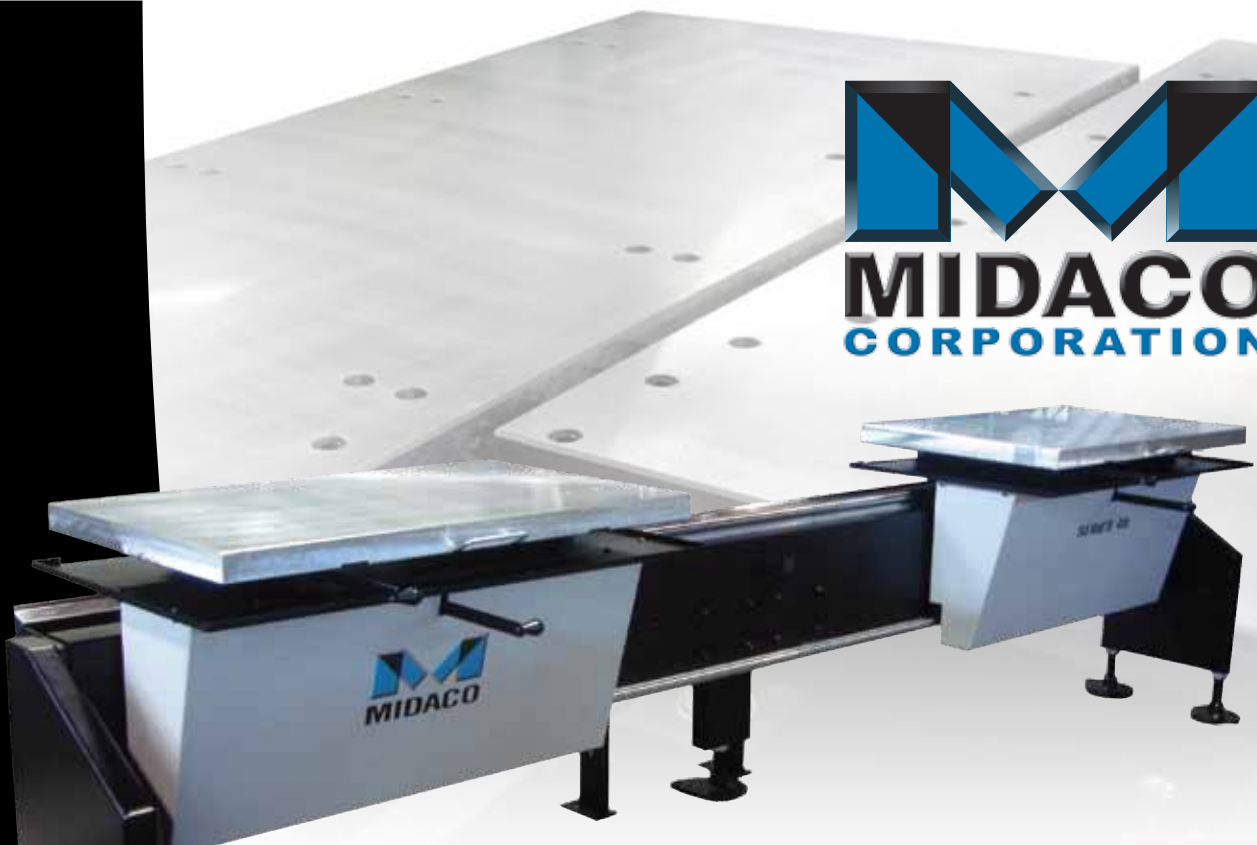


Manual Pallet System



Compact shuttle with telescoping legs, adapts to all machines including those with chip/coolant drawers

Load, unload, inspect parts and set up jobs while alternate pallet is in machine

Minimize set up time on repeat jobs by dedicating tooling onto pallets

Pallets easily interchanged between machines or departments

Heavy/large workpieces easily loaded outside the machine

Up to 2000+ lbs. (909 kgs.) capacity

Linear guide rails for ease of use



Increase machine and operator productivity

Air blast at each contact pad for chip removal

Palletized jobs easily interrupted for emergency or J.I.T. job

Change pallet in seconds with +/- .0001" (.0025mm) repeatability

MANUAL LIFT-OFF



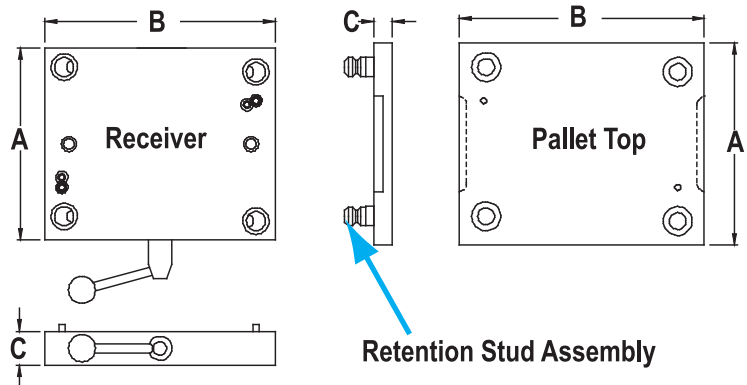
For productivity on a II types of machining centers, MIDACO's Micro Pallet System™ allows operators to manually change pallets in seconds.

