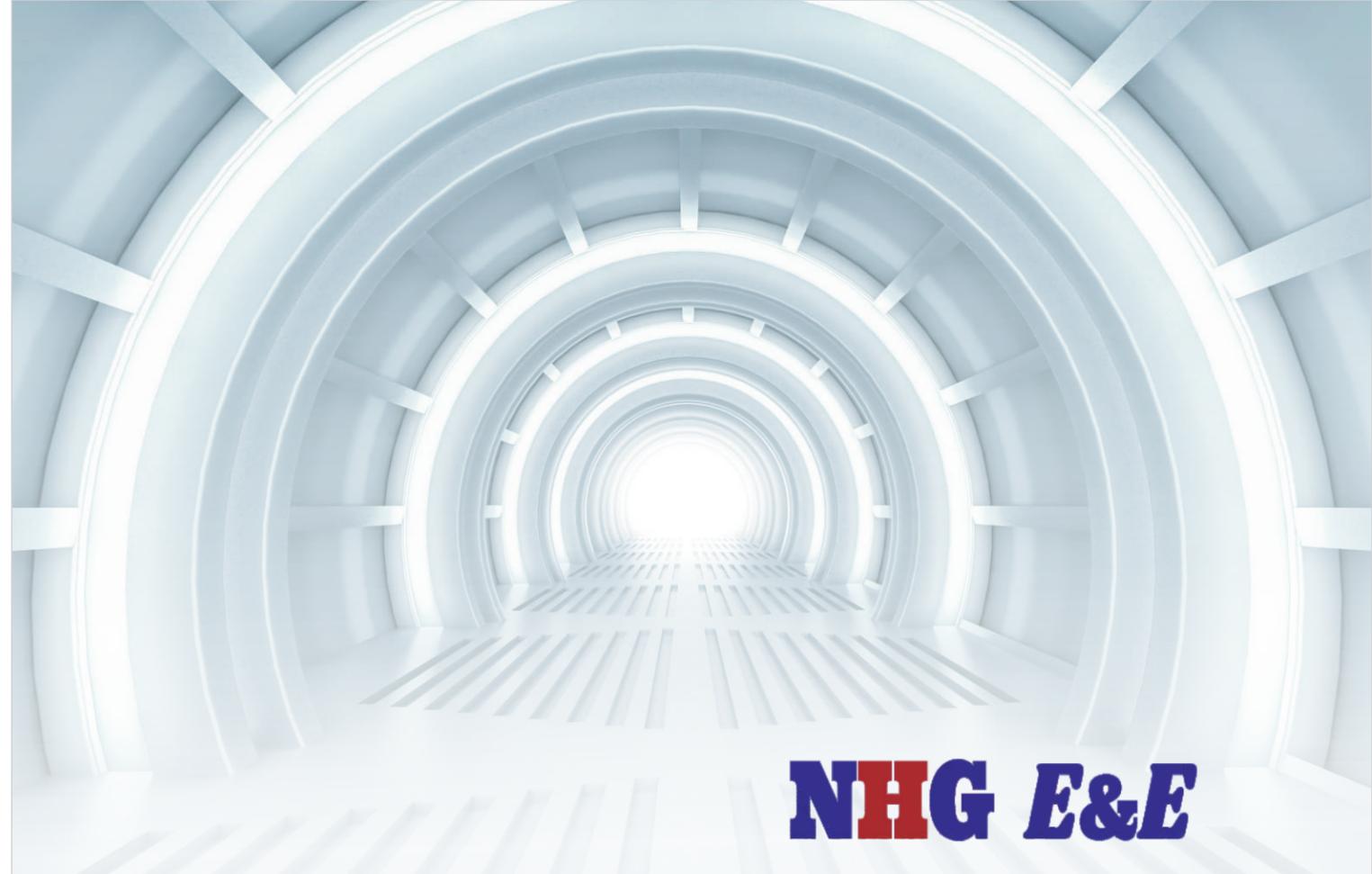




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**NORTH HEAVY GRYP'S EQUIPMENT AND ENGINEERING
(SHENYANG) CO.,LTD**



COMPANY PROFILE

North Heavy Gryps Equipment And Engineering (Shenyang) Co, Ltd. (hereinafter referred to as NHG) was established in 2013. The company is headquartered in Shenyang Economic & Technological Development Zone which is honored by the State Council as "Double Demonstration Zone" of national equipment manufacturing industry. NHG is specialized in the R&D, manufacturing and sales of mining tunneling equipment and overseas mining and tunneling engineering services with more than 1,000 employees (including construction personnel) worldwide, more than 200 equipment and more than 30 construction projects providing services to different customers in more than 10 countries around the world.

The company has established branches and offices in Southeast Asia (Laos), South Asia (India), Europe (Turkey, Poland), Russia (NOVOKLZNETSK), Central Asia (Almaty), South America (Venezuela), Africa (South Africa) and other countries. A regional operation network with equipment sales, service and parts supply and engineering construction service has been established. The 24 x 365 service is implemented to meet the customer's requirements to the greatest extent.

With the rapid development of China, NHG is relying on the industrial base in northeast China to become a leader and stand out as a pioneer in the industry, NHG is striving to achieve the operation of two listed companies to become an international benchmarking enterprise for overseas sales of mining and tunneling machinery and for international engineering construction.



MINING AND TUNNELING EQUIPMENT DIVISION

The Mining and Tunneling Equipment Division was established in 2013, which gathered the top R&D teams and first-class international sales teams in the domestic industry. It always adheres to the concept of "technology promotes industrial progress" and strives to build a world-class standard enterprise technology center. It is specialized in R & D, manufacturing, and international sales of a series of tunneling machinery suitable for non-explosive heading methods and blasting heading methods.

NHG always regards quality engineering as the company's "dignity Item", adopts unique and effective management system and quality control system, carries out international standard quality inspection on manufactured products, quality of raw materials and purchased parts. The quality of production process, the qualifications of employees in special positions, testing equipment and measuring instruments and the entire assembly commissioning and storage process are strictly controlled. The quality risk prevention and control system is implemented to create "zero defect" products.

Based on the principle of "maximizing customer benefits", NHG have established a comprehensive global supporting procurement strategy which not only greatly reduces product costs, but also fully guarantees product quality and provides customers with the most competitive products and services. Relying on the continuous improvement of overseas networks, the Mining and Tunneling Equipment Division has gradually become a beautiful postcard for Chinese mining and tunneling equipment in overseas market.

MAIN PRODUCTS

Mining Roadheader, Tunneling Roadheader, Drilling-Loading-Bolting Integrated Machine, Drill and Bolting Jumbo, Drilling Rig, Bolting Jumbo, Continuous Miner, Drill Loader, Mine Car etc.

INTERNATIONAL ENGINEERING DIVISION

The International Engineering Division was established in 2016. It undertakes not only tunnel construction projects for railway, subway, highway, water irrigation and hydraulic engineering but also inclined tunnels, flat alleys, vertical shafts, and underground roadways for coal mines, metal mines and potash mines in overseas countries. With rich resource of overseas mine and tunnel construction customers and good understanding of certification requirements of equipment and construction related regulations of different mining countries, NHG successfully connects domestic coal mining groups with large contracting projects of different countries. Currently, five overseas contracting projects are in process with the total annual operating income of nearly 10 million US dollars.

The company takes efficient management as the guarantee, takes advanced technology as the foundation, and takes customer satisfaction as the goal. NHG dedicate to provide overseas customers with high-quality, reliable, efficient and satisfactory technical services to continuously meet customer needs.

EBZ132



PRODUCT FEATURES

- Optimized fuselage design, suitable for large inclination and lowroadway development.
- The overall structure is reasonable, durable and reliable.
- Adopt two-stage oil filter for inlet and return to reduce the wear ofhydraulic components.
- The walking part has large output torque and strong climbingability.
- Increased console space, changing the arrangement of multi-wayvalves, and improving convenience by 30%.

TECHNICAL PARAMETERS

Item	EBZ132
Machine weight (T)	36
Dimensions (L×W×H) (m)	9×2.6×1.8
Total power (kW)	220
Cutting motor power (kW)	132/75
Oil pump motor power (kW)	75
Maximum cutting hardness/economic cutting hardness (MPa)	≤70/50 (Suitable for all coal tunnels)
Maximum cutting height (m)	4.5
Maximum cutting width (m)	5
Cutting head telescopic amount (mm)	520
Gradability	±18°
Ground pressure (MPa)	0.13
Travel speed (m/min)	0~7.6
Production capacity (m ³ /min)	3.5
Water pressure (MPa)(L/Min)	2/90
Power supply (V)(Hz)	1100/50

EBZ160



PRODUCT FEATURES

- The whole machine is newly upgraded with strong stability.
- 80KN large torque reducer is used in the walking part, which hasstronger traction.
- The size of cutting head is optional, small cutting head toimprove the cutting force, large cutting head to improve the cutting efficiency.
- Improved bearing capacity by adopting impact-resistant heavy-duty bearings.
- The arrangement of double telescopic oil cylinders solves theproblem of bearing eccentric load when telescopic.

