375 HP (276 kW) - 500 HP (368 kW) at 2100 rpm - Tier II

31 sh tn (28000 kg) - 44 sh tn (40000 kg)

23.3 yd^3 (17.8 m^3) - 31.9 yd^3 (24.4 m^3)

DA30 - DA40 | Articulated Dump Truck

New generation of Doosan Articulated Dump Trucks

Reliable machinery for challenging conditions

**Doosan strives to be a pioneer in the field of product development and performance.
With the new generation of DOOSAN Articulated Dump Trucks, the product features have been refined and innovated to meet the tough demands of the future. Our philosophy is to stay one step ahead of the competition and always deliver a full range of Articulated Dump Trucks to suit the market.**

Doosan ADTs

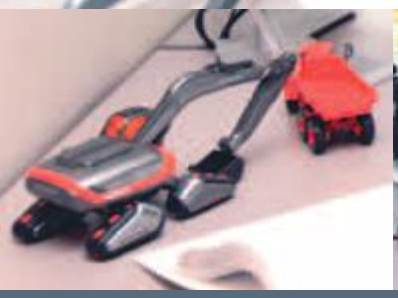
Our goal has been to develop a new line of advanced, reliable and cost effective Articulated Dump Trucks, loaded with significant competitive advantages.
Thanks to a new, modern design and state-of-the-art technical features, Doosan ADTs offer you all the benefits you expect from an Articulated Dump Truck:

Power
Productivity
Stability
Traction
Reliability
Comfort

Scandinavian durability with Korean excellence

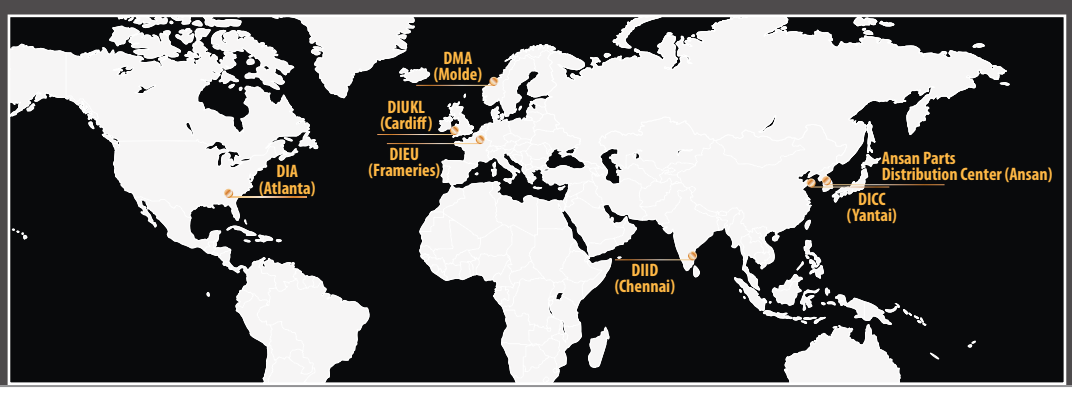
Aiming at the best

During the design phase of our new ADTs, the quality standards were further enhanced by Doosan expertise and reliable processes, creating best-in-class Articulated Dump Trucks that will give you complete satisfaction in all terrain conditions.
Thanks to more of thirty years dedicated to product development, the new generation of Doosan trucks provides innovative drivetrain and fatigue-proof structures.



The Doosan network is your best support

Thanks to the Doosan dealer support network and its fully owned parts distribution centers, we can provide parts distribution worldwide.



New productivity standards

PRODUCTIVITY

Exclusive transmission
The Doosan ADTs use reliable transmissions that feature smooth and equal gear shifting abilities.
As a result, there is a maximum transfer of net power from the transmission to all 6 wheels, providing maximum traction and best-in-class fuel efficiency.

Downhill speed modulation
Downhill braking can be increased or decreased simply by "dosing" the accelerator pedal.

Convenient dump lever
A new fingertip-controlled body hoist/dump lever is conveniently located next to the gear lever. This location allows the operator to have full control over body hoisting and dumping with little strain to the wrist or arm.
The floating feature on the body down function ensures a smooth, jolt-free lowering of the body to the rest position.

Engine

DA 30

- Scania DC9
- Power rating: (ISO 3046) 375 HP (276 kW)
  (ISO 9249) 365 HP (268 kW)
- No. of cylinders: 5 (in line)
- Displacement: 9.3 litres
- Air filter: Dry type

DA 40

- Scania DC13
- Power rating: (ISO 3046) 500 HP (368 kW)
  (ISO 9249) 490 HP (360 kW)
- No. of cylinders: 6 (in line)
- Displacement: 12.7 litres
- Air filter: Dry type

POWER

The Doosan ADT concept offers a larger load capacity in all weight categories.
Additional load capacity, combined with superior power and traction, allow for improved productivity.
The unique advantages of the Doosan ADTs permanent six-wheel drive, the free swinging rear tandem, the front mounted turning ring, the independent front wheel suspension and the sloping rear frame provide excellent driving stability with equal weight distribution and superior traction.
The Doosan Articulated Dump Truck is designed to work under very tough conditions and travel over 55 km/h.

