



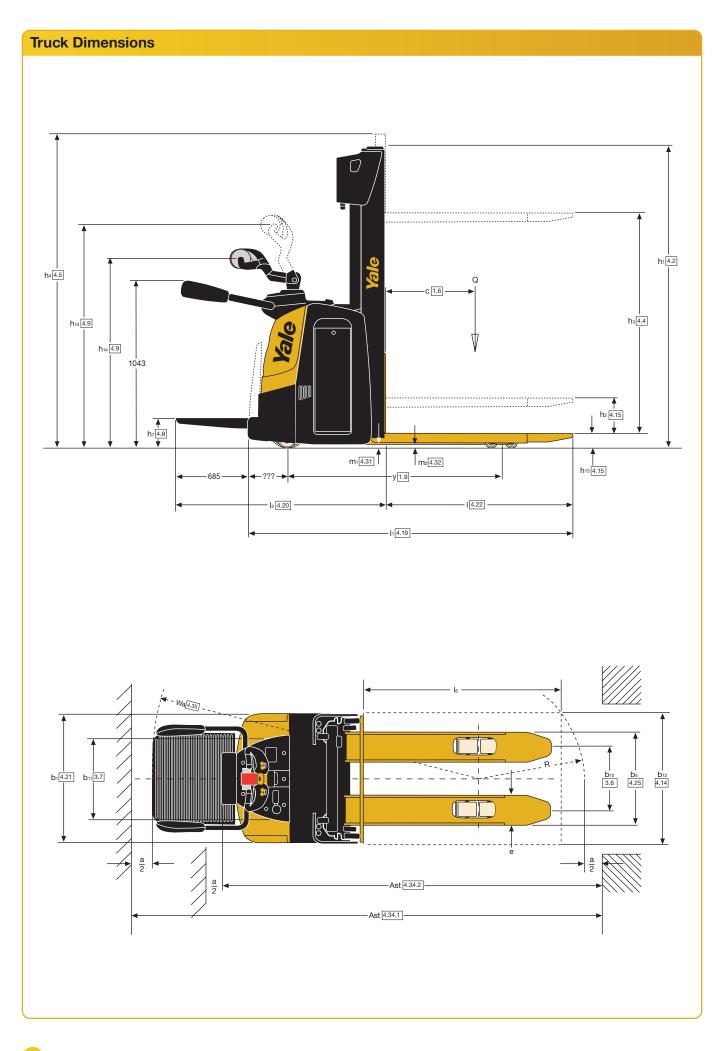
Pedestrian high lift stacker with operator platform



- Large operator platform
- COMBI Controller
- Yale AC Technology
- Brushless power steering motor
- High manoeuvrability

• Dual purpose machine for pedestrian or ride on operation

Initial lift option



MS12X, MS14X, MS16X - Mast details, 2 stage NFL

| Model | h₃ (mm) | h ₂ (mm) | h ₁ տ (mm) | h₄ ∞ (mm) | Weight ® (kg) |
|-------|---------|---------------------|-----------------------|-----------|---------------|
| | 2800 | 100 | 1900(4) | 3328 | 329 |
| | 3000 | 100 | 2000(4) | 3528 | 343 |
| | 3200 | 100 | 2100 | 3728 | 356 |
| MS12X | 3400 | 100 | 2200 | 3928 | 369 |
| MS14X | 3600 | 100 | 2300 | 4128 | 382 |
| MS16X | 3800 | 100 | 2400 | 4328 | 395 |
| | 4000 | 100 | 2500 | 4528 | 409 |
| | 4200 | 100 | 2600 | 4728 | 422 |

⁽¹⁾ With free lift of 100 mm for NFL mast.

