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BRA14E1-02

KOMATSU

# SHOP MANUAL

ELECTRIC REACH TRUCK

# AR50 Series

| | |
|---|---|
| FB10RL(F)/13RL(F)/15RL(F)/18RL(F)-14 | M245-140001 and up |
| FB10RW/13RW/15RW-14 | M245-140001 and up |

## KOMATSU FORKLIFT

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**PRECAUTIONS WHEN PERFORMING THE SERVICE WORK**

Always pay attention to “Safety” before starting any work — this is important.
Never attempt any work where danger to yourself or to other persons.
Whenever work requiring safety precautions are described in this manual, a flag mark ⚠ inserted, always make double sure that safety measures are taken.
Other unmarked work, should always be performed after studying and using your common sense to prevent accidents.

## DESCRIPTION OF THE SYMBOLS

The symbols described below are used in this manual for convenience and better understanding.

| Symbol | Item | Description |
|---|---|---|
| ⚠ | **Safety** | Special safety precautions are needed to perform the work. |
| ★ | **Note** | Special technical precautions are needed to perform the work |
| Nm | **Tightening torque** | Fastening parts that require specified tightening force when assembling. |
| k g | **Weight** | Weight of parts or systems |
| | **Coat** | Places to be coated with adhesives, etc. when assembling |
| | **Filling** | Oil filling and its amount |

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20. TESTING AND ADJUSTING

30. REMOVAL AND INSTALLATION

40. DISASSEMBLY AND ASSEMBLY

50. MAINTENANCE STANDARD

60. STRUCTURE AND FUNCTION

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# 10. GENERAL AND SPECIFICATIONS