TECHNICAL PARAMETERS

Item	EBZ160
Machine weight (T)	43
Dimensions (L×W×H) (m)	9.7×3×2
Total power (kW)	285
Cutting motor power (kW)	160/100
Oil pump motor power (kW)	110
Maximum cutting hardness/economic cutting hardness (MPa)	≤80/60 (Applicable to all coal, half coal and half rock, and all rock)
Maximum cutting height (m)	4.9
Maximum cutting width (m)	5.6
Cutting head telescopic amount (mm)	550
Gradability	-25°/21°
Ground pressure (MPa)	0.13
Travel speed (m/min)	0~6.5
Production capacity (m ³ /min)	3.5
Water pressure (MPa)(L/Min)	2/90
Power supply (V)(Hz)	1100/50

EBZ200E



PRODUCT FEATURES

- The cutting head is optimized in all directions, with higher cutting efficiency and stronger rock breaking ability.
- The star wheel and the first transport are directly driven by a low-speed large-torque hydraulic motor, and the failure rate is low.
- Add cable holder to protect cables from damage.
- The arrangement of double telescopic oil cylinders solves the problem of bearing eccentric load when telescopic.
- Quickly remove the shovel table.

TECHNICAL PARAMETERS

Item	EBZ200E	
Weight of the whole machine (including two transports)	64t	
Dimensions (L×W×H)	10.7m×3.6/3.0m (shovel board) 2.6m (machine body)×2.67m	
Total power	325KW	
Maximum cutting height	5.2m	
Maximum cutting width	6.6m	
Cutting head extension (mm)	None	
Gradability	±18°	
Ground pressure ratio	0.17Mpa	
Economic cutting rock uniaxial compressive strength	70MPa	
Power supply voltage	AC1140V	
Required/minimum cooling water volume	120/100L/min	
Maximum non-detachable parts weight (front main frame)	8.5t	
Maximum size of non-removable parts (L × W × H)	Main frame	3.12m×1.39m×1.5m
	Front chute	2.81m×0.70m×0.68m
	Support frame	1.65m×2.40m×1.40m

EBZ200H



PRODUCT FEATURES

- Efficient rock breaking, hard rock type picks.
- The key components are jointly researched and developed with well-known international manufacturers.
- The outer spray system adopts a patented annular spray structure.
- With update nozzles adopted, the dust removal effect increased by 30%.
- It can be used for roadway excavation of coal, semi-coal rock and full rock, and can also be used in tunnel construction of railway highways, and hydraulic engineering.

TECHNICAL PARAMETERS

Item	EBZ200H	
Total weight (t)	72	
Dimension (L×W×H)(m)	11×3.6×2.4	
Total power (KW)	347	
Cutting motor power (KW)	200/150	
Oil pump motor power (KW)	132	
Maximum cutting hardness/economic cutting hardness (MPa)	≤100/80 (Suitable for full coal and half coal-half rock and full rock.)	
Maximum cutting height (m)	5	
Maximum cutting width (m)	6	
Cutting head telescopic (mm)	None	
Gradeability	±18°	
Grounding pressure (MPa)	0.14	
Walking speed (m/min)	0---6.5	
Production capacity (m³/min)	4	
Water pressure (MPa)(L/Min)	2/90	
Power supply (V)(Hz)	1100/50	

EBZ260



PRODUCT FEATURES

- The hydraulic system adopts the form of "triple pump", which has the function of self-circulating filtering of oil.
- Automatic refueling system provides work efficiency and reduces work intensity.
- The water system is equipped with a backwash filter, which is automatically cleaned to ensure that the water spray of the pipeline is always open.
- The hydraulic system uses imported filters with "three-stage filtration", which has high filtration accuracy, effectively delays oil deterioration and emulsification, and improves the service life of hydraulic oil.

TECHNICAL PARAMETERS

Item	EBZ260
Total weight (T)	88
Dimension (L×W×H) (m)	11.5×3.6×2.6
Total Power (kW)	438.5
Cutting motor power(kW)	260/200
Oil pump motor power(kW)	160
Maximum cutting hardness / economic cutting hardness (MPa)	≤110/90 (Suitable for full coal and half coal-half rock and full rock.)
Max Cutting height (m)	5.2
Maximum cutting width (m)	6.6
Cutting head telescopic (mm)	None
Grading Ability	±18°
Grounding Pressure (MPa)	0.14
Walking Speed(m/min)	0~6
Production Capacity(m ³ /min)	4.3
Water Pressure(MPa)(L/Min)	2/90
Power Supply (V)(Hz)	1100/50

EBZ320



PRODUCT FEATURES

- The walking part adopts the plunger hydraulic motor and planetary reducer, with stable and reliable performance.
- The hydraulic system adopts constant power load sensitive control, which not only reduces energy consumption but also eliminates possibility of over temperature failure of the system.
- The walking section is tensioned by oil (grease) cylinder and clamping plate device, which ensures the tensioning effect.It also improves the service life of the oil cylinder and reduces the failure points.
- Both the first conveyor and the shovel section are directly driven by low-speed high-torque hydraulic motorswithout the need of reduction box to reduce the failure.
- The cutting vibration is small and there is a supporting device to improve the stability of the machine.The overall reliability is improved.

TECHNICAL PARAMETERS

Item	EBZ320
Machine weight	105t (excluding secondary transport)
Dimensions (L×W×H)	12.79m×3.6m (shovel platform)/2.98m (machine body)×2.98m (working platform)/2.15m (machine body)
Loading width	3.6m
Star wheel speed	0-33rpm
Load capacity (maximum)	4m ³ /min
Maximum cutting hardness/economic cutting hardness	90/70Mpa
Maximum cutting height	5.62m
Maximum cutting width	7m
Cutting head speed	31rpm
Grade climbing ability	±18°
Ground pressure	0.159Mpa
Travel speed	0~6.5mm/min
Track shoe width	700mm
Water pressure (MPa)	2/90L/Min
Power supply (V)	1100/50Hz
Travel motor displacement	160ml/r (2 sets)

EBZ300M



PRODUCT FEATURES

■ Integrated design

tunneling, support, and anchoring are integrated, and the whole machine has a compact structure and reasonable layout.

■ Synchronous digging and anchoring operation:

Through modular structural design, the cutting head tunneling and anchor drilling rig support can be carried out simultaneously, reducing the process switching time and improving the continuity of construction.

■ High-power cutting system

heavy-duty cutting arms and high-strength cutting teeth are used to adapt to complex geological conditions such as hard rock and composite coal seams, and the cutting efficiency is high.

■ Excellent working environment:

manual + remote control mode controls the anchoring operation under temporary support, with high safety. Hydraulic anchor drilling rig, low noise, and labor saving.

■ High safety performance:

hydraulic interlocking of tunneling and anchoring; electrical interlocking of tunneling and anchoring.

■ Wide operating range:

The anchor support device adopts a multi-stage telescopic device to achieve ultra-long telescopic distance to complete the anchoring of tunnels of different heights and shapes.

■ Modular structure:

The key components of the cutting part and anchor mechanism adopt modular design to support rapid disassembly and replacement underground.



General Parameter

Length (M)	12.25
Width (M)	3.6 (shovel table)
Weight (Te.)	104
Max Height (M)	2.78
Power Supply	1140 V AC, 50 Hz
Pump Motor	200
Methane Sensor	Yes
Remote Control	2 sets
Canopy (FOPS & ROPS)	FOPS

Hydraulic system configuration

Double pump (ml/r)	260/260
Oil tank capacity (L)	1200

First Luck

Type	Bilateral Chain
Chain specification	22×86-C
Chain speed (m/min)	60
Transport capacity: (m ³ /min)	4.5

Shovel Board

Shovel type	5-tooth star wheel
Shovel width (m)	3.6
Rate (r/min)	33
Loading capacity (m ³ /min)	4.3
Shovel bottom (mm)	260

Traction

Pulling Force of each crawler (kN)	977
Braking System (SAHR)	SAHR Multi Disk Brake integrated into the Gear box
Crawler Length (mm)	5,697.5
Crawler Width (mm)	720
Traction Speed (m/min)	0 - 9
Grade ability (Max.)	±18°
Ground Pressure (Mpa)	0.18
Ground Clearance (mm)	350
Tensioning Cylinder	2

Cutter

Cutter Motor Power (KW)	300
Cutting Height (M)	5.6
Cutting Width (M)	6.5
Cutting Head Shape	Cone Shape
Cutting Head Size (Dia), mm	Φ900 × 950
Cutting Capacity (m ³ /h) @ 100 Mpa	5-10
No. of Picks on Cutter Drum	39
Max. Compressive Strength of Rock (Mpa)	120
Floor Undercut (mm)	260

Multi-way valve

Multi-way valve I	1 unit
Multi-way valve II	1 unit

Water System

Water Spray	Internal & External Sprayl
Recommended Water Pressure (Mpa)	0.8 - 1.2
Recommended Water Flow, LPM	100
Motor Cooling System (Air / Water)	Water cooled

Bolter

Drilling Nature	Wet
Bolting Range, Width (M)	4.6 - 6.1
Bolting Range, Height (M)	4 - 5.1
Drilling Torque (N-m)	500
Feed Rate force (kN)	16
Drilling rotation, (RPM)	400
Drilling Lowest Position (M)	0.9
Bolting Rate for 2.7 M Anchor, Per Hour (bolt with diameterφ28 than hardness 60MPA)	4-5 Bolts with each rig
Side Bolting Provision	Yes
Hole Length can be drilled	12
Hole Dia (mm2)	φ32
TRS Capacity (T)	1
Provision of Pump for de-watering	Available
Fire extinguishing system	No
Lubrication System	Manual
Hydraulic Fittings	JIC

EBH320 Horizontal Type Roadheader



PRODUCT FEATURES

- The whole machine can be operated by hydraulic pilot proportional control or full wireless remote control.
- The hydraulic system adopts variable pump system, with high efficiency, less heat generation, energy saving and environmental protection.
- The unique sub-packaging and sub-transportation system is adopted, which reduces the accident rate of the shipping organization in the process of cutting coal, improves the shipping effect and improves the shipping capacity.
- The cutting head has large single-pole force, reasonable pick arrangement, strong ability to break rocks and pass faults, and small cutting vibration.