With load backrest (h=1000) for carriage h4 + 562 mm (2 stage mast), + 524mm (3 stage mast), + 518mm (2 ton. mast). ⁽³⁾ All weights are: mast structures (weldment, cylinders, chain, pulley) + oil EXCLUDED: forks, accessories

⁽⁴⁾ Not available with vertical extraction

MS12X, MS14X, MS16X - Mast details, 2 stage FFL

| Model | h₃ (mm) | h₂ (mm) | h1 " (mm) | h₄ ∞ (mm) | Weight® (kg) |
|----------------|---------|---------|---------------------|-----------|--------------|
| | 2740 | 1418 | 1850 ⁽⁴⁾ | 3268 | 341 |
| | 2940 | 1518 | 1950(4) | 3468 | 354 |
| | 3140 | 1618 | 2050 | 3668 | 367 |
| MS12X | 3340 | 1718 | 2150 | 3868 | 380 |
| MS14X MS16X | 3540 | 1818 | 2250 | 4068 | 393 |
| MSIDX | 3740 | 1918 | 2350 | 4268 | 406 |
| | 3940 | 2018 | 2450 | 4468 | 419 |
| | 4140 | 2118 | 2550 | 4668 | 432 |

⁽¹⁾ With free lift of 100 mm for NFL mast.

⁽²⁾ With load backrest (h=1000) for carriage h4 + 562 mm (2 stage mast), + 524mm (3 stage mast), + 518mm (2 ton.

⁽³⁾ All weights are: mast structures (weldment, cylinders, chain, pulley) + oil EXCLUDED: forks, accessories

⁽⁴⁾ Not available with vertical extraction

mast).

MS12X, MS14X, MS16X, MS16X SL - Mast details, 3 stage FFL

| Model | | h₃ (mm) | h₂ (mm) | h ₁ " (mm) | h ₄ 🕫 (mm) | Weight ® (kg) | |
|-------|-------------------|---------|---------|-----------------------|-----------------------|---------------|-----|
| | | | 4040 | 1318 | 1850 ⁽⁴⁾ | 4606 | 462 |
| | MS14X MS16X SL | | 4340 | 1418 | 1950(4) | 4906 | 481 |
| | | MS12X | 4620 | 1518 | 2050 | 5186 | 499 |
| MOARY | | | 4900 | 1618 | 2150 | 5466 | 518 |
| MS16X | | | 5180 | 1718 | 2250 | 5746 | 537 |
| | | | 5460 | 1818 | 2350 | 6026 | 556 |
| | | | 5740 | 1918 | 2450 | 6306 | 575 |
| | | | 6020 | 2018 | 2550 | 6586 | 594 |

⁽¹⁾ With free lift of 100 mm for NFL mast.

(3) All weights are: mast structures (weldment, cylinders,

(2) With load backrest (h=1000) for carriage h4 + 562 mm (2 stage mast), + 524mm (3 stage mast), + 518mm (2 ton. mast).

chain, pulley) + oil EXCLUDED: forks, accessories

⁽⁴⁾ Not available with vertical extraction

MS20X - Mast details, B583-20, 2 stage NFL 2 ton.

| Model | h ₃ (mm) | h ₂ (mm) | h ₁ " (mm) | h₄ ∞ (mm) | Weight ® (kg) | |
|-------|---------------------|---------------------|-----------------------|-----------|---------------|--|
| | 2600 | 100 | 1900(4) | 3172 | 327 | |
| | 2800 | 100 | 2000(4) | 3372 | 340 | |
| | 3000 | 100 | 2100 | 3572 | 353 | |
| MOOOV | 3200 | 100 | 2200 | 3772 | 366 | |
| MS20X | 3400 | 100 | 2300 | 3972 | 379 | |
| | 3600 | 100 | 2400 | 4172 | 393 | |
| | 3800 | 100 | 2500 | 4372 | 406 | |
| | 4000 | 100 | 2600 | 4572 | 419 | |

⁽¹⁾ With free lift of 100 mm for NFL mast.

(2) With load backrest (h=1000) for carriage h4 + 562 mm (2 stage mast), + 524mm (3 stage mast), + 518mm (2 ton. mast).

All weights are: mast structures (weldment, cylinders, chain, pulley) + oil EXCLUDED: forks, accessories (3)

Not available with vertical extraction

All values are nominal values and they are subject to tolerances.

For further information, please contact the

manufacturer.

Yale products might be subject to change without notice.

Lift trucks illustrated may feature optional equipment.

