



# ERP-VM

## Electric, Pneumatic Tire Trucks

8,000 · 9,000 · 10,000 · 11,000 · 12,000 lbs

**Yale® ERP-VM** electric trucks are available in 8,000 – 12,000 pound capacities designed for demanding applications that require clean, quiet-running, heavy duty capability. These trucks are very maneuverable and offer plenty of power and high stacking ability, while also offering excellent ergonomics, reliability and maintenance ease. Pneumatic tires provide more comfort indoors and greater capabilities for outdoor applications.

### **AC Transistor Traction Control**

AC technology offers smooth acceleration and directional changes, proportional regenerative braking and the Auto Deceleration System. The controller converts battery power to three phase AC power, and adjusts frequency and current to meet performance demands. Performance control settings and extensive diagnostics are accessible by technicians through the display or a PC. A Vehicle System Manager (VSM) utilizing CANbus technology monitors and controls key truck components and systems. The advanced thermal management system monitors component temperature and gradually adjusts performance to prevent damage to key components.

### **Controller Area Network (CANbus)**

CANbus technology streamlines communications between truck systems through one main master controller, the Vehicle System Manager (VSM). Display, traction controllers and pump controller are all controlled via the CANbus network. A connection point is provided for interface with a service PC.

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 display transmits continual feedback to the operator and allows for communication of truck status and service indicators.

### **Electrical System**

The ERP-VM forklift utilizes AC motor technology designed for exceptional performance. It uses a brushless induction motor for high starting torque and smooth rapid acceleration. A speed sensor provides feedback to the electrical system, allowing motor speed and direction to be continuously monitored.

### **Dual Drive Motors**

Left hand and right hand AC drive motors are contained in the drive axle assembly. The outer end of each motor drives a wheel through a planetary gear transmission. The transmissions use helical gears with tooth geometry that is optimized to minimize gear noise. Each drive motor is individually controlled allowing for a “zero inside turning radius” scenario that provides excellent maneuverability.

### **Automatic Park Brake**

The ERP-VM lift truck features a standard automatic park brake that is applied by a spring when the truck is stationary. Upon sensing a demand at the accelerator pedal, the brake is released and held “off.” A manual override (located underneath the floor plate) is provided to disengage the brake if the truck has to be moved during service conditions or in the absence of power.

### **Wet Disc Brakes**

The brake system features standard oil-cooled wet disc brakes which are internal to the drive axle housing, protecting them against dirt and moisture. These low pedal effort brakes require no adjustments and very little maintenance, yet provide long service life.

### **Power-assist braking**

Power-assist braking is accomplished via the VSM. The VSM monitors brake line pressure. When this pressure exceeds a set threshold the VSM sends a signal to the traction controller to decelerate the

traction motor proportionally to the brake pressure. The higher the brake pedal pressure being applied, the more quickly the truck will decelerate. The master cylinder is sealed and has a fluid level sensor that illuminates an icon on the display if low. The standard Auto Deceleration System automatically slows the truck when the operator’s foot is removed from the accelerator pedal, extending brake life.

### **Voltage**

The ERP-VM lift truck uses an 80-volt electrical system for high performance and long run time to meet a variety of application requirements.

