Vehicle range

255
405
605
705
905

65 METRIC TONS

DUMP TRUCK DP 705

PERLINI Equipment
veicoli • dumpers • meccanica industriale

Manufacturers since 1957

PERLINI Equipment
veicoli • dumpers • meccanica industriale

Maximum payload: 65.000 kg
Capacity: 42 m³

65 Metric tons

65 Ton Standard vehicle
Total gross weight: 108.500 kg

DUMP TRUCKS - ALWAYS AT WORK

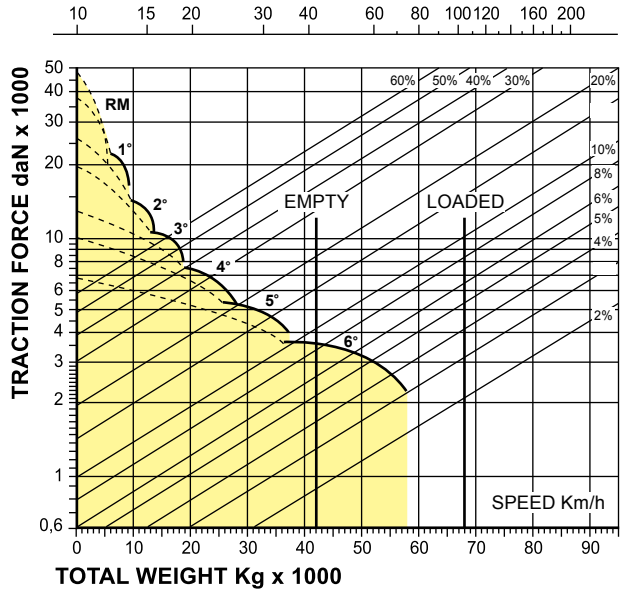
By this design concept, **Perlini** has developed a distinctive construction technique in its **Dump Trucks**, to make the job-site personell tasks of maintenance and repair easier during vehicle operation.

As a matter of fact the components requiring maintenance, such as engine, transmission, differential, hydraulic pumps, suspensions and brakes, have been all carefully designed and properly installed to minimize the truck downtime, thus improving availability, for a high productivity at low operational costs.

Performances

Gradeability performance

To calculate the maximum climb angle, please read from total weight at the bottom and follow the line upwards until it crosses the diagonal line matching the overall resistance percentage (where the "overall resistance" is the actual slope grade, with 1% added for every 10 kg/t of rolling resistance).
From this matching point of weight and resistance, move horizontally to the curve with the highest obtainable speed range, then down to the maximum speed.
Usable rim pull depends on traction available and weight on the drive wheels.



BETTER VEHICLE CONTROL = SAFETY

BRAKES

The main braking system consists of two service brakes, and the rear brakes retarder.

Service brakes

The front axle is equipped with disc dry type brakes, with single independent calipers: equipped with wide and tick braking elements capable of developing the best braking transition in all operating conditions, especially on slippery terrain, thus assuring stability during operation.

The braking elements provided with great thickness and surface guarantee superior endurance, and can be easily replaced when changing tires, without disassembling the brake thrust elements, thus minimizing service time and costs.

The great capacity retarder integrated in the brake discs is automatically controlled, and balanced when the vehicle operates on difficult, lengthy descending slopes.

Traction control system ABS/ ASR

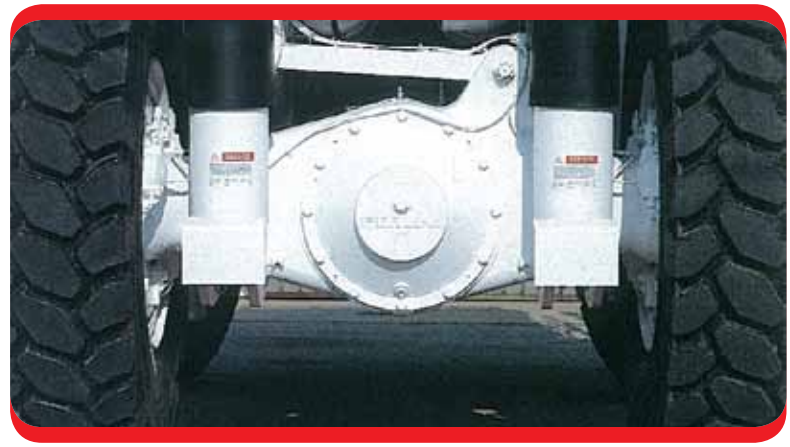
ABS

Anti-blocking system of the wheels while braking.
It assures an excellent truck control while braking, even on low grip surfaces.

