

SANY COAL CUTTER 三一采煤机

Product Brochure
产品手册



Coal Cutter of SANY Heavy Equipment

SANY Heavy Equipment started to research on coal cutters in 2006 and has developed a series of products for thin, medium-thick and thick seams with mining height of 1.0 m~5.4 m, featuring wide scope of application and high reliability. Among them, the thin seam coal cutter is in the leading position in China, with the maximum installed power of 1,150 kW, which is the largest installed power at home and abroad. Its market share has been in the forefront for two consecutive years. While the medium-thick seam coal cutter is at the leading level in the industry in terms of reliability, adaptability, maintainability and intelligence. SANY Heavy Equipment can provide customized development for different geological conditions to meet your needs in an all-round way, and provide you with optimized mining scheme and high-quality coal mining equipment.



All-round Gold Miner

MG210/485-WD

Thin seam coal cutter of SANY Heavy Equipment



Key features

High reliability

Super wear-resistant guide shoes, and walking wheels with a life span of over 1 million tons. Seismic grade of inverter: 15g.

High adaptability

Body length of 2.8 m, adapting to the fluctuations of the working face. Dinting depth of 160 mm, ensuring thorough cutting of the lower triangular coal and adapting to narrow gateways. Haulage pull of 510 kN, adapting to mining at a working face inclination of 40°.

High compatibility

Applicable to fully mechanized mining of 1.0 m-1.5 m thin seams and high-grade conventional mining. Available scraper conveyor series: SGZ630/ SGZ730/ SGZ764/800.

High cutting performance

Single ranging arm single cutting motor, with power of 210 kW, capable of cutting f4 gangue. C-type ranging arm, and internal rotation design for drum with low vibration.

Efficient coal mining

Mining speed up to 6.2 m/min, with coal loaded while cutting, and underneath clearance greater than 300 mm.

Intelligence

Memory cutting, adaptive cutting, and data uploading, suitable for working faces with few workers.

Power configuration

- Single cutting motor: 210 kW, capable of cutting f4 gangue.
- Haulage motor: 2×30 kW, haulage pull of 510 kN.
- Oil pump motor: 4 kW, large displacement oil pump, quick action.

Haulage system

- Casting structure integrated with the body.
- Haulage pull up to 510 kN, adapting to 40° inclination.
- Haulage speed of 6.2 m/min for high yield and efficiency.

Support system

- Suspension structure, supporting long guide shoes and automatically adjusting the body posture.

Hydraulic system

- Large displacement gear pump, completing the full action of ranging arm within 20s.
- HAWE multi-way valve.

Drum

- Adopt imported 10+10 wear plates and alloy bean picks, with wear resistance increased by 30%.
- Four diameters of 850/950/1000/1050 available.

Cutting system

- Planetary reduction drive, with drum speed of 65 r/min.
- Double water seal internal spraying technology, with service life of more than 4 months.

Walking system

- Super wear-resistant guide shoes, which is stable and reliable.
- Walking wheels with a life span of over 1 million tons.

Electric control system

- 1,140 V high-capacity middle voltage inverter for one-driven-two four-quadrant inverter control.
- No top cover, with good water resistance.

Water system

- Internal & external spraying system.
- Motor water cooling system.

Intelligence

- Learning-oriented memory cutting.
- Adaptive cutting.

