

# Articulated Dumper Truck

# ADT 30

Automatic transmission  
6x6 Drive

- ENGINE  
Cummins M11
- POWER  
280 bhp 209kW
- GVW 45.95 t (50.7 sh tn)
- Payload  
27 t (29.8 sh tn)
- Volume (SAE 2:1)  
16,5 m<sup>3</sup>



**ASTRA**  
Veicoli Industriali

ENGLISH



**ENGINE**

Cummins M11: diesel direct injected turbocharged 4-cycle engine  
6 in-line, with replaceable linings

|                |        |                     |
|----------------|--------|---------------------|
| • bore         | 125 mm | 4.92 in             |
| • stroke       | 147 mm | 5.79 in             |
| • displacement | 10,8 l | 661 in <sup>3</sup> |

**Cylinders**

- bore
- stroke
- displacement

**Compression ratio**

**Power rating** 209 kW at 2100 rpm 280 bhp  
**Torque max** 1288 Nm at 1300 rpm 950 lbf ft  
**Air filter** dry type air cleaner  
**Cold starting device** optional



**STEERING SYSTEM**

Hydraulically operated steering, acting on articulated joint between frames  
Orbitrol plus hydraulic amplifier  
2 double acting hydraulic cylinders  
gear type (see hydraulic system)

|                                 |   |          |
|---------------------------------|---|----------|
| <b>Max. operative pressure</b>  | 185 bar   | 2683 PSI |
| <b>Emergency Steering angle</b> | electrical pump, standard fitted 40° both direction |          |
| <b>Turning radius</b>           | see specific table                                  |          |
| <b>Steering column</b>          | adjustable  |          |

**Control Cylinders Pump**  
**Max. operative pressure**  
**Emergency Steering angle**  
**Turning radius**  
**Steering column**



**AUTOMATIC TRANSMISSION**

ZF 6WG210 full power-shift gearbox with 8 forward and 6 reverse speeds

**Gears/Speed**

**Ratios F - R**

|             |   | forward |      | reverse |      |
|-------------|---|---------|------|---------|------|
|             |   | km/h    | mph  | km/h    | mph  |
| 5.56 - 5.27 | 1 | 5,0     | 3.1  | 5,3     | 3.3  |
| 3.62 - 2.14 | 2 | 7,7     | 4.8  | 13,0    | 2.1  |
| 2.26 - 0.89 | 3 | 12,3    | 7.6  | 31,1    | 19.3 |
| 1.47        | 4 | 18,9    | 11.7 |         |      |
| 0.94        | 5 | 29,5    | 12.3 |         |      |
| 0.61        | 6 | 45,3    | 28.2 |         |      |

single stage torque converter with lock-up in all gears  
Built-in drop box with dog-clutch differential lock between front and rear drives. Max. gradeability: >40%



**BRAKE SYSTEM**

Dual circuit, full hydraulic system, operated by pressure accumulators  
single caliper dry disc brakes  
single caliper dry disc brakes  
spring applied twin caliper disc acting on rear propeller shaft  
relief valve pressure  
125 bar 1813 PSI  
Jakob type exhaust brake

**Service** • front  
• rear  
**Parking**  
**Gear type pump**  
(see hydraulics)  
**Engine brake**



**SUSPENSION**

Semi-independent systems front and rear , very sensitive to the ground  
double air-over-hydraulic cylinders  
double beam linked by elastic pin to a torque reacting structure

**Front**  
**Rear**



**AXLES – 6x6 DRIVE**

ZF axles, rigid-type, with planetary gear-type hub reduction  
driven, with limited slip differential  
driven, with limited slip differentials and lockable interaxle differential

**Front axle**  
**Rear axles**

**Reductions**

|                | standard | optional  |
|----------------|----------|-----------|
| • differential | 3.44     | no option |
| • hub          | 6.35     |           |
| • total ratio  | 21.85    |           |



**ELECTRICAL SYSTEM**

**Voltage** 24 V  
**Battery** 2 x 12 V 88 Ah  
70 A 28 V  
7,6 kW 10.2 Bhp

**Alternator**  
**Starter motor**



**HYDRAULIC SYSTEM**

Hydraulic pump, engine dependent, for steering, braking, tipping  
245 l/min 64.7 US gal/min  
**max. working pressure**  
170 bar 2466 PSI

**Capacity**  
**Gear type pump**

**Emergency electrical pump for steering**



**WHEELS & TYRES**

5-piece rims on all 6 wheels

**Rims**  
**Tyres**

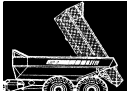
|  | standard    | Optional     |
|--|-------------|--------------|
|  | 19.5-25     | 24.00-30     |
|  | 23.5 R 25** | 30/65 R 25** |



**Steel Profile**

**FRAME & CHASSIS**

Front and rear frames are linked by heavy duty articulation pin joint and taper roller bearing ring  
high tensile steel Hardox 400  
box section and plates



**BODY**

Hardened and tempered wear resi-stant steel plates, reinforced by high tensile pressed steel Hardox 400

2 double-acting multistage cylinders

**Tipping**

**Tipping angle**

**Tipping time**

**Volume**

• **struck SAE**

• **heaped SAE 2:1**

**Thickness**

• **floor and scow**

• **sides**

• **front**

70°

Up 10"

Down 8"

m<sup>3</sup>

yd<sup>3</sup>

13,0

17,0

16,5

21,5

mm

in.

