

# Heavy-Duty Forklift Trucks

## 6-10ton

**FD60Z8 FD70Z8**  
**FD80Z8 FD100Z8**



# DIESEL POWERED Pneumatic Tire Truck



## POWERFUL

### Biggest and Most Powerful Engine in This Class

High-power & Low-fuel consumption 6.5 liter diesel engine, 6BG1 provides:

| Rated Power                        |          |
|------------------------------------|----------|
| <b>84.6kW (115PS) / 2100r.p.m.</b> | FD80/100 |
| <b>82.4kW (112PS) / 2000r.p.m.</b> | FD60/70  |

| Rated Torque                               |  |
|--|--|
| <b>416.5 N·m (42.5 kg·m) / 1500 r.p.m.</b> |  |

### Fastest Acceleration

10 meter accelerating speed (loaded)

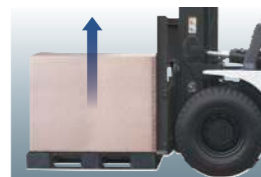
|                 |                |
|-----------------|----------------|
| <b>NEW</b>      | <b>4.3 sec</b> |
| <b>PREVIOUS</b> | <b>5.1 sec</b> |

## SPEEDY

### Speedy Lifting

One of the highest lift speeds in its class.

**500mm/s** (loaded, FD60)



### Electronic Controlled Automatic Transmission

Automatic transmission provides reliable travel control incorporated with a low effort single electronic control lever.



## FRIENDLY

### Environment Friendly Black Smoke Savings of 30% Noxious Substance Savings of 50%

### Low Noise

**85dB(A)**  
(at operators ear, according to ISO)

### Greater Visibility / Super-wide Finger Bar

Excellent forward and upward visibility (top in class) 20% wider than previous model.



## SAFETY

### Boltless Floorboards

Both the front and rear floorboards can be removed or installed easily, without any tools.

