

Designed for energy-saving

Designed for performance

Designed for comfort

Durable for high-production mining and construction applications

SANY SKT130S

Hybrid mining
truck

Energy-saving warrior
Advantage attack



The **SKT130S** hybrid mining truck has extra-large carrying capacity to reduce your shipping cost per ton. The solid structure creates a durable machine. The energy recovery system ensures ultra-high fuel-saving performance and lower operating costs, the electric power assist ensures strong power performance, and the simple maintenance procedure ensures high reliability, long service life and lower maintenance costs.

Hybrid power technology

- Engine + dual motors, with a total power of 925 kW and a gradeability of 35%.
- Power generation during driving and parking, power generation with surplus engine torque, no need for charging.
- The general engine purchase and spare parts price is decreased by 50%, with low cost.
- Recover the energy when the vehicle goes downhill, brakes and decelerates, saving 20% energy.



20%

Recover the energy when the vehicle goes downhill, brakes and decelerates 20% Energy-saving

>35%

Maximum gradeability

www.wme.cn

Power performance

The rated power of the system is up to 925kW, with adaptive shift on slopes. The climbing speed is 20% higher than vehicles of the same tonnage, which improves the operation efficiency and outputs 20% more than similar products

Economical efficiency

Dual motor energy recovery, driving charging, better energy saving effect
Intelligent shifting strategy, self-learning to optimize engine output according to working condition characteristics, provide idle flameout technology with an efficiency of more than 5%, and save unnecessary idle fuel consumption

Drivability

Electronically controlled automatic mechanical gearshift for more comfortable driving experience
Integrated manual and automatic gear shifting mode to improve driving experience
Dual-motor auxiliary gear shifting, uninterrupted power, no-sense gear shifting

Reliability

Three-intermediate shaft transmission, with reliable bearing
Unique fuel mode and pure electric mode to ensure trouble-free operation

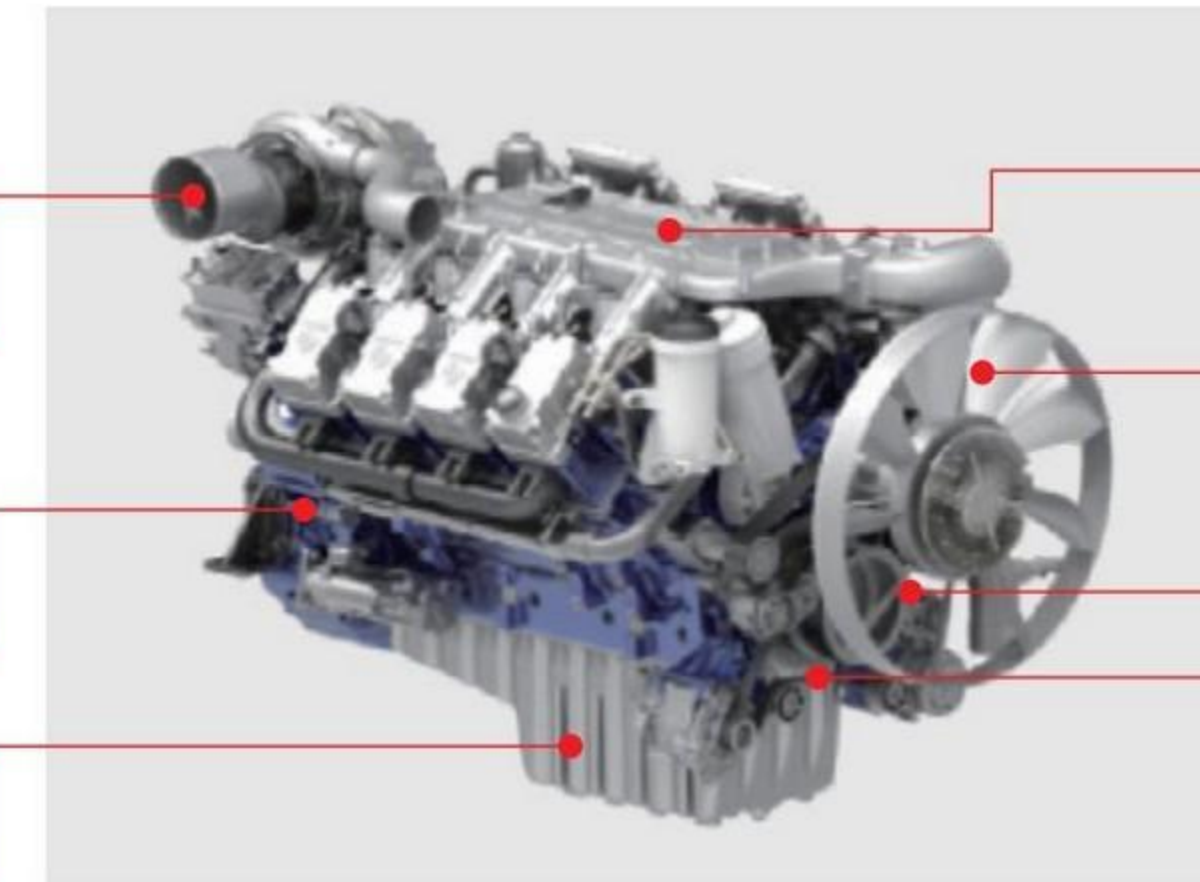
Engine

- Model: WP17G770E304:
- Rated power: 566kW/1900rpm,
- Maximum torque: 3000Nm/1200rpm ~ 1600rpm
- Displacement: 16.72 L