Values may vary with alternative configurations.

| 1 | 1.1 | Manufacturer (abbreviation) | | Yale | Yale | Yale | Yale |
|-----------------------|--------------------------------|--|---|---|---|--|--------------------------------|
| 1 | 1.2 | Manufacturer's type designation | | MS12X | MS14X | MS16X | MS20X |
| Ļ. | 1.0 | | | | | | (h |
| | | Drive: electric (battery or mains), diesel, petrol, fuel gas | | Electric (battery) | Electric (battery) | Electric (battery) | Electric (battery |
| | _ | Operator type: hand, pedestrian, standing, seated, order-picker | 2 (1) | °. | Pedestrian / Standing | | • |
| | | | | 1.2 | 1.4 | 1.6 | 2.0 |
| | | Load centre distance | 1 ` / I | 600 709 | 600 709 | 600 | 600 709 |
| - | | | | 709 1319 | 709 1319 | 709 1391 | 709 1391 |
| - | | Wheelbase Service weight | y (mm) | 1319 | 1319 | 1391 | 1391 |
| | | Service weight | U | 1100 797 / 1503 | 1130 830 / 1700 | 1240 897 / 1943 | 1243 938 / 2305 |
| | | | | 797 / 1503 | 830 / 1700 | | 938 / 2305 836 / 407 |
| - | _ | Axle loading without load, front/rear ⁽²¹⁾ | 0 | 749 /351 NDIIThane / NDIIThane | 774 /356 NDIIThane / NDIIThane | 837 / 403 NDIIThane / NDIIThane | |
| | | Tyres: polyurethane, topthane, vulkollan, front/rear Tyre size, front ⁽²¹⁾ | 1 | NDIIThane / NDIIThane 230 x 80 | e NDIIThane / NDIIThane 230 x 80 | e NDIIThane / NDIIThane 230 x 80 | NDIIThane / NDII 230 x 80 |
| | | Tyre size, front ⁽²¹⁾ | . , | 230 x 80 85 x 70 | 230 x 80 85 x 70 | 230 x 80 85 x 70 | 230 x 80 85 x 70 |
| | | | . , | 85 x 70 150 x 54 | 85 x 70 150 x 54 | 85 x 70 150 x 54 | 85 x 70 150 x 54 |
| - | | Additional wheels (dimensions) Wheels, number front/rear ($x = driven wheels$) ⁽²¹⁾ | . , | 150 x 54 1x + 1 / 2 | | 150 x 54 1x + 1 / 4 | |
| _ | _ | Wheels, number front/rear (x = driven wheels) ⁽²¹⁾ Tread front ⁽²¹⁾ | | | 1x + 1 / 4 | | 1x + 1 / 4 |
| - | | Tread, front ⁽²¹⁾ | | 510 396 | 510 396 | 510 396 | 510 396 |
| - | _ | Tread, rear ⁽²¹⁾ | . , | 396 | 396 | 396 | 396 |
| - | | Height, mast lowered | . , | 2100 | 2100 | 2100 | 2100 |
| | | Free lift | h2 (mm) | 100 | 100 | 100 | 100 |
| | | Lift | | 3200 | 3200 | 3200 | 3000 |
| | | Height, mast extended | | 3728 | 3728 | 3728 | 3572 |
| - | | | | - | - | - | - |
| _ | | Seat height/stand height | h7 (mm) | 185 | 185 | 185 | 185 |
| - | | Height drawbar in driving position min./max. | | 1147 / 1382 | 1147 / 1382 | 1147 / 1382 | 1147 / 1382 |
| | | Height, lowered | | 90 | 90 | 90 | 90 |
| | | Overall length (pedestrian) (3) | . , | 2009 | 2009 | 2081 | 2081 |
| - | _ | Overall length (standing) (3) | | 2445 | 2445 | 2517 | 2517 |
| 4 | 4.20.1 | Length to face of forks (pedestrian) (3) | l2 (mm) | 859 | 859 | 931 | 931 |
| 4 | 4.20.2 | Length to face of forks (standing) (3) | l2 (mm) | 1295 | 1295 | 1367 | 1367 |
| 4 | 4.21 | Overall width | b1 /b2 (mm) | 790 | 790 | 790 | 790 |
| 4 | 4.22 | Fork dimensions | s/e/l (mm) | 55 / 185 / 1150 | 55 / 185 / 1150 | 55 / 185 / 1150 | 65 / 185 / 1150 |
