

Heavy-Duty FORKLIFT TRUCKS

16-23 ton

FD160-2 FD180-2 FD200-2 FD230-2



Innovated Engine

6BG1T diesel engine has the performance to meet the emission levels required in Stage II / Tier 2 emission control standards in the U.S. (EPA), Europe and Japan.

Powerful Engine

125kW(170PS) / 2200r.p.m
(SAE GROSS 170HP/2200r.p.m)



TCM yellow color available as an option.

Amazing power, yet substantially improved maneuverability, comfort & safety.

Improved Drawbar Pull and Gradeability

Max. Drawbar Pull

**119kN (12,100 kgf)
(26,680 lbf)**

(FD180-2 with load)

Gradeability at 1.6km/h (1mph)

20% (11.3° slope)

(FD180-2 with load)



Three Speed Automatic Transmissions

By automated speed control, you can comfortably drive the truck just same as passenger cars.

Ⓐ Finger Touch Shift Lever

Soft touch lever changes, achieved by magnetic valves.

Ⓑ Easy Drive Mode Selections

Interchangeable by simple switch operations between power mode (1st → 2nd → 3rd gear) and economy mode (2nd → 3rd gear)

Ⓒ Constant Travel Speed

By a dial switch, able to get the most suitable speed you require. (1st, 2nd, and automatic changing speeds)

Ⓓ Combined Type Switch Lever

(Lighting and Turn Signal)
Turn-signal with self-cancelling mechanism

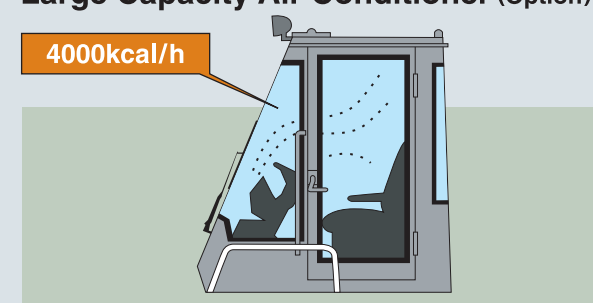


Integrated Instrument Panel



Large Capacity Air Conditioner (Option)

4000kcal/h



Sufficient Fuel Tank

One time refueling able to achieve longtime operation. Tank capacity increased to 400 liters from 300 liters.

Deluxe Multi-Functional Driver Seat with Suspension (Option)

Forward and backward slidings, up and down as well as turnable functions.



Improved Visibility by Pillar-less Cabin (Option)

No front nor rear pillars secure wider visibility. Front visibility improved by 10 percent. (compared to conventional models)

No pillar cabin substantially contributes to increasing safety at cargo handlings as well as when traveling.

Excellent visibility 115°



Improved Rear Visibility

Rear visibility improved by newly designed counter weight.



Electric Parking Brake

Brake to be easily on by soft-touch electric switch - only 0.5kg.



Dependable Wet-Disc Parking Brake

No pad adjustments substantially contribute to saving of annual maintenance cost.

Brake Line with an Air Dryer as Standard Equipment.

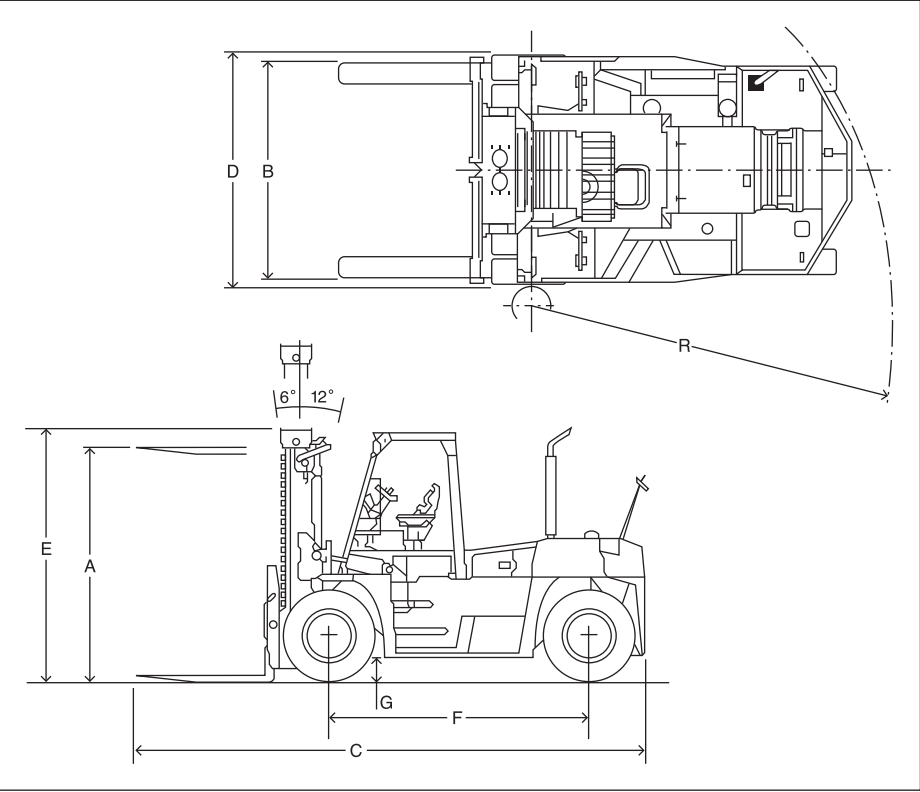
Dry pressurized air prevents mal- functioning of machines as well as freezing brake-line.