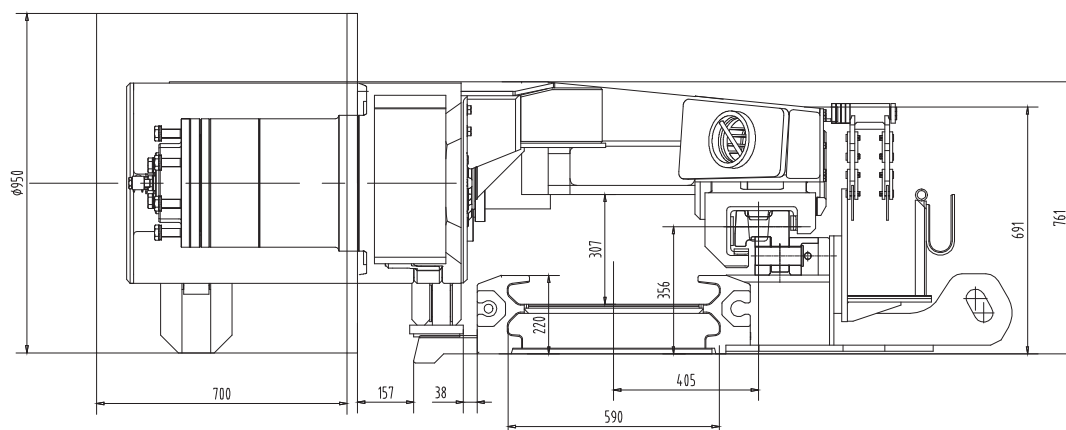
Main technical parameters

Items	Parameters
Range of mining height (m)	1.0~1.5 (1.6 high)
Machine height (mm)	761 (691 for goaf)
Underneath clearance (mm)	307
Cutting power (kW)	2×210
Haulage speed (m/min)	0~6.2~10
Haulage pull (kN)	510/280
Haulage type	One-driven-two four-quadrant inverter control
Supply voltage (V)	1140
Drum diameter (mm)	850/950/1000/1050
Scraper conveyor	SGZ630/SGZ730/SGZ764/SGZ800

Weight/Dimensions

Items	Parameters
Maximum component size (mm)	3020×985×495 (Body)
Maximum component weight (t)	5.0
Machine weight (t)	≈18

Central section



MG330/730i-WD

High-power intelligent thin seam coal cutter of SANY Heavy Equipment



Key features

High reliability

High-strength quenched and tempered shell, super wear-resistant guide shoes, walking wheels with a life span of over 1 million tons, and seismic grade of inverter of 15g.

High adaptability

Suspension structure, the shortest body in the industry, horizontal center distance of drum of 6.5 m, and haulage pull of 450 kN, adapting to the fluctuations of the working face.

High compatibility

The shortest machine height and the largest underneath clearance, applicable to fully mechanized mining of 1.0 m-1.9 m thin seams and high-grade conventional mining.

High cutting performance

Ranging arm single cutting motor with a power of 330 kW, C-type ranging arm, internal rotation design for drum with low vibration, and strong rock breaking capacity for cutting f5 gangue.

High maintainability

Short torque cutting shaft easy to replace, modular design of the hydraulic and electrical system for convenient maintenance, and self-lubricating hinge pin free of oil injection and maintenance.

Intelligence

Learning-oriented memory cutting, adaptive cutting, predictive maintenance of ranging arm failure, coal cutter health diagnosis model, and data cloud, suitable for working faces with few workers.

Power configuration

- Single cutting motor: 330 kW, rock breaking capacity of f5 and local f6.
- Haulage motor: 2×30 kW, haulage pull of 450 kN.
- Oil pump motor: 10 kW, large displacement oil pump.

Haulage system

- Casting structure integrated with the body.
- Haulage pull of 450 kN, adapting to 40° inclination.
- Haulage speed of 7.4 m/min for high yield and efficiency.

Support system

- Suspension structure, supporting long guide shoes and automatically adjusting the body posture.

Hydraulic system

- Large displacement gear pump, completing the full action of ranging arm within 20s.
- HAWE multi-way valve.

Drum

- Adopt imported 10+10 wear plates and alloy bean picks, with wear resistance increased by 30%.
- Five diameters of 1000/1150/1250/1400/1500 available.

Cutting system

- High-strength planetary reduction drive, with drum speed of 55 r/min.
- Gear chamber with internal & external cooling system.
- High-reliability internal spraying sealing technology, with service life of more than 4 months.

Walking system

- Super wear-resistant guide shoes, which is stable and reliable.
- Walking wheels with a life span of over 1 million tons.

Electric control system

- 1,140 V high-capacity middle voltage inverter for one-driven-two four-quadrant inverter control.
- No top cover for electric cabinet, with good water resistance.