New engines – lower emissions / higher torque

Doosan ADTs use only proven, reliable and powerful diesel engines with excellent torque which achieve low fuel consumption and fulfil Tier II regulation requirements.

Total cost of ownership

By combining the newest Scania engines, ZF transmissions and our unique free swinging tandem drive, the running cost in terms of cost per tonne transported, is unrivalled in the market. Minimum fuel consumption is achieved whilst the lock up clutch is immediately engaged, avoiding any slippage and therefore loss of power.

Safe in all conditions

STABILITY

Bogie suspension
Doosan ADTs free-swinging rear tandem bogie and the special articulation system offer excellent performance and the best possible ground contact in soft and uneven terrain.

Rear frame
Thanks to the sloping rear frame, the load of the truck is distributed equally among the 6 tyres. This ensures a lower centre of gravity, greater stability, better tractive effort and less tyre wear, unlike our competitors.

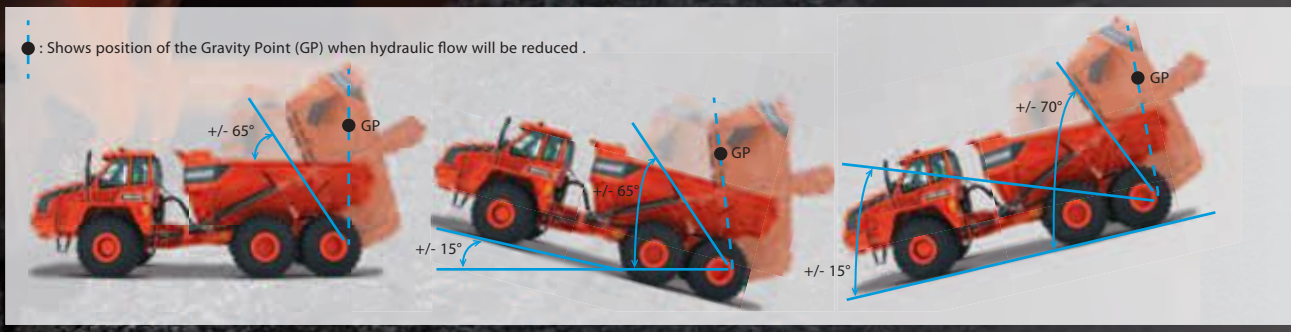
Unique front wheel concept
One of the main highlights of the Doosan ADT design is the location in the front of the turning ring in relation to the articulation point, which always ensures equal weight distribution to the front wheels.
Equal weight distribution to the front wheels makes it possible to use the differential locks while maintaining manoeuvrability.
Our unique independent front wheel suspension allows for maximum ground contact and shock absorption.

SAFETY

Thanks to the unique design of the forward-mounted turning ring, sloping rear frame and free swinging tandem bogie, weight is distributed equally throughout the truck, providing excellent stability. The rear tandem ensures the tyres are in continuous contact with the ground for more stability and thus the best safety in the market.

"Over Centre of Gravity" safety feature

During tipping of the body, this feature prevents a "sticky" load from lifting the front half of the truck. The system slows down the tipping speed when the load starts to pull the hoist cylinders backwards.



Rear view camera

Offers a clear view of what's happening behind the machine for maximum safety and peace of mind.

TRACTION

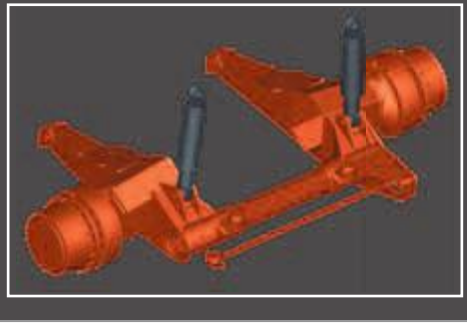
The unique Doosan ADT design offers permanent six-wheel drive which ensures stability and equal weight distribution to accommodate all job applications.
The Doosan ADTs superior driveline ensures maximum traction and durability.

Semi-independent front suspension

New hydro-pneumatic system specially designed for DA40.

Low ground-bearing pressure

Thanks to the combination of the sloping rear frame for better weight distribution and the free swinging tandem, the ground bearing pressure of our ADTs is equal to that of a traditional machine equipped with flotation tyres.



Climate control

Hot / cool box

Air suspension seat

Tiltable and telescopic steering

OPERATE IN COMFORT & SIMPLICITY

Quietest truck in the industry

- The ROPS/FOPS cab is equipped with climate control and an high quality operator seat with air suspension to provide excellent comfort. Precise steering, good visibility and low noise levels [DA30: 72 dB(A) & DA40: 71 dB(A)] provide a comfortable and quiet cab environment
- The sloping hood provides an excellent view from the operator's position
- The cab is mounted on a special rubber suspension in order to reduce vibration and noise transfer into the cab

Best-in-class operator environment

Doosan ADTs are powered by industry-leading engines that achieve low fuel consumption and meet the latest Tier II regulations in addition to all noise regulations. Doosan ADTs provide exceptional operator comfort with low cab vibration and noise levels.