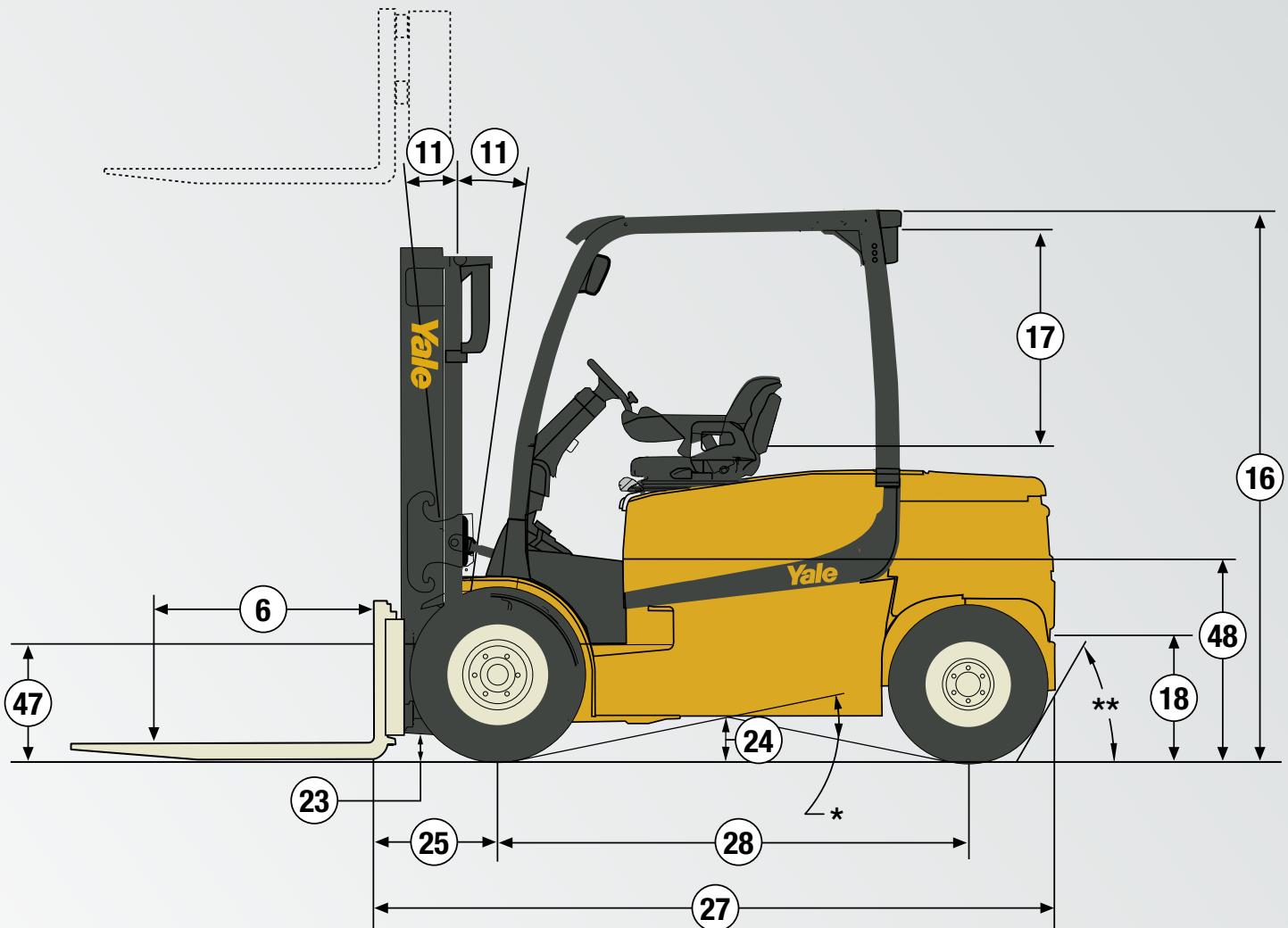
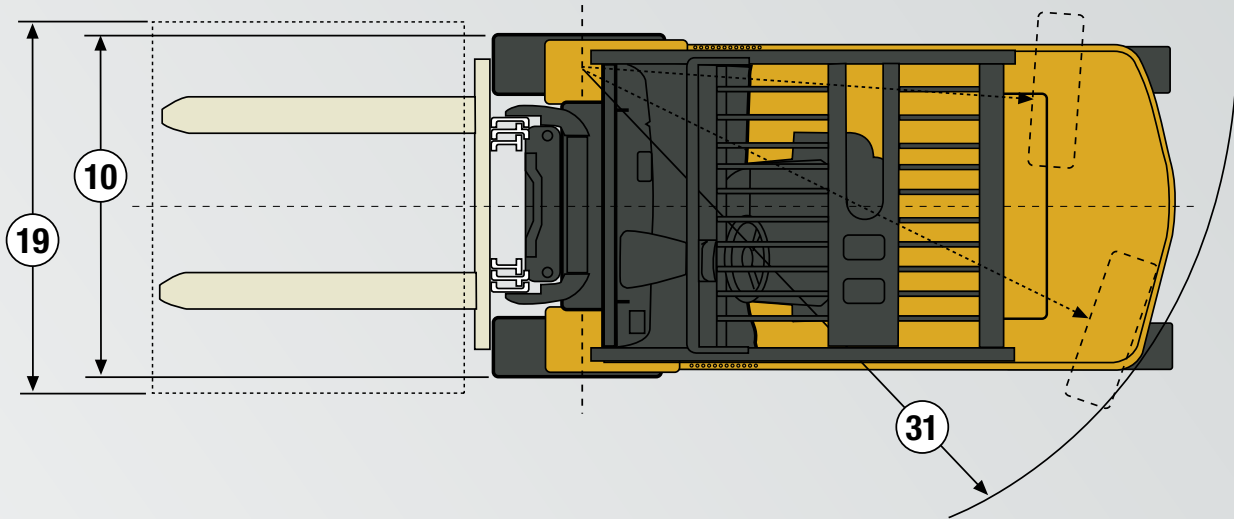
An operator presence system reduces the possibility of inadvertent truck movement.

### **Operator Interface Display**

The display is conveniently located in the upper right area of the operator’s compartment. The LCD display includes an hour meter, battery discharge indicator with lift interrupt, seat belt reminder and digital clock. Additional indicators are provided for travel direction, performance mode, brake fluid level, park brake and truck status. The display also permits access for service technicians to adjust performance