Water system

- Integrated water valve assembly.
- Motor & inverter cooling system.
- Internal & external spraying dust suppression system.

Intelligence

- Learning-oriented memory cutting.
- Adaptive cutting.
- Predictive maintenance of cutting unit failure.
- Coal cutter health diagnosis model

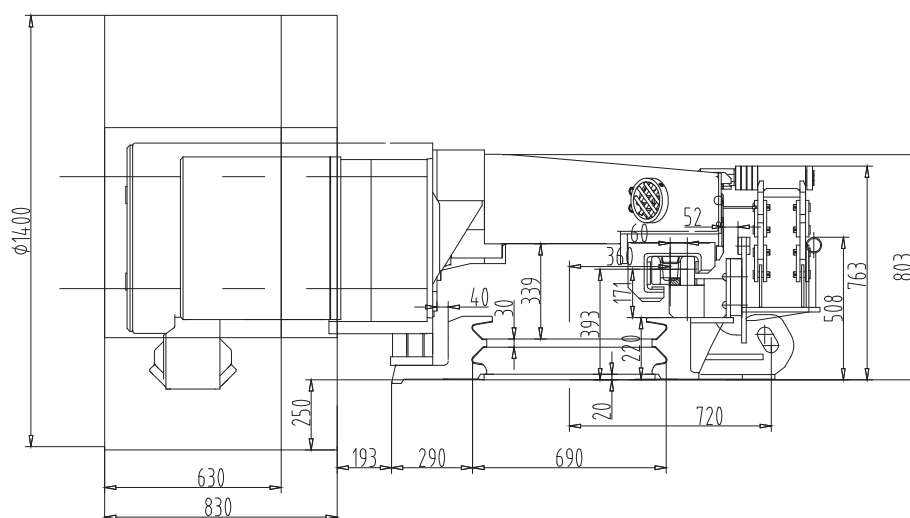
Main technical parameters

Items	Parameters
Range of mining height (m)	1.0~1.9 (2.2 high)
Machine height (mm)	765 (723 for goaf)
Underneath clearance (mm)	336
Cutting power (kW)	2×330
Haulage speed (m/min)	0~7.4~12
Haulage pull (kN)	450/260
Haulage type	One-driven-two four-quadrant inverter control
Supply voltage (V)	1140
Distance of ranging arm pivots (mm)	3340
Horizontal center distance of drum (mm)	7260
Drum diameter (mm)	1000/1150/1250/1400/1500
Scraper conveyor	SGZ630/SGZ730/SGZ764/SGZ800

Weight/Dimensions

Items	Parameters
Maximum component size (mm)	3580×1145×580 (Body)
Maximum component weight (t)	6.5
Machine weight (t)	≈28

Central section



MG300/710-WD

Medium-thick seam coal cutter of
SANY Heavy Equipment



Key features

High configuration

High configuration for the machine, with bearings, hydraulic pumps, hydraulic valve groups, key seals and main electrical components imported from well-known manufacturers.

High reliability

Quenched and tempered ranging arm shell: guiding shoes made of high-strength wear-resistant materials; imported bearings; comprehensive and advanced test system.

High compatibility

Applicable to various working conditions ranging from 2.0 m to 3.7 m. A variety of cutting power, haulage power and machine heights available, and supporting 730, 764, 800 and other scraper conveyors.

High universality

Modular structure adopted for electrical components, with internal transmission parts of ranging arm, internal transmission parts of haulage box, internal transmission parts of walking box, guide shoes, and telescopic cylinders interchangeable left and right.

High maintainability

Maintenance-free copper bushing, centralized oil injection, and drawer type structure adopted for electrical parts, with cutting motor, haulage motor, motor, height adjusting pump, telescopic cylinder, walking box and onboard electrical control parts withdrawable from the goaf side.

Automation and intelligence

Constant power automatic control, gas overrun alarm, critical value protection, fault inquiry and diagnosis, voice warning alarm, active memory cutting, and predictive maintenance of ranging arm.