### The Parking Brake Lever is Equipped with a Safety Device

### The Mast is as Rigid as Ever.

Durable mast with a thoughtful layout of rollers



## STANDARD SPECIFICATIONS

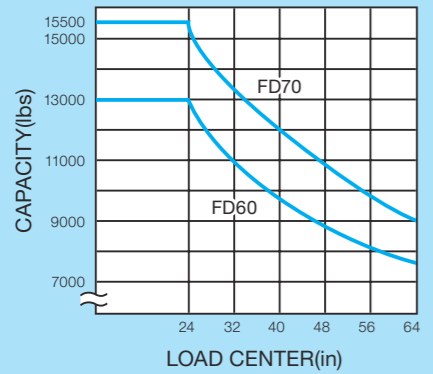
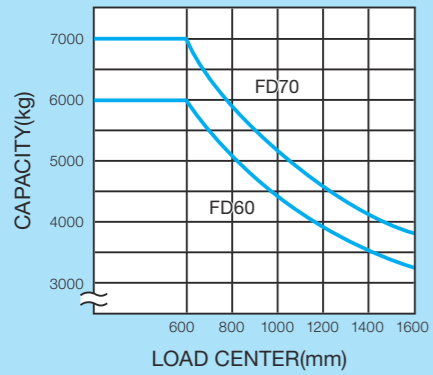
|                       |  | UNICARRIERS                       |                             |  |                                    |   |                                    |                        |              |
|-----------------------|--|-----------------------------------|-----------------------------|--|------------------------------------|---|------------------------------------|------------------------|--------------|
|                       |  | FD60Z8                            | FD70Z8                      | FD80Z8   | FD100Z8                            |   |                                    |                        |              |
| Characteristics       | 1 Manufacturer   |                                   |                             |  |                                    |   |                                    |                        |              |
|                       | 2 Model  |                                   |                             |  |                                    |   |                                    |                        |              |
|                       | 3 Load Capacity  | kg(lbs)                           | 6000(13000)                 | 7000(15500)  | 8000(17500)                        | 10000(22000)  |                                    |                        |              |
|                       | 4 Load Center  | mm(in)                            | 600(24)                     |  |                                    |   |                                    |                        |              |
|                       | 5 Power Type   | Diesel                            |                             |  |                                    |   |                                    |                        |              |
|                       | 6 Operator Position  | Seated                            |                             |  |                                    |   |                                    |                        |              |
|                       | 7 Tire Type  | Front/Rear                        | Pneumatic                   |  |                                    |   |                                    |                        |              |
|                       | 8 Wheels(X=driven)   | Front/Rear                        | 4 × /2                      |  |                                    |   |                                    |                        |              |
| Dimensions            | 9 Maximum Fork Height  | mm(in)                            | 3000(118)                   |  |                                    |   |                                    |                        |              |
|                       | 10 Free Lift   | mm(in)                            | 205(8.1)                    | 215(8.5)   | 205(8.1)                           |   |                                    |                        |              |
|                       | 13 Fork Size   | L × W × T                         | mm (in)                     | 1220 × 150 × 60 (48.0 × 5.9 × 2.4)   | 1220 × 150 × 70 (48.0 × 5.9 × 2.8) | 1220 × 170 × 75 (48.0 × 6.7 × 3.0)                                | 1220 × 180 × 75 (48.0 × 7.1 × 3.0) |                        |              |
|                       | 14 Tilt Range  | Fwd/Bwd                           | deg                         | 6/12   |                                    |   |                                    |                        |              |
|                       | 15 Length to Fork Face   | mm(in)                            | 3535(139.2)                 | 3600(141.7)  | 3940(155.1)                        | 4255(167.5)   |                                    |                        |              |
|                       | 16 Overall Width   | mm(in)                            | 1995(78.5)                  |  | 2165(85.2)                         | 2245(88.4)  |                                    |                        |              |
|                       | 17 Mast Height Fork Lowered  | mm(in)                            | 2500(98.4)                  |  | 2700(106.3)                        | 2850(112.2)   |                                    |                        |              |
|                       | 18 Mast Height, Fork Raised  | mm(in)                            | 4420(174.0)                 |  |                                    |   |                                    |                        |              |
|                       | 19 Overhead Guard Height ★★★                                       | mm(in)                            | 2450(96.5)                  |  | 2560(100.8)                        |   |                                    |                        |              |
|                       | 21 Turning Radius(Outside)   | mm(in)                            | 3300(130.0)                 | 3360(132.3)  | 3650(143.7)                        | 3900(153.5)   |                                    |                        |              |
|                       | 22 Load Distance (Centerline of Front Axle to Front Face of Forks) | mm(in)                            | 615(24.2)                   | 625(24.6)  | 720(28.3)                          | 710(28.0)   |                                    |                        |              |
|                       | 23 Basic Right Angle Stacking Aisle Width                          | mm(in)                            | 5550(218.5)                 | 5620(221.3)  | 6015(236.8)                        | 6250(246.1)   |                                    |                        |              |
|                       | Performance  | 24                                | Travel Max.                 | Full Load  | km/h(mph)                          | 26(16.1)  |                                    | 25(15.5)               | 24(14.9)     |
|                       |  |                                   |                             | No Load  | km/h(mph)                          | 30(18.6)  |                                    |                        |              |
|                       |  | 25                                | Lifting                     | Full Load  | mm/s(fpm)                          | 500(98.4)   | 460(90.6)                          | 450(88.6)              | 390(76.8)    |
| No Load               |  |                                   |                             | mm/s(fpm)  | 550(108.3)                         |   | 470(92.5)                          | 410(80.7)              |              |
| 26                    |  | Lowering                          | Full Load                   | mm/s(fpm)  | 450(88.6)                          |   | 470(92.5)                          |                        |              |
