

# Kalmar DCF180-250

## Lift trucks 40,000 – 55,000 lbs



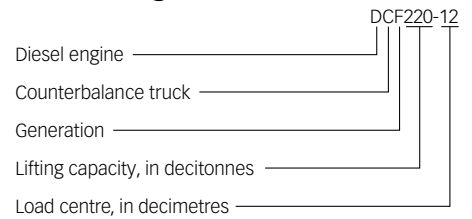
# Made for performance

The Kalmar DCF180-250 is the latest member of the F-generation. It has been developed to meet the high demands for performance and reliability set by the market. The reliable and versatile DCF180-250 makes it the obvious choice for heavy duty handling in a number of different industries and applications.

The Kalmar DCF180-250 is a powerful machine, but at the same time it meets the new tough emission regulations for Tier 4i. Tier III Cummins available until further notice.

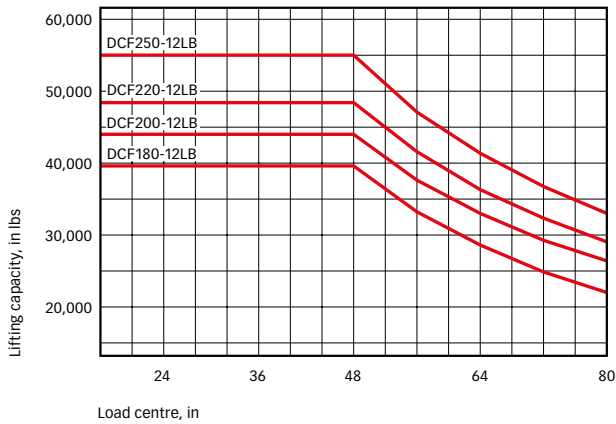
DCF180-250 has a fully variable hydraulic system. The load sensing pumps reduce the pressure of the hydraulic system and the hydraulic system will only use as much pressure as needed for the specific load. This significant improves the reliability of the entire hydraulic system.

