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ZYS系列全电脑凿岩台车
ZYS SERIES TUNNELLING DRILLING JUMBO



公司微信二维码



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产品手册
Product manual



ZYS Series Computer-controlled Drilling Jumbo

ZYS series computer-controlled drill jumbo can drill, carry explosives and be driven to move. It is featured by stable performance, easy operation, high-speed drilling, good functional integration, high safety and low construction cost. The machine has been widely used in fields of national defense, metallurgy, railway, highway for excavating & supporting shafts, tunnels or caves.

The drilling jumbo is in four-wheel drive and equipped with rubber tires. It is also equipped with engines which drive it to move. With engines and four-wheel drive, the machine has strong power, moves flexibly and easily.

Electric motors equipped in the drill jumbo provide the machine power and several motor pumps drive working booms to move. Both individual control of one working boom and simultaneous control of working booms can be realized. The machine is eco-friendly, easy to operate and can pinpoint drilling positions.

With a computer control system, the drill jumbo can automatically pinpoint positions and make the posture of its booms adjusted. To realize automatic drilling, a designed borehole layout needs to be put into the computer system of the machine.

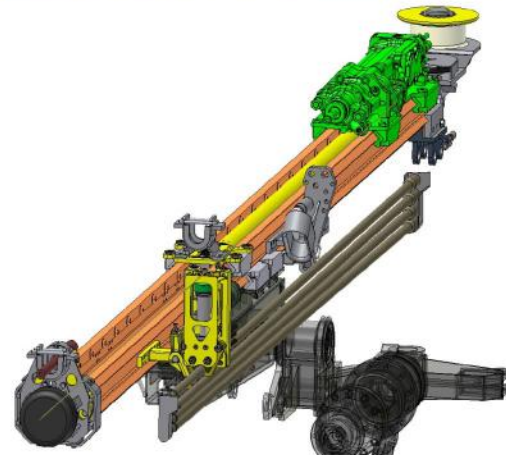
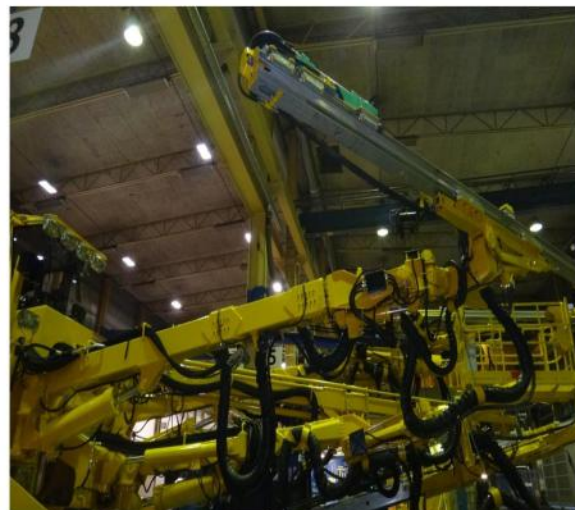
Specially-designed chassis

ZYS82 and ZYS113 use an articulated chassis and a rig chassis respectively based on their load. Suitable vehicle-mounted equipment arrangement ensures machine's stability when it is moving and drilling. Wheeled type and low emission engines enable the machine to move in four-wheel drive and have strong power, which ensures flexibility and safety of the machine when it is moving and locating in the tunnel.



Telescopic Feed System

The drill jumbos are equipped with a hydraulic-driven multi-dimensional amplitude feed system. Using hydraulic cylinders and swing motors, booms can rise, swing, extend and retract, and thrusters can swing, tilt, gyrate and be compensated. There are two work models for thrusters which are auto-tracking translation and individual control. This ensures flexible adjustment of booms and quick positioning of drilling holes. ZYS series computer controlled drill jumbo has the function of simple structure, high stability, low vibration and less deviation.



Drilling machine

The drill jumbos are equipped with drilling machines from Montabert and a special hydraulic control system, which ensures reliable advance, impact, gyration, enables rigs to gently drill holes and prevents the occurrence of drilling rods blocking and empty drilling. Therefore, the machine is featured by high speed of drilling, low consumption of drilling rods and longer service time.



