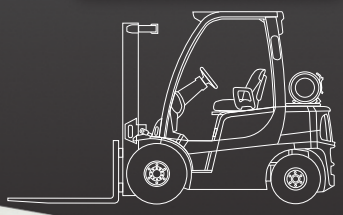
# VX Series

## Diesel and LP Gas Forklift Trucks

2,000kg, 2,500kg, 3,000kg and 3,500kg

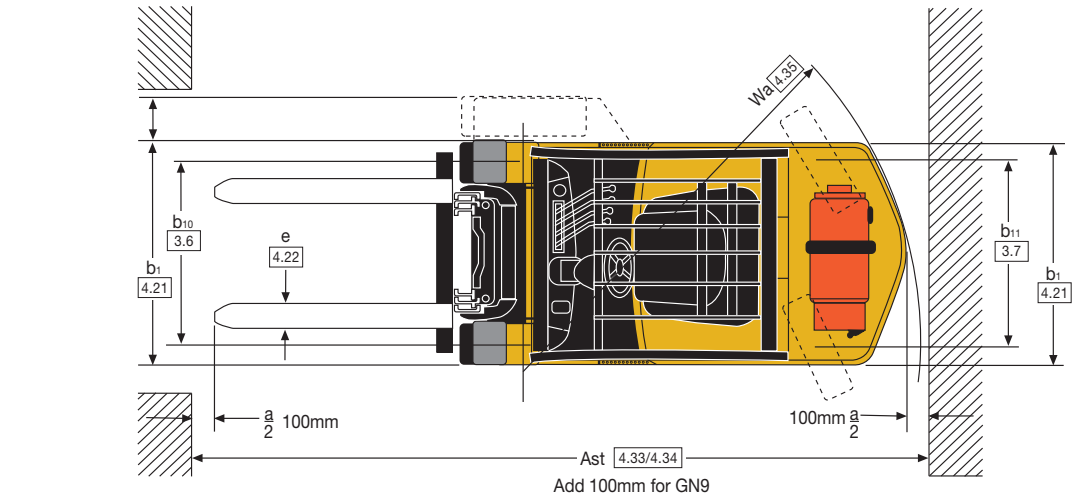



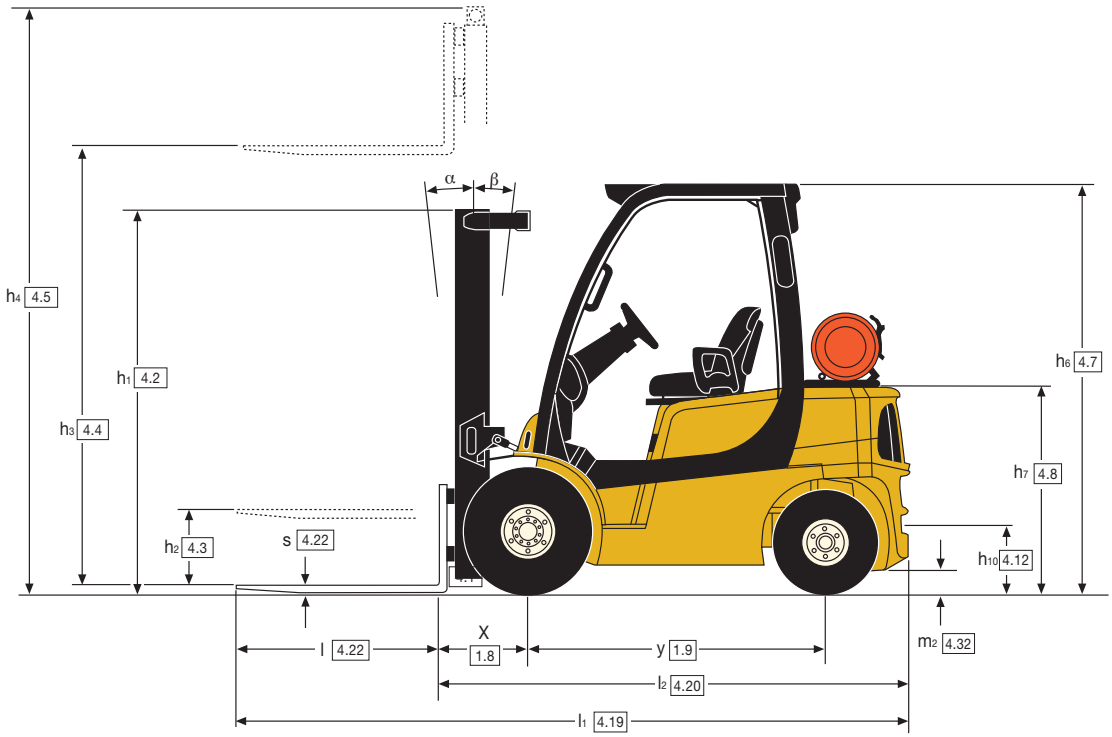
- Intellix Vehicle Management System
- 3 application matched transmissions, including the World's best hydrodynamic transmission - the Yale Techtronix 200X
- Oil immersed brakes
- ADS - Auto Deceleration System on Techtronix 100 transmission
- Anti Roll Back
- CANbus technology
- Accutouch minilevers and manual levers
- Supercushion, pneumatic and Michelin XZM radial tyres

Yale®

People. Products. Productivity.

## Truck Dimensions




## Engine Specifications

**Yanmar TNE series, Diesel**
**Base, Value, Productivity**

| | |
|---|---|
| 4 Cylinder | Overhead valve |
| Displacement | 2.6 litre |
| Torque | 146 Nm @ 1,400rpm |
| Power | 35.8kW @ 2,450rpm |
| Air filtration | Two stage, dry type |

IDI fuel injection system

**Yanmar TNE series, Diesel**
**Base, Value, Productivity**

| | |
|---|---|
| 4 Cylinder | Overhead valve |
| Displacement | 3.3 litre |
| Torque | 210 Nm @ 1,700rpm |
| Power | 48.5 kW @ 2,400rpm |
| Air filtration | Two stage, dry type |

IDI fuel injection system

**Mazda FE, LPG - Base**

| | |
|---|---|
| 4 Cylinder | Overhead Camshaft |
| Displacement | 2.0 litre |
| Torque | 124 Nm @ 1,800rpm |
| Power | 32.8 kW @ 2,700rpm |
| Air filtration | Two stage, dry type |

Emission Control Closed loop

**Mazda F2, LPG - Value**

| | |
|---|---|
| 4 Cylinder | Overhead Camshaft |
| Displacement | 2.2 litre |
| Torque | 146 Nm @ 1,800rpm |
| Power | 38 kW @ 2,700rpm |
| Air filtration | Two stage, dry type |

Emission Control Closed loop

**GM, LPG - Productivity**

| | |
|---|---|
| 4 Cylinder | Overhead Camshaft |
| Displacement | 2.4 litre |
| Torque | 167 Nm @ 2,650rpm |
| Power | 46.2 kW @ 2,700rpm |
| Air filtration | Two stage, dry type |

Emission Control Closed loop

## Options

- Powertrain protection system
- Premium monitoring package
- High air intake with pre-cleaner
- Accumulator
- Keyless start (with auxiliary key switch)
- Traction speed limiter
- Heavy-duty “Combi Cooler” radiator
- Swing-out, drop-down EZ-Tank bracket
- Return-to-set tilt
- Swivel full suspension seat
- Foot directional control
- Operator password
- Alarm-reverse
- Amber strobe light - continuous activated
- Impact monitor
- Load weight indicator
- Oil immersed brakes

A full range of Yale Hi-Vis™ 2 stg LFL and 2 and 3 stage FFL masts are available.

Yale Hi-Vis™ masts are designed for maximum visibility, with widely spaced channels, lift chains and main lift cylinders.

## Mast details and capacity ratings (kg) - Supercushion tyres

| Model | | | | | | | GLP/GDP 20 VX | | | | | | GLP/GDP 25 VX | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tyres | | | | | | | 7.00 x 12 | | | | | | 7.00 x 12 | | | | | |
| Width across tyres | | | | | | | 1157mm | | | | | | 1157mm | | | | | |
| Mast | OAH h1 | FFH h2+s | MFH h3+s | h4 | Tilt F | Tilt B | Forks 500 LC | Forks 600 LC | Forks 700 LC | Integral side shift 500 LC | Integral side shift 600 LC | Integral side shift 700 LC | Forks 500 LC | Forks 600 LC | Forks 700 LC | Integral side shift 500 LC | Integral side shift 600 LC | Integral side shift 700 LC |
| 2-Stg. LFL (V) | 2170 | 140 | 3290 | 3904 | 6 | 5 | 2000 | 1920 | 1760 | 2000 | 1840 | 1690 | 2500 | 2380 | 2180 | 2500 | 2280 | 2100 |
| | 2420 | 140 | 3790 | 4404 | 6 | 5 | 2000 | 1910 | 1750 | 2000 | 1830 | 1680 | 2500 | 2370 | 2170 | 2500 | 2280 | 2090 |
| | 2770 | 140 | 4330 | 4944 | 6 | 5 | 2000 | 1900 | 1730 | 2000 | 1820 | 1670 | 2500 | 2350 | 2150 | 2480 | 2260 | 2070 |
| 2-Stg. FFL (F) | 2170 | 1558 | 3300 | 3914 | 6 | 5 | 2000 | 1920 | 1760 | 2000 | 1850 | 1690 | 2500 | 2380 | 2180 | 2500 | 2290 | 2100 |
| 3-Stg. FFL (E) | 1970 | 1382 | 4350 | 4938 | 6 | 5 | 2000 | 1880 | 1720 | 1980 | 1800 | 1650 | 2500 | 2380 | 2180 | 2500 | 2280 | 2090 |
| | 2170 | 1582 | 4950 | 5538 | 6 | 5 | 1880 | 1770 | 1610 | 1860 | 1680 | 1540 | 2380 | 2240 | 2060 | 2380 | 2150 | 1970 |
| | 2420 | 1832 | 5550 | 6138 | 6 | 5 | 1770 | 1630 | 1500 | 1720 | 1560 | 1430 | 2240* | 2110* | 1930* | 2220* | 2020* | 1860* |

* With wide tread drive tyres (1317mm width) or dual drive tyres (1601mm width) - must be specified. h2 and h4 are without load backrest.