*(continued on back)*





**\* Ground Clearance Grade**  
 23.4° (ERP080VM, ERP090VM, ERP100VM)  
 20.7° (ERP100VML, ERP110VM, ERP120VM)

**\*\* Counterweight Angle**  
 61° (ERP080VM, ERP090VM, ERP100VM)  
 75° (ERP100VML, ERP110VM, ERP120VM)

GENERAL	1	Manufacturer			Yale		
	2	Model Designation			ERPO80VM		ERPO90VM
	3	Power/Voltage			Electric/80 Volts		
	4	Operation			Sit		
	5	Rated Capacity		lb (kg)	8000 (3629)		9000 (4082)
	6	Load Center		in (mm)	24 (610)		
TIRES	7	Tire Type - Cushion, Solid, Pneumatic, etc.		Std/Opt	Pneumatic/Pneumatic Shaped Solid		
	8	Tire Size (Standard)		Drive/Steer	in 250 x 15 20 Ply / 7.00 x 12 16 Ply		
	9	Wheels - Number	X=Driven	Drive/Steer	2X/2		
	10	Tread (Drive / Steer)			See Tread Chart on page 7		
DIMENSIONS	11	Mast Tilt	Std Opt Opt	degrees	6F/6B	6F/8B	6F/4B
	12	Mast - Lowered Height	Std Mast	in (mm)	92 (2320)		
	13	Free Lift - Top of Fork	Std 2 Stg Limited Free Lift Mast		in (mm)	5 (150)	
	14	Lift Height - Top of Fork	Std 2 Stg Limited Free Lift Mast		in (mm)	131 (3350)	
	15	Mast - Extended Height	Std Mast with/without LBR		in (mm)	181/162 (4591/4109)	
	16	Overhead Guard Height			in (mm)	92 (2338)	
	17	SIP to Bottom of OHG	Seat Depressed	Std/Susp/Swivel	in (mm)	38.5/39.1/38.5 (977/992/978)	
	18	Tow Pin Height	Vertical Center of Pin		in (mm)	20.7 (526)	
	19	Overall Width (Drive Tires)			See Overall Width Chart on page 7		
	20	Forks	Thickness x Width x Length		in (mm)	2.0 x 4.9 x 48 (50 x 125 x 1219)	2.0 x 5.9 x 48 (50 x 150 x 1219)
	21	Standard Carriage Width	Class III (8000-9000 lb.) Class IV (10000 - 12000 lb.)		in (mm)	48 (1219)	
	23	Ground Clearance	Lowest Point		See Ground Clearance Chart on page 7		
	24	Ground Clearance	Center of Truck	NL/RL	in (mm)	7.2/7.0 (183/177)	
	25	Load Distance	Center of Wheel to Face of Forks		in (mm)	20.6 (523)	
	26a	Battery Compartment	Height	w/Vertical Battery Removal	in (mm)	31.8 (808)	
	26b		Width		in (mm)	40.8 (1037)	
	26c			Nominal (Std/Opt)	SIZE	40/34	
	26d		Length	Actual (Std/Opt)	in (mm)	39.6/33.8 (1006/859)	
	27	Length to Face of Forks	Chassis Length		in (mm)	114.5 (2908)	
	28	Wheelbase			in (mm)	79.5 (2020)	
	29	Right Angle Stack			in (mm)	163.9 (4164)	
30	Equal Aisle	90° Intersecting Aisle		in (mm)	91.4 (2322)		
31	Outside Turning Radius			in (mm)	94.9 (2411)		
WT.	32	Truck Weight	Without Battery	NL	lb (kg)	11080 (5026)	11390 (5166)
	33	Axle Loading - Drive	Static with Max. Wt. Battery	NL/RL	lb (kg)	8791/21276 (3988/9651)	8912/22958 (4042/10414)
	34	Axle Loading - Steer	Static with Max. Wt. Battery	NL/RL	lb (kg)	7687/3201 (3487/1452)	7870/2824 (3570/1281)
PERFORMANCE	Standard Performance						
	35a	Travel Speed	Extended Shift On	NL/RL	mph (km/h)	11.0/9.9 (17.7/15.9)	10.7/9.5 (17.2/15.3)
	35b		Extended Shift Off	NL/RL	mph (km/h)	13.0/12.4 (21.0/20.0)	
	36a	Lift Speed, Extended Shift On	Std 2 Stg LFL Mast	NL/RL	ft/min (m/sec)	118/87 (0.60/0.44)	
	36b		Opt 2 Stg FFL Mast	NL/RL	ft/min (m/sec)	107/78 (0.542/0.398)	
	36c		Opt 3 Stg FFL Mast	NL/RL	ft/min (m/sec)	110/81 (0.56/0.411)	
	36d		Std 2 Stg LFL Mast	NL/RL	ft/min (m/sec)	118/87 (0.60/0.44)	
	36e	Lift Speed, Extended Shift Off	Opt 2 Stg FFL Mast	NL/RL	ft/min (m/sec)	107/78 (0.542/0.398)	
	36f		Opt 3 Stg FFL Mast	NL/RL	ft/min (m/sec)	110/81 (0.56/0.411)	
	37a	Lower Speed	Std 2 Stg LFL Mast	NL/RL	ft/min (m/sec)	94/104 (0.48/0.53)	
	37b		Opt 2 Stg FFL Mast	NL/RL	ft/min (m/sec)	75/91 (0.38/0.46)	
	37c		Opt 3 Stg FFL Mast	NL/RL	ft/min (m/sec)	77/98 (0.39/0.50)	
	38a	Gradeability	5 Minute Rating	NL/RL	%	23/15.6	22.7/14.9
	38b		60 Minute Rating	NL/RL	%	8.4/5.8	8.3/5.5
	39a	Drawbar Pull	5 Minute Rating	NL/RL	lbf	3985/3867	4025/3908
	39b		60 Minute Rating	NL/RL	lbf	1475/1444	1493/1460
40a	Brake	Method of Control	Service/Parking	Hydraulic/Spring Applied			
40b		Method of Operation	Service/Parking	Foot/Automatic			
ELECTRIC	41	Battery	Type	Lead Acid			
	42	Traction Motors (Dual)	60 Minute Rating	Each	hp (kW)	19.7 (14.7)	
	43	Pump Motor	15 Minute rating		hp (kW)	48.3 (36)	
	44	Traction Motors	Type/Control Method	Dual AC/Transistor			
	45	Pump Motor	Type/Control Method	AC/Transistor			
	46	Number of Speeds	Traction/Pump	Infinitely Variable/Infinitely Variable			
OTHER	47	Step Height			in (mm)	19.3 (490)	
	48	Floor Height			in (mm)	33.1 (840)	
	49	Attachment Relief Pressure			psi (bar)	2250 (155)	
	50	Auxiliary Oil Flow	3rd and 4th Function		gal/min (l/min)	16 (60)	
	51a	Sound Level	Extended Shift On		dB (A)	68	
51b	(Measured per ANSI B56.11.5)	Extended Shift Off		dB (A)	69		

Above specifications, unless otherwise listed, are for a standard truck without optional equipment.  
Right Angle Stack and Equal Intersecting Aisle dimensions provided with a 48" long and 40" wide pallet load, allowing zero clearance.

