

CROWN

C-5 SERIES

Specifications

LPG Counterbalance Truck – Cushion



C-5 Series

Specifications

General Information	1.1	Manufacturer	Crown Equipment Corporation					
	1.2	Model			C-5 1000-2.0	C-5 1000-2.5	C-5 1000-3.0	
	1.3	Power	electric			LPG		
	1.4	Operator Type			Driver-seated			
	1.5	Load Capacity		Q	t	2.0	2.5	3.0
	1.6	Load Centre		c	mm	500		
	1.8	Load Distance		x	mm	417		422
	1.9	Wheel Base		y	mm	1420		
	Weights	2.1	Weight		kg	3955	4416	4908
2.2		Axle Load	w. load front / rear	kg	5080 / 567	5822 / 862	6861 / 996	
2.3		Axle Load	w.o. load front / rear	kg	1926 / 2029	1871 / 2545	1717 / 3191	
Tyres	3.1	Tyre Type			Cushion			
	3.2	Tyre Size	front diameter, width, rim diameter		21 x 7 x 15		21 x 8 x 15	
	3.3	Tyre Size	rear diameter, width, rim diameter		16 x 6 x 10.5		18 x 6 x 12.125	
	3.5	Wheels	no. (x=driven) front/rear		2x / 2			
	3.6	Track	front, std. / wide	b10	mm	912 / 1016		937 / 988
	3.7		rear	b11	mm	953		912
Dimensions	4.1	Mast Tilt / Fork Carriage	forward / backward		°	5 / 5		
	4.2	Mast	collapsed height	h1	mm	see table 1	see table 2	see table 3
	4.3	Free Lift		h2	mm	see table 1	see table 2	see table 3
	4.4	Lift Height		h3	mm	see table 1	see table 2	see table 3
	4.5	Mast	extended height	h4	mm	see table 1	see table 2	see table 3
	4.7	Overhead Guard Height		h6	mm	2121		
	4.8	Seat Height		h7	mm	1095		1110
	4.12	Tow Hitch Height		h10	mm	567		592
	4.19	Overall Length		l1	mm	3389	3420	3508
	4.20	Headlength		l2	mm	2324	2355	2443
	4.21	Overall Width	std.	b1/b2	mm	1090		
			front, wide	b1	mm	1195		1140
	4.22	Fork Dimension		th x w	mm	45 x 100		45 x 125
			std. / optional	l	mm	1065 / 915, 990, 1145, 1210, 1370, 1525		
	4.23	Fork Carriage	ISO / FEM / ITA			Class IIA		Class IIIA
	4.24	Fork Carriage Width	std. / wide		b3	mm	1120 / 1345	
	4.31	Ground Clearance	with load below mast		m1	mm	79	
4.32	centre wheelbase		m2	mm	125			
4.33	Working Aisle Width	pallets 1000x1200 traverse		Ast	mm	3730	3786	3879
4.34		pallets 800x1200 length		Ast	mm	3548	3604	3697
4.35	Turning Radius		Wa	mm	1991	2047	2136	
Performance	5.1	Travel Speed	w./w.o. load		km/h	18 / 18		
	5.2	Lift Speed	w./w.o. load		m/s	0.65 / 0.66		
	5.3	Lower Speed	w./w.o. load		mm	0.47 / 0.46		
	5.5	Drawbar Pull	w./w.o. load (max.)		N	19000		
	5.7	Gradeability	w./w.o. load (max.)		%	22 / 34	18 / 28	16 / 21
	5.9	Acceleration Time	w./w.o. load		s	5.2 / 4.3	5.2 / 4.3	5.3 / 5.0
	5.10	Brake	service			Hydraulic / Power Disc / Foot		
park				Hydraulic / Power Disc / Switch				
Engine / Transmission	7.1	Engine Manufacturer	type			Crown 4024		
	7.2	Engine Rated Output	per ISO 1585		kW / HP	44 / 59		
					Nm @ rpm	169 @ 1400		
	7.3	Rated Speed			rpm	2800		
	7.4	No. of Cylinder / Displacement			qty / cm ³	4 / 2400		
		Battery Voltage			V/Ah	12 / 45		
	8.1	Transmission Type				Hydrodynamic - Powershift		
	8.2	Available Working Pressure for Attachments			bar	179	214	
8.3	Oil Capacity for Attachments			l/min	72			
8.4	Sound Level at Driver's Ear DIN EN 12053			dB (A)	82			