High-efficiency thermal management technology High-efficiency water pump, high-efficiency fan, low-pressure resistance thermostat
Electronic silicon oil fan clutch

1600bar
High-pressure common rail fuel Injection technology

Structure of one head for one cylinder, good process performance, easy maintenance



Advanced efficient combustion technology
Test technology of whole machine, components and parts

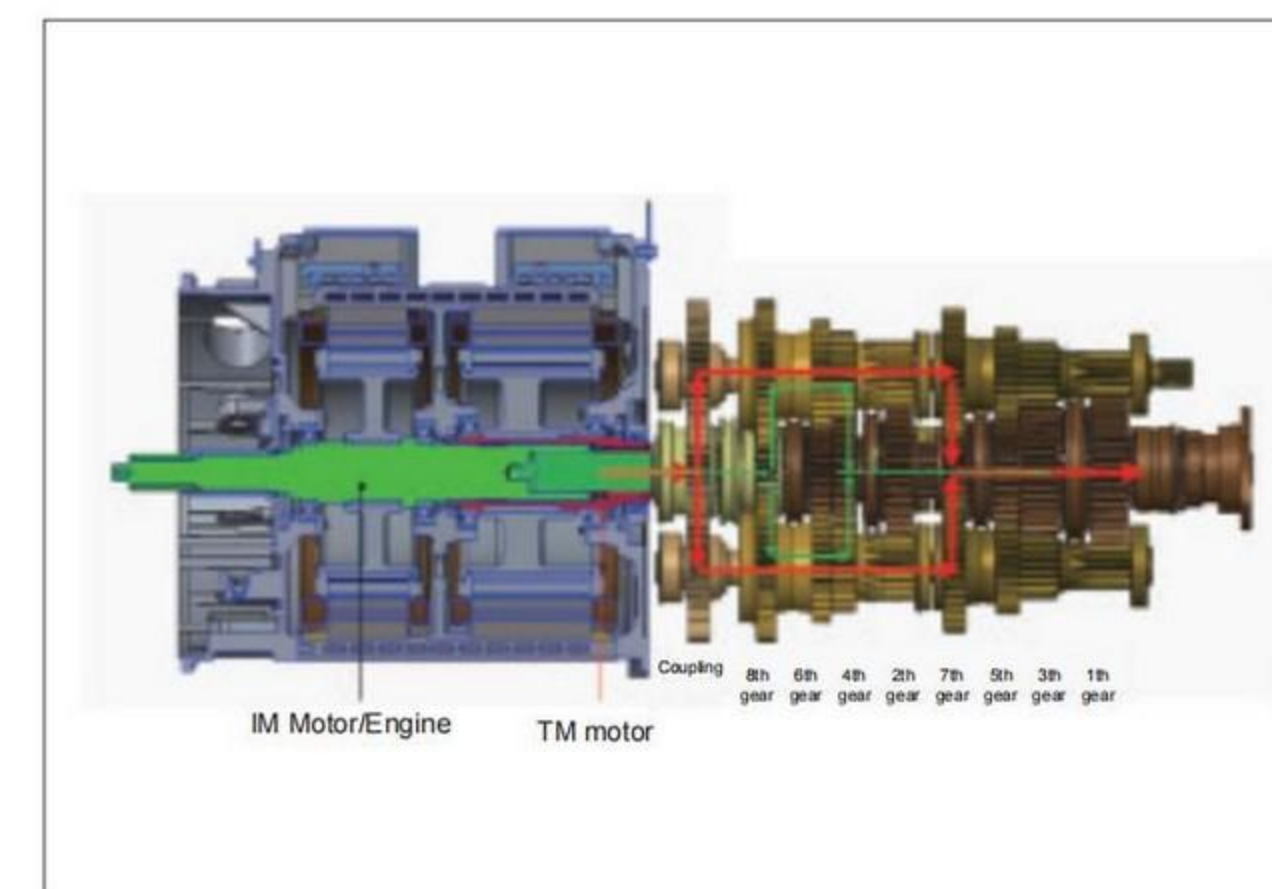
Autonomous electronic intelligent control technology

V-shaped gantry type engine body, dry cylinder liner and high rigidity; the cylinder head adopts alloy cast iron material, which is suitable for the requirements of high temperature and high strength

Electric drive system

The motor is the core of the electric drive system, which is used to convert electric energy into mechanical energy to drive the vehicle forward or backward. According to different running states of the vehicle, the drive motor has two working modes: electric driving and power generation. When the vehicle works in the electric drive mode, the drive motor converts electric energy into mechanical energy, generating torque to drive the vehicle. In the power generation mode, the engine drives the drive motor to rotate. At this time, the drive motor works in the alternator mode and acts as an alternator to generate three-phase AC to charge the battery.

The gearbox plays an important role in power coupling and transmission, which can realize dual input without power interruption during gear shifting.