|                       |  |                                   | No Load                     | mm/s(fpm)  | 500(98.4)                          | 450(88.6)   | 340(66.9)                          |                        |              |
| 28                    |  | Max. Drawbar Pull                 | Full Load / No Load         | kN (lbs)   | 53.9/22.1 (12100/4960)             | 52.9/21.6 (11900/4850)  | 57.3/27.4 (12900/6150)             | 57.3/31.4 (12900/7050) |              |
| 29                    |  | Gradeability at (1.6km/h or 1mph) | Full Load                   | %(tan θ )  | 33                                 | 29  | 27                                 | 22                     |              |
| 30                    | Max. Gradeability ★★   | Full Load / No Load               | %(tan θ )                   | 38/19  | 33/19                              | 29/19   | 24/20                              |                        |              |
| Weight                | 32   | Total Weight                      | kg(lbs)                     | 8630(19030)  | 9360(20640)                        | 10980(24210)  | 12300(27120)                       |                        |              |
|                       | 33   | Weight Distribution               | Full Load                   | Front  | kg(lbs)                            | 13040(28750)  | 14530(32040)                       | 17040(37570)           | 20100(44320) |
|                       |  |                                   |                             | Rear   | kg(lbs)                            | 1590(3510)  | 1830(4040)                         | 1940(4280)             | 2200(4850)   |
|                       | 34   | No Load                           | Front                       | kg(lbs)  | 3810(8400)                         | 3750(8270)  | 4820(10630)                        | 5420(11950)            |              |
| Rear                  |  |                                   | kg(lbs)                     | 4820(10630)  | 5610(12370)                        | 6160(13580)   | 6880(15170)                        |                        |              |
| Chassis & Wheels      | 35   | Number                            | Front/Rear                  | 4/2  |                                    |   |                                    |                        |              |
|                       | 36   | Tires                             | Front                       | 8.25 × 15-14PR   |                                    | 9.00 × 20-14PR  |                                    |                        |              |
|                       |  |                                   | Rear                        | 8.25 × 15-14PR   |                                    | 9.00 × 20-14PR  |                                    |                        |              |
|                       | 37   | Size                              | Front                       | 8.25 × 15-14PR   |                                    | 9.00 × 20-14PR  |                                    |                        |              |
|                       | 38   | Wheelbase                         | mm(in)                      | 2250(88.6)   | 2500(98.4)                         | 2800(110.2)   |                                    |                        |              |
|                       |  |                                   | mm(in)                      | 1470(57.9)   | 1600(63.0)                         |   |                                    |                        |              |
|                       | 39   | Tread                             | Front                       | 1700(66.9)   |                                    |   |                                    |                        |              |
|                       | 40   | Underclearance                    | at lowest point             | mm(in)   | 190(7.5)                           | 245(9.6)  |                                    |                        |              |
| Center of Frame       |  |                                   | mm(in)                      | 230(9.1)   | 335(13.2)                          |   |                                    |                        |              |
| 42                    | Brake  | Service                           | Hydraulic-Foot pedal        |  |                                    |   |                                    |                        |              |
| 43                    |  | Parking                           | Mechanical-Hand lever       |  |                                    |   |                                    |                        |              |
| 45                    | Battery  | Voltage / Capacity                | 2 × 12V-70AH/20h            |  |                                    |   |                                    |                        |              |
| 49                    |  | Make-Model                        | ISUZU 6BG1                  |  |                                    |   |                                    |                        |              |
| Engine & Transmission | 50   | Internal Combustion Engine        | Rated Horspower / r.p.m.    | 82.4kW/2000r.p.m. : 112PS/2000r.p.m. (SAE GROSS 114HP/2000r.p.m.)            |                                    | 84.6kW/2100r.p.m. : 115PS/2100r.p.m. (SAE GROSS 118HP/2100r.p.m.) |                                    |                        |              |
|                       |  |                                   | Rate Torque / r.p.m         | 416.5N · m/1500r.p.m. : 42.5kg · m/1500r.p.m. (SAE 307.4ft · lbs/1500r.p.m.) |                                    |   |                                    |                        |              |
|                       | 51   |                                   | Number of Cylinder          | 6  |                                    |   |                                    |                        |              |
|                       | 52   |                                   | Displacement                | lit(cu-in)   | 6.494(396.3)                       |   |                                    |                        |              |
|                       |  |                                   | Fuel Tank Capacity Type     | lit(US gal)  | 140(37.0)                          |   |                                    |                        |              |
| 55                    | Transmission   | Number of Speed Fwd / Rvs-Type    | 2/2-Automatic Power shift   |  |                                    |   |                                    |                        |              |
| 57                    | Operating Pressure   | For Attachment                    | kgf / cm <sup>2</sup> (psi) | 200(2844)  |                                    |   |                                    |                        |              |