Table 1 – Mast C-5 1000-2.0 / C-5 1000-2.5

				TL				TT						
4.1	Mast Tilt	forward / backward	°	5 / 5				5 / 5					5 / 3	
4.2	Mast	collapsed height	h1 mm	1690	2110	2260	2415	2110	2260	2415	2565	2720	2870	3025
4.3	Free Lift	without load backrest	h2 mm	150				1600	1750	1905	2055	2210	2360	2520
		with 760 mm load backrest	h2 mm	150				1345	1495	1650	1800	1955	2105	2265
4.4	Lift Height		h3 mm	2055	3200	3505	3810	4775	5230	5485	5865	6250	6555	7010
4.5	Mast	extended height, w.o. lbr.	h4 mm	2560	3705	4010	4315	5280	5735	5990	6370	6755	7060	7515
		extended height, with 760 mm lbr.	h4 mm	2815	3960	4265	4570	5535	5995	6250	6630	7010	7315	7770
	Interlock	fork height	mm	-	1980			2415					2440	2590

Table 2 – Mast C-5 1000-2.0 / C-5 1000-2.5

				Quad			
4.1	Mast Tilt	forward / backward	°	5 / 3			
4.2	Mast	collapsed height	h1 mm	2110	2260	2415	2565
4.3	Free Lift	without load backrest	h2 mm	1560	1710	1865	2015
		with 760 mm load backrest	h2 mm	1350	1500	1655	1800
4.4	Lift Height		h3 mm	6095	6555	7010	7470
4.5	Mast	extended height, w.o. lbr.	h4 mm	6605	7065	7520	7980
		extended height, with 760 mm lbr.	h4 mm	6860	7320	7775	8235
	Interlock	fork height	mm	1930	2085	2235	2390

Table 3 – Mast C-5 1000-3.0

				TL			TT					
4.1	Mast Tilt	forward / backward	°	5 / 5			5 / 5					
4.2	Mast	collapsed height	h1 mm	2110	2260	2415	2110	2260	2415	2565	2720	2870
4.3	Free Lift	without load backrest	h2 mm	150			1490	1640	1795	1945	2100	2250
		with 915 mm load backrest	h2 mm	150			1195	1345	1500	1650	1805	1955
4.4	Lift Height		h3 mm	2920	3200	3530	4345	4800	5055	5435	5815	6120
4.5	Mast	extended height, w.o. lbr.	h4 mm	3540	3820	4150	4965	5420	5675	6055	6435	6740
		extended height, with 915 mm lbr.	h4 mm	3835	4115	4445	5260	5715	5970	6350	6730	7035
	Interlock	fork height	mm	1980			2415					2440

Standard Equipment

1. Industrial 2.4 liter Crown LPG engine compliant to current EU standards
2. Hydrodynamic transaxle
3. Dual open-core radiator
4. Crown's Access 1 2 3® Comprehensive System Control
5. Intrinsic Stability System™ Greater mass and low centre of gravity
 - Tilt interlock
 - Tilt speed control
 - Stalled engine braking and steering
 - Hill hold
6. Top speed limiter
7. Fold down LP bottle bracket
8. Two pedal control with combination inching/brake
9. Operator compartment design features
 - Low cowl for fork and floor visibility
 - Wide placed overhead guard uprights reduce visual interference
 - Isomounted overhead guard reduces vibration
 - Comfort suspension safety seat MSG 65 vinyl, hip restraints and anti-cinch seat belt
 - Infinitely adjustable steering wheel column
 - Nylon covered control handles with tactile feedback
 - Natural position for forward/reverse selector
 - Rubber floor mat/rubber covered pedals
10. Operator entry/exit
 - Extra wide step
 - Large entry/exit
 - Overhead guard post for easy hand hold
 - Contoured seat deck
 - Compact tilt steering wheel and column
 - Spinner knob
 - Large uncluttered floorboard
11. 1065 mm forks
12. 1120 mm wide fork carriage with upper thrust rollers
13. High visibility mast with in-line hose routing
14. Hour meter/event memory
15. No tool lift out floor boards
16. Three spool valve
17. O-ring face seal hydraulic fittings
18. Colour-coded wiring

19. 12-volt alternator
20. Drum brakes are standard on 2.0 and 2.5 ton trucks
21. Crown Power Brakes are standard on 3.0 ton trucks
22. Isomounted heavy duty steer axle with grease zerks
23. Single element air cleaner
24. Wet cell battery
25. Low LPG fuel level indicator
26. Air filter restriction indicator
27. Tow pin
28. Horn
29. Radiator Grill
30. Adjustable Armrest