## Mast details and capacity ratings (kg) - Supercushion tyres

| Model | | | | | | | GLP/GDP 30 VX | | | | | | GLP/GDP 35 VX | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tyres | | | | | | | 7.00 x 12 | | | | | | 7.00 x 12 | | | | | |
| Width across tyres | | | | | | | 1186mm | | | | | | 1186mm | | | | | |
| Mast | OAH h1 | FFH h2+s | MFH h3+s | h4 | Tilt F | Tilt B | Forks 500 LC | Forks 600 LC | Forks 700 LC | Integral side shift 500 LC | Integral side shift 600 LC | Integral side shift 700 LC | Forks 500 LC | Forks 600 LC | Forks 700 LC | Integral side shift 500 LC | Integral side shift 600 LC | Integral side shift 700 LC |
| 2-Stg. LFL (V) | 2195 | 150 | 3105 | 3809 | 6 | 5 | 3000 | 2820 | 2580 | 2960 | 2700 | 2480 | 3500 | 3030 | 3310 | 3490 | 3180 | 2910 |
| | 2445 | 150 | 3605 | 4309 | 6 | 5 | 3000 | 2810 | 2570 | 2950 | 2690 | 2470 | 3500 | 3020 | 3300 | 3480 | 3170 | 2910 |
| | 2795 | 150 | 4105 | 4809 | 6 | 5 | 3000 | 2790 | 2560 | 2930 | 2670 | 2450 | 3500 | 3010 | 3280 | 3460 | 3150 | 2890 |
| 2-Stg. FFL (F) | 2195 | 1495 | 3110 | 3810 | 6 | 5 | 3000 | 2820 | 2580 | 2960 | 2700 | 2480 | 3500 | 3030 | 3310 | 3490 | 3170 | 2910 |
| 3-Stg. FFL (E) | 1995 | 1319 | 4015 | 4694 | 6 | 5 | 3000 | 2800 | 2560 | 2930 | 2670 | 2450 | 3500 | 3010 | 3290 | 3450 | 3150 | 2890 |
| | 2195 | 1519 | 4615 | 5294 | 6 | 5 | 2900 | 2700 | 2470 | 2830 | 2590 | 2360 | 3400 | 2930 | 3200 | 3360 | 3040 | 2790 |
| | 2345 | 1669 | 4915 | 5594 | 6 | 5 | 2830 | 2630 | 2400 | 2740 | 2520 | 2310 | 3330* | 2860* | 3110* | 3270* | 2970* | 2720* |
| | 2445 | 1769 | 5215 | 5894 | 6 | 5 | 2740 | 2560 | 2340 | 2680 | 2450 | 2240 | 3240* | 2770* | 3040* | 3170* | 2900* | 2650* |

* With wide tread drive tyres (1321mm width) or dual drive tyres (1601mm width) - must be specified. h2 and h4 without load backrest.

## Mast details and capacity ratings (kg) - Michelin XZM tyres

| Model | | | | | | | GLP/GDP 20 VX | | | | | | GLP/GDP 25 VX | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tyres | | | | | | | 7.00 x 12 | | | | | | 7.00 x 12 | | | | | |
| Width across tyres | | | | | | | 1157mm | | | | | | 1157mm | | | | | |
| Mast | OAH h1 | FFH h2+s | MFH h3+s | h4 | Tilt F | Tilt B | Forks 500 LC | Forks 600 LC | Forks 700 LC | Integral side shift 500 LC | Integral side shift 600 LC | Integral side shift 700 LC | Forks 500 LC | Forks 600 LC | Forks 700 LC | Integral side shift 500 LC | Integral side shift 600 LC | Integral side shift 700 LC |
| 2-Stg. LFL (V) | 2170 | 140 | 3290 | 3904 | 6 | 5 | 2000 | 1920 | 1760 | 2000 | 1840 | 1690 | 2500 | 2380 | 2180 | 2500 | 2280 | 2100 |
| | 2420 | 140 | 3790 | 4404 | 6 | 5 | 2000 | 1910 | 1750 | 2000 | 1830 | 1680 | 2500 | 2370 | 2170 | 2500 | 2280 | 2090 |
| | 2770 | 140 | 4330 | 4944 | 6 | 5 | 2000 | 1900 | 1730 | 2000 | 1820 | 1670 | 2500 | 2350 | 2150 | 2480 | 2260 | 2070 |
| 2-Stg. FFL (F) | 2170 | 1558 | 3300 | 3914 | 6 | 5 | 2000 | 1920 | 1760 | 2000 | 1850 | 1690 | 2500 | 2380 | 2180 | 2500 | 2290 | 2100 |
| 3-Stg. FFL (E) | 1970 | 1382 | 4350 | 4938 | 6 | 5 | 2000 | 1880 | 1720 | *1980 | 1800 | 1650 | *2500 | *2380 | *2180 | *2500 | *2280 | *2090 |
| | 2170 | 1582 | 4950 | 5538 | 6 | 5 | *1880 | *1770 | *1610 | *1860 | *1680 | *1540 | *2380 | *2240 | *2060 | *2380 | *2150 | *1970 |
| | 2420 | 1832 | 5550 | 6138 | 6 | 5 | *1770 | *1630 | *1500 | *1720 | *1540 | *1430 | **2240 | **2110 | **1930 | **2220 | **2020 | **1860 |

* With wide tread drive tyres (1317mm width) or dual drive tyres (1601mm width) - must be specified. **Dual drive tyres (1601mm width) must be specified. h2 and h4 are without load backrest.

## Mast details and capacity ratings (kg) - Michelin XZM tyres

| Model | | | | | | | GLP/GDP 30 VX | | | | | | GLP/GDP 35 VX | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tyres | | | | | | | 7.00 x 12 | | | | | | 7.00 x 12 | | | | | |
| Width across tyres | | | | | | | 1186mm | | | | | | 1186mm | | | | | |
| Mast | OAH h1 | FFH h2+s | MFH h3+s | h4 | Tilt F | Tilt B | Forks 500 LC | Forks 600 LC | Forks 700 LC | Integral side shift 500 LC | Integral side shift 600 LC | Integral side shift 700 LC | Forks 500 LC | Forks 600 LC | Forks 700 LC | Integral side shift 500 LC | Integral side shift 600 LC | Integral side shift 700 LC |
| 2-Stg. LFL (V) | 2195 | 150 | 3105 | 3809 | 6 | 5 | 3000 | 2820 | 2580 | 2960 | 2700 | 2480 | 3500 | 3310 | 3030 | 3490 | 3180 | 2910 |
| | 2445 | 150 | 3605 | 4309 | 6 | 5 | 3000 | 2810 | 2570 | 2950 | 2690 | 2470 | 3500 | 3300 | 3020 | 3480 | 3170 | 2910 |
| | 2795 | 150 | 4105 | 4809 | 6 | 5 | 3000 | 2790 | 2560 | 2930 | 2670 | 2450 | 3500 | 3280 | 3010 | 3460 | 3150 | 2890 |
| 2-Stg. FFL (F) | 2195 | 1495 | 3110 | 3810 | 6 | 5 | 3000 | 2820 | 2580 | 2960 | 2700 | 2480 | 3500 | 3310 | 3030 | 3490 | 3170 | 2910 |
| 3-Stg. FFL (E) | 1995 | 1319 | 4015 | 4694 | 6 | 5 | 3000 | 2800 | 2560 | 2930 | 2670 | 2450 | *3500 | *3290 | *3010 | *3450 | *3150 | *2890 |
| | 2195 | 1519 | 4615 | 5294 | 6 | 5 | *2900 | *2700 | *2470 | *2830 | *2590 | *2360 | *3400 | *3170 | *2930 | *3330 | *3040 | *2790 |
| | 2345 | 1669 | 4915 | 5594 | 6 | 5 | *2830 | *2630 | *2400 | *2740 | *2520 | *2310 | **3330 | **3110 | **2860 | **3270 | *2970 | **2720 |
| | 2445 | 1769 | 5215 | 5894 | 6 | 5 | *2720 | *2560 | *2340 | *2680 | *2430 | *2240 | **3270 | **3040 | **2790 | **3170* | **2900 | **2680 |

* With wide tread drive tyres (1321mm width) or dual drive tyres (1601mm width) - must be specified. **Dual drive tyres (1601mm width) must be specified. h2 and h4 without load backrest.

