

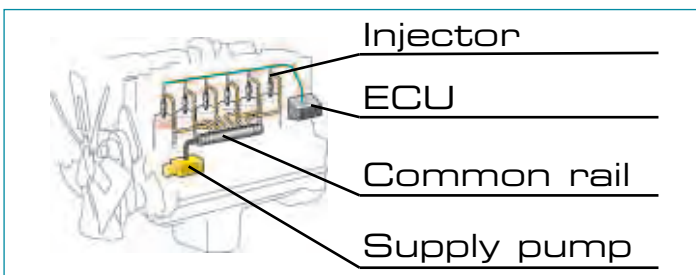
EX50 SERIES

10 TO 16 TON



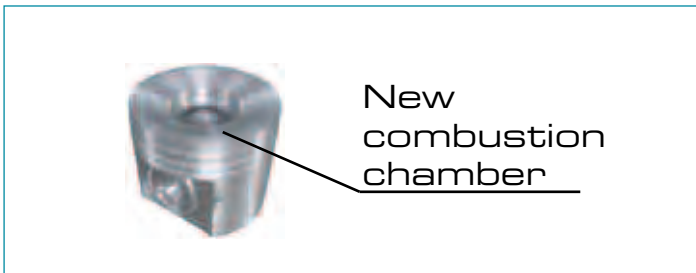
Key Technology-1: Electronic Control System

The center control unit quickly processes signals from various sensors on the vehicle in order to produce a maximum power in any condition, eliminating possible loss in engine performance.



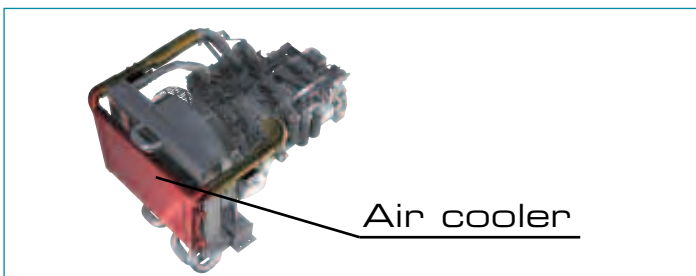
Key Technology-2: Heavy duty HPCR System

High pressure compressed fuel stored in an accumulator chamber, so-called common rail, is injected into each cylinder sufficiently at a proper timing by an ECU (Electric Controlled Unit). This HPCR (High Pressure Common Rail) system promises optimized fuel burning and reduced fuel consumption.



Key Technology-3: New Combustion System

A unique shape of the combustion chamber on the top surface of each piston facilitates complete fuel burning by optimizing conditions, timings and amounts of fuel injection, which helps reduce NOx and PM in exhaust, as well as fuel consumption.



Key Technology-4: Air to Air Charge Air Cooling System

This system cools high temperature air blown by the turbocharger and supplies it to cylinders. As a result, the system maximizes combustion efficiency and emission performance, facilitating high output while reducing NOx and fuel consumption.

Part Number. PKBI017EN-2

The illustrations do not necessarily show the standard version and features of the equipment.

Features and specifications may vary by country and region.

Products and specifications are subject to change without prior notice.

Please contact your Komatsu dealer for detail information.



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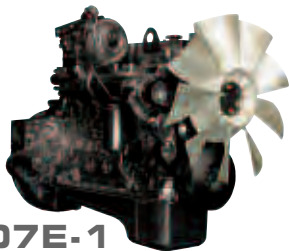
10 TO 16 TON



Diesel Pneumatic-Tyre Trucks

EX50 SERIES

10 TO 16 TON



SAA6D107E-1
HIGH POWER
CLEAN DIESEL ENGINE

ENVIRONMENTAL SAFETY

The new engine adopts the latest technologies that supports both reliable power and environment-friendliness. EPA Tier 3/ Euro IIIA compliant SAA6D107E-1 engine adopts Komatsu's latest engine technologies, and dramatically reduces NOx and PM in exhaust. Also, each system successfully interacts for better fuel efficiency and lowered running noises. Reliable fuel filters keep systems performance high and protect components. The engine offers full performance and power even in severe conditions.

MANEUVERABILITY

Exceptionally high travel speed achieved through use of electrically controlled forward/reverse lever and 3-speed transmission (or optional automatic transmission)

A best-of-breed combination of high-power new engine and powershift 3-speed transmission (or optional automatic transmission) with forward/reverse lever ensures excellent maneuverability and the optimum high-performance combination of travel speed, acceleration, lift speed, and gradability.

