

KOMATSU BX50

BX50 Series SPECIFICATIONS

Cushion Tire Lift Trucks
4000 - 6,000 lbs. Capacity



KOMATSU FORKLIFT



The Forklift With Proven Ability.™

ISO 9001 CERTIFIED

Truck Data

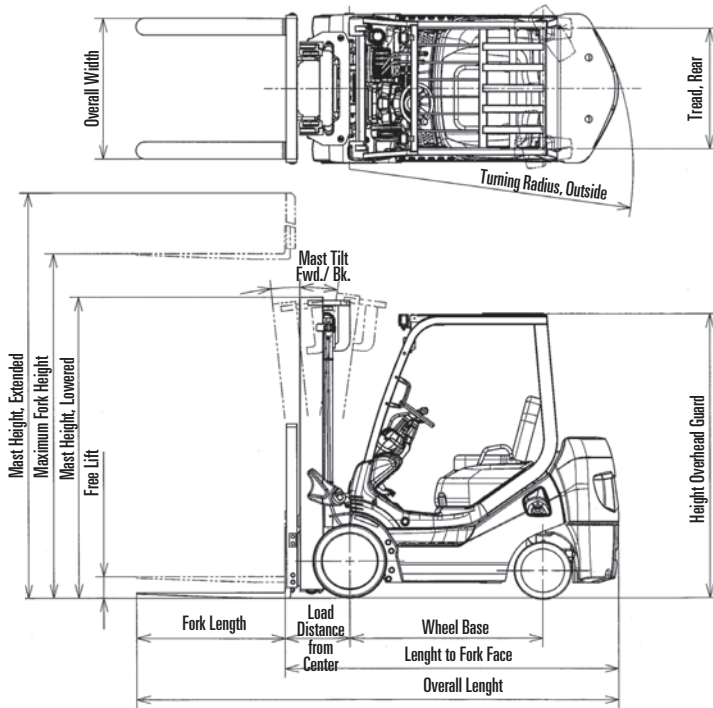
GENERAL		FG20ST-16	FG20SHT-16	FG25ST-16
Power Type		Gasoline	Gasoline	Gasoline
Operation Type		Sit-Down	Sit-Down	Sit-Down
Capacity @ 24 in. (600 mm) load center *	lbs. (kg)	4,000 (1,810)	4,000 (1,810)	5,000 (2,267)
Load distance from center axle (2-stage)	in. (mm)	16.9 (430)	16.9 (430)	16.9 (430)
Wheelbase	in. (mm)	55.1 (1,400)	55.1 (1,400)	55.1 (1,400)
WEIGHT				
Service weight (includes 2-stage std. mast & forks)	lbs. (kg)	7,300 (3,310)	7,300 (3,310)	8,180 (3,710)
Axle Loading	Loaded	Front	9,820 (4,455)	11,330 (5,140)
		Rear	1,480 (670)	1,850 (840)
	Unloaded	Front	2,820 (1,280)	2,600 (1,180)
		Rear	4,480 (2,030)	5,580 (2,530)
TIRE				
Tire type		Cushion	Cushion	Cushion
Tire size, front		21 x 7 x 15	21 x 7 x 15	21 x 7 x 15
Tire size, rear		16.25 x 5 x 11.25	16.25 x 5 x 11.25	16.25 x 5 x 11.25
Number of wheel, front / rear	x= driven	2x / 2	2x / 2	2x / 2
Tread (center of tires)	Front	34.6 (879)	34.6 (879)	34.6 (879)
	Rear	35.4 (900)	35.4 (900)	35.4 (900)
DIMENSIONS				
Tilting angle, 2-stage (FV) masts, forward / backward	deg.	6 / 8	6 / 8	6 / 8
Tilting angle, 3-stage (TFV) masts, forward / backward	deg.	6 / 5	6 / 5	6 / 5
Mast height, lowered (2-stage std. mast)	in. (mm)	85.5 (2,170)	85.5 (2,170)	85.5 (2,170)
Mast height, extended (2-stage std. mast) †	in. (mm)	176.0 (4,470)	176.0 (4,470)	176.0 (4,470)
Maximum fork height (2-stage std. mast) **	in. (mm)	128.0 (3,250)	128.0 (3,250)	128.0 (3,250)
Free lift height (2-stage std. mast)	in. (mm)	5.5 (140)	5.5 (140)	5.5 (140)
Height overhead guard	in. (mm)	80.9 (2,055)	80.9 (2,055)	80.9 (2,055)
Length, with Standard Forks	in. (mm)	132.9 (3,375)	132.9 (3,375)	135.4 (3,440)
Length to fork face (2-stage mast)	in. (mm)	90.8 (2,305)	90.8 (2,305)	93.3 (2,370)