GENERAL	1	Manufacturer		Yale		
	2	Model Designation		ERP100VM	ERP100VML	
	3	Power/Voltage		Electric/80 Volts		
	4	Operation		Sit		
	5	Rated Capacity		lb (kg)	10000 (4536)	
	6	Load Center		in (mm)	24 (610)	
TIRES	7	Tire Type - Cushion, Solid, Pneumatic, etc.	Std/Opt		Pneumatic/Pneumatic Shaped Solid	Pneumatic Shaped Solid
	8	Tire Size (Standard)	Drive/Steer	in	28 x 12.5-15 24 Ply / 7.00 x 12 16 Ply	355/50-15 / 28 x 9-15
	9	Wheels - Number	X=Driven	Drive/Steer	2X/2	
	10	Tread (Drive / Steer)			See Tread Chart on page 7	
DIMENSIONS	11	Mast Tilt	Std Opt Opt	degrees	6F/6B 6F/8B 6F/4B	
	12	Mast - Lowered Height	Std Mast	in (mm)	92 (2320)	
	13	Free Lift - Top of Fork	Std 2 Stg Limited Free Lift Mast	in (mm)	5 (150)	
	14	Lift Height - Top of Fork	Std 2 Stg Limited Free Lift Mast	in (mm)	121 (3090)	
	15	Mast - Extended Height	Std Mast with/without LBR	in (mm)	172/159 (4364/4030)	
	16	Overhead Guard Height		in (mm)	92 (2338)	
	17	SIP to Bottom of OHG	Seat Depressed	Std/Susp/Swivel	in (mm)	38.5/39.1/38.5 (977/992/978)
	18	Tow Pin Height	Vertical Center of Pin		in (mm)	20.7 (526)
	19	Overall Width (Drive Tires)				See Overall Width Chart on page 7
	20	Forks	Thickness x Width x Length	in (mm)	2.0 x 5.9 x 48 (50 x 150 x 1219)	
	21	Standard Carriage Width	Class III (8000-9000 lb.) Class IV (10000 - 12000 lb.)	in (mm)	48 (1219)	
	23	Ground Clearance	Lowest Point		See Ground Clearance Chart on page 7	
	24	Ground Clearance	Center of Truck	NL/RL	in (mm)	7.2/7.0 (183/177)
	25	Load Distance	Center of Wheel to Face of Forks		in (mm)	20.6 (523)
	26a	Battery Compartment	Height	w/Vertical Battery Removal	in (mm)	31.8 (808)
	26b		Width		in (mm)	40.8 (1037)
	26c			Nominal (Std/Opt)	SIZE	40
	26d		Length	Actual (Std/Opt)	in (mm)	39.6 (1006)
	27	Length to Face of Forks	Chassis Length	in (mm)	114.5 (2908)	120.8 (3068)
	28	Wheelbase		in (mm)	79.5 (2020)	85.8 (2180)
	29	Right Angle Stack		in (mm)	163.9 (4164)	170.2 (4323)
30	Equal Aisle	90° Intersecting Aisle	in (mm)	91.4 (2322)	95.9 (2436)	
31	Outside Turning Radius		in (mm)	94.9 (2411)	101.3 (2573)	
WT.	32	Truck Weight	Without Battery	NL	lb (kg)	12220 (5543) 13710 (6219)
	33	Axle Loading - Drive	Static with Max. Wt. Battery	NL/RL	lb (kg)	9341/25235 (4237/11446) 9816/25354 (4452/11500)
	34	Axle Loading - Steer	Static with Max. Wt. Battery	NL/RL	lb (kg)	8272/2378 (3752/1079) 9287/3750 (4213/1701)
PERFORMANCE	Standard Performance					
	35a	Travel Speed	Extended Shift On	NL/RL	mph (km/h)	10.4/9.4 (16.7/15.1) 11.6/9.1 (18.7/14.7)
	35b		Extended Shift Off	NL/RL	mph (km/h)	13.0/12.4 (21.0/20.0)
	36a	Lift Speed, Extended Shift On	Std 2 Stg LFL Mast	NL/RL	ft/min (m/sec)	93/71 (0.47/0.36) 91/61 (.46/.31)
	36b		Opt 2 Stg FFL Mast	NL/RL	ft/min (m/sec)	87/67 (0.444/0.34) 83/59 (.422/.3)
	36c		Opt 3 Stg FFL Mast	NL/RL	ft/min (m/sec)	89/68 (0.452/0.346) 85/60 (.434/.303)
	36d		Std 2 Stg LFL Mast	NL/RL	ft/min (m/sec)	93/71 (0.47/0.36) 96/69 (.49/.35)
	36e	Lift Speed, Extended Shift Off	Opt 2 Stg FFL Mast	NL/RL	ft/min (m/sec)	87/67 (0.444/0.34) 89/66 (.452/.334)
	36f		Opt 3 Stg FFL Mast	NL/RL	ft/min (m/sec)	89/68 (0.452/0.346) 91/67 (.464/.339)
	37a	Lower Speed	Std 2 Stg LFL Mast	NL/RL	ft/min (m/sec)	73/89 (0.37/0.45) 71/91 (.36/.46)
	37b		Opt 2 Stg FFL Mast	NL/RL	ft/min (m/sec)	57/81 (0.29/0.41) 55/83 (.28/.42)
	37c		Opt 3 Stg FFL Mast	NL/RL	ft/min (m/sec)	63/87 (0.32/0.44) 61/89 (.31/.45)
	38a	Gradeability	5 Minute Rating	NL/RL	%	22.2/14.1 21.9/14.3
	38b		60 Minute Rating	NL/RL	%	8.1/5.2 4.7/3.2
	39a	Drawbar Pull	5 Minute Rating	NL/RL	lbf	4022/3907 4020/3898
	39b		60 Minute Rating	NL/RL	lbf	1490/1458 1485/1451
	40a	Brake	Method of Control	Service/Parking		Hydraulic/Spring Applied
	40b		Method of Operation	Service/Parking		Foot/Automatic
ELECTRIC	41	Battery	Type		Lead Acid	
	42	Traction Motors (Dual)	60 Minute Rating	Each	hp (kW)	19.7 (14.7)
	43	Pump Motor	15 Minute rating		hp (kW)	48.3 (36)
	44	Traction Motors	Type/Control Method		Dual AC/Transistor	
	45	Pump Motor	Type/Control Method		AC/Transistor	
	46	Number of Speeds	Traction/Pump		Infinitely Variable/Infinitely Variable	
OTHER	47	Step Height		in (mm)	19.3 (490)	
	48	Floor Height		in (mm)	33.1 (840)	
	49	Attachment Relief Pressure		psi (bar)	2250 (155)	
	50	Auxiliary Oil Flow	3rd and 4th Function	gal/min (l/min)	16 (60)	
	51a	Sound Level	Extended Shift On		dB (A)	68
51b	(Measured per ANSI B56.11.5)	Extended Shift Off		dB (A)	69	

