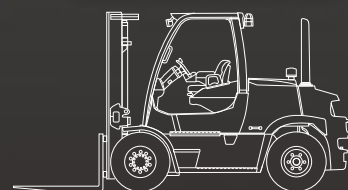


VX Series

Diesel and LP Gas Forklift Trucks

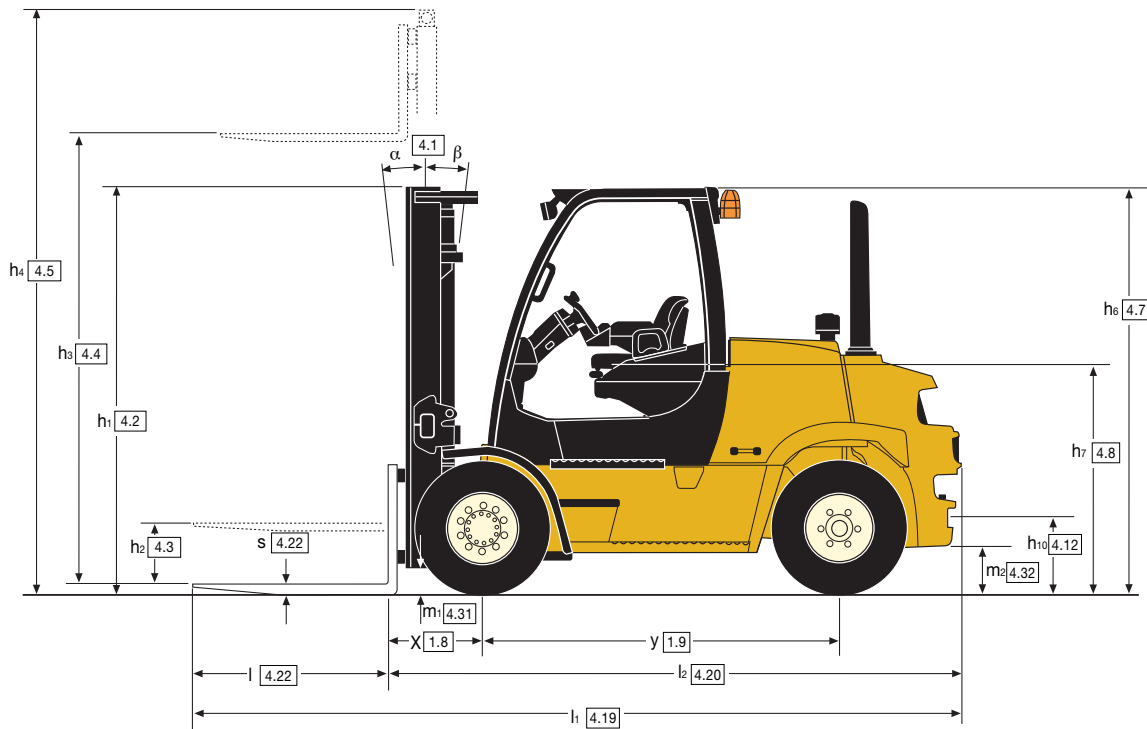
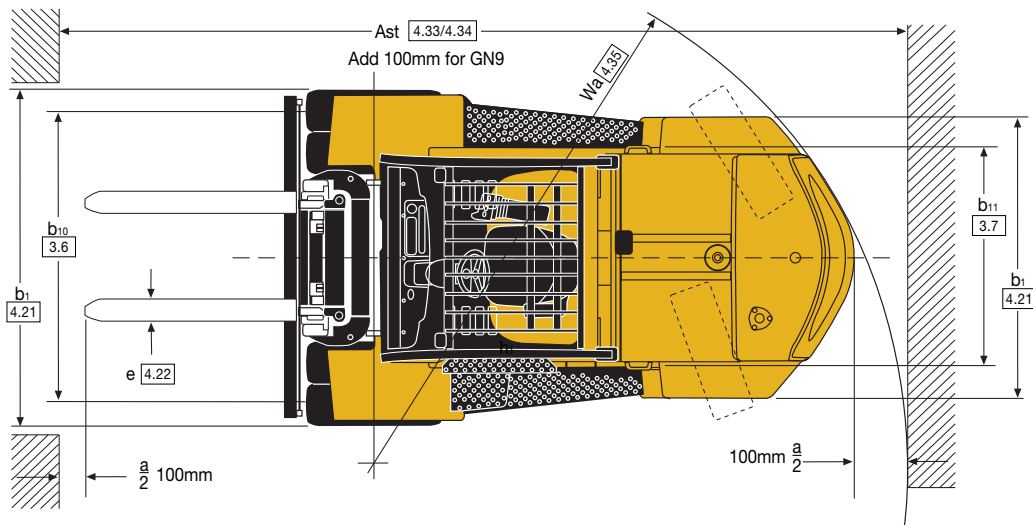
6,000kg and 7,000kg