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Cargo box system

- Cargo box volume: 50m³ (flat)/61m³ (stacking) (standard)
- Material plate thickness: t16/10/12 (bottom/front/side)-basic
t20/12/12 (bottom/front/side)-reinforced

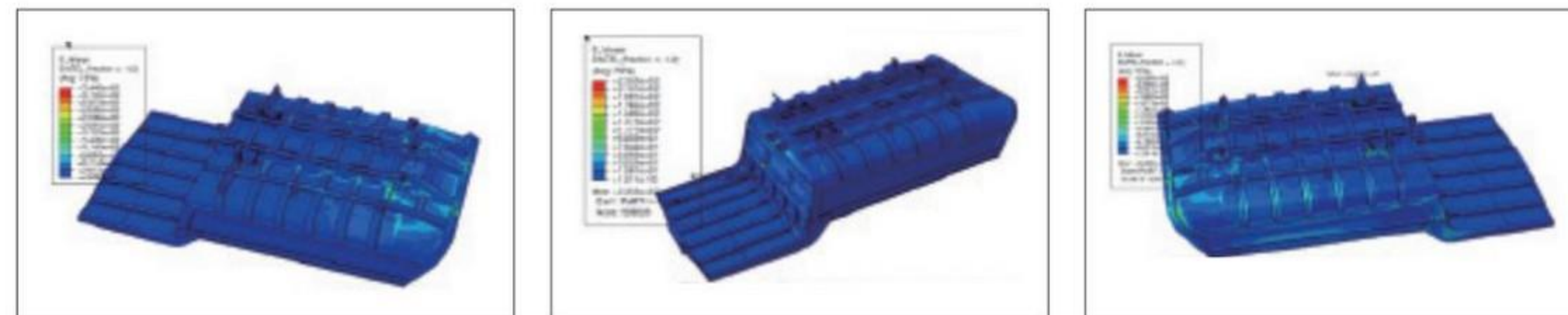
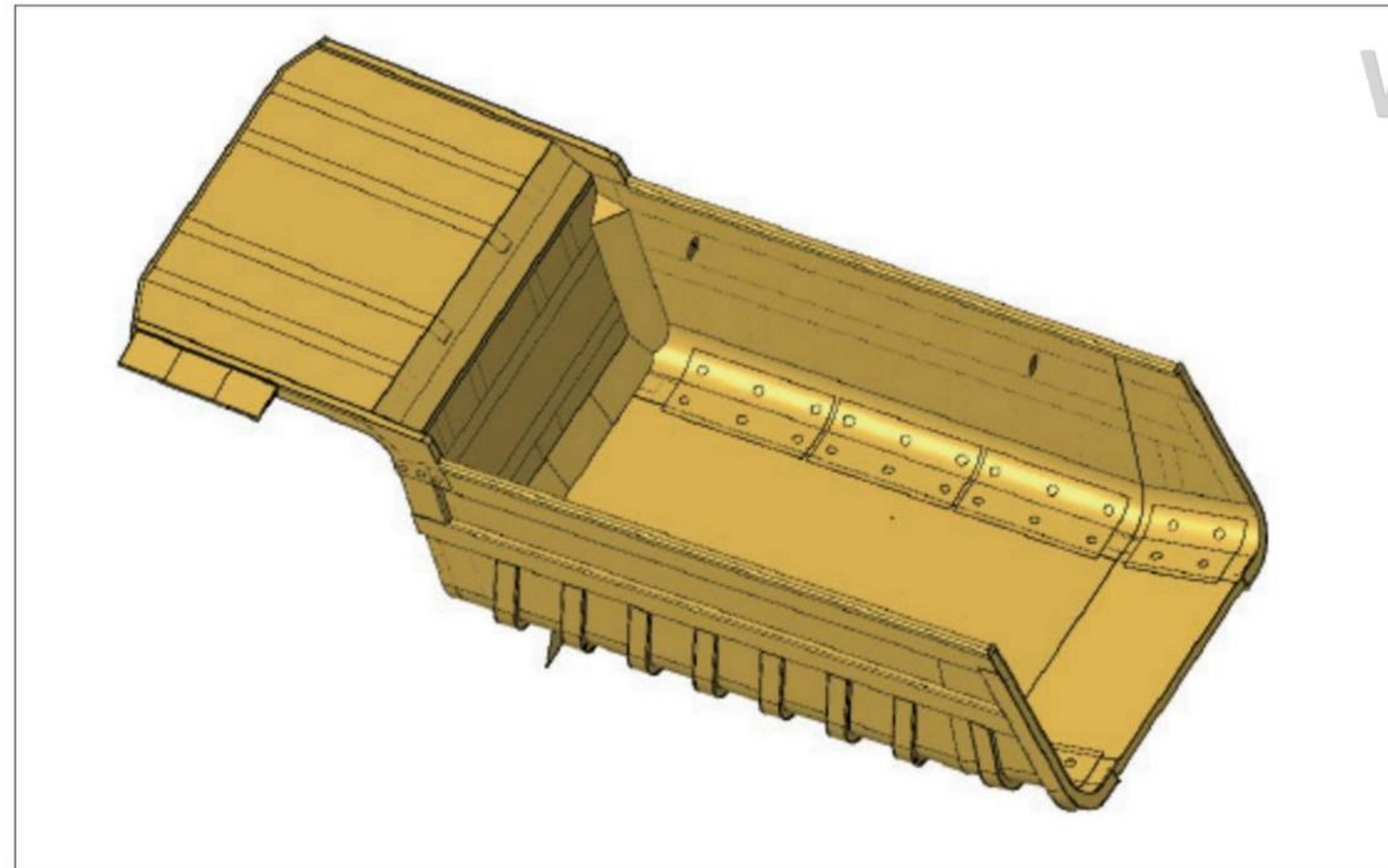
The main plate mainly adopts wear-resistant plates and high-strength plates to ensure the high wear resistance of the whole vehicle

Advantages of cargo box:

1. The cargo box adopts a U-type raised tail structure as a whole, and the overall frame structure is strong, which makes unloading cleaner and faster;
2. The bottom plate cross beam adopts a full-through structure to support the cargo floor and side plate, improving the overall strength and impact resistance;
3. The internal guide plate of the cargo box connects the butt joint position between the side plate and the bottom plate to improve the deformation resistance;
4. The long brim structure can cover the cab to prevent materials from falling into the cab when going downhill with heavy load. At the same time, a protective plate is set on the left side of the brim to prevent materials from hurting people when falling;
5. The cargo box is equipped with an exhaust heating device.