## VDI 2198 – General Specifications, Diesel Powered GDP20VX, GDP25VX

| | | | | | | |
|---|---|---|---|---|---|---|
| Characteristics | 1.1 | Manufacturer | | Yale | | |
| | 1.2 | Model designation | | **GDP 20 VX** | | |
| | | Power Train - Engine Transmission | | Yanmar 2.6L Standard Electronic | Yanmar 2.6L Techtronix 100 | Yanmar 3.3L Techtronix 200X |
| | | Model - Manufacturer Designation | | Base | Value | Productivity |
| | 1.3 | Power: battery, diesel, LPG, electric mains | | Diesel | Diesel | Diesel |
| | 1.4 | Operation: manual, pedestrian, stand, seat, order picker | | Seat | Seat | Seat |
| | 1.5 | Load capacity | Q (kg) | 2000 | 2000 | 2000 |
| | 1.6 | Load centre | c (mm) | 500 | 500 | 500 |
| | 1.8 | Load distance | x (mm) | 471 | 471 | 471 |
| | 1.9 | Wheelbase | y (mm) | 1623 | 1623 | 1623 |
| Weights | 2.1 | Unladen weight | kg | 3623 | 3623 | 3623 |
| | 2.2 | Axle loading laden, front/rear | kg | 5046 / 577 | 5046 / 577 | 5046 / 577 |
| | 2.3 | Axle loading unladen, front/rear | kg | 1850 / 1773 | 1850 / 1773 | 1850 / 1773 |
| Wheels & Tyres | 3.1 | L = Pneumatic, V = Cushion, SE = Supercushion | | SE | SE | SE |
| | 3.2 | Tyre size-front | | 7.00 X 12 - 12 | 7.00 X 12 - 12 | 7.00 X 12 - 12 |
| | 3.3 | Tyre size-rear | | 6.00 X 9 | 6.00 X 9 | 6.00 X 9 |
| | 3.5 | Number of wheels, front/rear (X = driven) | | 2x / 2 | 2x / 2 | 2x / 2 |
| | 3.6 | Track width, front | b10 (mm) | 965 | 965 | 965 |
| | 3.7 | Track width, rear | b11 (mm) | 967 | 967 | 967 |
| Dimensions | 4.1 | Mast tilt, forward $\alpha$ /back $\beta$ | degrees | 6 / 5 | 6 / 5 | 6 / 5 |
| | 4.2 | Height of mast, lowered | h1 (mm) | 2170 | 2170 | 2170 |
| | 4.3 | Free lift ▲ | h2 (mm) | 100 | 100 | 100 |
| | 4.4 | Lift height ▲ | h3 (mm) | 3250 | 3250 | 3250 |
| | 4.5 | Height of mast, extended ✚ | h4 (mm) | 3904 | 3904 | 3904 |
| | 4.7 | Height to top of overhead guard ❍ | h6 (mm) | 2160 | 2160 | 2160 |
| | 4.8 | Seat height ✘ | h7 (mm) | 1061 | 1061 | 1061 |
| | 4.12 | Towing coupling height | h10 (mm) | 365 | 365 | 365 |
| | 4.19 | Overall length | l1 (mm) | 3486 | 3486 | 3486 |
| | 4.20 | Length to face of forks | l2 (mm) | 2486 | 2486 | 2486 |
| | 4.21 | Overall width, Std/Dual | b1/b2 (mm) | 1157 / 1601 | 1157 / 1601 | 1157 / 1601 |
| | 4.22 | Fork dimensions | s/e/l (mm) | 40 X 100 X 1000 | 40 X 100 X 1000 | 40 X 100 X 1000 |
| | 4.23 | Fork carriage to DIN 15173. Class, A/B | | II A | II A | II A |
| | 4.24 | Fork carriage width ◗ | b3 (mm) | 1067 | 1067 | 1067 |
| | 4.31 | Ground clearance under mast, laden | m1 (mm) | 107 | 107 | 107 |
| | 4.32 | Ground clearance at centre of wheelbase | m2 (mm) | 160 | 160 | 160 |
| | 4.33 | Aisle width with pallets 1000mm long x 1200mm wide | Ast (mm) | 3820 | 3820 | 3820 |
| | 4.34 | Aisle width with pallets 800mm wide x 1200mm long | Ast (mm) | 4020 | 4020 | 4020 |
| | 4.35 | Outer turning radius | Wa (mm) | 2149 | 2149 | 2149 |
| | 4.36 | Inner turning radius | b13 (mm) | 50 | 50 | 50 |
| Performance | 5.1 | Travel speed laden/unladen | km/h | 16.9 / 18.0 | 16.9 / 18.0 | 21.1 / 21.4 |
| | 5.2 | Lifting speed laden/unladen ❖ | m/sec | 0.66 / 0.71 | 0.62 / 0.65 | 0.63 / 0.63 |
| | 5.3 | Lowering speed laden/unladen | m/sec | 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 |
| | 5.5 | Drawbar pull laden/unladen, @ 1.6km/h | N | 17440 / 11570 | 17440 / 11570 | 21805 / 11570 |
| | | Drawbar pull laden/unladen, @ 4.8km/h | N | 11600 / 11800 | 11600 / 11800 | 20000 / 20900 |
| | 5.6 | Maximum drawbar pull laden/unladen | N | 21204 / 11570 | 21204 / 11570 | 21805 / 11570 |
| | 5.7 | Gradeability laden/unladen, @ 4.8km/h | % | 21.3 / 34.2 | 21.3 / 34.2 | 39.0 / 34.2 |
| | 5.8 | Maximum gradeability laden/unladen, @ 1.6km/h | % | 33.2 / 34.2 | 33.2 / 34.2 | 42.8 / 34.2 |
| | 5.10 | Service brake | | Hydraulic | Hydraulic | Hydraulic |
| Motor | 7.1 | Engine manufacturer/type | | Yanmar 4TNE92 | Yanmar 4TNE92 | Yanmar 4TNE98 |
| | 7.2 | Engine output, in accordance with ISO1585 | kW | 35.8 | 35.8 | 48.5 |
| | 7.3 | Governed speed | rpm | 2700 | 2700 | 2600 |
| | 7.4 | Number of cylinders/displacement | cm3 | 4 / 2659 | 4 / 2659 | 4 / 3319 |
| | 7.5 | Fuel consumption in accordance with VDI cycle ❖ | l/h | 3.1 | 2.7 | 2.8 |
| Other | 8.1 | Drive control | | Hydrodynamic | Hydrodynamic | Hydrodynamic |
| | 8.2 | Working pressure for attachments | bar | 0 - 155 | 0 - 155 | 0 - 155 |
| | 8.3 | Oil flow for attachments ↕ | l/min | 75 | 75 | 75 |
| | 8.4 | Average noise level at operator's ear ★ ■ | dB(A) | 79 | 79 | 79 |
| | | Guaranteed sound power 2001/14/EC | | 102 | 102 | 102 |
| | 8.5 | Towing coupling type | | Pin | Pin | Pin |

★ Measured according to the test cycles and based on the weighting values contained in EN12053.

■ Noise levels are reduced by 3dB(A) on Value and Productivity models with ECO-eLo mode engaged.

↕ Variable.

▲ Top of forks.

✘ Full suspension seat in depressed position.

◗ Add 32mm with load backrest.

❍ h6 subject to +/- 5mm tolerance. GDP20-25VX add 25mm when front tyre size 28 x 9-15 is selected.

✚ Without load backrest.

❖ For Base models supplied with mini-levers, fuel consumption figures (line 7.5) are as stated on the Value VDI table.

| | | | | | | |
|---|---|---|---|---|---|---|
| Yale | | | | | 1.1 | |
| **GDP 25 VX** | | | | | 1.2 | |
| Yanmar 2.6L Standard Electronic | Yanmar 3.3L Standard Electronic | Yanmar 2.6L Techtronix 100 | Yanmar 3.3L Techtronix 100 | Yanmar 3.3L Techtronix 200X | | |
| Base | Base | Value | Productivity | Productivity | | Characteristics |
| Diesel | Diesel | Diesel | Diesel | Diesel | 1.3 | |
| Seat | Seat | Seat | Seat | Seat | 1.4 | |
| 2500 | 2500 | 2500 | 2500 | 2500 | 1.5 | |
| 500 | 500 | 500 | 500 | 500 | 1.6 | |
| 471 | 471 | 471 | 471 | 471 | 1.8 | |
| 1623 | 1623 | 1623 | 1623 | 1623 | 1.9 | |
| 3961 | 3961 | 3961 | 3961 | 3961 | 2.1 | Weights |
| 5775 / 686 | 5775 / 686 | 5775 / 686 | 5775 / 686 | 5775 / 686 | 2.2 | |
| 1780 / 2181 | 1780 / 2181 | 1780 / 2181 | 1780 / 2181 | 1780 / 2181 | 2.3 | |
| SE | SE | SE | SE | SE | 3.1 | Wheels & Tyres |
| 7.00 X 12 - 12 | 7.00 X 12 - 12 | 7.00 X 12 - 12 | 7.00 X 12 - 12 | 7.00 X 12 - 12 | 3.2 | |
| 6.00 X 9 | 6.00 X 9 | 6.00 X 9 | 6.00 X 9 | 6.00 X 9 | 3.3 | |
| 2x / 2 | 2x / 2 | 2x / 2 | 2x / 2 | 2x / 2 | 3.5 | |
| 965 | 965 | 965 | 965 | 965 | 3.6 | |
| 967 | 967 | 967 | 967 | 967 | 3.7 | |
| 6 / 5 | 6 / 5 | 6 / 5 | 6 / 5 | 6 / 5 | 4.1 | Dimensions |
| 2170 | 2170 | 2170 | 2170 | 2170 | 4.2 | |
| 100 | 100 | 100 | 100 | 100 | 4.3 | |
| 3250 | 3250 | 3250 | 3250 | 3250 | 4.4 | |
| 3904 | 3904 | 3904 | 3904 | 3904 | 4.5 | |
| 2160 | 2160 | 2160 | 2160 | 2160 | 4.7 | |
| 1061 | 1061 | 1061 | 1061 | 1061 | 4.8 | |
| 365 | 365 | 365 | 365 | 365 | 4.12 | |
| 3559 | 3559 | 3559 | 3559 | 3559 | 4.19 | |
| 2559 | 2559 | 2559 | 2559 | 2559 | 4.20 | |
| 1157 / 1601 | 1157 / 1601 | 1157 / 1601 | 1157 / 1601 | 1157 / 1601 | 4.21 | |
| 40 X 100 X 1000 | 40 X 100 X 1000 | 40 X 100 X 1000 | 40 X 100 X 1000 | 40 X 100 X 1000 | 4.22 | |
| II A | II A | II A | II A | II A | 4.23 | |
| 1067 | 1067 | 1067 | 1067 | 1067 | 4.24 | |
| 107 | 107 | 107 | 107 | 107 | 4.31 | |
| 160 | 160 | 160 | 160 | 160 | 4.32 | |
| 3887 | 3887 | 3887 | 3887 | 3887 | 4.33 | |
| 4087 | 4087 | 4087 | 4087 | 4087 | 4.34 | |
| 2216 | 2216 | 2216 | 2216 | 2216 | 4.35 | |
| 50 | 50 | 50 | 50 | 50 | 4.36 | |
| 16.9 / 18.0 | 18.2 / 19.3 | 16.9 / 18.0 | 18.2 / 19.3 | 21.1 / 21.4 | 5.1 | Performance |
| 0.61 / 0.71 | 0.68 / 0.68 | 0.59 / 0.65 | 0.63 / 0.63 | 0.63 / 0.63 | 5.2 | |
| 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 | 5.3 | |
| 17440 / 11450 | 21640 / 11450 | 17440 / 11450 | 21640 / 11450 | 21805 / 11450 | 5.5 | |
| 11800 / 11100 | 24248 / 11450 | 19389 / 11450 | 16500 / 16500 | 20900 / 19600 | | |
| 19389 / 11450 | 16500 / 16500 | 11800 / 11100 | 24248 / 11450 | 21805 / 11450 | 5.6 | |
| 21.0 / 29.3 | 26.0 / 29.3 | 21.0 / 29.3 | 26.0 / 29.3 | 33.8 / 29.3 | 5.7 | |
| 27.7 / 29.3 | 35.1 / 29.3 | 27.7 / 29.3 | 35.1 / 29.3 | 35.4 / 29.3 | 5.8 | |
| Hydraulic | Hydraulic | Hydraulic | Hydraulic | Hydraulic | 5.10 | |
| Yanmar 4TNE92 | Yanmar 4TNE98 | Yanmar 4TNE92 | Yanmar 4TNE98 | Yanmar 4TNE98 | 7.1 | Motor |
| 35.8 | 48.5 | 35.8 | 48.5 | 48.5 | 7.2 | |
| 2700 | 2600 | 2700 | 2600 | 2600 | 7.3 | |
| 4 / 2659 | 4 / 3319 | 4 / 2659 | 4 / 3319 | 4 / 3319 | 7.4 | |
| 3.4 | 3.7 | 3.0 | 3.3 | 3.3 | 7.5 | |
| Hydrodynamic | Hydrodynamic | Hydrodynamic | Hydrodynamic | Hydrodynamic | 8.1 | Other |
| 0 - 155 | 0 - 155 | 0 - 155 | 0 - 155 | 0 - 155 | 8.2 | |
| 75 | 75 | 75 | 75 | 75 | 8.3 | |
| 79 | 79 | 79 | 79 | 79 | 8.4 | |
| 102 | 102 | 102 | 102 | 102 | | |
| Pin | Pin | Pin | Pin | Pin | 8.5 | |

❖ For Value trucks supplied with manual levers, the values for lifting speeds (line 5.2) and fuel consumption (line 7.5) are as stated on the Base VDI table.

