

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



A4020SD shown on Hwacheon Vesta 1000+

Retrofits to **NEW** or **EXISTING**
HWACHEON Vertical Machining Centers

AUTOMATIC PALLET CHANGER

It all comes down to... "Is your VMC spindle running?"



A4020SD shown on Hwacheon VESTA-1000+

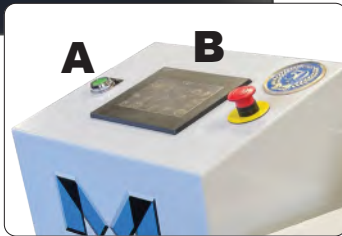
- Load, unload, inspect parts and set up jobs while alternate pallet is in the machine.
- Reduce set up time on repeat jobs by dedicating tooling onto pallets.
- Exchange pallet in seconds with +/- .0001" (.0025 mm) repeatability.
- Pallets easily interchanged between machines or departments.

HWACHEON	MIDACO	Pallet Size - inches (mm)
VESTA-660	AS2716SD	27" x 15" (685.8 x 381mm)
VESTA-1000+	A4020SD	40" x 19" (1016 x 482.6mm)
eVESTA-1100	A4020SD	40" x 19" (1016 x 482.6mm)
VESTA-1300	A6025SD	60" x 24" (1524 x 609.6mm)
VESTA-1650	A6432SD	64" x 31" (1625.6 x 787mm)
VESTA-2000	A8035SD	80" x 34.5" (2032 x 876.3mm)
VESTA-850B	A3020SD	30" x 19" (762 x 482.6mm)
VESTA-1050B	A4020SD	40" x 19" (1016 x 482.6mm)
VESTA-1300B	AS5025SD	50" x 24" (1270 x 609.6mm)
VESTA-500T	AS2716SD	27" x 15" (685.8 x 381mm)
VESTA-650T	A5025SD	50" x 24" (1270 x 609.6mm)

Pallet Changer System includes two (2) standard cast aluminum pallets.

- Heavy/large workpieces easily loaded outside the machine.
- Up to 8000 lb (3636 kg) capacity on largest model with part weight evenly distributed
- Jobs can be easily interrupted for emergency.
- Increase machine and operator productivity.
- Equipped with Mitsubishi controls.

FULLY INTEGRATED WITH VMC



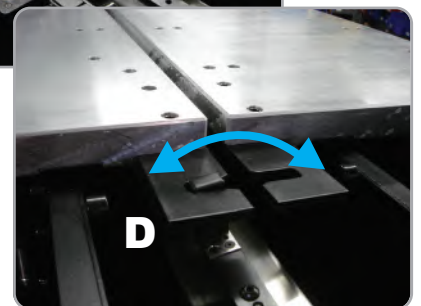
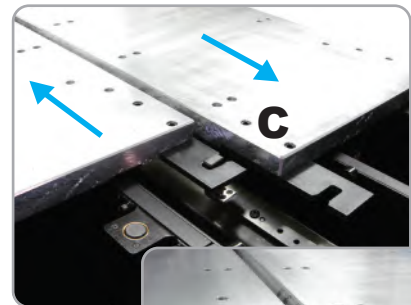
Keypad (B) Provides:

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

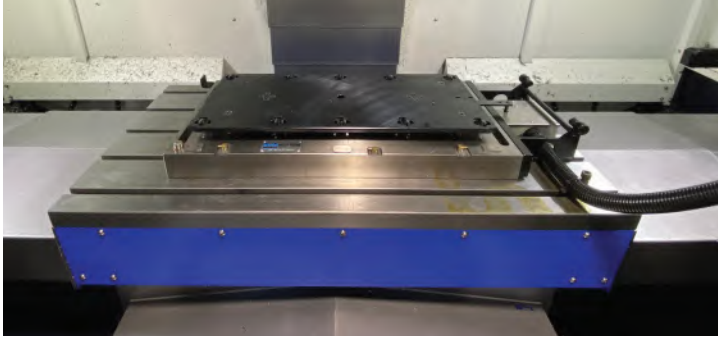
Electric Servo Drive Provides Proven Reliability

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.

