C-5 SERIES

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

### General Information

1. **Manufacturer**
   - Crown Equipment Corporation

2. **Model**
   - C-5 1000-2.0
   - C-5 1000-2.5
   - C-5 1000-3.0

3. **Power**
   - Electric
   - LPG

4. **Operator Type**
   - Driver-seated

5. **Load Capacity**
   - Qt
     - 2.0
     - 2.5
     - 3.0

6. **Load Centre**
   - c mm
     - 500

7. **Load Distance**
   - x mm
     - 425
   - y mm
     - 430

8. **Wheel Base**
   - 1420

9. **Weight**
   - 3955 kg

10. **Axle Load**
    - w. load front / rear kg
      - 5250 / 705
      - 6005 / 910
      - 6740 / 1200

11. **Axle Load**
    - w.o. load front / rear kg
      - 1940 / 2015
      - 1865 / 2550
      - 1750 / 3190

### Weights

12. **Tyres**

   13. **Tyre Type**
      - Cushion

   14. **Tyre Size**
      - front diameter, width, rim diameter
        - 21 x 7 x 15
      - rear diameter, width, rim diameter
        - 16 x 6 x 10.5

15. **Wheels**
    - no. (x=driven) front / rear
      - 2x / 2

16. **Track**
    - front, std. / wide mm
      - 910 / 1015
    - rear mm
      - 910

### Dimensions

17. **Mast Tilt / Fork Carriage**
   - forward / backward °
     - 5 / 5

18. **Mast**
    - collapsed height h1 mm
      - see table 1 and 2
    - extended height h4 mm
      - see table 1 and 2

19. **Seat Height**
    - h7 mm
      - 1095
      - 1110

20. **Headlength**
    - l2 mm
      - 2335
      - 3510

21. **Fork Dimension**
    - th x w mm
      - 45 x 100
      - 45 x 125

22. **Fork Carriage**
    - ISO / FEM / ITA Class
      - Class IIA
      - Class IIIA

### Performance

23. **Travel Speed**
    - w./w.o. load km/h
      - 18 / 18

24. **Lift Speed**
    - m/s
      - 0.58 / 0.64

25. **Lower Speed**
    - m/min
      - 0.47 / 0.46

26. **Drawbar Pull**
    - N
      - 19370

27. **Gradeability**
    - %
      - 22 / 34
      - 18 / 28
      - 16 / 21

28. **Acceleration Time**
    - s
      - 5.5 / 4.7
      - 5.5 / 4.7
      - 6.2 / 5.4

### Engine / Transmission

29. **Engine Manufacturer**
    - type
      - Crown 4024

30. **Engine Rated Power**
    - per ECE R120 kW / HP
      - 43 / 58

31. **Rated Speed**
    - rpm
      - 171 / 1680

32. **No. of Cylinder / Displacement**
    - qty / cm³
      - 4 / 2400

33. **Sound Level at Driver's Ear**
    - dB (A)
      - 81

### Engine / Transmission

34. **Transmission Type**
    - Hydrodynamic

35. **Available Working Pressure for Attachments**
    - bar
      - 179
      - 214

36. **Oil Capacity for Attachments**
    - l/min
      - 72

37. **Engine / Transmission Type**
    - Crown 4024

38. **Engine Rated Power**
    - per ECE R120 kW / HP
      - 43 / 58

39. **Rated Speed**
    - rpm
      - 171 / 1680

40. **No. of Cylinder / Displacement**
    - qty / cm³
      - 4 / 2400

41. **Sound Level at Driver's Ear**
    - dB (A)
      - 81
Table 1 – Mast C-5 1000-2.0 / C-5 1000-2.5