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# SPECIFICATION

## 1.Main specification

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Characteristics | 1.2 | Model | Manufacturer's Designation | | | | FB10RL-14, FB10RLF-14 | FB13RL-14, FB13RLF-14 |
| | 1.3 | Power Type | Electric, Diesel, Gasoline, LPG, Cable | | | | Electric | Electric |
| | 1.4 | Operation Type | Pedestrian, Driver Standing, Sitting, Order Picking | | | | Standing | Standing |
| | 1.5 | Rated Capacity | Q1 | Rated Capacity | | kg | 1000 | 1250 |
| | 1.6 | Load Center | c | Load Center | | mm | 500 | 500 |
| | 1.6.1 | Alternative Capacity | Q2 | Capacity@600mm Load Center | | kg | 870 | 1080 |
| | 1.8 | Load Distance | x | Front Axle Center to Fork Face | | mm | 175 | 175 |
| | 1.9 | Wheelbase | y | | | mm | 1110 | 1250 |
| Weight | 2.1 | Service Weight | Including Min. Capacity Battery, see line 6.5 | | | kg | 2020 | 2035 |
| | 2.4 | Axle Loading Mast/Forks Extended | Loaded | | Front | kg | 2555 | 2855 |
| | 2.4.1 | | | | Rear | kg | 465 | 430 |
| | 2.4.2 | | Unloaded | | Front | kg | 905 | 890 |
| | 2.4.3 | | | | Rear | kg | 1115 | 1145 |
| | 2.5 | Axle Loading Mast/Forks Retracted | Loaded | | Front | kg | 1940 | 2020 |
| | 2.5.1 | | | | Rear | kg | 1080 | 1265 |
| | 2.5.2 | | Unloaded | | Front | kg | 690 | 635 |
| | 2.5.3 | | | | Rear | kg | 1330 | 1400 |
| Tyre | 3.1 | Tyre Type | | | | | Solid | Solid |
| | 3.2 | Tyre Size | Front | | | | $\phi$ 260 x 120 | $\phi$ 260 x 120 |
| | 3.3 | | Rear | | | | $\phi$ 360 x 180 | $\phi$ 360 x 180 |
| | 3.4 | | Additional Wheels | | | | $\phi$ 127 x 90 | $\phi$ 127 x 90 |
| | 3.5 | Number of Wheel | Front/Rear(*=driven) | | | | 2/1*+2 | 2/1*+2 |
| | 3.6 | Tread, Front | b10 | | | mm | 975 | 975 |
| | 3.7 | Tread, Rear | b11 | | | mm | – | – |
| Dimenshions | 4.1 | Tilting Angle | $\alpha/\beta$ | Forward/Backward | | degree | 3/5 | 3/5 |
| | 4.2 | Mast Height, Lowered | h1 | with Std. Mast | | mm | 1995 | 1995 |
| | 4.3 | Std. Free Lift | h2 | with Std. Mast, from Ground | | mm | 105 | 105 |
| | 4.4 | Std. Lift Height | h3 | with Std. Mast, from Ground | | mm | 3000 | 3000 |
| | 4.5 | Mast Height, Extended | h4 | with Std. Mast | | mm | 3935 | 3935 |
| | 4.7 | Height, Overhead Guard | h6 | | | mm | 2250 | 2250 |
| | 4.19 | Length, with Std. Forks | l 1 | | | mm | 1905 | 1905 |
| | 4.21 | Width, at Tyre | b1 | | | mm | 1095 | 1095 |