TECHNICAL PARAMETERS

Item		EBH320
Whole machine weight (including dust removal and secondary transport)		125t (including two transports)
Dimensions	L	13.015m
	W	1. Blade width: 3.6m (optional narrow blade width 3m and 3.2m) 2. Track width on both sides: 2.98m
	H	1. Machine height: 3.145m 2. Cutting head height at highest point when placed horizontally: 2.691m
Total installed power		347kW (200+132+15)
Maximum unidirectional compressive strength of cut rock		80MPa
Travel speed		0~6.5m/min
Star wheel speed		33r/min
Scraper chain speed		66m/min
Oil tank capacity		1200L
Track width		700mm
Hydraulic pump		190+145+16
Ground pressure		0.159MPa
Ground clearance		417mm
Loading capacity		4.0m ³ /min

EBH200 Horizontal Type Roadheader



PRODUCT FEATURES

- Using computer control, the whole machine realizes full wireless remote control, intelligent forming cutting and constant power cutting.
- Super structural design concept ensures sufficient weight of the whole machine, and the machine is stable when cutting rocks, with a weight of 125 tons.
- Advanced imported centralized lubrication system ensures the normal and reliable operation of all parts.
- High-efficient electric drive system for sub-packaging and sub-transportation is more suitable for rock roadway excavation.

TECHNICAL PARAMETERS

Item		EBH200
Whole machine weight (including dust removal and secondary transport)		55t
Dimensions	L	11/18.4m
	W	3.6m
	H	2.61m
Total installed power		341kW
Uniaxial compressive strength of economically cut rock		70Mpa
Positioning cutting range	W	5.5m
	H	6.0m
Ground pressure ratio		0.18Mpa
Climbing ability		±18°
Supply voltage		AC1140V
Cooling water volume		30-100L/min

NCM340



PRODUCT FEATURES

Strong cutting ability

The core technology of pick arrangement with independent intellectual property rights realizes the optimized design of pick arrangement under different working conditions, improves cutting efficiency, reduces pick consumption, and realizes large cutting depth and high-efficiency cutting.

Strong movement of the device

It sets a precedent in the industry and adopts the innovative design of shoveling and transporting drive. It has high power and high efficiency, realizes the rapid transportation of materials, is easy to maintain, and increases the service life of shoveling and transporting drive parts.

High reliability

The whole machine adopts the design concept of high safety factor, and the service life of key parts such as reducer can reach more than 10,000 hours.

Wide range of application

The cutting range covers 1.8-4.5/2.4-5.1 meters, which can be applied to more than 70% of coal mine tunnels. It has strong climbing ability and can be applied to coal mine tunnels with a slope of 17°.

Cutting system protection technology

The patented "adjustable torque limiter" protection device is equipped between the cutting motor and the reducer to effectively protect the impact and vibration of the whole machine caused by cutting overload and reduce working noise.

High transport efficiency

The walking frequency conversion drive realizes stepless speed regulation and automatically adjusts according to the actual working conditions to achieve powerful grooving and fast transport speed.

Machine parameters

Machine length	10.97m	Total power	635kW
Machine width (cutting part)	3.30m	Hardness of coal and rock that can be cut	≤60MPa
Machine height	2.13m	Cutting height	2.7~4.64m
Ground clearance	305mm	Drum width	3.3m
Cutting depth	180mm	Adaptable roadway slope	±17° vertically, 5° horizontally
Ground pressure ratio	0.201MPa	Equipment power supply voltage	1140V
Machine weight	62t		

Traveling mechanism

Travel mode	Crawler type (motor driven separately)		
Motor	Model	YBQYS-60(B)II/ YBVF-60	
	Power	2×60kW	
	Speed	2216 r/min	
Travel speed	0 ~ 6.3/12.6/18.9m/min		
Braking type	Wet brake		
Track shoe width	557 mm		
Tensioning type	Cylinder tensioner		

Cutting mechanism

Motor	Model	YBUS-170(F)/YBUS-170F	
Drum	Power	2×170kW	
	Speed	1473 r/min	
	Speed	49.5r/min	
	Cut teeth	Pickaxe shape	
	Maximum swing angle	Upper	30.8°
		Lower	23°

Scraper conveyor

Transport mode	Middle single chain
Trough width	746mm
Chain speed	2.55m/s
Tension mode	Cylinder tensioning

Hydraulic system

System rated pressure	18MPa	
Cylinder circuit	18MPa	
Transport circuit	16MPa	
Pump station motor	Model	YBRB2-55(C)/YBRB-55
	Power	55kW
	Speed	1470r/min
	Pump station double gear pump displacement	103.3/24.2mL/r
Oil tank	Effective volume	500L
	Cooling method	Plate fin water cooler
Number of oil cylinders	8	

Water System

Dust suppression mode	Airborne wet dust removal
Water supply pressure	3MPa
Cooling water pressure	1.5MPa
Cooling components	Motor, fuel tank

Loading mechanism

Loading mode	Three-claw star wheel		
Shovel width	3.2m		
Shovel undercover	218mm		
Shovel raised	1087mm		
Electric motor	Model	YBUS2-45/YBRB-45A	
	Power	2×45kW	
	Speed	1462 r/min	
Star wheel speed	54r/min		

Electrical System

Main technical parameters and characteristics of the isolation box		
Rated voltage	Main circuit	1140V
	Control circuit	AC:36V
Rated current	525A	
Rated frequency	50Hz	
Number of output branches	2	
The rated current of each circuit at 1140 V is	Switch box circuit	400A
	VFD speed control box circuit	125A

Main technical parameters and characteristics of switch box

Rated voltage	Main circuit	1140V
	Control circuit	AC: 220V、127V; DC: 24V、12V
Rated current	400A	
Rated frequency	50Hz	
Number of output branches	6	
The rated current of each circuit at 1140 V is	Left and right cutting circuits	108A
	Oil pump circuits	35A
	Left and right collecting circuits	30A
Dust removal circuit	19A	

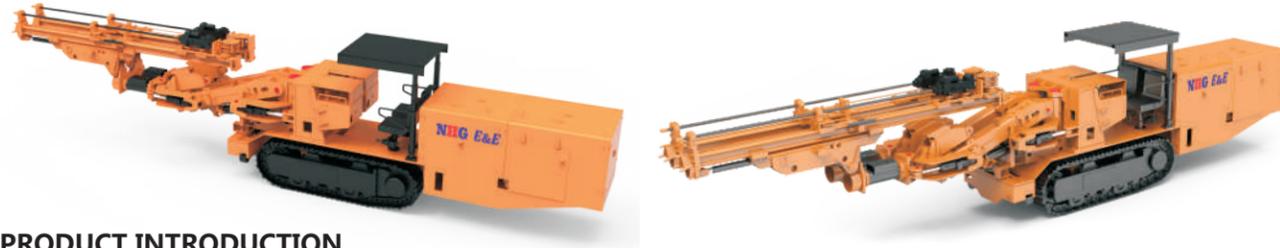
Main technical parameters and characteristics of the inverter box

Rated voltage	Main circuit	1140V
	Control circuit	AC: 220V DC: 24V
Rated power	2×60KW	
Rated frequency	50Hz	
Number of output branches	2	
Output frequency range	5 ~ 90Hz	
Output current range	0 ~ 2×41A	

Main technical parameters and characteristics of the operation box

Rated voltage	≤36V
Rated current	≤1

CMJ2-35



PRODUCT INTRODUCTION

CMJ2-35 mining crawler hydraulic roadheader drill is a tunnel excavation equipment. It is suitable for excavation operations on the working face of rock tunnels and semi-coal rock tunnels. It can simultaneously realize the excavation of tunnel top and side wall blastholes, and also has the functions of detecting holes in rock formations and so on.

