



ERP100-160

SPEC SHEET

10,000 - 16,000 kg

EF/DF Series

Electric Forklift Trucks



VDI 2198 – GENERAL SPECIFICATIONS – EF/DF SERIES

		ERP100DF		ERP120DF		ERP130EF		
GENERAL	1.1	Manufacturer	Yale					
	1.2	Model designation	ERP100DF		ERP120DF		ERP130EF	
	1.3	Power train / Voltage	Electric / 350V					
	1.4	Operator type	Seated					
	1.5	Rated capacity / rated load	Q (kg) 10,000		12,000		13,000	
	1.6	Load centre distance	c (mm)		600			
	1.7	Load distance	x (mm)		804		889	
	1.8	Wheelbase	y (mm)		2,900		3,300	
WEIGHT	2.1	Service weight ⁽¹⁾	14,772		16,027		18,947	
	2.2	Axle loading, laden front / rear	23,347	1,925	26,174	2,353	29,239	2,408
	2.3	Axle loading, unladen front / rear	7,763	7,009	7,622	8,405	10,448	8,499
TYRES	3.1	Tyres	Pneumatic					
	3.2	Tyres size, front	10.00-20 16PR				12.00-20 20PR	
	3.3	Tyres size, rear	10.00-20 16PR				12.00-20 20PR	
	3.4	Wheels, number front / rear (x = driven wheels)	4X / 2					
	3.5	Track width, front	1,842					
	3.6	Track width, rear	b ₁₀ (mm)		1,930		2,000	
DIMENSIONS	4.1	Mast tilt: forward / backwards	15°	12°	15°	12°	15°	12°
	4.2	Height of mast lowered (unloaded)	h ₁ (mm) 4,132				4,193	
	4.3	Free lift	h ₂ (mm)		-			
	4.4	Lift height (bottom of forks)	h ₃ (mm) 4,925				4,910	
	4.5	Height of mast extended (unloaded)	h ₄ (mm) 6,594				6,648	
	4.6	Height of overhead guard (closed cab)	h ₅ (mm) 3,042				3,110	
	4.6.1	Height of overhead guard (closed cab w/ airco)	h ₅ (mm) 3,042				3,110	
	4.6.2	Height of overhead guard (closed cab w/ strobe light)	h ₅ (mm) 3,137				3,205	
	4.6.3	Height of overhead guard (closed cab w/ work lights)	h ₅ (mm) 3,191				3,259	
	4.6.4	Height of overhead guard (closed cab w/ airco & strobe light)	h ₅ (mm) 3,167				3,235	
	4.7	Seat height (Seat Index Point, ISO 5353)	h ₇ (mm) 1,835				1,903	
	4.8	Coupling height	h ₁₀ (mm) 649				717	
	4.9	Overhang	l ₅ (mm) 809				809	
	4.10	Overall length	l ₁ (mm) 5,733				6,828	
	4.11	Length to face of forks	l ₂ (mm) 4,513				4,998	
	4.12	Overall width truck	b ₂ (mm) 2,464				2,541	
	4.13	Fork dimensions	75 / 200	1,220	75 / 200	1,220	90 / 200	1,830