**Base specification sheet truck based on:**
3290mm (GDP20/25VX) Top of Forks 2 stage LFL Standard carriage, 1000mm forks and manual levers.

**Value and Productivity specification sheet truck based on:**
3290mm (GDP20/25VX) Top of Forks 2 stage LFL Standard carriage, 1000mm forks and e-hydraulics.

## VDI 2198 – General Specifications, Diesel Powered GDP30VX, GDP35VX

| | | | | | | |
|---|---|---|---|---|---|---|
| Characteristics | 1.1 | Manufacturer | | Yale | | |
| | 1.2 | Model designation | | **GDP 30 VX** | | |
| | | Power Train - Engine Transmission | | Yanmar 2.6L Standard Electronic | Yanmar 3.3L Standard Electronic | Yanmar 2.6L Techtronix 100 |
| | | Model - Manufacturer Designation | | Base | Base | Value |
| | 1.3 | Power: battery, diesel, LPG, electric mains | | Diesel | Diesel | Diesel |
| | 1.4 | Operation: manual, pedestrian, stand, seat, order picker | | Seat | Seat | Seat |
| | 1.5 | Load capacity | Q (kg) | 3000 | 3000 | 3000 |
| | 1.6 | Load centre | c (mm) | 500 | 500 | 500 |
| | 1.8 | Load distance | x (mm) | 478 | 478 | 478 |
| | 1.9 | Wheelbase | y (mm) | 1623 | 1623 | 1623 |
| Weights | 2.1 | Unladen weight | kg | 4437 | 4437 | 4437 |
| | 2.2 | Axle loading laden, front/rear | kg | 6662 / 775 | 6662 / 775 | 6662 / 775 |
| | 2.3 | Axle loading unladen, front/rear | kg | 1845 / 2592 | 1845 / 2592 | 1845 / 2592 |
| Wheels & Tyres | 3.1 | L = Pneumatic, V = Cushion, SE = Supercushion | | SE | SE | SE |
| | 3.2 | Tyre size-front | | 28 X 9 - 15 | 28 X 9 - 15 | 28 X 9 - 15 |
| | 3.3 | Tyre size-rear | | 6.50 X 10 | 6.50 X 10 | 6.50 X 10 |
| | 3.5 | Number of wheels, front/rear (X = driven) | | 2x / 2 | 2x / 2 | 2x / 2 |
| | 3.6 | Track width, front | b10 (mm) | 965 | 965 | 965 |
| | 3.7 | Track width, rear | b11 (mm) | 967 | 967 | 967 |
| Dimensions | 4.1 | Mast tilt, forward $\alpha$ /back $\beta$ | degrees | 6 / 5 | 6 / 5 | 6 / 5 |
| | 4.2 | Height of mast, lowered | h1 (mm) | 2195 | 2195 | 2195 |
| | 4.3 | Free lift ▲ | h2 (mm) | 100 | 100 | 100 |
| | 4.4 | Lift height ▲ | h3 (mm) | 3055 | 3055 | 3055 |
| | 4.5 | Height of mast, extended ✚ | h4 (mm) | 3809 | 3809 | 3809 |
| | 4.7 | Height to top of overhead guard ❍ | h6 (mm) | 2185 | 2185 | 2185 |
| | 4.8 | Seat height ✘ | h7 (mm) | 1086 | 1086 | 1086 |
| | 4.12 | Towing coupling height | h10 (mm) | 390 | 390 | 390 |
| | 4.19 | Overall length | l1 (mm) | 3633 | 3633 | 3633 |
| | 4.20 | Length to face of forks | l2 (mm) | 2633 | 2633 | 2633 |
| | 4.21 | Overall width, Standard/Dual | b1/b2 (mm) | 1186 / 1601 | 1186 / 1601 | 1186 / 1601 |
| | 4.22 | Fork dimensions | s/e/l (mm) | 50 X 120 X 1000 | 51 X 120 X 1000 | 52 X 120 X 1000 |
| | 4.23 | Fork carriage to DIN 15173. Class, A/B | | III A | III A | III A |
| | 4.24 | Fork carriage width ◗ | b3 (mm) | 1067 | 1067 | 1067 |
| | 4.31 | Ground clearance under mast, laden | m1 (mm) | 132 | 132 | 132 |
| | 4.32 | Ground clearance at centre of wheelbase | m2 (mm) | 185 | 185 | 185 |
| | 4.33 | Aisle width with pallets 1000mm long x 1200mm wide | Ast (mm) | 3955 | 3955 | 3955 |
| | 4.34 | Aisle width with pallets 800mm wide x 1200mm long | Ast (mm) | 4155 | 4155 | 4155 |
| | 4.35 | Outer turning radius | Wa (mm) | 2277 | 2277 | 2277 |
| | 4.36 | Inner turning radius | b13 (mm) | 25 | 25 | 25 |
| Performance | 5.1 | Travel speed laden/unladen | km/h | 18.2 / 19.1 | 20.0 / 21.1 | 18.2 / 19.2 |
| | 5.2 | Lifting speed laden/unladen ❖ | m/sec | 0.47 / 0.62 | 0.51 / 0.57 | 0.55 / 0.55 |
| | 5.3 | Lowering speed laden/unladen | m/sec | 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 |
| | 5.5 | Drawbar pull laden/unladen, @ 1.6km/h | N | 16354 / 11708 | 21556 / 13154 | 16354 / 11708 |
| | | Drawbar pull laden/unladen, @ 4.8km/h | N | 11100 / 11600 | 16200 / 16500 | 11100 / 11600 |
| | 5.6 | Maximum drawbar pull laden/unladen | N | 19291 / 11708 | 24164 / 13154 | 19291 / 11708 |
| | 5.7 | Gradeability laden/unladen, @ 4.8km/h | % | 15.0 / 26.6 | 23.0 / 30.2 | 15.0 / 26.6 |
| | 5.8 | Maximum gradeability laden/unladen, @ 1.6km/h | % | 22.6 / 26.6 | 30.3 / 30.2 | 22.6 / 26.6 |
| | 5.10 | Service brake | | Hydraulic | Hydraulic | Hydraulic |
| Motor | 7.1 | Engine manufacturer/type | | Yanmar 4TNE92 | Yanmar 4TNE98 | Yanmar 4TNE92 |
| | 7.2 | Engine output, in accordance with ISO1585 | kW | 35.8 | 48.5 | 35.8 |
| | 7.3 | Governed speed | rpm | 2700 | 2600 | 2700 |
| | 7.4 | Number of cylinders/displacement | cm3 | 4 / 2659 | 4 / 3319 | 4 / 2659 |
| | 7.5 | Fuel consumption in accordance with VDI cycle ❖ | l/h | 3.8 | 3.3 | 4.3 |
| Other | 8.1 | Drive control | | Hydrodynamic | Hydrodynamic | Hydrodynamic |
| | 8.2 | Working pressure for attachments | bar | 0 - 155 | 0 - 155 | 0 - 155 |
| | 8.3 | Oil flow for attachments ↕ | l/min | 75 | 75 | 75 |
| | 8.4 | Average noise level at operator's ear ★ ■ | dB(A) | 79 | 79 | 79 |
| | | Guaranteed sound power 2001/14/EC | | 102 | 102 | 102 |
| | 8.5 | Towing coupling type | | Pin | Pin | Pin |

★ Measured according to the test cycles and based on the weighting values contained in EN12053.

■ Noise levels are reduced by 3dB(A) on Value and Productivity models with ECO-eLo mode engaged.

↕ Variable.

▲ Top of forks.

✘ Full suspension seat in depressed position.

◗ Add 32mm with load backrest.

❍ h6 subject to +/- 5mm tolerance.

✚ Without load backrest.

❖ For Base models supplied with mini-levers, fuel consumption figures (line 7.5) are as stated on the Value VDI table.