PRODUCT FEATURES

- Efficient operation capability: The hydraulic drive system adopts high-power hydraulic motor and pump station to provide strong power, fast drilling speed and high efficiency, suitable for hard rock or complex geological conditions.
- High-precision positioning: Equipped with automatic positioning and angle adjustment system to ensure drilling accuracy and reduce manual adjustment time.
- Compact structure design: The machine body is flexible and the turning radius is small, which is suitable for operation in narrow lanes or tunnels and reduces the moving time.
- Anti-drilling protection: The hydraulic system has overload protection and automatic drill retraction functions to reduce the risk of drilling.
- Intelligent control system: Integrated PLC control panel to realize real-time parameter monitoring and store drilling data.
- Modular design: Key components (such as hydraulic pumps and motors) adopt modular structure, which is convenient for rapid maintenance or replacement and reduces downtime costs.
- Multi-functional configuration: It can be matched with different drilling tools (such as down-the-hole hammers, rotary drill bits) and apertures to meet different geological needs.
- Customized service: Customize the drill arm length, drilling depth (up to 50 meters), power and other parameters according to customer needs to adapt to specific engineering needs.

TECHNICAL PARAMETERS

Item	CMJ2-35
Dimensions (L × W × H)	9.8×1.2×2.45m (Boom) /2.4 (Ceiling, detachable)
Location drilling range (W× H)	7.0×5.0m
Machine weight	15t
Minimum ground clearance	350mm
Adaptable to tunnel properties	Rock Lane
Adaptable to drilling hardness	f7~f14
Adaptable to minimum cross section (W × H)	3.0×3.0m
Maximum drilling depth per time	2.1-3.1m
Drilling diameter	38-76mm
Travel speed (maximum)	0~8m/min
Climbing ability	±18°
Power supply pressure	1140/660V

CMZY2-120/25



PRODUCT FEATURES

- Both the left and right movable arms can realize forward and backward telescopic movement through slideways.
- In order to avoid disturbing the movement of all parts, the shovel adopts a double-sided folding structure, which can reduce the width of the fuselage and facilitate transportation.
- Modular design of walking parts and high-strength engineering track shoes can adapt to various complex working conditions.
- Hydraulic rock drill: long service life, low maintenance cost, no need to disassemble within 10,000 meters, and the function of piston and seal exceeds 5,000 meters.
- Cable reel: This cable reel is equipped with a special cable reel for coal mine, which can store 50 meters of cable, which can be retracted by hydraulic motor, thus making equipment deployment faster and safer.
- Hydraulic system: load-sensitive variable system is adopted to realize the reasonable matching of output pressure, flow and load.
- The system has low energy consumption and more accurate control of hydraulic oil temperature rise. The boom bit adopts Atlas special control valve.
- Horizontal drill pipe: the main arm of drill pipe and anchor platform adopt double triangle hydraulic horizontal drill pipe, which has the characteristics of high positioning accuracy, and the swing process of drill pipe is stable without setbacks.

TECHNICAL PARAMETERS

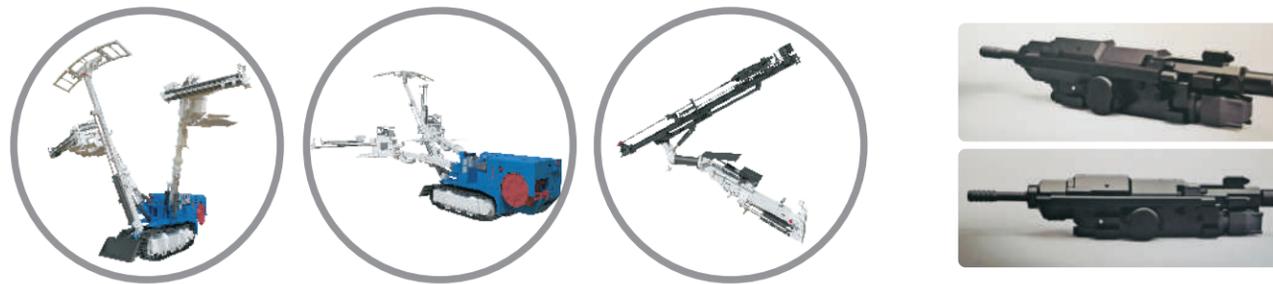
Whole Parameters	
Dimension (L×W×H) (m)	11.7×2.30×3.0
Total weight(t)	35
Power Supply (V)	AC1140/660
Working range of positioning drilling (m)	7.4×5.5
Working range of positioning and loading(m)	5.5×4.2
Scooping range (m)	2.9
Ground pressure (MPa)	≤0.13
Suitable rock hardness (MPa)	≤160
Ground clearance (mm)	350
Maximum height of rear supporting (m)	≤1.65
System rated pressure (MPa)	23
Cable reel distance (m)	60
Whole machine power (Kw)	132
Maximum non-removable part	2.8×1.1×1.78
	5.01×0.92×0.81
Blast hole drill arm	
Blast hole diameter (mm) / maximum depth (m)	φ38-45
Number of booms (pcs)	2
Up and down lifting angle (°)	-15~+60
Swing angle from left to right (°)	±35
Pitch angle (°)	-6~+90
Single penetration depth (m)	3.0

Hydraulic system	
System rated flow (L/min)	578
Hydraulic oil tank volume (L)	600
Cooling method	Water cooling
Water supply volume (L/min)	80
Water supply pressure (MPa)	1.5—3.0
Air supply pressure (MPa)	0.6
Collection and transportation	
Bucket width (m)	0.6
Chute width (m)	0.74
Shipping capacity (m³/h)	300
First transportation chain speed (m/min)	50
Conveying angle (°)	13.5
Shovel width (m)	2.5/3.0/3.5
Width of folding push plate (m)	0.5(Bilateral symmetry)
Digging arm	
Digging width (m)	5.5
Digging distance (m)	2.9
Digging height (m)	4.5
Digging depth (m)	1.0
Bucket width (m)	0.6
Bucket volume (m³)	0.3
Broken width (m)	4.7

CMM1-30 / 2-30

PRODUCT INTRODUCTION

The hydraulic anchor drilling vehicle is the company's latest new type of tunnel support mechanical equipment. The machine is used in conjunction with a tunneling machine, a drilling rig and a rock drilling rig to quickly complete the support work, achieve balanced operations and improve mechanization. It is mainly used for coal-rock, semi-coal-rock tunnels, road and railway tunnels and water conservancy tunnel working face support operations, and can achieve the top of the tunnel. Side wall anchor bolt cable support, also has the functions of drilling blastholes and detection holes (water control, gas detection) and so on.



PRODUCT FEATURES

- Easy operation, flexible displacement, and multi-purpose hydraulic translational bolting boom, which can realize full-section mechanized operation of roadway top and side bolting, and also for front blasthole operations and head-on exploration holes (water and gas exploration holes, etc.) operations in soft rock and medium-hard roadways.
- High-quality and efficient bolt support :fine adjustment of front part of drill boom (two swing hydraulic cylinders + partial expansion), which can accurately find the steel belt holes. Outputs 350N•M torque meets the roadway bolts preload requirements.
- Ensure the safety of the operators: Advanced support platform with the functions of pitching forward and backward and telescopic up and down ensures the operator can work under the advanced support, eliminating the danger of overhead work and ensuring construction safety.
- Load-sensitive hydraulic system reduces energy consumption and cost, and improves the service life of hydraulic components.
- Narrow body design meets the requirements of use together with roadheader, rock drilling rig and drill loader in underground.

■ Advance support platform
The advance support platform with forward and backward pitching and up and down telescopic functions can realize fast and safe operation from 2.15m to 5.0m lanes. Large support range ensures the adaptability of the double-arm anchor drilling vehicle.

■ Hydraulic translation anchor arm
The vehicle anchor arm has up and down hydraulic translation function, which can quickly and accurately locate, simple and convenient operation, always keep the standing platform in a horizontal state, and has hydraulic reverse translation function, which can fine-tune the anchor machine.

■ Hydraulic system
Adopt mature and stable constant power load-sensitive variable hydraulic pump to reduce energy consumption, reduce operating costs, and ensure efficient operation of the system.

■ Cable reel
Adopting cable reel with coal safety certification, the cable reel distance is 60m, which can realize the equipment to enter and exit the site flexibly and freely retract and release the cable, without workers dragging the cable, reducing the labor intensity of workers, improving work efficiency, and high degree of automation.

■ Bulldozer assembly
Equipped with high-strength bulldozer assembly: effectively remove obstacles during equipment transportation and effectively stabilize the machine.