Overall width, at drive tires (single)	in. (mm)	42.1 (1,070)	42.1 (1,070)	42.1 (1,070)
Forks, thickness x width x length	in. (mm)	1.6 x 3.9 x 42 (40 x 100 x 1070)	1.6 x 3.9 x 42 (40 x 100 x 1070)	1.6 x 4 x 42 (40 x 100 x 1070)
Carriage width / ITA Class	in. (mm)	37.0 (940) / II	37.0 (940) / II	37.0 (940) / II
Ground clearance, under mast	in. (mm)	5.5 (140)	5.5 (140)	5.5 (140)
Ground clearance, center of wheelbase	in. (mm)	3.9 (100)	3.9 (100)	3.9 (100)
Right angle stacking aisle (2-stage mast) ††	in. (mm)	92.6 (2,355)	92.6 (2,355)	94.6 (2,405)
Turning radius, outside	in. (mm)	75.6 (1,920)	75.6 (1,920)	77.6 (1,970)
PERFORMANCE				
Travel speed, forward, loaded / unloaded	mph (km/h)	10.6 (17) / 10.6 (17)	10.6 (17) / 10.6 (17)	10.6 (17) / 10.6 (17)
Lifting speed, loaded / unloaded (2-stage mast)	fpm (mm/s)	120 (610) / 124 (630)	120 (610) / 124 (630)	120 (610) / 124 (630)
Lowering speed, loaded / unloaded (2-stage mast)	fpm (mm/s)	98 (500) / 98 (500)	98 (500) / 98 (500)	98 (500) / 98 (500)
Maximum drawbar pull, loaded	lbs. (kN)	4,343 (19.3)	5,513 (24.5)	4,343 (19.3)
Maximum gradability	%	36	47	30
Service brake, operation/control		Foot / Hydraulic	Foot / Hydraulic	Foot / Hydraulic
Parking brake, operation/control		Hand / Mechanical	Hand / Mechanical	Hand / Mechanical
Steering, type		FHPS	FHPS	FHPS
DRIVE				
Engine Manufacturer / Engine model		Nissan / K21	Nissan / K25	Nissan / K21
Rated output (SAE Gross)	HP (kW) @ rpm	56 (41) @ 2700	60 (44) @ 2700	55 (41) @ 2700
Maximum torque (SAE Gross)	lb-ft (Nm) @ rpm	119 (160) @ 1600	142 (193) @ 1600	119 (160) @ 1600
No. of cylinder / displacement	cu. in. (cm ³)	4 / 126 (2,065)	4 / 152 (2,488)	4 / 126 (2,065)
Fuel tank capacity	U.S. gallons (liters)	10.1 (38.4)	10.1 (38.4)	10.1 (38.4)
OTHER				
Relief pressure, maximum	psi (bar)	2,650 (181)	2,650 (181)	2,650 (181)
Transmission		Powershift	Powershift	Powershift
Sound level, at operator ears	dB	82	83	83