Simulation analysis:

The maximum stress of the cargo box under various working conditions is 275MPa, and the overall safety factor is above 2.14.



Perimeter-type frame

Performance characteristics:

1. Brand-new perimeter type frame, sheet large-section box structure, stiffness ↑25%
2. Under equivalent load condition, weight ↓20%, stress ↓25%.
3. Passed the 6-channel bench test with a service life exceeding 8 years.



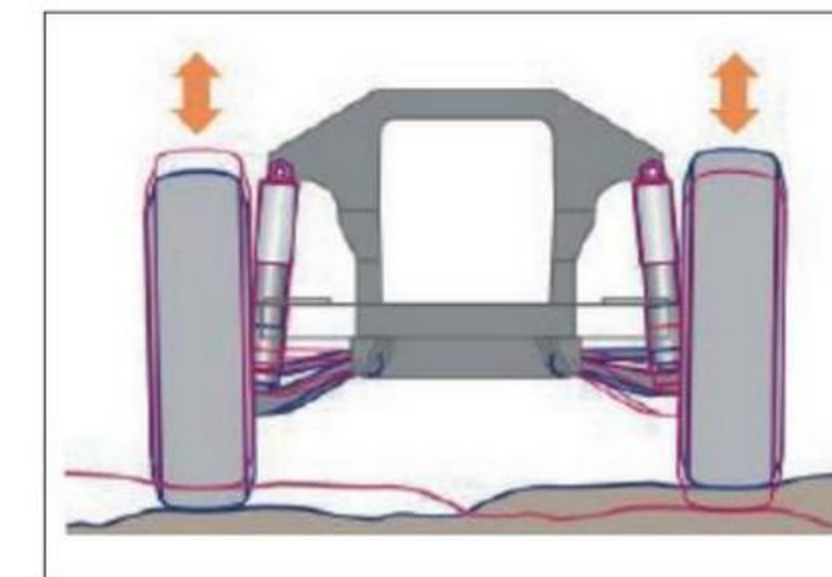
Suspension system

Performance characteristics:

MacPherson suspension system is adopted for the front wheel, and the small swing arm movement reduces the lateral displacement of the tire, prolongs the service life of the tire, so that it has a longer service life and maintenance cycle; provide more comfortable driving experience.

Front suspension stroke: 160mm (6.3 in);

Rear suspension stroke: 140mm (5.5 in).