★★ Computed values(Travel speed 0km/h) ★★★ In European Export Units +15mm(0.5in)

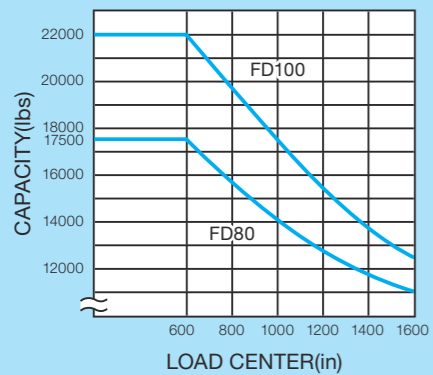
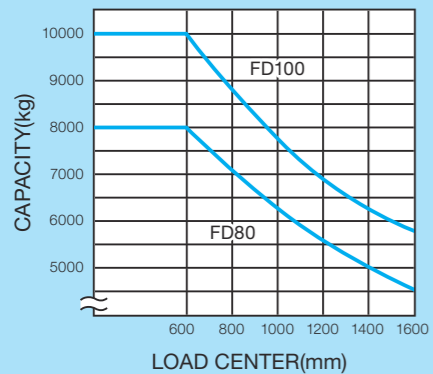


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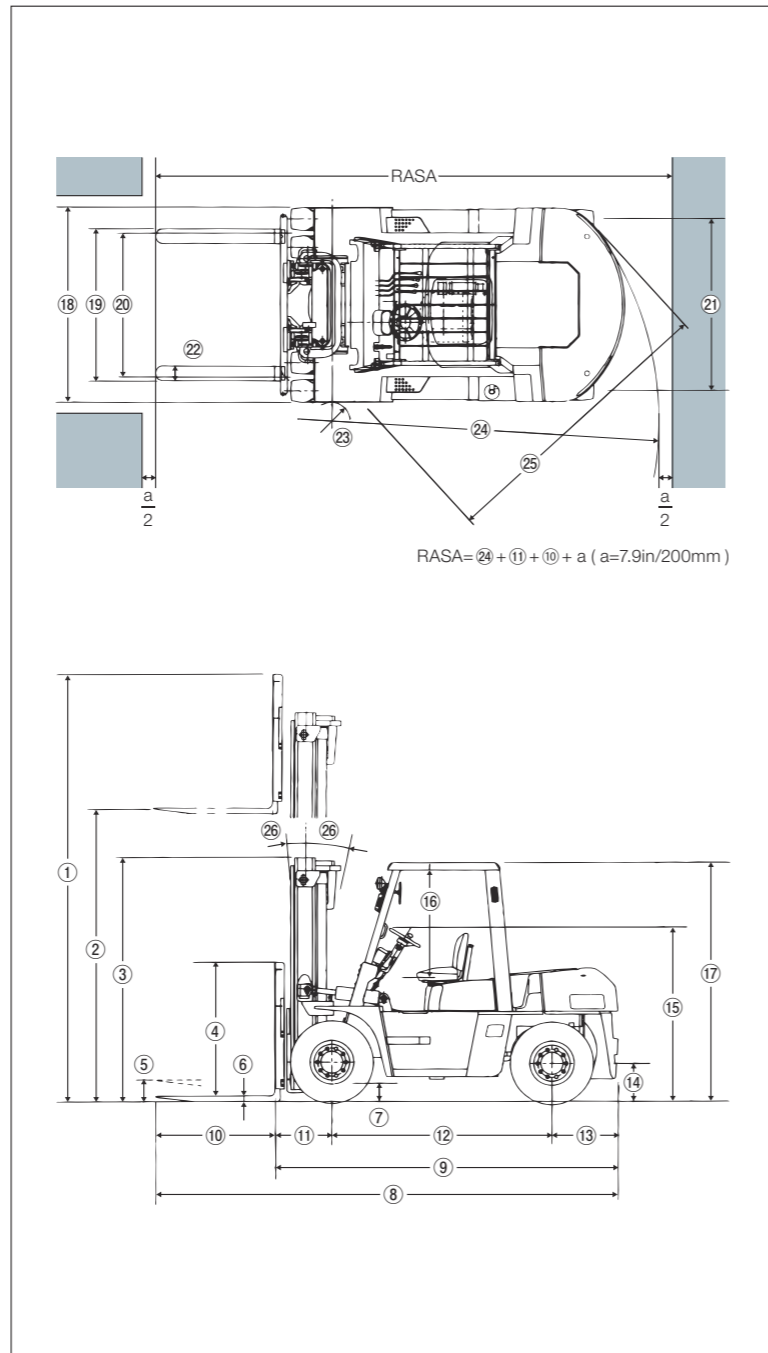
**FD60Z8 • FD70Z8**