12

0.50

8

0.31

10

0.39



**INSTRUMENTS & GAUGES**

**Digital display and relative lights**

**for:** air cleaner obstruction, battery

charge, headlight highbeam, turn signal, service brake pressure, parking brake, longitudinal differential engaged, torque converter lockup, fuel level, engine coolant temperature, engine oil level, engine oil temperature, transmission pressure, transmission temperature, hour meter, speed (MPH or Km/h) engine speed (RPM), clock.

**Controls and indicators for:** engaged gear, wiper washer, wiper speed (2 speed)), heater vent (+ aircoc), cigarette lighter, all wheel drive selector, lights/horn, hazard warning, flashing bacon, front work lamps fog light, auto gear-shifting engagement



**CAB**

Steel constructed to current ROPS & FOPS

Standards, centrally located

mounted on rubber pads

pressurized and filtered air

tinted glass

**Engine bonnet**

**Driver seat**

**Engine bonnet**

**Rear-view mirrors**

forward tilting and sloped

mechanically sprung

forward tilting and sloped

including wide-angle



**STANDARD EQUIPMENT**

Equipment and accessories follow

Markets requirements and Laws.

**Ergo standards and optionals are stated by local price lists.**



**OPTIONALS**

*See notice in Standard*



**SERVICE REFILL CAPACITIES**

For fluids specification, please look at Operating & Servicing Manual

**Crankcase**

**Cooling system**

**Fuel tank**

**Transmission**

**Axles** • front

• center

• rear

**Hubs**

**Hydraulics**

liters

US Gals

34

9.0

43

11.4

325

86.0

19

5.0

11

2.9

14

6.3

11

2.9

2,5x6

0.66x6

200

52.8

Air conditioning

12 V converter

Close circuit TV

Cold starting device

Radio cassette player

Body extension

Body heating kit

Body liners

Dump indicator

Rear gate hydraulically controlled

Retarder

Michelin tyres

Tyres 30/65 R 25



**OPERATING WEIGHTS**

Including fuel and driver (70 kg/154 lb)

**Empty**

**Rated load**

**Loaded**

kg

Lb

kg

lb

kg

lb

**Assale anteriore**

**Assale posteriore (boogie)**

Total (G.V.W.)

9.120

20.106

6.830

15.058

15.950

35.164

9.830

21.671

20.170

44.467

30.000

66.139

**18.950**

41.777

**27.000**

59.525

**45.950**

101.303



# Articulated Dumper Truck **ADT 30**

70°

T

J

R

E

K

L

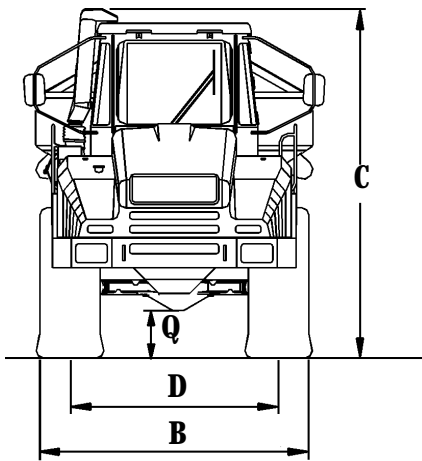
M

N

O

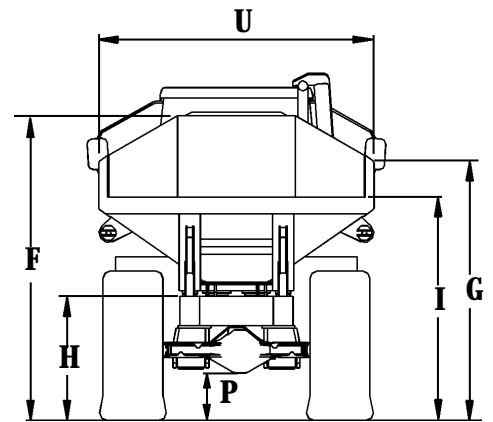
S

A



SAE  
Turning  
radius  
(J695B)

|   | mm    | ft in. |
|---|-------|--------|
| X | 4.832 | 15'10" |
| Z | 8.500 | 27'11" |



|   | mm    | ft in. |
|---|-------|--------|
| A | 9.493 | 31'2"  |
| B | 2.800 | 9'3"   |
| C | 3.460 | 11'4"  |
| D | 2.200 | 7'3"   |
| E | 975   | 3'3"   |
| F | 3.104 | 10'3"  |
| G | 2.648 | 8'9"   |

|   | mm    | ft in. |
|---|-------|--------|
| H | 1.264 | 4'2"   |
| I | 2.277 | 7'5½"  |
| J | 27°   | 27°    |
| K | 2.286 | 7'6"   |
| L | 1.333 | 4'5"   |
| M | 2.900 | 9'7"   |
| N | 1.700 | 5'7"   |

|   | mm    | ft in. |
|---|-------|--------|
| O | 1.274 | 4'3"   |
| P | 484   | 1'7"   |
| Q | 484   | 1'7"   |
| R | 510   | 1'8"   |
| S | 338   | 1'2"   |
| T | 6.000 | 19'9"  |
| U | 2.800 | 9'3"   |