Top-of-class rated lift speed ensures speedy and efficient work

A top-of-class lift speed can be achieved in both loaded and unloaded states through optimization of the oil-level efficiency of the large-capacity tandem hydraulic pump (common to 10-ton to 16-ton models) as well as use of the new hydraulic circuit (loadsensing valve).

Lift Speed	Rated Output	Maximum Torque	Travelling Speed	Gradability
Laden/FD100 470mm/s	SAE gross 122kW@2200min⁻¹	SAE gross 575N·m@1600min⁻¹	Unladen in 3rd Gear/FD100 32km/h	Laden/FD100 38% (21 degrees)

STRENGTH

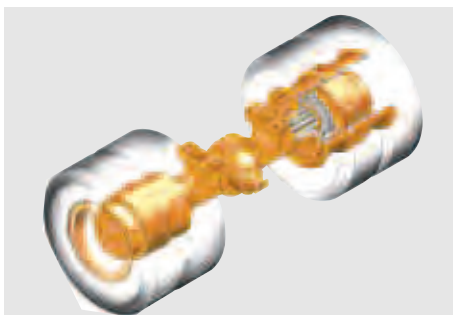


A high-rigidity frame for enhanced durability and load-handling performance

Use of a mainframe structure comprising a single, thick steel plate provides high rigidity against twisting caused by static steering, turning, or unevenness of the road surface, thus achieving excellent vehicle durability and load-handling performance.

Highly rigid mast construction to ensure reliability

Use of an outer mast of rolled steel rails as well as parts of sufficient strength at every portion of the forklift ensures high strength and durability.



SAFETY

Wet disc brake that safely stops the vehicle in any working conditions (Option)

The EX50 features Komatsu's original wet disc braking system that eliminates weakness of traditional drum brakes. With its built-in waterproof and dustproof mechanism, the braking system also delivers high durability with less brake shoe wearing. Because the braking system is enclosed, it does not require part replacement or overhauls for maintenance.* Regardless of your working conditions, it offers added reliability and safety of the EX50.

*Oil replacement and regular inspections are required.



Operator Presence Sensing (OPS) system automatically stops traveling and lifting when the operator leaves the seat (Option)

To avoid malfunctions and operations in the operator's unstable positions, the OPS system automatically prevents driving and loading when the operator is unseated. Indicators on the display panel inform the vehicle condition when it stops by the interlock.

This mechanism conforms with ISO3691-1, one of the worldwide safety standards.

*This system is to safely stop the driving and loading function, and not intended to forcibly brake the vehicle.

**ENVIRONMENT & ECONOMY IS THE WORD
FOR THE NEXT GENERATION.
EX50 SERIES IS OUR ANSWER FOR IT.**

Komatsu put its technologies and know-how into the design and construction of a new engine, which is a proof of our careful consideration of the next step.

With its new cutting edge four key technologies, the new engine provides reliable power with better fuel efficiency for maximum productivity and lowered operating cost while being environment-friendly.

**BORN OF THE UNSURPASSED
TECHNOLOGIES SHAPED FROM
THE DEEP THOUGHTFULNESS
FOR ENVIRONMENT.**

Photographs in this catalogue may show machines fitted with optional equipment

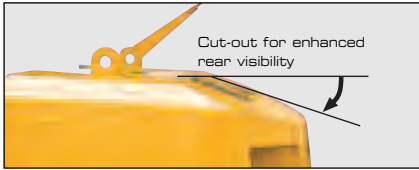


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EX50 SERIES

10 TO 16 TON



VISIBILITY

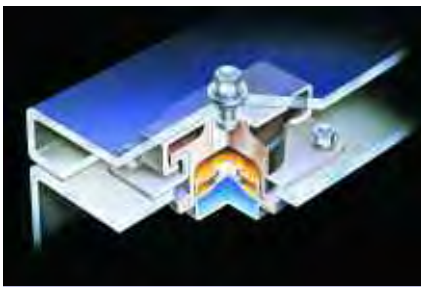
Greatly enhanced front/rear visibility achieved by improved top of the counter weight shape and expanded inner width of the mast

Improvement in the shape of the back portion of the rear weight enhances rearward visibility, which has been a blind spot for the operator. Moreover, arrangement of the chains outside of the mast allows the inner width of the mast to be expanded to 642 mm [25.3 inches] (FD100), ensure the good frontward visibility essential for safe operation.

