KOMATSU®

HM400-1

GROSS HORSEPOWER
331 kW 444 HP

NET HORSEPOWER
321 kW 430 HP

MAXIMUM GVW
66,875 kg 147,435 lb

ARTICULATED Dump Truck

Photo may include optional equipment.
HM400-1 Articulated Dump Truck

Walk-Around

The HM400-1 offers all around maximum productivity with faster travel speed and many features that enhance efficiency, while reducing maintenance costs. From construction sites to landfill - the HM400-1 excels.

Wide, spacious cab
- The wide cab offers a comfortable operator environment
- Viscous mounts support the cab while absorbing vibrations and noise
- Interior noise level 76 dB(A)

Tiltable cab can be tilted rearward to provide easy service.

High performance and environment-friendly SAA6D140E-3 engine
- Gross horsepower 331 kW 444 HP
- Meets North American EPS Tier II emission regulations for 2001

Fully hydraulic articulated steering
- Light and easy operation
- Minimum turning radius 8.7 m 28'7"

Interaxle and differential locks for excellent traction in rough terrain. The oil-cooled multiple-disk interaxle lock and differential locks can be turned on and off during travel. In addition, the differential locks can lock up all three axles’ differentials for maximum traction.
**HM400-1 ARTICULATED DUMP TRUCK**

**GROSS HORSEPOWER**
331 kW **444 HP** @ 2000 rpm

**NET HORSEPOWER**
321 kW **430 HP** @ 2000 rpm

**MAXIMUM GVW**
66,875 kg **147,435 lb**

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**Komatsu designed electronically controlled transmission for a comfortable ride.**
F6-R2 counter-shaft type transmission with K-ATOMiCS (Komatsu Advanced Transmission with Optimum Control System).

**Easy-to-Load Body**
- Heaped capacity 22.3 m³ **29.2 yd³**
- Low loading height 2970 mm **9'9”**
- Robust body constructed of thick wear-resistant steel having 400 Brinell hardness

**Reliable wet type multiple-disk brake and retarder**
- Fully hydraulic controlled wet multiple-disk brake
- Retarder Absorbing Capacity (continuous descent)
  - 405 kW **544 HP**
  - 583 kW **782 HP** (with optional exhaust retarder)

**Hydropneumatic Suspension for all terrains.**
The hydropneumatic suspension assures a comfortable ride even over rough terrain.

**Maintenance-free oscillating hitch**
means lower operating costs by eliminating the need to lubricate the hitch.

**Galeo**
Komatsu’s highly productive, innovative technology, environmentally friendly machines built for the 21st century.
Productivity Features

The combination of high travel speeds and an efficient engine with low emissions delivers maximum productivity at the lowest cost.

High Performance SAA6D140E-3 Engine
This engine delivers faster acceleration and higher travel speeds with the highest horsepower per ton in its class. Advanced technology, such as high-pressure electronic controlled injection system (CRI), air to air aftercooler, and an efficient turbocharger enabling the engine to meet the North American EPA Tier II emission requirements. High torque at low speed, impressive acceleration, and low fuel consumption ensures maximum productivity.

Komatsu Designed Electronically Controlled Transmission
The Komatsu designed Electronically Controlled Transmission called K-ATOMiCS has been successfully employed in Komatsu’s rigid dump trucks. The electronic clutch modulation system ensures proper clutch pressure when the clutch is engaged. The total control system controls both the engine and transmission by monitoring the vehicle conditions. This high technology system assures smooth shifts without shock.

Interaxle and Differential Locking Systems
The full-time six-wheel drive system reduces slippage. A wet multiple-disk interaxle clutch also locks the three axles in unison for greater traction. The interaxle lock and differential locks can be switched on and off while the truck is travelling, thereby boosting productivity. In addition, the differential lock switch, which is a three position switch, can lock up the rear axle differentials only, or all axles for maximum performance in the worst conditions.
Fully Hydraulically Controlled Wet Multiple-Disk Brakes and Retarder

Wet multiple-disk brakes have been proven on Komatsu dump trucks and wheel loaders. They ensure highly reliable and stable brake performance. The large-capacity wet-multiple disk brakes also function as a highly responsive retarder which gives the operator greater confidence when travelling downhill.