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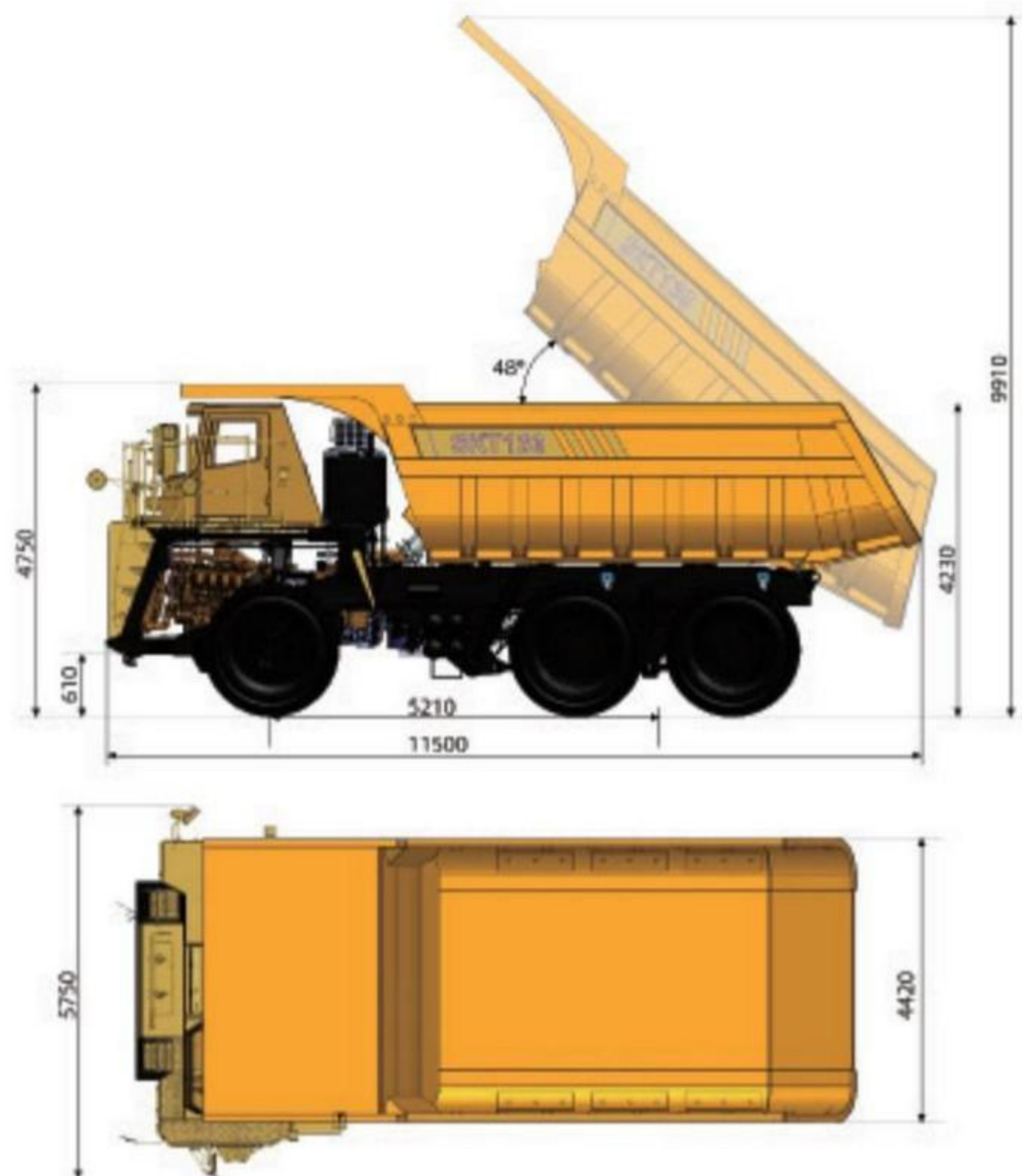
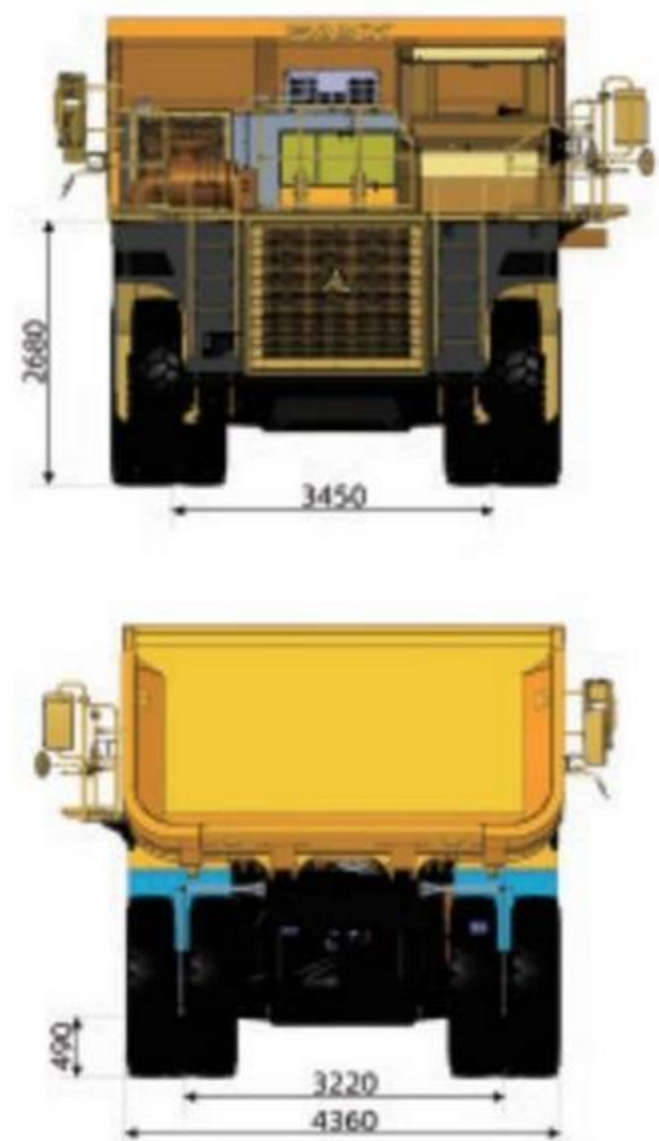
Main technical parameters

Machine parameters	Unit	Parameter
Overall vehicle dimensions L × W × H(lifting)	mm	11500×5750×4750(9910)
Wheelbase	mm	4150
Front wheel track	mm	3450
Rear wheelbase	mm	3220
Minimum ground clearance	mm	450
Maximum steering angle of front wheel	°	40
Minimum turning radius	mm	13000
Total power	kW	565+140+220
Battery capacity	kWh	128
Maximum speed	km/h	50
Maximum gradeability	%	>30
Struck capacity	m³	50
Stacking capacity 2:1	m³	61
Axle	t	35+55+55

Weight distribution

Axle load	Front axle	Rear axle
No load	42%	58%
Full load	21%	79%

Overall dimensions



Dimensions (unit: mm)

* Specific parameters are subject to actual conditions

Fuel/oil capacity

Fuel/oil capacity	L
Engine (engine oil)	44
Cooling system (antifreeze)	85
Hydraulic oil tank (hydraulic oil)	290
Intermediate/rear axle (gear oil)	216
Transmission (transmission oil)	34
Motor - battery (coolant)	30

Weight parameter

Weight parameter	kg	lb
Dead weight	54000	119050
Rated load	90000	198416
Maximum gross weight	144000	317466

* Maximum gross weight including optional devices, all accessories, fill the fuel and load, etc.;

Overloading is strictly prohibited. Overloading or rough loading will seriously affect the service life of parts and components and the whole vehicle!