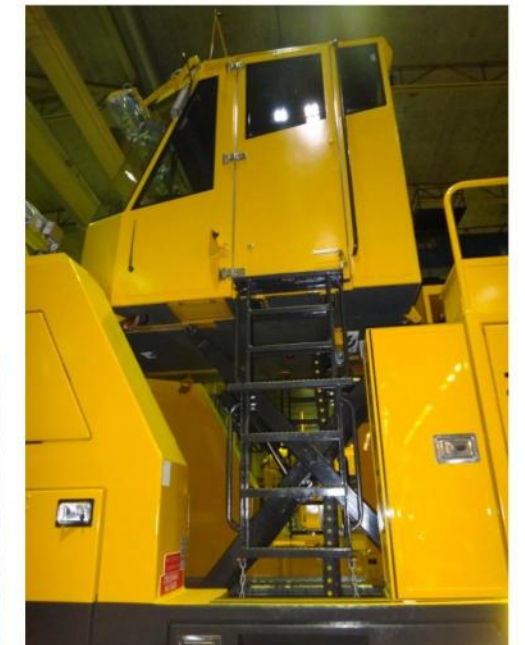
Operator cabin

1. Visualized operation interface

Boom posture, section distribution, drilling process and all complete machine state can be seen from the computer screen.

2. Humanized operation mode

The seats and hand shanks are designed according to ergonomics. Operation unites of different booms can be switched conveniently. With the help of different shortcuts only one personnel can finish complicated tasks.

