

MO AC Series

Medium & High Level Order Picker Range

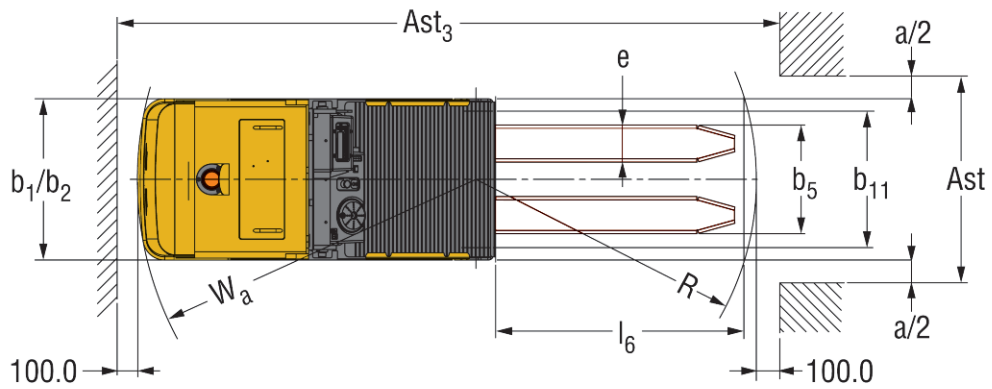
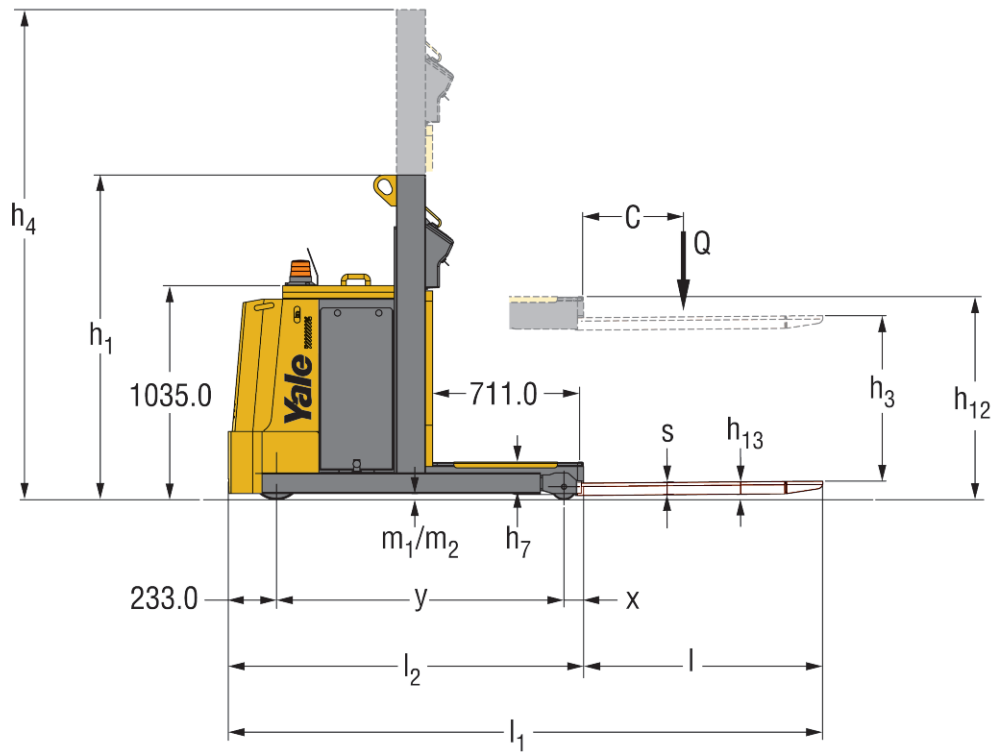
1,000kg



- Yale AC technology
- AC motors
- CANbus
- Fly-by-wire steering
- Enhanced comfort and performance
- Low maintenance features

Yale[®]
People. Products. Productivity.

Truck Dimensions MO10E AC



Mast details - M010E AC

| Model | Overall extended height (h^1) mm | Platform height from floor (h^{12}) mm | Overall lowered height (h^1) mm |
|---------------|---|---|--|
| MO10E AC - 32 | 5298 | 3207 | 2275 |
| MO10E AC - 36 | 5698 | 3607 | 2475 |
| MO10E AC - 40 | 6098 | 4007 | 2675 |
| MO10E AC - 44 | 6498 | 4407 | 2875 |
| MO10E AC - 48 | 6898 | 4807 | 3075 |