| | | Yale | | | 1.1 | |
|---|---|---|---|---|---|---|
| | | **GDP 35 VX** | | | 1.2 | |
| Yanmar 3.3L Techtronix 100 | Yanmar 3.3L Techtronix 200X | Yanmar 3.3L Standard Electronic | Yanmar 3.3L Techtronix 100 | Yanmar 3.3L Techtronix 200X | | |
| Productivity | Productivity | Base | Value / Productivity | Productivity | | |
| Diesel | Diesel | Diesel | Diesel | Diesel | 1.3 | Characteristics |
| Seat | Seat | Seat | Seat | Seat | 1.4 | |
| 3000 | 3000 | 3500 | 3500 | 3500 | 1.5 | |
| 500 | 500 | 500 | 500 | 500 | 1.6 | |
| 478 | 478 | 478 | 478 | 478 | 1.8 | |
| 1623 | 1623 | 1700 | 1700 | 1700 | 1.9 | |
| 4437 | 4437 | 4754 | 4754 | 4754 | 2.1 | Weights |
| 6662 / 775 | 6662 / 775 | 7336 / 928 | 7336 / 928 | 7336 / 928 | 2.2 | |
| 1845 / 2592 | 1845 / 2592 | 1804 / 2950 | 1804 / 2950 | 1804 / 2950 | 2.3 | |
| SE | SE | SE | SE | SE | 3.1 | Wheels & Tyres |
| 28 X 9 - 15 | 28 X 9 - 15 | 28 X 9 - 15 | 28 X 9 - 15 | 28 X 9 - 15 | 3.2 | |
| 6.50 X 10 | 6.50 X 10 | 6.50 X 10 | 6.50 X 10 | 6.50 X 10 | 3.3 | |
| 2x / 2 | 2x / 2 | 2x / 2 | 2x / 2 | 2x / 2 | 3.5 | |
| 965 | 965 | 965 | 965 | 965 | 3.6 | |
| 967 | 967 | 967 | 967 | 967 | 3.7 | |
| 6 / 5 | 6 / 5 | 6 / 5 | 6 / 5 | 6 / 5 | 4.1 | Dimensions |
| 2195 | 2195 | 2195 | 2195 | 2195 | 4.2 | |
| 100 | 100 | 100 | 100 | 100 | 4.3 | |
| 3055 | 3055 | 3055 | 3055 | 3055 | 4.4 | |
| 3809 | 3809 | 3809 | 3809 | 3809 | 4.5 | |
| 2185 | 2185 | 2185 | 2185 | 2185 | 4.7 | |
| 1086 | 1086 | 1086 | 1086 | 1086 | 4.8 | |
| 390 | 390 | 390 | 390 | 390 | 4.12 | |
| 3633 | 3633 | 3734 | 3734 | 3734 | 4.19 | |
| 2633 | 2633 | 2734 | 2734 | 2734 | 4.20 | |
| 1186 / 1601 | 1186 / 1601 | 1186 / 1601 | 1186 / 1601 | 1186 / 1601 | 4.21 | |
| 53 X 120 X 1000 | 54 X 120 X 1000 | 55 X 120 X 1000 | 56 X 120 X 1000 | 57 X 120 X 1000 | 4.22 | |
| III A | III A | III A | III A | III A | 4.23 | |
| 1067 | 1067 | 1067 | 1067 | 1067 | 4.24 | |
| 132 | 132 | 132 | 132 | 132 | 4.31 | |
| 185 | 185 | 185 | 185 | 185 | 4.32 | |
| 3955 | 3955 | 4058 | 4058 | 4058 | 4.33 | |
| 4155 | 4155 | 4258 | 4258 | 4258 | 4.34 | |
| 2277 | 2277 | 2380 | 2380 | 2380 | 4.35 | |
| 25 | 25 | 54 | 54 | 54 | 4.36 | |
| 20.0 / 21.1 | 22.4 / 22.7 | 20.0 / 21.1 | 20.0 / 21.1 | 22.4 / 22.7 | 5.1 | Performance |
| 0.55 / 0.55 | 0.55 / 0.55 | 0.60 / 0.60 | 0.55 / 0.55 | 0.55 / 0.55 | 5.2 | |
| 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 | 5.3 | |
| 21556 / 13154 | 21805 / 11708 | 21485 / 11708 | 21485 / 11708 | 21805 / 12594 | 5.5 | |
| 16200 / 16500 | 19600 / 19400 | 16500 / 16500 | 16500 / 16500 | 19100 / 19400 | | |
| 24164 / 13154 | 21805 / 11708 | 24079 / 11708 | 24079 / 11708 | 21805 / 12594 | 5.6 | |
| 23.0 / 30.2 | 26.1 / 26.6 | 20.2 / 26.6 | 20.2 / 26.6 | 24.0 / 26.9 | 5.7 | |
| 30.3 / 30.2 | 30.4 / 26.6 | 30.5 / 26.6 | 30.5 / 26.6 | 27.3 / 26.9 | 5.8 | |
| Hydraulic | Hydraulic | Hydraulic | Hydraulic | Hydraulic | 5.10 | |
| Yanmar 4TNE98 | Yanmar 4TNE98 | Yanmar 4TNE98 | Yanmar 4TNE98 | Yanmar 4TNE98 | 7.1 | Motor |
| 48.5 | 48.5 | 48.5 | 48.5 | 48.5 | 7.2 | |
| 2600 | 2600 | 2600 | 2600 | 2600 | 7.3 | |
| 4 / 3319 | 4 / 3319 | 4 / 3319 | 4 / 3319 | 4 / 3319 | 7.4 | |
| 3.8 | 3.6 | 4.8 | 4.3 | 4.0 | 7.5 | |
| Hydrodynamic | Hydrodynamic | Hydrodynamic | Hydrodynamic | Hydrodynamic | 8.1 | Other |
| 0 - 155 | 0 - 155 | 0 - 155 | 0 - 155 | 0 - 155 | 8.2 | |
| 75 | 75 | 75 | 75 | 75 | 8.3 | |
| 79 | 79 | 79 | 79 | 79 | 8.4 | |
| 102 | 102 | 102 | 102 | 102 | | |
| Pin | Pin | Pin | Pin | Pin | 8.5 | |

❖ For Value trucks supplied with manual levers, the values for lifting speeds (line 5.2) and fuel consumption (line 7.5) are as stated on the Base VDI table.

**Base specification sheet truck based on:**
3105mm (GDP30/35VX) Top of Forks 2 stage LFL Standard carriage, 1000mm forks and manual levers.

**Value and Productivity specification sheet truck based on:**
3105mm (GDP30/35VX) Top of Forks 2 stage LFL Standard carriage, 1000mm forks and e-hydraulics.

## VDI 2198 – General Specifications, LPG Powered GLP20VX, GLP25VX

| | | | | | | |
|---|---|---|---|---|---|---|
| Characteristics | 1.1 | Manufacturer | | Yale | | |
| | 1.2 | Model designation | | **GLP 20 VX** | | |
| | | Power Train - Engine Transmission | | Mazda 2.0L Standard Electronic | Mazda 2.2L Standard Electronic | Mazda 2.2L Techtronix 100 |
| | | Model - Manufacturer Designation | | Base | Base | Value |
| | 1.3 | Power: battery, diesel, LPG, electric mains | | LPG | LPG | LPG |
| | 1.4 | Operation: manual, pedestrian, stand, seat, order picker | | Seat | Seat | Seat |
| | 1.5 | Load capacity | Q (kg) | 2000 | 2000 | 2000 |
| | 1.6 | Load centre | c (mm) | 500 | 500 | 500 |
| | 1.8 | Load distance | x (mm) | 471 | 471 | 471 |
| | 1.9 | Wheelbase | y (mm) | 1623 | 1623 | 1623 |
| Weights | 2.1 | Unladen weight | kg | 3515 | 3515 | 3515 |
| | 2.2 | Axle loading laden, front/rear | kg | 5003 / 512 | 5003 / 512 | 5003 / 512 |
| | 2.3 | Axle loading unladen, front/rear | kg | 1807 / 1708 | 1807 / 1708 | 1807 / 1708 |
| Wheels & Tyres | 3.1 | L = Pneumatic, V = Cushion, SE = Supercushion | | SE | SE | SE |
| | 3.2 | Tyre size-front | | 7.00 X 12 - 12 | 7.00 X 12 - 12 | 7.00 X 12 - 12 |
| | 3.3 | Tyre size-rear | | 6.00 X 9 | 6.00 X 9 | 6.00 X 9 |
| | 3.5 | Number of wheels, front/rear (X = driven) | | 2x / 2 | 2x / 2 | 2x / 2 |
| | 3.6 | Track width, front | b10 (mm) | 965 | 965 | 965 |
| | 3.7 | Track width, rear | b11 (mm) | 967 | 967 | 967 |
| Dimensions | 4.1 | Mast tilt, forward $\alpha$ /back $\beta$ | degrees | 6 / 5 | 6 / 5 | 6 / 5 |
| | 4.2 | Height of mast, lowered | h1 (mm) | 2170 | 2170 | 2170 |
| | 4.3 | Free lift ▲ | h2 (mm) | 100 | 100 | 100 |
| | 4.4 | Lift height ▲ | h3 (mm) | 3250 | 3250 | 3250 |
| | 4.5 | Height of mast, extended ✚ | h4 (mm) | 3904 | 3904 | 3904 |
| | 4.7 | Height to top of overhead guard ❍ | h6 (mm) | 2160 | 2160 | 2160 |
| | 4.8 | Seat height ✘ | h7 (mm) | 1061 | 1061 | 1061 |
| | 4.12 | Towing coupling height | h10 (mm) | 365 | 365 | 365 |
| | 4.19 | Overall length | l1 (mm) | 3486 | 3486 | 3486 |
| | 4.20 | Length to face of forks | l2 (mm) | 2486 | 2486 | 2486 |
| | 4.21 | Overall width, Std/Dual | b1/b2 (mm) | 1157 / 1601 | 1157 / 1601 | 1157 / 1601 |
| | 4.22 | Fork dimensions | s/e/l (mm) | 40 X 100 X 1000 | 40 X 100 X 1000 | 40 X 100 X 1000 |
| | 4.23 | Fork carriage to DIN 15173. Class, A/B | | II A | II A | II A |
| | 4.24 | Fork carriage width ◗ | b3 (mm) | 1067 | 1067 | 1067 |
| | 4.31 | Ground clearance under mast, laden | m1 (mm) | 107 | 107 | 107 |
| | 4.32 | Ground clearance at centre of wheelbase | m2 (mm) | 160 | 160 | 160 |
| | 4.33 | Aisle width with pallets 1000mm long x 1200mm wide | Ast (mm) | 3820 | 3820 | 3820 |
| | 4.34 | Aisle width with pallets 800mm wide x 1200mm long | Ast (mm) | 4020 | 4020 | 4020 |
| | 4.35 | Outer turning radius | Wa (mm) | 2149 | 2149 | 2149 |
| | 4.36 | Inner turning radius | b13 (mm) | 50 | 50 | 50 |
| Performance | 5.1 | Travel speed laden/unladen | km/h | 17.1 / 18.0 | 17.1 / 18.0 | 17.1 / 18.0 |
| | 5.2 | Lifting speed laden/unladen ❖ | m/sec | 0.56 / 0.57 | 0.56 / 0.57 | 0.56 / 0.57 |
| | 5.3 | Lowering speed laden/unladen | m/sec | 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 |
| | 5.5 | Drawbar pull laden/unladen, @ 1.6km/h | N | 13991 / 12082 | 16937 / 12082 | 16937 / 12082 |
| | | Drawbar pull laden/unladen, @ 4.8km/h | N | 17257 / 12082 | 11200 / 11200 | 11200 / 11200 |
| | 5.6 | Maximum drawbar pull laden/unladen | N | 8800 / 8900 | 20510 / 12082 | 20510 / 12082 |
| | 5.7 | Gradeability laden/unladen, @ 4.8km/h | % | 15.0 / 24.5 | 19.0 / 29.8 | 19.0 / 29.8 |
| | 5.8 | Maximum gradeability laden/unladen, @ 1.6km/h | % | 25.3 / 34.2 | 31.1 / 34.2 | 31.1 / 34.2 |
| | 5.10 | Service brake | | Hydraulic | Hydraulic | Hydraulic |
| Motor | 7.1 | Engine manufacturer/type | | Mazda FE | Mazda F2 | Mazda F2 |
| | 7.2 | Engine output, in accordance with ISO1585 | kW | 32.8 | 38.0 | 38.0 |
| | 7.3 | Governed speed | rpm | 2700 | 2700 | 2700 |
| | 7.4 | Number of cylinders/displacement | cm3 | 4 / 1998 | 4 / 2184 | 4 / 2184 |
| | 7.5 | Fuel consumption in accordance with VDI cycle ❖ | kg/h | 2.8 | 2.8 | 2.5 |
| Other | 8.1 | Drive control | | Hydrodynamic | Hydrodynamic | Hydrodynamic |
| | 8.2 | Working pressure for attachments | bar | 0 - 155 | 0 - 155 | 0 - 155 |
| | 8.3 | Oil flow for attachments ↕ | l/min | 62 | 62 | 62 |
| | 8.4 | Average noise level at operator's ear ★ ■ | dB(A) | 79 | 79 | 79 |
| | | Guaranteed sound power 2001/14/EC | | 102 | 102 | 102 |
| | 8.5 | Towing coupling type | | Pin | Pin | Pin |

★ Measured according to the test cycles and based on the weighting values contained in EN12053.