ASR

Traction control. Automatically activating in case of skidding of one or both the driving wheels, it guarantees truck stability even upward slopes with low grip sections.

The rear axle is equipped with wet multiple disc brakes, designed and manufactured by Perlini, that ensure reliable braking, especially on descending slopes and downhill tracks or slippery terrains.
Featuring oversized discs to guarantee longer operational life.



LESS FUEL CONSUMPTION - LESS TIRE WEAR

The front oleopneumatic suspensions have been developed and produced with a particular fork design, for a reduced offset, allowing soft steering and reduced slipping of the tires on the ground.
This features convey better control and stability on the front wheels during straight motion, with comfortable and safe driving.
This construction design allows easy inspection and replacement of seals, that can be performed without disassembling the suspension, but acting solely on its upper or lower chamber, with a significant reduction of service costs and truck downtime.
The lower pneumatic chamber is of large diameter, allowing low inside pressure and a longer seal life.

The rear oleopneumatic suspensions, of special Perlini design, provide an excellent flexibility to the truck in any conditions of application and loading. They are connected to the chassis and to the rear axle through ball joints, which allow a good oscillation amplitude, for better adjustment even on the roughest terrains. The wide axle base ensures best vehicle stability in turning and in winding haul roads. The large diameter of the pin reduces the inner pressure thus extending the life of the seals and, at the same time, giving a better flexibility. The inner shock-absorber dampens the vibrations transmitted through the rigid structure of the frame from the ground bumps. Perlini original suspensions allow, therefore, high cycle speeds with reduced stresses on the mechanical and structural components, greater productivity with high comfort.

Perlini suspensions with other features of the vehicle, achieve the following advantages:

- **Higher stability and driving comfort**
- **Higher average cycle speed**
- **Less tire wear**
- **Less fuel consumption**
- **Less stresses on the truck structural and mechanical components**

MORE STABILITY - MORE SPEED - MORE CUBIC METERS HAULED

CAB

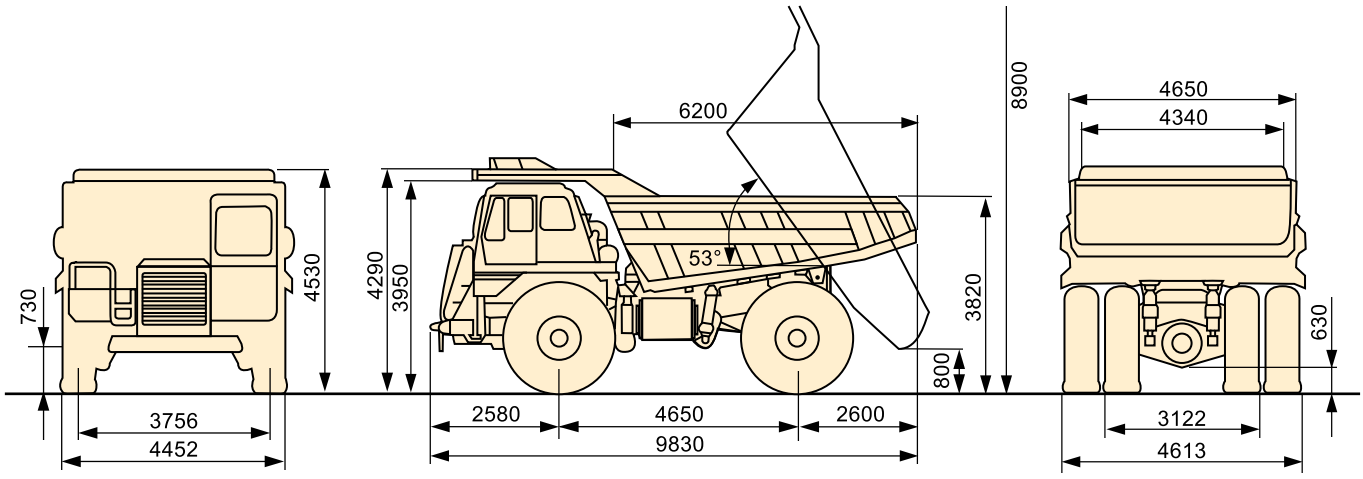
DP 705 cab is designed and manufactured to maximize the operator's comfort and safety, and complies with the EEC Standards. Optimum driving position, seat with double dampening, adjustable in height and depth, steering wheel adjustable in height and inclination, best accessibility of all controls with gear selector and body hoist control lever positioned on the dashboard next to the steering wheel. The visibility from the driving position is wide in all directions.
With air conditioner in operation, the noise level in the cab is: 79 dBA.
The instrument board is complete so as to assure a constant overview of the main vehicle functions.