Above specifications, unless otherwise listed, are for a standard truck without optional equipment.  
Right Angle Stack and Equal Intersecting Aisle dimensions provided with a 48" long and 40" wide pallet load, allowing zero clearance.

GENERAL	1	Manufacturer		Yale			
	2	Model Designation		ERP110VM	ERP120VM		
	3	Power/Voltage		Electric/80 Volts			
	4	Operation		Sit			
	5	Rated Capacity		lb (kg)	11000 (4990)	12000 (5443)	
	6	Load Center		in (mm)	24 (610)		
TIRES	7	Tire Type - Cushion, Solid, Pneumatic, etc.		Std/Opt	Pneumatic Shaped Solid		
	8	Tire Size (Standard)		Drive/Steer	in	355/50-15/28 x 9-15	
	9	Wheels - Number	X=Driven	Drive/Steer		2X/2	
	10	Tread (Drive / Steer)			See Tread Chart on page 7		
DIMENSIONS	11	Mast Tilt	Std Opt Opt	degrees	6F/6B	6F/8B 6F/4B	
	12	Mast - Lowered Height	Std Mast	in (mm)	92 (2320)		
	13	Free Lift - Top of Fork	Std 2 Stg Limited Free Lift Mast	in (mm)	5 (150)	6 (160)	
	14	Lift Height - Top of Fork	Std 2 Stg Limited Free Lift Mast	in (mm)	121 (3090)	122 (4000)	
	15	Mast - Extended Height	Std Mast with/without LBR	in (mm)	172/159 (4364/4030)		
	16	Overhead Guard Height		in (mm)	92 (2338)		
	17	SIP to Bottom of OHG	Seat Depressed	Std/Susp/Swivel	in (mm)	38.5/39.1/38.5 (977/992/978)	
	18	Tow Pin Height	Vertical Center of Pin		in (mm)	20.7 (526)	
	19	Overall Width (Drive Tires)			See Overall Width Chart on page 7		
	20	Forks	Thickness x Width x Length		in (mm)	2.0 x 5.9 x 48 (50 x 150 x 1219)	2.4 x 5.9 x 48 (60 x 150 x 1219)
	21	Standard Carriage Width	Class III (8000-9000 lb.) Class IV (10000 - 12000 lb.)		in (mm)	48 (1219)	
	23	Ground Clearance	Lowest Point			See Ground Clearance Chart on page 7	
	24	Ground Clearance	Center of Truck	NL/RL	in (mm)	7.2/7.0 (183/177)	
	25	Load Distance	Center of Wheel to Face of Forks		in (mm)	20.6 (523)	
	26a	Battery Compartment	Height	w/Vertical Battery Removal	in (mm)	31.8 (808)	
	26b		Width		in (mm)	40.8 (1037)	
	26c			Nominal (Std/Opt)	SIZE	40	
	26d		Length	Actual (Std/Opt)	in (mm)	39.6 (1006)	
	27	Length to Face of Forks	Chassis Length		in (mm)	120.8 (3068)	
	28	Wheelbase			in (mm)	85.8 (2180)	
	29	Right Angle Stack			in (mm)	170.2 (4323)	
30	Equal Aisle	90° Intersecting Aisle		in (mm)	95.9 (2436)		
31	Outside Turning Radius			in (mm)	101.3 (2573)		
WT.	32	Truck Weight	Without Battery	NL	lb (kg)	13930 (6319)	14510 (6582)
	33	Axle Loading - Drive	Static with Max. Wt. Battery	NL/RL	lb (kg)	9839/26931 (4463/12216)	10118/28726 (4589/13030)
	34	Axle Loading - Steer	Static with Max. Wt. Battery	NL/RL	lb (kg)	9485/3393 (4302/1539)	9789/3180 (4440/1442)
PERFORMANCE	Standard Performance						
	35a	Travel Speed	Extended Shift On	NL/RL	mph (km/h)	11.6/9.0 (18.7/14.5)	11.6/9.0 (18.7/14.5)
	35b		Extended Shift Off	NL/RL	mph (km/h)	13.0/12.4 (21.0/20.0)	13.0/12.1 (21.0/19.5)
	36a	Lift Speed, Extended Shift On	Std 2 Stg LFL Mast	NL/RL	ft/min (m/sec)	91/59 (.46/.30)	91/59 (.46/.30)
	36b		Opt 2 Stg FFL Mast	NL/RL	ft/min (m/sec)	83/58 (.422/.295)	83/58 (.422/.295)
	36c		Opt 3 Stg FFL Mast	NL/RL	ft/min (m/sec)	85/58 (.434/.297)	85/58 (.43/.297)
	36d	Lift Speed, Extended Shift Off	Std 2 Stg LFL Mast	NL/RL	ft/min (m/sec)	96/67 (.49/.34)	96/65 (.49/.33)
	36e		Opt 2 Stg FFL Mast	NL/RL	ft/min (m/sec)	89/65 (.452/.33)	89/64 (.452/.325)
	36f		Opt 3 Stg FFL Mast	NL/RL	ft/min (m/sec)	91/66 (.464/.333)	91/64 (.464/.327)
	37a	Lower Speed	Std 2 Stg LFL Mast	NL/RL	ft/min (m/sec)	71/91 (.36/.46)	71/91 (.36/.46)
	37b		Opt 2 Stg FFL Mast	NL/RL	ft/min (m/sec)	55/83 (.28/.42)	55/83 (.28/.42)
	37c		Opt 3 Stg FFL Mast	NL/RL	ft/min (m/sec)	61/89 (.31/.45)	61/89 (.31/.45)
	38a	Gradeability	5 Minute Rating	NL/RL	%	21.5/13.7	21.0/13.0
	38b		60 Minute Rating	NL/RL	%	4.6/3.0	4.5/2.9
	39a	Drawbar Pull	5 Minute Rating	NL/RL	lbf	4020/3895	4018/3892
	39b		60 Minute Rating	NL/RL	lbf	1484/1448	1483/1445
	40a	Brake	Method of Control	Service/Parking		Hydraulic/Spring Applied	
40b	Method of Operation		Service/Parking		Foot/Automatic		
ELECTRIC	41	Battery	Type		Lead Acid		
	42	Traction Motors (Dual)	60 Minute Rating	Each	hp (kW)	19.7 (14.7)	
	43	Pump Motor	15 Minute rating		hp (kW)	48.3 (36)	
	44	Traction Motors	Type/Control Method		Dual AC/Transistor		
	45	Pump Motor	Type/Control Method		AC/Transistor		
	46	Number of Speeds	Traction/Pump		Infinitely Variable/Infinitely Variable		
OTHER	47	Step Height		in (mm)	19.3 (490)		
	48	Floor Height		in (mm)	33.1 (840)		
	49	Attachment Relief Pressure		psi (bar)	2250 (155)		
	50	Auxiliary Oil Flow	3rd and 4th Function	gal/min (l/min)	16 (60)		
	51a	Sound Level	Extended Shift On		dB (A)	68	
51b	(Measured per ANSI B56.11.5)	Extended Shift Off		dB (A)	69		

