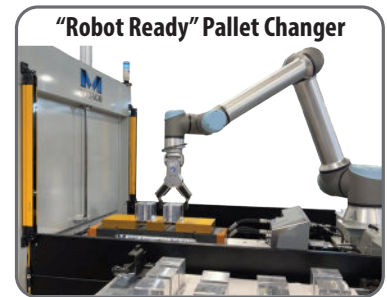




# Pallet Changer Model Guide for / **Haas** F1 Team **Machines** OFFICIAL MACHINE TOOL



Pallet Changers for **NEW** or **EXISTING**  
**HAAS** Vertical Machining Center

**MIDACO** Pallet Changers and Automatic Door Openers increase productivity and decrease down time. **KEEP THE SPINDLE RUNNING!**

# Pallet Changer Model Guide for HAAS Machines



## Series A16SD

**ADT-1SDCELC fits:** DT-1  
**ADM-1SDCELC fits:** DM-1



## Series A30SD

**A3016SDCELC fits:**  
VF-2  
VF-2SS



## Series A40SD

**A4020SDCELC fits:**  
VF-3  
VF-3SS



## Series AS50SD

**AS5020SDCELC fits:**  
VF-4  
VF-4SS



## Series A60SD

**A6025SDCELC fits:**  
VF-5XT & VF-5/50XT



## Series A80SD

**A8432SDCELC fits:**  
VF-7 & VF-7/50



## Series A120SD & A150SD

**A12030SDCELC fits:**  
VF-10 & VF-10/50



## Automatic 4-Pallet Pool

- 360 degree rotation
  - 2 flip-up access panels
  - No overhead obstruction for crane loading.
- Fits:** DT-2, DM-2, VF-2, VF-2YT, VF-3, VF-3YT, VF-4 & VF-5



See also: Manual M2216FL\*

**ADT-2SDCELC fits:** DT-2  
**ADM-2SDCELC fits:** DM-2



See also: Manual M2216FL\*



See also: Manual M3016FL\*

**A3020SDCELC fits:**  
VF-2YT  
VF-2SSYT  
VM-2



See also: Manual M3020FL\*



See also: Manual M4020FL\*

**A4025SDCELC fits:**  
VF-3YT & VF-3YT/50  
VF-3SSYT  
VM-3



See also: Manual M4025FL\*



See also: Manual M5020FL\*

**AS5025SDCELC fits:**  
VF-5 & VF-5/50  
VF-5SS



See also: Manual M5025FL\*



See also: Manual M6025FL\*

**A6432SDCELC fits:**  
VF-6 & VF-6/50  
VF-6SS  
VM-6



Manual N/A

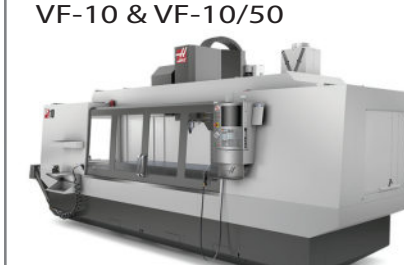


Manual N/A

**A8440SDCELC fits:**  
VF-9 & VF-9/50

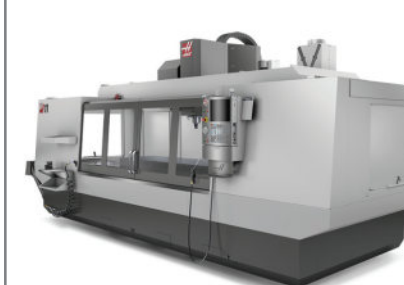


Manual N/A



Manual N/A

**A12040SDCELC fits:**  
VF-11 & VF-11/50



Manual N/A



**A15032SDCELC fits:**  
VF-12 & VF-12/50

**A15040SDCELC fits:**  
VF-14 & VF-14/50

Manual N/A



## "Robot Ready"

Available for Automatic Pallet Changers series A16SD through A60SD

- Automatic Pallet Changer
- Robot/Cobot Mount
- Hydraulic Docking System

(does not include robot or vises, Light Curtain and Side Carts are additional options)

