



Page: 1 of 6
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The IC-25 is a self-propelled industrial crane designed for in-plant lifting and material handling applications. It is powered by either a dual fuel (gasoline/LPG) or diesel engine. The IC-25 has special features of low height, narrow width, short length, cargo deck, rear wheel steer, and front wheel drive. The basic unit consists of a chassis and a hydraulic boom assembly. The chassis includes a frame, a control station, and full power steering. The boom assembly includes a hydraulic powered three section telescopic boom, a hydraulic boom elevating cylinder, and a hydraulic powered planetary hoist.

General:

| | | |
|---|------------------------|------------|
| Length: | | |
| Chassis | 9 feet | 11 inches |
| Overall | 10 feet | 4 inches |
| Width: | 4 feet | |
| Height: | | |
| Deck | | 31 inches |
| Overall without Operator Guard | 5 feet | 9 inches |
| Overall with Operation Guard | 7 feet | 2 inches |
| Wheelbase: | 5 feet | 10 inches |
| Ground Clearance: | | |
| Chassis | | 10 inches |
| Rear Axle (Minimum) | | 5.5 inches |
| Angle of Approach: | 40° | |
| Angle of Departure: | 31° | |
| Turning Radius: (Minimum) | 9 feet | 2 inches |
| Aisle Width for 90-degree Turn: (Minimum) | 7 feet | 6 inches |
| Travel Speed: (Maximum) | 4.0 MPH | |
| Weight: | 5,850 pounds | |
| Front Axle | 2,200 pounds | |
| Rear Axle | 3,650 pounds | |
| Front Tire Footprint: | 40 square inches, each | |
| Rear Tire Footprint: | 46 square inches, each | |
| Drawbar Pull: | 3,400 pounds | |
| Gradeability: | 55% (29°) | |
| Boom Movement: | | |
| Rotation | Non-rotating Boom | |
| Elevation | 75° | |
| Telescope | 9 feet | |
| Boom Speed: | | |
| Elevation | 12 seconds | |
| Telescope | 30 seconds | |

General: (Cont'd)

Sheave Height:

| | | |
|------------------------|---------|----------|
| Without Boom Extension | 20 feet | 9 inches |
| With Boom Extension | 27 feet | |

Horizontal Reach:

| | |
|------------------------|-------------------------|
| Without Boom Extension | 10 feet Front of Bumper |
| With Boom Extension | 17 feet Front of Bumper |

ENGINE:

Standard

Kubota 1.0L Dual Fuel

Kubota Model DF972 industrial gasoline/dual fuel engine. Water cooled, 3 cylinder, 972 cc, 28 HP at governed speed of 3,200 RPM. Maximum torque, 53 ft. lbs. at 2400 RPM. 40-amp alternator, 13.5 gallon gas tank and 33 lb. aluminum LPG tank.

Optional Engine and Accessories:

Kubota 1.1L Diesel:

Kubota Model D1105 diesel engine. Water cooled, 3 cylinder, 1105 cc. 25 HP at governed speed of 2,800 RPM. Maximum torque, 50 ft. lbs. at 2100 RPM. 30-amp alternator and 13.5 gallon fuel tank.
(Net Weight: 20 pounds)

Spark Arrester Muffler:

Spark arrester muffler used in addition to standard muffler.
(Net Weight: 10 pounds)

Engine Shutdown Kit:

Consists of switches that shut engine down if coolant temperature is excessive or if oil pressure is too low.

Hydrostatic Pump:

Standard

Sauer-Danfoss piston pump, 2.8 CID/revolution direct drive from engine crankshaft. Maximum flow 34 GPM, maximum pressure 4000 PSI. Electrohydraulic servo and electronic, automotive-type controller.

Axle:

Standard

Front Axle:

Planetary drive axle with overall ratio of 24:1. Differential is limited slip. Front axle oscillates a total of 0.75 inches to minimize wheel spin on uneven surfaces.

Rear Axle:

Steering axle fixed rigidly to frame. Box beam crossmember and thrust bearing supported wheel hubs.

Steering:

Standard

Full hydraulic unit controls 2.5 inch steering cylinder attached to rear axle. Limited steering if engine dies.

Brakes:

Standard

Primary braking from hydrostatic transmission. Foot-actuated hydraulic disc brakes in axle for additional braking. Cable-applied park brake. All braking is on front wheels.

Tires:

Standard

Front Tires:

28x9-15 pneumatic tires, 14PR. Pressurized to 120 PSI for crane rated loads.

Rear Tires:

7.50x10 pneumatic tires, 16PR. Pressurized to 145 PSI for crane rated loads.

Optional Tire:

Foam Filling of Tires:

Standard tires. Foam filled to prevent flats. (Net Weight: 350 pounds)

Spare Tire & Wheel, Front:

28x9-15 pneumatic tires, 14PR. (Net Weight: 118 pounds)

Spare Tire & Wheel, Rear:

7.5x10 pneumatic tires, 16PR. (Net Weight: 80 pounds)

Chassis:

Standard

Cargo Deck:

23-square-foot area. A maximum of 5000 pounds may be carried on the deck when centered from 1 to 12 inches to the rear of front axle center. Nine stake pockets are provided in deck, and nine 1-inch diameter, pipe stakes.

Front Pulling Eye:

Heavy eye in front bumper provides for attachment of hook block, so main winch line can be used for pulling loads at or near floor level. (Hook block is not provided.)

Lifting Rings:

Four lift rings, one at each corner of deck, for attaching lifting slings or taglines.