## Model designation



## Dimensions

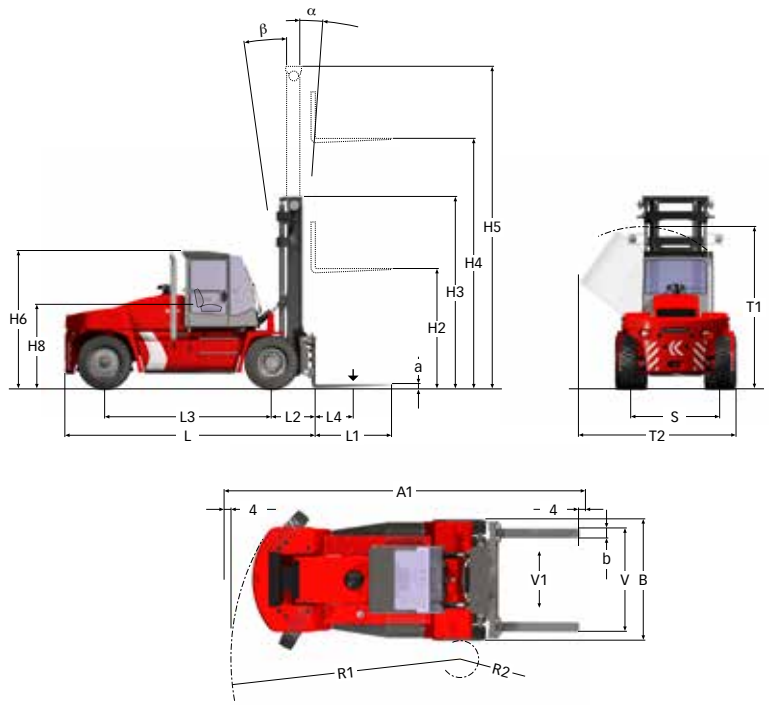
		DCF180-12LB	DCF200-12LB	DCF220-12LB	DCF250-12LB
Lifting capacity	Rated (lb)	40,000	44,000	48,000	55,000
	Load centre (in)	L4	48	48	48
Truck	Truck length (in)	L	240	240	250
	Truck width (in)	B	120	120	120
	Height, basic machine (in)	H6	129	129	129
	Seat height (in)	H8	85	85	85
	Distance between centre of front axle – front face of fork arm (in)	L2	42	42	42
	Wheelbase (in)	L3	157	157	167
	Track (c-c), front – rear (in)	S	87 – 84	87 – 84	87 – 84
	Turning radius, outer – inner (in)	R1 – R2	220 – 17	220 – 17	220 – 17
	Ground clearance, min. (in)		12	12	12
	Height when tilting cab, max. (in)	T1	150	150	150
Standard duplex mast	Height when tilting cab, max. (in)	T2	146	146	146
	Min. aisle width for 90° stacking with forks (in)	A1	365	365	376
Forks	Lifting height (in)	H4	197	197	197
	Mast height, min. (in)	H3	170	170	170
	Mast height, max (in)	H5	269	269	269
	Mast tilting, forward – backward (°)	$\alpha - \beta$	5 – 10	5 – 10	5 – 10
	Ground clearance, min. (in)		12	12	12
Weight	Width (in)	b	9,8	9,8	9,8
	Thickness (in)	a	4,3	4,3	4,3
	Length of fork arm (in)	l	94,5	94,5	94,5
	Width across fork arms, max. – min. (in)	V	102 – 39	102 – 39	102 – 39
	Sideshift $\pm$ at width across fork arms (in)	V1 – V	16 – 71	16 – 71	16 – 71
Wheels / tyres	Service weight (lb)		62,800	68,800	72,500
	Axle load front, unloaded (lb)		33,100	33,100	34,200
	Axle load front, at rated load (lb)		95,200	102,100	118,600
	Axle load back, unloaded (lb)		29,800	32,600	38,400
	Axle load back, at rated load (lb)		7,300	7,700	8,200
Steering system	Type, front – rear	Pneumatic	Pneumatic	Pneumatic	Pneumatic
	Dimensions, front – rear / ply (in)	14,00x24 - 14,00x24			
	Number of wheels, front – rear (*driven)	4* - 2	4* - 2	4* - 2	4* - 2
	Pressure (Psi)	145	145	145	145
Service brake system	Type – manoeuvring	Hydraulic servo – Steering wheel			
Parking brake system	Type – affected wheels	Oil cooled disc brakes (Wet disc brakes) – drive wheels			
Hydraulic pressure	Type – affected wheels	Dry, spring activated disc brake – drive wheels			
Hydraulic fluid volume	Max. (Psi)	2,321	2,611	2,176	2,393
Fuel volume	(gal)	71	71	71	71
AdBlue volume	(gal)	74	74	74	74
	(gal)	4	4	4	4



DCF180-250 models:

Full lifting capacity up to 217 in lift height with duplex/duplex freelif mast, integrated sideshift/fork positioning carriage and forkshaft system.

Full lifting capacity up to 217 in lift height with triplex freelif mast, integrated sideshift/fork positioning carriage and forkshaft system.



**Drive train**

		Volvo TAD761VE (215 hp) *Tier 4i ZF 3WG171	Cummins QSB6.7 (220 hp) *Tier III ZF 3WG171
Engine	Manufacturer – type designation	Volvo – TAD761VE (Turbo-Intercooler)	Cummins – QSB6.7 (Turbo-Intercooler)
	Fuel – type of engine	Diesel – 4-stroke	Diesel – 4-stroke
	Rating ISO 3046 – at revs (kW/hp – rpm)	160/215 – 2200	164/220 – 2200
	Peak torque ISO 3046 – at revs (lbf – rpm)	870 – 1200	697 – 1500
	Number of cylinders – displacement (in³)	6 – 436	6 – 409
	Fuel consumption, normal driving (gal/h)	3-3.4	3-3.4
	AdBlue consumption, normal driving (gal/h)	0.1-0.13	–
Gearbox	Manufacturer – type designation	ZF – 3WG171	ZF – 3WG171
	Clutch, type	Torque converter	Torque converter
	Gearbox, type	Hydrodynamic Powershift	Hydrodynamic Powershift
	Numbers of gears, forward – reverse	3 – 3	3 – 3
Alternator	Type – power (Amp)	AC – 120	AC – 1960
Starting battery	Voltage – capacity (V – Ah)	2x12 – 145	2x12 – 70
Driving axle	Manufacturer – type	Kessler D91 – Differential and hub reduction	Kessler D91 – Differential and hub reduction