TECHNICAL PARAMETERS

Item		CMM1-30	CMM2-30
Machine parameters	Dimensions (L× W × H)	6.4×1.4×1.9 (machine body height)/2.4m (anchor arm vertical placement height)	
	Location drilling range (W × H)	6.0×4.5m	6.0×5.0m
	Suitable minimum cross section (W×H)	3.0×3.0m	
	Weight of the whole machine	13t	
	Diameter of anchor rod and anchor cable hole	28-32mm	
	Depth of anchor rod and anchor cable hole	0-12m	
	Drill rod specifications	B19、 B22	
	Minimum anchor rod height at side wall level	1000mm	
	Minimum ground clearance	350mm	
	Suitable tunnel properties	Coal, semi-coal and rock tunnels	
	Suitable drilling hardness	F2-f10	F2-f6
	Suitable minimum cross section (W× H)	3.0×3.0m (Single machine operation)	
		3.0×1.2×1.25m(1.9t)	
		2.67×0.45×0.45(0.7t)	
Maximum size of non-removable parts (weight)	3.0×1.1×0.65(1t)		
Technical parameters of main components			
Rotating mechanism	Type characteristics	Hydraulic motor rotation	
	Rated output drilling torque	≥350N•M	
	Rated drilling speed	550r/min	
	Working flow	80L/min	
Thruster	Form mode	Hydraulic cylinder + chain	
	Advance stroke	1300-2500	
	Maximum feed force	15t	
	Advance speed	5000mm/min	
	Vertical flip angle	270°	
Drill arm mechanism	Horizontal rotation angle	180°	
	Main telescopic length	1000mm	
	Auxiliary telescopic length	400mm	
	Swing angle	35°(Inside)/35°(Outside)	
	Lifting angle	50°/ -20°	50°/ 20°
Electrical system	Thruster rotary drive type	Hydraulic rotary cylinder	
	Power supply pressure	1140/660V	
	Rated output power	45kW	
Hydraulic system	Rated speed	1480r/min	
	Fuel tank capacity	350L	
	System pressure	25Mpa	
Air supply system	Main pump displacement	145 ml/r	
	Air supply pressure	≥0.5Mpa	
Traveling mechanism	Travel speed	0-14m/min	
	Climbing ability	±16°	
	Track shoe width	350mm	
	Ground contact pressure	0.1MPa	

CMZY2-200/35



PRODUCT FEATURES

- Drilling-Loading-Bolting Integrated unit is with multi-usage, integrating multiple functions including drill jumbo, rock bolting machinemucking loader, crusher into one unit, which avoids the problem of different machines passing by each other in the roadway and the problem of tunneling in hard rock roadway can be solved comprehensively.
- Drilling, bolting, loading, digging, crushing and other functional modules are with reasonable layout for non-interference during the working not only reduces the repeated input of power equipment, but also reduce the purchase and maintenance cost of the whole machine
- The drilling arm adopts double-triangle self-parallel mechanism and 360 ° flexible displacement mechanism, which can realize multi-position and multi-angle drilling.
- Folding type scraper plate, double chain scraper structure and large scope of bucket realize the efficient and reliable loading capacity.



TECHNICAL PARAMETERS

Whole Parameters	Dimension(L×W×H)	10.7×2.08×2.56m(drill arm)/2.856m(optional)		
	Working range of positioning drilling(W×H)	7.0×5.0m		
	Working range of positioning loading(W×H)	5.5×4.0m		
	Total weight	36t		
	Ground clearance	350mm		
	Suitable roadway	岩巷		
	Suitable rock hardness	≥f5		
	Mini suitable Section(W×H)	3.0×3.0m		
Maximum non-removable part dimension/weight	Main body:	3.546×1.498×0.515m/1.6t		
	Front chute:	4.23×0.72×0.76/1.55t		
	Crawler frame:	4.04×0.59×0.54/1.3t		
Bucket	Bucket capacity	0.2m ³		
	Working mode	Backhoe		
Drill drifter	Model	French brand(standard)/UK brand(optional)		
	Blast hole maximum depth	3.0m		
	Blast hole diameter	≥φ38		
	Length of drill rod	3290mm		
Drilling part	Drill arm	Drill boom lift angle	Up 65°Down 30°	
		Drill boom swing angle	In 35°Outer 35°	
		Drill boom rotary angle	Clockwise 180°counterclockwise 180°	
	Thruster	Compensation stroke	750+650mm	
		Pitch angle	Up 90°Down 6°	
Collection and transportation	Transport mode	Double side scraper		
	Chain speed	50m/s		
	Transport capacity	300m ³ /h		
	Chute section(W×H)	650×350mm		
	Driving mode	hydraulic motor(one side)		
	Shovel width	2100mm		
Walking part	Mode	Crawler type		
	Crawler width	420mm		
	Brake mode	Hydraulic		
	Grounding pressure	0.13Mpa		
	Walking speed(max)	0~8m/min		
	Grading ability	±18°		
Water system	Water supply required	1.5~3Mpa		
	Required/minimum cooling water	60L/min		
Electrical system	Power supply	1140/660V		
	Rated output power	101kW(pump station 90kW+2nd conveyor 11kW)		
Hydraulic system	Fuel tank capacity	500L		
	System pressure	25Mpa		
	Main pump displacement	145ml/r+145ml/r		
Air supply system	Supply pressure	≥0.5Mpa		
Bolting boom (drill boom)	Bolting hole diameter(mm)	≥Φ28 mm		
	Number of bolting arms	2		
	Single penetration depth	1.6/2.4m		
	Drive way	Hydraulic drifter		
	Distance from ground of side bolter	0.8m		

PRODUCT INTRODUCTION

Mining hydraulic excavators are suitable for tunneling, rock loading, bottom cleaning and excavation of frozen soil in coal mines, metal mines, non-metallic mines, vertical shafts, inclined shafts and horizontal tunnels; they can meet various functions such as excavation, undercover, wall expansion, side excavation, damage, rock breaking, shoveling, cleaning the bottom of belt conveyors, loading, and leveling tunnels.

PRODUCT FEATURES

- The working platform can rotate 360° horizontally; the boom adopts a three-section arm design and can rotate ±90°;
- The height of the arm can be adjusted according to the size of the tunnel to avoid touching the anchor rods, anchor cables, and tunnel roof, and can be flexibly operated in sections of different heights;
- A variety of auxiliary tools such as breaker hammers, milling heads, hydraulic shears, etc. can be selected to achieve multiple uses of one machine;
- The motor power structure is compact, and a flameproof cable reel can be selected to avoid manual dragging of cables.



NW-50

TECHNICAL PARAMETERS

Item	Basic parameters
Length	5850mm
Width	1250mm
Height	1850mm
Left and right swing angle	±30°
Weight	45000kg
Gross power	45kw
Dourong	Standard is 0.2, optional 0.3m ³
Bucket width	500mm
Operating voltage	1140V
Ground clearance	200mm

Item	Basic parameters
Walking speed	2.6Km/h
Gradeability	30°
Maximum digging force of bucket	25kN
Maximum excavation height	3475mm
Maximum dumping height	2415mm
Maximum excavation depth	2290mm
Maximum vertical excavation depth	1750mm
Maximum excavation radius	3900mm
Undercarriage	Crawler-type
Fuel tank capacity	55L

NW-60

TECHNICAL PARAMETERS

Basic parameter	
Machine weight	5700kg
Bucket capacity	0.21m ³
Width of bucket	742mm
Performance parameter	
Power	45kw
Gradeability	70%(35°)
Max.digging force of arm	27.5kN
Max.digging force of bucket	36.6kN
Traveling speed	2.2/3.6 km/h
Max.hauling force	46.5kN
Slewing speed of platform	9~11 rpm

Operating parameter	
Max.digging height	5740mm
Max.digging depth	3720mm
Max.digging radius	6065mm
Max.digging radius on ground level	5945mm
Max.dumping height	4040mm
Min.slewing radius	2175mm
Max.vertical digging depth	2750mm
Transportation dimension	
Overall length of transportation	5656mm
Overall width	1920mm
Overall height	2585mm

PRODUCT INTRODUCTION

WJ series underground loader is specially developed for underground mines with narrow veins. It is suitable for 3.8×3.8m mine tunnels and is used for shoveling and transporting loose materials. The smaller wheelbase and larger turning angle can better meet the passing requirements of different tunnels. Better overall stability and more reasonable blade design can effectively improve production efficiency and bucket wear resistance and service life. Equipped with an independent cab, it is easy to disassemble and replace; the large interior space of the cab improves the comfort of the driver. The working system and steering system adopt a confluence form, which greatly improves production efficiency.

■ **High Efficiency**

Rapid loading and transportation of ore, rock and other materials can significantly improve the efficiency of mine operations.

■ **Flexibility**

With a small turning radius and flexible maneuverability, it can operate in narrow and complex underground environments.

■ **Powerful power system**

Equipped with a powerful engine and transmission system to ensure high load and long-term operation.



■ **Safety**

With multiple safety protection measures, anti-rollover protection structure and anti-falling object protection structure, the safety of operators can be guaranteed.

■ **Environmental protection**

Focus on environmental protection design, use low-emission engines to reduce pollution to underground air.

■ **Adaptability**

Different buckets and accessories can be equipped according to different operating requirements and geological conditions to adapt to various materials and operating environments.

