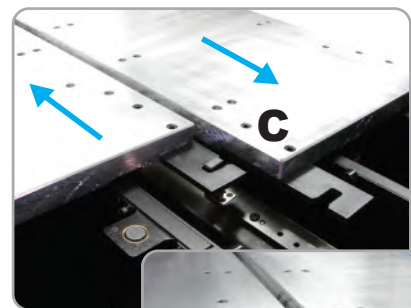
- MIDACO's PLC is fully integrated with the machine.
- While the alternate pallet is on the machine, the operator sets up the next pallet. Once ready, the operator pushes the "Pallet Ready" button (A) and walks away to attend other activities. When the pallet in the machine is complete, the next pallet shuttles in automatically.
- The PLC allows the operator to program pallet acceleration and deceleration according to the weight of the fixture to optimize performance.

### Keypad (B) Provides:

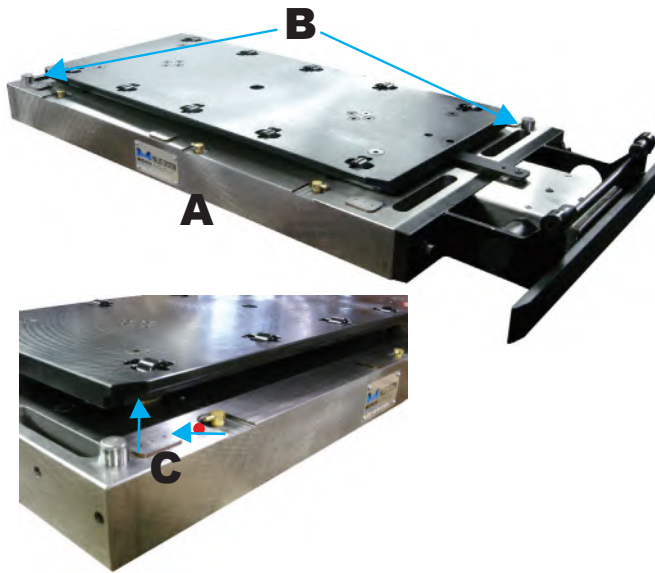
- Password protected access
- Parameters page access
- Manual functions access
- Current I/O status
- Diagnostic pages

### Electric Servo Drive Provides Proven Reliability

MIDACO's precision engineered Servo Drive assembly (C) extends into the machining center, tilts and engages with the pallet coupler (D) to remove the pallet from the machining center. The Servo Drive then delivers the next pallet into the machine in seconds.



## RECEIVER

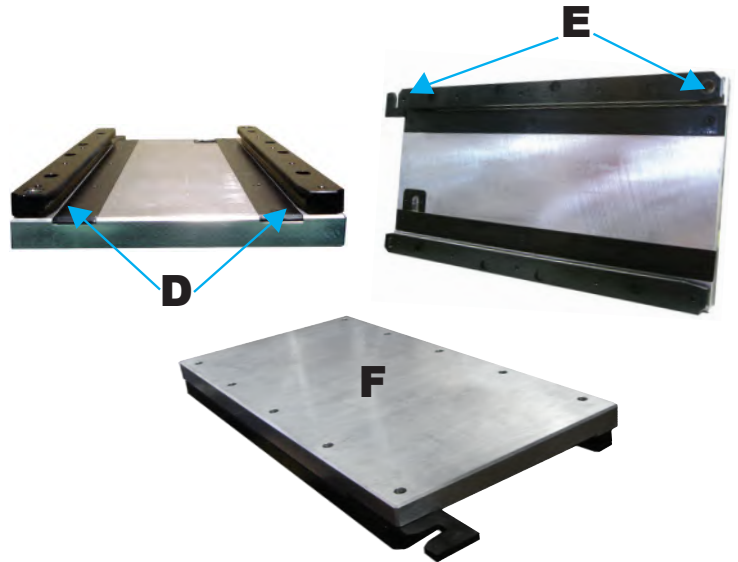


(A) Cast Iron receiver mounts directly to the machine table.

(B) Hardened and ground locating pins assure +/- .0001" (.0025 mm) repeatability.

(C) MIDACO's patented "Dual Air Blast" blows air up through and across the contact pads for chip removal. (see inset)

## PALLET



Precision ground steel rails (D) include hardened and ground bushings (E) to assure accuracy and durability.

Standard plain cast aluminum pallets (F) offer extreme versatility.

Cast Iron and T-Slotted Cast Iron custom pallets are optional.

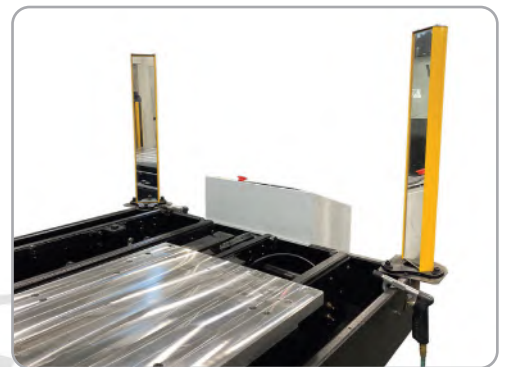
## Light Curtain Guarding

CE UK CA



All models of the Automatic Pallet Changer System are available with **Light Curtain Guarding**.

With 3-sided guarding via a light emitter, mirrors and sensors, a pallet change will not occur if the invisible light beams surrounding the shuttle system are breached.