**A2216SDCELC fits:** MM2, SMM2, VF-1 & VF-1YT

**A2416SDCELC fits:** DC-1

(Automatic N/A for MM or SMM)

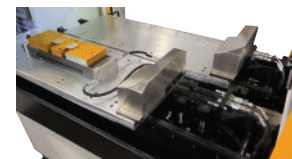


See also Manuals:  
M1614FL\* for MM & SMM  
M2216FL\* for DC-1, VF-1, MM2 & SMM2  
M2020FL\* for VF-1YT

### Additional Midaco Products for Increased Productivity and Efficiency



AutoDoor Openers are available for Single and Double doors on VMCs, UMCs and Lathes.



Hydraulic Docking System for automated vises. Stays charged on the pallet while in the VMC without needing hoses.



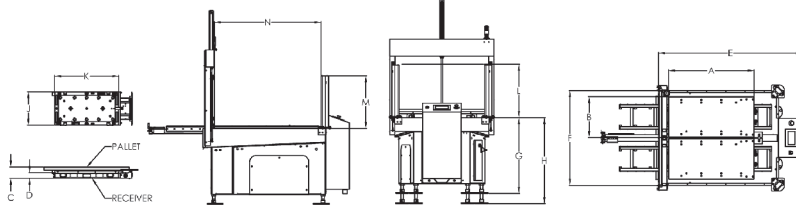
Industrial CNC Vacuums for Chips, Oil and Coolant Extraction & Liquid Reintegration.

\*All Manual Pallet Changers may require a Transfer Bridge depending on position of VMC control panel. See back of brochure for details.

# Automatic Pallet Changer Specifications



Note: Diagram shown with Light Curtain



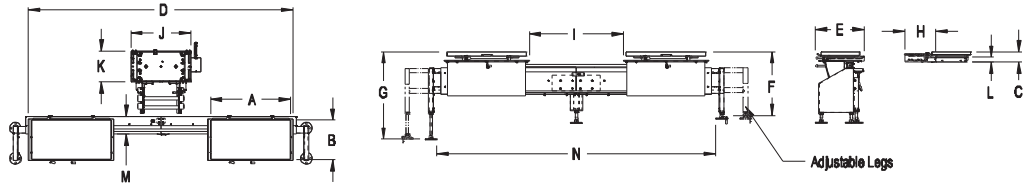
**DUAL systems available with one shuttle on each side of VMC with total of 4... 6... or 8 pallets.**