| 4 | 4.24 | Fork-carriage width | b3 (mm) | - | - | - | - |
| ۵ | 4.25 | Distance between fork-arms | . , | 570 (22) | 570 (22) | 570 (22) | 570 (22) |
| ۵ | 4.26 | Width between load arms | | - | - | - | - |
| | | | | 42 | 42 | 42 | 42 |
| - | _ | Ground clearance, center of wheelbase | | 32 | 32 | 32 | 32 |
| | | Load dimension b12 × I crossways | |) 1000 x 1200 | 1000 x 1200 | 1000 x 1200 | 1000 x 1200 |
| - | | Aisle width for pallets 1200mm x 1000mm crossways (pedestrian) | | 2463 | 2463 | 2534 | 2534 |
| | | | | 2870 | 2870 | 2942 | 2942 |
| _ | | | . , | 2429 | 2429 | 2500 | 2500 |
| | | Asile width for pallets 800mm x 1200mm lengthwise (pedesthan) | . , | 2429 | 2836 | 2908 | 2908 |
| _ | | Plaise width for pallets 800mm x 1200mm lengthwise (standing) | . , | 1596 | 1596 | 1667 | 1667 |
| | | 5 u , | | | | | 2075 |
| - | | Turning radius (standing) ⁽²⁾ Travel speed laden/upladen (nedestrian) | | 2003 6 | 2003 6 | 2075 6 | 2075 6 |
| | | Travel speed, laden/unladen (pedestrian) | | | | | |
| - | | Travel speed, laden/unladen (standing) (23) (24) | | 7.5 ⁽¹⁰⁾ | 7.5 ⁽¹⁰⁾ | 8.5 | 7 |
| | | | | 6 | 6 7 F (10) | 6 | 6 |
| | | | 1 | 7.5 (10) | 7.5 ⁽¹⁰⁾ | 8.5 | 7 |
| | | Lift speed, laden/unladen | | 0.15 / 0.26 | 0.15 / 0.26 | 0.13 / 0.26 | 0.10 / 0.19 |
| _ | | Lowering speed, laden/unladen | | 0.4 / 0.3 | 0.4 / 0.3 | 0.4 / 0.3 | 0.24 / 0.17 |
| | | Gradeability, laden/unladen | | - ⁽¹⁶⁾ | _ (17) | 1.1 / 5.0 | 0.7 / 5.0 |
| _ | _ | Max. gradeability, laden/unladen | | 7.0 / 16.8 (12) | 6.9 / 16.3 ⁽¹³⁾ | 8.1 / 20.0 | 6.8 / 20 |
| - 12 | _ | Service brake | | Electromagnetic | Electromagnetic | Electromagnetic | Electromagnet |
| - | _ | Drive motor, S2 60 min rating | 1 | 1.8 (11) | 1.8 ⁽¹¹⁾ | 2.5 | 2.5 |
| | | Lift motor S3 15% rating | kW | 3 (20) | 3 (20) | 3 (20) | 3 (20) |
| _ | _ | Battery according to DIN 43531 /35 /36 A,B,C, no | | В | В | В | В |
| | | Battery voltage/nominal capacity K5 | | 24V / 250Ah ⁽⁵⁾ | 24V / 250Ah ⁽⁶⁾ | 24V / 375Ah (7) | 24V / 375Ah (7) |
| 6 | 6.5 | Battery weight (4) | kg | 212 | 212 | 288 | 288 |
| 6 | 6.6 | Energy consumption acc. to VDI cycle | kWh/h | 0.97 | 1.09 | 1.25 | 1.28 |
| 8 | 8.1 | Type of drive unit | | AC-Controller | AC-Controller | AC-Controller | AC-Controller |
| 7 | _ | Sound pressure level at the driver's seat | - | 65.4 | 65.4 | 65.4 | 65.4 |
| With L: Ic With | th 3 sta load s th 3 sta | stage mast - 43mm section lowered +72mm stage mast +43mm, with 3 stage mast d backrest +43mm, with 2 stage mast | on (180kg + (7) (8) (2kg) ; 24V / (9) | Available battery 24V / 3 Available battery 24V / 2 Available battery 24V / 2 Available battery 24V / 2 24V / 315Ah (288kg) ; 2⁴ | 315Ah (288kg) ⁽¹⁰⁾ 210Ah (212kg) ⁽¹¹⁾ 210Ah (212kg) ; ⁽¹²⁾ | ^o Available 8.5km/h with 2. ¹⁾ Available 2.5kW S2 = 60r ²⁾ Available 10.4 / 20.0 with motor ³⁾ Available 9.0 / 20.0 with 2 | 2.5kW S2 = 60min Imin motor |

