

# DOOSAN

Articulated Dump Truck |  
DA30 DA40



Maximum power (ISO 3046): 375-500 hp  
Maximum payload: 28-40 m t  
Body capacity heaped (with tailgate): 17.8-26.0 m<sup>3</sup>



# Doosan Group – Building your tomorrow today

## ► Be part of the great Doosan family

The Doosan Group - founded in 1896 and headquartered in Seoul, South Korea - is one of the fastest-growing companies in the world:

- With more than 37,500 employees in 38 countries, we are a major player in a variety of industries worldwide.
- A global leader in the Infrastructure Support Business (ISB), with 56 subsidiaries and 3,700 distributors worldwide.
- Dramatic growth over the past two decades, with an annual Doosan Group revenue rising from €2.4 billion in 1998 to €12.8 billion in 2016.

## ► Doosan Group – a top player worldwide



### Doosan Infracore

- Among the world's Top 5 manufacturers of construction equipment



### Doosan Bobcat

- A leading company in the design, manufacture, marketing, distribution and service of small equipment and attachments for construction, agriculture, and landscaping
- Leading position in the global compact equipment market
- N° 1 in North America for SSL, CTL and MEX



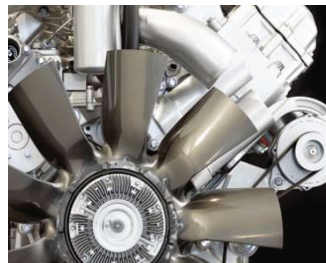
### Doosan Heavy Industries & Construction

- World N° 1 in desalination plant construction
- World N° 1 in heat recovery steam generator market
- World N° 1 in mould & tool steel
- World N° 3 in crankshafts



### Doosan Engineering & Construction

- A pioneering leader in construction of residential and public buildings, civil works and industrial facilities.
- World N° 1 chemical process equipment products



## ► Doosan Infracore Construction Equipment

Creating construction equipment for over 40 years

For over 40 years, we've been building a global production and business network to become one of the world's foremost construction equipment manufacturers.

A solid partner, close to you

A truly global player in every respect, we have large-scale factories, sales subsidiaries and dealers all over the world.



Doosan facilities in Europe

► **From machine manufacturer... to full solution provider**

To ensure the highest trade-in and residual values, our parts and service support professionals maintain the performance, productivity and reliability that you expect of our products throughout their lifetime.

► **Ask your dealer for a full range of services designed especially for you!**

As your local specialist, your dealer ensures that you receive the maximum benefit from our integrated package. Plan ahead to ensure the success of your equipment!



Doosan approved attachments



Genuine parts



Extension of warranty



Financial solutions



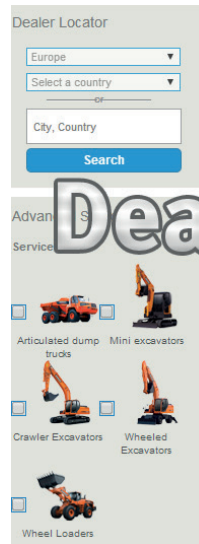
Maintenance contract



Telematics



Monitoring systems



► **Experience the Doosan product range!**



Articulated Dump Trucks



Wheel Loaders



Wheeled Excavators



Mini Excavators



Crawler Excavators

# Take a tour of the DA40

## ► Productivity

Doosan ADTs offer the highest payload and the best weight distribution. Combined with superior power and traction, we offer you the best productivity.

☉ **Comfort:** access from the front for increased safety & visibility, lowest operator noise level, climate control, tiltable & telescopic steering, and much more...

☉ **Operate at ease:** improved monitor panel with multiple languages as standard, payload meter, rear view camera, diagnostic section, etc.

☉ **Power:** new SCR & EGR Stage IV compliant Scania DC13 engine: 368 kW (493 hp) at 2100 rpm.

☉ **Upgraded design:** improved vents with extra cooling capacity for operating in hot working environment.

☉ **Front differential:** directly mounted on the transmission to eliminate wear parts (drive shaft), making the Doosan ADT shorter, more compact for working in tighter areas.

☉ **Automatic limited slip differential:** push 1 button to engage the longitudinal differential lock.



## Total cost of ownership ▲

☉ **Safety:** increased safety thanks to the gradient meter

The Doosan ADTs deliver one of the most competitive operation costs, thanks to the combination of fuel-efficient powertrain, proven design, low-maintenance components, overall durability & unmatched traction.