DIMENSIONS at empty vehicle (mm)

All dimensions are approximate.
The length and width dimensions, the distance between the axles (wheel base) and the height of center of gravity of a vehicle are essential features assuring a best load distribution on wheels in every ground conditions, particularly on rough terrain, as well as on uphill and downhill tracks.
In the **DP 705** the optimum weight distribution, obtained through the large wheel base and width, as well as to the low centre of gravity, improves vehicle performances, allows better turning control with safer and easier drive, improves adherence, reduces fuel consumption and tire wear, and contributes to higher average cycle speed and to a greater productivity.

External noise level in compliance with the directive 2000/14/EEC

Dimensions at empty vehicle (mm) - All dimensions are approximate



Specifications, weights, dimensions and tolerance can be changed at any time without previous notice.

This vechicle complies with the ECC safety standards - EEC standard 2006/42.

DP 705 SPECIFICATIONS

Maximum payload: 65.000 kg ◐ Capacity: 42 m³

ENGINE *

**Engine emissions meet 97/68 EC stage II regulations*

Model	Detroit Diesel MTU 12V - 2000 - TIER 2
Type	4 cycle water cooled
Air system	Turbocharged with intercooler
N° of cylinders	12
Bore x stroke	130 x 150 mm
Displacement	23.89 lt
Gross power SAE J1995	567 kW (760 HP) at 2100 rpm
Max Torque	3309 Nm at 1350 rpm
Filter	Dry type, heavy duty, double elements, precleaner and dust indicator
Control	Electronic DDEC IV system

DRIVE AXLE

Perlini heavy duty with single central reduction and built-in differential, full floating axle shafts and four-planetaries epicyclic train at the wheels.

Central reduction	3.53 : 1
Epicyclic reduction	5.78 : 1
Total reduction	20.40 : 1

FRAME

Box sectioned longitudinal members made of high yield strength steel plate, connected to each other by means of tubular cross members with special torsion proof joints.

TIRES

Singly mounted at front and dually at rear, with interchangeable rims.

Type	Radial E4
Standard tire size	24.00 x 35"
Standard rim size	17.00 x 35"

BODY

Structure	Ribwork structured body with dual slope and flat bottom
Material	High tensile strength steel (1250 N/mm²)
Average hardness	400 HB
Body canopy	**ROPS/FOPS ISO 3471 and ISO 3449**

Thickness (standard body)

Bottom	25 mm
Front	12 mm
Side	12 mm

Capacities standard body

Struck	30,5 m³
Heaped SAE 2:1	42,0 m³

DUMPING SYSTEM

Rear dumping by means of twin hoist cylinder, 2 stages, telescopic double acting, mounted outside the frame.

Hydraulic pump flow	400 litres/min
Max. pressure	150 bar
Insertion	Only during the unloading phase
Dumping time	16 sec
Dumping angle	53°

ELECTRICAL SYSTEM

Tension	24 V
Batteries	n° 4, 12V 176 Ah/each
Alternator	24 V - 100 A

TRANSMISSION

Full automatic, planetary gear, multidisc clutches hydraulically activated.