FG25SHT-16	FG28SHT-16	FG30SHT-16	FG32SHT-16
Gasoline	Gasoline	Gasoline	Gasoline
Sit-Down	Sit-Down	Sit-Down	Sit-Down
5,000 (2,267)	5,500 (2,495)	6,000 (2,722)	6,500 (2,948)
16.9 (430)	17.3 (440)	17.3 (440)	17.3 (440)
55.1 (1,400)	57.1 (1,450)	57.1 (1,450)	57.1 (1,450)
8,180 (3,710)	8,840 (4,010)	9,440 (4,280)	9,920 (4,500)
11,330 (5,140)	12,350 (5,600)	13,260 (6,015)	14,000 (6,350)
1,850 (840)	2,000 (905)	2,180 (990)	2,430 (1,100)
2,600 (1,180)	2,820 (1,280)	2,870 (1,300)	2,740 (1,245)
5,580 (2,530)	6,020 (2,730)	6,570 (2,980)	7,180 (3,255)
Cushion	Cushion	Cushion	Cushion
21 x 7 x 15	21 x 8 x 15	21 x 8 x 15	21 x 8 x 15
16.25 x 5 x 11.25	16.25 x 6 x 11.25	16.25 x 6 x 11.25	16.25 x 6 x 11.25
2x / 2	2x / 2	2x / 2	2x / 2
34.6 (879)	35.2 (895)	35.2 (895)	35.2 (895)
35.4 (900)	34.7 (880)	34.7 (880)	34.8 (885)
6 / 8	6 / 8	6 / 8	6 / 8
6 / 5	6 / 5	6 / 5	6 / 5
85.5 (2,170)	85.5 (2,170)	86.5 (2,197)	88.6 (2,250)
176.0 (4,470)	176.0 (4,470)	176.0 (4,470)	176.0 (4,470)
128.0 (3,250)	128.0 (3,250)	128.0 (3,250)	128.0 (3,250)
5.5 (140)	5.5 (140)	5.5 (140)	5.5 (140)
80.9 (2,055)	80.9 (2,055)	80.9 (2,055)	80.9 (2,055)
135.4 (3,440)	136.6 (3,470)	137.8 (3,500)	139.2 (3,535)
93.3 (2,370)	94.5 (2,400)	95.7 (2,430)	97.1 (2,465)
42.1 (1,070)	43.3 (1,100)	43.3 (1,100)	43.3 (1,100)
1.6 x 4 x 42 (40 x 100 x 1070)	1.6 x 4 x 42 (40 x 100 x 1070)	2 x 4 x 42 (50 x 125 x 1070)	2 x 4 x 42 (50 x 125 x 1070)
37.0 (940) / II	37.0 (940) / II	37.0 (940) / III	37.0 (940) / III
5.5 (140)	5.5 (140)	5.5 (140)	5.5 (140)
3.9 (100)	3.9 (100)	3.9 (100)	3.9 (100)
94.6 (2,405)	97.0 (2,464)	98.9 (2,515)	100.1 (2,543)
77.6 (1,970)	79.5 (2,020)	81.5 (2,070)	82.7 (2,100)
10.6 (17) / 10.6 (17)	10.6 (17) / 10.6 (17)	10.6 (17) / 10.6 (17)	10.6 (17) / 10.6 (17)
120 (610) / 124 (630)	112 (570) / 124 (630)	104 (530) / 124 (630)	104 (530) / 108 (550)
98 (500) / 98 (500)	98 (500) / 98 (500)	98 (500) / 98 (500)	98 (500) / 98 (500)
5,513 (24.5)	5,513 (24.5)	5,513 (24.5)	5,175 (23)
39	33	31	28.5
Foot / Hydraulic	Foot / Hydraulic	Foot / Hydraulic	Foot / Hydraulic
Hand / Mechanical	Hand / Mechanical	Hand / Mechanical	Hand / Mechanical
FHPS	FHPS	FHPS	FHPS
Nissan / K25	Nissan / K25	Nissan / K25	Nissan / K25
60 (44) @ 2700	60 (44) @ 2700	60 (44) @ 2700	60 (44) @ 2700
142 (193) @ 1600	142 (193) @ 1600	142 (193) @ 1600	142 (193) @ 1600
4 / 152 (2,488)	4 / 152 (2,488)	4 / 152 (2,488)	4 / 152 (2,488)
10.1 (38.4)	10.1 (38.4)	10.1 (38.4)	10.1 (38.4)
2,650 (181)	2,650 (181)	2,650 (181)	2,650 (181)
Powershift	Powershift	Powershift	Powershift
83	83	83	83