⁽⁴⁾ These values may vary of +/-5%.
⁽⁵⁾ Available battery 24V / 210Ah (212kg) ; 24V /

ballast 32kg); with 315 /375Ah the wheelbase is increased y = +72mm

⁽¹⁴⁾ Available 10.0 / 20.0 with 2.5kW S2 = 60min motor

| Yale | Yale | Yale | Yale | | Manufacturer (abbreviation) | 1.1 | |
|---|---|-----------------------------------|------------------------------------|-----------------------|---|------------|---------------------|
| MS12X with option Initial Lift | MS14X with option | MS16X with option Initial Lift | MS16X with option Straddle Legs | | Manufacturer's type designation | 1.2 | Distinguishing mark |
| Electric (battery) | Electric (battery) | Electric (battery) | Electric (battery) | | Drive: electric (battery or mains), diesel, petrol, fuel gas | 1.3 | g |
| | | Pedestrian / Standing | | | Operator type: hand, pedestrian, standing, seated, order-picker | 1.4 | shin |
| 1.2 | 1.4 | 1.6 | 1.6 | Q (t) | Rated capacity/Rated load | 1.5 | gui |
| 600 | 600 | 600 | 600 | c (mm) | Load centre distance | 1.6 | stin |
| 644 | 644 | 644 | 646 | x (mm) | Load distance, centre of drive axle to fork ⁽¹⁾ | 1.8 | ä |
| 1350 | 1350 | 1422 | 1408 | y (mm) | Wheelbase | 1.9 | |
| 1191 | 1191 | 1267 | 1523 | kg | Service weight | 2.1 | ts |
| 912 / 1479 | 840 / 1751 | 1000 / 1867 | 1042 / 2081 | kg | Axle loading with load, front/rear ⁽²¹⁾ | 2.2 | Weights |
| 815 /376 | 795 /396 | 870 /397 | 985 / 538 | kg | Axle loading without load, front/rear ⁽²¹⁾ | 2.3 | Ne Ne |
| NDIIThane / NDIIThane | NDIIThane / NDIIThane | NDIIThane / NDIIThane | NDIIThane / NDIIThane | | Tyres: polyurethane, topthane, vulkollan, front/rear | 3.1 | |
| 230 x 80 | 230 x 80 | 230 x 80 | 230 x 80 | ø (mm) | Tyre size, front ⁽²¹⁾ | 3.2 | <u>.</u> |
| 85 x 70 | 85 x 70 | 85 x 70 | 85 x 70 | ø (mm) | Tyre size, rear ⁽²¹⁾ | 3.3 | Tyres/chassis |
| 150 x 54 | 150 x 54 | 150 x 54 | 125 x 60 | ø (mm) | Additional wheels (dimensions) | 3.4 | /ch |
| 1x + 1 / 4 | 1x + 1 / 4 | 1x + 1 / 4 | 1x + 1 / 4 | | Wheels, number front/rear (x = driven wheels) $^{(21)}$ | 3.5 | res |
| 510 | 510 | 510 | 522 | b10 (mm) | Tread, front (21) | 3.6 | ₽ |
| 385 | 385 | 385 | 968 / 1168 / 1368 | b11 (mm) | Tread, rear (21) | 3.7 | |
| 1900 | 1900 | 1900 | 2100 | h1 (mm) | Height, mast lowered | 4.2 | |
| 100 | 100 | 100 | 100 | h2 (mm) | Free lift | 4.3 | |
| 2800 | 2800 | 2800 | 3200 | h3 (mm) | Lift | 4.4 | |
| 3328 | 3328 | 3328 | 3728 | h4 (mm) | Height, mast extended | 4.5 | |
| 120 | 120 | 120 | - | h5 (mm) | Initial lift | 4.6 | |
| 185 | 185 | 185 | 185 | h7 (mm) | Seat height/stand height | 4.8 | |
| 1147 / 1382 | 1147 / 1382 | 1147 / 1382 | 1147 / 1382 | h14 (mm) | Height drawbar in driving position min./max. | 4.9 | |
| 90 | 90 | 90 | 55 | h13 (mm) | Height, lowered | 4.15 | |
| 2105 | 2105 | 2177 | 2161 | l1 (mm) | Overall length (pedestrian) ⁽³⁾ | 4.19.1 | |
| 2540 | 2540 | 2612 | 2597 | l1 (mm) | Overall length (standing) (3) | 4.19.2 | |
| 955 | 955 | 1027 | 1011 | l2 (mm) | Length to face of forks (pedestrian) (3) | 4.20.1 | |
| 1390 | 1390 | 1462 | 1447 | l2 (mm) | Length to face of forks (standing) (3) | 4.20.2 | suc |
| 790 | 790 | 790 | 794 / 1095 - 1295 - 1495 | b1 /b2 (mm) | Overall width | 4.21 | Dimensions |