| | 4.22 | Forks | s/e/l | Thickness/Width/Length | | mm | 35x100x850 | 35x100x850 |
| | 4.23 | Fork Carriage Class | ISO 2328, Type A/B/no | | | | Pin Mount | Pin Mount |
| | 4.24 | Width, Fork Carriage | b3 | | | mm | 750 | 750 |
| | 4.26 | Width, between Reach Legs | b4 | | | mm | 752 | 752 |
| | 4.28 | Reach Travel | l 4 | | | mm | 440 | 580 |
| | 4.31 | Ground Clearance | m1 | under the Mast | | mm | 75 | 75 |
| | 4.32 | | m2 | at the center of Wheelbase | | mm | 80 | 80 |
| | 4.33 | Right Angle Stacking Aisle | Ast | with L1000 x W1200 pallet | | mm | 2275 | 2310 |
| | 4.34 | | Ast | with L1200 x W800 pallet | | mm | 2340 | 2355 |
| | 4.35.1 | Turning Radius | Wa | | | mm | 1325 | 1465 |
| | 4.35.2 | | Wb | | | mm | 670 | 555 |
| | 4.37 | Length, without Forks | /7 | | | | 1470 | 1610 |
| Performance | 5.1 | Travel Speed (FWD) | Loaded/Unloaded | | | km/h | 9.5/10.5 | 9.5/10.5 |
| | 5.2 | Lifting Speed | Loaded/Unloaded | | | mm/s | 350/540 | 320/540 |
| | 5.3 | Lowering Speed | Loaded/Unloaded | | | mm/s | 500/550 | 460/550 |
| | 5.4 | Reach Speed | Loaded/Unloaded | | | mm/s | 300/300 | 300/300 |
| | 5.6 | Max. Drawbar Pull | 3min rating | | | N | 5880 | 5880 |
| | 5.8 | Max. Gradeability | Unloaded 1.5km/h, 3min rating | | | % | 32 | 31 |
| | 5.10 | Service Brake | Operation/Control | | | | Mechanical, Disc | Mechanical, Disc |
| | 5.11 | Parking Brake | Operation/Control | | | | Mechanical, Disc | Mechanical, Disc |
| | 5.12 | Steering | Operation/Control | | | | Electric Power Steering | Electric Power Steering |
| Drive | 6.1 | Drive Motor (AC) | 60min rating | | | kW | 4.5 | 4.5 |
| | 6.2 | Pump Motor (AC) | 5min rating | | | kW | 9 | 9.0 |
| | 6.2.1 | PS Motor (DC) | 60min rating | | | kW | 0.3 | 0.3 |
| | 6.4 | Battery Voltage | | | | V | 48 | 48 |
| | 6.4.1 | Battery Capacity, Min. | | | | Ah/5-hour | 201 | 201 |
| | 6.4.2 | Battery Capacity, Max. | | | | Ah/5-hour | 240 | 240 |
| | 6.5 | Battery Weight, Min. Capacity | | | | kg | 365 | 365 |
| Others | 8.1 | Drive Motor Control | | | | | MOS-FET inverter | MOS-FET inverter |
| | 8.1.1 | Pump Motor Control | | | | | MOS-FET inverter | MOS-FET inverter |
| | 8.1.2 | PS Motor Control | | | | | MOS-FET chopper | MOS-FET chopper |
| | 8.2 | Relief Pressure for Attachment | | | | bar | 167 | 167 |
| | 8.2.1 | Hydraulic Tank Capacity | | | | Ltr | 16 | 16 |

4.33 and 4.34 Values are not including a cliearance. See Aisle width section for detail.