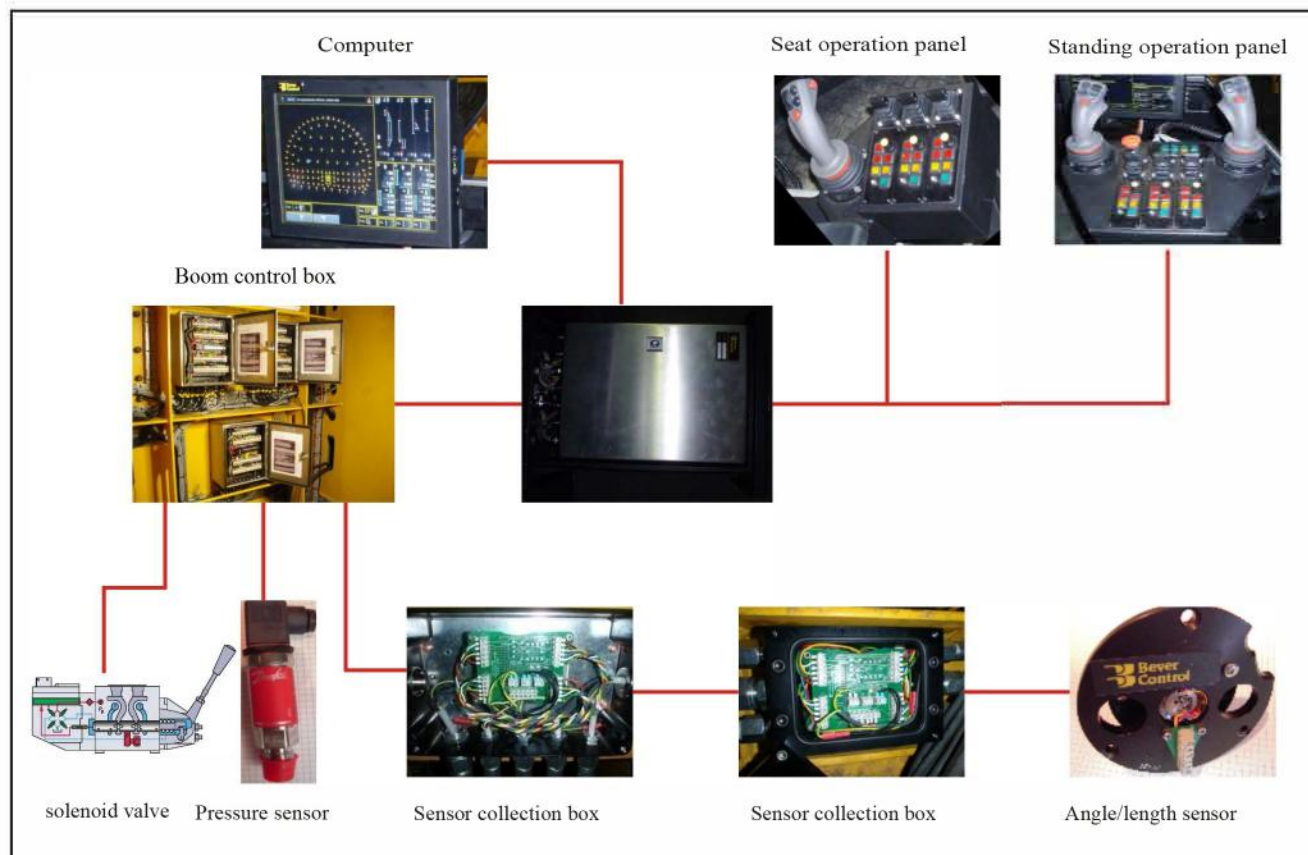


Intelligent Control System

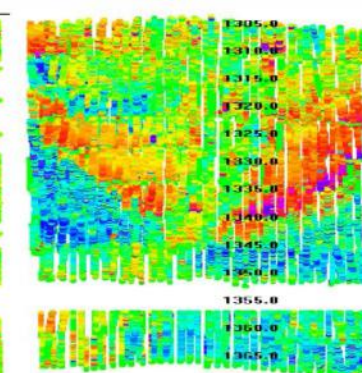
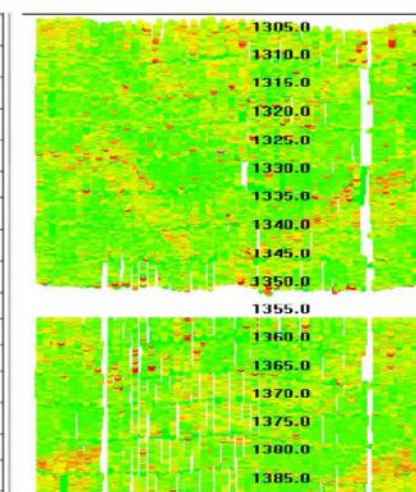
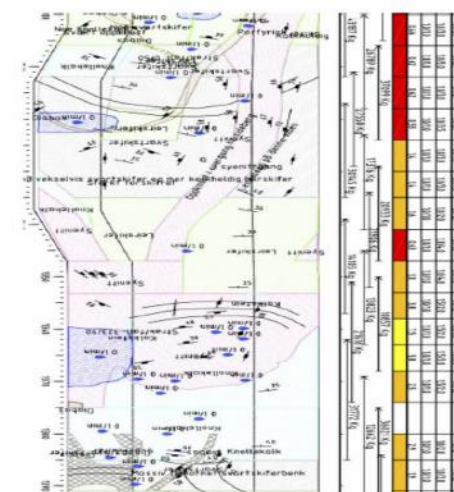
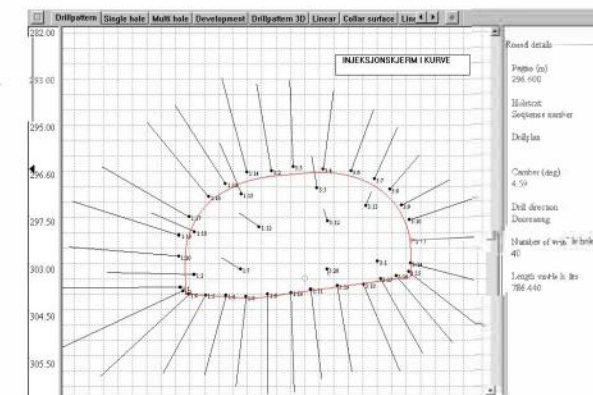
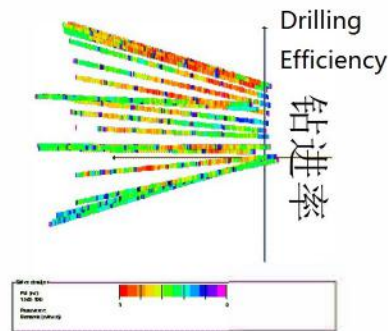
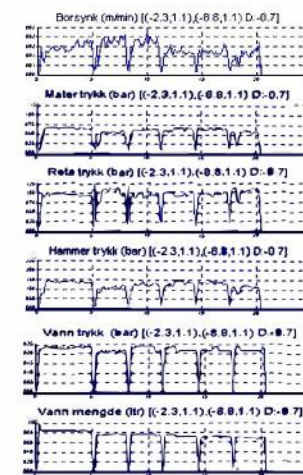
After positioning the complete machine, drill jumbo can control automatic positioning of booms according to the predesigned borehole arrangement plan with the help of the on-board computer. There is no interference among the booms. The machine can automatically drill holes of certain depth in strict accordance with the design requirements. The system has the functions of self-healing and reset. It is equipped with semi-automatic operation so the operator can locate the booms and operate the drilling rigs according to the predesigned borehole arrangement plan.