Retarder Absorbing Capacity (continuous descent):

- 405 kW 544 HP
- 583 kW 782 HP (with optional exhaust retarder)

Hydropneumatic Suspension

The hydropneumatic suspension has been proven on Komatsu’s rigid dump trucks. The front axle suspension employs “De Dion” type design, allowing the machine to ride more smoothly over bumps. The rear-axles are mounted on a dynamic equalizer structure equipped with hydropneumatic suspension. The entire vehicle’s suspension delivers a comfortable ride and maximizes the productivity.

Large Capacity Body and Box Section Frame Structure

The 22.3 m³ 29.2 yd³ heaped capacity is among the highest in its class. The low loading height of 2970 mm 9'9" enables easy loading. The body is built of thick wear-resistant steel with a Brinell hardness of 400, and the body shape provides excellent load stability. Rugged enough for the toughest jobs, the HM400’s frame is designed using a rigid box structure with high strength low alloy steel.

Articulated Steering

Fully hydraulic articulated steering offers low-effort operating performance and maneuverability. A minimum turning radius of only 8.7 m 28’7” provides the freedom to move about in confined areas.
Komatsu has developed a state-of-the-art, wide comfortable cab. The low level of vibration and noise ensure maximum productivity from the operator.

Wide, Spacious Cab
The wide cab provides a comfortable space for the operator and a full size buddy seat. Large electrically operated windows and the operator’s seat positioned to the left side ensures superior visibility.

Ergonomically Designed Cab
The ergonomically designed operator’s compartment makes it very easy and comfortable for the operator to use all the controls. The result is more confident operation by operators and greater productivity

Easy-to-See Instrument Panel
The instrument panel makes it easy to monitor critical machine functions. In addition, a caution light warns the operator of any problems that may occur. Problems are recorded in the monitor and indicated as service codes. This makes the machine very friendly and easy to service.

Steering Wheel and Pedals
Low effort pedals reduce operator fatigue when working continuously for long periods. The tiltable, telescoping steering column enables operators to maintain the optimum driving position at all times.
**Built-in ROPS/FOPS**
These structures conform to ISO 3471 and SAE J1040-1988 standards.

**Hydropneumatic Suspension for all Terrains**
The hydropneumatic suspension assures a comfortable ride even over rough terrain and ensures maximum productivity and operator confidence.

**Viscous Cab Mounts**
Viscous mounts reduce the noise transmitted to the cab and achieve a quiet 76 dB(A) noise level.

**Air Suspension Seat**
The air suspension, fabric-covered seat which is adjustable to the operator's weight is provided as standard. The air suspension seat dampens vibrations transmitted from the machine and reduces operator fatigue as well as holding the operator securely to assure confident operation.

**Electric Body Dump Control Lever**
The low effort lever makes dumping easier than ever.

**Supplementary Steering and Secondary Brakes**
Supplementary steering and secondary brakes are standard features.

Steering: ISO 5010-1992, SAE J1511
Brakes: ISO 3450-1996, SAE J1473

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Photo may include optional equipment.
Easy Maintenance

The HM400-1 has been designed to keep service time down and productivity up by having a maintenance-free oscillating hitch, a reduced number of grease points, easy access to filters, and longer intervals between oil changes.

Tiltable Cab
The cab can be tilted rearward to provide easy maintenance/service for the engine and transmission.
Note: An external hydraulic pump is required to tilt the cab or a service crane can be used.

Fewer Grease Points
The number of grease points are minimized by using maintenance-free rubber bushings and a maintenance-free oscillating hitch.

Extended Service Intervals
In order to minimize operating costs, service intervals have been extended:
- Engine oil 500 hours
- Transmission oil 1000 hours
- Engine and transmission filters 500 hours

Guards
The following guards are provided as standard:
- Protective grill for rear window
- Engine underguard
- Transmission underguard
- Propeller shaft guards
- Exhaust thermal guard
- Fire prevention covers
### SPECIFICATIONS