- Powerful engines
- Intellix Vehicle System Manager
- Canbus technology
- Techtronix 300 Series transmission
- Oil Immersed Brakes
- Accutouch Mini Levers, PalmTech joystick and manual levers
- Pneumatic, supercushion and Michelin XZM radial tyres

Yale 
People. Products. Productivity.

Truck Dimensions



Mast details and capacity ratings (kg) - all tyre types

Model							GLP/GDP 60 VX		GLP/GDP 70 VX	
Drive tyre size							8.25x15 Supercushion		8.25x15 Supercushion	
							8.25R15 Michelin Radial		8.25R15 Michelin Radial	
							8.25x15 14PR Pneumatic		8.25x15 14PR Pneumatic	
Width across tyres							2082mm		2082mm	
							with forks		with forks	
Mast	OAH h1	FFH h2+s	MFH h3+s	h4	Tilt		600	700	600	700
					F	B	LC	LC	LC	LC
2-Stage LFL (V)	2540	160	3000	4130	5	10	6000	5880	7000	6810
	2740	160	3400	4530	5	10	6000	5870	7000	6800
	3240	160	4400	5530	5	10	6000	5820	7000	6750
	3740	160	5400	6530	5	10	6000	5790	7000	6720
	4165	160	6000	7130	5	10	5830	5600	6800	6510
3-Stage FFL (E)	2570	1440	4700	5830	5	6	6000	5690	7000	6590
	2870	1740	5600	6730	5	6	5800	5460	6780	6350
	3120	1990	6200	7330	5	6	5600	5260	6580	6150