☉ **Body:** steel plates with 400 HB hardness. Capacity: 24.4 m<sup>3</sup>. Tailgate, body heating & wear plates available as optional equipment.

☉ **New rear differential:** more torque & power at lower engine RPM for improved fuel efficiency. Reduced vibrations extend drive shaft & bearing life.

☉ **Brake systems:** oil-cooled wet disc brakes (lifetime up to 15,000 hours). Standard electronic engine brake, hydraulic transmission retarder & parking brake.

☉ **New driveline ratio** for reduced axle speed & fuel consumption.

☉ **Total control:** automatic & manual gear shifting, power steering, finger operated body up & down lever, automatic engine & transmission brakes, central operator seat and simple touch pad with all functions.



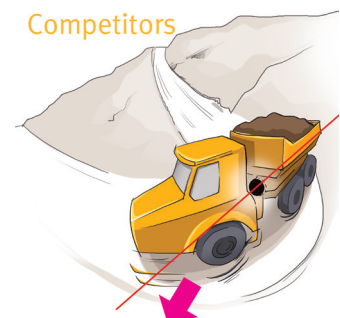
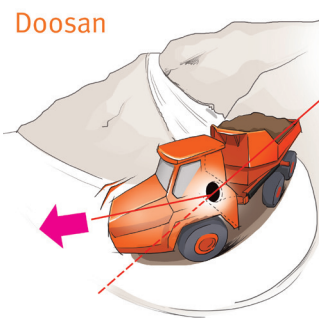
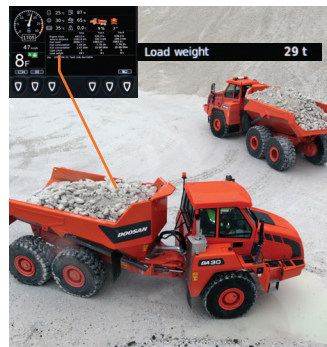
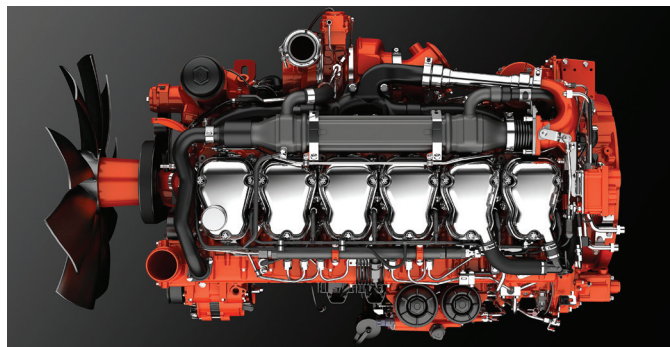
**Service accessibility:** increased access to engine & transmission and the cab tilts back for superior access for service & maintenance to all major components.

# Top performance and fuel efficiency



## ► The power to raise productivity

The Doosan ADT concept offers a larger load capacity in all weight categories. Additional load capacity, combined with superior power and traction, improve productivity. The unique advantages of the Doosan ADT's permanent 6-wheel drive, free swinging rear tandem, front-mounted turning ring, independent front wheel suspension, and 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 up to 55 km/h.



### New engines – lower emissions / higher torque

Doosan ADTs use only proven, reliable and powerful SCR and EGR diesel Scania engines with excellent torque, which achieve low fuel consumption and fulfil Stage IV (Tier 4 final) European regulation requirements.

### Exclusive transmission

The reliable transmissions feature smooth and equal gear shifting abilities - so there is a maximum transfer of power and torque from the power train to all 6 wheels, providing maximum traction and best-in-class fuel efficiency.

### Payload meter

Our standard payload & load count meter provides the Doosan operator and owner with an immediate indication of the productivity.

### Downhill speed modulation

The new electronic engine brake & the hydraulic transmission retarder work simultaneously when dosing the accelerator pedal.

### Transportability

Thanks to a width under 3 metres, the DA30 can easily be moved from one site to another.