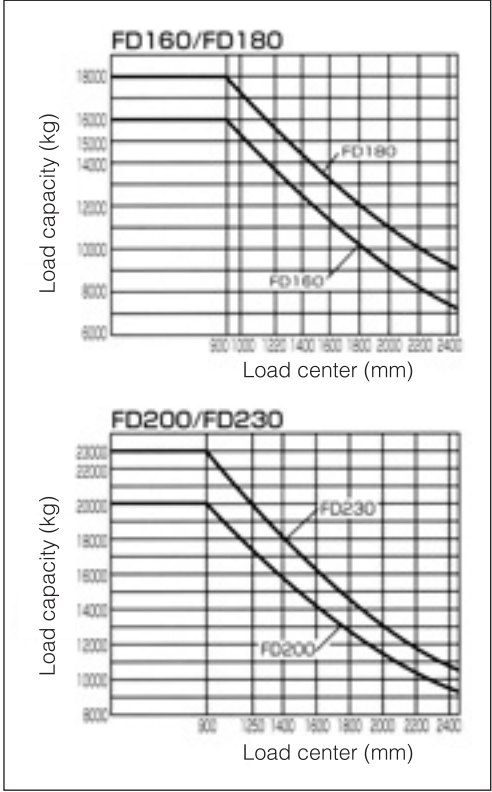


- UniCarriers Corporation retains the right to change these products and specifications without incurring any obligation relating to such changes.
- These products and specifications are subject to change without notice.
- Photos and illustrations may slightly differ from the actual trucks.
- Photos and illustrations may or may not include optional equipment and accessories
- Produced in ISO certified factory.

■ Dimensions



■ Load Charts



■ Standard Specifications

| Model | | | FD160-2 | FD180-2 | FD200-2 | FD230-2 |
|-----------------------|--------------------------------------|-------------------------|--|--------------------------------------|--------------------------------------|-------------------------------------|
| Performance | Load capacity | kg (lbs) | 16000 (35000) | 18000 (40000) | 20000 (44000) | 23000 (50000) 20000 (44000) |
| | Load center | mm (in) | 900 (36) | 900 (36) | 900 (36) | 900 (36) 1250 (49) |
| | Maximum fork height | mm (in) | A 3000 (118.1) | 3000 (118.1) | 3000 (118.1) | 3000 (118.1) |
| | Lifting speed : with load | mm/s (fpm) | 330 (64.9) | 290 (57.1) | 285 (56.1) | 230(45.3) 240 (47.2) |
| | Mast tilt angle : forward / backward | deg | 6 / 12 | 6 / 12 | 6 / 12 | 6 / 12 |
| | Max. Travel speed | km/h (mph) | 34 (21.1) | 34 (21.1) | 34 (21.1) | 32 (19.9) |
| | Lateral fork adjustment (outside) | mm (in) | B 790 ~ 2750 (31.1~108.3) | 810 ~ 2750 (31.9~108.3) | 810 ~ 2750 (31.1~108.3) | 950 ~ 2750 (37.4~108.3) |
| | Turning radius (outside) | mm (in) | R 5000 (196.9) | 5000 (196.9) | 5150 (202.8) | 5350 (210.6) |
| Dimensions & Weight | Gradeability : with load (1.6km/h) | % | 24 | 20 | 18 | 15 16 |
| | Overall length : with fork | mm (in) | C 7165 (282.1) | 7205 (283.7) | 7205 (283.7) | 7990 (314.6) |
| | : without fork | mm (in) | 5325 (209.6) | 5365 (211.2) | 5365 (211.2) | 5545 (218.3) |
| | Fork size : L x W x T | mm (in) | 1830 x 250 x 90 (72.0 x 9.8 x 3.5) | 1830 x 260 x 100 (72.0 x 10.2 x 3.9) | 1830 x 260 x 100 (72.0 x 10.2 x 3.9) | 2440 x 310 x 98 (96.1 x 12.2 x 3.8) |
| | Overall width | mm (in) | D 2970 (116.9) | 2990 (117.7) | 3060 (120.5) | 3060 (120.5) |
| | Overall height : mast | mm (in) | E 3290 (129.5) | 3545 (127.8) | 3575 (140.7) | 3580 (140.9) |
| | : overhead guard | mm (in) | 3225 (127.0) | 3255 (128.1) | 3285 (129.3) | 3280 (129.1) |
| | Wheelbase | mm (in) | F 3650 (143.7) | 3650 (143.7) | 3650 (143.7) | 3650 (143.7) |
| Engine & Transmission | Ground clearance | mm (in) | G 300 (11.8) | 275 (10.8) | 305 (12.0) | 290 (11.4) |
| | Total weight | kg (lbs) | 22510 (49600) | 25040 (55200) | 27260 (60100) | 30760 (67800) |
| | : model | | ISUZU 6BG1T Diesel Engine | | | |
| | : piston displacement | lit. (in ³) | 6.494 (396.3) | | | |
| Tire & Brake | : rated output / engine speed | | 125kW (170PS) / 2200r.p.m. (SAE GROSS 127kW (170HP) / 2200r.p.m.) | | | |
| | : maximum torque / engine speed | | 537N·m (54.8kgf·m) / 1800r.p.m. | | | |
| | : type | | Automatic power-shift transmission | | | |
| Tire & Brake | : number of speeds | | 3 - 3 (Fwd / Rvs) | | | |
| | Tire size | | 12.00-24-18PR | 13.00-24-20PR | 14.00-24-24PR | 14.00-24-24PR |
| | Brake : service | | Air-over-hydraulic disc brake | | | |
| Tire & Brake | : parking | | Built in transmission, wet multiple disc brake | | | |
| | Steering system | | Full hydrostatic power steering | | | |