	4.14	Carriage type	75 mm std pin type				85mm std pin type	
	4.15	Carriage width	b ₃ (mm) 2,396				2,496	
	4.16	Distance over fork arms, minimum / maximum	470	2320	470	2320	470	2420
	4.17	Sideshift (min / max)	b ₈ (mm)		-			
	4.18	Ground clearance, under mast (w/o load)	m ₁ (mm) 250				245	
	4.19	Ground clearance, centre of wheelbase	m ₂ (mm) 273				341	
	4.20	Load size	w x l (mm) 1,200					
	4.20.1	Aisle width (a=10%)	A _{st} (mm) 6,727				7,340	
	4.20.2	Aisle width (a=0)	A _{st} (mm) 6,115				6,673	
4.20.3	Aisle width (a=200)	A _{st} (mm) 6,315				6,873		
4.21	Load size	w x l (mm) 1,200 800 1,200 800 1,200 800						
4.21.1	Aisle width (a=10%)	A _{st} (mm) 6,287				6,900		
4.21.2	Aisle width (a=0)	A _{st} (mm) 5,715				6,273		
4.21.3	Aisle width (a=200)	A _{st} (mm) 5,915				6,473		
4.22	Turning radius (outer)	W _a (mm) 4,111				4,584		
4.23	Internal turning radius	b ₁₃ (mm) 1,545				1,890		
PERFORMANCE	5.1	Travel speed laden/unladen ⁽²⁾	32.2				24.8	
	5.2	Lifting speed laden/unladen	m/s TBD					
	5.3	Lowering speed laden/unladen	0.50	0.48	0.50	0.48	0.50	0.48
	5.4	Drawbar pull laden/unladen ⁽¹⁾	23	25	23	25	30	33
	5.5	Max. Drawbar pull laden/unladen ⁽²⁾	48	50	48	50	63	65
	5.6	Gradeability laden/unladen ⁽¹⁾	10	18	8	16	10	18
	5.7	Max. Gradeability laden/unladen ⁽²⁾	20	32	17	33	20	28
ELEC-TRIC	6.1	Drive motor rating S2 60 min	kW 46					
	6.3	Battery according to DIN 43531/35/36 A, B, C, no	No					
	6.4	Battery voltage/nominal capacity	363	384	363	384	363	576
OTHER	8.1	Type of drive unit	AC Electric					
	8.2	Drive axle Manufacturer / Type	Kessler D61				Kessler D81	
	8.3	Service brake	Oil-immersed disc					
	8.4	Parking brake	Dry disc on drive axle					
	10.1	Operating pressure for attachments	MPa		22.5			
	10.2	Oil volume for attachments	l/min		100			
	10.3	Hydraulic tank capacity	l		135		140	
	10.4	Steering design	Hydraulic power steering					
	10.5	Number of steering rotation	4.5					
	10.6	Sound pressure level at the driver's seat	dB (A)		TBD			
10.6.1	Sound power level during the working cycle	dB (A)		TBD				
10.7	Towing coupling, model / type	Yes / Pin						

