C-5 SERIES

Specifications
LPG Counterbalance Truck – SE
# C-5 Series Specifications

## General Information

<table>
<thead>
<tr>
<th>1.1 Manufacturer</th>
<th>Crown Equipment Corporation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2 Model</td>
<td>C-5 1050-2.0, C-5 1050-2.5, C-5 1050-3.0</td>
</tr>
<tr>
<td>1.3 Power</td>
<td>electric, LPG</td>
</tr>
<tr>
<td>1.4 Operator Type</td>
<td>Driver-seated</td>
</tr>
<tr>
<td>1.5 Load Capacity</td>
<td>Q t 2.0</td>
</tr>
<tr>
<td>1.6 Load Centre</td>
<td>c mm 500</td>
</tr>
<tr>
<td>1.8 Load Distance</td>
<td>x mm 455</td>
</tr>
<tr>
<td>1.9 Wheel Base</td>
<td>y mm 1626</td>
</tr>
</tbody>
</table>

## Weights

| 2.1 Weight | kg 3560 | 3934 | 4785 |
| 2.2 Axle Load w. load front/rear | kg 4888/672 | 5642/792 | 6631/1154 |
| 2.3 Axle Load w.o. load front/rear | kg 1717/1843 | 1679/2255 | 1941/2844 |

## Tyres

| 3.1 Tyre Type | Super Elastic (SE), Cushion (C), Pneumatic (P) |
| 3.2 Tyre Size | front diameter, width, rim diameter std./dual w:26 x 7.00 - 12, L:28 x 9 - 15 |
| 3.3 Tyre Size | rear diameter, width, rim diameter w:6.00 - 9, L:6.50 - 10 |
| 3.5 Wheels | no. x=driver) front/rear 2x/2 |
| 3.6 Track | front std./wide/dual b10 mm 1024/1115/1542 |
| 3.7 Track | rear std./wide/b11 mm 1072/1138/1542 |

## Dimensions

| 4.1 Mast Tilt/Fork Carriage | forward/backward ° 5/5 |
| 4.2 Mast | collapsed height h1 mm see table 1 see table 2 |
| 4.3 Free Lift | h2 mm see table 1 see table 2 |
| 4.4 Lift Height | h3 mm see table 1 see table 2 |
| 4.5 Mast | extended height h4 mm see table 1 see table 2 |
| 4.7 Overhead Guard Height | h5 mm 2185 |
| 4.8 Seat Height | h7 mm 1095 |
| 4.12 Tow Hitch Height | h10 mm 605 |
| 4.19 Overall Length | l1 mm 3651 |
| 4.20 Headlength | l2 mm 2586 |
| 4.21 Overall Width | front/rear, std. tyre b1/b2 mm 1194/1090 |
| 4.22 Fork Dimension | std./optional th x w mm 45 x 100 |
| 4.23 Fork Carriage | ISO/FEM/ITA Class II/III |
| 4.24 Fork Carriage Width | with load backrest bx mm 1120 |
| 4.31 Ground Clearance | with load below mast m1 mm 137 |
| 4.32 Ground Clearance | centre wheelbase m2 mm 162 |
| 4.33 Working Aisle Width | pallets 1000x1200 traverse Ast mm 3996 |
| 4.34 Working Aisle Width | pallets 800x1200 length Ast mm 4125 |
| 4.35 Turning Radius | Wa mm 2222 |
| 4.36 Right Angle Stack | add load and clearance mm 2677 |

## Performance

| 5.1 Travel Speed | w./w.o. load km/h 20/20 |
| 5.2 Lift Speed | w./w.o. load m/s 0.65/0.66 |
| 5.3 Lower Speed | w./w.o. load mm 0.46/0.47 |
| 5.5 Drawbar Pull | w./w.o. load (max.) N 15000 |
| 5.7 Gradeability | w./w.o. load (max.) % 29/22 |
| 5.9 Acceleration Time | w./w.o. load s 5.2/4.3 |
| 5.10 Brake | service Hydraulic/Power Disc/Foot |
| 7.1 Engine Manufacturer | type Crown 4024 |
| 7.2 Engine Rated Output | per ISO 1585 kW/HP 44/59 |
| 7.3 Rated Speed | rpm 2800 |
| 7.4 No. of Cylinder/Displacement | qty/cm³ 4/2400 |
| 8.1 Type | Hydrodynamic |
| 8.2 Available Working Pressure for Attachments | bar 179 |
| 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 1050-2.0 / C-5 1050-2.5

<table>
<thead>
<tr>
<th>Mast Tilt</th>
<th>4.1</th>
<th>4.2</th>
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<tr>
<td>forward / backward</td>
<td>5 / 5</td>
<td>2185</td>
<td>2335</td>
<td>2490</td>
<td>2640</td>
<td>2795</td>
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<tr>
<td>collapsed height</td>
<td>mm</td>
<td>2185</td>
<td>2335</td>
<td>2490</td>
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<tr>
<td>without load backrest</td>
<td>h1</td>
<td>150</td>
<td>150</td>
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<td>h4</td>
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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 roller with upper and lower thrust bearings
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 peddals
    - 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. e-Smart™: LPG fuel level indicator
27. Air filter restriction indicator
28. Tow pin
29. Horn
30. Radiator Grill
31. Adjustable armrest
32. Unregulated Catalyst
33. Three adjustable outlets: foot, filter element, and 3-speed fan.
34. Polycarbonate top screen
35. 1345 mm wide carriage
36. Drum brake with sealed bearings
37. Wide tread drive tyres
38. Dual drive tyres
39. Non marking tyres
40. Hydraulic Accumulator
41. Safety Belt:
   - High visibility orange anti-cinch safety belt
   - Duo Sense, black
   - Seltbelt Interlock, orange
42. Two wheel chocks

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
7. Quick disconnect hydraulic fittings
8. Attachment pressure regulator and gauge
9. Special tilt angle
10. Load backrest heights (915, 1065, 1220 and 1525 mm)
11. Accessory hydraulics, integrated sideshifter and other attachments
12. Clamp interlock switch
13. Work lights (Halogen or LED)
14. Strobe light (Halogen or LED)
15. Back-up and brake lights
16. Turn signals
17. Smart travel alarm – Reverse
18. Blue Warning Light
19. Keyless on/off switch
20. Fixed LPG bottle bracket
21. Swing out and drop down bottle bracket
22. Rear post handle with horn button
24. 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
25. Three pedal control with separate inching/brake
26. 3-way catalytic brake converter
27. Radiator screen
28. Air intake pre-cleaner
29. Belly pan
30. Positive/Negative accessory cable
31. Spinner knob
32. InfoLink ready
33. Counterweight grill
34. Mirrors – plastic or glass
35. 1345 mm wide carriage
36. Steering axle with sealed bearings
37. Wide tread drive tyres
38. Dual drive tyres
39. Non marking tyres
40. Hydraulic Accumulator
41. Safety Belt:
   - High visibility orange anti-cinch safety belt
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42. Two wheel chocks

C-5 Series

Technical Information

Hard Cabin Options
1. Headlights
   - 12V LED
2. Dipper / low beam
3. Turn / indicator lights
4. Hazard flashing lights
5. Tail lights
   - 12V LED at lower rear
6. Two overhead speakers
7. Antenna
8. Power harness
9. DIN 1 slot for radio

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.

Windshield only
Front screen with tempered glass, wiper and washer, curved front and top glass and Work Assist Rail.

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 with an unregulated catalytic converter as standard. Optionally available is 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.