### Forward-mounted turning ring

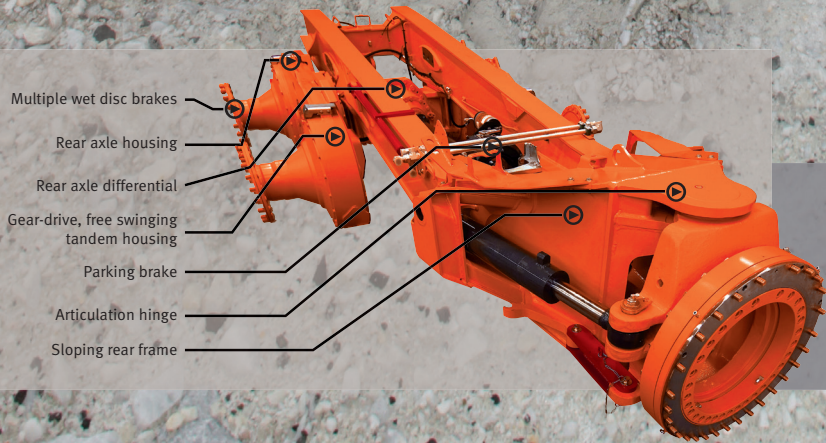
The turning ring is located in front of the articulation point, ensuring equal weight distribution to the front wheels in all operating situations, including maximum turning. The equal weight distribution enables you to use the differential with only 45% locking value - ensuring drive to both front wheels in all situations, without completely locking the wheels.

### New differential & lower fuel consumption

New front & rear differential ratio for reduced axle speed and fuel consumption.

### Traction

The unique Doosan ADT design offers permanent 6-wheel drive, ensuring stability and equal weight distribution to accommodate all job applications. The Doosan ADTs superior driveline ensures maximum traction and durability.



- Multiple wet disc brakes
- Rear axle housing
- Rear axle differential
- Gear-drive, free swinging tandem housing
- Parking brake
- Articulation hinge
- Sloping rear frame

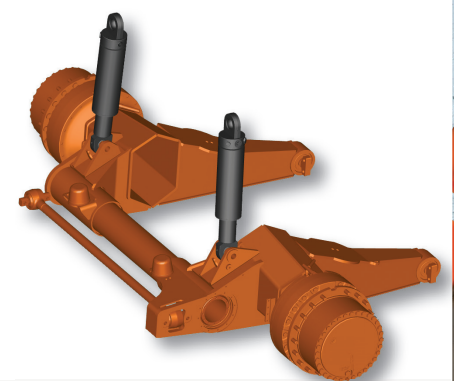
**Design simplicity:** permanent 6-wheel drive, together with the ground following rear tandem and our special front-mounted turning ring, provide equal power & weight distribution and excellent operating performance. The sloping rear frame provides a lower centre of gravity - improving the ADT's overall stability, and ensuring fast and easy tipping of the body for increased productivity. Simplicity works!

# Operate in comfort

## ▣ Quietest truck in the industry

The spacious ROPS/FOPS cab is equipped with climate control and a high-quality operator seat with air suspension to provide excellent comfort. Precise steering, good visibility, low noise levels [DA30: 72 dB(A) & DA40: 72 dB(A), ISO6395] and optional vertical movement provide additional comfort and quiet.

- The sloping hood gives the operator an excellent view
- The cab is mounted on a special rubber suspension 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 Stage IV European regulations (Tier 4 final) in addition to all noise regulations - providing exceptional operator comfort, with low cab vibration and noise levels.

### High-comfort air-suspension seat

Because a highly comfortable seat means a lot to every operator, we provide an air-suspension seat with armrest as standard. A brand-new high-comfort air-suspension seat is available as an option to enhance this comfort even further.

### One key solution

To enter and safely operate your Doosan ADT, you need just one key that locks and unlocks all the doors and also starts the engine. This makes the operators life very easy and allows servicemen easy access to all the components.

### Storage compartments and hot/cool box

Plenty of storage spaces, plus the possibility to keep your drinks at the desired temperature.

### MP3

Standard CD-Radio player that plays your MP3 tracks during operation.

### Climate control

Our specially designed climate control is easy to operate and highly efficient - keeping you comfortable at all times.

### Semi-independent front suspension

New hydro-pneumatic system specially designed for DA40.





Sliding window



Air suspension seat



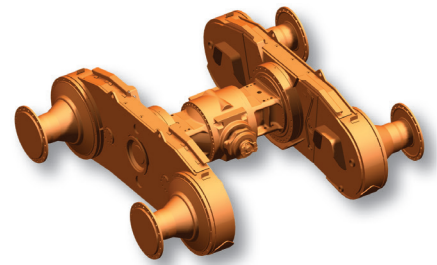
Tilttable and telescopic steering

# Total control in all simplicity

## ▶ Operate at ease in your comfort zone

The Doosan ADT is one of the industry's simplest trucks to operate. Comfortably seated in this class-leading operator cab, you'll enjoy easy operation combined with excellent efficiency. And thanks to the upgraded monitor panel, you'll operate in your comfort zone.