VDI 2198 General Specifications - MO10E AC 0.7, 12, 15

| | | | | | | |
|------------------|---|---|----------------------------|------------------------|-----------------------|----------------------|
| Characteristics | 1.1 | Manufacturer | | Yale | Yale | Yale |
| | 1.2 | Model designation | | MO10E AC 0.7 FC | MO10E AC 15 FC | MO10E AC 12 |
| | 1.3 | Power: Battery, Diesel, LPG, Electric mains | | Battery | Battery | Battery |
| | 1.4 | Operator type: manual, pedestrian, stand-on, seat, order picker | | Order Picker | Order Picker | Order Picker |
| | 1.5 | Load capacity | Q [kg] | 1000 | 1000 | 1000 |
| | 1.6 | Load centre | c [mm] | 600 | 600 | 600 |
| | 1.8 | Load distance, centre of drive axle to fork | x [mm] | 144 | 144 | 96 |
| | 1.9 | Wheelbase | y [mm] | 1390 | 1390 | 1390 |
| | Weights | 2.1 | Unladen weight | [kg] | 1550 | 1750 |
| 2.2 | | Axle loading, laden front/rear | [kg] | 350 / 2200 | 350 / 2400 | 350 / 2250 |
| 2.3 | | Axle loading, unladen front/rear | [kg] | 900 / 650 | 950 / 800 | 900 / 700 |
| Wheels and Tyres | 3.1 | Tyres: solid rubber, polyurethane, pneumatic | | Vulkollan / Topthane | Vulkollan / Topthane | Vulkollan / Topthane |
| | 3.2 | Tyre size, front | ø mm x mm | ø 254 x 125 | ø 254 x 125 | ø 254 x 125 |
| | 3.3 | Tyre size, rear | ø mm x mm | ø 125 x 94 | ø 125 x 94 | ø 125 x 94 |
| | 3.5 | Wheels, number front/rear (x = driven wheels) | | 1x/2 | 1x/2 | 1x/2 |
| | 3.6 | Track width, front | b10 [mm] | - | - | - |
| | 3.7 | Track width, rear | b11 [mm] | 660 | 660 | 660 |
| | Dimensions | 4.2 | Height mast, lowered (cab) | h1 [mm] | 1957 | 1957 |
| 4.3 | | Free lift | h2 [mm] | - | - | - |
| 4.4 | | Lift height | h3 [mm] | 690 | 1410 | 1010 |
| 4.5 | | Height, mast extended | h4 [mm] | - | - | 2590 |
| 4.7 | | Height of overhead guard (cabin) | h6 [mm] | - | - | - |
| 4.8 | | Platform height | h7 [mm] | 180 | 180 | 180 |
| 4.11 | | Auxiliary lift | h9 [mm] | - | - | - |
| 4.14 | | Height, platform raised | h12 [mm] | - | - | 1190 |
| 4.15 | | Lowered height | h13 [mm] | 90 | 90 | 90 |
| 4.19 | | Overall length ^(N) | l1 [mm] | 2907 | 2907 | 2874 |
| 4.20 | | Length to face of forks ^(N) | l2 [mm] | 1767 | 1767 | 1719 |
| 4.21 | | Overall width | b1/b2 [mm] | 796 | 796 | 780 |
| 4.22 | | Fork dimensions | s/e/l [mm] | 60 / 180 / 1140 | 60 / 180 / 1140 | 60 / 180 / 1155 |
| 4.23 | | Fork carriage DIN 15173, Class/form A, B | | - | - | - |
| 4.24 | | Fork-carriage width | b3 [mm] | 700 | 700 | - |
| 4.25 | | Outside fork width | b5 [mm] | 560 | 560 | 526 |
| 4.27 | | Width across guide rollers ^(O) | b6 [mm] | - | - | - |
| 4.31 | | Ground clearance, laden below mast | m1 [mm] | 30 | 30 | 30 |
| 4.32 | | Ground clearance, centre of wheelbase | m2 [mm] | 30 | 30 | 30 |
| 4.33 | | Aisle width for pallet 1000mm x 1200mm wide | Ast [mm] | 1400 | 1400 | 1400 |
| 4.34 | Aisle width for pallet 800mm x 1200mm long ^(H) | Ast [mm] | 1000 | 1000 | 1000 | |
| 4.35 | Turning radius | Wa [mm] | 1640 | 1640 | 1640 | |
| 4.42 | Transfer aisle width with pallets 800mm x 1200mm long | Ast3 [mm] | 3270 | 3270 | 3200 | |
| Performances | 5.1 | Travel speed laden/unladen ^(J) | [km/h] | 10.1 / 10.4 | 10.1 / 10.4 | 10.1 / 10.4 |
| | 5.2 | Lift speed laden/unladen (cab) ^(J) | [m/s] | - | - | 0.17 / 0.25 |
| | 5.2 | Lift speed laden/unladen (SL) ^(J) | [m/s] | 0,09 / 0,18 | 0,09 / 0,18 | - |
| | 5.3 | Lowering speed laden/unladen (cab) ^(J) | [m/s] | - | - | 0.29 / 0.25 |
| | 5.3 | Lowering speed laden/unladen (SL) ^(J) | [m/s] | 0,20 / 0,07 | 0,20 / 0,07 | - |
| | 5.7 | Gradeability laden/unladen ^(I) | % | 5 / 8 | 5 / 8 | 5 / 8 |
| | 5.8 | Max. gradeability laden/unladen (5 min.) ^(I) | % | 5 / 8 | 5 / 8 | 5 / 8 |
| | 5.9 | Acceleration time (10 m) laden/unladen ^(J) | [s] | 5.5 / 7.5 | 5.5 / 7.5 | 5.5 / 7.5 |
| | 5.10 | Service brake | | Electro Magnetic | Electro Magnetic | Electro Magnetic |
| | Power Unit | 6.1 | Drive motor, S2 60 min | [kW] | 4 | 4 |
| 6.2 | | Lift motor, S3 25% | [kW] | 3 | 3 | 3 |
| 6.3 | | Battery according to DIN 43531/35/36 A,B,C, no | | DIN 43535 B | DIN 43535 B | DIN 43535 B |
| 6.4 | | Battery voltage, nominal capacity K5 | [V/Ah] | 24 / 560 | 24 / 560 | 24 / 560 |
| 6.5 | | Battery weight (+/- 5%) | [kg] | 480 | 480 | 480 |
| 6.6 | | Energy consumption acc. to VDI cycle | [kWh/h] | 2.28 | 2.35 | 2.30 |
| Other | 8.1 | Drive control | | AC ~ MOSFET | AC ~ MOSFET | AC ~ MOSFET |
| | 8.4 | Average noise level at operator's ear according to DIN12053 | [dBA] | < 70 | < 70 | < 70 |

(H) All models: See VDI table or refer to your local sales representative for Ast values not listed.

(I) Values determined by wheel friction, if climbing ramps frequently (within 1h), consult your sales representative.