**ENGINE**
- Model: Komatsu SAA6D140E-3
- Type: Water-cooled, 4-cycle
- Aspiration: Turbo-charged and air-to-air after-cooled
- Number of cylinders: 6
- Bore: 140 mm (5.51"
- Stroke: 165 mm (6.50"
- Piston displacement: 152.92 in³
- Gross horsepower: 331 kW (444 HP)
- Flywheel horsepower: 321 kW (430 HP)
- Rated RPM: 2000 RPM
- Maximum torque: 208.5 kg•m (1,508 ft. lb)
- Fuel system: Direct injection
- Governor: Electronically controlled
- Lubrication system: Gear pump, force-lubrication
- Method: Gear pump, force-lubrication
- Filter: Full-flow type
- Air cleaner: Dry type with double elements and precleaner, plus dust indicator
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**TRANSMISSION**
- Torque converter: 3-elements, 1-stage, 2-phase
- Transmission: Full-automatic, counter-shaft type
- Speed range: 6 speeds forward and 2 reverse
- Lockup clutch: Wet, single-disk clutch
- Forward: Torque converter drive in 1st gear
direct drive in 1st lockup and all higher gears
- Reverse: Torque converter drive and direct drive in all gear
- Shift control: Electronic shift control with automatic clutch modulation in all gear
- Maximum travel speed: 58.6 km/h (36.4 mph)

**AXLES**
- Full time all wheel drive with 100% differential lock in all axles.
- Final drive type: Planetary gear
- Differential: 3.417
- Planetary: 4.941

**SUSPENSION SYSTEM**
- Front: Hydropneumatic suspension
- Rear: Combined hydropneumatic and rubber suspension system

**STEERING SYSTEM**
- Type: Articulated type, fully hydraulic power steering with two double-acting cylinders.
- Supplementary steering: Automatically actuated, electrically powered (meets SAE J695B)
- Minimum turning radius, wall to wall: 8.7 m (28'7"
- Articulation angle: 45° each direction

**BRAKES**
- Service brakes: Full-hydraulic control, oil-cooled multiple-disc type on all wheels
- Parking brake: Spring applied, caliper disc type
- Retarder: Front and center axle brakes act as retarder

**MAIN FRAME**
- Type: Articulated type, box-sectioned construction on front and rear

**BODY**
- Capacity:
  - Struck: 16.5 m³ (21.6 yd³)
  - Heaped (2:1, SAE): 22.3 m³ (29.2 yd³)
- Payload: 36.5 metric tons (40 U.S. tons)
- Material: 130 kg/mm² (184925 psi) high tensile strength steel
- Material thickness:
  - Bottom: 16 mm (0.63"
  - Front: 8 mm (0.31"
  - Sides: 12 mm (0.47"
  - Target area:
    - (inside length x width): 5629 mm x 3194 mm (18'6" x 10'6"
  - Heating: Exhaust heating (option)

**HYDRAULIC SYSTEM**
- Hoist cylinder: Twin, 2-stage telescopic type
- Relief pressure: 20.6 Mpa (210 kg/cm² 2,990 psi)
- Hoist time: 12 sec

**CAB**
- Dimensions comply with ISO 3471 and SAE J1040-1988c ROPS (Roll-Over Protective Structure) standards

**WEIGHT (APPROXIMATE)**
- Empty weight: 30300 kg (66,800 lb)
- Gross vehicle weight: 66875 kg (147,435 lb)
- Weight distribution:
  - Empty: Front axle: 55%
  - Rear axles: 45%
  - Loaded: Front axle: 28%
  - Rear axles: 72%

**TIRES**
- Standard tire: 29.5 R25

**SERVICE REFILL CAPACITIES**
- Fuel tank: 495 ltr. (130.8 U.S. Gal
- Engine oil: 52 ltr. (13.7 U.S. Gal
- Torque converter, transmission and retarder cooling: 115 ltr. (30.4 U.S. Gal
- Differentials (total): 54.5 ltr. (14.4 U.S. Gal
- Final drives (total): 35 ltr. (9.2 U.S. Gal
- Hydraulic system: 180 ltr. (47.6 U.S. Gal
- Suspension (total): 28.4 ltr. (7.5 U.S. Gal

**DIMENSIONS**
- Standard tire: 29.5 R25

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- Heating: Exhaust heating (option)
### Standard Equipment for Base Machine