- Multiple languages
- Integrated payload meter (as standard)
- Diagnostic section
- Gradient meter indication for increased safety while operating
- Integrated rear view camera



### 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)
- Operating work-lights ON/OFF

### Differential activation

With automatic limited slip differentials, automatic and manual transmission shift, power steering, "simple touchpad" and "easy to read" display, every ADT is as simple to use & operate as possible.

### 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, to keep you safe at all times.

### "Tip-tronic" gear shift

To ensure the smoothest possible gear shifts and momentum, you can run the truck in both automatic and manual gears.



**Body hoist lever:** to increase overall productivity without applying the accelerator, you can automatically apply engine rpm when raising the body simply by pressing a button on the body hoist lever.



**Body hoist lever**



**All-round visibility**

# Safety

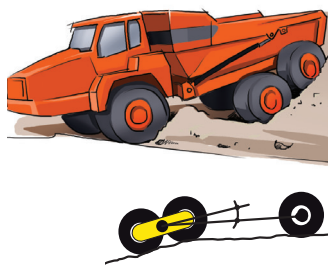
## ▣ Peace of mind and stable operations

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 keeps the tyres in continuous contact with the ground for more stability and the best safety in the market.

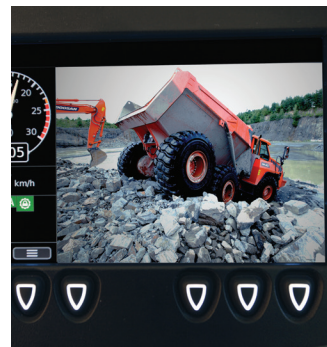
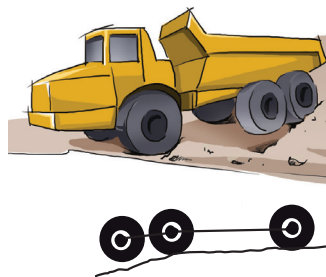
The new Doosan Stage IV ADTs are designed to improve your forward visibility. The compact front-mounted cooling package is designed to avoid large cooling packages mounted on the side of the engine (which limit visibility & safety).



Doosan



Competitors



### Gradient meter

To keep operation safe, the gradient meter lets you clearly see the angle at which the truck is operating.

### Bogie suspension

The 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 truck's load is distributed equally among the 6 tyres - ensuring a lower centre of gravity, greater stability, better tractive effort and less tyre wear than our competitors.

### Speed limitation (optional)

To provide the highest level of safety, at the customer's request, the maximum speed of each Doosan ADT can be reduced to best suit the application.

### Automatic limited slip

Automatic limited slip differentials offer you an Automatic Traction Control System to prevent the truck from sliding in very slippery, sometimes dangerous, conditions

### Front access

Accessing the cab from the front offers safe entry (as well as escape), whatever position the tractor and trailer are in. This also prevents slipping due to mud on the steps.

### Rear view camera

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

### Excellent all-round visibility

You have excellent all-round visibility for safer operation, thanks to the excellent position of special "wide angle" side mirrors.

### Brake systems

The Doosan ADT has 4 braking systems: service brakes (oil-cooled disc brakes on all wheels, with 2 separate circuits), parking brake (spring applied, hydraulically released), electronic engine exhaust brake, and transmission retarder.



● : Shows position of the Gravity Point (GP) when hydraulic flow will be reduced.



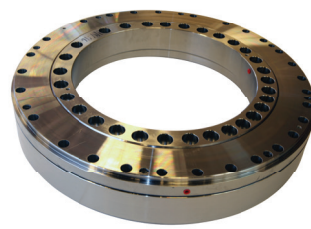
**“Over Centre of Gravity” safety feature:** when tipping the body, this standard feature prevents a “sticky” load from lifting the front half of the truck. When the load starts to pull the hoist cylinders backward, the system slows down the tipping speed.

# Reliability, the habit of a lifetime

## ▣ Built in-house using highly reliable components

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

In-house control of all machining and robotic welding maximises the quality of all our 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.