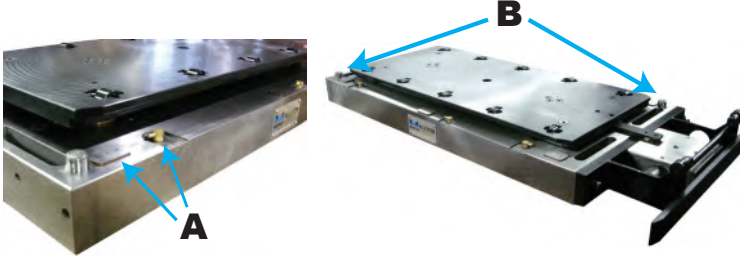
- MIDACO's PLC is fully integrated with the machine using two M-functions.
- While the alternate pallet is in the machine, the operator sets up the next pallet. Once ready, the operator pushes the "Pallet Ready" button (A) and walks away to attend other activities. When the pallet in the machine is complete, 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.



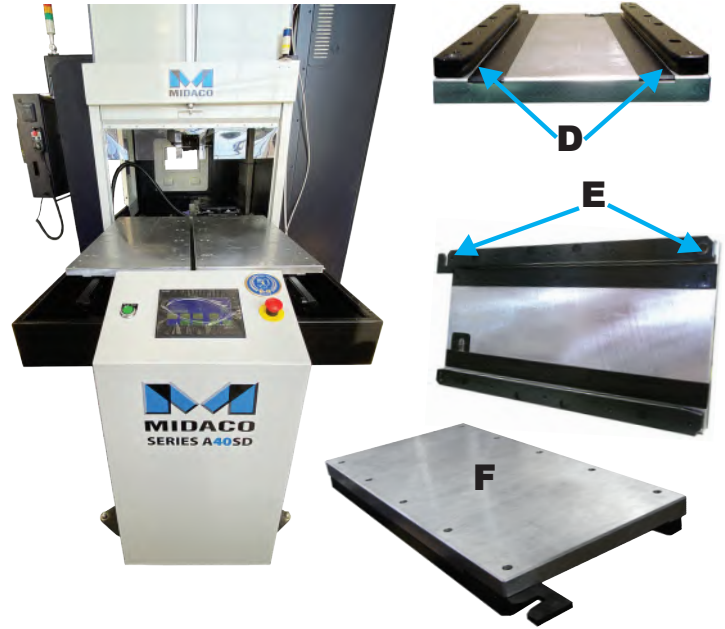
RECEIVER



- Cast Iron receiver mounts directly to the machine table.
- **(A)** MIDACO's patented "Dual Air Blast" blows air up through and across the contact pads for chip removal.
- **(B)** Hardened and ground locating pins assure +/- .0001" (.0025 mm) repeatability.



PALLET



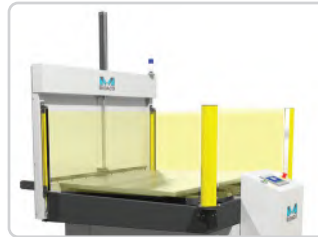
- Precision ground steel rails **(D)** include hardened and ground bushings **(E)** to assure accuracy and durability.
- Standard plain cast aluminum pallets **(F)** offer extreme versatility. Cast Iron and T-Slotted Cast Iron custom pallets are optional.

LIGHT CURTAIN GUARDING

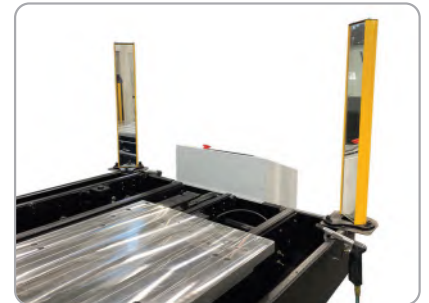
CE UK
CA



A4020SD with Light Curtain Guarding
shown on Hwacheon eVESTA-1100



- All models of the Automatic Pallet Changer System are available with **Light Curtain Guarding** meeting international CE and UKCA compliance.
- 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.