VDI 2198 - General Specifications

		Yale							
		GDP 60 VX							
		Base		Value					
Characteristics	1.1	Manufacturer							
	1.2	Model designation							
		Model - Manufacturer Designation							
		Power Train - Engine Transmission	Cummins 3.3L Standard Electronic 2x2		Cummins 3.3L Techtronix 332				
		Brake Type	Oil Immersed		Oil Immersed				
	1.3	Drive Power Type: Diesel, LPG	Diesel		Diesel				
	1.4	Operation: Seated rider	Seated Rider		Seated Rider				
	1.5	Load capacity	Q (kg)	6000		6000			
	1.6	Load centre	c (mm)	600		600			
	1.8	Load distance	x (mm)	601		601			
1.9	Wheelbase	y (mm)	2235		2235				
Weights	2.1	Unladen weight	kg	8950		8950			
	2.2	Axle loading laden, front/rear	kg	13888	1185	13888	1185		
	2.3	Axle loading unladen, front/rear	kg	4354	4596	4354	4596		
Wheels and Tyres	3.1	Tyres: P=pneumatic, C=cushion, SC=supercushion	P				P		
	3.2	Tyre size - front	8.25x15 14PR		8.25x15 14PR		8.25x15 14PR		
	3.3	Tyre size - rear	8.25x15 14PR		8.25x15 14PR		8.25x15 14PR		
	3.5	Number of wheels, front/rear (X = driven)	4X / 2		4X / 2		4X / 2		
	3.6	Track width, front	b10 (mm)	1846		1846		1846	
	3.7	Track width, rear	b11 (mm)	1536		1536		1536	
	Dimensions	4.1	Mast tilt, forward α /back β	degrees	5 / 10		5 / 10		5 / 10
4.2		Height of mast, lowered	h1 (mm)	2740		2740		2740	
4.3		Free lift ▲	h2 (mm)	100		100		100	
4.4		Lift height ▲	h3 (mm)	3340		3340		3340	
4.5		Height of mast, extended +	h4 (mm)	4530		4530		4530	
4.7		Height to top of overhead guard (high) ○	h6 (mm)	2531		2531		2531	
4.8		Seat height X	h7 (mm)	1540		1540		1540	
4.12		Towing coupling height	h10 (mm)	474		474		474	
4.19		Overall length	l1 (mm)	4784		4784		4784	
4.20		Overall length (length to face of forks)	l2 (mm)	3584		3584		3584	
4.21		Overall width, Standard/Dual	b1/b2 (mm)	2082		2082		2082	
4.22		Fork dimensions	s/e/l (mm)	60x150x1200		60x150x1200		60x150x1200	
4.23		Fork carriage to DIN 15173 Class, A/B		IVA		IVA		IVA	
4.24		Fork carriage width ▶	b3 (mm)	1981		1981		1981	
4.31		Ground clearance under mast, laden	m1 (mm)	146		146		146	
4.32		Ground clearance at centre of wheelbase	m2 (mm)	253		253		253	
4.33		Aisle width with pallets 1,000 long x 1,200 wide	Ast (mm)	5163		5163		5163	
4.34		Aisle width with pallets 800 wide x 1,200 long	Ast (mm)	5329		5329		5329	
4.35		Outer turning radius	Wa (mm)	3320		3320		3320	
4.36	Inner turning radius	b13 (mm)	230		230		230		
Performances	5.1	Travel Speed, laden/unladen	km/h	21.1	21.6	23.0	23.5		
	5.2	Lifting speed (2LFL), laden/unladen	m/sec	0.49	0.53	0.48	0.49		
	5.3	Lowering speed (2LFL), laden/unladen	m/sec	0.56	0.43	0.56	0.43		
	5.5	Maximum drawbar pull, laden/unladen	N	48260	26950	44480	26950		
		Drawbar pull, @ 1.6 km/h, laden/unladen	N	38680	26950	44480	26950		
	5.7	Maximum Gradeability	%	34.3	31.9	31.3	31.9		
		Gradeability, @ 1.6 km/h, laden/unladen	%	26.9	31.9	31.3	31.9		
5.10	Service brake		Hydraulic		Hydraulic				
Motor	7.1	Engine manufacturer/type		Cummins QSB3.3L		Cummins QSB3.3L			
	7.2	Engine output, in accordance with ISO1585	kW	60		74			
	7.3	Governed speed	rpm	2200		2200			
	7.4	Number of cylinders/displacement	cm3	4 / 3261		4 / 3261			
Other	8.1	Drive Control		Hydrodynamic		Hydrodynamic			
	8.2	Working pressure for attachments	bar	155		155			
	8.3	Oil flow for attachments †	l/min	83.3		83.3			
	8.4	Average noise level at operator's ear (with / without cab) ★	dB(A)	79 / 78		80 / 79			
		Guaranteed sound power 2001/14/EC		105		105			
	8.5	Towing coupling type		Pin		Pin			

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

† Variable

▲ Top of forks

X Full suspension seat in depressed position

▶ Add 32mm with load backrest

○ h6 subject to +/- 5mm tolerance

+ Without load backrest.