WJ-3 / WJ-4 / WJ-6

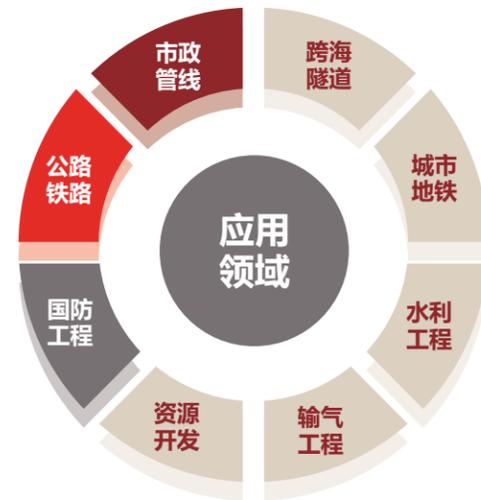
TECHNICAL PARAMETERS

Item	WJ-3	WJ-4	WJ-6
L×W×H (mm)	9324×2133×2252	9742×2588×2379	10925×2799×2561
Grading ability (°)	15	15	15
Speed (km/h)	I step : 4.4 ; II step : 8.9 ; III step : 16.6 ; IV Step : 23.6	I step : 5 ; II step : 10 ; III step : 15 ; IV Step : 25	I step : 4.6 ; II step : 8 ; III step : 13.7 ; IV Step : 23.5
Turning Radius	5850mm (External) 2990mm (Internal)	6550mm (External) 3200mm (Internal)	6880mm (External) 3220mm (Internal)
Maximum traction force (KN)	155	220	281
Steering angle	±42.5°	±42.5°	±42.5°
Weight (kg)	19200	28500	38000
Bucket capacity (m ³)	3	4	6
Rated loading capacity (kg)	78000	8000	12000
Lifting force/shoveling force (KN)	140/117	187/163	280/230

NTR260

PRODUCT INTRODUCTION

The tunnel boring machine is a large-scale mechanical equipment used for tunnel excavation. It is widely used in transportation tunnels, such as railway, highway, and subway tunnels; water conservancy Items, such as water diversion tunnels and drainage tunnels; municipal Items, such as underground pipelines and cable tunnels. It breaks rocks or soil mechanically to achieve efficient and safe tunnel construction. The tunnel boring machine has the development trend of intelligence, large-scale, and green. It is the core equipment of modern tunnel construction and has the advantages of high efficiency, safety, and environmental protection. The NTR series cantilever tunnel boring machine is a comprehensive tunneling equipment independently developed by our company. It is a non-explosive excavation equipment that integrates cutting, walking, loading, and spray dust suppression.



PRODUCT FEATURES

- Large positioning cutting range and optimal whole machine stability.
- The most optimized cutting head cutting teeth arrangement makes the cutting teeth more stable and less impacted, the cutting efficiency is increased by 20%, and the cutting consumption is reduced by 20%.
- The flexible connection technology is adopted between the cutting motor and the cutting reducer, which has eccentric compatibility and solves the problem of eccentric damage to the reducer and motor due to rigid connection.
- High-strength composite wear-resistant plates are used for the most easily worn parts such as the cutting head, shovel plate, and first transport, and their life is more than ten times that of ordinary steel plates.
- The variable pump system adopts a load-sensitive multi-way valve, and the hydraulic system generates less heat, which increases the service life of the seals.
- Use an extended first conveyor or a second conveyor belt conveyor to improve the mucking efficiency.
- Equipped with an efficient and large-volume airborne dust removal system, it is more suitable for improving the working environment under tunnel conditions.

TECHNICAL PARAMETERS

Item	NTR260	
Total weight(including dust removal and secondary transport)	125t	
Dimension	L (2nd Conveyor not included/ included)	15.6/22.3m
	W	3.6m
	H	3.7m
Total Power	530KW	
Maximum compressive strength of single cutting rock	100MPa	
Track width	L	7.2m
	H	6.5m
Grounding pressure	3.05m	
Grading ability	0.18MPa	
Power supply	±16°	
Total cooling water demand	AC1140V	
Required transformer capacity	0-90L/min	

NTR300



TECHNICAL PARAMETERS

Item	NTR300	
Total weight (including dust removal and secondary transport)	125t	
Dimension	L (2nd Conveyor not included/included)	15.6/23.4m
	W	3.6m
	H	3.7m
Total Power	530kW	
Maximum compressive strength of single cutting rock	70Mpa	
Track width	L	7m
	H	6.5m
Grounding pressure	3.05m	
Grading ability	0.213Mpa	
Power supply	±16°	
Total cooling water demand	AC1140V	
Required transformer capacity	0-150L/min	
Grounding pressure	800KVA	

NTR320



TECHNICAL PARAMETERS

Item	NTR320	
Total weight (including dust removal and secondary transport)	132.5t	
Dimension	L (2nd Conveyor not included/included)	16.2/23.5m
	W	4.0m
	H	4.3m
Total Power	633KW	
Maximum compressive strength of single cutting rock	70MPa	
Track width	L	8m
	H	7.5m
Grounding pressure	3.6m	
Grading ability	0.18MPa	
Power supply	±16°	
Total cooling water demand	AC1140V	
Required transformer capacity	0-150L/min	
Grounding pressure	1000KVA	

NSM1-35



PRODUCT INTRODUCTION

NSM1-35 fully automatic hydraulic bolting jumbo is a new type of non-coal field multi-functional roadway bolting drilling and support equipment newly developed by NHG, which is reliable and stable. The drilling arm part is constructed with dual power heads, and the drilling and bolting processes are independently constructed. It has functions such as automatic drilling and one-key anchoring, and the drilling function is operated by remote control, which comprehensively improves the operator's operating vision to make up for insufficient manual operation vision and greatly improves the construction efficiency of the bolting. The whole machine has the characteristics of precise drilling, fast drilling speed, and low drilling tool consumption. It can be widely used in bolting construction operations of small and medium-sized tunnels such as railways, highways, national defense, water conservancy, and mines.

PRODUCT FEATURES

- Adjustable net hanging mechanism, which can adapt to one or more anchor net brackets, and the station platform is added.
- 360° rotating oil cylinder + linear cylinder swing structure, realizing all-round bolt construction without dead angle.
- Remote control + wire control + manual control, combined with multiple control methods, greatly enhances the field of view of the equipment in the underground operation and improves the convenience, safety and reliability of the whole machine operation.
- It adopts a 1.8-meter-wide chassis system, wheeled walking system and articulated steering system, with flexible steering and half-small turns.
- Anchor agent propulsion operation with high-pressure wind power.
- Double power heads (imported rock drifter and hydraulic power head) are used for drilling and bolt fastening construction.
- The drilling mechanism with the functions of one-key switching of drilling, anchoring agent and anchor rod is adopted, which greatly improves the efficiency of anchor rod construction.
- Drilling rod warehouse with 10 anchor rods greatly improves the work efficiency and convenience of anchor rod construction.

TECHNICAL PARAMETERS

Machine Parameters	Dimensions (L × W × H)	7.92×1.8×2.2 (Fuselage Height)
	Maximum drilling range (W × H)	7.0×5m
	Minimum cross section (W × H)	3.3×3.3m (Drilling)
	Weight of the whole machine	14t
	Minimum anchor height of side wall	700mm
	Minimum ground clearance	350mm
	Adapt to tunnel properties	Rock Lane
	Adapt to rock hardness	F6-f18

NSY-30



NSY-50



Main structure and characteristics

- The vehicle is composed of frame, suspension, steering system, braking system, power system, hydraulic system, cab, electronic control system and so on.
- The transmission route of the vehicle is engine→coupling→variable pump→electrically controlled proportional valve→executive element, and each system works and coordinates through the microelectronic control system.

Frame

The frame is designed in a concave shape to reduce the height of cargo transportation. In order to facilitate transportation and the smooth entry of vehicles from the construction shaft into the tunnel, the frame adopts a three-section front frame, middle frame and rear frame. The middle frame adopts a double-sided beam bearing structure, and the side beam is a box-type structure. The front and rear sections of the frame adopt a middle beam bearing structure, and the box beam of the middle frame is pre-arched. The front and rear frames are connected to the middle frame with bolts for easy and quick disassembly and assembly. At the same time, the Ansys finite element calculation method is used to optimize the frame structure. It has strong rigidity and bending moment resistance, and good flexibility when subjected to torsion, so that the vehicle can carry a uniform load. A pipe segment bracket is installed on the upper part of the transport vehicle to realize the transportation of pipe segments. The transportation of box culverts can be realized by quickly replacing the box culvert support mechanism.

