

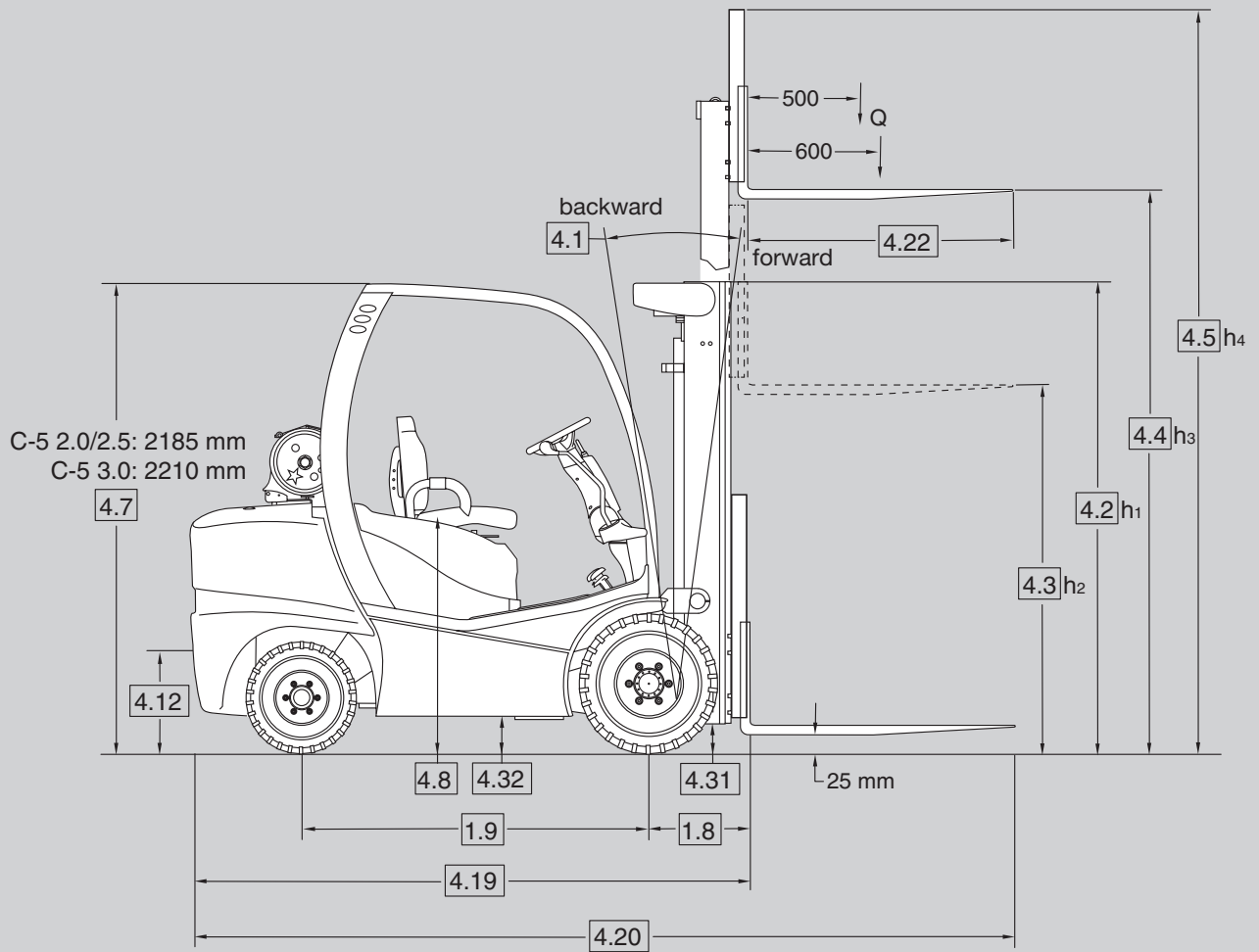
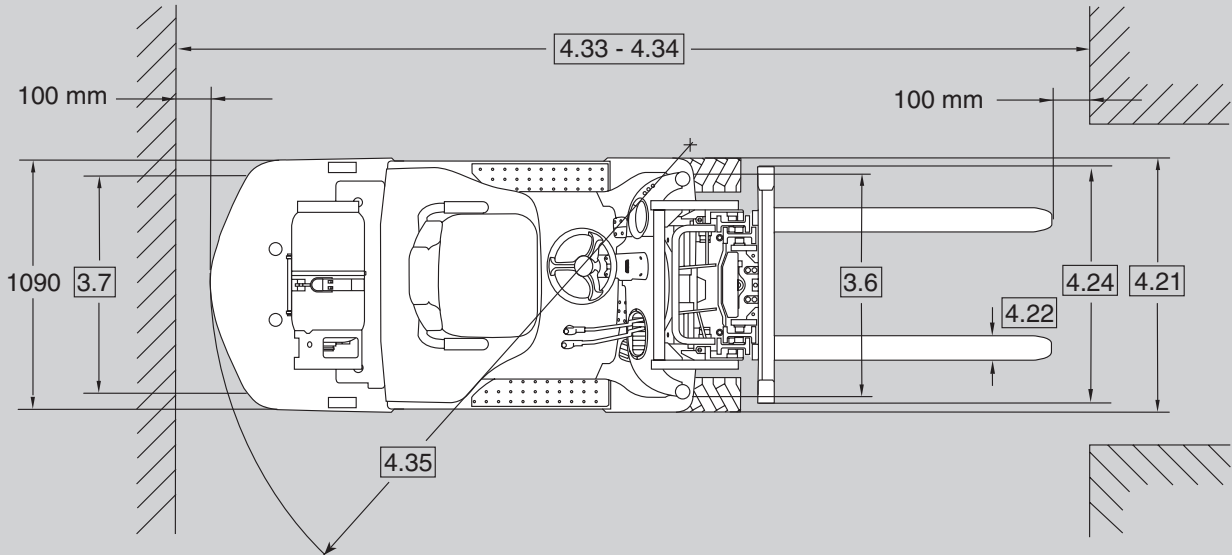
CROWN