Plan View & Mast Charts



CALL YOUR LOCAL KOMATSU FORKLIFT DEALER FOR MAST & ATTACHMENT OPTIONS.



Komatsu "Proven Ability"

is Komatsu's ability to eclipse the competition by taking the complicated and making it simple. We strive to provide innovative solutions using the technologies of tomorrow – today.

Special Features

- K21 and K25 industrial engines exceed EPA Tier I emission standards and provide high torque at low RPM for power with fuel economy.
- Dual Floating structure uses drive-train cushion mounts and Hydraulic Suspension Compartment mounts to isolate the operator compartment from engine and road vibrations.
- Open step, a large entry handgrip, and wide-open floor space provide easy access on and off.
- EZlift Hydraulic System with tandem pump provides fast and controllable lifting speed at low engine RPM.
- Wiring harness connectors are waterproof.

Standard Equipment

- Instrument display – fuel gauge, water temperature gauge, hour meter
- Indicator lights – Neutral/Return to Neutral, Low Oil Pressure, Low Battery/Alternator, Hydraulic Lock (Operator Presence), Check Engine Warning, Check Controller Code
- Drawbar Pin
- Electronic Ignition, Anti-Restart Ignition Switch
- Fully Hydrostatic Power Steering with Dedicated Pump
- Long-life Headlights (OHG Mounted)
- LED Tail/Stop/Rear Turn Lights
- High-Mount Air Intake
- Horn with Actuator on Center of Steering Wheel

- "Komfort" Seat and Operator Restraint System with Lap Belt
- Three-Piece Overhead Guard
- Three-Function Hydraulic Control Valve
- Parking Brake with Double Action Release
- Tilting Steering Column
- Fully Open Floor Board with Suspended Pedals
- Transmission Torque Converter Oil Cooler

Optional Equipment

- Warning Lights and Audible Travel Alarms
- Economy Mode Package
- Tilt Cylinder Boots
- Cotton-Core Radiator
- Radiator Lint/Trash Protection Screen
- Special Application Packages

Contact your authorized dealer for other options

Technical Data

ENGINES

K21 (2.1 liter) or K25 (2.5 liter) gasoline/LPG, 4-cylinder, in-line engines with Engine Concentrated Control Systems (ECCS) meet or exceed EPA emission standards. These low-RPM, high-torque industrial engines offer reduced maintenance requirements, exceptional emission controls, fast acceleration, high performance, reliable durability, and enhanced serviceability through engineering excellence.

- There are three engine fuel choices: gasoline multi-port fuel injection, LPG single-port (throttle-body) fuel injection, or a dual fuel system with easy switching at the flip of a switch. All engines are equipped with 3-way catalytic converters and closed-loop exhaust systems.
- All engines utilize an ECCS that continuously monitors data from the fuel pressure, accelerator throttle position, mass air-flow sensor, and heated oxygen sensor—for improved fuel economy, smooth operation, reliable starting in cold weather, and high performance throughout the operating range. An electronic governor protects the engine against over-rev damage.
- Crankshaft and camshaft position sensors provide information to the ECCS for optimum ignition and fuel injection timing. Each cylinder has an individual ignition coil for precise control and reliability.
- An engine coolant temperature sensor and controller protects the engine against damage due to high engine temperature by automatically limiting engine speed during high-temperature operation. If the engine coolant temperature exceeds safe operation temperature, the engine will be shut down. An illuminated indicator on the instrument console indicates high-temperature operation, and gives the operator warning of engine shutdown.
- The aluminum alloy cylinder head has large intake and exhaust valves and a semi-hemispherical combustion chamber for efficient fuel consumption.
- The engine block is designed with five main bearings. All main and rod bearings are micro-grooved to improve lubrication and reduce wear.
- Noise and vibration abatement reduce operator fatigue.

FUEL SYSTEM

Gasoline, LPG, or Dual-Fuel systems are available. The gasoline fuel tank is integral to the truck frame.

- In-tank mounted gasoline fuel delivery pump, fuel-level sensing unit, pressure regulator, and filter are standard.

- LPG fuel system uses single-point, throttle-body fuel injection. A removable 33 lb. or 43 lb. fuel tank is available with stationary, fold-back, or swing-out-and-down tank mountings.

COOLING SYSTEM

The high-capacity aluminum radiator is designed with an efficient thermal transfer fin and an integral oil cooler for the transmission torque converter.

- System design allows easy access to the reservoir for checking the coolant level.
- High-volume cooling fan uses flexible plastic blades and shroud for maximum air volume and noise abatement.

ELECTRICAL SYSTEM

Standard instrument package and operator conveniences:

- 12-volt electrical system
- 50A alternator with built-in IC regulator
- Key-lock, anti-restart ignition switch
- High-torque, low-amp starter motor with planetary gear reduction
- Waterproof electrical connectors
- Electric fuel gauge, water temperature gauge, LED hour meter
- Indicator lights for Neutral/Return to Neutral, Low Oil Pressure, Low Battery/Alternator Output, Check Engine Warning, Hydraulic Lock (Operator Presence), and ECCS Status Code
- ECCS Service Support Tool connector for rapid system diagnostics

EZLIFT HYDRAULIC SYSTEM

The EZlift Hydraulic System features a tandem pump assembly with separate pumps for load handling and steering. This enables faster lifting at engine idle speed for greater fuel economy and performance levels.

- Large hydraulic fluid reservoir integral to the truck frame reduces heat buildup in the system.
- Pressure relief valve protects system components.

FRAME

An all-welded assembly with heavy-gauge steel and integral hydraulic and fuel tanks provide exceptional durability.

- Welded front cross-member and bolted drive axle increase frame rigidity.
- Loads are transferred directly from the mast to the drive axle and on to the floor without being transmitted through the frame, reducing frame stress.
- Wide, open step is designed into the frame assembly without compromising the structure.