| 55 / 185 / 1150 | 55 / 185 / 1150 | 55 / 185 / 1150 | 35 / 120 / 1150 | s/e/l (mm) | Fork dimensions | 4.22 | uei |
| - | - | - | 800 / 1000 / 1200 | b3 (mm) | Fork-carriage width | 4.24 | ā |
| 570 (22) | 570 (22) | 570 (22) | max. 716 / 944 / 1096 (25) | b₅ (mm) | Distance between fork-arms | 4.25 | |
| - | - | - | 841 / 1041 / 1241 | b4 (mm) | Width between load arms | 4.26 | |
| 44 | 44 | 44 | 42 | m1 (mm) | Ground clearance, laden, below mast | 4.31 | |
| 20 | 20 | 20 | 26 | m2 (mm) | Ground clearance, center of wheelbase | 4.32 | |
| 1000 x 1200 | 1000 x 1200 | 1000 x 1200 | 1000 x 1200 | b12 × l6 (mm) | Load dimension b12 × I crossways | 4.33 | |
| 2524 | 2524 | 2595 | 2619 | Ast ₂ (mm) | Aisle width for pallets 1200mm x 1000mm crossways (pedestrian) | | |
| 2932 | 2932 | 3002 | 3034 | Astı (mm) | Aisle width for pallets 1000mm x 1200mm crossways (standing) | | |
| 2511 | 2511 | 2582 | 2605 | Ast ₂ (mm) | Aisle width for pallets 800mm x 1200mm lengthwise (pedestrian) | | |
| 2919 | 2919 | 2990 | 3020 | Astı (mm) | Aisle width for pallets 800mm x 1200mm lengthwise (standing) | 4.34.2 | |
| 1626 | 1626 | 1697 | 1722 | Wa2 (mm) | Turning radius (pedestrian) ⁽²⁾ | 4.35.2 | |
| 2034 | 2034 | 2105 | 2137 | Wa1 (mm) | Turning radius (standing) ⁽²⁾ | 4.35.1 | |
| 6 | 6 | 6 | 6 | km/h | Travel speed, laden/unladen (pedestrian) | 5.1 | |
| 7.5 (10) | 7.5 (10) | 8.5 | 7 | km/h | Travel speed, laden/unladen (standing) | 5.1 | ta |
| 6 | 6 | 6 | 6 | km/h | Travel speed, laden/unladen, backwards (pedestrian) | 5.1.1 | Performance data |
| 7.5 (10) | 7.5 (10) | 8.5 | 7 | km/h | Travel speed, laden/unladen, backwards (standing) | 5.1.1 | nce |
| 0.15 / 0.26 | 0.15 / 0.26 | 0.13 / 0.26 | 0.13 / 0.26 | m/s | Lift speed, laden/unladen | 5.2 | ma |
| 0.4 / 0.3 | 0.4 / 0.3 | 0.4 / 0.3 | 0.4 / 0.3 | m/s | Lowering speed, laden/unladen | 5.3 | for |
| - ⁽¹⁸⁾ 7.2 / 16.6 ⁽¹⁴⁾ | - ⁽¹⁹⁾ | 1.0 / 4.8 | 0.8/3.7 | % | Gradeability, laden/unladen | 5.7 5.8 | Pe |
| | 16.6 / 6.5 ⁽¹⁵⁾ | 8.0 / 20.0 | 7.2 / 16.8 | % | Max. gradeability, laden/unladen | 5.10 | |
| Electromagnetic | Electromagnetic | Electromagnetic | Electromagnetic | k/\// | Service brake | 6.1 | <u> </u> |
| 3 ⁽²⁰⁾ | 3 (20) | 2.5 3 ⁽²⁰⁾ | 2.5 3 ⁽²⁰⁾ | kW kW | Drive motor, S2 60 min rating | 6.2 | ne. |
| 3 (20) B | 3 (20) B | 3 (20) B | B | IX V V | Lift motor S3 15% rating Battery according to DIN 43531 /35 /36 A,B,C, no | 6.3 | Electric-engine |
| в 24V / 250Ah ⁽⁸⁾ | D 24V / 250Ah ⁽⁹⁾ | 24V / 375Ah ⁽⁷⁾ | D 24V / 375Ah ⁽⁷⁾ | V/Ah | Battery voltage/nominal capacity K5 | 6.4 | ы. Ч |
| 240 / 250An (%) 212 | 2407250An (*) 212 | 288 | 288 | v/An kg | Battery weight ⁽⁴⁾ | 6.5 | ctr |
| 0.97 | 1.09 | 1.25 | 1.3 | kg kWh/h | Energy consumption acc. to VDI cycle | 6.6 | Ē |
| AC-Controller | AC-Controller | AC-Controller | AC-Controller | IXVVI//11 | Type of drive unit | 8.1 | |
| 65.4 | 65.4 | 65.4 | 65.4 | dB (A) | Sound pressure level at the driver's seat | 10.7 | |
| | | | | . , | | | |
| (16) Available 1.8 / 5.8 wit | ith 2.5kW S2 = 60min mo h 2.5kW S2 = 60min mot h 2.5kW S2 = 60min mot | or rear are inverted. | nn: with b5 680mm and 2 | All value | ble battery 24V / 315Ah (288kg) Lift trucks illustrated may feature s are nominal values and they are to tolerances. For further Values may vary with alternative | - | nal |