■ Noise levels are reduced by 3dB(A) on Value and Productivity models with ECO-eLo mode engaged.

↕ Variable.

▲ Top of forks.

✘ Full suspension seat in depressed position.

◗ Add 32mm with load backrest.

❍ h6 subject to +/- 5mm tolerance. GLP20-25VX add 25mm when front tyre size 28 x 9-15 is selected.

✚ Without load backrest.

❖ For Base models supplied with mini-levers, fuel consumption figures (line 7.5) are as stated on the Value VDI table.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Yale | | | | | 1.1 | |
| | | **GLP 25 VX** | | | | | 1.2 | |
| GM 2.4L Techtronix 100 | GM 2.4L Techtronix 200X | Mazda 2.0L Standard Electronic | Mazda 2.2L Standard Electronic | Mazda 2.2L Techtronix 100 | GM 2.4L Techtronix 100 | GM 2.4L Techtronix 200X | | |
| Productivity | Productivity | Base | Base | Value | Productivity | Productivity | | Characteristics |
| LPG | LPG | LPG | LPG | LPG | LPG | LPG | 1.3 | |
| Seat | Seat | Seat | Seat | Seat | Seat | Seat | 1.4 | |
| 2000 | 2000 | 2500 | 2500 | 2500 | 2500 | 2500 | 1.5 | |
| 500 | 500 | 500 | 500 | 500 | 500 | 500 | 1.6 | |
| 471 | 471 | 471 | 471 | 471 | 471 | 471 | 1.8 | |
| 1623 | 1623 | 1623 | 1623 | 1623 | 1623 | 1623 | 1.9 | |
| 3515 | 3515 | 3853 | 3853 | 3853 | 3853 | 3853 | 2.1 | Weights |
| 5003 / 512 | 5003 / 512 | 5732 / 621 | 5732 / 621 | 5732 / 621 | 5732 / 621 | 5732 / 621 | 2.2 | |
| 1807 / 1708 | 1807 / 1708 | 1737 / 2116 | 1737 / 2116 | 1737 / 2116 | 1737 / 2116 | 1737 / 2116 | 2.3 | |
| SE | SE | SE | SE | SE | SE | SE | 3.1 | Wheels & Tyres |
| 7.00 X 12 - 12 | 7.00 X 12 - 12 | 7.00 X 12 - 12 | 7.00 X 12 - 12 | 7.00 X 12 - 12 | 7.00 X 12 - 12 | 7.00 X 12 - 12 | 3.2 | |
| 6.00 X 9 | 6.00 X 9 | 6.00 X 9 | 6.00 X 9 | 6.00 X 9 | 6.00 X 9 | 6.00 X 9 | 3.3 | |
| 2x / 2 | 2x / 2 | 2x / 2 | 2x / 2 | 2x / 2 | 2x / 2 | 2x / 2 | 3.5 | |
| 965 | 965 | 965 | 965 | 965 | 965 | 965 | 3.6 | |
| 967 | 967 | 967 | 967 | 967 | 967 | 967 | 3.7 | |
| 6 / 5 | 6 / 5 | 6 / 5 | 6 / 5 | 6 / 5 | 6 / 5 | 6 / 5 | 4.1 | Dimensions |
| 2170 | 2170 | 2170 | 2170 | 2170 | 2170 | 2170 | 4.2 | |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 4.3 | |
| 3250 | 3250 | 3250 | 3250 | 3250 | 3250 | 3250 | 4.4 | |
| 3904 | 3904 | 3904 | 3904 | 3904 | 3904 | 3904 | 4.5 | |
| 2160 | 2160 | 2160 | 2160 | 2160 | 2160 | 2160 | 4.7 | |
| 1061 | 1061 | 1061 | 1061 | 1061 | 1061 | 1061 | 4.8 | |
| 365 | 365 | 365 | 365 | 365 | 365 | 365 | 4.12 | |
| 3486 | 3486 | 3559 | 3559 | 3559 | 3559 | 3559 | 4.19 | |
| 2486 | 2486 | 2559 | 2559 | 2559 | 2559 | 2559 | 4.20 | |
| 1157 / 1601 | 1157 / 1601 | 1157 / 1601 | 1157 / 1601 | 1157 / 1601 | 1157 / 1601 | 1157 / 1601 | 4.21 | |
| 40 X 100 X 1000 | 40 X 100 X 1000 | 40 X 100 X 1000 | 40 X 100 X 1000 | 40 X 100 X 1000 | 40 X 100 X 1000 | 40 X 100 X 1000 | 4.22 | |
| II A | II A | II A | II A | II A | II A | II A | 4.23 | |
| 1067 | 1067 | 1067 | 1067 | 1067 | 1067 | 1067 | 4.24 | |
| 107 | 107 | 107 | 107 | 107 | 107 | 107 | 4.31 | |
| 160 | 160 | 160 | 160 | 160 | 160 | 160 | 4.32 | |
| 3820 | 3820 | 3887 | 3887 | 3887 | 3887 | 3887 | 4.33 | |
| 4020 | 4020 | 4087 | 4087 | 4087 | 4087 | 4087 | 4.34 | |
| 2149 | 2149 | 2216 | 2216 | 2216 | 2216 | 2216 | 4.35 | |
| 50 | 50 | 50 | 50 | 50 | 50 | 50 | 4.36 | |
| 17.5 / 18.7 | 18.7 / 19.6 | 17.1 / 18.0 | 17.1 / 18.0 | 17.1 / 18.0 | 17.5 / 18.7 | 18.7 / 19.6 | 5.1 | Performance |
| 0.60 / 0.61 | 0.60 / 0.61 | 0.54 / 0.57 | 0.56 / 0.57 | 0.56 / 0.57 | 0.60 / 0.61 | 0.60 / 0.61 | 5.2 | |
| 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 | 5.3 | |
| 19647 / 12082 | 21805 / 11450 | 13848 / 11450 | 16857 / 11450 | 16857 / 11450 | 19033 / 11450 | 21805 / 11450 | 5.5 | |
| 13300 / 14200 | 16500 / 12500 | 8450 / 8900 | 10700 / 11100 | 10700 / 11100 | 12900 / 13300 | 15800 / 16500 | | |
| 23211 / 12082 | 21805 / 11450 | 16020 / 11450 | 19082 / 11450 | 19082 / 11450 | 22028 / 11450 | 21805 / 11450 | 5.6 | |
| 24.0 / 34.2 | 30.0 / 34.2 | 13.0 / 22.0 | 16.0 / 29.0 | 16.0 / 29.0 | 21.0 / 29.3 | 25.0 / 29.3 | 5.7 | |
| 37.0 / 34.2 | 41.0 / 34.2 | 21.7 / 29.3 | 26.7 / 29.3 | 26.7 / 29.3 | 28.0 / 29.3 | 35.4 / 29.3 | 5.8 | |
| Hydraulic | Hydraulic | Hydraulic | Hydraulic | Hydraulic | Hydraulic | Hydraulic | 5.10 | |
| GM 2.4L | GM 2.4L | Mazda FE | Mazda F2 | Mazda F2 | GM 2.4L | GM 2.4L | 7.1 | Motor |
| 46.2 | 46.2 | 32.8 | 38.0 | 38.0 | 46.2 | 46.2 | 7.2 | |
| 2700 | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 | 7.3 | |
| 4 / 2400 | 4 / 2400 | 4 / 1998 | 4 / 2184 | 4 / 2184 | 4 / 2400 | 4 / 2400 | 7.4 | |
| 2.6 | 2.7 | 3.2 | 3.2 | 2.9 | 2.8 | 2.9 | 7.5 | |
| Hydrodynamic | Hydrodynamic | Hydrodynamic | Hydrodynamic | Hydrodynamic | Hydrodynamic | Hydrodynamic | 8.1 | Other |
| 0 - 155 | 0 - 155 | 0 - 155 | 0 - 155 | 0 - 155 | 0 - 155 | 0 - 155 | 8.2 | |
| 66 | 66 | 62 | 62 | 62 | 66 | 66 | 8.3 | |
| 80 | 80 | 79 | 79 | 79 | 80 | 80 | 8.4 | |
| 105 | 105 | 102 | 102 | 102 | 105 | 105 | | |
| Pin | Pin | Pin | Pin | Pin | Pin | Pin | 8.5 | |

❖ For Value trucks supplied with manual levers, the values for lifting speeds (line 5.2) and fuel consumption (line 7.5) are as stated on the Base VDI table.

**Base specification sheet truck based on:**
3290mm (GLP20/25VX) Top of Forks 2 stage LFL Standard carriage, 1000mm forks and manual levers.

**Value and Productivity specification sheet truck based on:**
3290mm (GLP20/25VX) Top of Forks 2 stage LFL Standard carriage, 1000mm forks and e-hydraulics.