<table>
<thead>
<tr>
<th>4.1 Mast Tilt</th>
<th>forward / backward</th>
<th>°</th>
<th>TL</th>
<th>TF</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2 Mast</td>
<td>collapsed height</td>
<td>h1</td>
<td>mm</td>
<td>2110</td>
</tr>
<tr>
<td>4.3 Free Lift</td>
<td>without load backrest</td>
<td>h2</td>
<td>mm</td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>with 1220 mm load backrest</td>
<td>h2</td>
<td>mm</td>
<td>145</td>
</tr>
<tr>
<td>4.4 Lift Height</td>
<td>extended height, w.o. lbr.</td>
<td>h3</td>
<td>mm</td>
<td>3200</td>
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<tr>
<td></td>
<td>extended height, with 1220 mm lbr.</td>
<td>h4</td>
<td>mm</td>
<td>3785</td>
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<tr>
<td>Interlock</td>
<td>fork height</td>
<td>mm</td>
<td>1980</td>
<td>1520</td>
</tr>
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Table 2 – Mast C-5 1000-2.0 / C-5 1000-2.5

<table>
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<td>h3</td>
<td>mm</td>
</tr>
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<td>h4</td>
<td>mm</td>
</tr>
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<td>1750</td>
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Table 3 – Mast C-5 1000-3.0

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<td>mm</td>
<td>2110</td>
</tr>
<tr>
<td>4.3 Free Lift</td>
<td>without load backrest</td>
<td>h2</td>
<td>mm</td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>with 1220 mm load backrest</td>
<td>h2</td>
<td>mm</td>
<td>145</td>
</tr>
<tr>
<td>4.4 Lift Height</td>
<td>extended height, w.o. lbr.</td>
<td>h3</td>
<td>mm</td>
<td>2920</td>
</tr>
<tr>
<td></td>
<td>extended height, with 1220 mm lbr.</td>
<td>h4</td>
<td>mm</td>
<td>3610</td>
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<tr>
<td>Interlock</td>
<td>fork height</td>
<td>mm</td>
<td>1980</td>
<td>1445</td>
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</table>
Standard Equipment

1. Industrial 2.4 liter Crown LPG engine compliant to current EU standards
2. Hydrodynamic transaxle
3. Industrial Dual 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. Three pedal control with separate inching/brake
9. Operator compartment design features
   - Low cowl for fork and floor visibility
   - Wide placed overhead guard uprights reduce visual interference
   - Ismounted overhead guard reduces vibration
   - Comfort suspension safety seat MSG 65 vinyl, hip restraints and anti-cinch seat belt, orange
   - Comfort right hand armrest
     - vertical and horizontal adjustable
     - includes horn button
   - Infinity 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 steering column and small steering wheel
    - Spinner knob with grips
    - Large uncluttered floorboard
11. 990 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. Ismounted heavy duty steer axle with grease zerk
23. Single element air cleaner
24. Severe duty wet cell battery
25. e-Smart™: Low LPG fuel level indicator
26. Air filter restriction indicator
27. Tilt pin
28. Horn
29. Radio Grill
30. 3-way catalytic converter

Optional Equipment

1. On-Demand Cooling (ODC)
2. TL mast (2-stage)
3. TT mast (3-stage)
4. Quad mast (4-stage)
5. Polished and full taper forks (915, 990, 1015, 1100, 1145, 1220, 1370 and 1525 mm)
6. Quick disconnect hydraulic connections
7. Attachment pressure regulator and gauge
8. Special tilt angle
9. Tilt Position Assist TPA - Mast stops in vertical position
10. Load backrest heights (760, 915, 1020, 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, forward or both directions
18. Floor Spotlight, blue
19. Non-marking, smooth or lug rubber tyres
20. Fixed LPG bottle bracket
21. Swing out and drop down bottle bracket
22. Rear post handle with horn button
23. Comfort suspension seat
24. High comfort air suspension seat MSG 65 - fabric
25. 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
   - Storage compartment
26. Two pedal control with combination inching/brake
27. Radiator screen
28. Air intake pre-cleaner
29. Belly pan
30. Positive/Negative accessory cable
31. InfoLink ready
32. Counterweight Grill
33. Mirrors – Plastic or Glass
34. 1345 mm wide carriage
35. Selbelt Interlock, orange

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 Series 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 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 tilt 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 servenaal duty battery. The heavy duty provides 510 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.

European Manufacturing:
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www.crown.com