The Bever Csystem control system with drilling modes and tunnel alignment planning log makes it convenient to design borehole positions under different conditions.

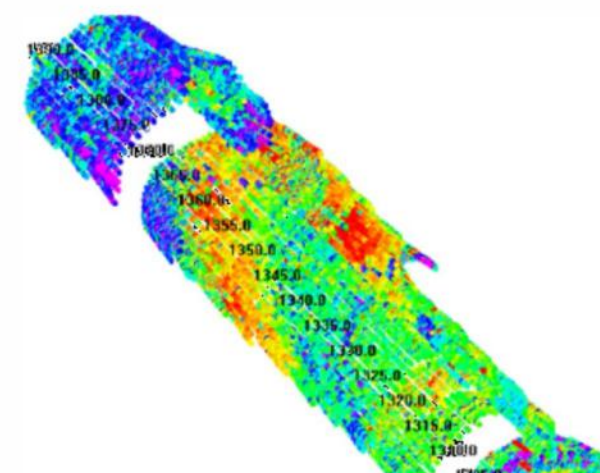
The control system can transmit real-time data so that the owner and the construction party can acquire the state of the tunnel construction and adjust it in time.



MWD Construction data analysis



Rock hardness



30 Model



Drill pressure

C 施工特点 Construction Features

1、High degree of automation

- Intelligent control system with automatic positioning of the drilling jumbo and automatic adjustment of the boom
- With drilling modes and tunnel alignment planning log, it can automatically drill and strictly follow the design
- With the functions of self-healing and reset

2、High working efficiency

- Powerful hydraulic drilling rig with fast drilling speed
- The booms can work together and drill more than one hole at a time
- Optimized digital borehole arrangement with intelligent and accurate positioning

3、Safe and reliable

- Optimal design of boom with high-strength and long service life
- Optimal design of feeder with light weight and high wear resistance
- Electrical control system with high protection class and good anti-jamming capacity
- Automatic drilling with little personnel intervention

4、Wide arrange of application

- Flexible operation and boom system with wide arrange of application
- Suitable for large and medium size tunnels