Easy flip handle precisely locks pallet into cast iron receiver.

The low profile receiver does not require air supply making it versatile for horizontal, vertical and special application machines.

Each Standard Micro Pallet System (model MPS 31) Includes:

	Receiver	Pallet Top
Material:	Cast Iron	Aluminum
Quantity:	One	Two
Weight:	40 lbs (18.18 kg)	14 lbs (6.36 kg)
A:	10" (254mm)	10.5" (266.7mm)
B:	12" (304.8mm)	12.75" (323.85mm)
C:	1.75" (44.45mm)	1" (25.4mm)
Retention Stud Assembly - 8 standard		



PNEUMATIC LIFT-OFF



Pallet guide rails on the front of the receiver allow safe and easy loading of pallets in only seconds. The operator simply pushes a button to activate the pneumatic clamping mechanism.



Optional "Side by Side" shuttle or Pallet Transfer Cart can be added to assist operators when moving pallets or heavy fixtures.



The "Receiver and Pallets Only" systems are available with pallets from 22"x16" (558.8 mm x 406.4 mm).

"SIDE BY SIDE" SHUTTLE PALLET SYSTEM

MIDACO's front load "Side by Side" Shuttle Pallet System comes with one cast iron, pneumatically powered receiver, two cast aluminum pallets and one "Side by Side" Shuttle allowing an operator to switch pallets in seconds.

The operator simply activates the pneumatic receiver to unclamp the pallet. The completed pallet (**A**) can be rolled out of the machine to the shuttle. The next pallet (**B**) can be quickly rolled into the machine and clamped in only seconds.



"Side by Side" Shuttle Systems adapt to a variety of applications:

- Vertical Milling Machines
- Drill and Tap Centers
- Surface Grinders
- Coordinate Measuring Machines
- Special Machines



- ◆ (**C**) Precision ground linear guide rails provide smooth and easy transfer of pallets.
- ◆ (**D**) Adjustable legs telescope out allowing access to chip/coolant drawers.
- ◆ (**E**) Full length shuttle drip through captures coolant and chips.

RECEIVER



Cast Iron pneumatically powered receiver mounts to the machine table.
Standard plain cast aluminum pallets.
Optional cast iron, T-Slotted and Tapped hole pallets available. Pallet handle promotes ease of use.

"Air Blast" at each contact pad of pneumatic receiver is standard for chip removal.
"Dual Palm Buttons" (Series 20 and larger) activate receiver maximizing operator safety.
Repeatability is +/- .0001" (.0025 mm).

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

CUSTOMER SATISFACTION

"Since I've added 5 MIDACO pallet changers, I've increased my productivity OVER 600%."

"100% plus increase in productivity without suffering quality."

"Productivity has increased over 90% and downtime due to loading and unloading parts was greatly reduced."

"25% savings in job set up time, eliminating lifting of heavy devices such as vises and rotary heads."

"We have achieved a 2 hour savings in production during an 8 hour shift, a 25% increase in productivity."

"I've been in the industry for over 25 years and have seen a lot of different machines and pallet changers. MIDACO's product is the best and most user friendly I've seen."

VARIOUS SYSTEMS AVAILABLE

Various pallet sizes, automatic, rotary and double systems are available along with other accessories designed to meet your needs.