*Since 1969, MIDACO has been a leader in providing innovative and quality solutions to improve manufacturing efficiency for companies worldwide.*



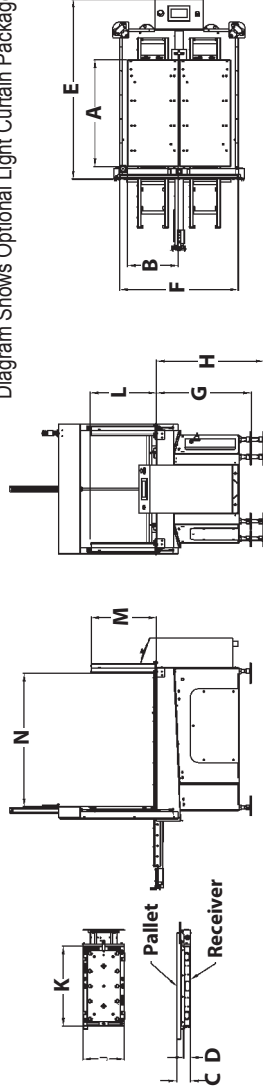
# AUTOMATIC PALLET SYSTEM SPECIFICATIONS

MIDACO pallet systems are designed for machines with stationary guarding. Some machines require options or customization. Contact your sales representative to confirm model and specifications for all applications.

Automatic	A2215SD & A2216SD	A2416SD & A2716SD	A3016SD	A3020SD & A3020SD	A4020SD	A4025SD	AS4525SD	AS5020SD	AS5025SD	A5025SD	A6025SD, A6030SD, A6432SD	A640SD & A6440SD
Specifications	lbs. / in	kg / mm	lbs. / in	kg / mm	lbs. / in	kg / mm	lbs. / in	kg / mm	lbs. / in	kg / mm	lbs. / in	kg / mm
Clamping Force*	4500	2041.2	4500	2358.7	5200	2358.7	5200	2358.7	7500	3401.9	7500	3401.9
Receiver Weight	95	43.1	95-107	43.1-48.5	223	101.2	239	108.4	240	108.9	243	110.2
Pallet Thickness	1	25.4	1-1.25	25.4-31.8	1.5	38.1	1.5	38.1	2	50.8	2	50.8
Pallet Load Cap**	250-500	113.4-226.8	250-500	113.4-226.8	1000 †	453.6	1000 †	453.6	2000	907.2	4000	1814.4
A (Pallet X Dim)	22	558.8	24-28	609.6-711.2	30	762.0	40	1016.0	45	1143.0	50	1270.0
B (Pallet Y Dim)	14-15	355.6-381	14-15	355.6-381	15.5	393.7	17-19	431.8-482.6	19	482.6	24	609.6
C	4-13	104.9	4-13-4-4	104.9-111.1	5-17	131.3	5-17	131.3	5-67	144.0	5-67	144.0
D	2.5	63.5	2.5	63.5	2.56	65.0	2.56	65.0	2.56	65.0	2.56	65.0
E	47.1	1196.3	53	1346.2	57.4	1458.0	68	1727.2	77.4	1966.0	77.4	1966.0
F (Min Height)	35.2	894.1	35.2	894.1	36.2	919.5	44.2	1122.7	44.2	1122.7	54.2	1376.7
G (Max Height)	34.8	883.9	34.8	883.9	38	965.2	38	965.2	38	965.2	38	965.2
H (Max Height)	44.8	1137.9	44.8	1137.9	49	1244.6	49	1244.6	49	1244.6	49	1244.6
J (Receiver)	13	330.2	13	330.2	15.5	393.7	15.5	393.7	15.5	393.7	15.5	393.7
K (Receiver)	18	457.2	18	457.2	30	762.0	30	762.0	30	762.0	30	762.0
L (Door Opening)	16	406.4	16	406.4	20	508.0	20	508.0	20	508.0	20	508.0
M (LC Height)	24	609.6	24	609.6	24	609.6	24	609.6	24	609.6	24	609.6
N (LC Opening)	30	762.0	36	914.4	39.9	1013.5	39.9	1014.0	49.9	1267.5	49.9	1269.0

Automatic	A8030SD & A8432SD	A8035SD & A8440SD	A12030SD & A12040SD	A15032SD
Specifications	lbs. / in	kg / mm	lbs. / in	kg / mm
Clamping Force*	20500	9298.6	20500	9298.6
Receiver Weight	1298	588.8	1298	588.8
Pallet Thickness	2.5	63.5	2.5	63.5
Pallet Load Cap**	8000	3628.7	8000	3628.7
A (Pallet X Dim)	80-84	2032-2133.6	80-84	2032-2133.6
B (Pallet Y Dim)	29-31	736.6-787.4	34-5-39	876.3-990.6
C	8-12	206.2	8-12	206.2
D	4.24	107.7	4.24	107.7
E	120.5	3060.7	120.5	3060.7
F	73.2	1859.3	85	2159.0
G (Min Height)	45	1143.0	45	1143.0
H (Max Height)	57-65	1448-1651	57-65	1448-1651
J (Receiver)	25.5	647.7	25.5	647.7
K (Receiver)	75	1905.0	75	1905.0
L (Door Opening)	32	812.8	32	812.8
M (LC Height)	36.3	922.0	36.3	922.0
N (LC Opening)	99.2	2519.7	97.7	2481.6

Diagram Shows Optional Light Curtain Package



**NOTE: Pallet load capacity is based on the weight of the parts evenly distributed on pallet.**



\*At 100PSI (6.9 bar) \*\*At 120PSI (8.2 bar) with weight evenly distributed on pallets  
 † Optional 2000 lb (907kg) Pallet Load Capacity with weight evenly distributed on pallets.  
 Patented. Specifications subject to change without notice.

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