# **SPECIFICATIONS HA45**

Powered By Tier 4 Final Scania Engine

ENGINE	
Maker / Model	Scania DC 9
Туре	Water-cooled, diesel engine with turbo charger and air-to-air intercooler
Aftertreatment System	EGR / SCR (No DPF)
Power Rating ISO 3046 @ 2100 rpm	Tier4F 500hp(368kW)
No. of Cylinders	6 (in line)
Torque Gross	2373 Nm@1,300 rpm
Displacement	3.35 gal (12.7 L)
Bore Diameter X Stroke	130 X 160 mm
Air Filter	2-stage (main + safety), dry type
Emissions	Complies with TIER4F of emission regulation

ELECTRICAL SYSTEM	
Voltage	24 V
Battery	2 X 12 V
Battery Capacity	2 X 140 Ah
Starter Motor	8HP (6 kW)
Alternator	28 V / 100 A

DRIVETRAIN	
Torque Converter	Lock up function in all gears
Transmission	Electronically controlled automatic transmission with retarder Full time 6X6 drive with two transverse differentials and one longitudinal inter-axle longitudinal Torque-proportioning differential, integrated into the ZF transmission
Front Axle Transverse Differential	Limited-slip diff lock with 45% locking ratio mounted directly at transmission
Rear Axle Transverse Differential	Limited-slip diff lock with 45% locking ratio
Torque Distribution (100% Lockable)	1/3 to the front axle, 2/3 to the rear axle

STEERING SYSTEM	
Cylinder	Two double-acting
Standard	The steering is approved according to ISO 5010
Max. Steering Angle	15°
Emergency Steering	Ground-driven emergency steering pump

TRANSMISSION		
Maker / Model	ZF 8EP-420	
Travel Speed - Forward		
1st	4 mph (6 km/h)	
2nd	6 mph (9 km/h)	
3rd	7 mph (12 km/h)	
4th	11 mph (17 km/h)	
5th	15 mph (24 km/h)	
6th	21 mph (34 km/h)	
7th	30 mph (48 km/h)	
8th	34 mph (55 km/h)	
Travel Speed - Reverse		
1st	4 mph (6 km/h)	
2nd	6 mph (9 km/h)	
3rd	7 mph (12 km/h)	
4th	11 mph (17 km/h)	
Front Hubs	Kessler	
Rear Axle + Hubs	Kessler	
Rear Tandem	Hyundai (in house)	

Max Payload

BRAKES	
Service Brakes	Dual circuit braking system acting on all six wheels, all hydraulic-operated brakes with enclosed oil-cooled wet multiple discs on four hubs (braking force distributed to two hubs by tandem gear wheels)
Parking Brake	Spring actuated mounted on driveline shaft
Max. Gradient, Parking Brake	15°
Retarder	Automatic transmission retarder standard
Brake System	Complies with ISO3450

# CABIN

Net Weight

66,359 lbs

(30,100 kg)

**Max Power** 

500 HP

(368 kW)

**Body Volume** 

(24.4m<sup>3</sup>)

ROPS / FOBS cabin meet ISO 3471 and ISO 3449 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> (ISO 2631-1)

# AIR CONDITIONING SYSTEM

The air condition system contains fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1,430). The system contains 2.0 kg of refrigerant representing a CO2 activation of 2.96 metric tennes. equivalent of 2.86 metric tonnes.

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HYDRAULIC SYSTEM	
Туре	1 variable displacement piston pump for steering, tipping, cooling fan brakes & auxilaries
Maximum Pump Output	77.6 gal / min @ 2,100 rpm
Filtration	return flow filter
Main Safety Valve Pressure Tipping	4,061 psi
Main Safety Valve Pressure Steering Circuit	3,045 psi
Tilt Cylinders	Single stage, double-acting
Tipping Time Raise	10 secs
Tipping Time Lower	10 secs

BODY	
Body Volume (Without Tailgate)	26 yd³ (24.4 m³)
Material	Hardened abrasion-resistant steel plates (400 HB)
Body Tipping Angle	70°
Level Capacity (with / without tailgate)	22.3 yd <sup>3</sup> (20.4 m <sup>3</sup> ) / 14.9 yd <sup>3</sup> (21.4 m <sup>3</sup> )
Heaped Capacity (with / without tailgate)	28.4 yd³ (26.0 m³) / 26.7 yd³ (24.4 m³)

TIRES	
Standard	29.5R25*
Optional	875/65R29

WEIGHTS	
Empty Front Axle	31,305 lbs (14,200 kg)
Empty Rear Axle	35,053 lbs (15,900 kg)
Net Weight	66,359 lbs (30,100 kg)
Max. Admissible Load: Front Axle	49,604 lbs (22,500 kg)
Max. Admissible Load: Rear Axle	121,254 lbs (55,000 kg)
Max. Admissible Total Weight	156,748 lbs (71,100 kg)
Payload	41 metric ton / 45 short ton

POWER TO WEIGHT RATIO	
Empty	12.2 kW/t
Loaded	5.2 kW/t

<sup>\*</sup>Distance of 15 m, moving forward in second gear rati

SERVICE REFILL CAPACITIES	
Engine Oil	11.9 gal (45 L)
Fuel Tank	129.4 gal (490 L)
DEF Tank	18.5 gal (70 L)
Transmission	17.9 gal (68 L)
Hub Front (2x)	2.5 gal (9.6 L)
Tandem Housing, Rear Differential and Hubs	63.4 gal (240 L)
Hydraulic System	26.4 gal (100 L)
Engine Cooling	13.2 gal (50 L)