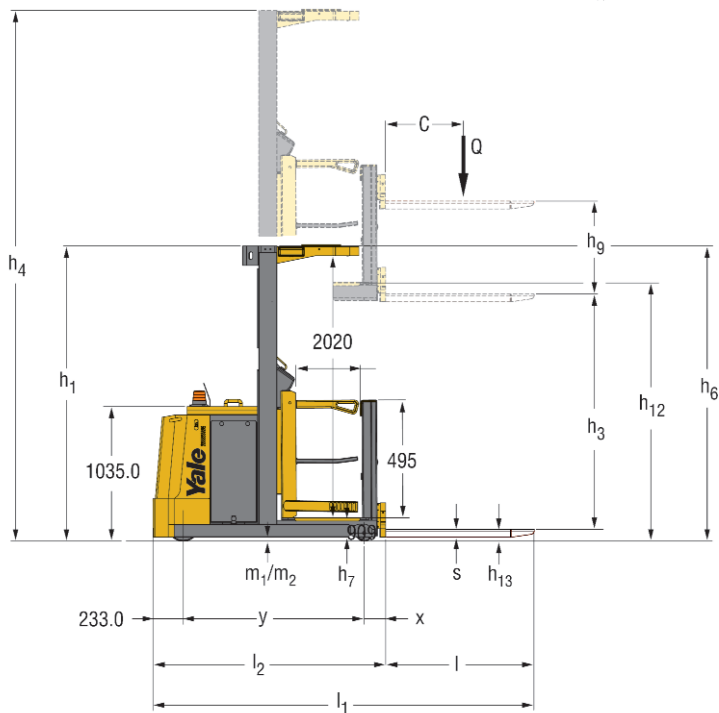
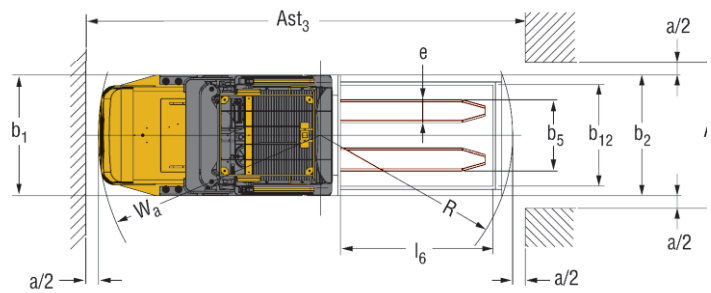
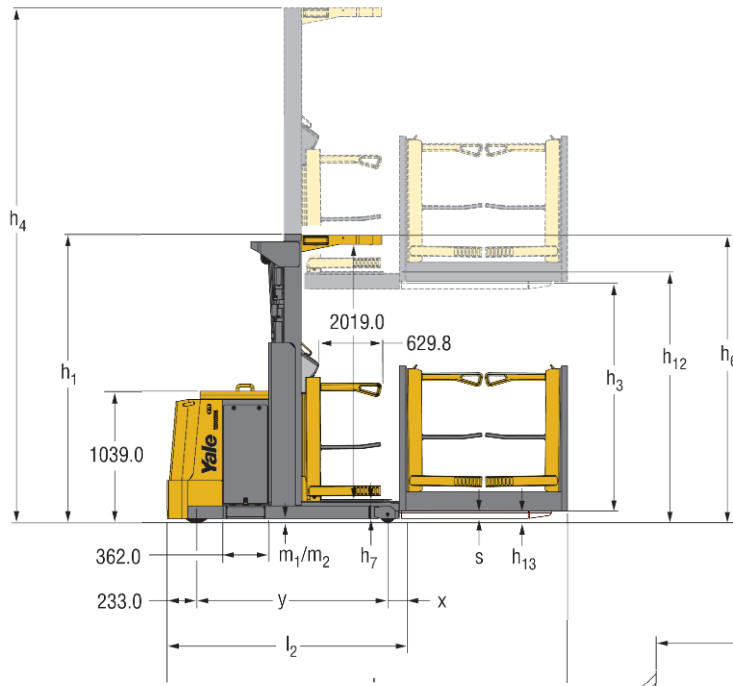
(J) Performance Mode: 3 preset values available, selected by the operator: soft, medium, hard. All values listed are in Hard mode.

(N) With wire guidance l1 and l2 + 40mm.

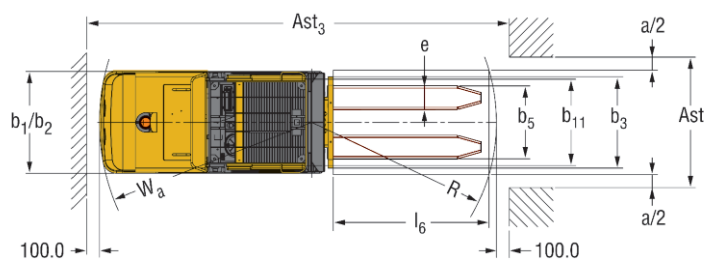
(O) Minimum size is shown, for other size contact the dealer.

