

Articulated Dumper Truck

ADT 30 E



Automatic transmission
6x6 Drive

- ENGINE
Cummins M11
- POWER
280 bhp 209kW
- GVW 47.2 t (52 sh tn)
- Payload
27 t (29.8 sh tn)
- Volume (SAE 2:1)
16,5 m³

 **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 in³

Cylinders

- bore 125 mm 4.92 in
- stroke 147 mm 5.79 in
- displacement 10,8 l 661 in³

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



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%



Front axle
Rear axles

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

Reductions

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



Rims
Tyres

WHEELS & TYRES

5-piece rims on all 6 wheels

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



Control Cylinders Pump

Max. operative pressure
Emergency Steering angle
Turning radius
Steering column

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)
 185 bar 2683 PSI
 electrical pump, standard fitted
 45° both direction
 see specific table
 adjustable



Service • front
 • rear

Parking

Pump
Max. operative pressure
Engine brake

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 gear type
 125 bar 1813 PSI
 Jakob type exhaust brake



Front
Rear

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



Alternator
Starter motor

ELECTRICAL SYSTEM

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



Pump
Capacity
Max. operating pressure
Emergency electrical pump for steering

HYDRAULIC SYSTEM

Hydraulic pump, engine dependent, for steering, braking, tipping
 gear type
 245 L/min 64.7 US gal/min
 170 bar 2466 PSI



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

Tipping Ejector

2 double-acting multistage cylinders headboard is actuated by a multi-stage double-acting large cylinder

Load ejecting time

18 "

Headboard retracting time

15 "

Volume

m³ yd³

• struck SAE

13,0 17.0

• heaped SAE 2:1

16,5 21.5

Thickness

mm in.

• sides

12 0.50

• front

12 0.50

Rear gate hydraulically controlled



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 (+ airco), cigarette lighter, all wheel drive selector, lights/horn, hazard warning, flashing bacon, fwork 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

Climate

automatic air conditioning tinted glass

Driver seat

mechanically sprung

Engine bonnet

forward tilting and sloped

Rear-view mirrors

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

Air conditioning
12 V converter
Close circuit TV
Radio cassette player
Ejecting indicator
Retarder
Michelin tyres
Tyres 30/65 R 25



SERVICE REFILL CAPACITIES

For fluids specification, please look at Operating & Servicing Manual

Crankcase

	liters	US Gals
Crankcase	34	9.0
Cooling system	43	11.4
Fuel tank	325	85.9
Transmission	23	6.0
Axles		
• front	13	3.4
• center	17	4.5
• rear	13	3.4
Hubs	4,4x6	1.2x6
Hydraulics	350	92.5

Cooling system

Fuel tank

Transmission

Axles

• front

• center

• rear

Hubs

Hydraulics



OPERATING WEIGHTS

Including fuel and driver (70 kg/154 lb)

Front axles

Rear axles (boogie)

	Empty		Rated load		Loaded	
	kg	Lb	kg	lb	kg	lb
Front axles	9.550	21.054	5.950	13.118	15.950	34.172
Rear axles (boogie)	10.650	23.479	21.050	46.407	31.700	69.886
Total (G.V.W.)	20.200	44.533	27.000	59.525	47.200	104.058



Articulated Dumper Truck **ADT 30E**

T

J

R

E

K

L

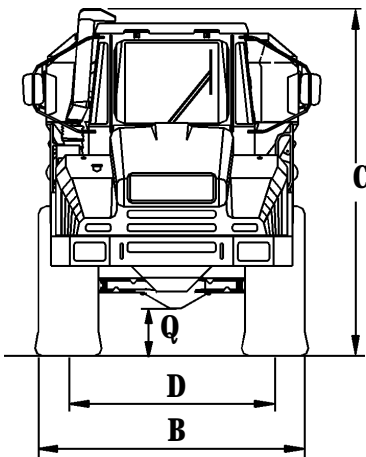
M

N

O

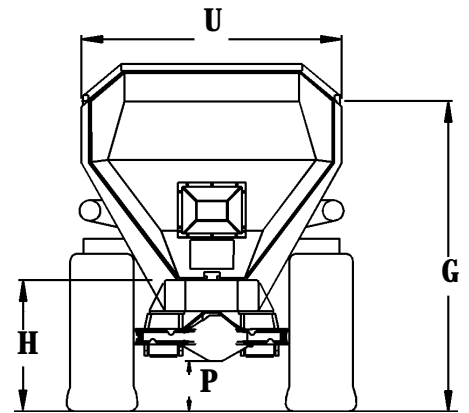
S

A



SAE
Turning
radius
(J695B)

	mm	ft in.
X	4.688	15'5"
Z	8.500	27'11"



	mm	ft in.
A	9.756	32'2"
B	2.716	8'11"
C	3.700	12'2"
D	2.106	6'11"
E	964	
F	3.380	
G	3.000	9'10"

	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	3.275	10'9"
N	1.700	5'7"

	mm	ft in.
O	1.162	3'10"
P	484	1'07"
Q	484	1'17"
R	510	1'8"
S	610	2'
T	3.670	11'10"
U	2.500	8'2"