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Characteristics | 1.2 | Model | Manufacturer's Designation | | | | FB15RL-14, FB15RLF-14 | FB18RL-14, FB18RLF-14 |
| | 1.3 | Power Type | Electric, Diesel, Gasoline, LPG, Cable | | | | Electric | Electric |
| | 1.4 | Operation Type | Pedestrian, Driver Standing, Sitting, Order Picking | | | | Standing | Standing |
| | 1.5 | Rated Capacity | Q1 | Rated Capacity | | kg | 1500 | 1800 |
| | 1.6 | Load Center | c | Load Center | | mm | 500 | 500 |
| | 1.6.1 | Alternative Capacity | Q2 | Capacity@600mm Load Center | | kg | 1300 | 1560 |
| | 1.8 | Load Distance | x | Front Axle Center to Fork Face | | mm | 175 | 175 |
| | 1.9 | Wheelbase | y | | | mm | 1350 | 1500 |
| Weight | 2.1 | Service Weight | Including Min. Capacity Battery, see line 6.5 | | | kg | 2220 | 2300 |
| | 2.4 | Axle Loading Mast/Forks Extended | Loaded | | Front | kg | 3245 | 3620 |
| | 2.4.1 | | | | Rear | kg | 475 | 480 |
| | 2.4.2 | | Unloaded | | Front | kg | 955 | 970 |
| | 2.4.3 | | | | Rear | kg | 1265 | 1330 |
| | 2.5 | Axle Loading Mast/Forks Retracted | Loaded | | Front | kg | 2360 | 2465 |
| | 2.5.1 | | | | Rear | kg | 1360 | 1635 |
| | 2.5.2 | | Unloaded | | Front | kg | 715 | 690 |
| | 2.5.3 | | | | Rear | kg | 1505 | 1610 |
| Tyre | 3.1 | Tyre Type | | | | | Solid | Solid |
| | 3.2 | Tyre Size | Front | | | | $\phi$ 254 x 114 | $\phi$ 254 x 120 |
| | 3.3 | | Rear | | | | $\phi$ 360 x 180 | $\phi$ 360 x 180 |
| | 3.4 | | Additional Wheels | | | | $\phi$ 127 x 90 | $\phi$ 127 x 90 |
| | 3.5 | Number of Wheel | Front/Rear(*=driven) | | | | 2/1*+2 | 2/1*+2 |
| | 3.6 | Tread, Front | b10 | | | mm | 975 | 975 |
| | 3.7 | Tread, Rear | b11 | | | mm | - | - |
| Dimenshions | 4.1 | Tilting Angle | $\alpha/\beta$ | Forward/Backward | | degree | 3/5 | 3/5 |
| | 4.2 | Mast Height, Lowered | h1 | with Std. Mast | | mm | 1995 | 1995 |
| | 4.3 | Std. Free Lift | h2 | with Std. Mast, from Ground | | mm | 105 | 105 |
| | 4.4 | Std. Lift Height | h3 | with Std. Mast, from Ground | | mm | 3000 | 3000 |
| | 4.5 | Mast Height, Extended | h4 | with Std. Mast | | mm | 3935 | 3935 |
| | 4.7 | Height, Overhead Guard | h6 | | | mm | 2250 | 2250 |
| | 4.19 | Length, with Std. Forks | l 1 | | | mm | 2005 | 2075 |
| | 4.21 | Width, at Tyre | b1 | | | mm | 1095 | 1095 |
| | 4.22 | Forks | s/e/l | Thickness/Width/Length | | mm | 35x100x850 | 38x100x850 |
| | 4.23 | Fork Carriage Class | ISO 2328, Type A/B/no | | | | Pin Mount | Pin Mount |
| | 4.24 | Width, Fork Carriage | b3 | | | mm | 750 | 730 |
| | 4.26 | Width, between Reach Legs | b4 | | | mm | 752 | 752 |
| | 4.28 | Reach Travel | l 4 | | | mm | 580 | 730 |
| | 4.31 | Ground Clearance | m1 | under the Mast | | mm | 75 | 75 |
| | 4.32 | | m2 | at the center of Wheelbase | | mm | 80 | 80 |
| | 4.33 | Right Angle Stacking Aisle | Ast | with L1000 x W1200 pallet | | mm | 2405 | 2460 |
| | 4.34 | | Ast | with L1200 x W800 pallet | | mm | 2450 | 2475 |
| | 4.35.1 | Turning Radius | Wa | | | mm | 1560 | 1715 |
| | 4.35.2 | | Wb | | | mm | 555 | 555 |
| | 4.37 | Length, without Forks | /7 | | | | 1710 | 1860 |
| Performance | 5.1 | Travel Speed (FWD) | Loaded/Unloaded | | | km/h | 9.5/10.5 | 9.5/10.5 |
| | 5.2 | Lifting Speed | Loaded/Unloaded | | | mm/s | 320/540 | 300/540 |
| | 5.3 | Lowering Speed | Loaded/Unloaded | | | mm/s | 460/550 | 460/550 |
| | 5.4 | Reach Speed | Loaded/Unloaded | | | mm/s | 300/300 | 300/300 |
| | 5.6 | Max. Drawbar Pull | 3min rating | | | N | 5880 | 5880 |
| | 5.8 | Max. Gradeability | Unloaded 1.5km/h, 3min rating | | | % | 28 | 27 |
| | 5.10 | Service Brake | Operation/Control | | | | Mechanical, Disc | Mechanical, Disc |
| | 5.11 | Parking Brake | Operation/Control | | | | Mechanical, Disc | Mechanical, Disc |
| | 5.12 | Steering | Operation/Control | | | | Electric Power Steering | Electric Power Steering |
| Drive | 6.1 | Drive Motor (AC) | 60min rating | | | kW | 4.5 | 4.5 |
| | 6.2 | Pump Motor (AC) | 5min rating | | | kW | 9.0 | 9.0 |
| | 6.2.1 | PS Motor (DC) | 60min rating | | | kW | 0.3 | 0.3 |
| | 6.4 | Battery Voltage | | | | V | 48 | 48 |
| | 6.4.1 | Battery Capacity, Min. | | | | Ah/5-hour | 280 | 280 |
| | 6.4.2 | Battery Capacity, Max. | | | | Ah/5-hour | 390 | 390 |
| | 6.5 | Battery Weight, Min. Capacity | | | | kg | 495 | 495 |
| Others | 8.1 | Drive Motor Control | | | | | MOS-FET inverter | MOS-FET inverter |
| | 8.1.1 | Pump Motor Control | | | | | MOS-FET inverter | MOS-FET inverter |
| | 8.1.2 | PS Motor Control | | | | | MOS-FET chopper | MOS-FET chopper |
| | 8.2 | Relief Pressure for Attachment | | | | bar | 167 | 167 |
| | 8.2.1 | Hydraulic Tank Capacity | | | | Ltr | 16 | 16 |