When operating becomes easy

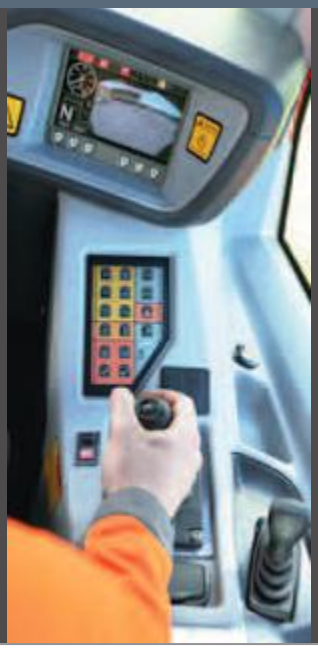
Body hoist lever
Simply by pressing a button on the body hoist lever, the operator can automatically apply engine rpm when raising the body, increasing overall productivity without having to apply the accelerator pedal.

CONTROLLABILITY

Body hoist lever
The new body hoist lever is easy to operate and fingertip controlled. This electronically managed hoist lever incorporates a higher body up speed and an automatic body down feature with soft touch down, allowing you to work in safe conditions.

"Tip-tronic" gearshift
This feature enables the operator to run the truck in both automatic and manual gears to ensure the smoothest possible gear shifts and momentum while operating the truck.

Excellent all-round visibility
Thanks to the excellent position and the use of special "wide angle" side mirrors, the operator is assured of having excellent all-round visibility for safer operation.



LCD colour monitor panel

- 7″ colour display, resolution 800 x 480 pixels
- Shows all necessary information for driving and handling the machine
- Embedded rear view camera image in instrumentation graphics
- Backlight dimming according to ambient light conditions
- Sub menus for additional and diagnostic functions

Touch pad

- Reduced retarder force (affects both retarder and engine exhaust brake)
- Diesel fuel heater ON/OFF
- Interaxle differential lock
- Override button
- Heated seat ON/OFF (optional)
- Cab roof and mirror arm front lights ON/OFF
- Rotating beacon ON/OFF (optional)

Reliability to maximise uptime

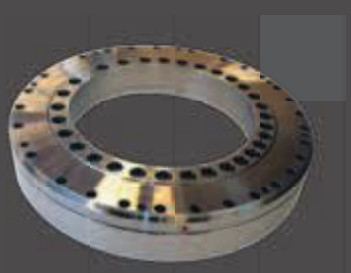
Built in-house using highly reliable components

Doosan ADTs are among the most reliable dump trucks in the industry thanks to the long history of using proven first-class components and manufacturing procedures.

With in-house control of all machining and robotic welding, Doosan is able to maximise the quality of all its assemblies.

Doosan ADTs use proven, specifically designed engine and transmission components tested not only by our suppliers, but also by rigorous "Doosan Reliability Growth" processes.

Turning ring



Axles

Maintenance and serviceability is a breeze

Excellent Service Accessibility

- The hood has a wide opening (up to 83°) to provide accessibility to the engine for easy maintenance
- The tilting cab allows the same clear access to the transmission and hydraulic components
- All electrical and AC connections are at the rear of the cab. This allows tilting of the cabin without disconnecting.
- The factory-fitted automatic central lubrication system is fully incorporated in the design of our ADTs. Thanks to the Vehicle Control Unit (VCU), the grease is only pumped when necessary.