Above specifications, unless otherwise listed, are for a standard truck without optional equipment.  
Right Angle Stack and Equal Intersecting Aisle dimensions provided with a 48" long and 40" wide pallet load, allowing zero clearance.

ERP080-090VM MAST DIMENSIONS					
Maximum Fork Height (TOF)	Overall Lowered Height	Overall Extended Height with Load Backrest	Overall Extended Height without Load Backrest	Free Lift (TOF) with Load Backrest	Free Lift (TOF) without Load Backrest
in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)
2-STAGE LIMITED FREE LIFT (LFL) Hi-Vis™ MAST					
131 (3350)	92 (2320)	181 (4591)	162 (4109)	5 (150)	5 (150)
143 (3650)	98 (2470)	193 (4891)	174 (4409)	5 (150)	5 (150)
167 (4250)	110 (2770)	217 (5491)	198 (5009)	5 (150)	5 (150)
2-STAGE FULL FREE LIFT (FFL) Hi-Vis™ MAST					
132 (3375)	92 (2320)	182 (4622)	165 (4187)	42 (1079)	59 (1514)
144 (3675)	98 (2470)	194 (4922)	177 (4487)	48 (1229)	65 (1664)
3-STAGE FULL FREE LIFT (FFL) Hi-Vis™ MAST					
185 (4715)	90 (2270)	235 (5962)	218 (5527)	40 (1029)	57 (1464)
194 (4950)	94 (2370)	244 (6197)	227 (5762)	44 (1129)	61 (1564)
206 (5250)	98 (2470)	256 (6497)	239 (6062)	48 (1229)	65 (1664)
218 (5550)	102 (2570)	268 (6797)	251 (6362)	52 (1329)	69 (1764)
236 (6000)	110 (2770)	286 (7247)	269 (6812)	60 (1529)	77 (1964)

ERP100-120VM MAST DIMENSIONS					
Maximum Fork Height (TOF)	Overall Lowered Height	Overall Extended Height with Load Backrest	Overall Extended Height without Load Backrest	Free Lift (TOF) with Load Backrest	Free Lift (TOF) without Load Backrest
in (mm)	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)
2-STAGE LIMITED FREE LIFT (LFL) Hi-Vis™ MAST					
121 (3090)	92 (2320)	172 (4364)	159 (4030)	5 (150)	5 (150)
133 (3390)	98 (2470)	184 (4664)	171 (4330)	5 (150)	5 (150)
157 (3990)	110 (2770)	208 (5264)	195 (4930)	5 (150)	5 (150)
2-STAGE FULL FREE LIFT (FFL) Hi-Vis™ MAST					
122 (3115)	92 (2320)	173 (4389)	162 (4107)	41 (1052)	52 (1334)
134 (3415)	98 (2470)	185 (4689)	174 (4407)	47 (1202)	58 (1484)
3-STAGE FULL FREE LIFT (FFL) Hi-Vis™ MAST					
174 (4437)	90 (2270)	225 (5711)	214 (5429)	39 (996)	50 (1278)
184 (4690)	94 (2370)	235 (5964)	224 (5682)	43 (1096)	54 (1378)
196 (4990)	98 (2470)	247 (6264)	236 (5982)	47 (1196)	58 (1478)
208 (5290)	102 (2570)	259 (6564)	248 (6282)	51 (1296)	62 (1578)