Wide View Mast

| Mast Model | Capacity | | | | | | | | | | Max. Fork Height | | Overall Mast Height (lowered) | | | | | | | | | | | |
|------------|-------------------------|-------|---------|-------|---------|-------|---------|-------|---------|-------|------------------|-------|-------------------------------|-------|---------|-------|---------|-------|---------|-------|--|--|--|--|
| | Load center 900mm(36in) | | | | | | | | | | | | 1250mm(49in) | | | | | | | | | | | |
| | FD160-2 | | FD180-2 | | FD200-2 | | FD230-2 | | FD230-2 | | | | FD160-2 | | FD180-2 | | FD200-2 | | FD230-2 | | | | | |
| | kg | lbs | kg | lbs | kg | lbs | kg | lbs | kg | lbs | mm | in | mm | in | mm | in | mm | in | mm | in | | | | |
| VM300 | 16000 | 35000 | 18000 | 40000 | 20000 | 44000 | 23000 | 50000 | 20000 | 44000 | 3000 | 118.1 | 3290 | 129.5 | 3545 | 139.6 | 3575 | 140.8 | 3580 | 140.9 | | | | |
| VM350 | 16000 | 35000 | 18000 | 40000 | 20000 | 44000 | 23000 | 50000 | 20000 | 44000 | 3500 | 137.8 | 3540 | 139.4 | 3795 | 149.4 | 3825 | 150.6 | 3830 | 150.8 | | | | |
| VM400 | 16000 | 35000 | 18000 | 40000 | 20000 | 44000 | 23000 | 50000 | 20000 | 44000 | 4000 | 157.5 | 3790 | 149.2 | 4045 | 159.3 | 4075 | 160.4 | 4080 | 160.6 | | | | |
| VM450 | 16000 | 35000 | 18000 | 40000 | 20000 | 44000 | 23000 | 50000 | 20000 | 44000 | 4500 | 177.2 | 4040 | 159.1 | 4295 | 169.1 | 4325 | 170.3 | 4330 | 170.5 | | | | |
| VM500 | 16000 | 35000 | 18000 | 40000 | 20000 | 44000 | 23000 | 50000 | 20000 | 44000 | 5000 | 196.9 | 4290 | 168.9 | 4545 | 178.9 | 4575 | 180.1 | 4580 | 180.3 | | | | |
| VM550 | 15000 | 33000 | 16000 | 35000 | 18000 | 40000 | 21500 | 47000 | 19000 | 42000 | 5500 | 216.5 | 4540 | 178.7 | 4795 | 188.8 | 4825 | 190.0 | 4830 | 190.2 | | | | |
| VM600 | 14000 | 31000 | 15000 | 33000 | 16000 | 35000 | 20000 | 44000 | 18000 | 40000 | 6000 | 236.2 | 4790 | 188.6 | 5045 | 198.6 | 5075 | 199.8 | 5080 | 200.0 | | | | |

