

# Articulated Dumper Truck

# ADT 16

Automatic Transmission  
4x2/4x4



- ENGINE  
Cummins 6 BT
- POWER  
137 bhp 102kW
- GVW 23.2 t (25.6 sh tn)
- Payload  
14 t (15.4 sh tn)
- Volume (SAE 2:1)  
10,0 m<sup>3</sup>

**ASTRA**  
Veicoli Industriali

ENGLISH



### Engine

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

#### Cylinders

- bore **102 mm 4.02 in**
- stroke **120 mm 4.77 in**
- displacement **5,88 l 359 in<sup>3</sup>**

#### Compression ratio

**Power rating** 102 kW at 2000 rpm 137 bhp

**Torque max** 613 Nm at 1400 rpm 452 lbf ft

**Air filter** dry type air cleaner



### Automatic Transmission

DF150 full power-shift gearbox with 8 forward and 3 reverse speeds

#### Gears/Speed

##### Ratios F - R

		forward		reverse	
		km/h	mph	km/h	mph
<b>5.85 - 3.85</b>	<b>1</b>	4,4	2.7	6,6	4.1
<b>4.19 - 2.04</b>	<b>2</b>	6,2	3.9	12,9	8.0
<b>2.96 - 0.83</b>	<b>3</b>	8,7	5.4	30,9	19.2
<b>2.12</b>	<b>4</b>	12,2	7.6		
<b>1.49</b>	<b>5</b>	17,4	10.8		
<b>1.06</b>	<b>6</b>	24,4	15.2		
<b>0.75</b>	<b>7</b>	34,5	21.4		
<b>0.54</b>	<b>8</b>	48,0	29.8		

Single stage torque converter with lock-up in all gears

Built-in drop box with dog-clutch to 4x4 drive

Max. gradeability: >40%



### Axles – 4x4 Drive

New Holland axles, rigid-type, with double reduction and torque proportional differentials

driven

driven - 4x4 drive can be disengaged

#### Front axle

#### Rear axles

#### Reductions

- |                | standard | optional  |
|----------------|----------|-----------|
| • differential | 4.625    | no option |
| • hub          | 4.50     |           |
| • total ratio  | 20.81    |           |



### Wheels & Tyres

5-piece rims on all 4 wheels

standard	Optional
17.5-25	19.5-25
20.5 R 25**	25/65 R 25**

#### Rims

#### Tyres



### Steering System

Hydraulically operated steering, acting on articulated joint between frames

Orbitrol type

2 double acting hydraulic cylinders

gear type (see hydraulic system)

electrical pump, standard fitted

40° both direction

see specific table

adjustable

#### Control

#### Cylinders

#### Pump

#### Emergency

#### Steering angle

#### Turning radius

#### Steering column



### Brake System

Dual circuit, full hydraulic system, operated by pressure accumulators

#### Service

#### • front

oil-bath multi-plate brakes

#### • rear

oil-bath multi-plate brakes

#### Parking

wet type, multi-plate, maintenance free brake, transmission built-in



#### Front

#### Rear

### Suspension

Semi-independent systems front and rear, very sensitive to the ground

air-over-hydraulic cylinders

air-over-hydraulic cylinders



### Electrical System

**Voltage** 24 V

**Battery** 2 x 12 V 100 Ah

70 A 28 V

#### Alternator

#### Starter motor

3,8 kW 5.1 Bhp



### Hydraulic System

Hydraulic pump, engine dependent, for steering, braking, tipping

Capacity 102 l/min 27US gal/min

#### Capacity

#### Emergency electrical pump for steering



### 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

#### Steel

#### Profile



### 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**

70°

**Tipping time**

Up 11"

Down 24"

**Volume**

m<sup>3</sup>

yd<sup>3</sup>

• struck SAE

7,7

10.1

• heaped SAE 2:1

10,0

13.1

**Thickness**

mm

in.

• floor and scow

10

0.39

• sides

6

0.24

• front

6

0.24



### Instruments & Gauges

#### Digital display and relative lights

for: air cleaner obstruction, battery

charge, headlight highbeam, turn signal, service brake pressure, parking brake, 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 (+ airco), cigarette lighter, all wheel drive selector, lights/horn, hazard warning, flashing bacon, work lamps front and rear, 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

**Insulation**

**Air intake**

**Engine bonnet**

forward tilting and sloped



### 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

liters

US Gals

**Crankcase**

14

3.7

**Cooling system**

30

7.9

**Fuel tank**

170

44.9

**Transmission**

22

5.8

**Axles • front**

31

8.2

• rear

31

8.2

**Hubs**

included

included

**Hydraulics**

100

26.4

Close circuit TV  
Radio cassette player  
Rotating beacon on cab top  
Michelin tyres  
Tyres 25/65 R 25



### Operating Weights

Including fuel and Driver (70 kg/154 lb)

Empty  
kg Lb

Rated load  
kg lb

Loaded  
kg lb

**Front axle**

5.850

12.897

3.500

7.716

9.350

20.613

**Rear axle**

3.350

7.385

10.500

23.148

13.850

30.533

Total (GVW)