P 产品外形及技术参数 Product Appearance and Technical Specification



Fig 1. ZYS113 Computer Controlled 3 Boom Drill Jumbo

P 产品外形及技术参数 Product Appearance and Technical Specification

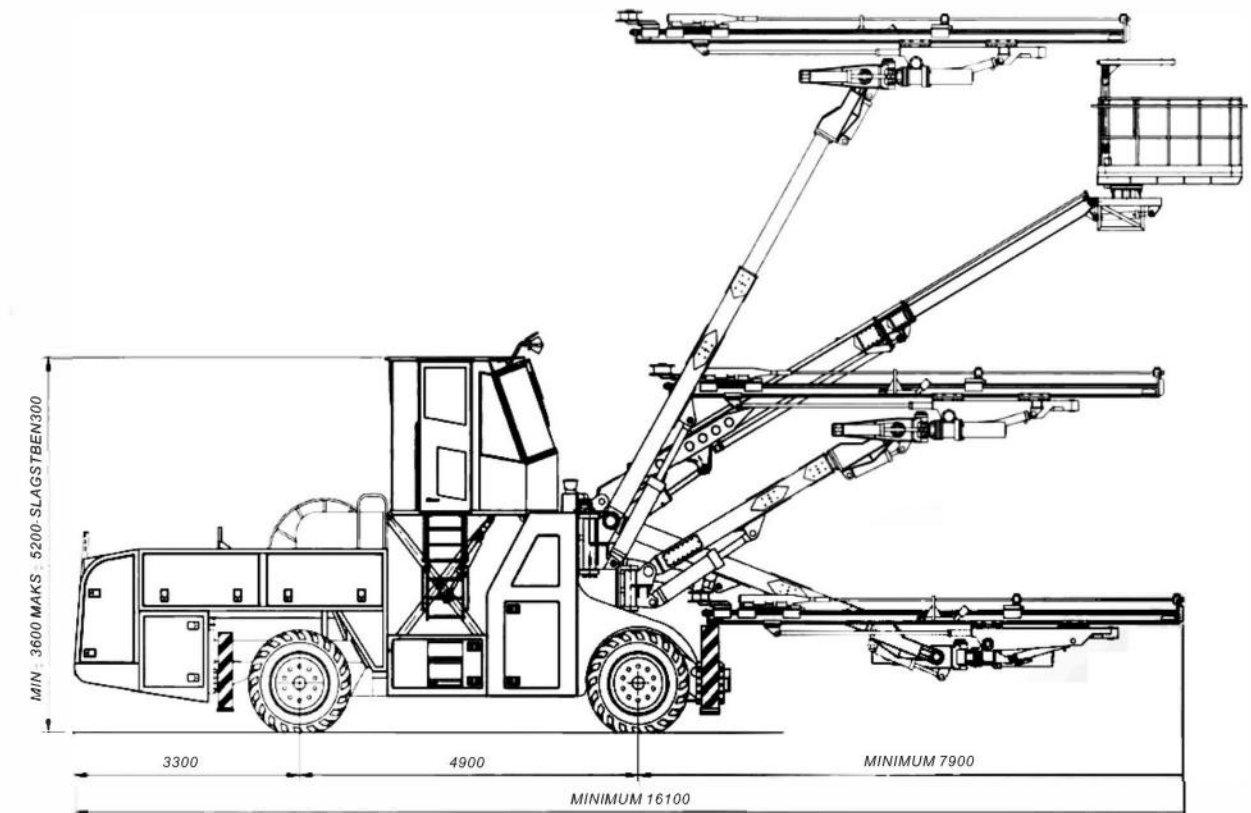


Fig 2. ZYS113 Computer Controlled 3 Boom Drill Jumbo Dimension

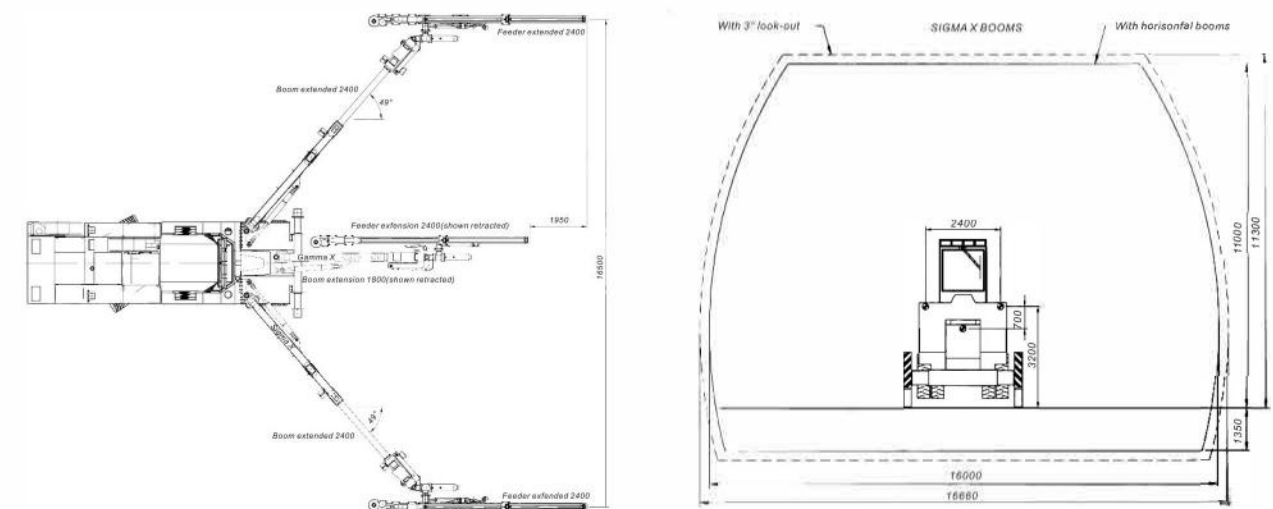


Fig 3. ZYS113 Work Range

P 产品外形及技术参数 Product Appearance and Technical Specification



Fig 4. ZYS82 Computer Controlled 2 Boom Drill Jumbo

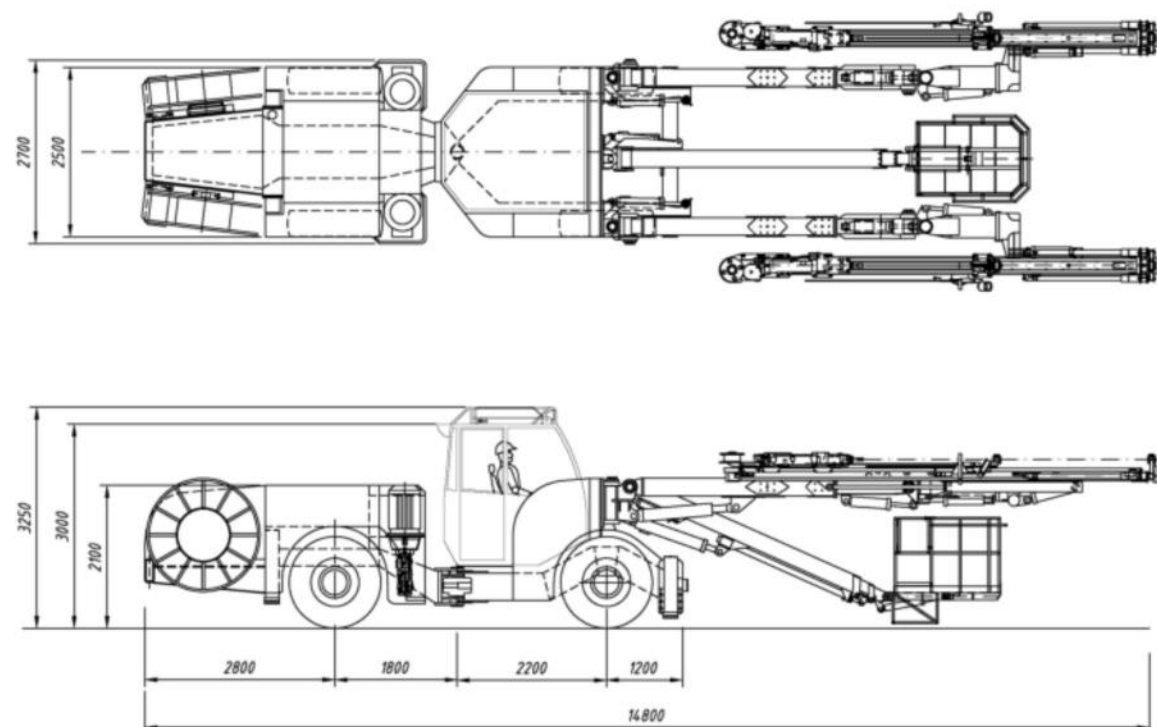


Fig 5. ZYS82 Computer Controlled 2 Boom Drill Jumbo Dimension