**Engine:**
- Alternator, 50A/24V
- Air cleaner, dry type with double elements and precleaner, plus dust indicator
- Batteries, 170 Ah x 2 x 12V
- Electric governor
- Engine, Komatsu SAA6D140E-3, turbocharged and air to air cooled, high pressure common rail injection system, 2001 NA Tier II certified, diesel
- Exhaust muffler with stack
- Full-automatic F6 R2 transmission with K-Atomic shift control and automatic T/C lockup
- Starting motor, 11.0 kW
- Separator, fuel/water

**Cab:**
- Air conditioner/heater/defroster, electronically controlled
- Ashtray and cigarette lighter
- Cup holder
- Dual entry
- Electronic hoist control system
- Electronic maintenance display-monitoring system
- Floor mat
- Power windows
- Radio AM/FM with cassette
- Rear window guard
- Seat, air suspension, reclining (fabric)
- Seat, passenger, with 3” seat belt
- Seat, operator’s, 3” width, retractable
- Storage space under seat and right armrest
- Sun visor, front window
- Tilt and telescopic steering wheel
- Tilt cab arrangement for easy serviceability
- Tinted glass
- Windshield washer and wiper (front and rear)

**Lighting System:**
- Back-up light
- Hazard light system
- Headlights with dimmer switch
- Stop, tail and turn signal lights
- Working lights, front

**Guard and Covers:**
- Engine oil pan
- Driveline guards, front and rear
- Transmission underguard
- Mudguards for front and rear tires
- Exhaust/muffler thermal guard

**Monitoring System:**
- Instrument panel (digital display with service meter and odometer, fuel gauge, speedometer, tachometer, coolant temperature, torque converter oil temperature, retarder oil temperature)
- Warning light and alarm system (parking brake, dump body float, fuel, secondary steering, coolant temperature, torque converter oil temperature, retarder oil temperature, battery charge, steering oil temperature, engine oil pressure, retarder oil pressure, tilt caution, engine system, transmission system, retarder system)

**Other Standard Equipment:**
- Alarm, backup
- Body, 22.3 m³ 29.2 yd³
- Centralized greasing
- Differential lock in all axles, clutch type with electric controls
- Electric circuit breaker, 24 volt
- Electronic hoist control system
- Hand rails for platform
- Horn, electric
- Hydropneumatic suspension, front and rear
- Interaxle lockup, clutch type
- Ladders, left and right hand side
- Rearview mirrors
- Rearview mirrors, additional, left and right hand side
- Retarder/brake system, continuously cooled
- Steering system, automatic electric supplemental
- Tire, 29.5R25 Bridgestone VLT with rims
- Under view mirror, front

### Optional Equipment

**Body:**
- Delete body
- Body exhaust heating kit
- Tail gate

**Lighting System:**
- Fog lights
- Side working lights, left and right side

**Other:**
- Alternator, 75A, 24V
- Batteries, large capacity

**Tires:**
- Bridgestone – 29.5R25 VLTS
- Michelin – 29.5R25 XADN
- 29.5R25 XADT
- Goodyear – 875/65 R29 GP4D
**Support**

Count on Komatsu and your local distributor for the support you deserve. Our success depends on satisfying your need for productive equipment and supporting that equipment. That’s why we have one of the largest and strongest heavy-equipment distributor organizations in North America. Their personnel are not only trained to help you select the equipment that is best-matched for your business but to support that equipment.

**Finance** Through its finance company, Komatsu can offer you a wide variety of financing alternatives designed to meet your needs. Programs include municipal leases for governmental agencies, conditional sales contracts, and leases with $1 purchase options for customers interested in owning their equipment. Ask your distributor about Komatsu leasing. We offer finance and operating leases and the unique *Advantage Lease* which offers you predetermined purchase, return, and renewal options.

**Parts** Three computer-linked parts distribution centers provide fast access to anywhere in the U.S. and Canada. Most parts are available overnight. Plus, Komatsu distributors keep a large assortment of commonly used parts in stock for immediate access.

**Remanufactured parts** Save money and still have the same warranty as new parts at a fraction of the cost with like-new remanufactured parts.

**Maintenance** Take advantage of the experience we have gained and ask your distributor about our factory-supported programs including: regular scheduled maintenance, oil and wear analysis, diagnostic inspections, undercarriage inspections, training, special service tools, parts programs, and even a special software program to help your distributor keep track of and manage service-related data.