General layout

- Multi-motor transverse arrangement structure.
- Modular construction without underframe, and clevis pins for positioning between components.
- High strength bolts and pull rods connected with hydraulic nuts.

Haulage system

- Haulage pull up to 570 kN, adapting to 35° inclination.
- Haulage speed of 0~8.5~14.2 m/min for high yield and efficiency.

Support system

- Support legs cast from high strength materials.

Hydraulic system

- Imported 20+5ml double gear pump.
- HAWE multi-way valve.

Drum

- Adopt imported 10+10 wear plates and alloy bean picks, with wear resistance increased by 30%.
- Two diameters of 1800/2000 available.

Cutting system

- Real-time oil filtration and cooling, and fixed-point lubrication.
- System level gear micro modification.
- Quenched and tempered ranging arm shell.

Walking system

- Cemented carbide wear plates, with the wear resistance increased by 2~3 times.

Electric control system

- One-driven-one four-quadrant inverter control.
- Double cover water-retaining structure, with good water resistance.
- Black box data storage system with fault memory and inquiry functions.

Water system

- External integrated water valve assembly.

Intelligence

- Constant power automatic control.
- Gas overrun alarm.
- Active memory cutting.
- Predictive maintenance of ranging arm failure.

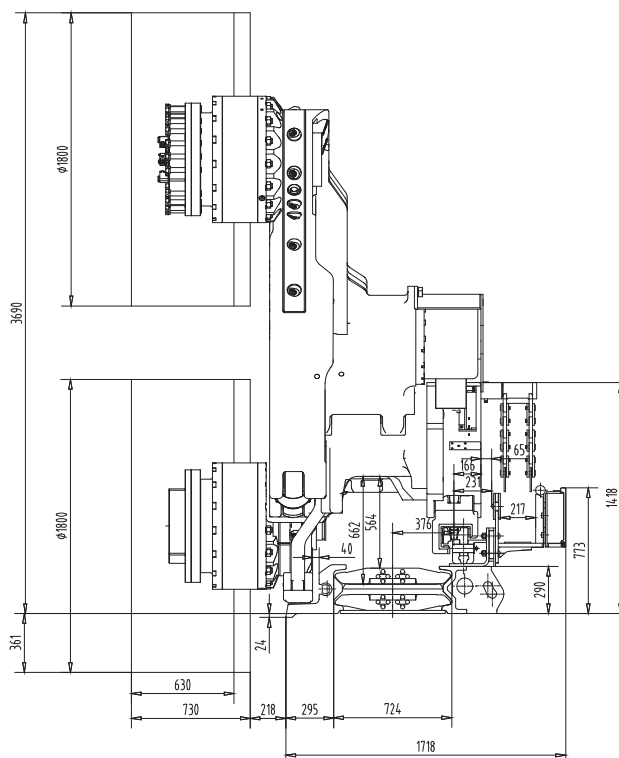
Main technical parameters

Items	Parameters
Range of mining height (m)	2~3.7
Machine height (mm)	1418/1202
Underneath clearance (mm)	662/446
Cutting power (kW)	2×300
Haulage speed (m/min)	0~8.5~14.2
Haulage pull (kN)	340~570
Haulage type	AC inverter control
Supply voltage (V)	1140
Drum diameter (mm)	1800/2000
Scraper conveyor	SGZ764、SGZ800

Weight/Dimensions

Items	Parameters
Maximum component size (mm)	3020×1220×825 (Electric control part)
Maximum component weight (t)	7.6 (Electric control part)
Machine weight (t)	≈45t

Central section



MG650(750) /1720(1920)-WD

High power thick seam coal cutter of
SANY Heavy Equipment



Key features

High wear resistance

Guide shoes with 8 8 wear plates, with the service life increased by 2-3 times.

High cutting performance

Maximum cutting power of 650/750 kW, capable of cutting local f6-f7 gangue.

High configuration

High configuration and high stability, with bearings, oil seals, electrical components and hydraulic components in key positions equipped with the world's top configuration.