Yale				Yale				Yale				1.1
GDP 70 VX				GLP 60 VX				GLP 70 VX				1.2
Base		Value		Base		Value		Base		Value		
Cummins 3.3L Standard Electronic 2x2		Cummins 3.3L Techtronix 332		GM 4.3L Standard Electronic 2x2		GM 4.3L Techtronix 332		GM 4.3L Standard Electronic 2x2		GM 4.3L Techtronix 332		
Oil Immersed		Oil Immersed		Oil Immersed		Oil Immersed		Oil Immersed		Oil Immersed		
Diesel		Diesel		LPG		LPG		LPG		LPG		1.3
Seated Rider		Seated Rider		Seated Rider		Seated Rider		Seated Rider		Seated Rider		1.4
7000		7000		6000		6000		7000		7000		1.5
600		600		600		600		600		600		1.6
601		601		601		601		601		601		1.8
2235		2235		2235		2235		2235		2235		1.9
9462		9462		8900		8900		9410		9410		2.1
15166	1327	15166	1327	13862	1347	13862	1347	15140	1301	15140	1301	2.2
4219	5243	4219	5243	4328	4572	4328	4572	4193	5217	4193	5217	2.3
P		P		P		P		P		P		3.1
8.25x15 14PR		8.25x15 14PR		8.25x15 14PR		8.25x15 14PR		8.25x15 14PR		8.25x15 14PR		3.2
8.25x15 14PR		8.25x15 14PR		8.25x15 14PR		8.25x15 14PR		8.25x15 14PR		8.25x15 14PR		3.3
4X / 2		4X / 2		4X / 2		4X / 2		4X / 2		4X / 2		3.5
1846		1846		1846		1846		1846		1846		3.6
1536		1536		1536		1536		1536		1536		3.7
5 / 10		5 / 10		5 / 10		5 / 10		5 / 10		5 / 10		4.1
2740		2740		2740		2740		2740		2740		4.2
100		100		100		100		100		100		4.3
3340		3340		3340		3340		3340		3340		4.4
4530		4530		4530		4530		4530		4530		4.5
2531		2531		2531		2531		2531		2531		4.7
1540		1540		1540		1540		1540		1540		4.8
474		474		474		474		474		474		4.12
4848		4848		4784		4784		4848		4848		4.19
3648		3648		3584		3584		3648		3648		4.20
2082		2082		2082		2082		2082		2082		4.21
60x150x1200		60x150x1200		60x150x1200		60x150x1200		60x150x1200		60x150x1200		4.22
IVA		IVA		IVA		IVA		IVA		IVA		4.23
1981		1981		1981		1981		1981		1981		4.24
146		146		146		146		146		146		4.31
253		253		253		253		253		253		4.32
5231		5231		5163		5163		5231		5231		4.33
5397		5397		5329		5329		5397		5397		4.34
3388		3388		3320		3320		3388		3388		4.35
230		230		230		230		230		230		4.36
21.1	21.6	23.0	23.5	22.5	23.0	25.6	26.2	22.5	23.0	25.6	26.2	5.1
0.49	0.53	0.48	0.49	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	5.2
0.56	0.43	0.56	0.43	0.56	0.43	0.56	0.43	0.56	0.43	0.56	0.43	5.3
48020	26220	44480	26220	43900	21700	44500	21700	43700	20900	44500	20900	5.5
38430	26220	44480	26220	36500	21700	44500	21700	36300	20900	44500	20900	
30.9	29.1	28.4	29.1	29.7	31.9	31.2	31.9	26.8	29.1	28.3	29.1	5.7
24.3	29.1	28.4	29.1	24.5	31.9	31.2	31.9	22.1	29.1	28.3	29.1	
Hydraulic		Hydraulic		Hydraulic		Hydraulic		Hydraulic		Hydraulic		5.10
Cummins QSB3.3L		Cummins QSB3.3L		GM 4.3L		GM 4.3L		GM 4.3L		GM 4.3L		7.1
60		74		77		77		77		77		7.2
2200		2200		2400		2400		2400		2400		7.3
4 / 3261		4 / 3261		6 / 4302		6 / 4302		6 / 4302		6 / 4302		7.4
Hydrodynamic		Hydrodynamic		Hydrodynamic		Hydrodynamic		Hydrodynamic		Hydrodynamic		8.1
155		155		155		155		155		155		8.2
83.3		83.3		83.3		83.3		83.3		83.3		8.3
79 / 78		80 / 79		82 / 78		82 / 78		82 / 78		82 / 78		8.4
105		105										
Pin		Pin		Pin		Pin		Pin		Pin		8.5

Characteristics

Weights

Wheels and Tyres

Dimensions

Performances

Motor

Other

Spec sheet truck based on :
3400mm top of forks 2 stage LFL mast with standard
1981mm Class IVA carriage and 1200mm forks.