Easy maintenance

Automatic lubrication system

Zooming in on Doosan ADTs - Turning ring

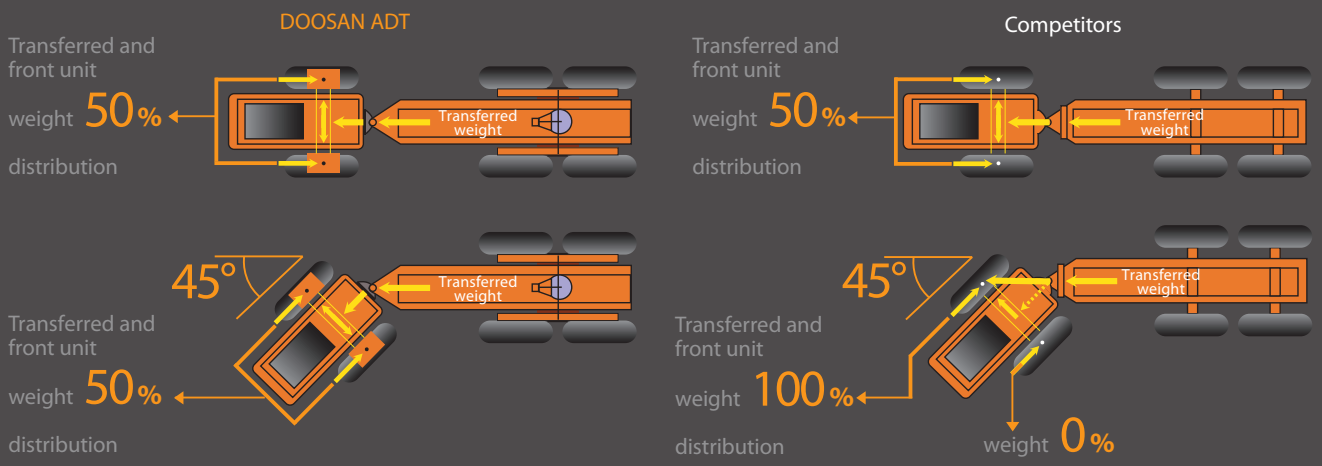
Forward mounted turning ring

One of the main innovative features in the Doosan ADT design is the location of the turning ring in relation to the articulation point. The turning ring is located in front of the articulation point, ensuring equal weight distribution to the front wheels in all operating situations, including during maximum turning.
Equal weight distribution to the front wheels makes it possible to use the differential with only 45 % locking value. This ensures drive to both front wheels in all situations without completely locking up the wheels.
With many of our competitors, the turning ring is located behind the point of articulation, resulting in an unequal weight distribution to the front wheels.
The combination of unequal weight distribution to the front wheels and the use of a 100 % differential lock can cause steering difficulties and also result in higher stress on the driveline and increased, uneven tyre wear.

DOOSAN ADT

Competitors

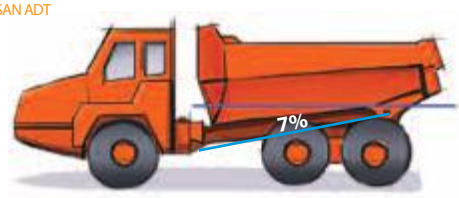
Weight distribution at the point of articulation



Unique sloping frame for improved weight distribution

The frame design of Doosan ADTs is similar to that used by manufacturers of rigid frame dump trucks. The frame is sloped downward from the hinge points to provide equal weight distribution on all axles when the truck is fully loaded. As a result, a lower centre of gravity is obtained, giving better stability.

DOOSAN ADT



Competitors

Scania DC9
9.3 litres - 5 cylinders

Scania DC13
12.7 litres - 6 cylinders

Tier II suitable for non Tier4i / Stage IIIB areas

Suitable for fuel with a high sulphur content, the latest Tier II engine technology from Scania features:

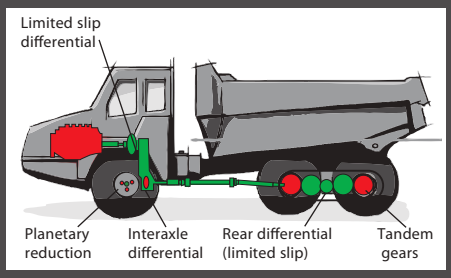
- Wastegate turbocharger
- Latest simplified engine electronics
- New mono steel pistons in order to cope with higher combustion pressure
- New engine block
- Simplified fuel management system

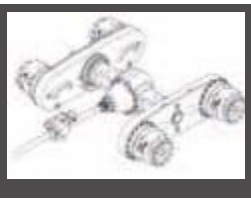
Zooming in on Doosan ADTs – Driveline

Significantly reduced tyre wear

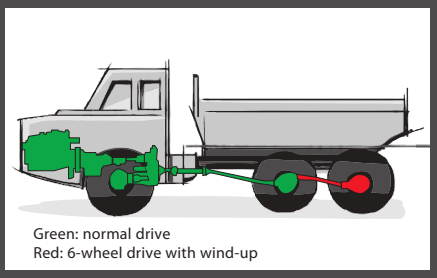
The single driveline requires the use of only one longitudinal differential lock to have an optimal power split of 50 % to the front and 50 % to the rear drive train. Combined with the use of only 2 state-of-the-art limited slip differentials, Doosan ADTs will always deliver best-in-class traction. One easy-to-lock differential is used in the rear, ensuring the best drive comfort. By contrast, our competitors use 2 rear differentials connected by an interaxle drive-through system which is subject to damage from the outside, loss of power and premature wear.

Doosan ADT Driveline





Competitors' Driveline

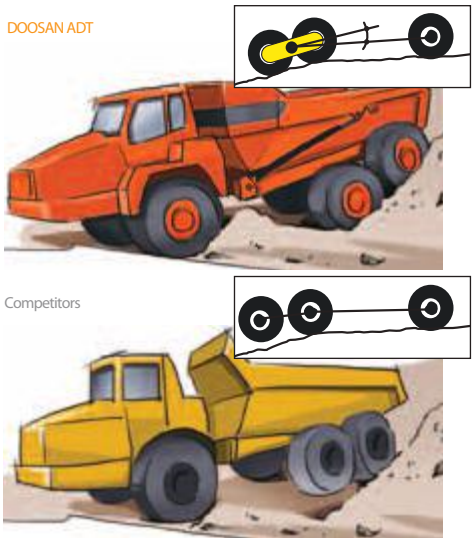


Free-swinging tandem bogie

The unique tandem drive ensures maximum productivity and allows easy loading of the truck in almost all positions and applications. Our competitors use rigid axles which cause movement on the centre or rear axle, resulting in loss of traction and driver discomfort.

