

ZDFJ76B/1 Face Drilling Jumbo

A hydraulic face drilling jumbo for low-vein mining

ZDFJ76B/1 is a powerful hydraulic face drilling jumbo suitable for low-vein mining tunnels with cross section up to 29m^2.

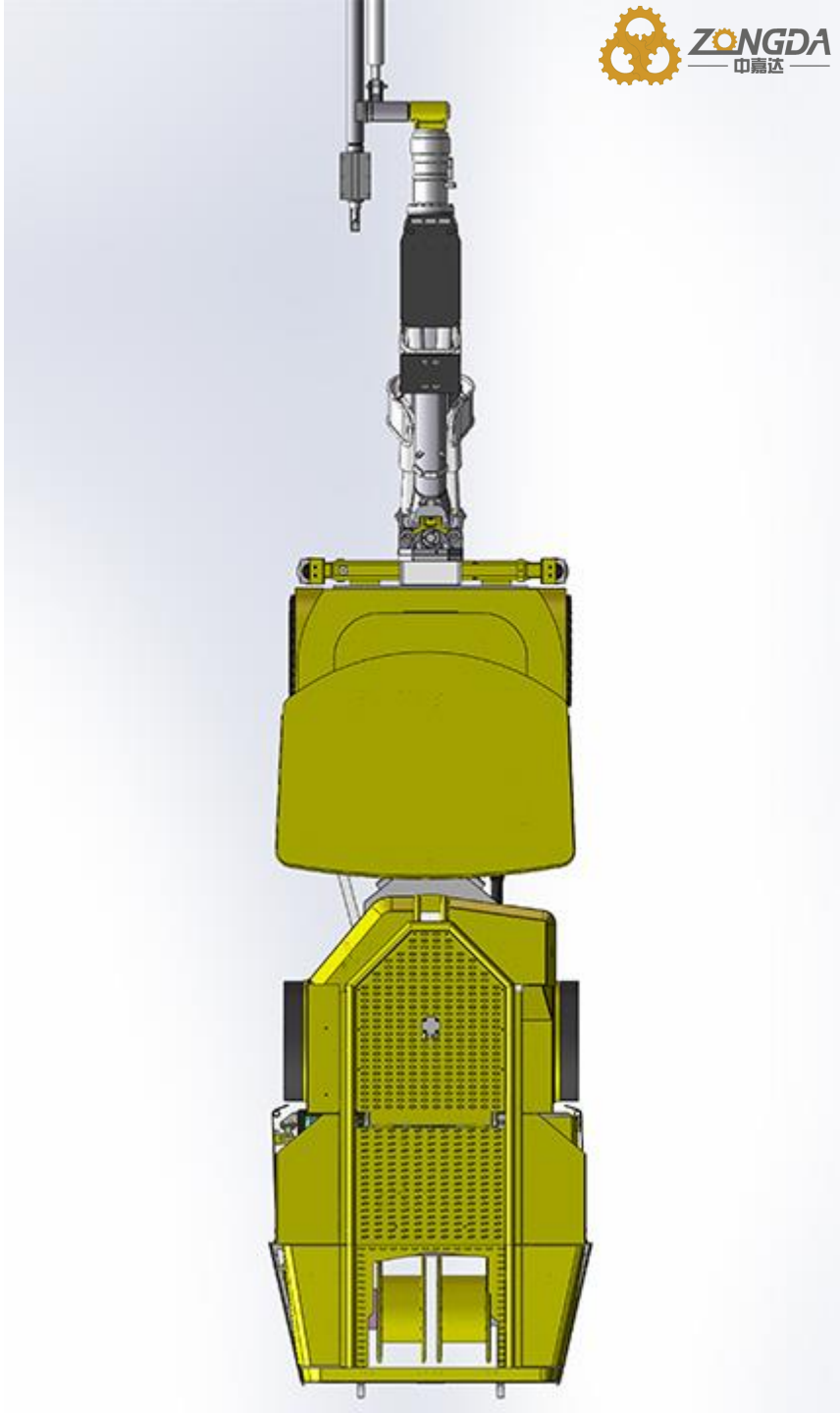
Stable and highly efficient performance makes it your first choice for small-size mining and tunneling applications.



A proven powerful and reliable rig

Main benefits

- **Powerful** performance with low emission diesel engine provides a relatively low environmental footprint while making a tremendous impact on the rock type you face
- **Versatile** in low-vein sizes, ideally suited for drifts or tunnels down to 1.3 meters in height
- **Time-proven robust design** and common-sense control system ensure great reliability.
- **Operator and service friendly.** Simple operator controls and easy service access.
- **Various options** are available for all kinds of operation requests.