 $^{(17)}$ Available 1.4 / 5.7 with 2.5kW S2 = 60min motor $^{(18)}$ Available 1.6 / 5.3 with 2.5kW S2 = 60min motor (19) Available 1.3 / 5.3 with 2.5kW S2 = 60min motor (20) Value referred to S3 12%

⁽²⁾ Available b5 680mm: with b5 680mm and 2 stage mast, x -43mm, 1 and 12 +43mm
 ⁽²³⁾ With lateral protections not in guarding position: 6km/h
 ⁽²⁴⁾ Without lateral protections (optional): 6km/h

subject to tolerances. For further information, please contact the manufacturer. Yale products might be subject to change without notice.

Values may vary with alternative configurations.

MSX series

Models: MS12X, MS14X, MS16X, MS20X

Tiller head and controls

The tiller head is designed for operator comfort featuring an ergonomic shaped handle with angled grips and integral hand guard. A height-adjustable tiller head is an option.

Large butterfly switches control direction of travel and speed and dual lift and lower buttons are located on the tiller head. The travel direction inverter button is designed for maximum angle of contact with the operator's body. When activated, the direction of travel is automatically reversed and the truck comes to a stop.

The horn is located on top of the tiller head and the creep speed control allows the truck to be operated with the tiller arm in the vertical position at reduced speed.

Instrumentation

The truck's dashboard features a multi-function indicator displaying information on the status of the truck and alarm conditions should they occur. The most important operational information includes the battery discharge indicator, odometer and performance level.

Operator Platform

The large operator platform allows the operator to find their own comfortable driving position. Foldable side arms are high relative to the level of the platform, providing the operator with maximum comfort and stability when manoeuvring. The 'man-on' platform sensors sensor prevents truck operating with no operator present.

The top casing has compartments for stationery and other small objects and an optional A4 reading stand can be mounted on the mast.