Continuous contact with the ground

The tandem bogie enables the wheels to be in continuous contact with the ground for better tractive effort, stability and safety. As there is only one differential, the driveline is more efficient with less loss of power and reduced wear of parts.



Front wheel suspension

The unique independent front suspension allows free movement of one side, ensuring maximum contact with the ground and excellent shock absorption.

Wet disc brake on all 6 wheels

The oil-cooled wet disc brakes on the DA40 provide high braking performance and excellent durability.
Dry disc brakes are open and exposed to dirt and water. Wet brakes are not affected by these conditions because they are fully encased in oil. With less servicing intervals, wet disc brakes last longer and are especially advantageous in very adverse conditions such as in deep mud and water.

The air-cooled disc brakes on the DA30 do not require forced cooling like most competitors.

Transmission

Unique Doosan ADT design – Front-mounted differential

Since the differential is mounted directly on the transmission, the total length of the truck is reduced. This design results in better weight distribution and a smaller turning circle, an important advantage in confined areas.

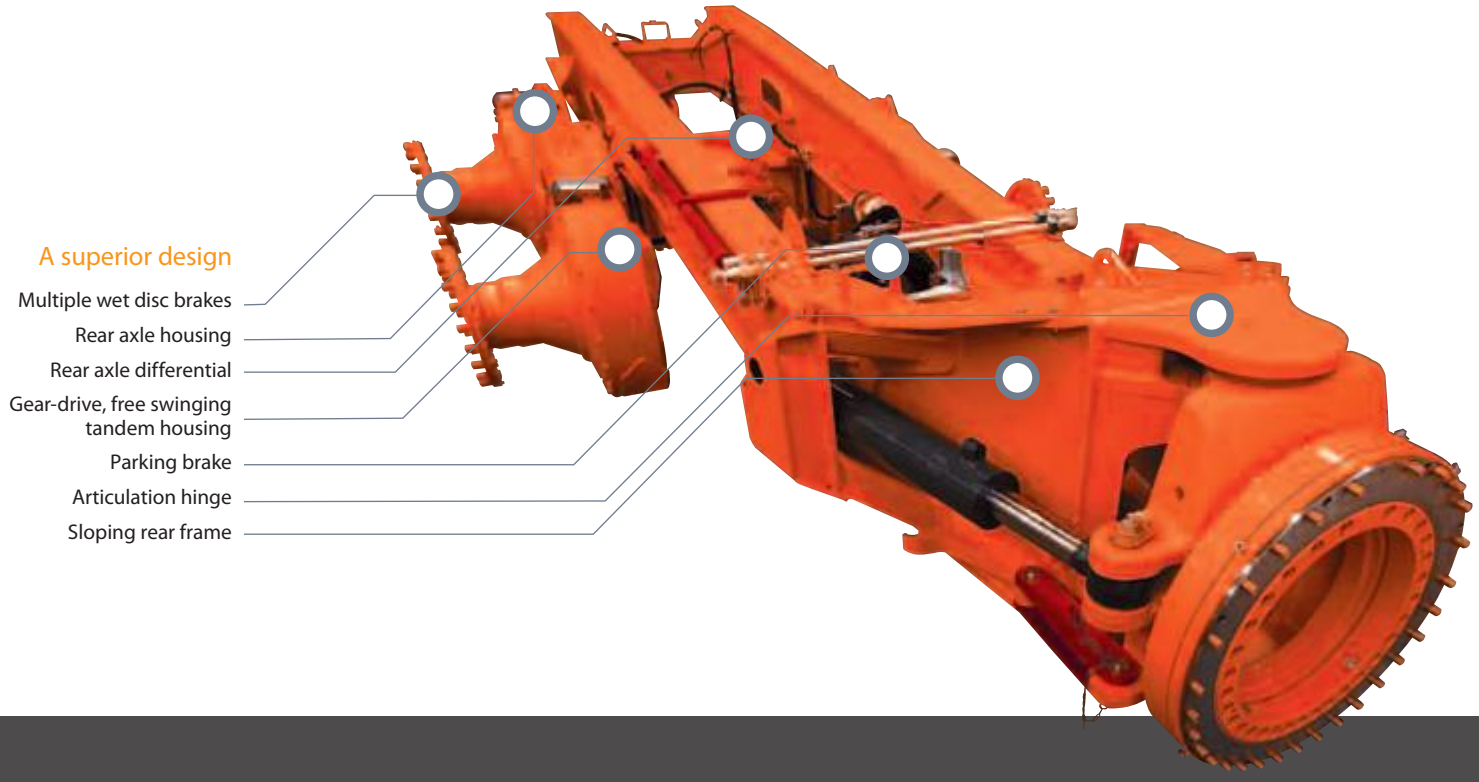
EP400 transmission range

The latest ZF transmission is designed specifically for Doosan ADTs.