(1) Rated power

(2) Peak power

All values are nominal values and they are subject to tolerances.

VDI 2198 – GENERAL SPECIFICATIONS – EF/DF SERIES

		Yale				
		ERP140EF		ERP160EF		
GENERAL	1.1	Manufacturer				
	1.2	Model designation				
	1.3	Power train / Voltage	Electric / 350V			
	1.4	Operator type	Seated			
	1.5	Rated capacity / rated load	14,000		16,000	
	1.6	Load centre distance	600			
	1.7	Load distance	889			
	1.8	Wheelbase	3,300			
WEIGHT	2.1	Service weight ⁽¹⁾	19,747		20,552	
	2.2	Axle loading, laden front / rear	30,668	2,774	33,557	2,695
	2.3	Axle loading, unladen front / rear	10,431	9,316	10,412	10,140
TYRES	3.1	Tyres	Pneumatic			
	3.2	Tyres size, front	12.00-20 20PR			
	3.3	Tyres size, rear	12.00-20 20PR			
	3.4	Wheels, number front / rear (x = driven wheels)	4X / 2			
	3.5	Track width, front	1,842			
	3.6	Track width, rear	2,000			
DIMENSIONS	4.1	Mast tilt: forward / backwards	15°	12°	15°	12°
	4.2	Height of mast lowered (unloaded)	4,193			
	4.3	Free lift	-			
	4.4	Lift height (bottom of forks)	4,910			
	4.5	Height of mast extended (unloaded)	6,648			
	4.6	Height of overhead guard (closed cab)	3,110			
	4.6.1	Height of overhead guard (closed cab w/ airco)	3,110			
	4.6.2	Height of overhead guard (closed cab w/ strobe light)	3,205			
	4.6.3	Height of overhead guard (closed cab w/ work lights)	3,259			
	4.6.4	Height of overhead guard (closed cab w/ airco & strobe light)	3,235			
	4.7	Seat height (Seat Index Point, ISO 5353)	1,903			
	4.8	Coupling height	717			
	4.9	Overhang	809			
	4.10	Overall length	6,828			
	4.11	Length to face of forks	4,998			
	4.12	Overall width truck	2,541			
	4.13	Fork dimensions	90 / 200	1,830	90 / 200	2,440
	4.14	Carriage type	85mm std pin type			
	4.15	Carriage width	2,496			
	4.16	Distance over fork arms, minimum / maximum	470	2420	470	2420
	4.17	Sideshift (min / max)	-			
	4.18	Ground clearance, under mast (w/o load)	245			
	4.19	Ground clearance, centre of wheelbase	341			
4.20	Load size	w x l (mm) 1,200				
4.20.1	Aisle width (a=10%)	Ast (mm) 7,340				
4.20.2	Aisle width (a=0)	Ast (mm) 6,673				
4.20.3	Aisle width (a=200)	Ast (mm) 6,873				
4.21	Load size	1,200	800	1,200	800	
4.21.1	Aisle width (a=10%)	Ast (mm) 6,900				
4.21.2	Aisle width (a=0)	Ast (mm) 6,273				
4.21.3	Aisle width (a=200)	Ast (mm) 6,473				
4.22	Turning radius (outer)	Wa (mm) 4,584				
4.23	Internal turning radius	b13 (mm) 1,890				
PERFORMANCE	5.1	Travel speed laden/unladen ⁽²⁾	km/h 24.8			
	5.2	Lifting speed laden/unladen	m/s TBD			
	5.3	Lowering speed laden/unladen	0.50	0.48	0.50	0.48
	5.4	Drawbar pull laden/unladen ⁽¹⁾	30	33	30	32
	5.5	Max. Drawbar pull laden/unladen ⁽²⁾	62	65	62	65
	5.6	Gradeability laden/unladen ⁽¹⁾	9	17	8	16
	5.7	Max. Gradeability laden/unladen ⁽²⁾	19	27	17	29
ELEC-TRIC	6.1	Drive motor rating S2 60 min	kW 46			
	6.3	Battery according to DIN 43531/35/36 A, B, C, no	No			
	6.4	Battery voltage/nominal capacity	363	576	363	576
OTHER	8.1	Type of drive unit	AC Electric			
	8.2	Drive axle Manufacturer / Type	Kessler D81			
	8.3	Service brake	Oil-immersed disc			
	8.4	Parking brake	Dry disc on drive axle			
	10.1	Operating pressure for attachments	MPa 22.5			
	10.2	Oil volume for attachments	l/min 100			
	10.3	Hydraulic tank capacity	l 140			
	10.4	Steering design	Hydraulic power steering			
	10.5	Number of steering rotation	4.5			
	10.6	Sound pressure level at the driver's seat	dB (A) TBD			
10.6.1	Sound power level during the working cycle	dB (A) TBD				
10.7	Towing coupling, model / type	Yes / Pin				