4.33 and 4.34 Values are not including a cliearance. See Aisle width section for detail

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Characteristics | 1.2 | Model | Manufacturer's Designation | | | | FB10RW-14 | FB13RW-14 |
| | 1.3 | Power Type | Electric, Diesel, Gasoline, LPG, Cable | | | | Electric | Electric |
| | 1.4 | Operation Type | Pedestrian, Driver Standing, Sitting, Order Picking | | | | Standing | Standing |
| | 1.5 | Rated Capacity | Q1 | Rated Capacity | | kg | 1000 | 1250 |
| | 1.6 | Load Center | c | Load Center | | mm | 500 | 500 |
| | 1.6.1 | Alternative Capacity | Q2 | Capacity@600mm Load Center | | kg | 870 | 1080 |
| | 1.8 | Load Distance | x | Front Axle Center to Fork Face | | mm | 175 | 175 |
| | 1.9 | Wheelbase | y | | | mm | 1110 | 1250 |
| Weight | 2.1 | Service Weight | Including Min. Capacity Battery, see line 6.5 | | | kg | 2020 | 2035 |
| | 2.4 | Axle Loading Mast/Forks Extended | Loaded | | Front | kg | 2560 | 2860 |
| | 2.4.1 | | | | Rear | kg | 460 | 425 |
| | 2.4.2 | | Unloaded | | Front | kg | 910 | 895 |
| | 2.4.3 | | | | Rear | kg | 1110 | 1140 |
| | 2.5 | Axle Loading Mast/Forks Retracted | Loaded | | Front | kg | 1945 | 2025 |
| | 2.5.1 | | | | Rear | kg | 1075 | 1260 |
| | 2.5.2 | | Unloaded | | Front | kg | 695 | 640 |
| | 2.5.3 | | | | Rear | kg | 1325 | 1395 |
| Tyre | 3.1 | Tyre Type | | | | | Solid | Solid |
| | 3.2 | Tyre Size | Front | | | | $\phi$ 260 x 120 | $\phi$ 260 x 120 |
| | 3.3 | | Rear | | | | $\phi$ 330 x 145 | $\phi$ 330 x 145 |
| | 3.4 | | Additional Wheels | | | | $\phi$ 150 x 80 | $\phi$ 150 x 80 |
| | 3.5 | Number of Wheel | Front/Rear(*=driven) | | | | 2/1*+2 | 2/1*+2 |
| | 3.6 | Tread, Front | b10 | | | mm | 975 | 975 |
| | 3.7 | Tread, Rear | b11 | | | mm | - | - |
| Dimenshions | 4.1 | Tilting Angle | $\alpha/\beta$ | Forward/Backward | | degree | 3/5 | 3/5 |
| | 4.2 | Mast Height, Lowered | h1 | with Std. Mast | | mm | 1995 | 1995 |
| | 4.3 | Std. Free Lift | h2 | with Std. Mast, from Ground | | mm | 105 | 105 |
| | 4.4 | Std. Lift Height | h3 | with Std. Mast, from Ground | | mm | 3000 | 3000 |
| | 4.5 | Mast Height, Extended | h4 | with Std. Mast | | mm | 3935 | 3935 |
| | 4.7 | Height, Overhead Guard | h6 | | | mm | 2250 | 2250 |
| | 4.19 | Length, with Std. Forks | l 1 | | | mm | 1905 | 1905 |
| | 4.21 | Width, at Tyre | b1 | | | mm | 1080 | 1080 |
| | 4.22 | Forks | s/e/l | Thickness/Width/Length | | mm | 35x100x850 | 35x100x850 |
| | 4.23 | Fork Carriage Class | ISO 2328, Type A/B/no | | | | Pin Mount | Pin Mount |
| | 4.24 | Width, Fork Carriage | b3 | | | mm | 750 | 750 |
| | 4.26 | Width, between Reach Legs | b4 | | | mm | 752 | 752 |
| | 4.28 | Reach Travel | l 4 | | | mm | 440 | 580 |
| | 4.31 | Ground Clearance | m1 | under the Mast | | mm | 75 | 75 |
| | 4.32 | | m2 | at the center of Wheelbase | | mm | 80 | 80 |
| | 4.33 | Right Angle Stacking Aisle | Ast | with L1000 x W1200 pallet | | mm | 2275 | 2310 |
| | 4.34 | | Ast | with L1200 x W800 pallet | | mm | 2340 | 2355 |
| | 4.35.1 | Turning Radius | Wa | | | mm | 1325 | 1465 |
| | 4.35.2 | | Wb | | | mm | 670 | 555 |
| | 4.37 | Length, without Forks | /7 | | | | 1470 | 1610 |
| Performance | 5.1 | Travel Speed (FWD) | Loaded/Unloaded | | | km/h | 9.5/10.5 | 9.5/10.5 |
| | 5.2 | Lifting Speed | Loaded/Unloaded | | | mm/s | 350/540 | 320/540 |
| | 5.3 | Lowering Speed | Loaded/Unloaded | | | mm/s | 500/550 | 460/550 |
| | 5.4 | Reach Speed | Loaded/Unloaded | | | mm/s | 300/300 | 300/300 |
| | 5.6 | Max. Drawbar Pull | 3min rating | | | N | 6080 | 6080 |
| | 5.8 | Max. Gradeability | Unloaded 1.5km/h, 3min rating | | | % | 32 | 32 |
| | 5.10 | Service Brake | Operation/Control | | | | Mechanical, Disc | Mechanical, Disc |
| | 5.11 | Parking Brake | Operation/Control | | | | Mechanical, Disc | Mechanical, Disc |
| | 5.12 | Steering | Operation/Control | | | | Electric Power Steering | Electric Power Steering |
| Drive | 6.1 | Drive Motor (AC) | 60min rating | | | kW | 4.5 | 4.5 |
| | 6.2 | Pump Motor (AC) | 5min rating | | | kW | 9.0 | 9.0 |
| | 6.2.1 | PS Motor (DC) | 60min rating | | | kW | 0.3 | 0.3 |
| | 6.4 | Battery Voltage | | | | V | 48 | 48 |
| | 6.4.1 | Battery Capacity, Min. | | | | Ah/5-hour | 201 | 201 |
| | 6.4.2 | Battery Capacity, Max. | | | | Ah/5-hour | 240 | 240 |
| | 6.5 | Battery Weight, Min. Capacity | | | | kg | 365 | 365 |
| Others | 8.1 | Drive Motor Control | | | | | MOS-FET inverter | MOS-FET inverter |
| | 8.1.1 | Pump Motor Control | | | | | MOS-FET inverter | MOS-FET inverter |
| | 8.1.2 | PS Motor Control | | | | | MOS-FET chopper | MOS-FET chopper |
| | 8.2 | Relief Pressure for Attachment | | | | bar | 167 | 167 |
| | 8.2.1 | Hydraulic Tank Capacity | | | | Ltr | 16 | 16 |