### Scandinavian durability with Korean excellence

Doosan expertise and processes further enhanced our quality standards during the design phase of our new ADTs. The result: best-in-class Articulated Dump Trucks that will give you complete satisfaction in all terrain conditions.

Thanks to more than 40 years of dedicated product development, the new generation of Doosan trucks provides innovative drive-train and fatigue-proof structures.

### Tandem

The only wear parts on the whole of the rear frame are the tandem bearings. The automatic lubrication system greases these bearings, so that they have an average lifetime of 10,000 hours.

### Brakes

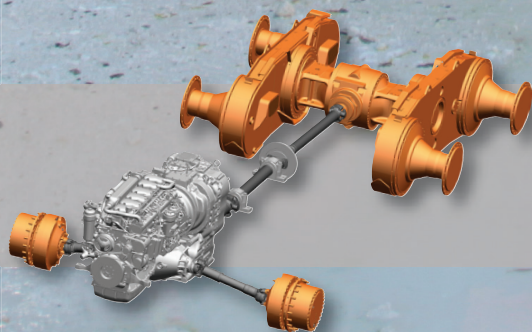
All Doosan ADTs features closed oil-cooled disc brakes to avoid early brake pad wear due to mud or water penetration.

### Power train components

Doosan uses quality power train components from proven manufacturers. The simple design guarantees a long lifetime and best-in-class performance.

### Turning ring

The Doosan turning ring - designed and manufactured in-house - is a key component of each ADT, ensuring trouble-free oscillation of the tractor/trailer and tandem.



**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 while the lock-up clutch is immediately engaged, avoiding slippage and thus loss of power.

# Simple maintenance with great uptime

## ▶ Excellent service accessibility

- The hood's wide opening (up to 83°) provides excellent access 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, allowing the cab to be tilted while maintaining connections
- The factory-fitted automatic central lubrication system is fully incorporated in the design of our ADTs. Thanks to the Vehicle Control Unit (VCU), grease is pumped only when necessary
- The new Ep transmission is specially designed for easier maintenance



### Training Center

Located in the heart of Europe, near Prague (Czech Republic), the Doosan Academy is a dynamic centre of knowledge where Product, Service and Doosan University training courses are held.

The facilities include a modern building that can accommodate all of the product ranges, and an outdoor training area where we conduct field exercises and product testing with the fleet of Doosan machines and attachments.

### Filters

All filters are centralised for quicker and easier accessibility.

### Global Doosan network

With a network of Doosan dealers & Parts Distribution centers worldwide, your Doosan trucks can be serviced & maintained wherever you are.

### Telematics

The Doosan Connect telematics system is available at your request - offering you all of the features for reading out vehicle operating & production parameters remotely, and providing you with complete ease-of-mind.





**SCR with NO DPF:** Building further on the success of the Stage III B engines, the new Stage IV Scania engine has no need for a DPF filter to meet the Stage IV emissions requirements.

# Take a tour of the DA30

## ► Productivity

The DA30 offers best-in-class ground clearance & ground bearing pressure. Combined with superior torque at low engine RPM, superior power and traction, we offer you the best productivity.

☉ **Safety:** increased safety thanks to the gradient meter

☉ **Comfort:** access from the front for increased safety & visibility, lowest operator noise level, climate control, tilttable & telescopic steering, and much more...

☉ **Operate at ease:** improved monitor panel with multiple languages as standard, payload meter, rear view camera, diagnostic section, etc.

☉ **Power:** new SCR & EGR Stage IV compliant Scania DC 09 engine: 276 kW (370 hp) at 2100 rpm.

☉ **Engine:** Scania engine with variable geometric turbo and electronic engine brake. This engine provides excellent torque at low RPM to give you "best in class" traction in each application.

☉ **Cooling:** improved cooling capacity for hot working environment.

☉ **Traction:** permanent 6-wheel drive combined with transversal automatic limited slip differentials eliminates operator error and offers superior traction. The longitudinal differential lock is operated with 1 simple switch.



## Total cost of ownership ▲

8F/4R speed ZF EP transmission - designed especially for the ADT - combined with Tip Tronic auto/manual shifting guarantees the operator superior comfort and increases fuel economy for each application.

☉ **Body:** steel plates with 400 HB hardness. Capacity: 16.8 m<sup>3</sup>. Tailgate, body heating & wear plates available as optional equipment.