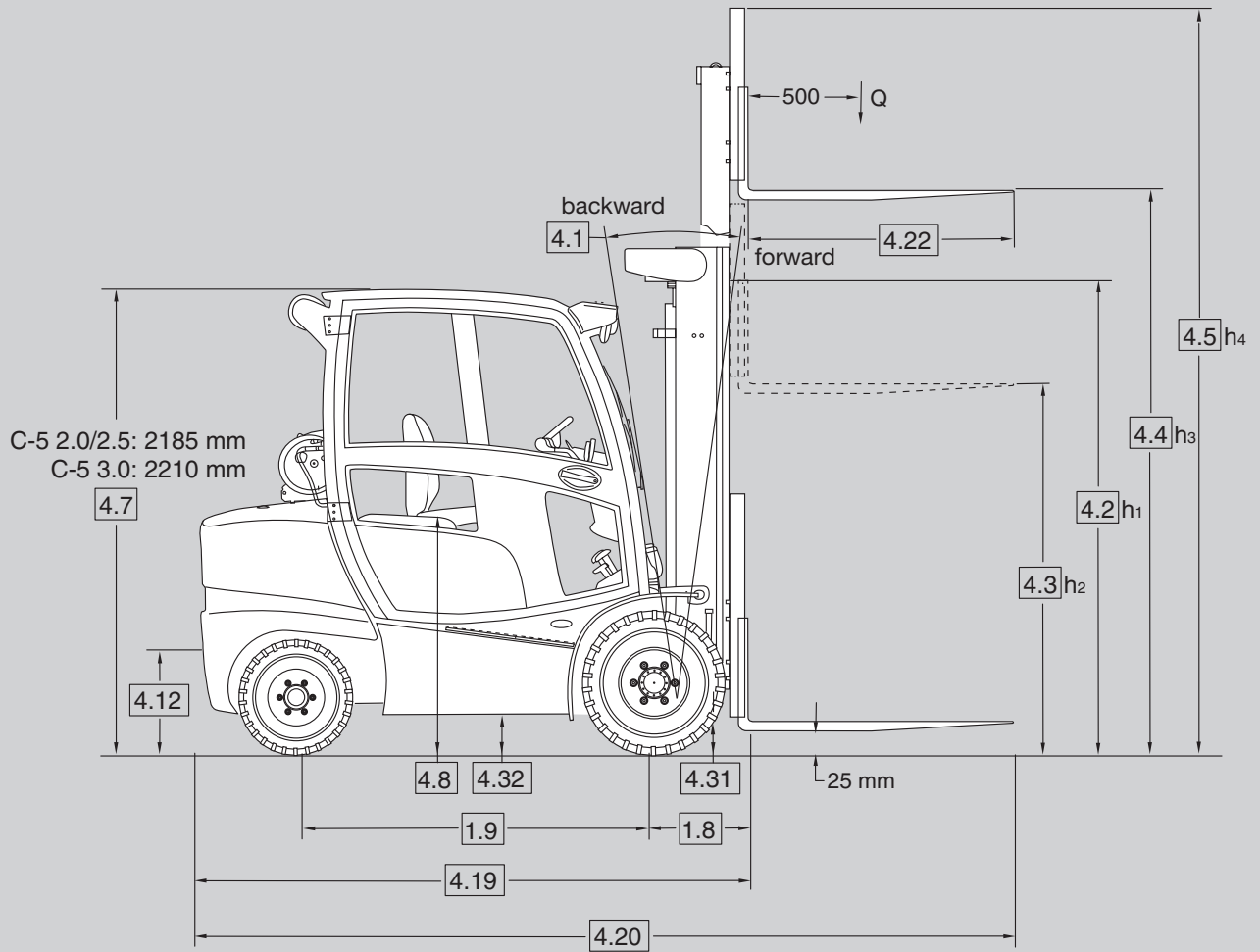