Unique design of Doosan ADTs

DOOSAN Articulated Dump Trucks have permanent 6-wheel drive for equal power distribution while the free-swinging rear tandem bogie and the special articulation system offer excellent driving performance. The articulation hinge is positioned behind the turning ring to ensure equal weight distribution. The sloping rear frame provides a lower centre of gravity and improves the overall stability of the truck, ensuring fast and easy tipping of the body for increased productivity in even the most demanding conditions.

Many DOOSAN articulated dump trucks have worked more than 25000 hours without a major overhaul of the engine. A fully automatic transmission and smooth gear-shifting provide maximum convenience and comfort, allowing the operator to concentrate on the work at hand.



TOP 10 ADVANTAGES OF DOOSAN ARTICULATED DUMP TRUCKS

- Low operating cost
- Excellent performance in difficult terrain
- Independent front suspension ensures maximum ground contact and stability
- The sloping rear frame ensures a low centre of gravity, good stability and excellent weight distribution to the front axle
- Improved driver comfort and easy operation
- Easy and safe access to the cab
- Free-swinging rear tandem bogie ensures the best possible ground contact
- Front-mounted turning ring ensures equal weight distribution to the front axle in all situations
- Permanent 6-wheel drive, a significant advantage in rugged terrain
- Easy maintenance

Equipment

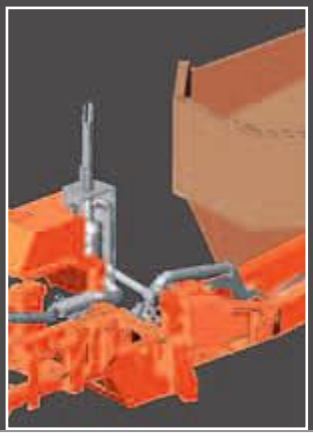
* Standard equipment

	DA30	DA40
Armrest at operator seat	•	•
Headrest at operator seat	•	•
Safety belt at operator and instructor seat	•	•
Adjustable steering column	•	•
All instrumentation in LCD display	•	•
Cigarette lighter and ashtray	•	•
12V charging point	•	•
Retractable roller sunblind	•	•
Tinted safety glass	•	•
Sliding window (left side)	•	•
Windshield wiper and washer	•	•
Mirror	•	•
Protection for rear window	•	•
Emergency steering, ground-driven	•	•
Towing hook, front and rear	•	•
Mud flaps	•	•
Automatic lubrication system	•	•
Engine exhaust brake	•	•
Transmission retarder brake	•	•
Rear view camera	•	•
Radio/CD/MP3	•	•
Work light front, at the top of the cab	•	•
Cab tilting system	•	•
Emergency shutdown switch	•	•
Wet disc brake	•	•
Anti-slip steps & platform	•	•
Space for cooler box	•	•
Storage room	•	•
Electronic climate control	•	•

* Optional equipment

	DA30	DA40
BODY OPTIONS		
Top tailgate	Std	•
Spill guard on front of body	•	•
Body heating system	•	•
Body lining standard	•	•
Body lining full	•	•
Side extensions (upon request)	•	•
Payload meter	•	•
CAB OPTIONS		
High comfort seat	•	•
Heated operator seat	•	•
Heated mirror	•	•
Sliding window (right side)	•	•
OTHER		
Webasto heating system (heat up the cooling system)	•	•
Electrical engine heater	•	•
Fire extinguisher	•	•
First aid kit	•	•
Beacon	•	•
Light bar	•	•
Speed limitation	•	•
Work light kit (rear and front)	•	•
Work light kit (rear and front) LED	•	•
Tool kit	•	•
Warning triangle	•	•
Fast fill	•	•
TYRE OPTIONS		
Quarry	•	•
Earthmoving	•	•
Flotation tyres	•	•