### TREAD (DRIVE AND STEER TIRES)

Tire Type	Drive Tire / Steer Tire	ERP080VM	ERP090VM	ERP100VM	ERP100VML	ERP110VM	ERP120VM
		in (mm)					
Pneumatic Tire	250 x 15 20 Ply / 7.00 x 12 16 Ply	44.2 / 45.0 (1123 / 1143)		N/A	N/A		
PSS Tires	250 x 15-7.5 / 7.00 x 12 / 5.0	44.2 / 45.0 (1123 / 1143)		N/A	N/A		
Pneumatic Tire	28 x 12.5-15 24 Ply / 7.00 x 12 16 Ply	45.9 / 45.0 (1167 / 1143)			N/A		
PSS Tires	355 / 50-15 / 7.00 x 12 / 5.0	45.9 / 45.0 (1167 / 1143)			N/A		
Pneumatic Tire (Dual Drive)	7.00 x 15 14 Ply / 7.00 x 12 16 Ply	60.1 / 45.0 (1526 / 1143)			N/A		
PSS Tires (Dual Drive)	7.00 x 15-5.5 / 7.00 x 12 / 5.0	60.1 / 45.0 (1526 / 1143)			N/A		
PSS Tires	355 / 50-15 / 28 x 9-15	N/A			45.9 / 45.0 (1167 / 1143)		
PSS Tires (Dual Drive)	700 x 15 / 5.5 / 28 x 9-15	N/A			60.1 / 45.0 (1526 / 1143)		

### OVERALL WIDTH (DRIVE TIRES)

Tire Type	Drive Tire	ERP080VM	ERP090VM	ERP100VM	ERP100VML	ERP110VM	ERP120VM
		in (mm)					
Pneumatic Tires	250 x 15 20 Ply	54.1 (1373)		N/A	N/A		
PSS Tires	250 x 15-7.5	54.7 (1388)		N/A	N/A		
Pneumatic Tires	28 x 12.5-15 24 Ply	58.0 (1472)			N/A		
PSS Tires	355/50-15	57.1 (1451)			57.1 (1451)		
Pneumatic Tires (Dual Drive)	7.00 x 15 14 Ply	67.9 (1724)			N/A		
PSS Tires (Dual Drive)	7.00 x 15-5.5	68.5 (1739)			68.5 (1739)		

### GROUND CLEARANCE (LOWEST POINT)

	ERP080VM	ERP090VM	ERP100VM	ERP100VML	ERP110VM	ERP120VM
	NL / RL in (mm)					
250 x 15 20 Ply	5.7/4.9 (144/125)		N/A	N/A		
250 x 15-7.5	5.6/5.1 (141/130)		N/A	N/A		
28 x 12.5-15 24 Ply	5.8/5.0 (148/128)			N/A		
355/50-15	5.6/5.3 (143/135)			5.6/5.3 (143/135)		
7.00 x 15 14 Ply (Dual Drive)	6.1/5.3 (156/135)			N/A		
7.00 x 15-5.5 (Dual Drive)	5.7/5.3 (145/135)			5.7/5.3 (145/135)		

### BATTERY AND COMPARTMENT SPECIFICATIONS

Battery Compartment Dimensions				Battery Dimensions and Specifications								
Truck Model	Width	Length	Height	"X"	"Y"	"Z"	Volts	No. of cells	Max Capacity 6 Hr Rate amp Hr (kWh)	Weight		
	in (mm)			in (mm)						Min	Max	
										lbs (kg)		
<b>ERP080-120VM 40" Compartment</b>	40.8 (1037)	39.6 (1006)	31.8 (808)	40.6 (1030)	39.4 (1000)	31.4 (798)	80	40	840 (65.2)	4600 (2080)	5400 (2440)	
<b>ERP080/090VM 34" Compartment</b>	40.8 (1037)	33.8 (859)	31.8 (808)	40.6 (1030)	33.1 (840)	31.4 (798)	80	40	700 (54.3)	4400 (1991)	5100 (2319)	

Battery Type: "EO" (Without Cover)

Max allowable battery capacity per UL is 1000 amp hr (77.6 kwh)

Commercially available lead acid batteries may not necessarily reach these max limits

34" Compartment achieved by use of a Front Compartment Spacer - Reduces Compartment Length from 39.6" to 33.8"

Allows use of 31.5" - 33" (800 - 840 mm) battery in the 40" (1006 mm) Battery Compartment

Battery Compartment Length is measured front to rear. Battery Compartment Width is measured across the truck.

#### Battery Notes - Conventional Charging

Battery Connector: 80 volt - Black SBE®320

Anderson Power Products® P/N E6363G2 (3/0 AWG), E6363G3 (4/0 AWG) or equivalent

Battery Lead: Length 20" (508 mm), Position "A", Minimum Cable Size 3/0 AWG

Handle (not required): SB®350 and SBE®320 (Anderson Power Products®) : "A" TYPE (Grey) P/N 995G2 or equivalent

#### Battery Notes - Premium, Fully Integrated "Quick Connect" Rapid / Fast Charging

NOTE: A Site Survey is required to confirm your application is a candidate for Rapid Charge and to determine the battery and charger specifications required. Contact your battery and charger supplier.