TECHNICAL PARAMETERS

Machine TYPE	NSY-30
Machine Length(mm)	15807
Machine Width (mm)	1646
Machine Height (mm)	2616
Machine Weight (t)	15
Standard loading capacity (t)	25
The Max. loading capacity (t)	30
Number of Tyre (Pcs)	8
Size of Tyre	315/70 R15
Number of tyre with parking brake	4 (2 brakes are with one coaxial)
Driving wheel (with parking brake)	4 (2 brakes are with one coaxial)
The Max. speed (Km/h)	10
The Max. speed (Km/h)	15
The Max. climbing capacity (loading condition is 40t)	12.5
Diesel engine Power (Kw)	173
Hydraulic tank capacity (L)	400
Diesel tank capacity (L)	400
Hydraulic Pump (ml/r)	250+23+33+16
Hydraulic pressure (Mpa)	25
Machine TYPE	NSY-30 Multi service Vehicle
Machine Length (mm)	15807
Machine Width (mm)	1646

TECHNICAL PARAMETERS

Machine TYPE	NSY-50
Machine Length(mm)	21642.7
Machine Width(mm)	1500 (bodywidth) 1765 (Width of both side mirrors, the width will become to 1500 after it is folded) 1582(if install the personal cabinet , the width will become 1582)
Machine Height(mm)	2652
Machine Weight(t)	18.5
Standard loading capacity(t)	40
The Max. loading capacity(t)	50
Number of Tyre(Pcs)	8
Size of Tyre	355-65R15 XZM_00
Number of tyre with parking brake	4 (2 brakes are with one coaxial)
Driving wheel (with parking brake)	4 (2 brakes are with one coaxial)
The Max. speed (Km/h) (moving on 5 degree uphill and loading is 40t)	10
The Max. speed (Km/h)(moving on flat ground and loading is 40t)	18
Diesel engine Power(Kw)	242 (QSL8.9-C325-30) EURO III (watercooling) (Detailed parameters checkattachment 1)
Hydraulic tank capacity(L)	400
Diesel tank capacity(L)	300
Hydraulic Pump (ml/r)	180
Hydraulic pressure(Mpa)	25
Personal cabinet	18 persons (it can be disassembled)
Machine Framesteel	Q355B (Equal to European standard S355)
Thickness of the carriage beam(mm)	310
Minimum radius(m)	50

NZY2

PRODUCT INTRODUCTION

■ The NZY 2 two-arm tunneling rig is a high-end equipment, and the main components are imported brands. The pilot hydraulic control method is equipped with two heavy-duty drill booms and an auxiliary boom, which greatly increases the working area. The equipment has reliable performance, accurate positioning, fast drilling speed, low drilling tool consumption and wide working range. It is used for drilling and blasting construction of large and medium-sized tunnels such as railways, highways, national defense, water conservancy, mining and other large and medium-sized tunnels.

PRODUCT FEATURES

- The drill arm adopts double triangle support for direct positioning, all-round self-parallel holding function, precise positioning and stable action.
- Original imported drive axle, four-wheel drive walking system, heavy-duty articulated engineering chassis, fast transition speed and strong climbing ability.
- The high-altitude turbocharged engine has strong power and sufficient power reserve to meet the severe cold and plateau environment operations.
- The main components of the hydraulic system adopt German Rexroth, American Parker, etc., hydraulic pilot control, stable and reliable.
- The electrical system adopts German Siemens, Schneider, etc., which is energy-saving and efficiency-increasing, and has high safety.
- With automatic anti-sticking function and automatic lubrication system, the drilling speed is fast and the consumption of drilling tools is low.
- The ceiling can be raised and lowered and could meet FOPS (Falling Object Impact) requirements.



TECHNICAL PARAMETERS

Part name	Item	Parameter
Whole machine	L×W×H(mm)	15450×2500×2930
	Total Weight(t)	35
	Suitable section(m)	12.9×9
Hydraulic drifter	Shank	R32,R38或T38
	Impact power(kW)	18
	Impact frequency(Hz)	42~50
	Maximum pressure of hydraulic system (bar)	230
	Slewing system	Independent rotation
	Rotation speed(rpm/min)	0~300
	Maximum rotating torque(N·m)	540
	Drilling speed(m/min)	1.5-2.2
Advance beam	Length(mm)	7102
	Drilling depth(mm)	5268
Drill boom	Advance compensation(mm)	1800
	Boom extension(mm)	1600
	Parallel holding	Complete
	Advance beam	360°flip
	Boom lifting angle(°)	+70~-30
	Swing angle of boom(°)	±45

Part name	Item	Parameter
Platform	Working platform range (W × H) (m)	14×11.5
	Rated load of working platform(kg)	400
Chasis	Type of walking	Wheel type
	Drive way	Four wheels driving
	Turning direction	Articulated steering ±35°
	Engine power (kW)	164
	Maximum walking speed(km/h)	15
Hydraulic system	Maximum grade(%)	25%
	Turning radius (m)	Inner≥5m, outer≥10m
	Main motor power (kW)	2×75
	Maximum system pressure(bar)	230
Gas system	Maximum capacity of hydraulic oil tank(L)	600
	Exhaust volume(m³/min)	1
Water system	Maximum working pressure(bar)	10
	Maximum flow(L/min)	133
Electric system	Working water pressure (bar)	2~12
	Installed power (kW)	161.5 (2×75+4+7.5)
	Supply voltage(V)	380
	Cable drum capacity(m)	80

NZY1

PRODUCT INTRODUCTION

■ The NZY1 full hydraulic tunneling drill rig is a high-end rock drilling equipment with mechatronics and hydraulic integration launched by our company in the development of product diversification, which makes it easier and more efficient for you in the process of tunnel and underground rock drilling. The main components of NZY1 full hydraulic tunneling drill rig adopt internationally renowned brand products. It greatly increases the reliability and stability of the equipment, the positioning of the drill boom is accurate, the drilling speed is fast, the consumption of drilling tools is low, and the working range is wide. It is used in the drilling and blasting construction of small and medium-sized tunnels such as railways, highways, national defense, water conservancy, mining and other small and medium-sized tunnels hole work or bolt hole work.



PRODUCT FEATURES

- The product is mainly suitable for tunnels, hydropower stations, underground mines, tunnels, tunnel construction or bolting operations.
- Energy-saving diesel engine is installed. The chassis adopts wheeled walking system and articulated steering, with a small turning radius.
- It adopts double-triangular support and positioning, with all-round self-parallel holding function, accurate positioning, stable action, high reliability and low maintenance cost.
- The propelling beam adopts light-weight, high-strength aluminum alloy beam, which has strong bending and torsion resistance, long service life, which guarantees the straightness of drilling.
- Equipped with the hydraulic rock drill independently researched and developed by our company. It adopts a unique dual shock absorber buffer system and automatic lubrication system with high drilling speed and low drill tools consumption:
- It adopts hydraulic automatic control drilling system with independent control loop, stable performance, and automatic anti-sticking function.

TECHNICAL PARAMETERS

Part name	Item	Parameter
Whole machine	L × W × H (mm)	11240×1770×2240/3060
	Total weight (t)	12.5
	Drilling operation section (width×height/m)	3×3~7.7×7.26
Hydraulic rock drifter	Working section of bolterrod	13.6×10.1
	Shank	R32, R38 or T38
	Impact power (kW)	18
	Impact frequency (Hz)	42~50
Propulsion beam	Rotary system	Independent rotation
	Rotation speed (rpm)	0~300
	Maximum rotating torque (N·m)	540
	Drilling speed (m/min)	0.8~2.2
Advance compensation (mm)	Drilling diameter (mm)	Φ38~Φ102
	Advance compensation (mm)	1250
	Boom extension (mm)	1600
	Parallel holes	all directions
	Propulsion beam	360° flip
Swing angle of boom (°)	Boom lifting angle (°)	+65~-30
		±35

Part name	Item	Parameter
Chassis	Walking mode	wheeled
	Drive mode	4 wheel drive
	Steering Articulated steering	±40°
	Wheelbase (mm)	3090
	Maximum travel speed (km/h)	15
Hydraulic system	Maximum gradeability (%)	25%
	Turning radius (m)	inside≥2.8m, outside≥5.0m
	Main motor power (kW)	75
Air supply system	System pressure (bar)	130~230
	Maximum capacity of hydraulic oil tank (L)	220
	Exhaust volume (m³/min)	0.3m³/min
Water system	Maximum working pressure (bar)	10
	Motor power (kW)	2.2
Electrical system	Maximum flow (L/min)	100
	Working water pressure (bar)	2~12
Cable drum capacity (m)	Installed power (kW)	80.2 (75+2.2+3)
	Power supply voltage (V)	380
		80

NL936H

- The proven linkage structure is very efficient which has big breakout force, quick movement and high lifting capacity features.
- Optimal designed bucket which can cut into materials easily with small resistance, and could retain more materials.
- The bucket has guide plate which can avoid the materials sprinkling to protect bucket cylinder during lifting.
- High-efficiency powertrain system is perfectly matched with hydraulic multi-stage power system that makes machine work fast and efficient.



Item	Specifications
Rated Load	3000kg
Max. Traction Force	101kN
Max. Gradeability	30°
Max. Dump Clearance	2930mm
Dump Reach	1110mm
Wheel Tread	1850mm
Wheelbase	2880mm
Overall Dimension (L×W×H)	7230mm×2425mm×3200mm
Tire width	2300mm

NL955K

- Equipped with 3m³ bucket, 3250mm optimized wheelbase central-articulation design is suitable for various applications.
- High-efficiency powertrain system is perfectly matched with hydraulic multi-stage power system that makes machine work fast and efficient to save energy.



Core Parameters	Engine Model	WP10G220E343
	Rated Power	162kw
	Operating Weight	17350kg
	Bucket Capacity	3.0m ³
	Max. Breakout Force	160kN
Main parameters of the product	Rated Load	5200kg
	Max. Traction Force	160kN
	Max. Gradeability	30°
	Max. Dump Clearance	3140mm
	Dump Reach	1090mm
	Wheel Tread	2150mm
	Wheelbase	3250mm
Overall Dimension (L×W×H)	8440mm×2980mm×3420mm	

NL956K

- The first 5.5T wheel loader of Chinese brand with 3.3m³ bucket which is easier to load, achieves greater fill factors and could retain more materials.
- High-efficiency powertrain system is perfectly matched with hydraulic multi-stage power system that makes machine work fast and efficient.
- The patented Three Pump Flow confluence technology is adopted. During engine idling, the auxiliary pump works together with the steering pump to provide sufficient flow to make steering light and convenient. When steering is not required, the auxiliary pump works together with working pump to make loading more powerful and efficient.
- Low-effort joystick control system delivers high-efficiency operation with ease and fast.