High maintainability

Modular haulage system, maintenance-free copper bushing, centralized oil injection, etc., greatly improving the maintainability.

Intelligence

Active memory cutting, predictive maintenance of ranging arm failure, and application of inertial navigation, reducing manpower 2-3 workers for the working face.

Large range of top adjustment

Straight ranging arms, with left and right interchangeable, for higher mining height and large range of top adjustment.

Power configuration

- High power configuration for high yield and efficiency of thick coal seams
- Single cutting motor: 650/750 kW, capable of cutting f6-f7 gangue.
- Haulage motor: 110 kW.
- Oil pump motor: 40 kW, with sufficient power reserve.

Haulage system

- Modular transmission system, with 3 independent modules
- Haulage pull up to 1,110 kN, adapting to 15° inclination.
- Haulage speed of 10.6 m/min for high yield and efficiency.

Electric control system

- 3,300 V, AC inverter control system for one-driven-one inverter control.
- One-driven-one four-quadrant drive mode.
- Modular structure adopted for electrical components.

Drum

- Adopt imported 10 10 wear plates and alloy bean picks, with wear resistance increased by 30%.
- Three diameters of 2240/2500/2700 available.

Cutting system

- Double planetary reduction drive, with drum speed of 2.7 r/min.
- Straight-tooth planetary chamber lubrication.
- Straight ranging arms for higher mining height and large range of top adjustment.

Walking system

- 8 8 wear plates, with the wear resistance increased by 2-3 times.

Hydraulic system

- Imported 80 20 double gear pump.
- HAWE multi-way valve.

Intelligence

- Learning-oriented memory cutting.
- Adaptive cutting.

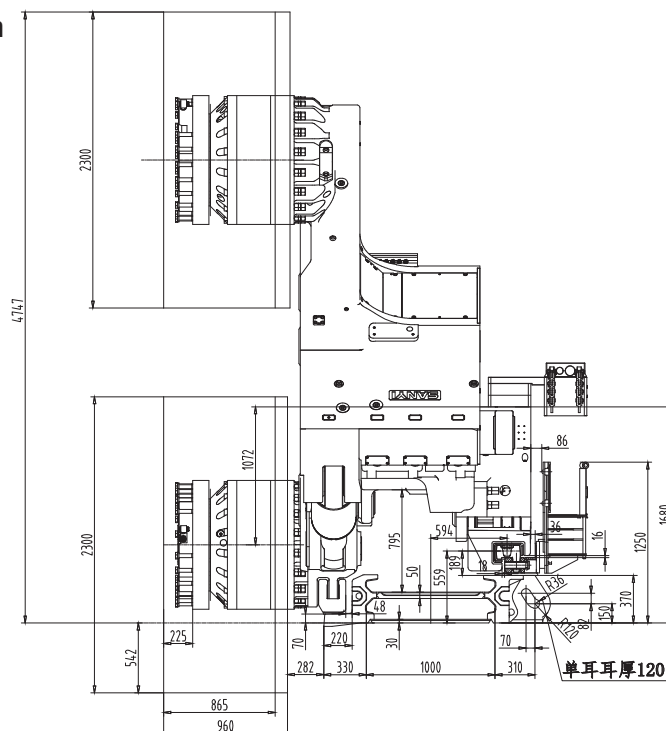
Main technical parameters

Items	Parameters
Range of mining height (m)	2.5~5.4
Machine height (mm)	1680/2205
Underneath clearance (mm)	>800/1300
Cutting power (kW)	2×650/750
Haulage speed (m/min)	0~10.6
Haulage pull (kN)	1110
Haulage type	AC inverter (onboard)
Supply voltage (V)	3300
Drum diameter (mm)	2240/2500/2700
Scraper conveyor	SGZ1000

Weight / Dimensions

Items	Parameters
Maximum component size (mm)	3320×1600×925 (Electric control part)
Maximum component weight (t)	14.1 (Cutting part)
Machine weight (t)	≈105/110

Central section



SA



Sany provides green, safe and efficient mining



ing solutions for global mineral producers.

SANY



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