Safe, fast and stable drilling

For improved productivity

Safety first

You have many reasons to keep safety first

- Clear safety features on the machine guarantee basic and original safe operation
- Safety instructions to help you increase safety
  - Training for new markets and new customers from ZONGDA including product knowledge, product application and safety, etc.
  - On-call service support
  - Site-based service
  - Parts claim



- FOPS-approved protective roof
- Optional FOPS-approved closed cabin
- Fire suppression system – manual release/Checkfire
- SAHR emergency and parking brakes
- Anti-jaming protection system
- Hand-held fire extinguisher
- Beacon and reverse alarm
- Safety seat belt
- Safety and warning signs



Safety features on the machine

A Range of rock drills for TOUGH Conditions

High frequency rock drill

- Rock drills between 22 and 24kW
  - ZDG550 (24Kw)
  - ZDG650 (22Kw)



- Heavy-duty front head designed for long component life and low running cost

- Montabert, Epiroc and Sandvik rock drills can also be installed on the jumbo (under customer requests)



Productivity – DCS system

Simple, easy and reliable

- Hydraulically controlled drilling system which incorporates the anti-jamming function Rotation Pressure Controlled Feed (RPCF)
- Rock drill lubrication warning kit
- Big hole drilling system
- Hole blowing system
- Air water mist flushing system
- Mining (heavy duty) centralizers

- Direct Control System adapted to underground harsh environment
- Common parts and simple operation
- Time-proven system with high reliability, easy maintenance and easy trouble shooting
- DCS system

Productivity – Boom

Speed up your drilling operation

- Fast and accurate positioning by parallel holding in all directions
- Excellent drilling performance due to rigid construction
- Faster advance rate
- Straight hole alignment
- Reduces drilling cost and leads to real operational economy



Productivity – Aluminium Feed

Long life, low cost



- Intended for small-sized vein and low-roof drill jumbos
- Strong aluminum beam with extremely high resistance against bending and stress
- High feed force, up to 15kN

Service offering

We provide a complete service offering

- We focus on parts availability through strategically located distribution centers worldwide.
- ZONGDA genuine parts help preserve superior quality through-out the life cycle of your equipment.
- To ensure your productivity we offer several levels of service agreements, tailor made for your operational requirements.
- Through professional operators training we give the tools to optimize the performance of your equipment in a safe way.
- With a global network of service engineers, we are committed to support you anytime, anywhere.



Service offering

We provide a complete service offering

- We focus on parts availability through strategically located distribution centers world wide.
- Convenient disassembly and installation of middle articulation
- Concentrated valves location makes easy pressure adjustment
- Monitor displays and records warning and maintenance reminding



Technical Specifications

➢ Rock drill /Drilling system

- ● Water mist flushing, external water and air supply
- ● Rock drilling lubrication kit
- □ Air-supply hole blowing kit
- □ Big hole drilling kit

Rock Drill	Shank adapter	Feed impact force	Impact power
ZDG550/ ZDG650	R32 R38 T38 T45 T76	≤425J	24Kw
Impact rate	Impact pressure	Rotation system	Rotation speed
60-75Hz	17-21Mpa	Separate rotation	0-300rpm
Rotation torque，max	Water consumption	Lub.Air consumption	Hole diameter
980Nm	80L/min	5m³/min	32mm-76mm
Length without shank	Height over drill center	Weight	Sound Level
600mm	88mm	190Kg	<110dB(A)

●= standard □=option

Technical Specifications

➢ Feed

- ● Clamp style hose tree on feed/s
- ● Rubber bushing type centralizers
- ● Dowel spacer
- □ Customized length for different drilling tools

Feed	Total length	Drill rod length
ZDT650	3600mm	2500mm
Feed extension	**Hole depth**	**Feed force,max**
1250mm	2300mm	15KN

●= standard □=option

Technical Specifications

➢ Boom

- ☐ Automatic boom lubrication kit, rear part of boom
- ☐ Boom suspension system

Boom	Boom extension	Parallel holding
ZDZB4	1250mm	Complete
Boom roll-over	**Max. Lifting angle**	**Max. Swinging angle**
±180°	+65°/-30°	±30°

●= standard □=option

Technical Specifications

➢ Electrical system

- ☐ Electric cable type or Buflex
- ☐ Plug / socket PC4/5 for cable
- ☐ Switch gear

Total installed power	Main motors	Voltage	Frequency
68Kw	55Kw	380-1000V	50-60Hz
Starting method	Transformer	Cable reel. diameter	Thermal overload protection for electric motors
star/delta (1000V direct start)	4KVA	660/1395mm	Percussion hour meter
Digital voltmeter/amperage meter in electric cabinet	Phase sequence indicator	Earth fault indicator	Battery charger

●= standard □=option

Technical Specifications

➢ Air system

Air pump power	Working pressure/air supply	Flow rate	Air pressure gauge
5.5KW	5-10 bar	600L/Min (6 bar)	✓

➢ Water system

Water pump power	Working pressure	Max Capacity	Water pressure gauge
7.5KW	8-12 bar	200 L/min (13.5 bar)	✓