**FD80Z8 • FD100Z8**



**STANDARD DIMENSIONS**



| GROUND CLEARANCE      | FD60Z8   | FD70Z8 | FD80Z8    | FD100Z8   |
|-----------------------|----------|--------|-----------|-----------|
| <b>Mast</b>           | 195(7.7) |        | 245(9.6)  |           |
| <b>Frame</b>          | 230(9.1) |        | 335(13.2) |           |
| <b>Front axle</b>     | 190(7.5) |        | 265(10.4) |           |
| <b>Rear axle</b>      | 245(9.7) |        | 325(12.8) | 315(12.4) |
| <b>Counter weight</b> | 225(8.9) |        | 310(12.2) |           |

mm(in)

| Model   | FD60Z8     |             | FD70Z8     |             | FD80Z8     |             | FD100Z8    |             |
|---|------------|-------------|------------|-------------|------------|-------------|------------|-------------|
|   | mm         | in          | mm         | in          | mm         | in          | mm         | in          |
| ① Overall height, Fork Raised(with backrest)                      | 4420       | 174.0       | 4420       | 174.0       | 4420       | 174.0       | 4330       | 170.5       |
| ② Maximum Fork Height   | 3000       | 118.0       | 3000       | 118.0       | 3000       | 118.0       | 3000       | 118.0       |
| ③ Mast height, Fork lowered(upright)                              | 2500       | 98.4        | 2500       | 98.4        | 2700       | 106.3       | 2850       | 112.2       |
| ④ Backrest height   | 1370       | 53.9        | 1365       | 53.7        | 1360       | 53.5        | -          | -           |
| ⑤ Free lift   | 205        | 8.1         | 215        | 8.5         | 205        | 8.1         | 205        | 8.1         |
| ⑥ Fork thickness  | 60         | 2.4         | 70         | 2.8         | 75         | 3.0         | 75         | 3.0         |
| ⑦ Ground clearance(front axle)                                    | 190        | 7.5         | 190        | 7.5         | 265        | 10.4        | 265        | 10.4        |
| ⑧ Overall length(with forks)                                      | 4760       | 187.4       | 4835       | 190.4       | 5180       | 203.9       | 5470       | 215.4       |
| ⑨ Length to fork face   | 3535       | 139.2       | 3600       | 141.7       | 3940       | 155.1       | 4255       | 167.5       |
| ⑩ Fork length   | 1220       | 48.0        | 1220       | 48.0        | 1220       | 48.0        | 1220       | 48.0        |
| ⑪ Load distance (centerline of front axle to front face of forks) | 615        | 24.2        | 625        | 24.6        | 720        | 28.3        | 710        | 28.0        |
| ⑫ Wheelbase   | 2250       | 88.6        | 2250       | 88.6        | 2500       | 98.4        | 2800       | 110.2       |
| ⑬ Rear overhang   | 675        | 26.6        | 740        | 29.1        | 740        | 29.1        | 740        | 29.1        |
| ⑭ Drawbar Pin Center Height                                       | 430        | 16.9        | 430        | 16.9        | 515        | 20.3        | 515        | 20.3        |
| ⑮ Machine height (without overhead guard and mast)                | 1780       | 70.1        | 1780       | 70.1        | 1890       | 74.4        | 1890       | 74.4        |
| ⑯ Overhead guard clearance (from face of seat) **                 | 1100       | 43.3        | 1100       | 43.3        | 1100       | 43.3        | 1100       | 43.3        |
| ⑰ Overall height(overhead guard) ***                              | 2450       | 96.5        | 2450       | 96.5        | 2560       | 100.8       | 2560       | 100.8       |
| ⑱ Overall width   | 1995       | 78.5        | 1995       | 78.5        | 2165       | 85.2        | 2245       | 88.4        |
| ⑲ Fork Spread(outside)  | 300 ~ 1835 | 11.8 ~ 72.2 | 300 ~ 1835 | 11.8 ~ 72.2 | 340 ~ 2000 | 13.4 ~ 78.7 | 405 ~ 2145 | 15.9 ~ 84.4 |
| ⑳ Tread(front)  | 1470       | 57.9        | 1470       | 57.9        | 1600       | 63.0        | 1600       | 63.0        |
| ㉑ Tread(rear)   | 1700       | 66.9        | 1700       | 66.9        | 1700       | 66.9        | 1700       | 66.9        |
| ㉒ Fork width  | 150        | 5.9         | 150        | 5.9         | 170        | 6.7         | 180        | 7.1         |
| ㉓ Inside turning radius   | 200        | 7.9         | 200        | 7.9         | 200        | 7.9         | 200        | 7.9         |
| ㉔ Outside turning radius  | 3300       | 130.0       | 3360       | 132.3       | 3650       | 143.7       | 3900       | 153.5       |
| ㉕ Min.intersecting aisle  | 2980       | 117.3       | 3020       | 118.9       | 3290       | 129.5       | 3540       | 139.4       |
| ㉖ Tilt range(forward-backward)                                    | 6° - 12°   |             | 6° - 12°   |             | 6° - 12°   |             | 6° - 12°   |             |