Truck Dimensions MO10E AC WP, MO10E AC SL

MO10E AC WP



MO10E AC SL



VDI 2198 General Specifications - MO10E AC 12SL, 17SL, 48SL, 17WP, 48WP

| | | Yale | Yale | Yale | Yale | Yale | | |
|------------------|---|---|----------------------------|----------------------|----------------------|-------------------------------|-------------------------------|--------------------------|
| Characteristics | 1.1 | Manufacturer | | Yale | Yale | Yale | | |
| | 1.2 | Model designation | MO10E AC 12 SL | MO10E AC 17 SL | MO10E AC 17 WP | MO10E AC 48 SL ^(L) | MO10E AC 48 WP ^(L) | |
| | 1.3 | Power: Battery, Diesel, LPG, Electric mains | Battery | Battery | Battery | Battery | Battery | |
| | 1.4 | Operator type: manual, pedestrian, stand-on, seat, order picker | Order Picker | Order Picker | Order Picker | Order Picker | Order Picker | |
| | 1.5 | Load capacity | Q [kg] | 1000 | 1000 | 1000 | 1000 | |
| | 1.6 | Load centre | c [mm] | 600 | 600 | 600 | 600 | |
| | 1.8 | Load distance, centre of drive axle to fork ^(A) | x [mm] | 166 | 166 | 166 | 157 | 166 |
| | 1.9 | Wheelbase | y [mm] | 1390 | 1390 | 1390 | 1510 | 1510 |
| | Weights | 2.1 | Unladen weight | [kg] | 1700 | 1800 | 2000 | 2665 |
| 2.2 | | Axle loading, laden front/rear | [kg] | 350 / 2350 | 350 / 2450 | 350 / 2650 | 2645 / 1020 | 2645 / 1220 |
| 2.3 | | Axle loading, unladen front/rear | [kg] | 950 / 750 | 950 / 850 | 950 / 1050 | 1120 / 1555 | 1120 / 1755 |
| Wheels and Tyres | 3.1 | Tyres: solid rubber, polyurethane, pneumatic | | Vulkollan / Topthane | Vulkollan / Topthane | Vulkollan / Topthane | Vulkollan / Topthane | Vulkollan / Topthane |
| | 3.2 | Tyre size, front | ø mm x mm | ø 254 x 125 | ø 254 x 125 | ø 254 x 125 | ø 254 x 125 | ø 254 x 125 |
| | 3.3 | Tyre size, rear | ø mm x mm | ø 125 x 94 | ø 125 x 94 | ø 125 x 94 | ø 125 x 94 | ø 125 x 94 |
| | 3.5 | Wheels, number front/rear (x = driven wheels) | | 1x/2 | 1x/2 | 1x/2 | 1x/2 | 1x/2 |
| | 3.6 | Track width, front | b10 [mm] | - | - | - | - | - |
| | 3.7 | Track width, rear | b11 [mm] | 660 | 660 | 660 | 830 | 830 |
| | Dimensions | 4.2 | Height mast, lowered (cab) | h1 [mm] | 1654 | 2270 | 2270 | 3075 |
| 4.3 | | Free lift | h2 [mm] | - | - | - | - | - |
| 4.4 | | Lift height | h3 [mm] | 1010 | 1510 | 1510 | 4627 | 4627 |
| 4.5 | | Height, mast extended ^(B) | h4 [mm] | 2590 | 3800 | 3800 | 6898 | 6898 |
| 4.7 | | Height of overhead guard (cabin) ^(B) | h6 [mm] | - | 2270 | 2270 | 2270 | 2270 |
| 4.8 | | Platform height | h7 [mm] | 180 | 180 | 180 | 180 | 180 |
| 4.11 | | Auxiliary lift | h9 [mm] | 690 | 690 | - | 690 | - |
| 4.14 | | Height, platform raised | h12 [mm] | 1190 | 1690 | 1690 | 4807 | 4807 |
| 4.15 | | Lowered height ^(C) | h13 [mm] | 90 | 90 | 80 | 90 | 80 |
| 4.19 | | Overall length ^{(A) (N)} | l1 [mm] | 2929 | 2929 | 3099 | 3040 | 3220 |
| 4.20 | | Length to face of forks ^{(A) (N)} | l2 [mm] | 1789 | 1789 | 1789 | 1900 | 1910 |
| 4.21 | | Overall width ^(D) | b1/b2 [mm] | 780 | 780 | 780 / 996 ^(P) | 950 | 950 / 996 ^(P) |
| 4.22 | | Fork dimensions ^(E) | s/e/l [mm] | 60 / 180 / 1140 | 60 / 180 / 1140 | 60 / 180 / 1140 | 60 / 180 / 1140 | 60 / 180 / 1140 |
| 4.23 | | Fork carriage DIN 15173, Class/form A, B | | - | - | - | - | - |
| 4.24 | | Fork-carriage width ^(F) | b3 [mm] | 700 | 700 | - | 700 | - |
| 4.25 | | Outside fork width ^(G) | b5 [mm] | 560 | 560 | 560 | 560 | 560 |
| 4.27 | | Width across guide rollers ^(O) | b6 [mm] | - | - | - | 1090 | 1090 |
| 4.31 | | Ground clearance, laden below mast | m1 [mm] | 30 | 30 | 30 | 30 | 30 |
| 4.32 | | Ground clearance, centre of wheelbase | m2 [mm] | 30 | 30 | 30 | 30 | 30 |
| 4.33 | | Aisle width for pallet 1000mm x 1200mm wide | Ast [mm] | 1400 | 1400 | - | 1400 | - |
| 4.34 | Aisle width for pallet 800mm x 1200mm long ^(H) | Ast [mm] | 1000 | 1000 | 1196 | 1150 | 1196 | |
| 4.35 | Turning radius | Wa [mm] | 1640 | 1640 | 1640 | 1760 | 1760 | |
| 4.42 | Transfer aisle width with pallets 800mm x 1200mm long | Ast3 [mm] | 3270 | 3270 | 3400 | 3390 | 3520 | |
| Performances | 5.1 | Travel speed laden/unladen ^(J) | [km/h] | 10.1 / 10.4 | 10.1 / 10.4 | 10.1 / 10.4 | 8,6 / 9,5 | 8,6 / 9,5 |
| | 5.2 | Lift speed laden/unladen (cab) ^(J) | [m/s] | 0.11 / 0.21 | 0.11 / 0.21 | 0,15 / 0,20 | 0,15 / 0,20 | 0,15 / 0,20 |
| | 5.2 | Lift speed laden/unladen (SL) ^(J) | [m/s] | 0,09 / 0,18 | 0,09 / 0,18 | - | 0,09 / 0,18 | - |
| | 5.3 | Lowering speed laden/unladen (cab) ^(J) | [m/s] | 0.26 / 0.14 | 0.26 / 0.14 | 0,28 / 0,24 | 0,27 / 0,23 | 0,28 / 0,24 |
| | 5.3 | Lowering speed laden/unladen (SL) ^(J) | [m/s] | 0,20 / 0,07 | 0,20 / 0,07 | - | 0,20 / 0,07 | - |
| | 5.7 | Gradeability laden/unladen ^(I) | % | 5 / 8 | 5 / 8 | 5 / 8 | 5 / 8 | 5 / 8 |
| | 5.8 | Max. gradeability laden/unladen (5 min.) ^(I) | % | 5 / 8 | 5 / 8 | 5 / 8 | 5 / 8 | 5 / 8 |
| | 5.9 | Acceleration time (10 m) laden/unladen ^(J) | [s] | 5.5 / 7.5 | 5.5 / 7.5 | 5.5 / 7.5 | 5.5 / 7.5 | 5.5 / 7.5 |
| | 5.10 | Service brake | | Electro Magnetic | Electro Magnetic | Electro Magnetic | Electro Magnetic | Electro Magnetic |
| | Power Unit | 6.1 | Drive motor, S2 60 min | [kW] | 4 | 4 | 4 | 4 |
| 6.2 | | Lift motor, S3 25% | [kW] | 3 | 3 | 3 | 3 | 3 |
| 6.3 | | Battery according to DIN 43531/35/36 A,B,C, no | | DIN 43535 B | DIN 43535 B | DIN 43535 B | DIN 43535 B | DIN 43535 B |
| 6.4 | | Battery voltage, nominal capacity K5 | [V/Ah] | 24 / 560 | 24 / 560 | 24 / 560 | 24 / 560 | 24 / 560 |
| 6.5 | | Battery weight (+/- 5%) | [kg] | 480 | 480 | 480 | 480 | 480 |
| 6.6 | | Energy consumption acc. to VDI cycle | [kWh/h] | 2.38 | 2.40 | 2.40 | 2.86 | 2.90 |
| Other | 8.1 | Drive control | | AC ~ MOSFET | AC ~ MOSFET | AC ~ MOSFET | AC ~ MOSFET | AC ~ MOSFET |
| | 8.4 | Average noise level at operator's ear according to DIN12053 | [dBA] | < 70 | < 70 | < 70 | < 70 | < 70 |