4.33 and 4.34 Values are not including a cliearance. See Aisle width section for detail

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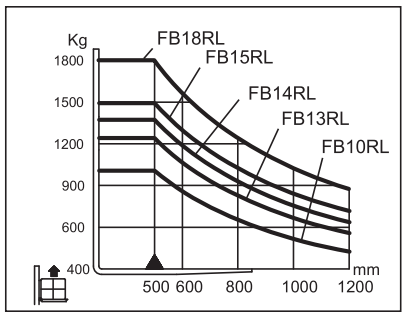
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Characteristics | 1.2 | Model | Manufacturer's Designation | | | | FB15RW-14 |
| | 1.3 | Power Type | Electric, Diesel, Gasoline, LPG, Cable | | | | Electric |
| | 1.4 | Operation Type | Pedestrian, Driver Standing, Sitting, Order Picking | | | | Standing |
| | 1.5 | Rated Capacity | Q1 | Rated Capacity | | kg | 1500 |
| | 1.6 | Load Center | c | Load Center | | mm | 500 |
| | 1.6.1 | Alternative Capacity | Q2 | Capacity@600mm Load Center | | kg | 1300 |
| | 1.8 | Load Distance | x | Front Axle Center to Fork Face | | mm | 175 |
| | 1.9 | Wheelbase | y | | | mm | 1350 |
| Weight | 2.1 | Service Weight | Including Min. Capacity Battery, see line 6.5 | | | kg | 2220 |
| | 2.4 | Axle Loading Mast/Forks Extended | Loaded | | Front | kg | 3250 |
| | 2.4.1 | | | | Rear | kg | 470 |
| | 2.4.2 | | Unloaded | | Front | kg | 955 |
| | 2.4.3 | | | | Rear | kg | 1265 |
| | 2.5 | Axle Loading Mast/Forks Retracted | Loaded | | Front | kg | 2365 |
| | 2.5.1 | | | | Rear | kg | 1355 |
| | 2.5.2 | | Unloaded | | Front | kg | 720 |
| | 2.5.3 | | | | Rear | kg | 1500 |
| Tyre | 3.1 | Tyre Type | | | | | Solid |
| | 3.2 | Tyre Size | Front | | | | $\phi$ 254 x 114 |
| | 3.3 | | Rear | | | | $\phi$ 330 x 145 |
| | 3.4 | | Additional Wheels | | | | $\phi$ 150 x 80 |
| | 3.5 | Number of Wheel | Front/Rear(*=driven) | | | | 2/1*+2 |
| | 3.6 | Tread, Front | b10 | | | mm | 975 |
| | 3.7 | Tread, Rear | b11 | | | mm | - |
| Dimenshions | 4.1 | Tilting Angle | $\alpha/\beta$ | Forward/Backward | | degree | 3/5 |
| | 4.2 | Mast Height, Lowered | h1 | with Std. Mast | | mm | 1995 |
| | 4.3 | Std. Free Lift | h2 | with Std. Mast, from Ground | | mm | 105 |
| | 4.4 | Std. Lift Height | h3 | with Std. Mast, from Ground | | mm | 3000 |
| | 4.5 | Mast Height, Extended | h4 | with Std. Mast | | mm | 3935 |
| | 4.7 | Height, Overhead Guard | h6 | | | mm | 2250 |
| | 4.19 | Length, with Std. Forks | l 1 | | | mm | 2005 |
| | 4.21 | Width, at Tyre | b1 | | | mm | 1080 |
