

KOMATSU®

HM400-2R

GROSS HORSEPOWER

338 kW 453 HP

NET HORSEPOWER

327 kW 438 HP

MAXIMUM GVW

69040 kg 152,200 lb

**HM
400**

ARTICULATED DUMP TRUCK



Photo may include optional equipment.

Standard equipment may vary for each country, and this specification sheet may contain attachments and optional equipment that are not available in your area. Please consult your Komatsu distributor for detailed information.

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WALK-AROUND

The HM400-2R offers all around maximum productivity with faster travel speed and many features that enhance efficiency, while reducing maintenance costs. From rough terrain construction sites to landfills - the HM400-2R has the competitive edge.

Wide, spacious cab with excellent visibility

- The wide cab offers a comfortable operator and passenger environment
- Viscous mounts support the cab while absorbing vibrations and noise
- Low-noise cab through improved sealing with integrated floor
Interior noise level 76 dB(A)
- Additional front under view mirrors provide superior visibility
- Air suspension seat is standard
- Power window (L.H)

Fully hydraulic articulated steering

- Light and easy operation
- Minimum turning radius **8.7 m 28'7"**

High performance Komatsu SAA6D140E-5 engine

- Gross horsepower **338 kW 453 HP**
- Engine power mode selection system realizes both greater productivity and improved fuel economy
- Higher engine output and torque improve productivity in all applications

Tiltable cab can be tilted rearward 32 degrees to provide easy service.



Photo may include optional equipment.

Interaxle & differential locks provide excellent traction in rough terrain.

The oil-cooled multiple-disc 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.

Komatsu designed, electronically controlled transmission for a comfortable ride.

F6-R2 counter-shaft type transmission with K-ATOMiCS (Komatsu Advanced Transmission with Optimum Modulation Control System). Transmission shift hold button optimizes the operator control.

Easy-to-load body

- Heaped capacity **22.3 m³ 29.2 yd³**
- Low loading height **2970 mm 9'9"**
- High strength body constructed of thick wear-resistant steel having 400 Brinell hardness

Hydro-pneumatic suspension for all terrains.

The hydro-pneumatic suspension in both front and rear suspensions assures a comfortable ride even over rough terrain.



GROSS HORSEPOWER
338 kW 453 HP @ 2000 rpm

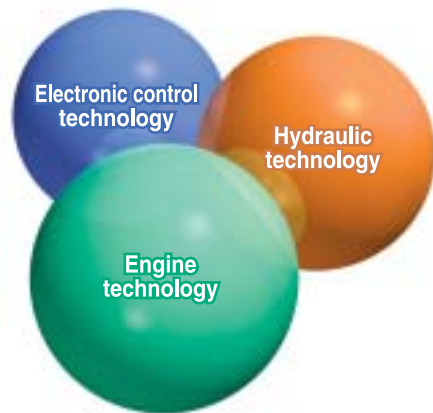
NET HORSEPOWER
327 kW 438 HP @ 2000 rpm

MAXIMUM GVW
69040 kg 152,200 lb

PRODUCTIVITY FEATURES

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

Komatsu technology



Komatsu develops and produces all major components, such as engines, electronics and hydraulic components, in house.

With this "Komatsu Technology," and adding customer feedback, Komatsu is achieving great advancement in technology.

To achieve both high levels of productivity and economical performance, Komatsu has developed the main components with a total control system.

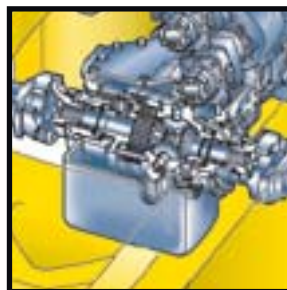
The result is a new generation of high performance and environment friendly machines.

High performance Komatsu SAA6D140E-5 engine

Powerful turbocharged and air-to-air aftercooled Komatsu SAA6D140E-5 engine provides **338 kW** 453 HP.

This engine realizes high power in low fuel consumption with Common Rail Injection system (CRI), and thus it delivers higher travel speeds with high horsepower.

Also high torque at low speed, impressive acceleration, and low fuel consumption ensure maximum productivity.



Engine power mode selection system

The system allows selection of the appropriate mode between two modes <Power mode > or <Economy mode> according to each working condition. The mode is easily selected with a switch in the operator's cab.

Power mode

Great productivity can be attained by taking a full advantage of high output power. It is appropriate for job sites where larger production at uphill-hauling is required.

Economy mode

Engine speeds of the maximum output, downshift, and upshift are set to a lower level. It is appropriate for light work on the flat ground.