\*\* In European Export Unit + 50mm(2.0in)  
\*\*\* In European Export Unit + 15mm(0.5in)

**STANDARD EQUIPMENTS**

- Automatic shifting T/M
- Back-up buzzer
- Back-up light
- Charging light
- Column shift direction change
- Convertor oil cooler
- Cyclopak air cleaner with dust indicator
- Documents clip
- Drawbar-pin
- Engine oil pressure warning light
- Fuel gauge
- Full wide carriage
- Glow plug indicator
- Head & turn signal lights
- Horn
- Hour meter
- Key switch engine stop
- Load backrest
- Load check valve
- Long life tires
- Neutral safety switch
- Overhead Guard
- Power brake
- Power steering
- Radiator reserve tank
- Rear view mirrors
- Retaining Rollers
- Starter switch
- Suspension seat
- Tilt adjustable handle
- Tool set
- Water temperature gauge
- Wide View Mast

**OPTIONAL EQUIPMENTS & ACCESSORIES**

- Catalytic muffler
- Central greasing
- Cold weather spec.
- Fire extinguisher
- Heater
- Overhead exhaust
- Plate fin radiator
- Port relief valves
- Rear working light
- Right hand direction change
- Solid tires
- Spark arrest muffler
- Speedometer
- Steel Cabin
- Steel net on head guard
- Strober light
- Tilt cylinder boots
- Water separator

**ATTACHMENTS**

- Fork extension sleeves
- Fork positioner
- Hinged Forks
- Load grab
- Long forks
- Ram
- Side shift
- etc.

**NOTES**

- Meets following major standards and code:  
ISO22915-2 Counter Balanced Lift Trucks, Stability & Safety Test(Int'l)  
JIS D6001 Industrial Lift Trucks (Japan)  
ISO D6011 Stability & Safety Test (Japan)
- Overhead guard meets ISO 6055, JIS D6021

And others on request.



- 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 or may not include optional equipment and accessories.
- Features and specifications may vary depending on markets.
- Performance data and dimensions are nominal and subject to tolerances.
- Produced in ISO certified factory.