Inner width of the mast

(FD100 2 stage Freeview mast)

642mm



Hydraulic Suspension Cab Mount

COMFORT

Komatsu's original Hydraulic Suspension Cab (HSC) mount provides the ultimate in operator comfort even during extended operation

Komatsu's original HSC mount system raises the operator's cab from the vehicle body with a hydraulic suspension that absorbs most travel vibration, thereby helping to reduce operator fatigue.

Sound insulating, low noise design, ambient and operator friendly

72dB[A]

(during low idle)



New operator's suspension seat

The new-design seat features a high-support structure that always balances and securely holds the operator's body, thus reducing fatigue during extended operation. It also provides retractable seat belt.

Efficient design and functionalities for comfortable operations



1
Integrated, easy-to-Read meter panel to ensure safe operation



2
Combination switch head-lamp and directional Indicator (Auto-return)



3
Tiltable Steering wheel for operator comfort



SERVICING

Large-capacity fuel tank for less frequent fueling; easy-to-see windows for fuel and oil tank inspection

A large-capacity tank reduces fueling frequency and enables extended non-stop operation. Easy-to-see inspection windows, mounted on both the fuel and oil tanks, permit reliable checking of oil and fuel levels as well as the degree of oil contamination.

High serviceability: non-bolted floor plates and side covers and quick-open/close engine hood.

Air cleaner with automatic dust ejector to prolong replacement cycle

This air cleaner automatically exhausts air-borne dust to reduce clogging of the filter element, thus enhancing suction efficiency and prolonging the element's replacement cycle.



Fuel Tank

(FD100·FD115)

260L

(FD135·FD150E·FD160E)

280L

Reserve tank for maintaining Engine coolant at a constant level (thus eliminating troublesome refilling)



Steel Cabin

OPTIONS

- Automatic Transmission
- Wet disc brake
- Operator Presence Sensing (OPS) system
- UL specification
- Cold climate specification (-30 degree)
- Rotating light
- Rear working light
- Speedometer
- Load indicator
- Special length forks
- Extension forks
- Air cleaner with pre-cleaner
- Spark arrester
- Rear view mirror
- Rear under mirror
- Steel cabin
- Air conditioner
- Heater
- Rotating seat
- Fuel cap with key

Wide visibility even under severe working conditions for a comfortable and quiet working environment

- Front and rear corners of glass for maximum visibility
- Quick-release door lock lever
- Cabin ceiling-mounted air conditioner for expanded operation space
- A high-mount cabin can be selected for an elevated view depending on the load
- Attachable wipers for front, rear and roof glasses (two wipers for the front glass, window washers for front and rear glasses)
- Built-in high-capacity alternator
- Room illumination

GOOD VIEW, COMFORT SEATING AND OPERABILITY. ALL DESIGNED TO DELIVER THE HIGHER LEVEL OF WORKABILITY.



tyre handler

ATTACHMENTS

- Side shifter
- Side shift fork positioner (Independent move)
- Fork positioner (Independent move)
- Fork positioner with side shift function (Simultaneous move)
- Manipulator*
- Ram*
- Crane*
- Pole carrier fork*
- Furnace charger*
- Tyre handler*

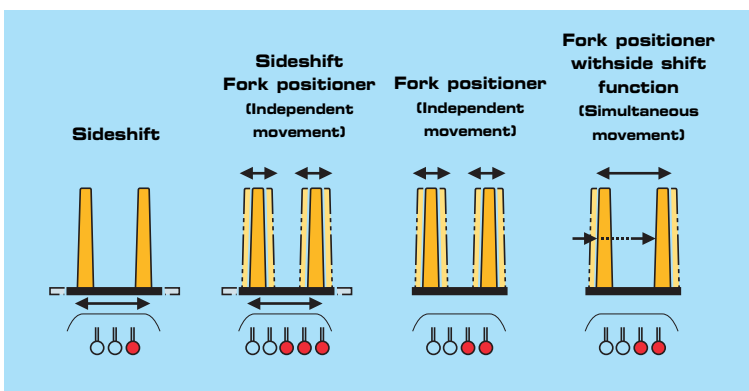
*Available upon request

Komatsu's exclusive design provide reliability and versatility.

Komatsu's exclusive design provide reliability and versatility.

This attachment holds and rotates a huge construction machinery tyre, making the tyre exchange faster and smoother.