(1) Rated power

(2) Peak power

VDI 2198 – GENERAL SPECIFICATIONS – EF/DF SERIES

GENERAL	1.1	Manufacturer		Yale		
	1.2	Manufacturer's type designation		ERP160EF12		
	1.3	Powertrain / Voltage		Electric		
	1.4	Operator type		Seated		
	1.5	Rated capacity / rated load	Q (kg)	16,000		
	1.6	Load centre distance	c (mm)	1,200		
	1.7	Load distance	x (mm)	973		
	1.8	Wheelbase	y (mm)	3,750		
WEIGHT	2.1	Service weight ⁽¹⁾	kg	24,448		
	2.2	Axle loading, laden front / rear	kg	37,274	3,174	
	2.3	Axle loading, unladen front / rear	kg	12,002	12,446	
TYRES	3.1	Tyres		Pneumatic		
	3.2	Tyres size, front		12.00 R 20		
	3.3	Tyres size, rear		12.00 R 20		
	3.4	Wheels, number front / rear (x = driven wheels)		4X / 2		
	3.5	Track width, front	b ₁₀ (mm)	2,218		
	3.6	Track width, rear	b ₁₁ (mm)	1,994		
DIMENSIONS	4.1	Mast tilt : forward / backwards	α / β (°)	6°	10°	
	4.2	Height of mast lowered (unloaded)	h ₁ (mm)	3,985		
	4.3	Free lift	h ₂ (mm)	-		
	4.4	Lift height (bottom of forks)	h ₃ (mm)	4,494		
	4.5	Height of mast extended (unloaded)	h ₄ (mm)	6,232		
	4.6	Height of overhead guard (closed cab)	h ₅ (mm)	3,110		
	4.6.1	Height of overhead guard (closed cab w/ airco)	h ₅ (mm)	3,110		
	4.6.2	Height of overhead guard (closed cab w/ strobe light)	h ₅ (mm)	3,205		
	4.6.3	Height of overhead guard (closed cab w/ work lights)	h ₅ (mm)	3,310		
	4.6.4	Height of overhead guard (closed cab w/ airco & strobe light)	h ₅ (mm)	3,259		
	4.7	Seat height (Seat Index Point, ISO 5353)	h ₇ (mm)	1,903		
	4.8	Coupling height	h ₁₀ (mm)	713		
	4.9	Overhang	l ₅ (mm)	791		
	4.1	Overall length	l ₁ (mm)	7,954		
	4.11	Length to face of forks	l ₂ (mm)	5,514		
	4.12	Overall width truck	b ₂ (mm)	2,542		
	4.13	Fork dimensions	s/e/l (mm)	100 / 200	2,440	
	4.14	Carriage type		Dual Function – Sideshift / Fork Positioning		
	4.15	Carriage width	b ₃ (mm)	2,540		
	4.15.1	DFSSFP carriage 350 mm sideshift				
	4.16	Width over forks (min / max) cylinders inner position	b ₅ (mm)	555	1,045	
	4.17	Width over forks (min / max) cylinders outer position	b ₅ (mm)	1,875	2,445	
	4.18	Sideshift @ width over forks	b ₈ /b ₅ (mm)	+/- 98	2,250	
	4.19	Sideshift @ width over forks cylinders inner position	b ₈ /b ₅ (mm)	+/- 350	1,745	
	4.20	Sideshift @ width over forks cylinders outer position	b ₈ /b ₅ (mm)	+/- 350	1,175	
	4.20.1	DFSSFP carriage 468 mm sideshift				
4.21	Width over forks (min / max)	b ₅ (mm)	575	2,445		
4.21.1	Sideshift @ width over forks	b ₈ /b ₅ (mm)	+/- 98	2,250		
4.21.2	Sideshift @ width over forks	b ₈ /b ₅ (mm)	+/- 468	1,510		
4.22	Ground clearance, laden, below mast	m ₁ (mm)	187			
4.23	Ground clearance, centre of wheelbase	m ₂ (mm)	341			
4.24	Load size	w x l (mm)	2,400	2,400		
4.24.1	Aisle width (a=10%)	Ast (mm)	9,430			
4.24.2	Aisle width (a=0)	Ast (mm)	8,573			
4.24.3	Aisle width (a=200)	Ast (mm)	8,773			
4.25	Turning radius (outer)	Wa (mm)	5,200			
4.26	Internal turning radius	b ₁₃ (mm)	2,026			
PERFORMANCE	5.1	Travel speed laden/unladen ⁽²⁾	km/h	24.8	24.8	
	5.2	Lifting speed laden/unladen	m/s	0.39	0.44	
	5.3	Lowering speed laden/unladen	m/s	0.54	0.54	
	5.4	Drawbar pull laden/unladen ⁽¹⁾	kN	29	32	
	5.5	Max. Drawbar pull laden/unladen ⁽²⁾	kN	61	64	
	5.6	Gradeability laden/unladen ⁽¹⁾	%	7	14	
	5.7	Max. Gradeability laden/unladen ⁽²⁾	%	16	28	
ELEC-TRIC	6.1	Drive motor rating S2 60 min	kW	46		
	6.3	Battery according to DIN 43531/35/36 A, B, C		No		
	6.4	Battery voltage/nominal capacity	V / Ah	363	768	
OTHER	8.1	Type of drive unit		AC Electric		
	8.2	Drive axle Manufacturer / Type		Kessler D81		
	8.3	Service brake		Oil-immersed / Wet disc		
	8.4	Parking brake		Dry disc on drive axle		
	10.1	Operating pressure for attachments	MPa	19.5		
	10.2	Oil volume for attachments	l/min	100		
	10.3	Hydraulic tank capacity	l	140		
	10.4	Steering design		Hydraulic power steering		
	10.5	Number of steering rotation		5.4		
	10.6	Sound pressure level at the driver's seat	dB (A)	-		
10.6.1	Sound power level during the working cycle	dB (A)	-			
10.7	Towing coupling, model / type		Yes / Pin			