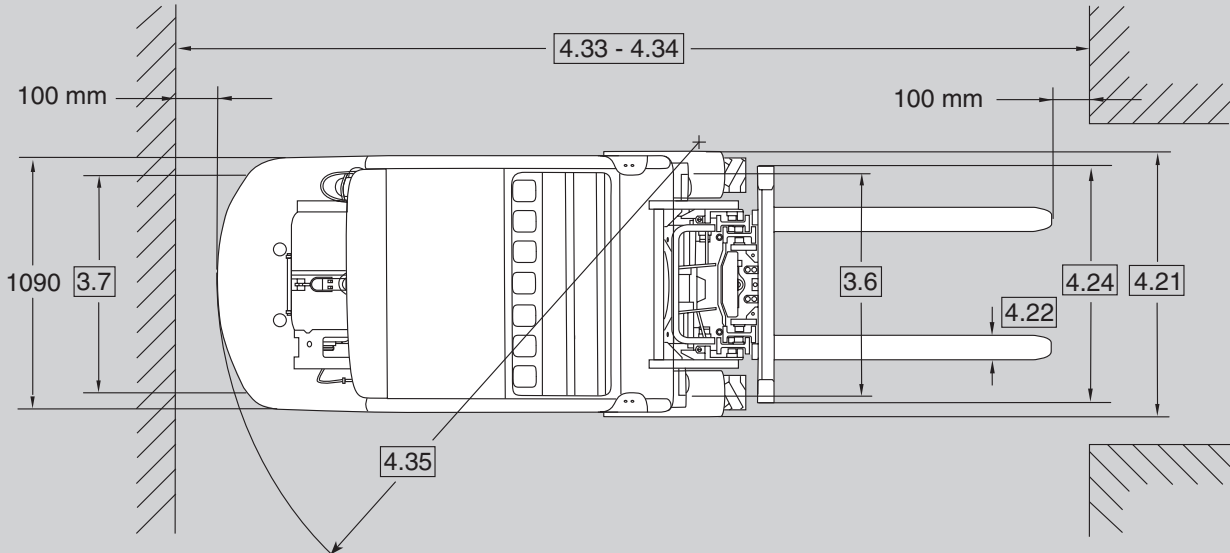
# C-5 SERIES

