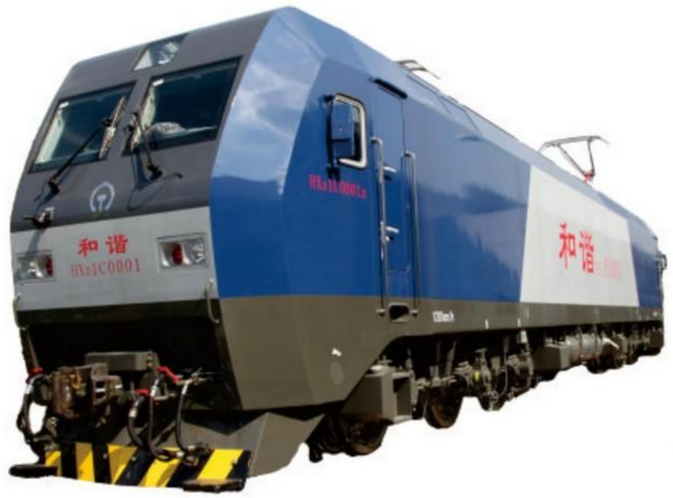
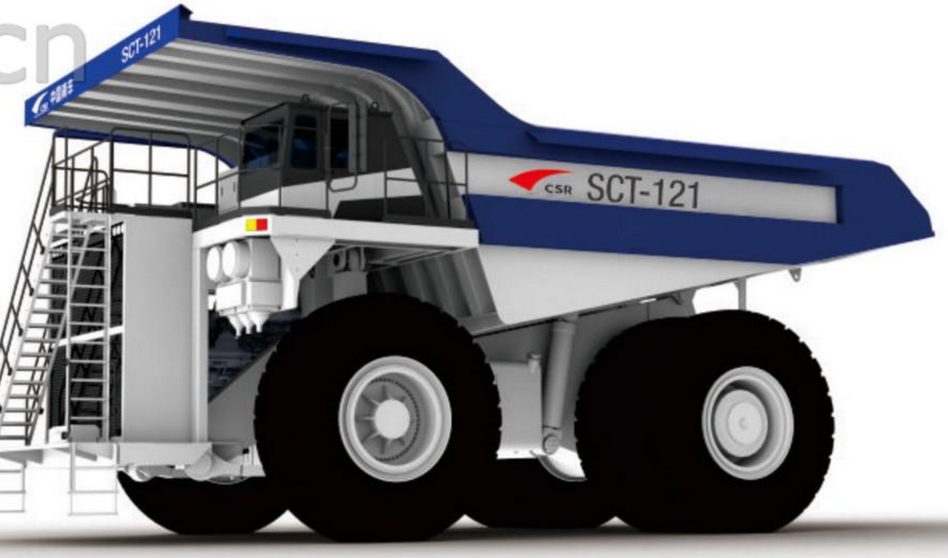
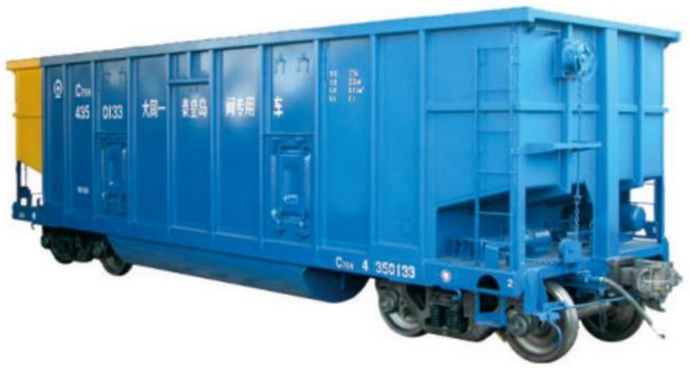
High Reliability From The Railway

源自铁路的高可靠性



机械传动技术
Mechanical transmission technology
网络控制技术
Network control technology
系统集成技术
System integration technology
电传动技术
Electricity transmission technology





轻量化设计技术
Lightweight design technology
精密焊接技术
Precision welding technology

minining dump truck CSR SCT-121

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不是简单的堆砌或总装
而是全面解决方案的供应商

Not only for assembling,
Is to provide a comprehensive solution.