Heated body



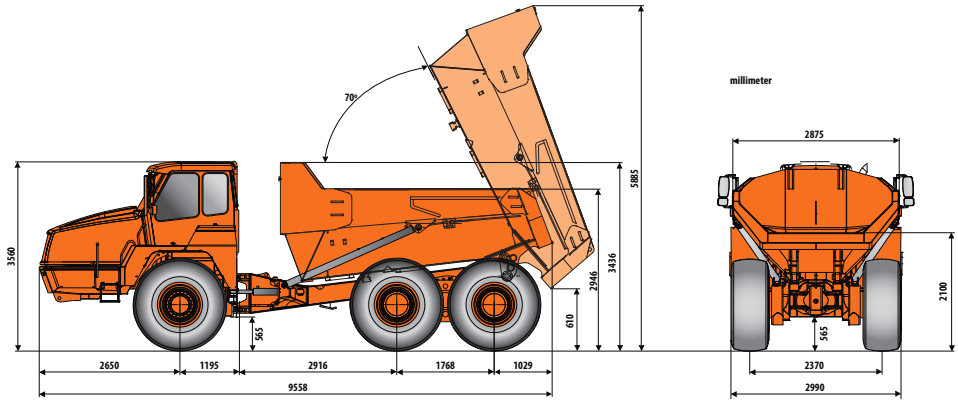
Fast fill

Quarry tyres

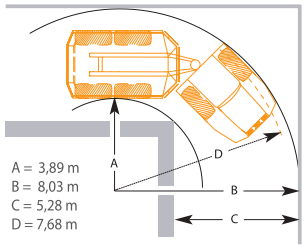
High flotation tyres

Technical specifications

DA30

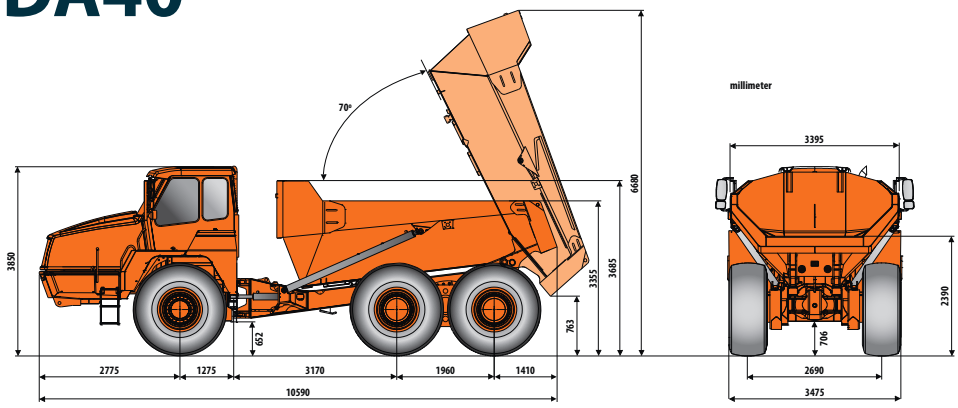


DA30 width with 750/65 R25 tyres: 3220 mm

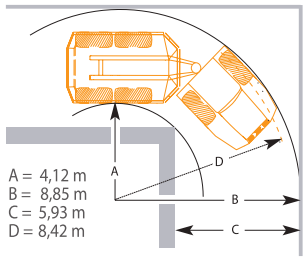


Turning radius according to ISO 7457: 7.68 m

DA40



DA40 width with 875/65 R29 tyres: 3630 mm



Turning radius according to ISO 7457: 8.42 m

DA30 - DA40

Suspension	• Front: DA30: Independent with long life rubber springs and hydraulic shock absorbers • Front: DA40: Independent with two hydro-pneumatic cylinders	• Rear: Free-swinging tandem housing
Articulation hinge and steering	• Articulation hinge with forward-mounted turning ring • Steering cylinders (two): Double-acting • The steering is approved according to ISO 5010	• Max. steering angle: 45° • Ground-driven emergency steering pump
Driveline	• Full-time 6 x 6 drive with two transverse differentials and one longitudinal • Front axle transverse differential: Limited-slip diff lock with 45 % locking ratio • DA40: Rear axle transverse differential: Limited-slip diff lock with 45% locking ratio • DA30: Rear axle transverse differential: clutch-engaged diff lock with torque dependent locking ratio	• Inter-axle longitudinal differential: Torque-proportioning differential, integrated into the ZF transmission Torque distribution: • 1/3 to the front axle • 2/3 to the rear axle • 100 % lockable • Tandem housing: Gear driven, free-swinging. Provides equal drive to rear wheels and ensures the best possible ground contact - whatever the ground conditions
Brake system	• Dual circuit braking system acting on all six wheels • Approved according to ISO 3450 • All-hydraulic operated brakes with enclosed oil-cooled wet multiple discs all round	• Spring actuated hydraulic released parking brake, mounted on driveline shaft • Max. gradient, parking brake: 20° • Automatic engine brake as standard • Automatic transmission retarder as standard
Cab	• Approved to ROPS/FOPS standards (ISO 3471, ISO 3449) • Low interior sound level DA30: 72 dB(A) - DA40: 71 dB(A) (ISO 6394) • The cab is centrally located on rubber mountings • Hand and arm vibrations are less than 2.5 ms^2 according to ISO 5349-2 • Whole body vibration is less than 0.5 ms^2 according to ISO 2631-1 • Superior visibility - for safer operation	• Superior operating controls location • Adjustable suspended operator seat • Adjustable steering column • Climate control – Heater and air conditioning • Tilting for service access