(1) Rated power

(2) Peak power

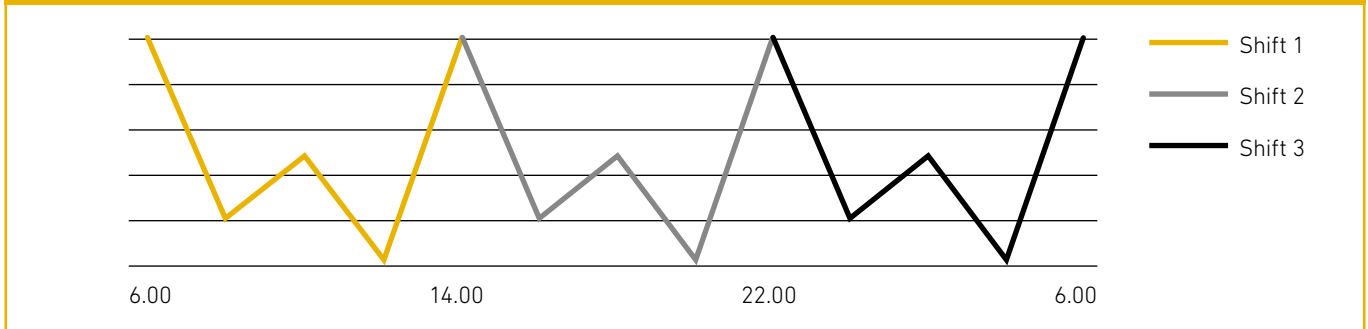
All values are nominal values and they are subject to tolerances.

BATTERY CHARGER SPECIFICATIONS – EF/DF SERIES

Input Voltage	Charge Rate (kW)	Rating (A)	Enclosure Size			Enclosure Weight (kg)	Charger Plug Cable Length (m)	Operating Range (c)	Manufacturer
			Height (mm)	Width (mm)	Thickness (mm)				
400V, 3 Phase, 50Hz	10	16/16	1654	1006.5	503	435	7.62	-20° to 50°	Bassi
	36	63/56							
	50	125/78							
	80	125/125	1654	1822	503	975			
	90	250/141							

Wall power cable not included. Enclosure Rating IP54. Equipped with emergency stop and anti-arc.

AVAILABLE ENERGY – EF/DF SERIES



The graph represents the battery state of charge in a 3-shift operation. Based on your application data this graph can be created upon request.

All values are nominal values and they are subject to tolerances.