DRIVE AXLE

A heavy-duty, cast steel drive axle housing supports the load and chassis without placing a load on the free-floating axle shafts. A flange is mounted to the truck frame to improve load distribution and reduce frame flexing.

TRANSMISSION

Komatsu Torqflow single-speed, powershift transmission is specifically designed for industrial applications.

- Column-mounted electrical shift lever gives the operator easy directional control without removing a hand from the steering wheel.
- Optimized stall ratio for torque converter provides high torque without sacrificing travel speed.
- A modulating control valve absorbs initial pressure spikes during initial engagement and directional change. This improves shifting capabilities and prolongs the life of the entire power train.
- Transmission oil is double-filtered by a 125-micron mesh on pickup, and a 35-micron cartridge on the return line.
- Transmission oil cooler is integral with the radiator.
- Inching control and auxiliary brake pedal combination allows the operator precise truck positioning with positive control.

BRAKES

Hydraulic brakes are self-energizing and self-adjusting.

- Brake fluid reservoir is located under the console cover for fast, easy inspection and maintenance.
- High-friction brake shoes are free of asbestos.
- Heavy-duty brake backing plate and thick brake drum provide reliable braking action and reduced heat.
- Mechanical parking brake has two-stage latching mechanism for positive engagement.
- Power assist is available on selected models.

STEER AXLE

Fully Hydrostatic Power Steering is standard.

- Independent power steering pump separates steering function from main hydraulics for smoother, more reliable action.
- Heavy-duty fabricated steer axle has double-acting, double-ended power steering cylinder and no drag links or tie rods.
- Steering stops are machined into the steering cylinder to reduce stress impact on steering linkages.
- Grease fitting on all linkages are accessible without lifting the truck.

Technical Data

MAST, CARRIAGE, LBR AND FORKS

High-visibility EZview mast assembly has a 6-roller carriage that is available in two-, three-, and four-stage Freelift Freeview designs.

- Sealed bearings require no maintenance.
- Angle-mounted bearings and a shaped rail flange prevent excessive wear and friction, while maintaining correct side thrust clearance.
- ITA Class II or Class III carriages accept a variety of fork sizes and common load-handling attachments.
- 48-inch-high load backrest is standard.
- Single or double auxiliary hydraulic-function internal hose routing is available.

OPERATOR COMPARTMENT

A unique "Komfort Zone" hydraulic suspension compartment isolates the operator from the floor surface and from engine vibrations, for greater operator comfort and productivity.

- Orthopedically designed "Komfort" seat has built-in lumbar support, retractable seat belt, lateral restraint system, and generous fore and aft adjustment.
- Hydraulic control levers are positioned for optimum access and ease of use. International symbols on the contoured grips indicate the function.

- Tilting steering console has small-diameter steering wheel and electronic instrumentation. Tilt is infinitely adjustable, with extended room between the engine bonnet and console.
- Wide-open floor board has suspended brake and inching pedals with ribbed rubber pads for comfort and safety. Integral accelerator mechanism has a transfer roller for smooth operation.
- Full-width rubber floor mat provides large, non-slip surface and reduces noise, vibration, and heat in the "Komfort Zone."
- Large, open steps with a traction surface and a large handgrip provide easy entry and exit for the operator.
- Standard headlight/turn indicator control lever is mounted on the steering column for easy use.
- Full-width overhead guard provides excellent visibility for high stacking and meets or exceeds ITSDF requirements.

SERVICEABILITY

The engine and transmission can be easily accessed for daily inspection without the use of any tools.

- Single-piece, all-steel engine cover and seat support is fully insulated to reduce noise and heat transfer to the "Komfort Zone."

- Engine cover has gas-filled cylinder with an automatic locking device to assist in opening and to prevent the cover from unexpectedly closing.
- Easy-access, easy-operation engine cover latch is recessed to prevent interference when entering and exiting the operator compartment.
- Engine cover is shaped for easy access into the engine area for maintenance and service.

COMPLIANCE, APPROVALS, AND ENVIRONMENTAL CONCERNS

Designed for maximum recycling at end of life, with special attention to materials and construction. Counterweight designed for breakup during recycling process. Transmission case is recyclable aluminum. Komatsu forklifts meet or exceed American National Standard Institute, ITSDF B56.1-Part III Safety Standards for Powered Industrial Trucks.

Classified by Underwriters Laboratories, Inc. for fire hazard only. Contact your authorized dealer for application-specific requirements. Meets or Exceeds EPA emissions standards 40 CFR.

KOMATSU®

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