Optional Chassis Accessories:

Pintle Hook:

T-60-A Holland 5-ton pintle hook mounted on rear frame member.
(Net Weight: 7 pounds)

Lifting Sling :

Four-leg hitch consisting of heavy-duty pear link, and four wire ropes with swaged-on clevis ends for attaching to lift points on crane chassis.
(Net Weight: 20 pounds)

Headlight and Taillight Grilles:

Consists of welded steel protective grilles for headlights and taillights. Easily removable or swung out of way for replacing bulbs.
(Net Weight: 20 pounds)

Operator's Compartment:

Standard

Operator control station provides one-position access to all chassis and crane functions.

Operator Guard:

Tubular steel weldment with heavy expanded steel mesh top section covers operator's compartment. Quick-attach pins secure the guard to the deck. Overall height with guard installed is 84 inches.
(Net Weight: 80 pounds)

Electrical System:

Standard

Battery:

12-volt, Group 24 with 550 CCA rating.

Lighting Group:

Consists of two headlights and two taillights and a 12-volt horn activated by button on instrument panel.

Instrument Group:

Located at operator's station and includes lighted fuel gauge, volt meter, oil pressure, water temperature, and hydrostatic oil temperature gauges. Hour meter records hours only during actual engine operation.

Back-Up Alarm:

Provides pulsating 97-decibel sound from solid-state alarm when ignition is on and transmission is in reverse.

Optional Electrical Accessories:

Strobe Light:

One yellow strobe light mounted at back of turret for high visibility. Flashes 60-120 times per minute. Draws 0.5 amp. Includes operator-controlled switch.

Boom Work Light:

One work light on left side of boom to light boom tip and load. Includes switch at operator's station.
(Net Weight: 5 pounds)

Hydraulic System:

Standard

Tandem pump mounted to rear of hydrostatic piston pump. Delivers 6 GPM at 1800 PSI for boom circuits and 10 GPM at 2350 PSI for hoist. System protected by relief valves and two 10-micron filters. Hydraulic reservoir has 9-gallon capacity.

Boom Assembly:

Standard

Three-section, high strength steel construction, equipped with bearing pads for efficient support and extension. Double-acting hydraulic cylinders extend boom sections. Extension cylinder and double-acting boom elevation cylinder are equipped with direct connected holding valves. Boom angle indicator provided on left side of boom.

Boom Hoist:

Standard

Turret-mounted, planetary hoist is hydraulically powered to provide bare-drum line pull of 5300 pounds. The IC-25 has a line speed of 66 feet per minute. Hoist drum is 7 1/2 inch diameter by 8 3/4 inches long and provides even pull and long cable life. Hoist includes 85 feet of 3/8-inch wire rope, downhaul weight, and swivel hook.

Boom Attachments:

Standard

Anti-Two-Block Device:

Has electric solenoid dump valve which prevents damage to hoist rope and machine components from accidentally pulling load hook against boom tip. This valve will dump the HOIST RAISE, TELESCOPE EXTEND, and BOOM LOWER circuits. No other circuits are affected. These circuits are returned to normal by operating the HOIST LOWER or TELESCOPE RETRACT control. This system uses a trip arm to activate switch.

Optional Boom Attachments:

Boom Extension – 7-Foot Rigid:

Provides 7 feet of additional length for lifting loads with load line. Extension may be stowed along side of base boom when not in use. Attaching brackets and pins included. Deduct 50 pounds from Capacity Chart when boom extension is stowed. Includes switch and trip arm for Anti-Two-Block system.
(Net Weight: 100 pounds)

Rated Capacity Limiter:

Warns operator of impending overload with audible and visual signals. Prevents overload by stopping boom functions that cause overload. Provides readouts for load, boom angle, boom length, and load radius.
(Net Weight: 30 pounds)

Specifications subject to change without notice

| CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE | | | |
|--|--------------------------------------|---|--------------------------------------|
| 3-SECTION MAIN BOOM | | | 7' BOOM EXT. |
| LOAD CG DISTANCE FROM FRONT BUMPER (FEET) | STATIC LIFT CAPACITY (POUNDS) | PICK & CARRY CAPACITY (POUNDS) | STATIC LIFT CAPACITY (POUNDS) |
| 2 | 4000 | 3400 | 1000 |
| 3 | 3100 | 2800 | 1000 |
| 4 | 2500 | 2300 | 1000 |
| 5 | 2100 | 1900 | 1000 |
| 6 | 1800 | 1650 | 1000 |
| 8 | 1400 | 1250 | 1000 |
| 10 | 1100 | 1000 | 1000 |
| 12 | | | 900 |
| 14 | | | 800 |
| 16 | | | 700 |
| 17 | | | 600 |

LOAD DISTANCE IS THE HORIZONTAL DISTANCE FROM THE FRONT BUMPER TO THE VERTICAL LOAD LINE WITH THE LOAD APPLIED.

LOAD HOOK, DOWNHAUL WEIGHT, SHEAVE BLOCKS AND OTHER LOAD HANDLING DEVICES SHALL BE CONSIDERED PART OF THE LOAD.

DECK CAPACITY 5000 POUNDS IF CENTERED ON FRONT DECK AND NO LOAD ON HOOK. MAXIMUM CARRY SPEED IS 2 MPH.

BOOM EXTENSION DEDUCT: 100 LBS WHEN STOWED ON BASE BOOM.

DO NOT PICK AND CARRY WITH BOOM EXTENSION INSTALLED.