Optional Equipment

1. On-Demand Cooling (ODC)
2. Severe duty wet cell battery
3. TL mast (2-stage)
4. TT mast (3-stage)
5. Quad mast (4-stage)
6. Polished and full taper forks (915 mm, 990 mm, 1145 mm, 1220 mm, 1370 mm and 1520 mm)
7. Quick disconnect hydraulic connections
8. Attachment pressure regulator and gauge
9. Special tilt angle
10. Load backrest heights (760, 915, 1220 and 1525 mm)
11. Accessory hydraulics and attachments
12. Work lights (Halogen or LED)
13. Strobe light (Halogen or LED)
14. Back-up and brake lights
15. Turn signals
16. Smart travel alarm – Reverse
17. Non-marking, smooth or lug rubber tyres
18. Fixed LPG bottle bracket Brackets for LPG bottle in various diameters and lengths
19. Rear post handle with horn button
20. Comfort suspension seat MSG 65 – fabric
21. Work Assist Accessories
 - Pad clip and hook
 - Accessory clamp
 - Terminal mounting
 - Fire extinguisher
 - Operator fan
 - Mirrors
 - Cup holder
 - Shrink wrap holder
 - Storage net or pocket behind seat
 - Pencil holder

22. Three pedal control with separate inching/brake
23. Choice of unregulated or 3-way catalytic converter
24. Radiator screen
25. Air intake pre-cleaner
26. Belly pan
27. Positive/Negative accessory cable
28. InfoLink ready
29. Counterweight Grill
30. Mirrors – Plastic or Glass
31. 1345 mm wide carriage
32. Steer axle with sealed bearings

Driveability

A wide entry step at low height greatly improves entry/exit on both sides of the truck. The V-contoured engine cover allows the operator to easily glide into the truck's seat. The curved posts of the overhead guard open up the entry/exit window and provide a comfortable grip location for a variety of operator heights.

Further facilitating entry/exit is a spring-loaded, tilt steering column that easily moves up and away. The spacious floor board is uncluttered and includes a webbed floor mat that insulates the operator from vibration and heat. Additional operator comfort is achieved through reduced inching and brake pedal efforts along with a lower pedal height off the floor.

Crown's Intrinsic Stability System achieves improved operator confidence through a proactive approach to safety and stability. Integrated into the truck's components and control system, Crown's Intrinsic Stability System includes the following features:

- Greater mass and low centre of gravity
- Tilt interlock
- Tilt speed control
- Stalled engine braking and steering
- Hill hold
- Ramp speed control

The C-5 features excellent visibility everywhere you look: a low front dash board for fork and carriage visibility, a high visibility mast, a compact

steering column, a sculpted floorboard design, an overhead guard top plate and bar configuration and a low LPG bottle height.

The control handles are crafted into the compartment and designed to provide tactile feedback for easy selection. Actuation forces are minimal and responsive. The switch operated parking brake with tone alert enhances operator entry/exit and naturally encourages its use.

A large convex horn button is housed in the center of the steering wheel. Isolation systems for the engine and the operator cell virtually eliminate all vibrations to the operator. Hot air is directed away from the operator by a large counterweight opening with a wedge deflector.

Powertrain

Derived from a diesel engine, the C-5 Series features an industrial in-line 4 cylinder 2.4L emissions compliant LPG engine without catalytic converter as standard. Optionally available is a unregulated or a specific 3-way catalytic converter designed to reduce carbon monoxide, hydrocarbons and oxides of nitrogen.

The heavy duty industrial engine includes a heat resistant cast iron block and head. The 7.6 liter oil capacity and standard engine oil cooler offer additional cooling for improved thermal capacity and extended component life.

A gear-driven valve train and auxiliary pump eliminates belt or chain adjustments. Operator comfort is further increased through internal balancing of the engine.

The Carraro TA135 single speed hydrodynamic power shift transmission offers an optimised gear construction for low noise and vibrations and increased efficiency. The robust design of the Carraro transmission includes forged gears and drive shaft, ductile iron axle, differential support housings and high temperature seals and o-rings, all contributing to increased life and durability.

Cooling

A standard Dual Open-Core Radiator offers separate cooling for the engine and transmission and is isolated from the truck, separating it from impact and improving radiator life. The open core feature offers large spacing between cooling fins for reduced clogging. Air flow is maximised by a ten-blade fan that increases radiator performance and efficiency. The full fan shroud surrounds the radiator core surface. Its two-piece design aids in serviceability and is sealed to prevent air flow from bypassing the radiator core. Air flow is further maximised by the custom venturi design that directs air over the entire surface of the radiator. Crown's optional On-Demand Cooling System delivers precise cooling and radiator clearing for economical savings and uptime in harsh environment applications. Precise cooling is achieved through an independent radiator fan that automatically adjusts its speed to manage engine and transmission temperatures. The independent fan also allows for optimal radiator clearing by reversing its direction at engine start.