SIDE SHIFTER - FORK POSITIONER



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EX50 SERIES

10 TO 16 TON

CHARACTERISTICS					FD100-8	FD115-8	FD135-8
1.2	Model Designation						
1.3	Power Type^A						Diesel
1.4	Operation Type^B						Sitting
1.5	Rated Capacity		Q	kg	10000 (22,000)	11500 (25,000)	13500 (30,000)
1.6	Load Center		c	mm			600 (24)
1.8	Load Distance^C		x	mm	695 (27.4)	715 (28.1)	740 (29.1)
1.9	Wheelbase		y	mm	2800 (110.2)		
WEIGHTS	Service Weight			kg	12980 (28,620)	14360 (31,660)	15480 (34,130)
2.2	Axle Loading	Loaded	Front	kg	20860 (45,990)	23490 (51,790)	26450 (58,310)
2.2.1			Rear	kg	2120 (4,670)	2370 (5,220)	2530 (5,580)
2.3		Unloaded	Front	kg	6230 (13,730)	6590 (14,530)	7110 (15,670)
2.3.1			Rear	kg	6750 (14,880)	7770 (17,130)	8370 (18,450)
TYRES		Tyre Type					
3.2	Tyre Size	Front			9.00-20-14PR (I)	10.00-20-14PR (I)	11.00-20-14PR (I)
3.3		Rear			9.00-20-14PR (I)	10.00-20-14PR (I)	11.00-20-14PR (I)
3.5	Number of Wheel: Front/Rear(x-driven)						4x/2
3.6	Tread, Front		b10	mm	1700 (66.9)		
3.7	Tread, Rear		b11	mm	1900 (74.8)		1890 (74.4)
DIMENSIONS	Tilting Angle		α/β	°			6/12
4.2	Mast Height, Lowered		h1	mm	2890 (113.8)	3160 (124.4)	3170 (124.8)
4.3	Std. Free Lift		h2	mm			0 (0.0)
4.4	Std. Lift Height		h3 (1)	mm			3000 (118)
4.5	Mast Height, extended		h4	mm	4400 (173.2)	4670 (183.9)	4680 (184.3)
4.7	Height, Overhead Guard		h6	mm	2780 (109.4)	2800 (110.2)	2810 (110.6)
4.19	Length, with Std. Forks		l1	mm	5465 (215.2)	5505 (216.7)	5860 (230.7)
4.20	Length, to Fork Face		l2	mm	4245 (167.1)	4285 (168.7)	4640 (182.7)
4.21	Width, at Tyre		b1		2280 (89.8)	2310 (90.9)	2410 (94.9)
4.22	Forks: Thickness/Width/Length		s/e/l	mm	75x170x1220 (3.0x6.7x48.0)	75x185x1220 (3.0x7.3x48.0)	80x185x1220 (3.1x7.3x48.0)
4.23	Fork Carriage Class^P						Pin Mount
4.24	Width, Fork Carriage		b3	mm	2140 (84.3)		
4.31	Ground Clearance	Under Mast	m1	mm	250 (9.8)		260 (10.2)
4.32		at Center of Wheelbase	m2		325 (12.8)	345 (13.6)	350 (13.8)
4.33	Right Angle Stacking Aisle		Ast	mm	5915 (232.9)	5945 (234.1)	6310 (248.4)
4.35	Turning Radius		Wa	mm	4000 (157.5)	4010 (157.9)	4350 (171.3)
PERFORMANCES	Travel speed (FWD)	Loaded	1st/2nd/3rd	km/h	8.5/18/28 (5.3/11.2/17.4)	8.5/19/28 (5.3/11.8/17.4)	9/19.5/27.5 (5.0/11.0/17.0)
5.1.1		Unloaded	1st/2nd/3rd	km/h	9/20/32 (5.6/12.4/19.9)	9/21/32 (5.6/13.0/19.9)	9.5/21/32 (5.3/11.0/17.0)
5.2	Lifting Speed	Loaded/Unloaded		mm/s	470/500 (93/98)	430/450 (85/89)	350/375 (69/74)
5.3	Lowering Speed	Loaded/Unloaded		mm/s	400/500 (78.7/98.4)		
5.6	Drawbar Pull	Loaded at 1.5km/h		kN	89 (20,010)	87 (19,610)	85 (19,150)
IC ENGINE	Gradeability	Loaded at 1.5km/h		%	40	34	28
5.10	Service Brake	Operation/Control					Foot/Hydraulic, Powered
5.11	Parking Brake	Operation/Control					Hand/Mechanical
5.12	Steering						Hydraulic Power Steering
6.4	Battery	Voltage/Capacity ^F		V/Ah	24/80		
7.1	Maker/Model				Komatsu SAA6D107E-1		
7.2	Output SAE gross				122 (164)		
7.3				kW @ min ⁻¹	2200		
7.3.1		Max. Torque, SAE gross			Nm @ min ⁻¹	575 (424)@1600	
7.4	Num. of Cylinder, Displacement			# / cm ³	6/6690 (408)		
7.6	Fuel Tank Capacity			Ltr	260 (68.7)		
OTHERS	Relief Pressure for Attachment			bar	216 (3,150)		
8.2.1	Tank Capacity			Ltr	180 (48)		
8.6	Clutch				Torque Converter		