Battery Connector: Requires Positive / Negative Cabling terminating in (1) Female EBC-320 DIN Connector

Anderson Power Products® P/N E32595-00X9 (3/0 AWG), A32504-00X9 (4/0 AWG) or equivalent. (X = Auxiliary Contacts)

DIN connector to include 1 Red Conductor to (+) and 1 black conductor to (-)

Battery Lead: Length 20" (508 mm), Position "A", Minimum Cable Size 3/0 AWG

(continued from cover)

control settings, allowing the truck to be customized to meet customer applications. Additionally, extensive diagnostics allow service technicians to quickly troubleshoot problems. Operator selectable performance modes are standard. Options for operator passwords and an onboard, customizable operator checklist are also available.

### Foot Directional Control Pedal

The optional foot directional control pedal is a highly productive directional/accelerator pedal. One pedal allows the operator to change direction and acceleration reducing operator fatigue and resulting in increased productivity. Yale offers the foot direction control pedal as a no charge option.

### Hydraulic Components

The hydraulic pump motor is powered by a transistor controller. A wet spline coupling joins a brushless, AC induction motor to the pump for long life and low noise. The motor and pump are mounted on rubber isolators for reduced noise and vibration. A combination of flexible wire-braid hoses and steel tubing is used to simplify the hydraulic plumbing. These hydraulic lines are carefully routed and held in place to reduce possible damage. A 10-micron full flow hydraulic filter located in the return line protects the hydraulic system from contaminants and helps provide long life. A bypass relief valve permits oil flow in the event of the filter clogging.

### Hydrostatic Power Steering

Hydrostatic power steering is standard and the all-hydraulic design gives precise, reliable control while eliminating mechanical linkages and road shocks at the steering wheel. An infinitely adjustable tilt steering column provides excellent operator comfort and visibility.

### Steering Axle

The steering axle is a one-piece ductile iron casting mounted on elastic cushions that reduce shock and provide a softer ride. The Continuous Stability System (CSS™) enhances truck stability in a simple, maintenance free design, without compromising uneven surface travel. "Zero Turn Radius" steer axle design allows for increased maneuverability.

### Masts/Carriage/Forks/Load Backrest Extension

Yale® Hi-Vis™ simplex, duplex and triplex masts provide excellent visibility. The mast features flush face design with geometrically matched, angled load rollers, which are canted, yet provide full-face roller contact. The mast front rail flange angle coupled with the inverted "J" inner channel and three degree mast rollers significantly reduces channel web milling and roller wear. Top accessible, "J-hook" mast mounting system allows convenient and easy mast service. The J-hook mounting is standardized to allow direct mast interchangeability on a variety of Yale® truck models without modification. Bronze steel-backed bushings reduce mounting wear. Class III six-roller carriages are standard for the ERP-VM 8,000 and 9,000 lb. trucks. Class IV six-roller carriages are standard for the ERP-VM 10,000, 11,000 and 12,000 lb. trucks. Forks are "upset forged" from a single piece of high-strength steel to give added strength and thickness for wear. A 48" load backrest extension is standard.

### Frame

The frame is a unitized construction, stress tested for durability. An integral step on both sides of the truck is provided for easy entry and exit. The truck has a two-piece floor plate that can be easily lifted out for service access. An easily removable counterweight top cover gives easy access to components. A stamped steel, gas spring-assisted hood allows easy changing of the battery.

### Additional Features

Additional features on the ERP-VM series include an overhead guard, seatside directional control, operator presence system, 48" forks, non-suspension seat and seat belt. An infinitely adjustable tilt steering column, rubber floor mat, and electronic horn are standard.

### Options

- Accutouch mini-levers
- Foot directional control pedal
- Return to set tilt
- Telescoping steering column with tilt memory
- Full-suspension seat (vinyl or cloth)
- Full-suspension swivel seat (vinyl or cloth)
- Keyless start switch
- Rear drive handle with horn button
- Load weight indicator
- Impact monitor
- Key switch controlled lights
- LED and halogen work light packages
- LED dome / reading light
- LED brake / tail / back-up light packages
- 6° forward / 8° back tilt
- 6° forward / 4° back tilt
- Integral sidershifter
- Full steel cab
- Front, top and rear cab panels
- Audible alarm – reverse operation (manually adjustable to 87, 97 or 102 dB)
- Visible alarm – amber led strobe with continuous operation
- Dual drive tires
- Type "EE" UL construction
- Dual rear view mirrors
- Panoramic rear view mirror
- Fire extinguisher
- Accumulator
- Cooler / freezer package: Operating temperatures: -20° F to + 120° F
- Synchronous steering
- Red, high-visibility, non-cinch seat belt with or without start interlock
- Low mount display
- Outdoor protection / wash-down package
- Front mud guards
- Tilt cylinder boots
- Premium, fully integrated "quick connect" rapid charge system



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Manufactured in our own ISO 9001 and 14001 Registered Facilities

2355-1B 12/2017 All trucks shown with optional equipment.

Truck performance may be affected by the condition of the vehicle, how it is equipped and the application. Consult your Yale® Industrial Truck Dealer if any of the information shown is critical to your application. Specifications are subject to change without notice.

This truck meets all applicable mandatory requirements of ANSI B56.1 Safety Standard for Powered Industrial Trucks at the time of manufacture. Classified by Underwriters' Laboratories, Inc., as to fire and electric shock hazard only for Type E industrial trucks.

The Yale® products included in this document may be covered by US patent 6,684,148 and other patents pending.