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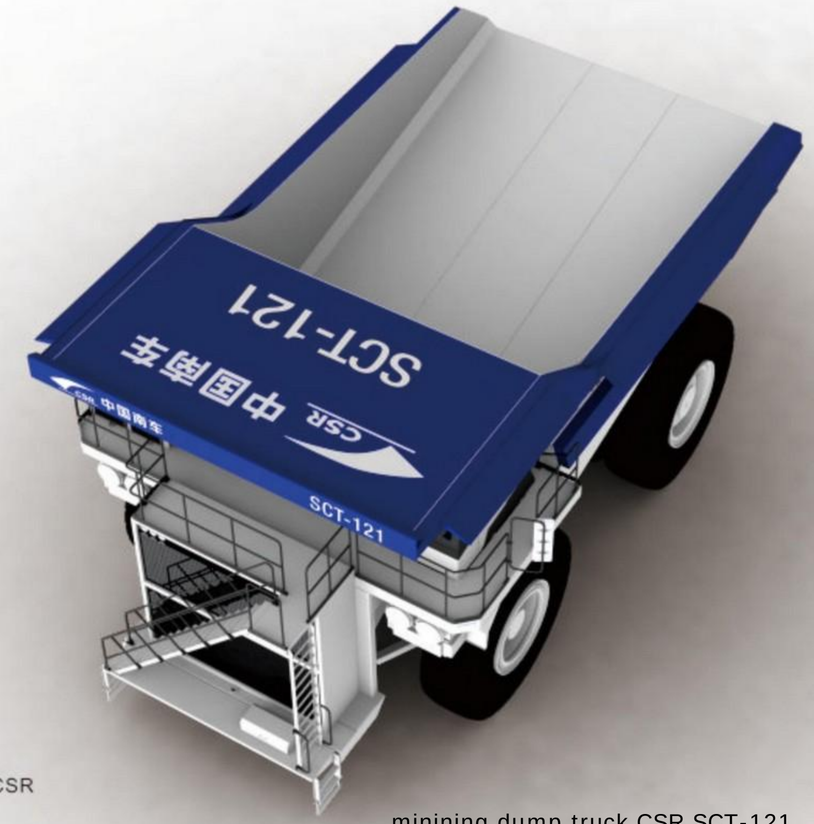
Whole-car Parameters

整车参数

产品型号 Product	SCT-121	整备质量 Curb Weight	165t
额定载荷 Rated Load	220t	最高车速 MAX Speed	64 km/h
长 Length	14567mm	最小转向半径 Min turning Radius	13.3m
宽 Width	8000mm	轴距 Wheel base	6100mm
高 Height	7240mm	货箱举升时间 Dump Body's lifting time	25s
最大卸货角度 MAX Dumping Angle	48°	燃油箱装油容积 Fuel capacity	4500L
液压油箱装油容积 Hydraulic capacity	1000L	满载时以30km/h时速制动距离 Braking distance of 30km/h at full load	20.1m
重量分布(轴荷) Hydraulic capacity	空载 Empty Vehicle	前桥 51% Front Axle 后桥 49% Rear Axle	
	满载 Loaded Vehicle	前桥 33.3% Front Axle 后桥 66.7% Rear Axle	



minining dump truck CSR SCT-121

Major Component Parameters

主要部件参数

ENGINE 发动机

额定功率 Rated power	1864 kw/2500 HP
额定转速 Rated Speed	1900 r/min
型式 Type	4 冲程、60°V型、16缸、中冷增压
缸径×冲程 Cylinder Bore Piston Stroke	159×190 mm
压缩比 Compression Ratio	14.5:1
每缸气门数 Number of valves per cylinder	4

BODY 货箱

货箱外围由槽型梁式结构包裹，主要采用低合金高强度结构钢制造。底板面为上翘的单坡度平板结构，提高了整体对物料的耐磨及抗冲击性能，同时也提供了快速便捷的物料卸载特性。12度的上翘角度也提供了良好的物料承载工况；侧板为两侧竖直的平行结构，前倾20°的前板保证了货物承载的可靠性，保证了驾乘人员装载物料过程中的安全。货箱整体提供了较为强大的装载能力，同时其低重心的设计也保证了满载时行车与举升卸载的安全运行。

The dump body that welded by U-steel structure is mainly manufactured by high-strength low alloy steel. The backplane face is a flat-panel structure which is upturned single slope shape, so that it improved the overall wear resistance and impact resistance of the materials. Also, it provides a feature for quick and easy unloading goods. The bend angle of 12 degrees provides a good condition of material carrying. Side panels are the vertical parallel structure on both sides. Front panel that forward 20 degrees ensures the reliability of carrying goods, so that it ensures the safety of driver and passenger in period of loading goods. The dump body provides powerful loading capacity. The low barycenter design ensures the safe operation of driving at full load, lifting and unloading.

容积 Body	平装 Struck (ISO6483) 116 m3	
	堆装 Standard SAE heaped 2:1 (ISO6483) 147 m3	

FRAME 车架

主要右“两纵四横”结构形式组成，其中两纵即左右纵梁，四横为保险杠，龙门，中部抗扭管，尾部抗扭管。保险杠采用折弯梁结构，其余五大结构采用封闭箱型梁结构，主要材料为低合金高强度钢板。

It is mainly comprised by 'two vertical and four horizontal' structure. The 'two vertical' comprises left and right longitudinal beam. The 'four horizontal' comprises the bumper, gantry,middle anti-wrest tube and the tail anti-wrest tube. The bumper uses bending beam structure, the other five structures use closed box beam structure, its main material is high strength low alloy steel plate.