MO10E SL models VDI Notes:

- (A) With FEM carriage and forks 80 x 30mm + 20mm.
With FEM carriage and forks 100 x 35mm + 25mm.
- (B) **Note for models with over head guard:**
With lift interrupt mounted on OHG h6+ 80mm.
- (C) With FEM carriage and forks 80 x 30mm h13= 35mm
With FEM carriage and forks 100 x 35mm h13= 40mm
- (D) With FEM carriage b2= 800mm.
- (E) Available also FEM carriage and fork size 80 x 30mm

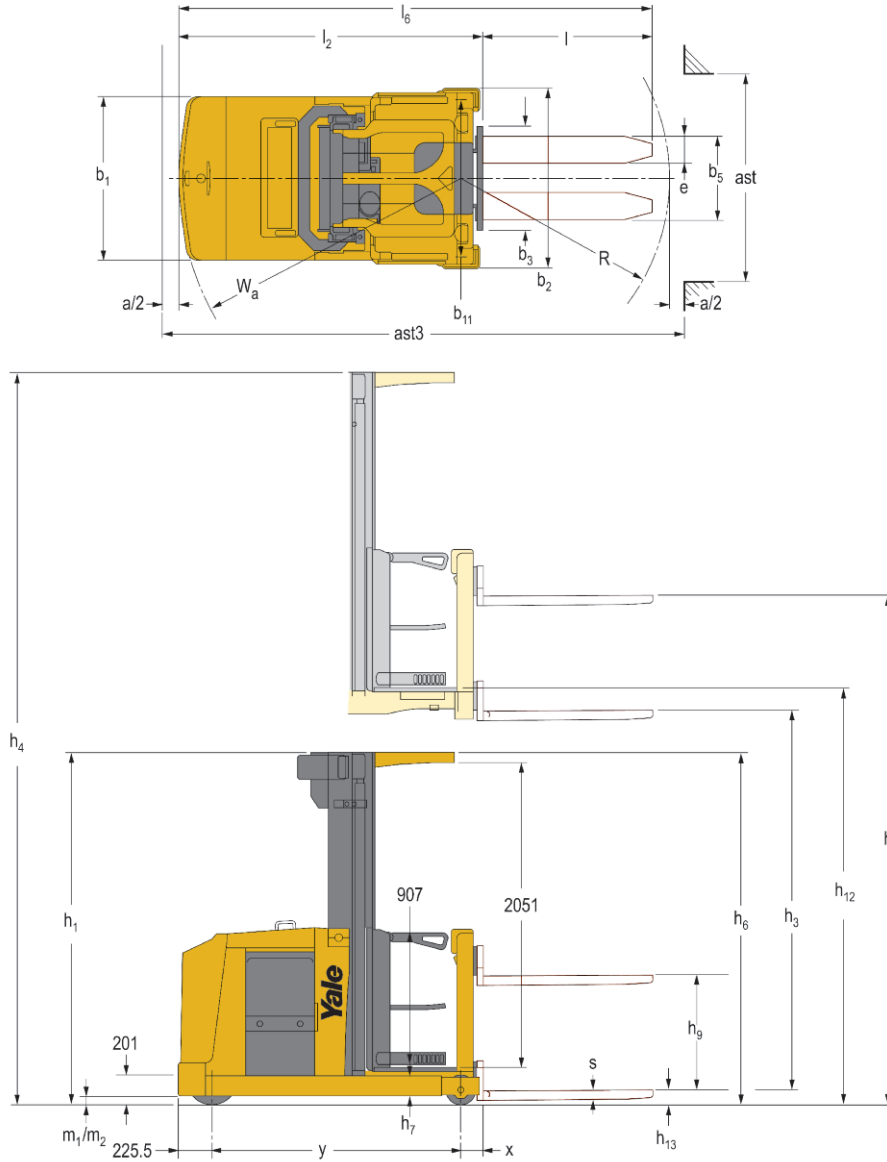
(600 Kg @ 600mm, 800 Kg @ 500mm, 1000 Kg @ 400mm)
and 100 x 35mm with 1000 Kg @ 600mm.

- (F) With FEM carriage b3= 800mm.
- (G) With FEM carriage and forks 80 x 30mm b5= 753mm.
With FEM carriage and forks 100 x 35mm b5= 773mm.
- (H) **All models:** See VDI table or refer to your local sales representative for Ast values not listed.
- (I) Values determined by wheel friction, if climbing ramps frequently (within 1h), consult your sales representative.

(J) Performance Mode: 3 preset values available, selected by the operator: soft, medium, hard. All values listed are in Hard mode.

- (L) Value determined with highest mast, see chart for other h data.
- (N) With wire guidance l1 and l2 + 40mm.
- (O) Minimum size is shown, for other size contact the dealer.
- (P) b12: width WP; b2 is the same as non WP version.