| Automatic         | A16SD     |         | A30SD     |         | A40SD     |         | AS40SD    |         | AS50SD    |         | A50SD     |         | A60SD     |           | A80SD     |           | A120SD    |           | A150SD    |           |
|-------------------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 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 | 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  | 15400     | 6985.3    | 20500     | 9298.6    | 20500     | 9298.6    | 20500     | 9298.6    |
| Receiver Weight   | 95        | 43.1    | 243       | 110.2   | 243       | 110.2   | 243       | 110.2   | 243       | 110.2   | 594       | 269.4   | 594       | 269.4     | 1539      | 698.1     | 1400      | 635       | 1400      | 635       |
| Pallet Thickness  | 1.0       | 25.4    | 1.5       | 38.1    | 1.5       | 38.1    | 2.0       | 50.8    | 2.0       | 50.8    | 2.0       | 50.8    | 2.0       | 50.8      | 2.5       | 63.5      | 2.5       | 63.5      | 2.5       | 63.5      |
| Pallet Load Cap** | 250-500   | 113-227 | 1000 †    | 454     | 1000 †    | 454     | 2000      | 907     | 2000      | 907     | 4000      | 1814    | 4000      | 1814      | 8000      | 3629      | 8000      | 3629      | 8000      | 3629      |
| A (Pallet X Dim)  | 22-27     | 559-686 | 30        | 762     | 40        | 1016    | 45        | 1143    | 50        | 1270    | 50        | 1270    | 60-64     | 1524-1626 | 80-84     | 2032-2134 | 120       | 3048      | 150       | 3810      |
| B (Pallet Y Dim)  | 14-15     | 356-381 | 15.5-19   | 394-483 | 19-24     | 483-610 | 24        | 609.6   | 19-24     | 483-610 | 24        | 609.6   | 24-39     | 610-991   | 29-39     | 737-991   | 29-39     | 737-991   | 31-49     | 787-1245  |
| C                 | 4.1       | 104.9   | 5.2       | 131.3   | 5.2       | 131.3   | 5.7       | 144     | 5.7       | 144     | 6.9       | 174     | 6.9       | 174       | 8.1       | 205.7     | 8.1       | 205.7     | 8.1       | 205.7     |
| D                 | 2.5       | 63.5    | 2.6       | 65      | 2.6       | 65      | 2.6       | 65      | 2.6       | 65      | 3.8       | 95.3    | 3.8       | 95.3      | 4.3       | 108       | 4.3       | 108       | 4.3       | 108       |
| E                 | 45        | 1143.0  | 54.5      | 1384.3  | 68        | 1727.2  | 74.8      | 1899.9  | 78        | 1981.2  | 78        | 1981.2  | 88        | 2235.2    | 120       | 3048      | 161       | 4089.4    | 183       | 4648.2    |
| F                 | 35.2      | 894.1   | 45        | 1143.0  | 45        | 1143.0  | 54.2      | 1376.7  | 57        | 1447.8  | 57        | 1447.8  | 67        | 1701.8    | 73-92     | 1854-2337 | 73-92     | 1854-2337 | 73-112    | 1854-2845 |
| G (Min Height)    | 34.8      | 883.9   | 38        | 965.2   | 38        | 965.2   | 38        | 965.2   | 38        | 965.2   | 38        | 965.2   | 38        | 965.2     | 45        | 1143.0    | 38        | 965.2     | 38        | 965.2     |
| H (Max Height)    | 44.8      | 1137.9  | 49        | 1244.6  | 49        | 1244.6  | 49        | 1244.6  | 49        | 1244.6  | 52        | 1320.8  | 52        | 1320.8    | 57-65     | 1448-1651 | 52        | 1320.8    | 52        | 1320.8    |
| J (Receiver)      | 13        | 330.2   | 15.5      | 393.7   | 15.5      | 393.7   | 15.5      | 393.7   | 15.5      | 393.7   | 19.5      | 495.3   | 19.5      | 495.3     | 25.5      | 647.7     | 25.5      | 647.7     | 25.5      | 647.7     |
| K (Receiver)      | 18        | 457.2   | 30        | 762     | 30        | 762     | 30        | 762     | 30        | 762     | 50        | 1270    | 50        | 1270      | 75        | 1905      | 75        | 1905      | 75        | 1905      |
| L (Door Opening)  | 16        | 406.4   | 20        | 508     | 20        | 508     | 20        | 508     | 20        | 508     | 28        | 711.2   | 28        | 711.2     | 32        | 812.8     | 32        | 812.8     | 32        | 812.8     |
| M (LC Height)     | 24        | 621     | 24        | 621     | 24        | 621     | 24        | 621     | 24        | 621     | 24        | 621     | 24        | 621       | 24        | 621       | 24        | 621       | 24        | 621       |
| N (LC Opening)    | 30-36     | 769-922 | 39.9      | 1014    | 49.9      | 1269    | 59.9      | 1522    | 59.9      | 1522    | 58.9      | 1497    | 73.7      | 1871      | 99.2      | 2518      | 139.4     | 3541      | 169.4     | 4303      |

\*At 100PSI (6.9 bar) \*\*At 120PSI (8.2 bar) with weight evenly distributed † Optional 2000 lb (909kg) pallet load capacity with weight evenly distributed Patented. Specifications subject to change without notice.