	DA30	DA40
Body		
Body volume	17.8 m^3 – 23.3 yd^3	24.4 m^3 – 31.9 yd^3
Material	Hardened abrasion-resistant steel plates (HB400)	Hardened abrasion-resistant steel plates (HB400)
Tilt cylinders	Single stage, double-acting	Single stage, double-acting
Tipping time	Up: 10 sec. / Down: 9 sec.	Up: 10 sec. / Down: 9 sec.
Body	Designed for exhaust heating	Designed for exhaust heating
Sloping frame	Down from the hinge point	Down from the hinge point
Level capacity (with / without tailgate)	14.2 m^3 / 13.6 m^3 – 18.6 yd^3 / 17.8 yd^3	20.4 m^3 / 19.6 m^3 – 26.7 yd^3 / 25.6 yd^3
Heaped capacity (with / without tailgate)	17.8 m^3 / 16.8 m^3 – 23.3 yd^3 / 22 yd^3	26 m^3 / 24.4 m^3 – 47.1 yd^3 / 31.9 yd^3
Density index	1.64 t/m^3	1.64 t/m^3
Weights		
Empty: Front axle	11900 kg – 26235 lb	14500 kg – 31967 lb
Rear axle	11500 kg – 25353 lb	15800 kg – 34833 lb
Loaded: Front axle	16600 kg – 36597 lb	21200 kg – 46738 lb
Rear axle	34800 kg – 76721 lb	49100 kg – 108247 lb
Pay load	28000 kg – 31 sh tn	40000 kg – 44 sh tn
Total weight (loaded)	51400 kg – 113317 lb	70300 kg – 154985 lb
Net weight	23400 kg – 51588 lb	30300 kg – 66800 lb
	NOTE: All weights include a full fuel tank and operator.	NOTE: All weights include a full fuel tank and operator.
Power to weight ratio	Net Power vs Ton	Net Power vs Ton
Empty	12.1 kW/t	12 kW/t
Loaded	5.47 kW/t	5.20 kW/t
Ground pressures	Standard 23.5 x 25 tyres with 15% sinkage	Standard 29.5 x 25 tyres with 15% sinkage
Empty: Front axle	104 kPa	88 kPa
Rear axle	53 kPa	48 kPa
Loaded: Front axle	141 kPa	130 kPa
Rear axle	162 kPa	152 kPa
Capacities		
Fuel Tank	335 l	530 l
Hydraulic System	123 l	209 l
Engine Cooling System	45 l	50 l
Transmission	75 l	75 l
Engine Crankcase	33 l	44 l
Front Reduction Gear	2 x 11 l	2 x 7.5 l
Rear Differential	16 l	46 l
Tandem Housing	2 x 48 l	2 x 140 l
Rear Reduction Gear	4 x 7 l	-
Speeds	Forward / Reverse	Forward / Reverse
1st	5 km/h / 5 km/h	5 km/h / 5 km/h
2nd	8 km/h / 8 km/h	8 km/h / 8 km/h
3rd	11 km/h / 11 km/h	11 km/h / 11 km/h
4th	15 km/h / 16 km/h	16 km/h / 16 km/h
5th	22 km/h	23 km/h
6th	30 km/h	32 km/h
7th	42 km/h	45 km/h
8th	55 km/h	55 km/h
Engine		
Complies with Tier II for emissions	Scania DC 9, water-cooled,diesel engine with turbo charger and air to air intercooler	Scania DC 13, water-cooled,diesel engine with turbo charger and air to air intercooler
Power rating (ISO 3046)	375 HP (276 kW)	500 HP (368 kW)
(ISO 9249)	365 HP (268 kW)	490 HP (360 kW)
No. of cylinders	5 (in line)	6 (in line)
Gross Torque	1873 Nm @ 1300 rpm	2373 Nm @ 1300 rpm
Engine exhaust brake	Yes	Yes
Cylinder volume	9.3 litres	12.7 litres
Bore diameter x stroke	127 x 140 mm	130 x 160 mm
Air filter	Dry type	Dry type
Transmission	ZF 8 EP320 electronically-controlled automatic transmission with retarder The torque converter has automatic lock-up in all gears	ZF 8 EP420 electronically-controlled automatic transmission with retarder The torque converter has automatic lock-up in all gears
Hydraulic system		
Pumps	1 variable displacement piston pump for steering & tipping for cooling fan, brakes & auxiliaries	1 variable displacement piston pump for steering & tipping for cooling fan, brakes & auxiliaries
Delivery	320 l/min @ 2200 rpm	320 l/min @ 2200 rpm
Filtration	One return flow filter	One return flow filter
Pressure-setting, main safety valves:		
Tipping Circuit	280 bar	280 bar
Steering Circuit	210 bar	210 bar
Electrical system		
Alternator	24V 100A	24V 100A
Batteries	2 x 12V 140Ah (series connected to give 24V)	2 x 12V 225Ah (series connected to give 24V)
Starter	7.5 HP (5.5 kW)	7.5 HP (5.5 kW)
Tyres		
Standard	23.5 R25 two star radial	29.5 R25 two star radial

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