Truck Dimensions MO10 AC, MO10S AC



Mast details - M010 AC, MO10S AC

| Mast type | Model | Overall width (b ²) mm | Overall extended fork height (h) mm | Height of platform raised (h ¹²) mm | Auxiliary lift (h ²) mm | Lift height (h ³) mm | Overall lowered mast height (h ¹) mm | Overall extended mast/cab height (h ¹) mm |
|-----------|----------|------------------------------------|-------------------------------------|---|-------------------------------------|----------------------------------|--|---|
| 2-stage | MO10 AC | 1000 | 4230 | 3620 | 770 | 3370 | 2420 | 5740 |
| | | 1000 | 4530 | 3920 | 770 | 3670 | 2570 | 6040 |
| | | 1000 | 5130 | 4520 | 770 | 4270 | 2870 | 6640 |
| 2-stage | MO10S AC | 1100 or 1200 | 4230 | 3620 | 770 | 3370 | 2420 | 5740 |
| | | 1100 or 1200 | 4530 | 3920 | 770 | 3670 | 2570 | 6040 |
| | | 1100 or 1200 | 5130 | 4520 | 770 | 4270 | 2870 | 6640 |
| | | 1100 or 1200 | 5630 | 5020 | 770 | 4770 | 3120 | 7140 |
| | | 1100 or 1200 | 6130 | 5520 | 770 | 5270 | 3370 | 7640 |
| | | 1100 or 1200 | 6630 | 6020 | 770 | 5770 | 3620 | 8140 |
| | | 1100 or 1200 | 7130 | 6520 | 770 | 6270 | 3870 | 8640 |
| 3-stage | MO10S AC | 1100 or 1200 | 5705 | 5095 | 770 | 4845 | 2370 | 7215 |
| | | 1100 or 1200 | 6005 | 5395 | 770 | 5145 | 2470 | 7515 |
| | | 1100 or 1200 | 6605 | 5995 | 770 | 5745 | 2670 | 8115 |
| | | 1100 or 1200 | 7205 | 6595 | 770 | 6345 | 2870 | 8715 |
| | | 1200 | 7805 | 7195 | 770 | 6945 | 3070 | 9315 |
| | | 1200 | 8405 | 7795 | 770 | 7545 | 3270 | 9915 |
| | | 9005 | 8395 | 770 | 8145 | 3470 | 10515 | |

VDI 2198 General Specifications - MO10 AC, MO10S AC

| | | | | | | |
|------------------|---|---|----------------------------|--------------------|---------------------|---------------------|
| Characteristics | 1.1 | Manufacturer | | Yale | Yale | Yale |
| | 1.2 | Model designation | | MO 10 AC | MO 10S AC | MO 10S AC |
| | 1.3 | Power: Battery, Diesel, LPG, Electric mains | | Battery | Battery | Battery |
| | 1.4 | Operator type: manual, pedestrian, stand-on, seat, order picker | | Order Picker | Order Picker | Order Picker |
| | 1.5 | Load capacity | Q [kg] | 1000 | 1000 | 1000 |
| | 1.6 | Load centre | c [mm] | 600 | 600 | 600 |
| | 1.8 | Load distance, centre of drive axle to fork ⁽¹⁾ | x [mm] | 190 | 150 ^(2a) | 205 ^(2b) |
| | 1.9 | Wheelbase | y [mm] | 1534.5 | 1574.5 | 1674.5 |
| | Weights | 2.1 | Unladen weight | [kg] | 2890 | 3255 |
| 2.2 | | Axle loading, laden front/rear | [kg] | 1060 / 2830 | 1515 / 2760 | 1760 / 3305 |
| 2.3 | | Axle loading, unladen front/rear | [kg] | 1240 / 1650 | 1940 / 1315 | 2200 / 1865 |
| Wheels and Tyres | 3.1 | Tyres: solid rubber, polyurethane, pneumatic | | Polyurethane | Polyurethane | Polyurethane |
| | 3.2 | Tyre size, front | ø mm x mm | ø 343 x 140 | ø 343 x 140 | ø 343 x 140 |
| | 3.3 | Tyre size, rear | ø mm x mm | ø 200 x 80 | ø 200 x 80 | ø 200 x 100 |
| | 3.5 | Wheels, number front/rear (x = driven wheels) | | 1 x / 2 | 1 x / 2 | 1 x / 2 |
| | 3.6 | Track width, front | b10 [mm] | - | - | - |
| | 3.7 | Track width, rear | b11 [mm] | 877 | 977 | 1057 |
| | Dimensions | 4.2 | Height mast, lowered (cab) | h1 [mm] | 3070 | 3320 |
| 4.3 | | Free lift | h2 [mm] | - | - | - |
| 4.4 | | Lift height | h3 [mm] | 4670 | 5170 | 8895 |
| 4.5 | | Height, mast extended ⁽³⁾ | h4 [mm] | 7040 | 7540 | 11265 |
| 4.7 | | Height of overhead guard (cabin) ⁽³⁾ | h6 [mm] | 2370 | 2370 | 2370 |
| 4.8 | | Platform height | h7 [mm] | 250 | 250 | 250 |
| 4.11 | | Auxiliary lift | h9 [mm] | 770 | 770 | 770 |
| 4.14 | | Height, platform raised | h12 [mm] | 4920 | 5420 | 9145 |
| 4.15 | | Lowered height ⁽⁴⁾ | h13 [mm] | 90 | 90 | 90 |
| 4.19 | | Overall length ^{(N) (1)} | l1 [mm] | 3087 | 3087 | 3242 |
| 4.20 | | Length to face of forks ^{(N) (1)} | l2 [mm] | 1947 | 1947 | 2102 |
| 4.21 | | Overall width | b1/b2 [mm] | 1000/1000 | 1100/1100 | 1100/1200 |
| 4.22 | | Fork dimensions ⁽⁵⁾ | s/e/l [mm] | 60 / 180 / 1140 | 60 / 180 / 1140 | 60 / 180 / 1140 |
| 4.23 | | Fork carriage DIN 15173, Class/form A, B | | - | - | - |
| 4.24 | | Fork-carriage width ⁽⁶⁾ | b3 [mm] | 700 / 780 / 860 | 700 / 780 / 860 | 700 / 780 / 860 |
| 4.25 | | Outside fork width ⁽⁷⁾ | b5 [mm] | 520 / 560 / 680 | 520 / 560 / 680 | 520 / 560 / 680 |
| 4.27 | | Width across guide rollers ^(O) | b6 [mm] | 1075 / 1130 / 1330 | 1175 / 1230 / 1430 | 1175 / 1230 / 1430 |
| 4.31 | | Ground clearance, laden below mast | m1 [mm] | 60 | 60 | 60 |
| 4.32 | | Ground clearance, centre of wheelbase ⁽⁸⁾ | m2 [mm] | 60 | 60 | 60 |
| 4.33 | | Aisle width for pallet 1000mm x 1200mm wide | Ast [mm] | 1400 | 1400 | 1400 |
| 4.34 | Aisle width for pallet 800mm x 1200mm long ^(H) | Ast [mm] | 1200 | 1300 | 1400 | |
| 4.35 | Turning radius | Wa [mm] | 1768 | 1809 | 1905 | |
| Performances | 5.1 | Travel speed laden/unladen ^{(j) (9)} | [km/h] | 8,8 / 9 | 8,8 / 9 | 8,8 / 9 |
| | 5.2 | Lift speed laden/unladen (cab) ^(j) | [m/s] | 0,35 / 0,42 | 0,31 / 0,42 | 0,31 / 0,42 |
| | 5.2 | Lift speed laden/unladen (SL) ^(j) | [m/s] | 0,22 / 0,24 | 0,2 / 0,24 | 0,2 / 0,24 |
| | 5.3 | Lowering speed laden/unladen (cab) ^(j) | [m/s] | 0,37 / 0,37 | 0,38 / 0,38 | 0,38 / 0,38 |
| | 5.3 | Lowering speed laden/unladen (SL) ^(j) | [m/s] | 0,12 / 0,14 | 0,12 / 0,14 | 0,12 / 0,14 |
| | 5.7 | Gradeability laden/unladen ^(l) | % | 6.3 | 6.2 | 5.8 |
| | 5.10 | Service brake | [kW] | Electro Magnetic | Electro Magnetic | Electro Magnetic |
| Power Unit | 6.1 | Drive motor, S2 60 min | [kW] | 6.4 | 6.4 | 6.4 |
| | 6.2 | Lift motor, S3 15% | | 12 | 12 | 12 |
| | 6.3 | Battery according to DIN 43531/35/36 A,B,C, no | [V/Ah] | No | DIN 43531 B | DIN 43531 B |
| | 6.4 | Battery voltage, nominal capacity K5 | [kg] | 48 / 310 | 48 / 420 | 48 / 560 |
| | 6.5 | Battery weight (+/- 5%) | [kWh/h] | 549 | 746 | 937 |
| | 6.6 | Energy consumption acc. to VDI cycle ⁽¹⁰⁾ | | 3,27 | 3,27 | 3,27 |
| Other | 8.1 | Drive control | [dBA] | AC ~ MOSFET | AC ~ MOSFET | AC ~ MOSFET |
| | 8.4 | Average noise level at operator's ear according to DIN12053 ⁽¹¹⁾ | | 59 | 59 | 59 |