Automatic Pallet System



Dual Automatic System



Micro Pallet System - MPS31



Automatic Door System

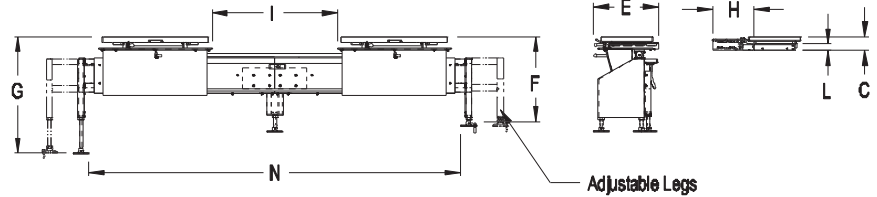
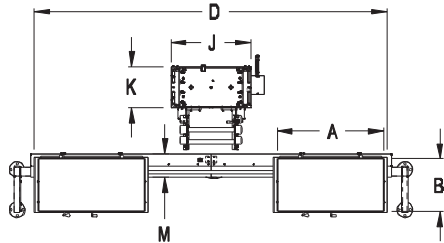


Manual "Lift Off" System



Manual Rotary System - MRPC

MANUAL PALLET SYSTEMS



	M1614FL	M2216FL	M2020FL	M3016/18/20FL	M4020FL	M5020FL	M5025/30FL	M6030FL	M7230FL
Clamping Force:*	4200 (1905)	4200 (1905)	4200 (1905)	5200/7500*** (2360/3410)	5200/7500*** (2360/3410)	5200/7500*** (2360/3410)	5200/7500*** (2360/3410)	5200/7500*** (2360/3410)	5200/7500*** (2360/3410)
Receiver Weight	80 (36)	80 (36)	80 (36)	243 (110)	243 (110)	243 (110)	243 (110)	243 (110)	243 (110)
Pallet Weight	31 (14)	55 (25)	63 (29)	140 (64)	170/212*** (80/96)	252 (115)	325 (148)	435 (198)	510 (232)
Pallet Thickness	1.0 (25.4)	1.0 (25.4)	1.0 (25.4)	1.5 (38)	1.5/2.0*** (38.1/50.8)	2.0 (50.8)	2.0 (50.8)	2.0 (50.8)	2.0 (50.8)
Pallet Load Cap:**	300 (136)	300 (136)	300 (136)	1000/2000*** (454/908)	1000/2000*** (454/908)	500/2000*** (227/908)	500/2000*** (227/908)	500/2000*** (227/908)	500/2000*** (227/908)
A (Pallet X Dim)	16 (406)	22 (559)	20 (508)	30 (762)	40 (1016)	50 (1270)	50 (1270)	50-60 (1270-1524)	72 (1829)
B (Pallet Y Dim)	14 (356)	16 (408)	20 (508)	16-20 (406-508)	20 (508)	20 (508)	25 (635)	30 (762)	30 (762)
C	4.12 (104)	4.12 (104)	4.12 (104)	5.17 (132)	5.17/5.67*** (132/144)	5.67 (144)	5.67 (144)	5.67 (144)	5.67 (144)
D	80 (2032)	80 (2032)	80 (2032)	109 (2770)	133 (3378)	162 (4115)	162 (4115)	192 (4877)	228 (5791)
E	20 (508)	20 (508)	23.5 (567)	25 (635)	25 (635)	25 (635)	34 (864)	34 (864)	34 (864)
F (Min Height)	29 (736)	29 (736)	29 (736)	34.5 (876)	35 (889)	40 (1016)	40 (1016)	40 (1016)	40 (1016)
G (Max Height)	39 (990)	39 (990)	39 (990)	44 (1117)	45 (1143)	51 (1295)	51 (1295)	51 (1295)	54 (1372)
H	****	****	****	****	****	****	****	****	****
I	30 (762)	30 (762)	30 (762)	39 (990)	47 (1194)	58 (1473)	58 (1473)	68 (1727)	74 (1880)
J (Receiver)	14 (355)	14 (355)	14 (355)	30 (762)	30 (762)	30 (762)	30 (762)	30 (762)	30 (762)
K (Receiver)	13 (330)	13 (330)	13 (330)	15.5 (394)	15.5 (394)	15.5 (394)	15.5 (394)	15.5 (394)	15.5 (394)
L	2.5 (63.5)	2.5 (63.5)	2.5 (63.5)	2.56 (65)	2.56 (65)	2.56 (65)	2.56 (65)	2.56 (65)	2.56 (65)
M	6.5 (165)	6.5 (165)	8.5 (218)	10.2 (260)	10.2 (260)	10.2 (260)	13.25 (337)	13.25 (337)	13.25 (337)
N (Adjustable Min)	75 (1905)	75 (1905)	75 (1905)	104 (2642)	133 (3378)	163 (4140)	163 (4140)	193 (4902)	230 (5842)

Weight capacities shown in lbs (kgs). Dimensions shown in inch (mm)

*At 100 PSI (6.9 bar) **At 120 PSI (8.2 bar) ***Optional 2000 lb (909 kg) Pallet Load Capacity Includes 2" pallets on 40 Series ****Manufactured to fit specific VMC application

Patent. Specifications subject to change without notice. Fully automatic systems are also available.

- ◆ 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.