## Specifications

LPG Counterbalance Truck – SE







General Information	1.1	<b>Manufacturer</b>	Crown Equipment Corporation						
	1.2	<b>Model</b>			C-5 1050-2.0	C-5 1050-2.5	C-5 1050-3.0		
	1.3	<b>Power</b>	electric			LPG			
	1.4	<b>Operator Type</b>			Driver-seated				
	1.5	<b>Load Capacity</b>	at 500 mm	Q	t	2.0	2.5	3.0	
	1.6	<b>Load Centre</b>		c	mm	500			
	1.8	<b>Load Distance</b>		x	mm	455		461	
	1.9	<b>Wheel Base</b>		y	mm	1626		1699	
	Weights	2.1	<b>Weight</b>		kg	3908	4282	4939	
2.2		<b>Axle Load</b>	w. load front / rear	kg	4464 / 1257	5887 / 662	6470 / 1417		
2.3		<b>Axle Load</b>	w.o. load front / rear	kg	2145 / 1763	2086 / 2195	2192 / 2746		
Tyres	3.1	<b>Tyre Type</b>	Super Elastic (SE), Cushion (C), Pneumatic (P)			SE			
	3.2	<b>Tyre Size</b>	front diameter, width, rim diameter	std. / dual	26 x 7.00 - 12		28 x 9 - 15		
				wide	27 x 10 - 12		355 / 45 - 15		
	3.3	<b>Tyre Size</b>	rear diameter, width, rim diameter			6.00 - 9	6.50 - 10		
	3.5	<b>Wheels</b>	no. (x=driven) front/rear			2x / 2			
	3.6	<b>Track</b>	front	std. / wide / dual	b10	mm	1024 / 1115 / 1412		1072 / 1138 / 1542
			rear	std., wide	b11	mm	953		958
Dimensions	4.1	<b>Mast Tilt / Fork Carriage</b>	forward / backward			° 5 / 5			
	4.2	<b>Mast</b>	collapsed height	h1	mm	see table 1		see table 2	
	4.3	<b>Free Lift</b>		h2	mm	see table 1		see table 2	
	4.4	<b>Lift Height</b>		h3	mm	see table 1		see table 2	
	4.5	<b>Mast</b>	extended height	h4	mm	see table 1		see table 2	
	4.7	<b>Overhead Guard Height</b>		h6	mm	2185		2210	
	4.8	<b>Seat Height</b>		h7	mm	1095		1110	
	4.12	<b>Tow Hitch Height</b>		h10	mm	605		630	
	4.19	<b>Overall Length</b>		l1	mm	3651	3661	3785	
	4.20	<b>Headlength</b>		l2	mm	2586	2596	2720	
	4.21	<b>Overall Width</b>	front / rear, std. tyre	b1/b2	mm	1194 / 1090		1293 / 1090	
			front / rear, wide	b1/b2	mm	1349 / 1090		1433 / 1090	
			front / rear, dual	b1/b2	mm	1585 / 1090		1765 / 1090	
	4.22	<b>Fork Dimension</b>		th x w	mm	45 x 100		45 x 125	
				std. / optional	l	mm	1065 / 915, 990, 1145, 1210, 1370, 1525		
	4.23	<b>Fork Carriage</b>	ISO / FEM / ITA			Class II		Class III	
	4.24	<b>Fork Carriage Width</b>	with load backrest	b3	mm	1120			
	4.31	<b>Ground Clearance</b>	with load below mast	m1	mm	137	135	152	
	4.32		centre wheelbase	m2	mm	162	160	179	
	4.33	<b>Working Aisle Width</b>	pallets 1000x1200 traverse	Ast	mm	3996	4007	4162	
4.34	pallets 800x1200 length		Ast	mm	4125	4136	4291		
4.35	<b>Turning Radius</b>		Wa	mm	2222	2233	2383		
4.35	<b>Right Angle Stack</b>	add load and clearance		mm	2677	2688	2844		
Performance	5.1	<b>Travel Speed</b>	w./w.o. load		km/h	20 / 20			
	5.2	<b>Lift Speed</b>	w./w.o. load		m/s	0.65 / 0.66			
	5.3	<b>Lower Speed</b>	w./w.o. load		mm	0.46 / 0.47			
	5.5	<b>Drawbar Pull</b>	w./w.o. load (max.)		N	15000		16750	
	5.7	<b>Gradeability</b>	w./w.o. load (max.)		%	29 / 22	23 / 19	17 / 16	
	5.9	<b>Acceleration Time</b>	w./w.o. load		s	5.2 / 4.3	5.2 / 4.3	5.3 / 5.0	
	5.10	<b>Brake</b>	service			Hydraulic / Power Disc / Foot			
park					Hydraulic / Power Disc / Switch				
Engine / Transmission	7.1	<b>Engine Manufacturer</b>	type			Crown 4024			
	7.2	<b>Engine Rated Output</b>	per ISO 1585		kW / HP	44 / 59			
					Nm @ rpm	169 @ 1400			
	7.3	<b>Rated Speed</b>			rpm	2800			
	7.4	<b>No. of Cylinder / Displacement</b>			qty / cm <sup>3</sup>	4 / 2400			
	8.1	<b>Type</b>				Hydrodynamic			
	8.2	<b>Available Working Pressure for Attachments</b>			bar	179	214		
	8.3	<b>Oil Capacity for Attachments</b>			l/min	72			
8.4	<b>Sound Level at Driver's Ear</b> DIN EN 12053			dB (A)	82				