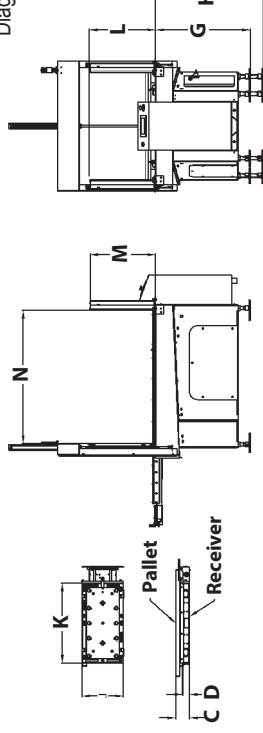
AUTOMATIC PALLET SYSTEM SPECIFICATIONS

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 & AS2716SD	A3016SD	A3016SD & A3020SD	A4020SD	A4025SD	AS4525SD	AS5020SD	AS5025SD	A502SD	A6025SD, A6030SD, A6432SD	A6040SD & 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	5200	2358.7	5200	2358.7	7500	3401.9	7500	3401.9	15400	6985.3
Receiver Weight	95	43.1	95-107	43.1-48.5	223	101.2	239	108.4	240	108.9	594	269.4
Pallet Thickness	1	25.4	1-1.25	25.4-31.8	1.5	38.1	2	50.8	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	6.91	175.5
D	2.5	63.5	2.5	63.5	2.56	65.0	2.56	65.0	2.56	65.0	3.8	96.5
E	47.1	1196.3	53	1346.2	57.4	1458.0	68	1727.2	77.4	1966.0	91.3	2319.0
F	35.2	894.1	35.2	894.1	36.2	919.5	44.2	1122.7	54.2	1376.7	69	1752.6
G (Min 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	52	1320.8
J (Receiver)	13	330.2	13	330.2	15.5	393.7	15.5	393.7	15.5	393.7	19.5	495.3
K (Receiver)	18	457.2	18	457.2	30	762.0	30	762.0	30	762.0	50	1270.0
L (Door Opening)	16	406.4	16	406.4	20	508.0	20	508.0	20	508.0	28	711.2
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	59.9	1521.5

Automatic		A8030SD & A8432SD		A8035SD & A8440SD		A12030SD & A12040SD		A15032SD	
Specifications	lbs. / in	kg / mm	lbs. / in	kg / mm	lbs. / in	kg / mm	lbs. / in	kg / mm	lbs. / in
Clamping Force*	20500	9298.6	20500	9298.6	20500	9298.6	20500	9298.6	20500
Receiver Weight	1298	588.8	1298	588.8	1400	635.0	1400	635.0	1400
Pallet Thickness	2.5	63.5	2.5	63.5	2.5	63.5	2.5	63.5	2.5
Pallet Load Cap**	8000	3628.7	8000	3628.7	8000	3628.7	8000	3628.7	8000
A (Pallet X Dim)	80-84	2032-2133.6	80-84	2032-2133.6	120	3048.0	150	3810.0	150
B (Pallet Y Dim)	29-31	736.6-787.4	34.5-39	876.3-990.6	29-39	736.6-990.6	31-49	787.4-1244.6	31-49
C	8-12	206.2	8-12	206.2	8.1	205.7	8.1	205.7	8.1
D	4-24	107.7	4-24	107.7	4.25	108.0	4.25	108.0	4.25
E	120.5	3060.7	120.5	3060.7	161	4089.4	183	4648.2	183
F	73.2	1859.3	85	2159.0	73-92	1854-2337	73-112	1854-2845	73-112
G (Min Height)	45	1143.0	45	1143.0	38	965.2	38	965.2	38
H (Max Height)	57-65	1448-1651	57-65	1448-1651	52	1320.8	52	1320.8	52
J (Receiver)	25.5	647.7	25.5	647.7	25.5	647.7	25.5	647.7	25.5
K (Receiver)	75	1905.0	75	1905.0	75	1905.0	75	1905.0	75
L (Door Opening)	32	812.8	32	812.8	32	812.8	32	812.8	32
M (LC Height)	36.3	922.0	36.3	922.0	24	609.6	24	609.6	24
N (LC Opening)	99.2	2519.7	97.7	2481.6	139.4	3541.0	169.4	4303.0	169.4

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.

0325



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MIDACO CORPORATION

2000 Touhy Avenue

Elk Grove Village, IL 60007 USA

phone: 847.593.8420

fax: 847.593.8451

email: sales@midaco-corp.com