☉ **Tailgate:** Doosan body & specially designed tailor-made tailgate ensure maximum opening for the load to slide down - increasing productivity and safety for the driver.

☉ **Brake systems:** oil-cooled wet disc brakes (lifetime up to 15,000 hours). Standard engine brake, hydraulic transmission retarder & parking brake.

☉ **Low ground pressure:** specially shaped body and sloping frame offer low center of gravity and perfect weight distribution. Combined with the free-swinging tandem, you have "best in class" ground bearing pressure without having to use high flotation tyres.

☉ **Total control:** automatic & manual gear shifting, power steering, finger operated body up & down lever, automatic engine & transmission brakes, central operator seat and simple touch pad with all functions.



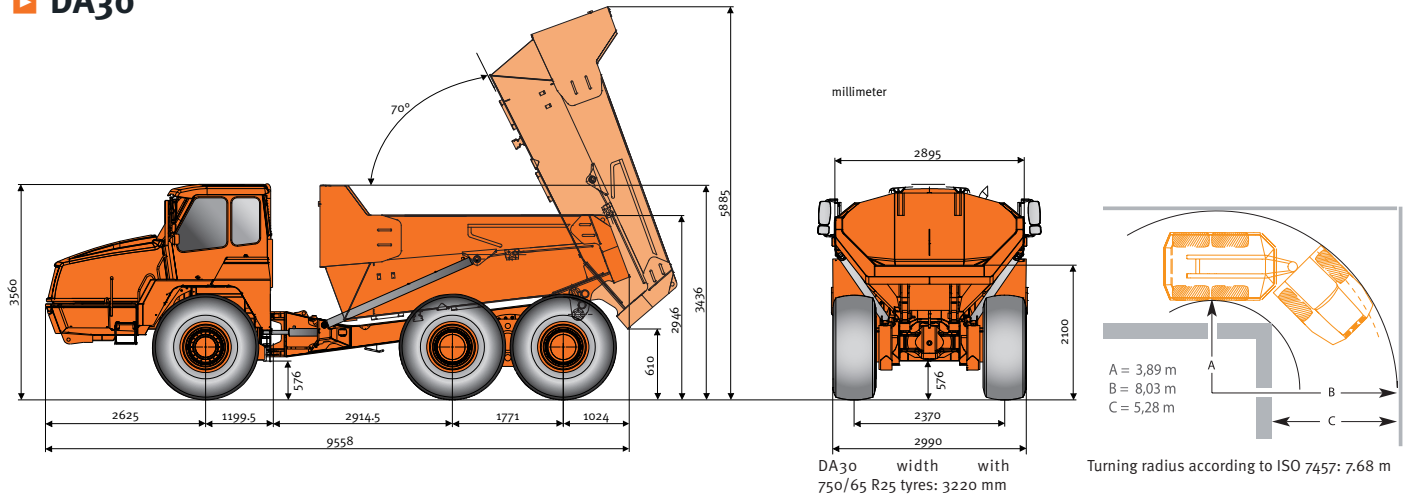
**Service accessibility:** the new EP transmission is designed for easy maintenance. The main control valve is located on top of the transmission for easy troubleshooting. The Doosan standard tilting cab gives you fast access to all major components.