P 产品外形及技术参数 Product Appearance and Technical Specification

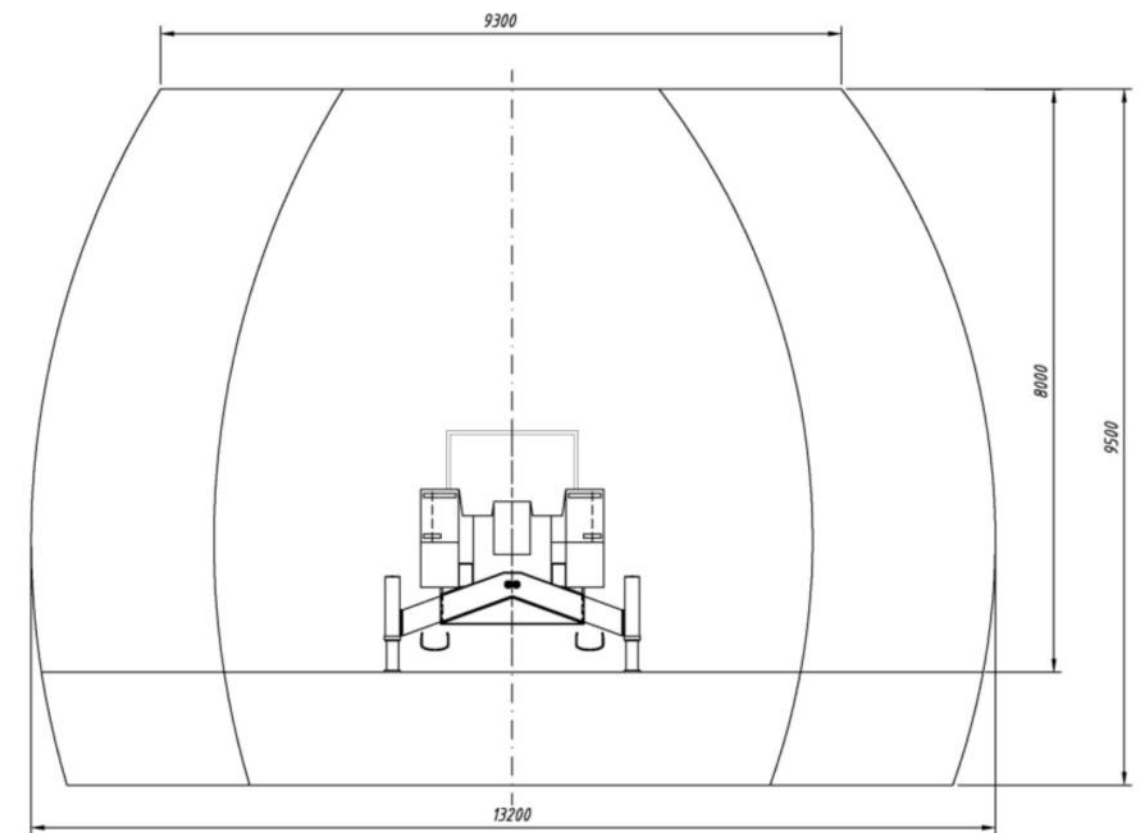


Fig 6. ZYS82 Work range

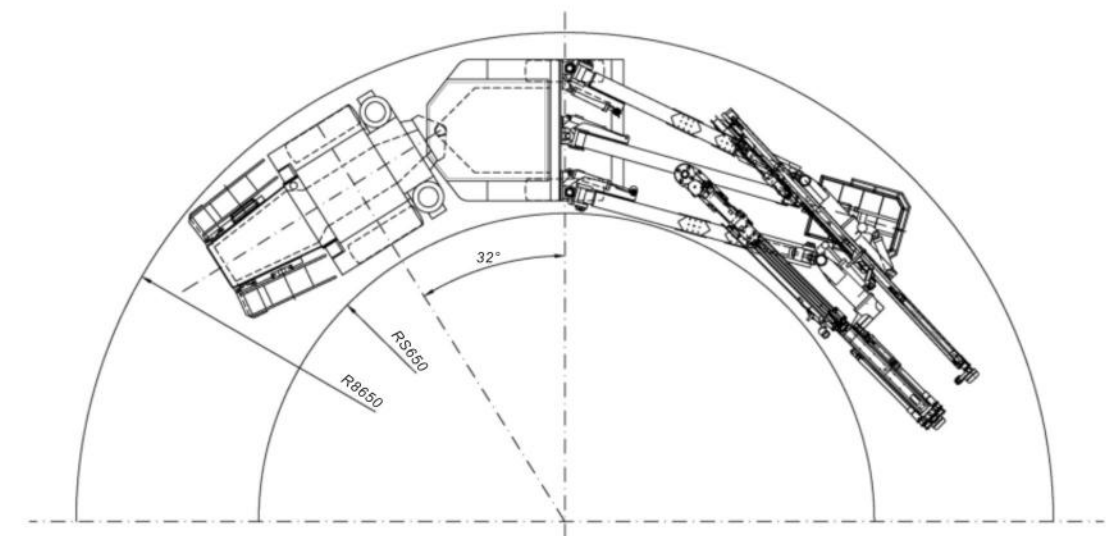


Fig 7. ZYS82 Turn Radius

P 产品外形及技术参数 Product Appearance and Technical Specification

ZYS113 and ZYS82 Drill Jumbo Specification

Description		UOM	ZYS113	ZYS82
General	Length	m	17.6	14.8
	Width	m	2.9	2.5
	Height	m	3.5	3.5
	Max. Working Height	m	11.3	9.5
	Max. Working Width	m	16.6	13.2
	Turning Radius	m	Outer 12.4	Out 8.65
	Total Weight	t	49	30
Carrier	Engine		Deutz TCD2012 L06	Deutz B40-14T