(H) All models:

See VDI table or refer to your local sales representative for Ast values not listed.

(I) Values determined by wheel friction, if climbing ramps frequently (within 1h), consult your sales representative.

(J) Performance Mode: 3 preset values available, selected by the operator: soft, medium, hard. All values listed are in Hard mode.

(L) Value determined with highest mast, see chart for other h data.

(N) With wire guidance l1 and l2 + 40mm.

(O) Minimum size is shown, for other size contact the dealer.

(P) b12: width WP; b2 is the same as non WP version.

MO10, MO10S models VDI Notes:

(1) With FEM carriage and forks 100 x 35 add + 25mm.

(2a) With 3 stage mast add 55mm.

(2b) With 2 stage mast reduce 55mm.

(3) With Lift interrupt mounted on Over Head Guard: h6 & h4 are increased by 105mm. With flashing light fitted on Over Head Guard: h6 & h4 are increased by 120mm.

(4) With FEM carriage and forks 80 x 30 h13 = 60mm -

With FEM carriage and forks 100 x 35 h13 = 65mm.

(5) Available also FEM carriage and fork size 100 x 35 with 1000 Kg @ 600 mm.

(6) With FEM carriage b3 = 800mm.

(7) With FEM carriage and forks 100 x 35 b5 max = 773mm.

(8) Sensor height 30mm from the ground.

(9) Acceleration: 3 preset values (soft, medium, hard) are available, they can be selected directly by the operator.

(10) Value found using a MO10 with 2 stage mast h12= 4000mm.

(11) Value found using a MO10 with 2 stage mast h12= 4920mm.

MO AC Series

Models: MO10E AC 0.7, 15FC, 12, 12SL, 17SL, WP, 48SL, 48WP, MO10 AC, MO10S AC

Operator Compartment

The operator cab allows the operator to find the most comfortable driving position. The platform is cushioned to absorb vibrations and incorporates an operator presence switch over the entire floor surface area. The cabin bulkhead is angled and padded to facilitate access to the load support. The low step height is a further aid to driver comfort and productivity.

MO10E Fixed Cab models feature a non-raising cab and forks that can be lifted up to a height of 1500mm. The standard platform is open on two sides for direct access/pass through.

MO10E AC 12 models have a maximum cabin platform lifting height of 1200mm. The standard platform is open on three sides for direct access to the pallet/load. The forks are welded directly to the cabin floor structure.

MO10E Supplementary Lift (SL) models have a maximum cabin platform lifting height of 4800mm and feature pallet/load auxiliary lift.

MO10E Walk on Pallet (WP) models have fixed forks, welded directly to the cabin floor structure, with platform lifting heights of 4800mm. The compartment is fitted with closing side gates forming an enclosed cage around the pallet, and the cabin has its own gates for operator entry and exit. The side gates are spring assisted and the integral toe board lifts up with the side arms to maintain a low step height for on/off access. An abseil device is provided with the truck. Storage facilities are located under the control console.