Komatsu designed electronically controlled countershaft transmission

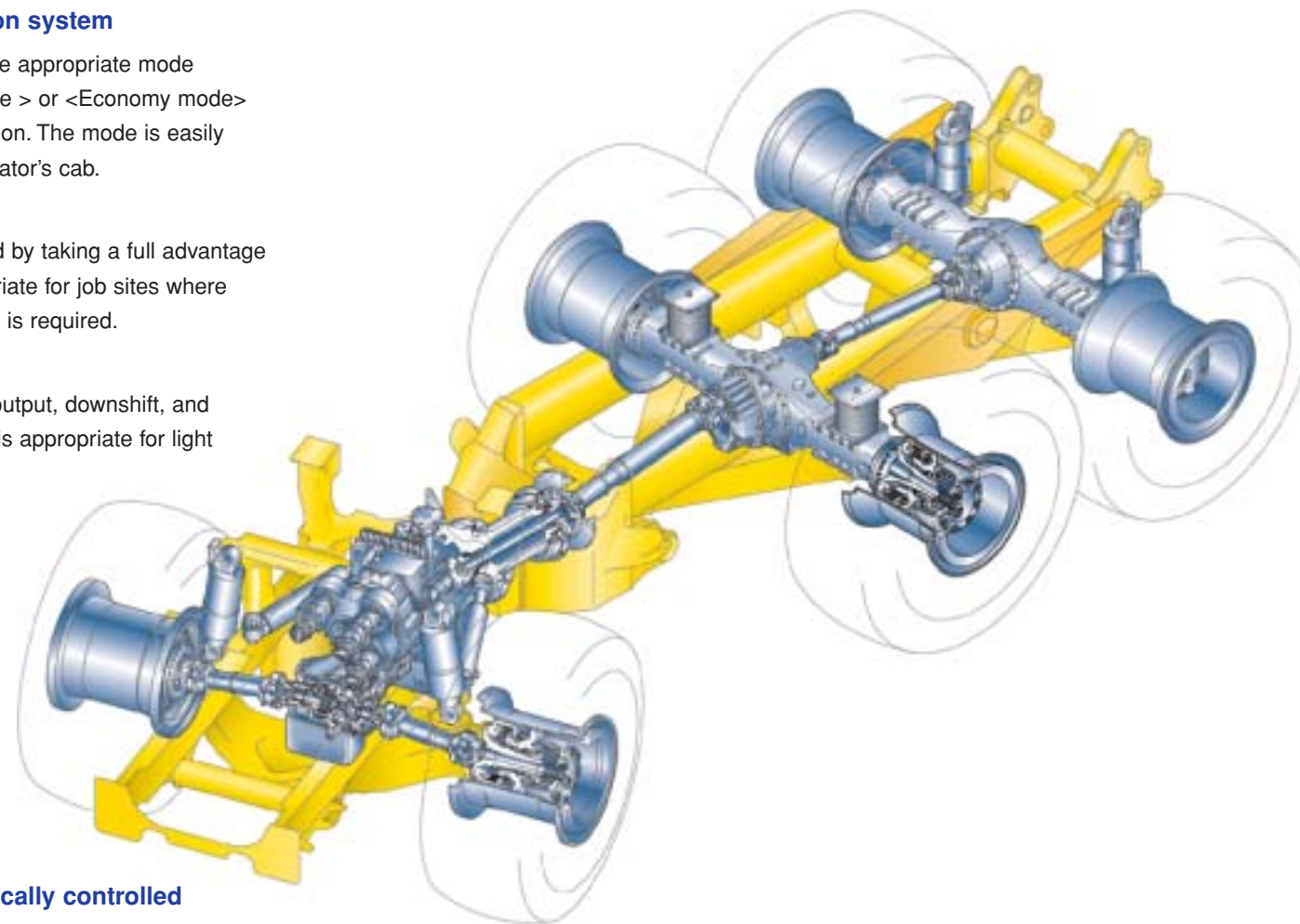
The Komatsu designed Electronically Controlled Transmission called K-ATOMiCS has been a success in Komatsu's rigid dump trucks. The electronic clutch modulation system ensures proper clutch pressure when the clutch is engaged. The total control system controls both the engine and transmission by monitoring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

Komatsu designed interaxle and differential locking systems

The full-time six-wheel drive system reduces slippage. A wet multiple-disc 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.

Hydro-pneumatic suspension

The hydro-pneumatic suspension has been proven on Komatsu's rigid dump trucks. The front axle hydro-pneumatic 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 hydro-pneumatic suspension. The entire vehicle's suspension delivers a comfortable ride and maximizes productivity.



Large capacity body and box section frame structure

The HM400 has the large heaped capacity of **22.3 m³** 29.2yd³ body. The low loading height of **2970 mm** 9'9" enables easy loading. The body is built of high strength 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 connecting torque tubes made of high strength low alloy steel.