| Mast Model | Overall Mast Height (raised) | | | | | | | | Tilt Angle | Service Weight | | | | | | | |
|------------|------------------------------|-------|---------|-------|---------|-------|---------|-------|------------|----------------|-------|---------|-------|---------|-------|---------|-------|
| | FD160-2 | | FD180-2 | | FD200-2 | | FD230-2 | | Fwd / Bwd | FD160-2 | | FD180-2 | | FD200-2 | | FD230-2 | |
| | mm | in | mm | in | mm | in | mm | in | degree | kg | lbs | kg | lbs | kg | lbs | kg | lbs |
| VM300 | 4790 | 188.6 | 5040 | 198.4 | 5070 | 199.6 | 5080 | 200.0 | 6 / 12 | 22510 | 49600 | 25040 | 55200 | 27260 | 60100 | 30760 | 67800 |
| VM350 | 5290 | 208.3 | 5540 | 218.1 | 5570 | 219.3 | 5580 | 219.7 | 6 / 12 | 22680 | 50000 | 25210 | 55600 | 27430 | 60500 | 30990 | 68300 |
| VM400 | 5790 | 228.0 | 6040 | 237.8 | 6070 | 239.0 | 6080 | 239.4 | 6 / 12 | 22850 | 50400 | 25400 | 56000 | 27620 | 60900 | 31230 | 68800 |
| VM450 | 6290 | 247.6 | 6540 | 257.5 | 6570 | 258.7 | 6580 | 259.1 | 6 / 12 | 23190 | 51100 | 25740 | 56700 | 27960 | 61600 | 31760 | 70000 |
| VM500 | 6790 | 267.3 | 7040 | 277.2 | 7070 | 278.3 | 7080 | 278.7 | 6 / 12 | 23360 | 51500 | 25920 | 57100 | 28140 | 62000 | 32000 | 70500 |
| VM550 | 7290 | 287.0 | 7540 | 296.9 | 7570 | 298.0 | 7580 | 298.4 | 6 / 12 | 23530 | 51900 | 26100 | 57500 | 28320 | 62400 | 32250 | 71100 |
| VM600 | 7790 | 306.7 | 8040 | 316.5 | 8070 | 317.7 | 8080 | 318.1 | 6 / 12 | 23700 | 52200 | 26270 | 57900 | 28490 | 62800 | 32480 | 71600 |

STANDARD EQUIPMENT AND ACCESSORIES

[Equipment]

- Adjustable suspension seat with seat belt
- Air-dryer for brake line
- Cartridge type air, fuel, engine oil, converter oil and hydraulic filters
- Coolant recovery system
- Cyclopack type double element air cleaner
- Cylinder type bonnet latch
- Drawbar pin
- Durable overhead guard
- Electrically-controlled parking brake
- Engine after glow system
- Engine auto glow system
- Engine oil dipstick
- Fork positioner (manual type)
- Front dual drive wheels
- Full hydrostatic power steering
- Hydraulic oil gauge (view level)
- ISUZU diesel engine with turbo-charger
- Lift circuit cut-off valve
- Load check valve
- Overhead exhaust system
- Pneumatic tires
- Power brake booster
- TCM automatic 3-speed powershift transmission
- Tilt adjustable steering post
- Tilt lock valve
- Torque converter oil dipstick
- Wide view mast
- 1830mm forks (FD160/FD180/FD200)
- 2440mm forks (FD230)

[Accessories]

- Back-up buzzer
- Electric horn
- Head lights
- Operator tool kit
- Rear combination lights (turn signal, tail, stop, back-up and side lights)
- Rear reflectors
- Rear under-view mirror
- Rear view mirrors
- Seat adjust lever
- Turn signal lights (front)

[Switch & Controls]

- Automatic transmission mode select switch (power mode / economy mode)
- Electrically-controlled direction change lever (inc. Neutral safety lock device)
- Electrically-controlled parking bkake switch
- Lift lever
- Light switch
- Preheater switch (inc. starter, main switch)
- Speed change hold switch (1st fixed / 2nd fixed / Automatic speed shift)
- Tilt lever
- Turn signal lever

[Instruments]

- Air cleaner clogging warning indicator
- Brake air pressure meter
- Brake air pressure warning indicator
- Brake oil level warning indicator
- Charge indicator
- Converter oil level warning indicator
- Converter oil temperature warning indicator
- Engine oil pressure warning indicator (inc. engine oil filter clogging warning)
- Engine water temperature meter
- Fuel meter
- Hourmeter
- Parking brake indicator
- Speedometer
- Turn signal indicator

OPTIONAL EQUIPMENT AND ACCESSORIES

[Equipment]

- Fork positioner (hydraulic motor type)
- CFC free air-conditioner
- Exhaust purifying muffler
- Heater & defroster

[Accessories]

- High mast
- Long forks
- Side shifting device
- Steel cabin

[Accessories]

- Central greasing system (manual pump type)
- Fire extinguisher
- Rotating warning light
- Working light (front, rear)

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