Main configuration

Engine

- Model: Weichai WP17G770E304;
- Model: high pressure common rail, turbocharged, intercooled;
- Rated power: 565kW/1900rpm;
- Maximum torque: 3000Nm/1200rpm ~ 1600rpm;
- Number of cylinders/type: 8-cylinder V type/turbocharged;
- Cylinder Bore × Stroke: Φ127×165mm;
- Displacement: 16.72 L.

Drive Motor

Electric drive system	Rated/peak power (kW)	Rated/peak torque (Nm)	Maximum speed (rpm)
IM	140/310	900/2300	3600
TM	220/450	1100/2500	3600

Brake system

- Front brake: single caliper disc brake;
- Middle and rear brake: double caliper disc brake;
- Diameter of brake disc: 680mm(26.8");
- Service brake: front/rear independent double-circuit air brake system, with large-capacity air reservoir and large displacement air brake valve for short brake response time;
- Parking brake: spring applied;
- Loading brake: switch control;
- Maximum electric braking power: 560kW (751hp);
- Maximum continuous brake power rating: 250kW (335hp);
- Electric slow brake, parking brake and standard reverse brake;
- The brake system complies with the ISO 3450 standard.

Steering system

- Independent hydraulic system with normally closed center steering valve, pressure cut-off plunger pump and accumulator. Regardless of the engine speed, the steering hydraulic system can deliver uniform steering; even in case of the engine power loss, emergency power can still be
- Minimum turning radius: 13000mm;
- The steering system meets the requirements of SAE1151/5010.

Tire

- Standard: 18.00R33;
- Rim specification: 33-13.00/2.5;

Frame

- The double-box variable cross section torsion-resistant frame welded with high strength alloy steel plates mating with steel castings is integrated with the anti-rollover structure of the cab, which provide a good bending resistance, torsional resistance and impact toughness and longer service life.

Suspension

- The independent suspension system is adopted for the front suspension, and the small swing arm movement reduces the lateral displacement of the tire, prolongs the service life of the tire, so that it has a longer service life and maintenance cycle;
- Front suspension stroke: 160mm (6.3 in);
- Rear suspension stroke: 140mm (5.5 in).

Lifting system

- Independent hydraulic system with limit position buffering function. Two three-stage lift cylinders are installed on the outside of the frame, making the lifting process more stable;
- Flow rate of lifting hydraulic pump: (1900rpm) 323L/min (85USgal/min);
- Lifting≤20s, lowering≤19s.

Truck

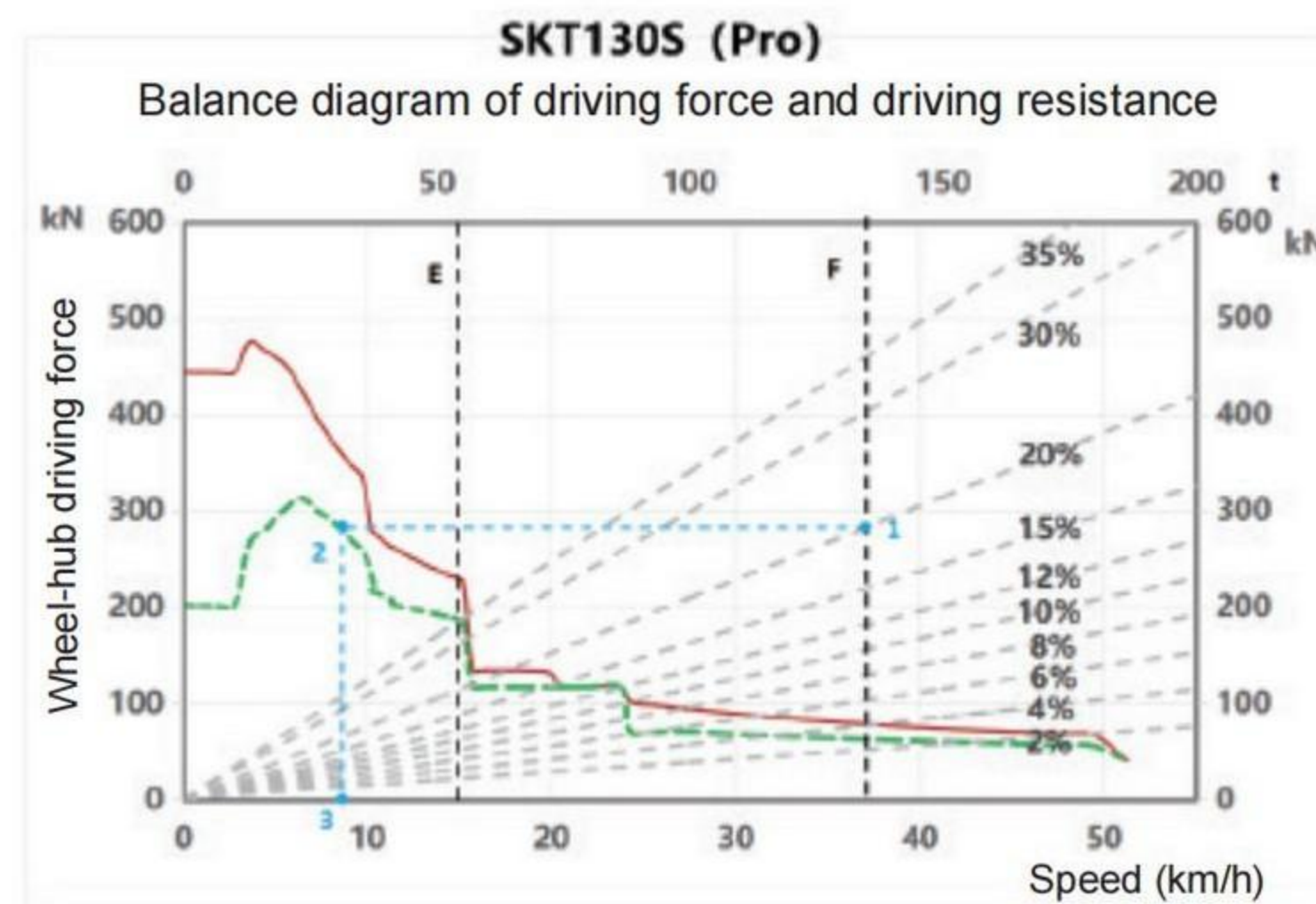
- U-shaped truck, side panels with horizontal ribs, an inclination angle of 48°, the truck is wear-resistant, impact-resistant and has a low loading height. The bottom plate, side plate and front plate are made of wear-resistant steel plate with high yield strength; the standard dump body is made of welded 16mm bottom plate, 10mm side plate, and 10mm front plate;
- Flat load (SAE): 50m3(66yd3);
- Stacking 2:1 (SAE): 61m3(80yd3);