VX Series

Models: GDP/GLP 60VX, 70VX

Yale Veracitor VX Series

This series of trucks is available in two configurations to meet and exceed your material handling application requirements. The Veracitor Base truck offers first-rate performance and is geared to minimise your cost of acquisition without compromising performance. The Veracitor Value truck provides excellent performance and is optimized for lowest hourly cost of operation.

LPG Engines

Yale Veracitor VX GM Vortec™ V-6 Engines feature a rigid cast iron block and main bearing caps. Nodular iron crankshaft is supported on four main bearings. Camshaft is cast iron. Hydraulic valve lifters are utilized to eliminate the need for manual adjustment. The GM engines also feature an electronic throttle for precise performance and control.

Fuel System:

The standard GM LP engine uses sequential port fuel injection. The LP engine uses a vaporizer/regulator to convert the fuel from a liquid to a gas for vapour injection. The Engine Control Unit electronically regulates the fuel, air, and spark advance to provide the necessary torque. The engine control unit's inputs include manifold air pressure, manifold air temperature, engine coolant temperature, accelerator pedal position, throttle position, engine speed, cam signal, and oxygen sensor signal.

Diesel Engines

The Yale Veracitor Cummins QSB3.3L diesel turbo charged engine meets EU Tier IIIA diesel emission standards. A standard power 60 kW engine is offered for the Veracitor Base model and a high power 74 kW truck for the

Advance Veracitor Value model coupled with the Techtronix 332 3-speed transmission, to suit the more arduous applications.

The QSB3.3L engine represents the latest technology in off-highway engines. The engine is turbocharged, with charge air intercooling and an electronically controlled high pressure common rail fuel system.

Fuel System:

The Cummins QSB3.3L diesel engine's electronically controlled high pressure common rail fuel system dramatically reduces engine noise while providing more responsive power and better fuel efficiency at every rpm. The fuel system is capable of delivering high injection pressures of 800-1100 bar. The engine is certified for different qualities of fuels used in the EMEA regions without conversion:

- Ultra-low sulphur, low sulphur and high sulphur (up to 5000 ppm) diesel fuel.
- Biodiesel fuel up to 5% concentration (B5).

Transmissions

There are two transmission selections available that will handle a wide variety of material handling applications.

Standard Electronic

The standard electronic powershift transmission features two forward and two reverse speeds with electronic shift control, smooth hydraulic inching, neutral start switch, and anti-restart protection. A single pedal controls both inching and braking. Optional dual inch/brake pedals are available for operators who prefer this design. A 100 mesh suction and a 10 micron return line filtration protect the transmission from abrasive contaminants.

The New Techtronix 300 series

Techtronix 332 includes all the features of the standard electronic powershift transmission. In addition, Auto Deceleration is accomplished through the controlled application of the clutch packs. Controlled power reversals (below 11.3 kph) are managed by precisely regulating engine speed to reduce driveline stress during directional changes. Inching is controlled electronically. The Techtronix 332 transmission features three speeds forward and two speeds in reverse for excellent gradeability

and drawbar pull while allowing top travel speeds for maximum productivity.

Cooling System

The cooling System employs a 43cm (diameter) blade pusher-type fan made of steel. A permanently lubricated water pump and a high capacity, cross-flow radiator ensure rapid heat dissipation. The sealed cooling system operates at a pressure of 1.03 bar and includes a coolant recovery tank for visual inspection of coolant level. The standard combi-cooler radiator features an externally mounted transmission oil cooler for increased heat transfer capability. Both the radiator and oil cooler are built with square-wave construction to reduce clogging from debris and are soft-mounted for excellent durability.

Drive Axle

The drive axles are designed to withstand heavy loads and absorb shocks. The wheel hubs rotate on large tapered roller bearings. The drive shaft transmits rotational torque to the drive axle from the engine and transmission. Transmission torque is distributed through planetary gear reduction and an industrial hypoid ring gear and pinion differential assembly.