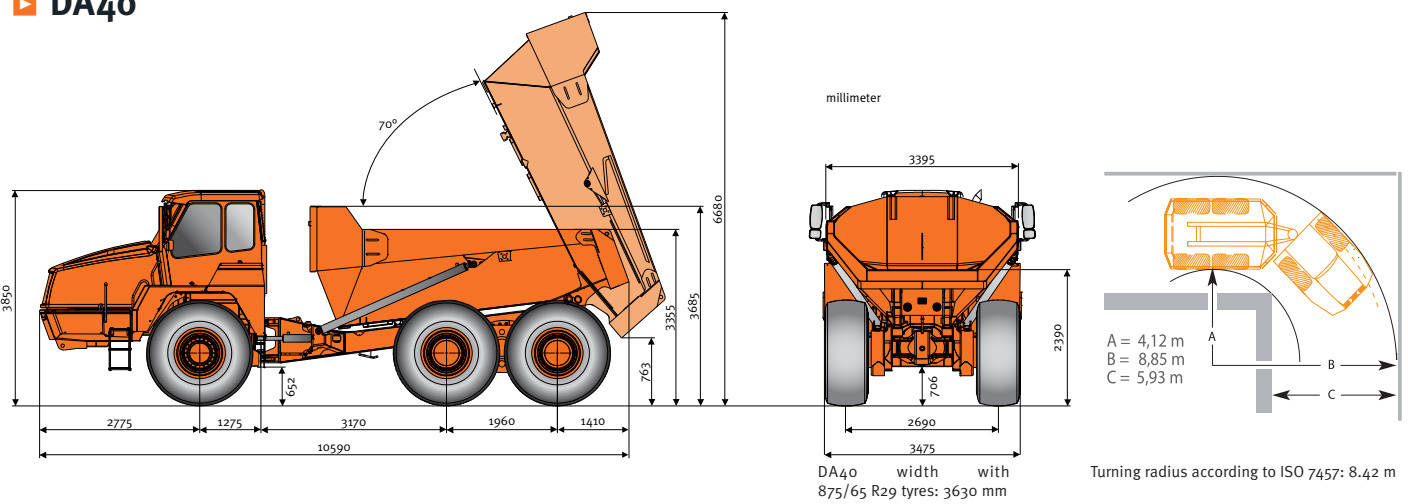
# Technical specifications

<b>Body</b>	<b>DA30</b>	<b>DA40</b>
Body volume	16.8 m <sup>3</sup> – 23.3 yd <sup>3</sup>	24.4 m <sup>3</sup> – 31.9 yd <sup>3</sup>
Material	Hardened abrasion-resistant steel plates (400 HB)	
Tilt cylinders	Single stage, double-acting	
Tipping time	Up: 12 sec. / Down: 9 sec.	
Body	Designed for exhaust heating	
Sloping frame	Down from the hinge point	
Level capacity (with / without tailgate)	14.2 m <sup>3</sup> / 13.6 m <sup>3</sup> – 18.6 yd <sup>3</sup> / 17.8 yd <sup>3</sup>	20.4 m <sup>3</sup> / 19.6 m <sup>3</sup> – 26.7 yd <sup>3</sup> / 25.6 yd <sup>3</sup>
Heaped capacity (with / without tailgate)	17.8 m <sup>3</sup> / 16.8 m <sup>3</sup> – 23.3 yd <sup>3</sup> / 22.0 yd <sup>3</sup>	26.0 m <sup>3</sup> / 24.4 m <sup>3</sup> – 47.1 yd <sup>3</sup> / 31.9 yd <sup>3</sup>
Density index	1.64 t/m <sup>3</sup>	
<b>Weights</b>		
Empty: Front axle	11900 kg – 26235 lb	14500 kg – 31967 lb
Empty: Rear axle	11500 kg – 25353 lb	15800 kg – 34833 lb
Max. load: Front axle	16700 kg – 36817 lb	22500 kg – 49604 lb
Max. load: Rear axle	34800 kg – 76721 lb	55 000 kg – 121 254 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.		
<b>Power to weight ratio (Net Power vs Ton)</b>		
Empty	12.1 kW/t	12 kW/t
Loaded	5.47 kW/t	5.20 kW/t
<b>Ground pressures</b>		
	Standard 23.5 × 25 tyres with 15% sinkage	Standard 29.5 × 25 tyres with 15% sinkage
Empty: Front axle	114.7 kPa – 16.6 psi	96.2 kPa – 14.0 psi
Empty: Rear axle	55.4 kPa – 8.0 psi	52.4 kPa – 7.6 psi
Loaded: Front axle	159.1 kPa – 23.1 psi	137.3 kPa – 19.9 psi
Loaded: Rear axle	166.0 kPa – 24.1 psi	164.5 kPa – 23.9 psi
<b>Capacities</b>		
Fuel Tank	335 l	530 l
Hydraulic System	123 l	209 l
Engine Cooling System	45 l	50 l
Transmission	72 l	72 l
Engine Crankcase	33 l	44 l
Front Reduction Gear	2 × 11 l	2 × 7.5 l
Rear Differential	16 l	46 l
Tandem Housing	2 × 48 l	2 × 140 l
Rear Reduction Gear	4 × 7 l	-
Adblue® tank	38 l	38 l
<b>Speeds</b>		
	Forward – Reverse	Forward – Reverse
Forward	5 – 8 – 11 – 15 – 22 – 30 – 42 – 55 km/h	5 – 8 – 11 – 16 – 23 – 32 – 45 – 55 km/h
1 – 2 – 3 – 4 – 5 – 6 – 7 – 8		
Rear	5 – 8 – 11 – 16 km/h	5 – 8 – 11 – 16 km/h
1 – 2 – 3 – 4		
<b>Engine</b>		
Complies with Stage IV of EU Directive 97/68/EC 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 / ISO 14396 @ 2100 rpm	375 hp (276 kW) / 362 hp (270 kW)	500 hp (368 kW) / 483 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 × stroke	130 × 140 mm	130 × 160 mm
Air filter	Dry type	Dry type
<b>Transmission</b>		
Electronically-controlled automatic transmission with retarder. The torque converter has automatic lock-up in all gears.	ZF 8 EP320	ZF 8 EP420
<b>Hydraulic system</b>		
1 variable displacement piston pump for steering & tipping for cooling fan, brakes & auxiliaries	305 l/min @ 2100 rpm	305 l/min @ 2100 rpm
Filtration	One return flow filter	One return flow filter
Main safety valves pressures, tipping / steering circuit	280 / 210 bar	280 / 210 bar
<b>Electrical system</b>		
Batteries	2 × 12V 140Ah (series connected to give 24V)	2 × 12V 225Ah (series connected to give 24V)
Starter	7.5 hp (5.5 kW)	7.5 hp (5.5 kW)
Alternator	24V 100A	24V 100A
<b>Tyres</b>		
Standard	23.5 R25 two star radial	29.5 R25 two star radial