Item	Specifications
Rated Load	5500kg
Max. Traction Force	160kN
Max. Gradeability	/
Max. Dump Clearance	3100mm
Dump Reach	1130mm
Wheel Tread	2150mm
Wheelbase	3350mm
Overall Dimension (L×W×H)	8590mm×2980mm×3420mm
Tire width	2750mm

NL958K

Item	Specifications
Rated Load	5500kg
Max. Traction Force	165kN
Max. Gradeability	30°
Max. Dump Clearance	3380mm
Dump Reach	1130mm
Wheel Tread	2150mm
Wheelbase	3320mm
Overall Dimension (L×W×H)	8850mm×2980mm×3420mm
Tire width	2750mm



NL968K

- 6.5T wheel loader standard equipped with 4.0m³ bucket, high-efficiency powertrain system is perfectly matched with hydraulic multi-stage power system that makes machine work fast and efficient.
- The proven linkage structure is very efficient which has big breakout force, quick movement and high lifting capacity features.
- Low-effort joystick control system delivers high-efficiency operation with ease and fast.

Item	Specifications
Rated Load	6000kg
Max. Traction Force	180kN
Max. Gradeability	30°
Max. Dump Clearance	3340mm
Dump Reach	1200mm
Wheel Tread	2300mm
Wheelbase	3500mm
Overall Dimension (L×W×H)	8970mm×3080mm×3520mm



NL976K

- Standard equipped with 4.5m³ bucket, high-efficiency powertrain system is perfectly matched with hydraulic multi-stage power system that makes machine work fast and efficient.
- The proven linkage structure is very efficient which has big breakout force, quick movement and high lifting capacity features.
- Low-effort joystick control system delivers high-efficiency operation with ease and fast.

Item	Specifications
Rated Load	7000kg
Max. Traction Force	189kN
Max. Gradeability	29°
Max. Dump Clearance	3510mm
Dump Reach	1280mm
Wheel Tread	2320mm
Wheelbase	3500mm
Overall Dimension (L×W×H)	9350mm×3240mm×3380mm



NL980K-HST

- Chinese first 8 Ton wheel loader with energy-saving hydrostatic transmission.
- High efficiency hydrostatic transmission technology can improve fuel efficiency by 25%.
- High-efficiency powertrain system is perfectly matched with hydrostatic transmission system, improving energy efficiency.

Item	Specifications	Item	Specifications
Rated Load	8000kg	Dump Reach	1260mm
Max. Traction Force	189kN	Wheel Tread	2320mm
Max. Gradeability	30°	Wheelbase	3550mm
Max. Dump Clearance	3450mm	Overall Dimension(L×W×H)	9250×3240×3540mm



NT90



TECHNICAL PARAMETERS

Gross vehicle weight (kg)	90000
Payload mass (kg)	32000
Dimensions (L×W×H) (mm)	60000
Wheelbase (mm)	8950×3550×4150
Tread (mm)	3800+1550
Approach angle	2606(Front 2656)
Departure angle	30
Max. vehicle speed (km/h)	22
Max. gradeability (%)	380
Min. turning diameter (m)	40/38

NT105



TECHNICAL PARAMETERS

Gross vehicle weight (kg)	105000
Payload mass (kg)	75000
Dimensions (L×W×H) (mm)	10920×3860×4730
Wheelbase (mm)	5000+1780
Tread (mm)	2630 (Front 2734)
Approach angle	32
Departure angle	38
Max. vehicle speed (km/h)	42
Max. gradeability (%)	30
Min. turning diameter (m)	28
Min. ground clearance (mm)	400

NT110



TECHNICAL PARAMETERS

Gross vehicle weight (kg)	105000
Curb weight (kg)	36400
Payload mass (kg)	75000
Dimensions (L×W×H) (mm)	9350×3810×4180
Wheelbase (mm)	3885+1780
Tread (mm)	2734/2630/2630
Max. vehicle speed (km/h)	38
Max. gradeability (%)	30
Min. turning diameter (m)	24
Min. ground clearance (mm)	400

NT120



TECHNICAL PARAMETERS

Gross vehicle weight (kg)	120000
Curb weight (kg)	36600
Payload mass (kg)	85000
Dimensions (L×W×H) (mm)	9400×3810×4250
Wheelbase (mm)	3950+1780
Tread (mm)	2934/2634/2634
Max. vehicle speed (km/h)	39
Max. gradeability (%)	30
Min. turning diameter (m)	23
Min. ground clearance (mm)	410

NT130



TECHNICAL PARAMETERS

Gross vehicle weight (kg)	130000
Curb weight (kg)	46350
Payload mass (kg)	90000
Dimensions (L×W×H) (mm)	10215×4050×4560
Wheelbase (mm)	4300+1840
Tread (mm)	3100/2850/2850
Max. vehicle speed (km/h)	38
Max. gradeability (%)	30
Min. turning diameter (m)	26
Min. ground clearance (mm)	400

NT160



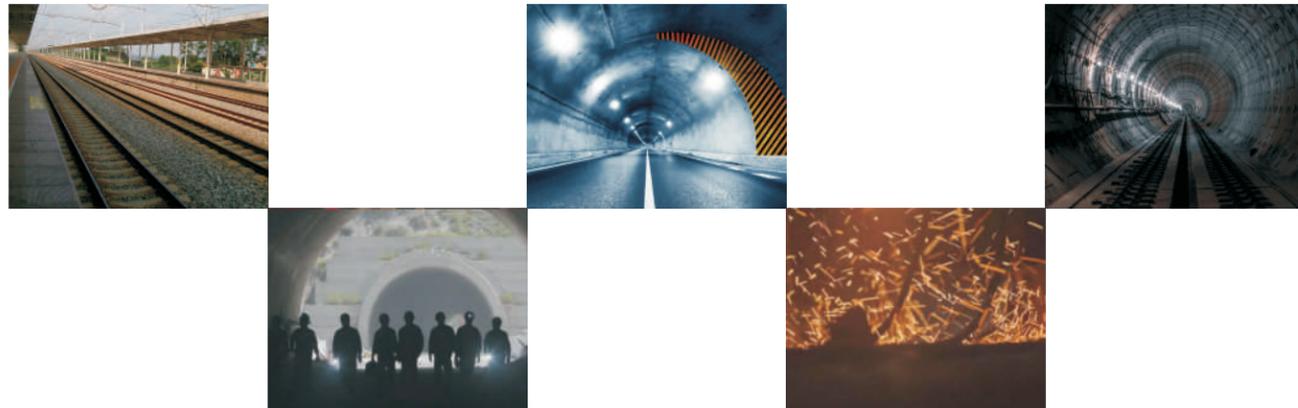
TECHNICAL PARAMETERS

Gross vehicle weight (kg)	160000
Curb weight (kg)	54600
Payload mass (kg)	110000
Dimensions (L×W×H) (mm)	10450×4360×4550
Wheelbase (mm)	4600+1900
Tread (mm)	3342/3080/3080
Max. vehicle speed (km/h)	38
Max. gradeability (%)	29
Min. turning diameter (m)	30
Min. ground clearance (mm)	410



NHG INTERNATIONAL ENGINEERING DIVISION

- The international Engineering Division was established in 2016. It mainly undertakes not only tunnel construction Items for railway, subway, highway, water irrigation and hydraulic engineering but also inclined tunnels, lat alleys, vertical shafts, and underground roadways for coal mines, metal mines and potash mines in overseas countries. With rich resource of overseas mine and tunnel construction customers and good understanding of certification requirements of equipment and construction related regulations of different mining countries, NHC successfully connects domestic coal mining groups with Large contracting Item of different countries. Currently, five overseas contracting projects are in process with the total annual operating income is nearly 10 million US dollars.
- With efficient management as guarantee, advanced technology as foundation and customer satisfaction as goal, the company wholeheartedly provides high-quality, reliable, efficient and satisfactory technical services to overseas customers and continuously meets customer needs.



CONTRACTOR SERVICE FOR

- Tunnel construction of Railways, Subways, Highways, Irrigation and Hydraulic Engineering.
- Underground inclined Tunnels, Flat Roadways and Vertical Shaft in Coal Mines, Metal ore Mines and Potash Mines.

PRINCIPLE BUSINESS COUNTRIES

- India, Poland, Turkey, Kazakhstan, Laos, Vietnam, Pakistan, Russia, Uzbekistan, Mozambique, Ethiopia, Myanmar, Indonesia, Mongolia, Eritrea, Venezuela, South



COOPERATION COUNTRIES

- Germany, Australia, Czechoslovakia, USA, Brazil, Japan