The drive axle is a "self contained" assembly that is isolated from the transmission by the drive shaft and heavy-duty rubber isolators. The axle shafts utilise a "rolled fillet" root spline design for increased resistance to torsion stress. A magnetic sump plug is used to collect any metal particles that are circulating in the axle oil, preventing component wear.

Brakes

Oil immersed brakes are standard and internal to the axle for better protection against the elements. These low pedal effort brakes require no adjustments and very little maintenance, yet provide an extremely long service life.

The hydraulically boosted single circuit master cylinder has a sealed fluid reservoir and features a fluid level sensor which activates an indicator light located on the instrument panel. Independent, hand adjustable parking brake with push-button release has an audible alarm to indicate when the operator has left the truck without applying the parking brake.

Engine Specifications

LP Engine Specification

Engine	GM
Cylinders	V6
Displacement	4.3 litre
Power	77 kW @ 2,400rpm
Torque	305 Nm @ 2,400rpm

Diesel Engine Specification

Engine	Cummins
Cylinders	Inline 4
Displacement	3.3 litre
Power	60 kW @ 2,050rpm
Torque	371 Nm @ 1,400rpm

Steering

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 center mounted steer cylinder is located within the confines of the steer axle for protection.

Steer Axle is constructed of cast steel and is mounted on phenolic bushings, allowing excellent stability and axle articulation. The steer axle system features tapered spindle bearings and non-adjustable tie rod end for durability.

Chassis

Chassis designed by state-of-the-art finite element methods features inch-thick frame members and contains a rugged, unitised frame structure with a low step for simple entrance to the operator's compartment.

Ergonomically designed overhead guard is bar type for excellent visibility and reduced noise.

Operator's Compartment

The operator's compartment features cowl mounted hydraulic control levers positioned on the right side of the steering column. Optional Accutouch minilever, electro-hydraulic controls are integrated into the operator's right-side armrest allowing superior ergonomic actuation. Automotive-style pedal arrangement with a large, single inch/brake pedal is standard. Rubber floor mat reduces noise and vibration. The floorplate can be removed without tools for excellent service access. Low step height and a convenient hand grip provide easy entry and exit to and from the truck.

Intellix Vehicle System Manager

Intellix VSM acts as a master truck controller, providing extensive monitoring and control of truck functions and systems. CANbus technology reduces wiring complexity and enables comprehensive communications between truck systems. The ergonomically positioned dash display transmits continual

feedback to the operator and allows for communication of service codes.

Comprehensive on-board diagnostics enable quick and easy troubleshooting. The electrical system features sealed connectors and Hall Effect sensors for superior dependability.

Hydraulic System

The hydraulic system incorporates a gear type pump with a cast iron body for quiet efficiency. The system is protected from overloads by a main relief valve for the lift circuit and a 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. The hydraulic tank is integrated into the frame. For Accutouch minilever, electro-hydraulic 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.

Masts

Yale Hi-Vis™ 2 stage LFL (V) and 3 stage FFL (E) masts afford operators outstanding visibility. Nested channel design incorporates angled load rollers for durability. Rolled mast channels and formed cross-members provide high strength. All masts have internal hose routings for protection and improved visibility.

Leaf-type chain provides superior strength. 1980mm hook-type carriages are standard equipment, providing great visibility and handles a wide variety of forks and attachments. Pin-type carriages are also available.

Options

- Powertrain protection system
- Premium monitoring package
- High air intake with precleaner
- Accumulator
- Headlights and rear drive lights with halogen bulbs
- Traction speed limiter
- Dual LPG tank bracket
- Return-to-set tilt
- Integral operator's cab
- Swivel full suspension seats

- Foot Directional Control pedal
- Operator password
- Mirrors
- Alarm-Reverse Actuated 82-102 dB(A) - Self-Adjusting
- Amber Strobe Light - Continuous Activated
- Solid and radial tires
- 4 function (2 aux) hydraulic control valve
- 5° forward/6° backward tilt.



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Safety. This truck conforms to the current EU requirements. Specification is subject to change without notice.

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Truck shown with optional equipment