FRONT AXLE STEERING SYSTEM 前桥转向系统

转向系统采用前置独立式转向梯形结构，这种结构使得车辆一侧车轮的上、下跳动不会影响另一侧车轮的运动，转向系统带有的蓄能器无论发动机转速高低，均可保证车辆均匀转向。

The steering system uses a front independent steering trapezoid structure. This structure makes the beating of one side wheel for the vehicle not affect the other side of the wheel movement. With accumulators the steering system can guarantee that the vehicles steering uniform regardless of the engine speed.

ELECTRIC DRIVE SYSTEM 电传动系统

包括主发电机、牵引变流器及大功率变流元器件，制动电阻、牵引电机，完全由中国南车自主研发，达到国际先进水平。

It comprises main generator, traction converters, high-power converter components, brake resistance and traction motors. All of the above components are completely developed independently by China South Locomotive and have reached the international advance level.

主发电机 Main-Generator	额定功率 Rater power	1800 kVA
	额定电压 Rater voltage	1210 VAC (基波fundamental wave)
牵引电机 Traction Motor	启动转矩 Starting torque	325904 N.M
	最高转速 Max speed	3100 r/min

LIFTING SYSTEM
举升系统

定量开式液压系统，具有浮动功能，举升缸为两支双极油缸，油缸的第二级为双作用式。

The quantitative open hydraulic system has a floating function. It has two bipolar hydro-cylinders. Thesecond level of the hydro-cylinderis double-acting.

SUSPENSION SYSTEM
悬挂系统

前后悬挂均由两支具有空载和满载自适应变阻尼特性的油气悬挂缸组成。

Front and rear suspension is comprised of the two oil and gas suspension cylinders which have no-load and full load adaptive variable damping characteristics.

BRAKING SYSTEM
制动系统

行车制动–Driving brake

干盘式制动器，采用前后双管路制动回路，由两个蓄能器独立供油。

Brake- dry disc brake uses front and rear dual pipeline brake circuit, and it is separately supplied the oil by the two accumulators.

驻车制动–Parking brake

车辆停车时，按下驻车制动按钮，实现驻车制动并机械锁定。

When parking, press the parking brake button and parking brake, then we have completed the parking brake and made the vehicle mechanical locked.

装载制动–Loading brake

车辆卸货时，按下装载制动按钮，实现装载或卸载时后桥行车制动器自动制动。

When unloading or loading goods, press the loading brake button, then we have completed the rear axle service brake automatically brake.

紧急制动–Emergency brake

车辆行驶时遇到突发情况，按下紧急制动按钮，使车辆同时受电制动与行车制动作用，从而缩短制动距离。

If an emergency situation happens when driving, press the emergency brake button, so that the vehicle is in electric brake and service brake status, and thus shorten the braking distance.

CAB
驾驶室

大面积全景挡风玻璃设计，给驾驶员开阔的视野空间；内部夹层隔音材料的使用，为驾驶员提供宁静的操控空间；室内空气增压系统，为驾驶员提供良好的驾驶环境；空气悬浮座椅有效衰减震动。翻车保护机构及落物保护机构有足够的抵御外界冲洗变形能力，避免驾驶员被挤压、碰撞致伤乃至死亡的危险。

The design of large-area panoramic windshield gives the driver a broad perspective space. The use of acoustic insulating material of interlayerprovides the driver with a quiet space for manipulation. Indoor air pressurization system provides the driver with good driving environment. An air suspension seat can effectively attenuate the vibration. The Roll-over protection structure(ROPS) and Falling Object Protective structure(FOPS) have enough capacity to resist outside rinse deformation, so that it can avoid the driver to be squeezed and risk of the injury by collision injury and even death.

CONTROL SYSTEM
控制系统

采用can总线网络控制系统，实现柴油机控制，主发励磁控制，传动控制，整车逻辑控制，整车故障诊断，故障记录，信息显示等功能，并设置各种保护控制，以实现车辆的安全运行。

It uses a Can bus network control system to achievediesel engine control, main generator excitation control, transmission control, vehicle logic control, vehicle fault diagnosis, fault records, information display and other functions. And it set a variety of protection and control mechanisms to achieve the safe operation of vehicles.

REAR AXLE DRIVING SYSTEM
后桥驱动系统

主要由轮边减速器，后桥桥壳，三角架等主要部件组成。后桥桥壳，三角架采用低合金高强度钢制造。轮边减速器完全由中国南车自主研发，制造，达到国际先进水平。

It is mainly comprised of hub reduction gear, rear axle housing and tripod. The rear axle housing and tripod is manufactured by high strength steel. The hub reduction gear is completed developed and manufactured independently by China South Locomotive, and have reached the completely developed independently by China South Locomotive and have reached the international advance level.

TIRE
轮胎

轮胎型号40–57

Tires 40-57

Vehicle Dimensions
整车尺寸