Chassis

Chassis are available in different widths and are manufactured using a heavy duty welded construction, including a thick bumper plate to protect components from the effect of any impact. The short chassis head L2 enhances manoeuvring, and the narrow width facilitates two-way traffic in the aisle. An overhead guard will be supplied for h12 higher than 1200mm.

MO10 model has a maximum cabin platform lifting height of 4920mm and features pallet/load auxiliary lift.

MO10S models have a maximum cabin platform lifting height of 9145mm when featuring pallet/load auxiliary lift and 6920mm when featuring fixed forks welded directly to the cab (Walk on Pallet).

Controls

The controls are located to maximise the walk-through area of the platform for easy pick-face access either side of the aisle. The control console is mounted on the drive side of the truck. The butterfly switch controls travel speed and forward /reverse direction. Whilst the left mini-lever controls the main lift/lower function for efficiency, the right mini-lever acts as an emergency stop actuator.

Extensive use of CANbus enhances the performance of the truck providing a quick response to any controls activated. Wiring complexity is reduced simplifying service maintenance. Hall effect sensors have replaced mechanical micro-switches increasing reliability.

Graphic Display

The graphic display is readable under all light conditions and contains a wealth of truck status information including; steer wheel position, cabin platform height, traction and/or lifting-lowering

speed, fault code display, battery discharge status and preset performance levels which the operator can easily set dependent on the application. Additional information on technical services for example sensor tests and functions is accessible via a password. Password protection for up to 20 operators is also available as a standard option, as are selectable picking intermediate stops lift levels and adjustable height pre-selection.

Steering

The electric steering system is "fly-by-wire" technology and incorporates a high efficiency AC motor. An ergonomically designed steering wheel is adjustable for enhanced steering feedback. The self-centring steering mechanism works automatically when the truck is turned on, via a push button on the control panel or when the creep speed advance mode is activated. On entering a guided aisle the steer wheel is automatically centred and steering is disengaged.

Creep Speed Advance

The "pedestrian mode" creep speed function allows the operator to advance the truck, and lift or lower the platform (and forks on the SL model) while on the ground next to the truck.

Supplementary lift

The supplementary carriage/forks are mounted on a bulkhead fitted to the operator's compartment and provide auxiliary lift. The materials handling interface and/or load can be raised or lowered to maintain a constant comfortable working height throughout the pick routine, reducing bending and stretching for the operator. The auxiliary lift/lower control requires two-handed operation. Pallet or FEM forks are available.

Walk on Pallet cage (WP)

The walk on pallet cage model allows direct access to the pallet at heights over 1200mm. Access to the operator's compartment and the pallet is provided via spring assisted swing-up gates. The cage is a strong metal structure which surrounds the pallet and features 2 swing-up gates on each side allowing full pick access from floor level. An additional retention rail is fitted at the load end of the cage. A fork-mounted pallet sensor prevents traction/lifting above 1200mm raised platform height with empty forks. The side and cabin gates are interlocked and must be deployed above this height for traction.

Mast

The mast section design provides torsional rigidity and minimises deflection.

The panorama design provides excellent visibility of the working environment. Slack chain detection devices mounted on the mast prevent further lowering if an obstacle is encountered. Lowering speed is automatically reduced as the cab nears the floor. The MO10/MO10S feature two stage mast options, with a three stage mast option available on the MO10S with a maximum cabin lifting height of up to 9145mm (depending on model - see VDI & mast tables). A strobe light is mounted on the chassis behind the mast.

The MO10E offers one stage mast with a lifting height (h12) up to 1860mm and two stage masts up to 4800mm with a proven mast profile.

Traction - Steering Unit

A powerful AC traction motor, with instant

response to forward and reverse traction inputs, provides considerable torque, delivers fast acceleration and travel speeds matched to the model specification, with almost no difference in unladen and laden performance. The fixed motor and vertically mounted drive unit eliminate flexing stresses to the power cables to ensure maximum uptime.

The electronic AC+DC combi MOSFET (MO10E) & AC (MO10-10S) controllers manage traction and hoist, offering excellent management of power and consumption, acceleration and regenerative braking.

The performance parameters can be adjusted using an external handset. Self diagnostics and thermal protection are features of the controller. The maintenance free motor (inspection intervals every 1000 operating hours) provides low cost long operational life.

Hydraulic system

The DC (MO10E) or AC (MO10-10S) pump motor guarantees consistent performance matched to the model specification. The MOSFET control provides proportional handling for lifting through control of the motor as well as proportional control on lowering movements of the cab and supplementary lift. The pump motor regenerative action (MO10-10S) provides efficient energy management, smooth starting and stopping.

Hose break valves prevent lowering in the event of a line break and a manual lowering valve allows emergency cab lowering to the ground. The integral and transparent plastic hydraulic tank allows easy checking of the oil level.

Brakes

The drive motor brakes automatically when the butterfly control is released. An electromagnetic parking brake is activated by a platform sensor. Emergency braking is carried out with a fingertip control and activates powerful reverse direction braking and the electromagnetic brake. If the operator leaves the platform, the emergency brake activates immediately.

Batteries

MO10E - 24V; 500 to 620 Ah

MO10 - 48V; 280 to 310Ah

MO10S - 48V; 420 to 620Ah

A flip up cover provides easy access for battery servicing and checking. The battery is mounted on rollers to facilitate left side extraction with a roller bed trolley available as an option to facilitate double shift operation

Guidance Options

MO10 range trucks may be free ranging or fitted with guidance options. Guided trucks can increase productivity as maximum speed can be maintained to higher heights inside the working aisle as the driver can simultaneously travel and lift or lower without having to focus on steering. Guidance options include wire-guidance package or rollers for rail guidance. The on-board wire guidance package includes sensors mounted fore and aft as well as a truck logic module linked to the steering system. The standard operating frequency is 6.25 kHz.

Optional Extras

A wide range of options is available. Further information on these is available from your local Yale dealer.



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