Power Brake

The Crown Power Brake is a unique hydraulic powered, full circle brake with few parts and larger friction areas that contribute to longer brake life. This design reduces operator pedal effort, improves brake responsiveness and features direct and easy access to the friction pad, which reduces downtime for brake maintenance. The parking brake is an integral part of the service brake and is activated by a one-touch push button located on the dashboard to the right of the steer wheel column. An audible alarm reminder is standard.

Hydraulics

The C-5 Series premium hydraulic function control valve provides a precise metering of lift, tilt and accessory functions. Operator stress is reduced through minimal hydraulic lever actuation.

Crown's lift/tilt interlock system provides extended forward tilt at low fork heights and reduced forward tilt at elevated heights for improved truck stability. The interlock system also inhibits accidental hydraulic functions when the operator is out of the seat. The tilt compensator maintains proper tilt speed control under all load conditions.

Maximum lowering speed is limited by a pressure compensating flow control valve and velocity fuses. Integrated hydraulic cylinder cushions soften mast staging. All lift cylinder rams are plated and when the forks are lowered, retract into the hydraulic oil for additional corrosion protection.

The steel oil reservoir is integral to the frame, aiding in the dissipation of hydraulic oil heat. This clean, leak-free design includes a suction strainer with separate, easily accessible fill port and dipstick with a dual filtered breather. Hydraulic oil is returned through an environmentally friendly cartridge filter, which is easily serviced.

A 2-stage filtration system on the breather/dipstick offers superior protection from contamination to the hydraulic oil and from oil misting, which could create a dirty residue on the inside of the engine compartment.

The steering and power brake systems are also hydraulic powered, assisting in the reduction of operator fatigue and improved productivity.

Mast Assembly

The heavy-duty mast of the C-5 Series is engineered to provide smooth, reliable operation without compromising strength or quality. The large, rugged mast trunnions are mounted on the drive axle. Securing the mast are extra heavy tilt cylinders with self-aligning bushings. Crown's high visibility mast features a nested-rail design with lift cylinders positioned behind the rails.

Inline hose routing also reduces visual interference. Large hydraulic hose pulleys and hose placement are engineered to reduce hose wear and increase hose life. Large lift chains are used for long reliable service life.

Carriage

A FEM / ISO / ITA Class II A carriage is standard on C-5 2.0 and C-5 2.5 model range, a FEM / ISO / ITA Class III A carriage is standard on C-5 3.0 models.

An optional hook-on type ISO sideshifter or other attachments are easy to add.

Steering

A fully hydrostatic steering system with equal area and double-acting cylinder provides an equally responsive steering rate both ways (4.8 turns lock to lock). The rugged axle frame, forged spindle and connecting links eliminate the need for adjustment. A two-piece spindle and kingpin with tapered roller bearings improves life and serviceability. Spherical bearings with straight pins in the connecting links eliminate any play in the linkage. All bearing locations are sealed to exclude contaminants and are equipped with lubrication fittings for ease of service. The steer axle articulates in a rubber isolation bushing to improve truck handling and ride.

Electrical System

The C-5 Series comes with a standard wet cell battery. An optional severe duty wet cell provides 450 cold cranking amps. Exclusive on-board information and diagnostics system includes fully integrated Access 1 2 3® Comprehensive System Control with CAN Bus communication. Features include:

- Engine diagnostics
- Truck level diagnostics
- Component analyser
- Password protection
- Speed control features
- Performance modes

Crown display is fully integrated, giving the operator and service technician real time information and messaging for event codes, fuel level, truck hours or real time speed. The alpha-numeric display serves as the communication nerve centre with the following indicator lights:

- Alternator/battery
- Malfunction
- Seat belt
- Park brake status
- Low oil pressure
- High transmission temperature
- Engine coolant temperature
- Multi-stage fuel level lights

All wire harnesses are wrapped with corrugated sleeving and are fully sealed with ultrasonically welded connections for improved reliability and durability. All electrical connectors are sealed to IP67.

Safety Regulations

Conforms to European safety standards. Dimensions and performance data given may vary due to manufacturing tolerances. Performance is based on an average size vehicle and is affected by weight, condition of truck, how it is equipped and the conditions of the operating area. Crown products and specifications are subject to change without notice.