# Manual Pallet Changer Specifications

(Manual Pallet Changer may require a Transfer Bridge depending on position of VMC control panel. Contact Midaco for quote on a specific application)



| Manual Series            | M10FL     |         | M20FL     |         | M30FL     |         | M40FL       |           | M50FL      |         | M60FL     |         |
|--------------------------|-----------|---------|-----------|---------|-----------|---------|-------------|-----------|------------|---------|-----------|---------|
| 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*          | 4200      | 1906.8  | 4200      | 1906.8  | 5200      | 2360.8  | 5200        | 2360.8    | 5200       | 2360.8  | 5200      | 2360.8  |
| Receiver Weight          | 80        | 36.3    | 80        | 36.3    | 243       | 110.3   | 243         | 110.3     | 243        | 110.3   | 243       | 110.3   |
| Pallet Weight            | ***       | ***     | ***       | ***     | ***       | ***     | ***         | ***       | ***        | ***     | ***       | ***     |
| Pallet Thickness         | 1         | 25.4    | 1         | 25.4    | 1.5       | 38.1    | 1.5         | 38.1      | 2          | 50.8    | 2         | 50.8    |
| Pallet Load Cap**        | 300       | 136.2   | 300       | 136.2   | 1000 †    | 454     | 1000 †      | 454       | 1000 †     | 454     | 1000 †    | 454     |
| A (Pallet X Dim)         | 16        | 406.4   | 20-22     | 508-559 | 30        | 762     | 40-45       | 1016-1143 | 50         | 1270    | 60        | 1524    |
| B (Pallet Y Dim)         | 14        | 355.6   | 16-20     | 406-508 | 16-20     | 406-508 | 20-25       | 508-635   | 20-25      | 508-635 | 25        | 635     |
| C                        | 4.12      | 104.6   | 4.12      | 104.6   | 5.17      | 131.3   | 5.17-5.67   | 131-144   | 5.67       | 144.0   | 5.67      | 144.0   |
| D                        | 80        | 2032.0  | 80        | 2032.0  | 109       | 2768.6  | 133-162     | 3378-4115 | 162        | 4114.8  | 192       | 4876.8  |
| E                        | 20        | 508.0   | 20-23.5   | 508-597 | 25        | 635.0   | 25-34       | 635-864   | 25-34      | 635-864 | 34        | 863.6   |
| F (Min Height)           | 29        | 736.6   | 29        | 736.6   | 34.5      | 876.3   | 35-40       | 889-1016  | 40         | 1016.0  | 40        | 1016.0  |
| G (Max Height)           | 39        | 990.6   | 39        | 990.6   | 44        | 1117.6  | 45-51       | 1143-1295 | 51         | 1295.4  | 51        | 1295.4  |
| H (this is VMC Specific) | -         | -       | -         | -       | -         | -       | -           | -         | -          | -       | -         | -       |
| I                        | 30        | 762.0   | 30        | 762.0   | 39        | 990.6   | 47-58       | 1194-1473 | 58         | 1473.2  | 68        | 1727.2  |
| J (Receiver)             | 14        | 355.6   | 14        | 355.6   | 30        | 762.0   | 30          | 762.0     | 30         | 762.0   | 30        | 762.0   |
| K (Receiver)             | 13        | 330.2   | 13        | 330.2   | 15.5      | 393.7   | 15.5        | 393.7     | 15.5       | 393.7   | 15.5      | 393.7   |
| L                        | 2.5       | 63.5    | 2.5       | 63.5    | 2.56      | 65.0    | 2.56        | 65.0      | 2.56       | 65.0    | 2.56      | 65.0    |
| M                        | 6.5       | 165.1   | 6.5-8.5   | 165-215 | 10.2      | 259.08  | 10.02-13.25 | 259-337   | 10.2-13.25 | 259-337 | 13.25     | 336.55  |
| N (Adjustable Min)       | 75        | 1905    | 75        | 1905    | 104       | 2641.6  | 133-163     | 3378-4140 | 163        | 4140.2  | 193       | 4902.2  |

Shown without Transfer Bridge



Shown with Transfer Bridge



\*At 100PSI (6.9 bar) \*\*At 120PSI (8.2 bar) with weight evenly distributed on pallet. † Optional 2000 lb (909kg) Pallet Load Capacity Patented. Specifications subject to change without notice. 10124

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.



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