| | 4.22 | Forks | s/e/l | Thickness/Width/Length | | mm | 35x100x850 |
| | 4.23 | Fork Carriage Class | ISO 2328, Type A/B/no | | | | Pin Mount |
| | 4.24 | Width, Fork Carriage | b3 | | | mm | 750 |
| | 4.26 | Width, between Reach Legs | b4 | | | mm | 752 |
| | 4.28 | Reach Travel | l 4 | | | mm | 580 |
| | 4.31 | Ground Clearance | m1 | under the Mast | | mm | 75 |
| | 4.32 | | m2 | at the center of Wheelbase | | mm | 80 |
| | 4.33 | Right Angle Stacking Aisle | Ast | with L1000 x W1200 pallet | | mm | 2405 |
| | 4.34 | | Ast | with L1200 x W800 pallet | | mm | 2450 |
| | 4.35.1 | Turning Radius | Wa | | | mm | 1560 |
| | 4.35.2 | | Wb | | | mm | 555 |
| | 4.37 | Length, without Forks | /7 | | | | 1710 |
| Performance | 5.1 | Travel Speed (FWD) | Loaded/Unloaded | | | km/h | 9.5/10.5 |
| | 5.2 | Lifting Speed | Loaded/Unloaded | | | mm/s | 320/540 |
| | 5.3 | Lowering Speed | Loaded/Unloaded | | | mm/s | 460/550 |
| | 5.4 | Reach Speed | Loaded/Unloaded | | | mm/s | 300/300 |
| | 5.6 | Max. Drawbar Pull | 3min rating | | | N | 6080 |
| | 5.8 | Max. Gradeability | Unloaded 1.5km/h, 3min rating | | | % | 29 |
| | 5.10 | Service Brake | Operation/Control | | | | Mechanical, Disc |
| | 5.11 | Parking Brake | Operation/Control | | | | Mechanical, Disc |
| | 5.12 | Steering | Operation/Control | | | | Electric Power Steering |
| Drive | 6.1 | Drive Motor (AC) | 60min rating | | | kW | 4.5 |
| | 6.2 | Pump Motor (AC) | 5min rating | | | kW | 9.0 |
| | 6.2.1 | PS Motor (DC) | 60min rating | | | kW | 0.3 |
| | 6.4 | Battery Voltage | | | | V | 48 |
| | 6.4.1 | Battery Capacity, Min. | | | | Ah/5-hour | 280 |
| | 6.4.2 | Battery Capacity, Max. | | | | Ah/5-hour | 390 |
| | 6.5 | Battery Weight, Min. Capacity | | | | kg | 495 |
| Others | 8.1 | Drive Motor Control | | | | | MOS-FET inverter |
| | 8.1.1 | Pump Motor Control | | | | | MOS-FET inverter |
| | 8.1.2 | PS Motor Control | | | | | MOS-FET chopper |
| | 8.2 | Relief Pressure for Attachment | | | | bar | 167 |
| | 8.2.1 | Hydraulic Tank Capacity | | | | Ltr | 16 |

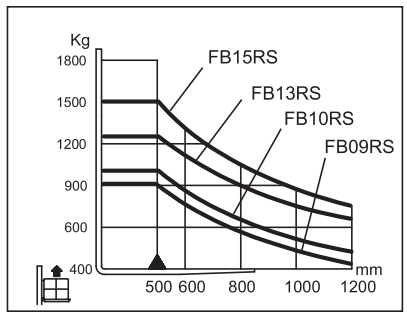
4.33 and 4.34 Values are not including a cliearance. See Aisle width section for detail