FEATURES LIST – EF/DF SERIES

PERFORMANCE	STD	OPT	VISIBILITY	STD	OPT
Performance modes	●		Exterior mirrors mounted to cab		●
Kessler D81 drive axle with wet disc brakes	●		Radar object detection system		●
DRIVE	STD	OPT	High performance LED work lights		●
Speed limiter - unconditional and customer adjustable		●	Two head lights mounted on front fenders		●
Travel speed limiter - loaded (adjustable)		●	Four mast mounted work lights		●
LIFT	STD	OPT	Four cabin mounted work lights		●
On-demand load sensing hydraulic system	●		Two rearward work lights mounted on the cabin		●
2 Stage Non Free Lift mast	●		LED stop/tail/brake lights	●	●
2 Stage Full Free Lift mast		●	Turn signals, hazard and marker lights (LED)	●	
3 Stage Full Free Lift mast		●	Rear view camera system ⁽²⁾		●
Mast tilt Indicator – mechanical		●	OPERATION	STD	OPT
Hydraulic accumulator		●	Air horn 112 dBA		●
Pressure compensated lowering	●		Electric horn 105 dBA	●	
Hydraulic system temperature protection		●	Visible alarm – Amber strobe light, key switch activated	●	
ERGONOMICS	STD	OPT	Visible alarm – Amber strobe light, switch and key switch activated ⁽¹⁾		●
Open operator compartment (without doors and screens)		●	Audible alarm – reverse direction activated 82–102 dB(A), self-adjusting	●	
Enclosed operator cabin	●		Audible alarm – reverse direction white noise		●
Powered tilt operator compartment for service		●	Forward / reverse motion alarm		●
Manual tilt operator compartment for service	●		Blue LED spotlight – rear / front and rear		●
Isolated cabin mounting for low noise and vibration	●		Tire pressure monitoring system		●
Operator presence system	●		Air-conditioning or automatic climate control off with open door		●
Mechanical suspension seat	●		Lockable battery disconnect switch	●	
Air suspension seat		●	Truck start with key switch and start button	●	
Deluxe air suspension seat		●	Operator password (display) for truck start		●
Low backrest seat	●		Seatbelt Interlock for truck start		●
High backrest seat		●	Power distribution group with fuses	●	
Additional armrest on left side		●	Fuses partially replaced by electric circuit breakers		●
Cloth seat cover		●	Yale Vision wireless asset management system		●
Vinyl seat cover	●		Yale Vision wireless asset management – Access / Verification		●
Seat heating		●	Yale Vision wireless asset management – Monitoring		●
Seat ventilation		●	Auto greasing system for basic truck and outer mast		●
2-point high visibility seatbelt	●		Centralized greasing provision for upper chain sheaves	●	
Front, top and rear wipers	●		24 volt electrical system	●	
"H"-pattern front wiper		●	Steer wheel lug nut protection		●
"I"-pattern front wiper	●		Front mud flaps		●
Laminated glass operator compartment front window		●	Rear mud flaps		●
Top window with armoured glass – FOPS certified (enclosed operator cabin)	●		Lifting eyes – 2 front and 2 rear		●
Steel bars under armoured glass top window (enclosed operator cabin)		●	APPEARANCE	STD	OPT
Tinted operator compartment windows (all)		●	Yale Gold paint base truck	●	
Tinted operator compartment top window		●	Special paint base truck		●
Lexan top window		●	Operator compartment special paint (outside only)		●
Plexiglass shield in front of front window		●	Hazard warning striping on counterweight		●
Wire mesh installed on top of operator compartment		●	SUPPLEMENTAL	STD	OPT
Vertical steel bar front window guard		●	Literature package	●	
Operator shield wire mesh		●	Operator's manual	●	
7" Integrated performance display	●		CE certification ⁽¹⁾	●	
Touchpoint™ mini levers hydraulic control integrated in control arm	●		Warranty: 24 Months / 4,000 Hours extended warranty	●	
Joystick hydraulic control integrated in control arm		●			
Steering wheel without spinner knob		●			
Steering wheel with spinner knob	●				
Directional control lever	●				
Yale FDC pedal		●			
Directional control on Mini-levers or Joystick		●			
Park brake – manual	●				
Park brake – automatic		●			
Interior wide angle mirrors	●				
Heater with adjustable speed fan	●				
Telescoping and tilting steering column	●				
DC/DC converter 24 volt/12 volt with socket		●			
Automatic climate control		●			
Reading light		●			

(1) Standard or optional in selected markets. Other options available through Special Products Engineering Department (SPED). Contact Yale for details

(2) Rear view camera is std on ERP160EF12

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About Yale®

Yale Materials Handling Corporation is one of the oldest manufacturers of lift trucks in the world. We've been in the business of lifting since 1875 and we apply that experience to help customers solve materials handling challenges. Our full line of lift trucks range in capacity from 1 to 16 tonne and are powered by internal combustion engines or electric options. Yale also offers robotic solutions, telemetry, fleet management, parts, financing and training. From traditional lift truck equipment to emerging technologies, our goal, every day, is to work with our nationwide dealer network to continually improve and provide the solutions you need, when and how you need them.

MATERIALS HANDLING FOR:

3PL

Auto Parts

Beverage

Cold & Frozen Foods

Food Distribution

Food Processing

Furniture & Furnishings

Health & Pharma

Home Centres

Retail

E-Commerce

Yale Lift Truck Technologies


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Notice: Care must be exercised when handling elevated loads. Operators must be trained and must read, understand and follow the instructions contained in the Operating Manual. Consult your Yale® Dealer if any of the information shown is critical to your application.

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