A= Electric, Diesel, Gasoline, LPG, Cable
B= Pedestrian, Driver Standing, Sitting, Order Picking

C= Front axle center to fork face
D= ISO 2328, Type A/B/no

E= at 5-hour rating

FD150E-8	FD160E-8
15000 (33,000)	16000 (35,000)
750 (29.5)	
3100 (122.0)	
16570 (36,530)	17200 (37,920)
28740 (63,360)	30140 (66,450)
2830 (6,240)	3060 (6,750)
7210 (15,900)	7170 (15,810)
9360 (20,640)	10030 (22,110)
11.00-20-16PR (I)	12.00-20-16PR (I)
11.00-20-16PR (I)	12.00-20-16PR (I)
1770 (69.7)	1870 (73.6)
3270 (128.7)	3290 (129.5)
4780 (188.2)	4800 (189.0)
1110.6	2830 (111.4)
5920 (233)	6020 (237)
4700 (185)	4800 (189)
(94.9)	2480 (97.6)
85x190x1220 (3.3x7.5x48.0)	85x210x1220 (3.3x8.3x48.0)
2210 (87.0)	
250 (9.8)	270 (10.6)
13.8	370 (14.6)
6370 (250.8)	6470 (254.7)
4400 (173.2)	4500 (177.2)
5.6/12.1/17.1	9.5/20/28 (5.9/12.4/17.4)
9/13.0/20.2	10/21.5/32 (6.2/13.4/20.5)
325/350 (64/69)	320/345 (63/68)
400/400 (79/79)	
80 (18,160)	80 (18,030)
25	23
280 (74.0)	
210 (55)	

STANDARD EQUIPMENT

- Headlights
- Turn signal lamps
- Charge warning lamps
- Safety checker
- Hourmeter
- Fuel gauge
- Torque converter oil temperature gauge
- Water temperature gauge
- Neutral safety switch
- Brake oil pressure warning buzzer
- Torque converter oil cooler
- Tiltable steering column
- Hydraulic power brake
- Horn
- Overhead guard
- Drawbar pin
- Cyclonic air cleaner
- Notch-release parking brake
- Back-up buzzer
- Rear view mirror



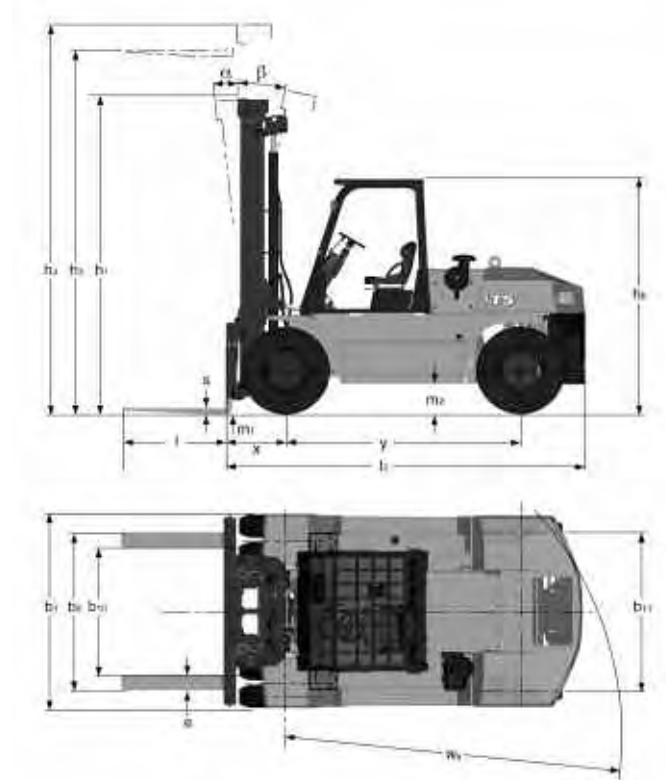
Full-open steps



Notch-release parking brake

Head guard with front/rear gutters

DIMENSIONAL DRAWING



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