**Performance – Volvo TAD761VE**

		DCF180-12LB	DCF200-12LB	DCF220-12LB	DCF250-12LB
Lifting speed	Unloaded (ft/s)	1,1	1,1	1,0	1,0
	At rated load (ft/s)	1,0	1,0	1,0	1,0
Lowering speed	Unloaded (ft/s)	1,1	1,1	1,1	1,1
	At rated load (ft/s)	1,3	1,3	1,3	1,3
Travelling speed, F/R	Unloaded (mph)	16 – 16	16 – 16	16 – 16	16 – 16
	At rated load (mph)	15 – 15	15 – 15	15 – 15	15 – 15
Gradeability, max.	Unloaded (%)	86	79	74	68
	At rated load (%)	42	39	36	32
Gradeability, at 1.2 mph	Unloaded (%)	59	55	52	48
	At rated load (%)	36	33	31	29
Drawbar pull	Max. (lbf)	138,661	138,661	138,661	138,661
Noise level, inside	LpAZ* (dB(A))	72	72	72	72
Noise level, outside	LwAZ** (dB(A))	109	109	109	109

**Performance – Cummins QSB6,7**

		DCF180-12LB	DCF200-12LB	DCF220-12LB	DCF250-12LB
Lifting speed	Unloaded (ft/s)	1,1	1,1	1,0	1,0
	At rated load (ft/s)	1,0	1,0	1,0	1,0
Lowering speed	Unloaded (ft/s)	1,1	1,1	1,1	1,1
	At rated load (ft/s)	1,3	1,3	1,3	1,3
Travelling speed, F/R	Unloaded (mph)	18 – 18	18 – 18	18 – 18	18 – 18
	At rated load (mph)	15 – 15	15 – 15	15 – 15	15 – 15
Gradeability, max.	Unloaded (%)	65	61	57	53
	At rated load (%)	34	31	29	26
Gradeability, at 1.2 mph	Unloaded (%)	54	51	48	45
	At rated load (%)	33	31	29	27
Drawbar pull	Max. (lbf)	116,534	116,534	116,534	116,534
Noise level, inside	LpAZ* (dB(A))	74	74	74	74
Noise level, outside	LwAZ** (dB(A))	109	109	109	109

\* LpAZ according to EN12053 \*\* LwAZ according to 2000/14/EC

**Duplex standard, clear view**

Lift height H4	Mast height H3 min	H5 max	Free lift H2
138	141	209	–
157	150	229	–
177	160	249	–
197	170	269	–
217	180	288	–

**Duplex full free lift, clear view\***

Lift height H4	Mast height H3 min	H5 max	Free lift H2
138	144	213	69
157	154	233	79
177	164	253	89
197	174	272	98
217	184	292	108

**Triplex full free lift, clear view\***

Lift height H4	Mast height H3 min	H5 max	Free lift H2
203	146	274	75

\* Duplex freelif and triplex mast requires el-hydr. servo incl. minilevers.

*Kalmar offers the widest range of cargo handling solutions and services to ports, terminals, distribution centres and to the heavy industry. Kalmar is the industry forerunner in terminal automation and in energy efficient container handling, with one in four container movements around the globe being handled by a Kalmar solution. Through its extensive product portfolio, global service network and ability to enable a seamless integration of different terminal processes, Kalmar improves the efficiency of every move. [www.kalmarglobal.com](http://www.kalmarglobal.com)*



**Cargotec Solutions LLC**  
415 East Dundee St.  
Ottawa, KS 66067, USA  
Telephone: +1-785-242-2200  
Fax: +1-785-242-8573  
**[www.cargotec.com](http://www.cargotec.com)**