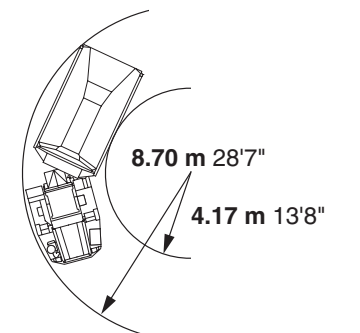
Hydraulically controlled wet multiple-disc brakes and retarder

Wet multiple-disc brakes have been proven on Komatsu dump trucks and wheel loaders ensuring highly reliable and stable brake performance. The large-capacity, continuously cooled, wet-multiple disc brakes also function as a highly responsive retarder which gives the operator greater confidence at higher speeds when travelling downhill. Retarder Absorbing Capacity (continuous descent):

389 kW 533 HP

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 ability to work in tight areas.



OPERATOR ENVIRONMENT

Komatsu has developed a state-of-the-art, wide comfortable cab. The low level of vibration and noise ensure maximum productivity from the operator.

Low-noise designed cab

Integrated cab and floor provide airtight cab. Engine room is also sealed. The low noise and sound insulated muffler /exhaust pipe contribute to reducing sound levels.

All these together offer a quiet and comfortable operator environment.

Wide, spacious cab with excellent visibility

The wide cab provides a comfortable space for the operator and a full size buddy seat. Large electrically operated window 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.

The front under view mirrors are increased to two from one, and the rear view mirrors increased to four from two. Newly employed laminated glass in the windshield assures safe operation. In addition, electric heated rear window facilitates defrosting.



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. This Komatsu on-board monitoring system 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.



Photo may include optional equipment.

Built-in ROPS/FOPS cab

These structures conform to ISO 3471-1994 standard.

Hydro-pneumatic suspension for all terrains

The hydro-pneumatic 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 is standard

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

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



EASY MAINTENANCE

The HM400-2R has been designed to keep service time down and productivity up by reduced number of grease points, easy access to filters, and longer intervals between oil changes.

Tiltable cab

The cab can be tilted rearward 32 degrees 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 after easily removing only eight bolts...



Fewer grease points

The number of grease points are minimized by using maintenance-free rubber bushings.

Extended service intervals

In order to minimize operating costs, service intervals have been extended:

- Engine oil 500 hours
- Transmission oil 1000 hours
- Engine oil filters 500 hours
- Transmission oil filters 1000 hours

Guards

The following guards are provided as standard:

- Protective grille for rear window
- Engine underguard
- Heavy duty transmission underguard
- Propeller shaft guards
- Exhaust thermal guard
- Fire prevention covers



SPECIFICATIONS



ENGINE

Model Komatsu SAA6D140E-5
 Type Water-cooled, 4-cycle
 Aspiration Turbo-charged, after-cooled
 Number of cylinders 6
 Bore 140 mm 5.51"
 Stroke 165 mm 6.50"
 Piston displacement 15.24 ltr. 930 in³
 Horsepower
 SAE J1995 Gross 338 kW 453 HP
 ISO 9249 / SAE J1349 Net 327 kW 438 HP
 Rated rpm 2000 rpm
 Fan drive type Mechanical
 Maximum torque 213 kg·m 1,541 lb. ft
 Fuel system Direct injection
 Governor Electronically controlled
 Lubrication system
 Method Gear pump, force-lubrication
 Filter Full-flow type
 Air cleaner Dry type with double elements and precleaner, plus dust indicator



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 58.5 km/h 36.4 mph



AXLES

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



SUSPENSION SYSTEM

Front Hydro-pneumatic suspension
 Rear Combined hydro-pneumatic and rubber suspension system



STEERING SYSTEM

Type Articulated type, fully hydraulic power steering with two double-acting cylinders
 Supplementary steering Automatically actuated, electrically powered
 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
 Connected by strong torque tubes.



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 185,000 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) 5630 mm x 3195 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 ROPS (Roll-Over Protective Structure) standard



WEIGHT (APPROXIMATE)

Empty weight 32,460 kg 71,560 lb
 Gross vehicle weight 69,040 kg 152,200 lb
 Weight distribution:
 Empty: Front axle 55.1%
 Center axle 22.8%
 Rear axle 22.1%
 Loaded: Front axle 29.0%
 Center axle 35.7%
 Rear axle 35.3%



TIRES

Standard tire 29.5 R25



SERVICE REFILL CAPACITIES

Fuel tank 493 ltr. 130.3 U.S. Gal
 Engine oil 50 ltr. 13.2 U.S. Gal
 Torque converter, transmission and retarder cooling 115 ltr. 30.4 U.S. Gal
 Differentials (total) 97 ltr. 25.6 U.S. Gal
 Final drives (total) 32 ltr. 8.7 U.S. Gal
 Hydraulic system 180 ltr. 47.6 U.S. Gal
 Suspension (total) 20.4 ltr. 5.4 U.S. Gal