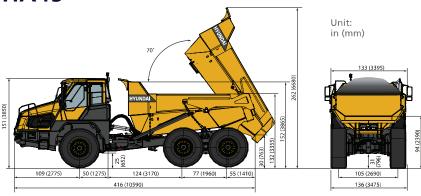
GROUND PRESSURE		
Tires	Standard tires with 15% sinkage	
Unloaded Front Axle	94 kPa	
Unloaded Rear Axle	52 kPa	
Loaded Front Axle	139 kPa	
Loaded Rear Axle	161 kPa	

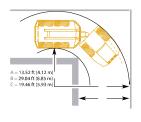
ARTICULATION HINGE AND CHASSIS		
Articulation hing	Articulation hinge with forward-mounted large dimensioned turning ring	
Chassis	Heavy duty design, box type welded frames; 7° sloping rear frame design	

SUSPENSION	USPENSION		
Front	Semi-independent, self- levelling hydro-gas suspension, manually adjustable		
Rear	Free-swinging tandem housing		

NOISE		
Guaranteed noise level presented below can be differed depending on a range of factors, such as operating condition, speed of a cooling fan, types of engine and so forth. Hearing protection shall be necessary if an operator is working in the improperly maintained cabin or exposed to a noisy environment by leaving doors and/or windows open.		
With a cooling fan at maximum value:		
Operator Sound Pressure Level (ISO 6396:2008)	72 dB(A)	
Exterior Sound Power Level (ISO 6395:2008)	107 dB(A)	

# **HA45**





HA45 width with 875/65 R29 tyres: 3630mm

Turning radius according to ISO 7457: 27.62 ft (8.42 m)

DIMENSIONS	Unit: in (mm)
Transport position / cab height	152 (3850)
Rotating beacon	159 (4050)
Overall w/o tailgate	417 (10590)
Overall with tailgate	420 (10673)
Overall body tipped	449 (11405)
Overloading height	172 (4360)
Over outside front tire 23.5R25	137 (3475)
Over outside front tire 750/65R25	143 (3630)
Over mudguard	134 (3400)
Over mirror operating position	157 (3990)
Over outside rear tires 23.5R25	137 (3475)
Over outside rear tires 750/65R25	143 (3630)
Between inner tires	75 (1900)
Over body	134 (3395)
Ground clearance art. hinge	25 (643)
Ground clearance front axle	24 (606)
Ground clearance rear axle	27 (691)
Ground clearance body fully tipped	30 (763)
Overloading	132 (3355)
Body w/o rock guard	152 (3865)
Body with rock guard	158 (4001)
Body fully tipped w/o rock guard	263 (6680)
Body fully tipped with rock guard	282 (7170)
Body tip	94 (2390)
Front axle center to machine front	109 (2775)
Front axle center to art. hinge	50 (1275)
Art. hinge to rear axle centre	163 (4150)
Rear axle centre to body tip	75 (2390)
Front axle center to rear axle center	214 (5425)
Wheelbase rear axle	77 (1960)

DIMENSIONS	Unit: in (mm)
Approach angle front	26.5°
Max. body tip angle	70°
Max. steering angle	45°
Front tie down height	42 (1063)
Rear tie down height	51 (1300)
Load height (SAE 2:1)	161 (4100)
Inner turning radius	162 (4215)
Outer turning radius	331 (8420)
Outer wheel turning radius	350 (8880)
Corridor width	216 (5940)



# **STANDARD EQUIPMENT**

#### **FNGINE**

- Electronically controlled, direct injected, water-cooled, turbo-charger, air-to-air intercooler
- Preheater for easier cold starts
- Exhaust brake

## HYDRAULIC SYSTEM

- •1 variable displacement piston pump for steering & tipping
- •One return flow filter

#### SAFETY

- Gradient meter with anti-flip-over protection system
- Payload meter & cycle counter
- •Wet disc brake
- •Rear-view camera
- Hammer for emergency escape
- · Hand rails on the fenders

#### OTHER

- Transmission retarder brake
- Automatic lubrication system
- Mud flaps
- . Towing hook, front and rear
- HYUNDAI Connect telematic system
- ·Work light kit (rear and front)
- Load weighing system

## **CAB & INTERIOR**

- 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
- 12 V and USB charging point
- Retractable roller sunblind
- •Tinted safety glass
- •Sliding window (left & right side)
- · Windshield wiper and washer
- Side mirrors
- · Protection for rear window
- Emergency steering, ground-driven
- Radio/MP3 and Bluetooth
- Cab tilting system
- Emergency shutdown switch
- Anti-slip steps & platform
- Cool box compartment
- Storage room
- Electronic climate control
- High-comfort seat (vertical and longitudinal suspension)
- Heated operator seat

# **OPTIONAL EQUIPMENT**

## **BODY**

- Tailgate
- •Body lining (400 HB)
- •Side extension (200mm/250mm)
- Body heating kit

# SAFETY

- •Seat belt green warning light
- •Blue or orange flashing reverse light
- White noise alarm
- Air inlet pre-cleaner
- Protection for rear lights
- •Wheel block
- •LED main lights
- HEPA filter package

# TIRES OPTIONS

- Quarry
- Earthmoving
- •Flotation tires

## OTHER

- •Webasto heating system (heat up the cooling system)
- Fire extinguisher
- •First aid kit
- •Beacon (rotating / foldable)
- •Light bar LED
- Speed limitation
- •Work light kit (rear and front) LED
- •Tool kit
- Warning triangle
- Fast fill
- •Tire pressure monitoring system (may not be available with all tires)
- Electrical diesel refueling pump
- Electrical adjustable heated mirror
- Electrical engine heater (230V)
- Auto grease system (6L, 20L, Beka)
- First maintenance kit
- Artic oil
- •Sign light
- •Construction road sign
- •CB radio
- Heated seat with 3" belt (2p/3p)



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