▣ DA30



▣ DA40



# Special features

## DA30 - DA40 special features

### 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 × 6 drive with two transverse differentials and one longitudinal.
- ▶ Front 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.
- ▶ DA40: Rear axle transverse differential: Limited-slip diff lock with 45% 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: 72 dB(A) (ISO 6395).
- ▶ External sound level DA30: 108 dB(A) - DA40: 107 dB(A) (ISO 6396).
- ▶ The cab is centrally located on rubber mountings.
- ▶ Hand and arm vibrations are less than 2.5 ms<sup>2</sup> (ISO 5349-2).
- ▶ Whole body vibration is less than 0.5 ms<sup>2</sup> 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.



# Standard and optional equipment

Engine	DA30	DA40
Scania, Stage IV compliant, SCR, EGR, water-cooled, diesel engine with turbo charger and air to air intercooler	●	●
No DPF	●	●
<b>Hydraulic system</b>		
1 variable displacement piston pump for steering & tipping	●	●
One return flow filter	●	●
<b>Cab &amp; Interior</b>		
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 & right side)	●	●
Windshield wiper and washer	●	●
Mirror	●	●
Protection for rear window	●	●
Emergency steering, ground-driven	●	●
Radio/CD/MP3	●	●
Work light front, at the top of the cab	●	●
Cab tilting system	●	●
Emergency shutdown switch	●	●
Anti-slip steps & platform	●	●
Cool box compartment	●	●
Storage room	●	●
Electronic climate control	●	●
Front light protector (Lexan)	●	●
High comfort seat	○	○
Heated operator seat	○	○
Heated mirror	○	○
<b>Safety</b>		
Gradient meter	●	●
Payload metre & cycle counter	●	●
Wet disc brake	●	●
Rear view camera	●	●
Hammer for emergency escape	●	●
<b>Other</b>		
Engine exhaust brake	●	●
Transmission retarder brake	●	●
Automatic lubrication system	●	●
Mud flaps	●	●
Towing hook, front and rear	●	●
Tail gate	○	○
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	○	○
<b>Tyres options</b>		
Quarry	○	○
Earthmoving	○	○
Flotation tyres	○	○

Standard: ●  
Optional: ○

Some of these options may be standard in some markets. Some of these options may not be available for certain markets. Please check with your local DOOSAN dealer for more information about availability or to adapt your machine to your application needs.



Side extensions



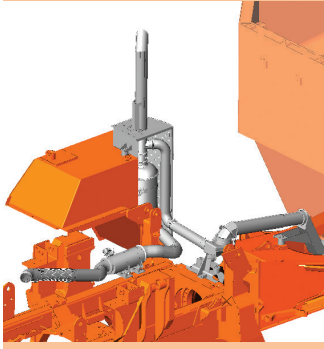
Tail gate



LED lights



High comfort seat



Heated body



Fast fill



Quarry tyres



High flotation tyres