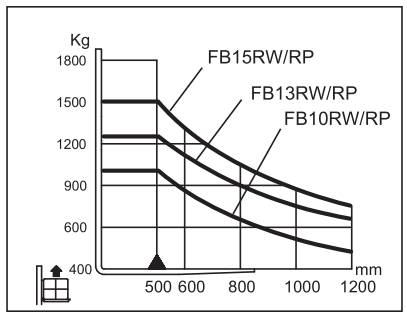
AR-14_E.book 6 ページ ２００７年１０月３日 水曜日 午後４時５９分

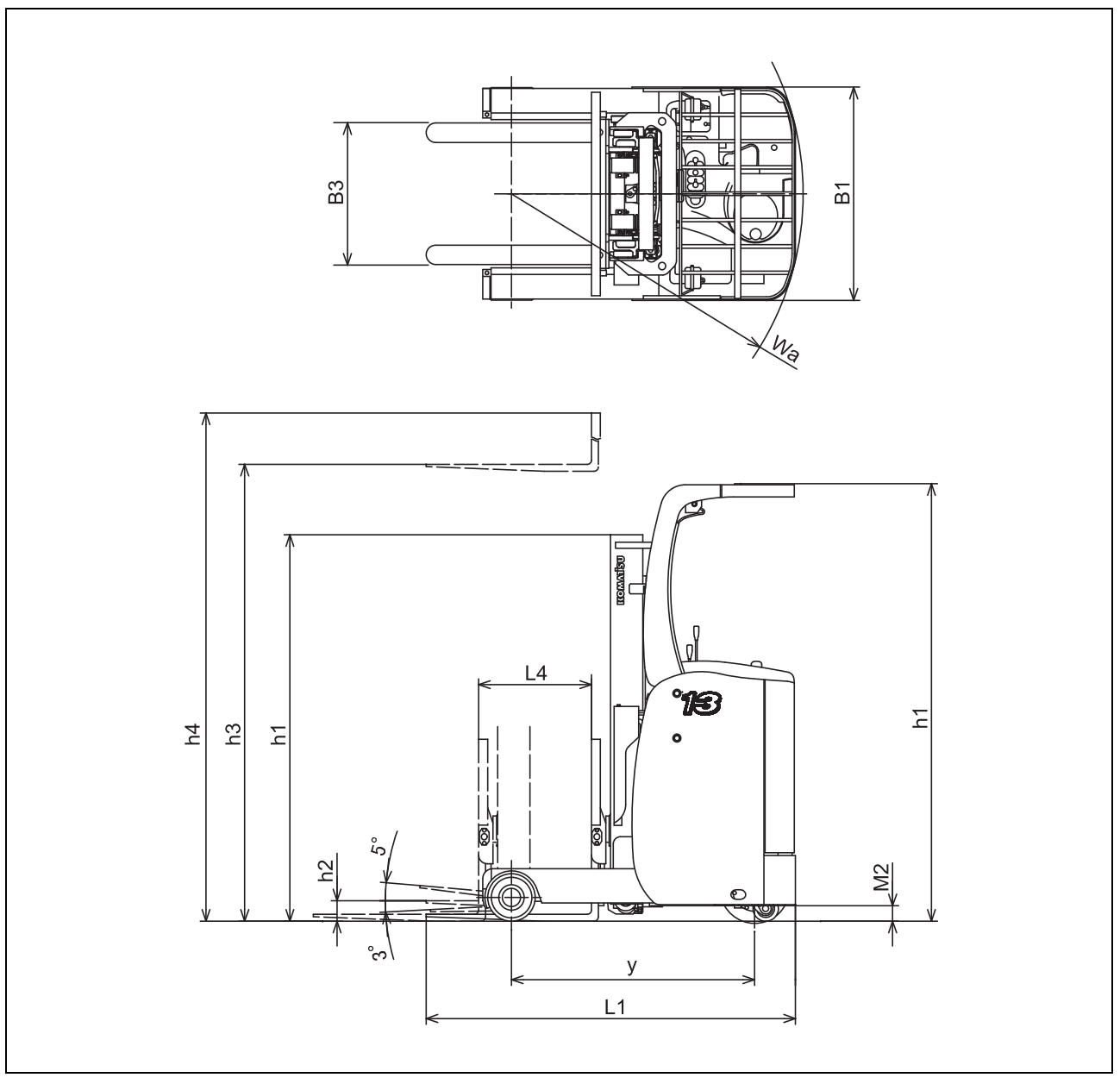


## 2. Allowable Load Table




## 3. Dimension Diagram