**Table 1 – Mast C-5 1050-2.0 / C-5 1050-2.5**

				<b>TL</b>									
4.1	<b>Mast Tilt</b>	forward / backward	°	5 / 5									
4.2	<b>Mast</b>	collapsed height	h1 mm	1765	2030	2185	2335	2490	2640	2795	2945	3100	
4.3	<b>Free Lift</b>	without load backrest	h2 mm	150									
		with load backrest	h2 mm	150									
4.4	<b>Lift Height</b>		<b>h3 mm</b>	<b>2055</b>	<b>2870</b>	<b>3200</b>	<b>3505</b>	<b>3810</b>	<b>3935</b>	<b>4040</b>	<b>4320</b>	<b>4650</b>	
4.5	<b>Mast</b>	extended height, w.o. lbr.	h4 mm	2565	3380	3710	4015	4320	4445	4545	4825	5155	
		extended height, with lbr.	h4 mm	3275	4060	4420	4725	5030	5155	5260	5535	5865	
	<b>Interlock</b>	fork height	mm	1980									

				<b>TT</b>							<b>Quad</b>			
4.1	<b>Mast Tilt</b>	forward / backward	°	5 / 5					5 / 3		5 / 3			
4.2	<b>Mast</b>	collapsed height	h1 mm	2185	2335	2490	2640	2795	2945	3100	2185	2335	2490	2640
4.3	<b>Free Lift</b>	without load backrest	h2 mm	1675	1825	1980	2130	2285	2435	2595	1630	1780	1935	2085
		with load backrest	h2 mm	965	1115	1270	1420	1575	1725	1880	965	1115	1270	1420
4.4	<b>Lift Height</b>		<b>h3 mm</b>	<b>4775</b>	<b>5230</b>	<b>5485</b>	<b>5865</b>	<b>6250</b>	<b>6555</b>	<b>7010</b>	<b>6095</b>	<b>6555</b>	<b>7010</b>	<b>7470</b>
4.5	<b>Mast</b>	extended height, w.o. lbr.	h4 mm	5280	5735	5990	6370	6755	7060	7515	6605	7065	7520	7980
		extended height, with lbr.	h4 mm	5995	6450	6705	7085	7470	7775	8230	7315	7775	8230	8690
	<b>Interlock</b>	fork height	mm	2415					2440	2590	1930	2085	2235	2390

**Table 2 – Mast C-5 1050-3.0**

				<b>TL</b>									
4.1	<b>Mast Tilt</b>	forward / backward	°	5 / 5									
4.2	<b>Mast</b>	collapsed height	h1 mm	2030	2185	2335	2490	2640	2795	2945	3100		
4.3	<b>Free Lift</b>	without load backrest	h2 mm	150									
		with load backrest	h2 mm	150									
4.4	<b>Lift Height</b>		<b>h3 mm</b>	<b>2590</b>	<b>2920</b>	<b>3200</b>	<b>3530</b>	<b>3810</b>	<b>4040</b>	<b>4320</b>	<b>4650</b>		
4.5	<b>Mast</b>	extended height, w.o. lbr.	h4 mm	3200	3530	3810	4140	4420	4650	4930	5260		
		extended height, with lbr.	h4 mm	3810	4140	4420	4750	5030	5260	5535	5865		
	<b>Interlock</b>	fork height	mm	1980									