	Power	kw	140	103
	Wheel Base	m	4.9	4
	Travel Speed	km/h	15	15
Boom	Boom QTY	PC	3	2
	Boom Extend	m	Side 2.4, Center 1.8	2.4
	Feed Extend	m	2.4	2.4
	Feed Rotation	°	360	360
	Feed Adjustment	°	90	90
Utility Basket	UB QTY	PC	1	1
	Extend	m	2×2.8	2×2.8
	Carrying Capacity	kg	450	450
Electric System	Total Power	kW	325	215
	Main Motor Power	kW	3x90	2x90
	Cable Length	m	100	100
Hydraulic System	Hydraulic Pump Aggregate QTY	Set	3	2
	Max. Pressure	Mpa	21	21
Water System	Power	kW	18.5	11
	Max. Flow Rate	l/min	330	200
	Rated Pressure	Bar	22	22
	Hose Length	m	100	100
Air System	Power	kW	15	9
	Blowing Rate	m³/min	2.4	1.5
	Wind Pressure	Bar	8	8
Feed	Total Length	m	7.465	7.465
	Drill Hole Length	m	5.34	5.34
	Feed Length	m	5.525	5.525
	Feed Pressure	kN	32.5	32.5
Drifter	Type		HC110	HC110
	Max. Percussion Power	kW	31.9	31.9
	Shock Frequency	Hz	63-72	63-72
	Shock Pressure	bar	165-190	165-190

P 细节展示 Product details



Operation System



Rod storage



Electrical system



Scanning system

P 细节展示 Product details



Drilling system



Lightening system



Driving system



Automatic drill rods replacement

M 营销与服务 Marketing & Service

Marketing Network