Model	Allison H 6610
Torque converter	3 elements TC 683
Lock-up clutch	Automatically inserted-effective in all forward ranges
Mounting	Remote type
Shift control	Automated – controlled electronically
Gears	6 speeds forward and 2 reverse

Gear	1	2	3	4	5	6	R1	R2
Ratio	4,00	2,68	2,01	1,35	1,00	0,67	5,12	3,46

STEERING - ISO 5010

Indipendent hydraulic system with twin double-acting cylinders.
An electric pump inserted into the hydraulic circuit allows steering in case of power source failure.

Main pump flow	230 litres/min
Max. pressure	150 bar
Turning radius	11.0 m

SUSPENSIONS

Front - Original Perlini fork type, indipendent, oil pneumatic with built-in shock absorbers.

Stroke	270 mm

Rear - Original Perlini type, oil pneumatic with double flexibility and built-in shock absorbers.

Stroke	270 mm

BRAKES - ISO 3450

Service

Front - Selfadjusting disc type, air-over-oil actuated with a separate circuit.

Disc dimension	710 x 32 mm

Rear - Sealed multiple disc brakes, cooled by oil forced circulation.

Brake surface (rear axle)	81.600 cm²

Parking - Disc type, spring applied, pneumatic released actuates on drive shaft.

Disc diameter	440 mm

Emergency - Due to the two separate circuits, braking is assured even in case of failure of one circuit.

Retarder rear brakes – Air-over-oil, controlled by a lever inside the cab positioned on the steering column.

Standing braking power	746 kW (1000 HP)

PERFORMANCES

Gear	1	2	3	4	5	6	R1	R2
Speed	10,0	15,0	20,0	29,6	40,0	59,7	7,8	11,5

STANDARD EQUIPMENT

- Electric starting engine.
- Electronic powershift transmission.
- Interchangeable disc front brakes.
- Wet multiple disc oil brakes and retarder.
- Body heating by means of exhaust smokes.
- Parking disc brake.
- Manoeuvre brake system.
- Power steering system with electric emergency pump.
- Automatic central lubricating system.
- Dry air filters with clogging indicators.
- Headlights with dimmer switch.
- Directional signals, stop and tail lights.
- Back up lights and alarm.
- Automatic air-conditioning system.
- Traction control system ABS/ASR.
- Type-tested windshield with washer and wiper.
- Rock ejectors and towing hook.
- Locking system for lifted body.
- Insulated and sound proofed cab.
- Cushioned and adjustable operator's seat.
- Adjustable steering wheel.
- Ashtray.
- Air dryer on pneumatic system.
- Alternator 100 A.
- Radial tires E4.
- Right and left rear-view mirrors.

OPTIONAL EQUIPMENT

- "Heavy duty" body.
- Engine pre-heating system.
- Xenon lights.
- Fuel filter with water separator.
- Platform for cab access, left side.
- Front and side body canopy protection.
- Rear view mirrors, heated.
- Monitor in cab for rear view.
- On board weighting system.
- Tachograph.
- Radio with cd player.

CAB

Two doors design, with controls arrangement and driver's space conforming with EEC standard.
It rests flexibly on the frame by means of special rubber elements. Heat insulated and sound proofed, it is equipped with a confortable weight-adjusting operator's seat, adjustable steering wheel and a complete and easy readable dash panel.
Automatic air-conditioning system.

MASSES*

*approximate values

Empty weight (with standard body)	43.500 kg
Payload	65.000 kg
Gross vehicle weight	108.500 kg

Weight distribution	Loaded	Empty
Front	33%	48%
Rear	67%	52%

SERVICE CAPACITIES (litres)

Engine oil	94
Allison transmission oil	80
Drive axle oil	200
Oil brakes and dumping system oil	350
Steering system oil	60
Suspensions oil (total)	70
Cooling system	160
Fuel tank	700

65 metric tons

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