## VDI 2198 – General Specifications, LPG Powered GLP30VX, GLP35VX

| | | | | | | |
|---|---|---|---|---|---|---|
| Characteristics | 1.1 | Manufacturer | | Yale | | |
| | 1.2 | Model designation | | **GLP 30 VX** | | |
| | | Power Train - Engine Transmission | | Mazda 2.0L Standard Electronic | Mazda 2.2L Standard Electronic | Mazda 2.2L Techtronix 100 |
| | | Model - Manufacturer Designation | | Base | Base | Value |
| | 1.3 | Power: battery, diesel, LPG, electric mains | | LPG | LPG | LPG |
| | 1.4 | Operation: manual, pedestrian, stand, seat, order picker | | Seat | Seat | Seat |
| | 1.5 | Load capacity | Q (kg) | 3000 | 3000 | 3000 |
| | 1.6 | Load centre | c (mm) | 500 | 500 | 500 |
| | 1.8 | Load distance | x (mm) | 478 | 478 | 478 |
| | 1.9 | Wheelbase | y (mm) | 1623 | 1623 | 1623 |
| Weights | 2.1 | Unladen weight | kg | 4329 | 4329 | 4329 |
| | 2.2 | Axle loading laden, front/rear | kg | 6619 / 710 | 6619 / 710 | 6619 / 710 |
| | 2.3 | Axle loading unladen, front/rear | kg | 1802 / 2527 | 1802 / 2527 | 1802 / 2527 |
| Wheels & Tyres | 3.1 | L = Pneumatic, V = Cushion, SE = Supercushion | | SE | SE | SE |
| | 3.2 | Tyre size-front | | 28 X 9 - 15 | 28 X 9 - 15 | 28 X 9 - 15 |
| | 3.3 | Tyre size-rear | | 6.50 X 10 | 6.50 X 10 | 6.50 X 10 |
| | 3.5 | Number of wheels, front/rear (X = driven) | | 2x / 2 | 2x / 2 | 2x / 2 |
| | 3.6 | Track width, front | b10 (mm) | 965 | 965 | 965 |
| | 3.7 | Track width, rear | b11 (mm) | 967 | 967 | 967 |
| Dimensions | 4.1 | Mast tilt, forward $\alpha$ /back $\beta$ | degrees | 6 / 5 | 6 / 5 | 6 / 5 |
| | 4.2 | Height of mast, lowered | h1 (mm) | 2195 | 2195 | 2195 |
| | 4.3 | Free lift ▲ | h2 (mm) | 100 | 100 | 100 |
| | 4.4 | Lift height ▲ | h3 (mm) | 3055 | 3055 | 3055 |
| | 4.5 | Height of mast, extended ✚ | h4 (mm) | 3809 | 3809 | 3809 |
| | 4.7 | Height to top of overhead guard ❍ | h6 (mm) | 2185 | 2185 | 2185 |
| | 4.8 | Seat height ✘ | h7 (mm) | 1086 | 1086 | 1086 |
| | 4.12 | Towing coupling height | h10 (mm) | 390 | 390 | 390 |
| | 4.19 | Overall length | l1 (mm) | 3633 | 3633 | 3633 |
| | 4.20 | Length to face of forks | l2 (mm) | 2633 | 2633 | 2633 |
| | 4.21 | Overall width, Std/Dual | b1/b2 (mm) | 1186 / 1601 | 1186 / 1601 | 1186 / 1601 |
| | 4.22 | Fork dimensions | s/e/l (mm) | 50 X 120 X 1000 | 51 X 120 X 1000 | 52 X 120 X 1000 |
| | 4.23 | Fork carriage to DIN 15173. Class, A/B | | III A | III A | III A |
| | 4.24 | Fork carriage width ◗ | b3 (mm) | 1067 | 1067 | 1067 |
| | 4.31 | Ground clearance under mast, laden | m1 (mm) | 132 | 132 | 132 |
| | 4.32 | Ground clearance at centre of wheelbase | m2 (mm) | 185 | 185 | 185 |
| | 4.33 | Aisle width with pallets 1000mm long x 1200mm wide | Ast (mm) | 3955 | 3955 | 3955 |
| | 4.34 | Aisle width with pallets 800mm wide x 1200mm long | Ast (mm) | 4155 | 4155 | 4155 |
| | 4.35 | Outer turning radius | Wa (mm) | 2277 | 2277 | 2277 |
| | 4.36 | Inner turning radius | b13 (mm) | 25 | 25 | 25 |
| Performance | 5.1 | Travel speed laden/unladen | km/h | 18.0 / 19.1 | 18.0 / 19.1 | 18.0 / 19.1 |
| | 5.2 | Lifting speed laden/unladen ❖ | m/sec | 0.45 / 0.50 | 0.49 / 0.50 | 0.48 / 0.49 |
| | 5.3 | Lowering speed laden/unladen | m/sec | 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 |
| | 5.5 | Drawbar pull laden/unladen, @ 1.6km/h | N | 12950 / 11708 | 16274 / 11708 | 16274 / 11708 |
| | | Drawbar pull laden/unladen, @ 4.8km/h | N | 8100 / 8500 | 10500 / 11100 | 10500 / 11100 |
| | 5.6 | Maximum drawbar pull laden/unladen | N | 15851 / 11708 | 18913 / 11708 | 18913 / 11708 |
| | 5.7 | Gradeability laden/unladen, @ 4.8km/h | % | 11.0 / 19.0 | 14.0 / 25.0 | 14.0 / 25.0 |
| | 5.8 | Maximum gradeability laden/unladen, @ 1.6km/h | % | 17.6 / 26.6 | 21.5 / 26.6 | 21.5 / 26.6 |
| | 5.10 | Service brake | | Hydraulic | Hydraulic | Hydraulic |
| Motor | 7.1 | Engine manufacturer/type | | Mazda FE | Mazda F2 | Mazda F2 |
| | 7.2 | Engine output, in accordance with ISO1585 | kW | 32.8 | 38.0 | 38.0 |
| | 7.3 | Governed speed | rpm | 2700 | 2700 | 2700 |
| | 7.4 | Number of cylinders/displacement | cm3 | 4 / 1998 | 4 / 2184 | 4 / 2184 |
| | 7.5 | Fuel consumption in accordance to VDI cycle ❖ | kg/h | 3.7 | 3.5 | 3.2 |
| Other | 8.1 | Drive control | | Hydrodynamic | Hydrodynamic | Hydrodynamic |
| | 8.2 | Working pressure for attachments | bar | 0 - 155 | 0 - 155 | 0 - 155 |
| | 8.3 | Oil flow for attachments ↕ | l/min | 62 | 62 | 62 |
| | 8.4 | Average noise level at operator's ear ★ ■ | dB(A) | 79 | 79 | 79 |
| | | Guaranteed sound power 2001/14/EC | | 102 | 102 | 102 |
| | 8.5 | Towing coupling type | | Pin | Pin | Pin |

★ Measured according to the test cycles and based on the weighting values contained in EN12053.

■ Noise levels are reduced by 3dB(A) on Value and Productivity models with ECO-eLo mode engaged.

↕ Variable.

▲ Top of forks.

✘ Full suspension seat in depressed position.

◗ Add 32mm with load backrest.

❍ h6 subject to +/- 5mm tolerance.

✚ Without load backrest.

❖ For Base models supplied with mini-levers, fuel consumption figures (line 7.5) are as stated on the Value VDI table.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Yale | | | | 1.1 | |
| | | **GLP 35 VX** | | | | 1.2 | |
| GM 2.4L Techtronix 100 | GM 2.4L Techtronix 200X | Mazda 2.2L Standard Electronic | Mazda 2.2L Techtronix 100 | GM 2.4L Techtronix 100 | GM 2.4L Techtronix 200X | | |
| Productivity | Productivity | Base | Value | Productivity | Productivity | | |
| LPG | LPG | LPG | LPG | LPG | LPG | 1.3 | Characteristics |
| Seat | Seat | Seat | Seat | Seat | Seat | 1.4 | |
| 3000 | 3000 | 3500 | 3500 | 3500 | 3500 | 1.5 | |
| 500 | 500 | 500 | 500 | 500 | 500 | 1.6 | |
| 478 | 478 | 478 | 478 | 478 | 478 | 1.8 | |
| 1623 | 1623 | 1700 | 1700 | 1700 | 1700 | 1.9 | |
| 4329 | 4329 | 4646 | 4646 | 4646 | 4646 | 2.1 | Weights |
| 6619 / 710 | 6619 / 710 | 7283 / 683 | 7283 / 683 | 7283 / 683 | 7283 / 683 | 2.2 | |
| 1802 / 2527 | 1802 / 2527 | 1761 / 2885 | 1761 / 2885 | 1761 / 2885 | 1761 / 2885 | 2.3 | |
| SE | SE | SE | SE | SE | SE | 3.1 | Wheels & Tyres |
| 28 X 9 - 15 | 28 X 9 - 15 | 28 X 9 - 15 | 28 X 9 - 15 | 28 X 9 - 15 | 28 X 9 - 15 | 3.2 | |
| 6.50 X 10 | 6.50 X 10 | 6.50 X 10 | 6.50 X 10 | 6.50 X 10 | 6.50 X 10 | 3.3 | |
| 2x / 2 | 2x / 2 | 2x / 2 | 2x / 2 | 2x / 2 | 2x / 2 | 3.5 | |
| 965 | 965 | 965 | 965 | 965 | 965 | 3.6 | |
| 967 | 967 | 967 | 967 | 967 | 967 | 3.7 | |
| 6 / 5 | 6 / 5 | 6 / 5 | 6 / 5 | 6 / 5 | 6 / 5 | 4.1 | Dimensions |
| 2195 | 2195 | 2195 | 2195 | 2195 | 2195 | 4.2 | |
| 100 | 100 | 100 | 100 | 150 | 150 | 4.3 | |
| 3055 | 3055 | 3055 | 3055 | 100 | 100 | 4.4 | |
| 3809 | 3809 | 3809 | 3809 | 3055 | 3055 | 4.5 | |
| 2185 | 2185 | 2185 | 2185 | 2185 | 2185 | 4.7 | |
| 1086 | 1086 | 1086 | 1086 | 1086 | 1086 | 4.8 | |
| 390 | 390 | 390 | 390 | 390 | 390 | 4.12 | |
| 3633 | 3633 | 3734 | 3734 | 3734 | 3734 | 4.19 | |
| 2633 | 2633 | 2734 | 2734 | 2734 | 2734 | 4.20 | |
| 1186 / 1601 | 1186 / 1601 | 1186 / 1601 | 1186 / 1601 | 1186 / 1601 | 1186 / 1601 | 4.21 | |
| 53 X 120 X 1000 | 54 X 120 X 1000 | 55 X 120 X 1000 | 56 X 120 X 1000 | 57 X 120 X 1000 | 58 X 120 X 1000 | 4.22 | |
| III A | III A | III A | III A | III A | III A | 4.23 | |
| 1067 | 1067 | 1067 | 1067 | 1067 | 1067 | 4.24 | |
| 132 | 132 | 132 | 132 | 132 | 132 | 4.31 | |
| 185 | 185 | 185 | 185 | 185 | 185 | 4.32 | |
| 3955 | 3955 | 4058 | 4058 | 4058 | 4058 | 4.33 | |
| 4155 | 4155 | 4258 | 4258 | 4258 | 4258 | 4.34 | |
| 2277 | 2277 | 2380 | 2380 | 2380 | 2380 | 4.35 | |
| 25 | 25 | 54 | 54 | 54 | 54 | 4.36 | |
| 18.7 / 19.8 | 19.8 / 20.9 | 18.0/19.1 | 18.0 / 19.1 | 18.7 / 19.8 | 19.8 / 20.9 | 5.1 | Performance |
| 0.52 / 0.53 | 0.52 / 0.53 | 0.49 / 0.50 | 0.48 / 0.49 | 0.52 / 0.53 | 0.52 / 0.53 | 5.2 | |
| 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 | 0.50 / 0.42 | 5.3 | |
| 18877 / 11708 | 21805 / 11708 | 15735 / 12594 | 15735 / 12594 | 18570 / 12594 | 21805 / 12594 | 5.5 | |
| 13400 / 11700 | 15600 / 16000 | 10500 / 11100 | 10500 / 11100 | 12500 / 13300 | 16000 / 16900 | | |
| 21952 / 11708 | 21805 / 11708 | 18913 / 12594 | 18913 / 12594 | 21609 / 12594 | 21805 / 12594 | 5.6 | |
| 18.1 / 26.6 | 22.1 / 26.6 | 13.5 / 23.0 | 13.5 / 23.0 | 15.2 / 26.9 | 20.0 / 26.9 | 5.7 | |
| 25.8 / 26.6 | 30.4 / 26.6 | 19.4 / 26.9 | 19.4 / 26.9 | 21.7 / 26.9 | 27.3 / 26.9 | 5.8 | |
| Hydraulic | Hydraulic | Hydraulic | Hydraulic | Hydraulic | Hydraulic | 5.10 | |
| GM 2.4L | GM 2.4L | Mazda F2 | Mazda F2 | GM 2.4L | GM 2.4L | 7.1 | Motor |
| 46.2 | 46.2 | 38.0 | 38.0 | 46.2 | 46.2 | 7.2 | |
| 2700 | 2700 | 2700 | 2700 | 2700 | 2700 | 7.3 | |
| 4 / 2400 | 4 / 2400 | 4 / 2184 | 4 / 2184 | 4 / 2400 | 4 / 2400 | 7.4 | |
| 3.0 | 3.2 | 3.8 | 3.5 | 3.2 | 3.4 | 7.5 | |
| Hydrodynamic | Hydrodynamic | Hydrodynamic | Hydrodynamic | Hydrodynamic | Hydrodynamic | 8.1 | Other |
| 0 - 155 | 0 - 155 | 0 - 155 | 0 - 155 | 0 - 155 | 0 - 155 | 8.2 | |
| 66 | 66 | 62 | 62 | 66 | 66 | 8.3 | |
| 80 | 80 | 79 | 79 | 80 | 80 | 8.4 | |
| 105 | 105 | 102 | 102 | 105 | 105 | | |
| Pin | Pin | Pin | Pin | Pin | Pin | 8.5 | |