Cab

- With FOPS/ROPS certified overall four column anti-rollover protection design, adjustable suspension seats, luxury interior, and tiltable and retractable steering wheel, it provides a safe and comfortable operating space for the driver;
- The cab conforms to ISO3471, and the noise value is ≤ 78dB(A) when doors and windows are closed.

Driving force

Read the total resistance percentage line down from the total weight. Starting at this weight drag intersection, read horizontally to the curve with the highest obtainable speed range and then down to maximum speed. The available rim traction depends on the available traction and the weight on the drive wheel.



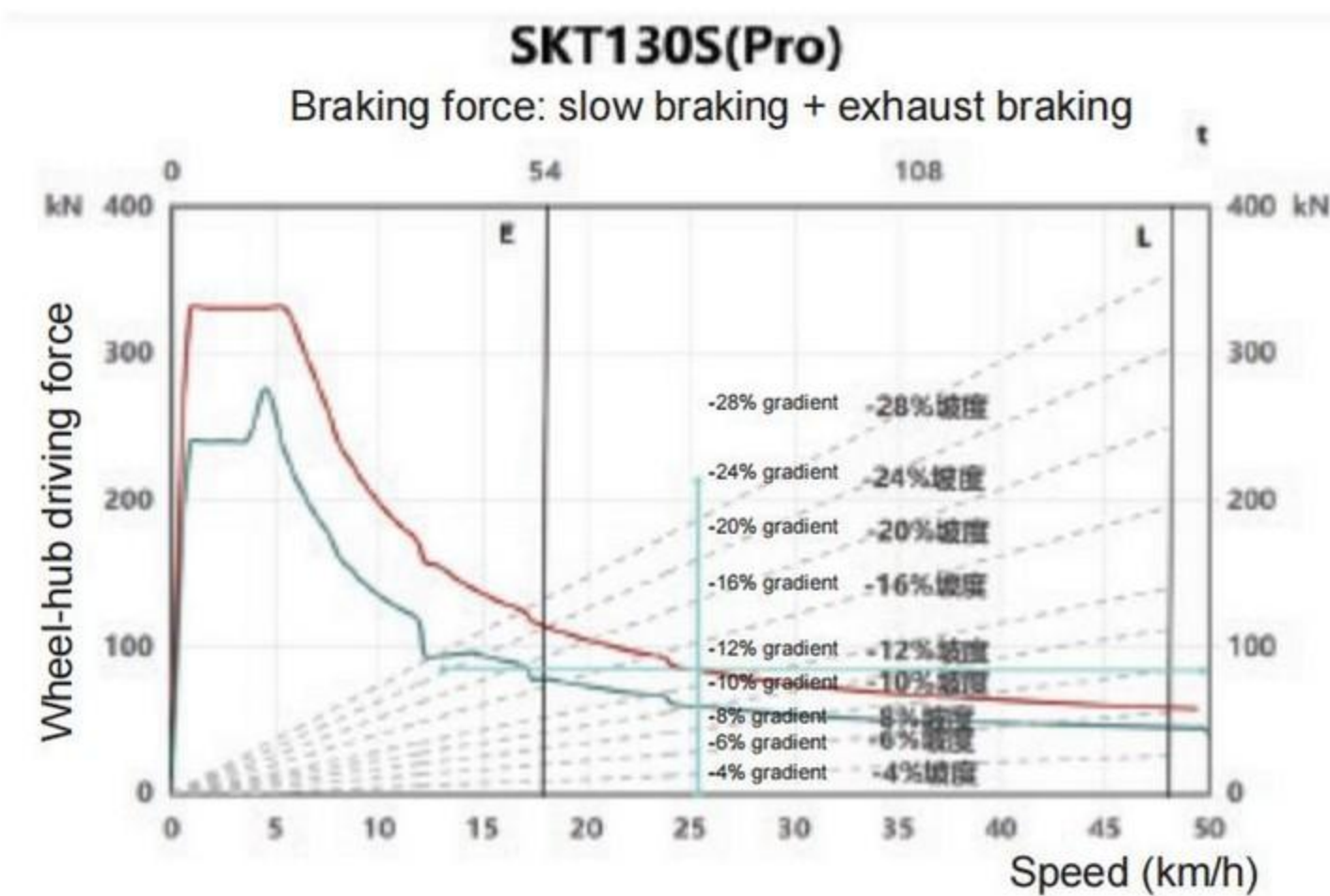
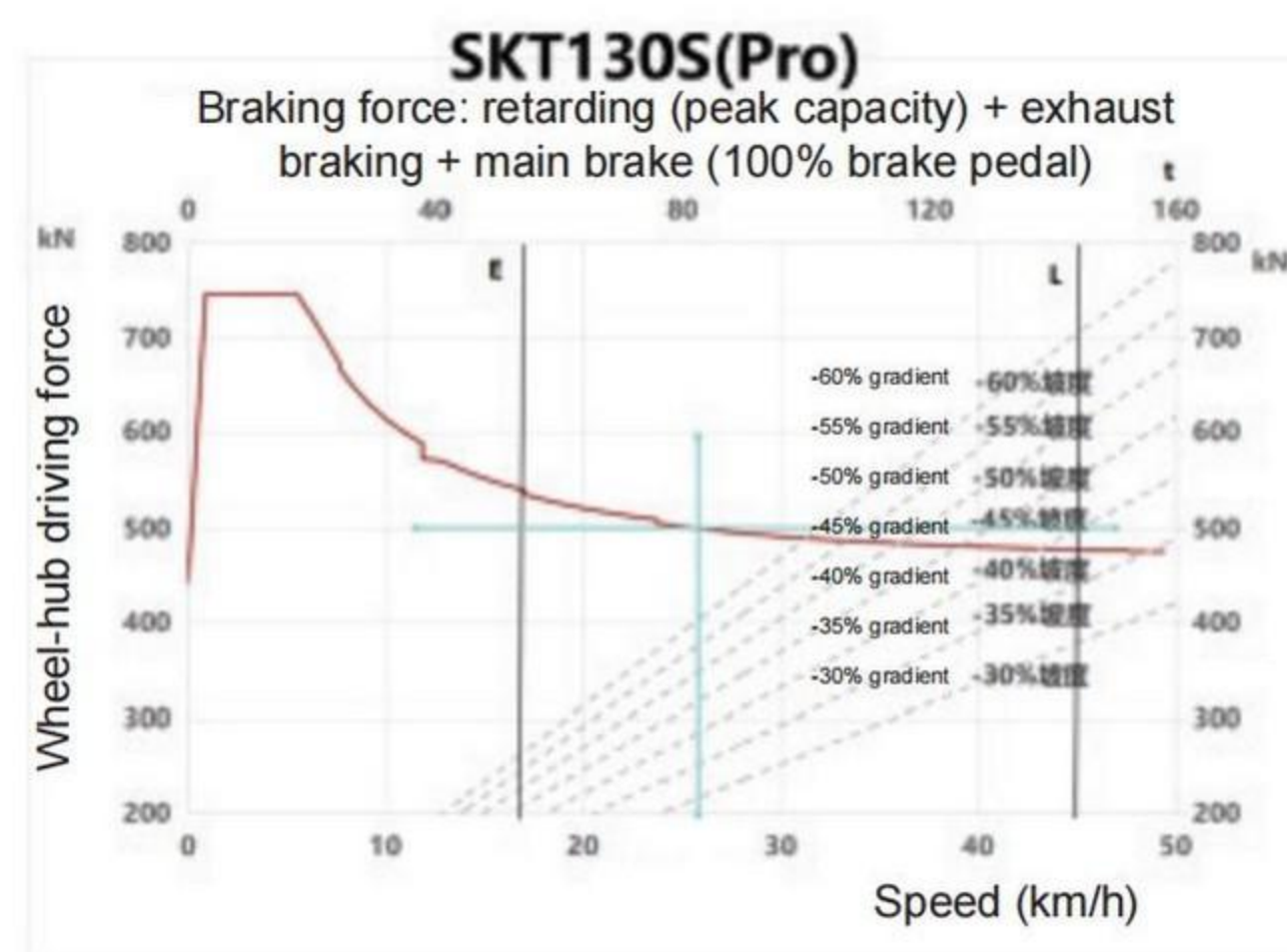
Slope	Continuous climbing speed Km/h	Peak climbing speed Km/h
2% gradient	49.5	50.0
4% gradient	23.8	38.7
6% gradient	23.8	23.8
8% gradient	15.4	20.0
10% gradient	15.4	15.4
12% gradient	15.4	15.4
15% gradient	10.0	15.4
20% gradient	8.6	10.0
30% gradient	-	7.1
35% gradient	-	5.2

Note: The maximum continuous climbing gradeability is 22.5% and the peak gradeability is 36%

Braking force

For braking performance, these curves are used to determine the maximum speed and gear for safer downhill driving at a given distance.

Starting from this weight resistance intersection, the curve for the highest obtainable speed range is read horizontally and then reduced to the maximum downhill driving speed at which the brakes can be handled safely without exceeding the cooling capacity.



Large entertainment screen

More convenient weighing function

Equipped with the weighing display function, the current vehicle load is calculated through the vehicle VCU. Support weight calibration, weighing parameter setting and historical weight statistics. The accuracy of load display can be ensured, the weighing correlation coefficient can be adjusted, and the historical weight of goods loaded can be viewed. Historical data can be exported with a USB, which is convenient for users to count the transfer capacity of vehicle.



Equipped with an 11.8-inch large central control screen and Android vehicle system, supporting video and music playing as well as USB. Equipped with loop monitoring and reversing camera function, eliminating blind spots of driving and improves the driving experience.

More convenient weighing function

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