9.200

20.282

14.000

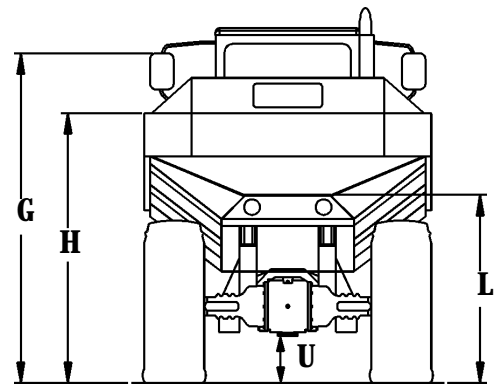
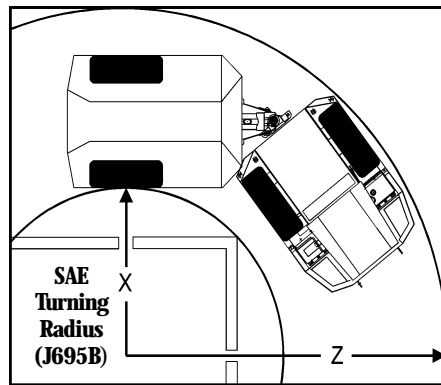
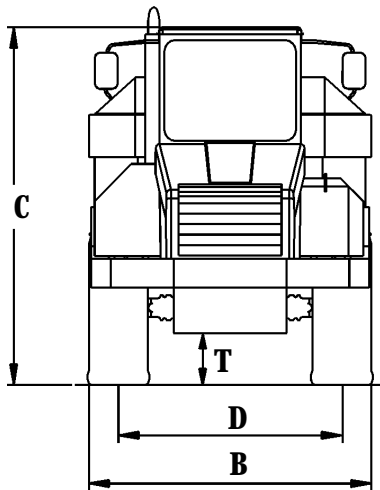
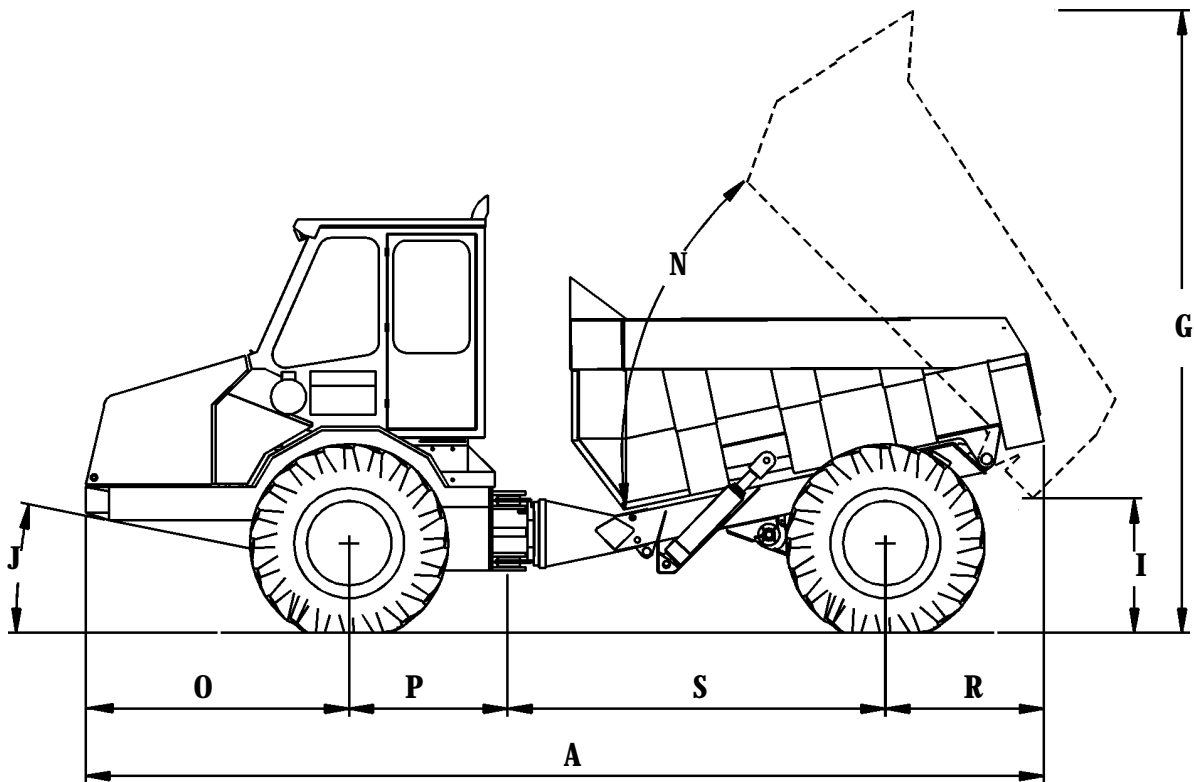
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23.200

51.146



# Articulated Dumper Truck **ADT 16**



	mm	ft in.
X	4.066	13'4"
Z	7.100	23'4"

	mm	ft in.
A	7.145	23'6"
B	2.500	8'3"
C	3.260	11'3"
D	1.955	6'6"
E	4.700	15'5"
G	2.650	8'9"
H	2.420	8'0"
I	975	3'3"
J	27°	27°

	mm	ft in.
L	1.690	5'1"
M	1.778	5'10"
N	70°	70°
O	1.970	6'6"
P	1.200	3'11"
R	1.175	3'10"
S	2.800	9'3"
T	490	1'7"
U	490	1'7"