❖ For Value trucks supplied with manual levers, the values for lifting speeds (line 5.2) and fuel consumption (line 7.5) are as stated on the Base VDI table.

**Base specification sheet truck based on:**
3105mm (GLP30/35VX) Top of Forks 2 stage LFL Standard carriage, 1000mm forks and manual levers.

**Value and Productivity specification sheet truck based on:**
3105mm ( GLP30/35VX) Top of Forks 2 stage LFL Standard carriage, 1000mm forks and e-hydraulics.

# VX Series

## Models: GDP/GLP 20VX, 25VX, 30VX, 35VX

**Yale Veracitor VX Series**
This series of trucks is available in three configurations.

The Veracitor Base truck offers first-rate performance for standard-duty applications, geared to minimise cost of acquisition without compromising performance.

The Veracitor Value truck provides excellent performance for standard and medium-duty applications, optimised for lowest hourly operation cost .

The Veracitor Productivity truck delivers maximum performance for medium to heavy-duty applications with state-of-the art features and industry leading power.

**Engines**
Engines feature a rigid cast iron block and main bearing caps.

Hydraulic valve lifters eliminate the need for manual adjustment. All engines include hardened exhaust valve seats, the GM engine's valves are stellite coated for superior durability. All engines feature closed loop emissions regulation systems that continually monitor exhaust and adjust fuel/air mix. The GM engine also features an electronic throttle for precise performance and control.

**Fuel System**
The Mazda LPG engine uses a single barrel non adjustable carburetor with an LPG injector and a regulator/vaporizer. The Engine Control Unit controls the LPG injector fueling.

The GM LPG use sequential port fuel injection, vaporiser/ regulator to convert fuel from a liquid to a gas for vapor injection. The Engine Control Unit (ECU) electronically controls the fuel/air mix, and spark advance to provide the necessary torque. The ECU inputs include manifold air pressure temperature, engine coolant temperature, accelerator pedal position, throttle position, engine speed, cam signal, and oxygen sensor signal.

The Yanmar fuel system has an Electro-mechanical controlled throttle providing excellent response time. Super quick glow plugs allow the engine to start quickly and reliably under cold conditions, the cold start device delivering a cleaner exhaust by advancing the fuel injection timing based on water temperature. Emissions have been reduced by controlling fuel injection timing according to engine load.

**Load Sensing Hydraulics**
Load Sensing Hydraulics (LSH) deliver increased operational efficiency, offering a 15% reduction in fuel consumption on the VDI cycle, with no loss in productivity*. Variable displacement piston pumps match the flow rate and lifting speed continuously to the demands of the duty cycle. The engine therefore supplies only power to the hydraulic pumps when required, so more power is available for driving. This provides increased responsiveness and acceleration, which increases productivity and lowers fuel consumption, reducing overall operating costs.

LSH also offers an ECO-eLo (Fuel Efficiency) mode, reducing engine speed by 20% and optimising throttle response, so that the truck operates in the most economical power range. This results in a reduction in fuel consumption of up to 20%* but has a limited effect on overall truck productivity under application conditions. The ECO-eLo mode also delivers lower noise levels by up to 3dB(A). If a faster work rate, or higher productivity is required, the truck can easily be reprogrammed to HiP (High Performance) mode of operation through the dash display, with access secured by a unique customer password.

**Transmission**
Four transmission selections are available with multiple engine configurations for a wide variety of material handling applications.

**1) *Standard Electronic*** features electronic inching, electric shift control, neutral start switch, anti-restart protection and heavy duty clutch packs.

A single pedal controls both inching and braking, optional dual inch/brake pedals are available if preferred. A 100 mesh suction and a 10 micron return line filtration protect the transmission from abrasive contaminants.

**2) *The Techtronix 100*** has all the Standard Electronic features plus Auto Deceleration System through the controlled application of clutch packs, reduces tyre spin by precisely regulating engine speed during controlled power reversals.

***3) The Techtronix 200*** has all the Techtronix 100 features, plus Two Speed Auto Shift (2 x forward, 1 x reverse).

**Cooling System**
The cooling system employs a 43cm blade pusher- type fan. A permanently lubricated water pump and a high capacity, cross-flow radiator ensure rapid heat dissipation. The sealed cooling system operates at 15psi, the coolant recovery tank allows visual inspection of coolant level. A transmission oil cooler is integrated into the radiator, located in the side tank. The optional combicooler radiator features an externally mounted transmission oil cooler for increased heat transfer capability. All radiators are soft mounted for durability.

**Drive Axle**
The drive axle is designed to withstand heavy-duty applications and absorb shock loads. It is a "self contained" assembly isolated from the transmission by a heavy-duty rubber isolator. The axle shafts utilize a "rolled fillet" root spline design for increased resistance to torsion stress. A magnetic sump plug collects any metal particles circulating in the axle oil to prevent component wear.

**Brakes**
Brakes are duo-servo hydraulic, self-energizing, and automatic adjusting drum brake assemblies. Asbestos-free brake linings are bonded to steel shoes operating in cast iron drums on the Base and Value models. The Productivity models have oil immersed brakes as standard. The single circuit master cylinder has sealed fluid reservoir and features a fluid level sensor which activates an indicator light on the instrument panel.

**Hydraulic Power Steering**
Hydrostatic steering provides responsive control and eliminates mechanical linkages for reduced surface shock and simplified maintenance. The steering wheel is 30cm in diameter with a textured surface grip and spinner knob, and requires only four turns lock-to-lock. The centre mounted steer cylinder is located within the confines of the steer axle for protection.

**Steer Axle**
Constructed from cast steel, the steer axle is rubber shock mounted to the frame for reduced wear and vibration. The CSE (Continuous Stability Enhancement) system enhances lateral truck stability through reduced steer axle articulation, while simultaneously allowing uncompromised uneven surface travel.

**Operator's Compartment**
Base truck features cowl mounted hydraulic control levers as standard, positioned on the right side of the steering column.

All models are available with a new mini-lever armrest, which features a new contoured design, and - in addition to the hydraulic functions - features a horn and direction switch, ensuring that all key truck functions are within constant, easy reach.

The new FLM80 Full Suspension Seat together with the isolated powertrain provide best in class Whole-Body Vibration levels of 0.6m/s$^2$, ensuring that the operator remains comfortable throughout the shift and fatigue, aches and pains are kept to a minimum.

Automotive-style pedal arrangement with a large, single inch/brake pedal is standard.

**Intellix Vehicle System Management (VSM)**
VSM acts as a master truck controller, providing extensive monitoring and control of truck functions and systems.

CANbus technology reduces wiring complexity and enables communications between truck systems. The dash display transmits continual feedback to the operator and allows communication of service codes. On-board diagnostics enable quick and easy troubleshooting. The electrical system features sealed connectors and Hall Effect sensors for superior dependability.

**Hydraulic System**
Hydraulic system incorporates a gear type pump with cast iron body for quiet efficiency. The system is protected from overloads by a main relief valve for the lift circuit and secondary relief valve for tilt and auxiliary functions. Oil is double filtered through a 100 mesh suction line strainer and 10 micron return line filter. Hydraulic tank is integrated into the frame.

For Accutouch electrohydraulic controls, an emergency lowering valve is provided to allow the load to be lowered in the event of power loss. O-ring face seal fittings are used in all high pressure hydraulic connections.

*(*Yale Productivity Test Cycle: Load Sensing Hydraulics is available on trucks with Accutouch mini-levers and the ECO-eLo function is available on trucks with Techtronix transmissions only).*

**NACCO Materials Handling Limited** trading as **Yale Europe Materials Handling**
Flagship House, Reading Road North, Fleet, Hampshire GU51 4WD, United Kingdom.
Tel: + 44 (0) 1252 770700 Fax: + 44 (0) 1252 770784
**www.yale-forklifts.eu**

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Truck shown with optional equipment