				<b>TT</b>									
4.1	<b>Mast Tilt</b>	forward / backward	°	5 / 3									
4.2	<b>Mast</b>	collapsed height	h1 mm	2185	2335	2490	2640	2795	2945				
4.3	<b>Free Lift</b>	without load backrest	h2 mm	1565	1715	1870	2020	2175	2325				
		with load backrest	h2 mm	965	1115	1270	1420	1575	1725				
4.4	<b>Lift Height</b>		<b>h3 mm</b>	<b>4345</b>	<b>4800</b>	<b>5055</b>	<b>5435</b>	<b>5815</b>	<b>6120</b>				
4.5	<b>Mast</b>	extended height, w.o. lbr.	h4 mm	4965	5420	5675	6055	6425	6740				
		extended height, with lbr.	h4 mm	5565	6020	6275	6655	7035	7340				
	<b>Interlock</b>	fork height	mm	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. Corrosion resistant chain with high performance chain lube
8. Fold down LP bottle bracket
9. Two pedal control with combination inching/brake
10. 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
  - Mud scraper and step plate
11. 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
12. 1065 mm forks
13. 1120 mm wide fork carriage with upper and lower thrust rollers
14. High visibility mast with in-line hose routing
15. Hour meter/event memory
16. No tool lift out floor boards
17. Three spool valve
18. O-ring face seal hydraulic fittings
19. Colour-coded wiring

20. 12-volt alternator
21. Super Elastic (SE) tyres
22. Crown Power Brakes
23. Rigid mounted heavy-duty steer axle with grease zerks
24. Single element air cleaner
25. Severe duty wet cell battery
26. Low LPG fuel level indicator
27. Air filter restriction indicator
28. Tow pin
29. Horn
30. Radiator Grill
31. Adjustable armrest

**Optional Equipment**

1. On-Demand Cooling (ODC)
2. 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 (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. Keyless on/off switch
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. Spinner knob
29. InfoLink ready

30. Counterweight grill
31. Mirrors – plastic or glass
32. 1345 mm wide carriage
33. Steer axle with sealed bearings
34. Wide tread drive tyres
35. Dual drive tyres

**Cabin Features**
**Hard Cabin**

Automotive-class comfort. Cabin height as on standard overhead guard height. Front screen with tempered glass, wiper and washer, curved front and top glass and Work Assist Rail. Top screen with laminated safety glass, LED Dome light, Roll-up overhead sunshade and DIN 1 slot for radio. Rear screen with tempered glass, defrost with 15 minute auto off timer, wiper and washer, tilting window, fold down rear panel with storage area and cabin pressure relief mechanism.

Removable doors with gas spring and door locks, two-way sliding windows on both sides, side windows with tempered glass, storage pockets in both doors and 12 Volt DC plug. Seat deck cover insulation from heat and noise. Door mounted cabin heater with temperature control, washable filter element, and 3-speed fan. Three adjustable outlets: foot, operator, defrost.

**Hard Cabin Options**

1. Headlights
  - 12V LED
  - Dipped / low beam
  - Turn / indicator lights
  - Hazard flashing lights
2. Tail lights
  - 12V LED at lower rear
  - Turn / indicator lights
  - Hazard flashing lights
3. Media ready option
  - DIN 1 slot for radio
  - Two overhead speakers
  - Antenna
  - Power harness

**Soft Cabin**

Front screen with tempered glass, wiper and washer, curved front and top glass and tubular handles for entry and exit and Work Assist options. Polycarbonate top screen mounted on top of OHG, PVC zipper type cabin rear with large window, PVC zipper type roll-up doors with large windows. Cabin height increased by 17 mm.

**Partial Cabin**

Same features as soft cabin, but without doors.

**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.

### Electrical System

The C-5 Series comes with a severe duty wet cell battery. 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.