Power-assisted steering

The electric motor completely eliminates steering effort, making the truck light and easy to steer in all working situations.

Frame and forks

The overall chassis width of 790mm makes the truck suitable for manoeuvring in narrow aisles.

Initial Lift (option) and lift

The initial lift increases the distance from the ground, allowing transfer on irregular surfaces, loading levels and ramps. The lift/lower control is provided by two push buttons located to the left of the tiller.



The adjustable pull rods give uniform lifting and lowering movement of the forks. The loading rollers are tandem with lubrication points and sealed bearings. Speed is automatically reduced with load arms raised.

Battery

The battery compartment takes a battery of up to 24V - 375Ah capacity, which, together with the characteristics of the traction motor, allows considerable flexibility in operation. A lateral battery extraction option is available.

Rollers and wheels

Both single and tandem load wheels are available, depending on model.

Electric motors

The drive motor gives instant response to forward and reverse traction inputs, providing considerable torque. The maintenance free motor (inspection intervals required every 1000 operating hours) provides low cost long operative life. The servo-steering with brushless type DC motor with permanent magnets is maintenance free and incorporates the electronic control system. The DC compound 3kw lifting motor provides power in excess of the truck's operative requirements.

Traction – steering unit

The steering reduction is calculated to provide maximum performance in every working situation. The motor is mounted vertically for efficient ventilation.







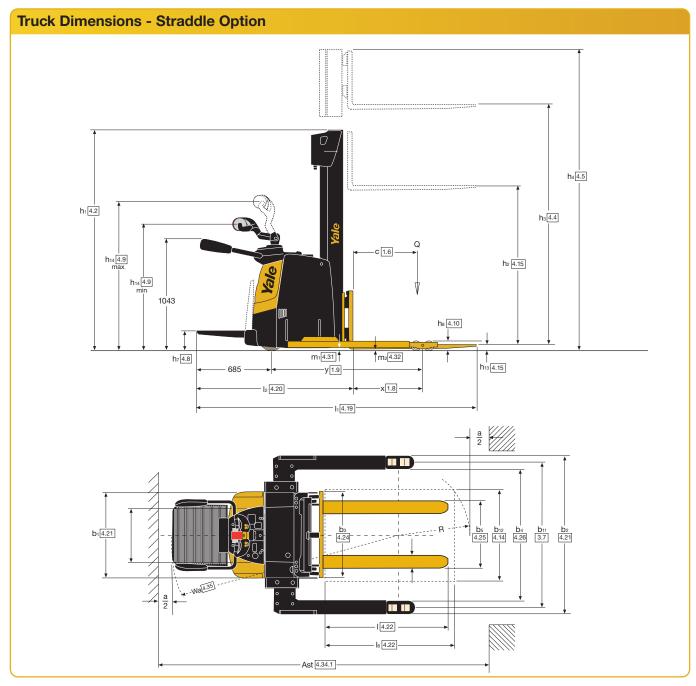
Hydraulic unit

The powerful hydraulic pump, activated by the electric motor, is of double gear type. The transparent tank facilitates checking of the hydraulic oil level. Lowering is controlled by a solenoid valve activated directly by the tiller pushbuttons.

Electronic controls

The combined characteristics of the traction motor and the control panel enhance efficiency of release and inversion braking, without reduction of





autonomy, leaving the electromagnetic brake for parking and emergencies only. Electronic parameters are easily customised by a service technician. **Options**

- Various options are available, including;
- Cold store to -30°C
- Wide range of masts
- Twin-bed trolley for battery change
- Lateral battery extraction
- Load backrest
- Reverse alarm

- Adjustable height tiller
- Yale Vision telematics
- Pedestrian awareness light
- Li-lon battery
- Wire mesh mast guard
- Multi-purpose bar
- Roll holder
- Bottle holder
- Straddle leg
- Optional double deck (compatible with initial lift option only).

Yale[®] Dealers



Contact your local Yale® Dealer

Yale Pacific

1/23 Rowood Road, Prospect NSW 2145 Tel: +61 (2) 9795 3800 | Fax: +61 (2) 9792 8484

Yale Asia

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Trucks may be shown with optional equipment.