➢ Miscellaneous

- ● Manual lubrication kit
- ☐ Rig washing kit with water hose and reel

➢ Protective roof

- ● Manual spotlight, left and/or right
- ☐ Outlet for communication radio, 12V

●= standard ☐=option

Technical Specifications

➢ Hydraulic system

- ● Hydraulic oil thermostat
- □ Heater kit for hydraulic oil tank

Pumps unloaded at start	System pressure, max	Low oil level indicator
✓	200bar	✓
Oil temperature gauge on oil tank	**Manual oil filing pump**	**Oil filter indicator**
✓	✓	✓
Hydraulic oil tank	**Filtration**	**Mineral hydraulic oil**
140L	✓	✓

●= standard □=option

Technical Specifications

➢ Drilling rods

Dimension	Hold diameter	Shank adapters	Extension rods for injection
R38, T38. T45	32mm-51mm	R38, T38, T45	T38 R32 Speedrod

➢ Dimensions

Width	Height roof down/up	Length with feeds	Ground clearence
2480mm	1300mm -1770mm	13450mm	260mm

➢ Recommended cable size and length

Voltage	Type	Dimensions, mm^2	Length(m)
380V	Frequency conversion	4 x 30	80
690V	Frequency conversion	4x25	100

●= standard □=option

Technical Specifications

➢ Carrier

☐ Closed cabin with heating system

Diesel engine	Power rating	Torque，max	Fuel oil tank volume
Deutz Engine 4 cylinder	52Kw	258Nm	60L
Fixed seat for tramming with safety belt	Articulated Steering	Horn，beacon and reverse alarm	Four-wheel drive
✓	±40° steering angle	✓	✓
Hydrostatic power steering system	Hydrostatic transmission	Front axle	Rear axle
✓	Clark 12000	Dana 112	Dana Hurth 311/12
Clearance outside axles	Hydraulic jacks，front	Hydraulic jacks，rear	Service brakes
15°	2 extendable	2 extendable	2 separate circuits
Emergency and parking brakes	Electric system	Batteries	Fire suppression system
SAHR	24V	2*12W，70Ah	Manual

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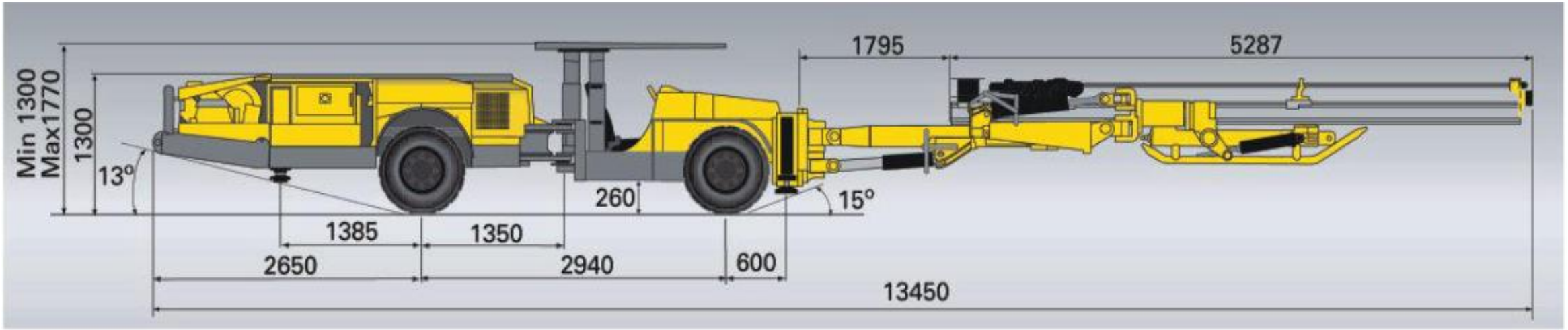
Technical specification

Key components

No.	Parts	Specification	Supplier	Origin
1	Rock drills	HYG550	Hong Yuan	China
2	Feed	HYT Single Feed	Hong Yuan	China
3	Boom	HYZ Boom	Hong Yuan	China
4	Axial piston pump	D-630	Danfoss	Germany
5	Gear pump	PGP 620/511	Parker	Tianjin
6	Main E-motor	YX3 250M-4	ABB	China
7	Air compressor	LG7EZ	HONGWUHUAN	China
8	Water booster pump	CNP Pump	Nanfang	China
9	Engine	BF4L 1011F	Deutz	Germany
10	Drive axle front	Dana 112	Dana	Italy
11	Drive axle rear	Dana 311/112	Dana	Italy
12	Tyres	XZM TL300 R15	China	Shanghai
13	Hydraulic valves		ZONGDA	Germany
14	Hydraulic cylinders		ZONGDA	Sweden
15	Hydraulic hoses		Manuli	Itlay
16	Carrier		ZONGDA	China

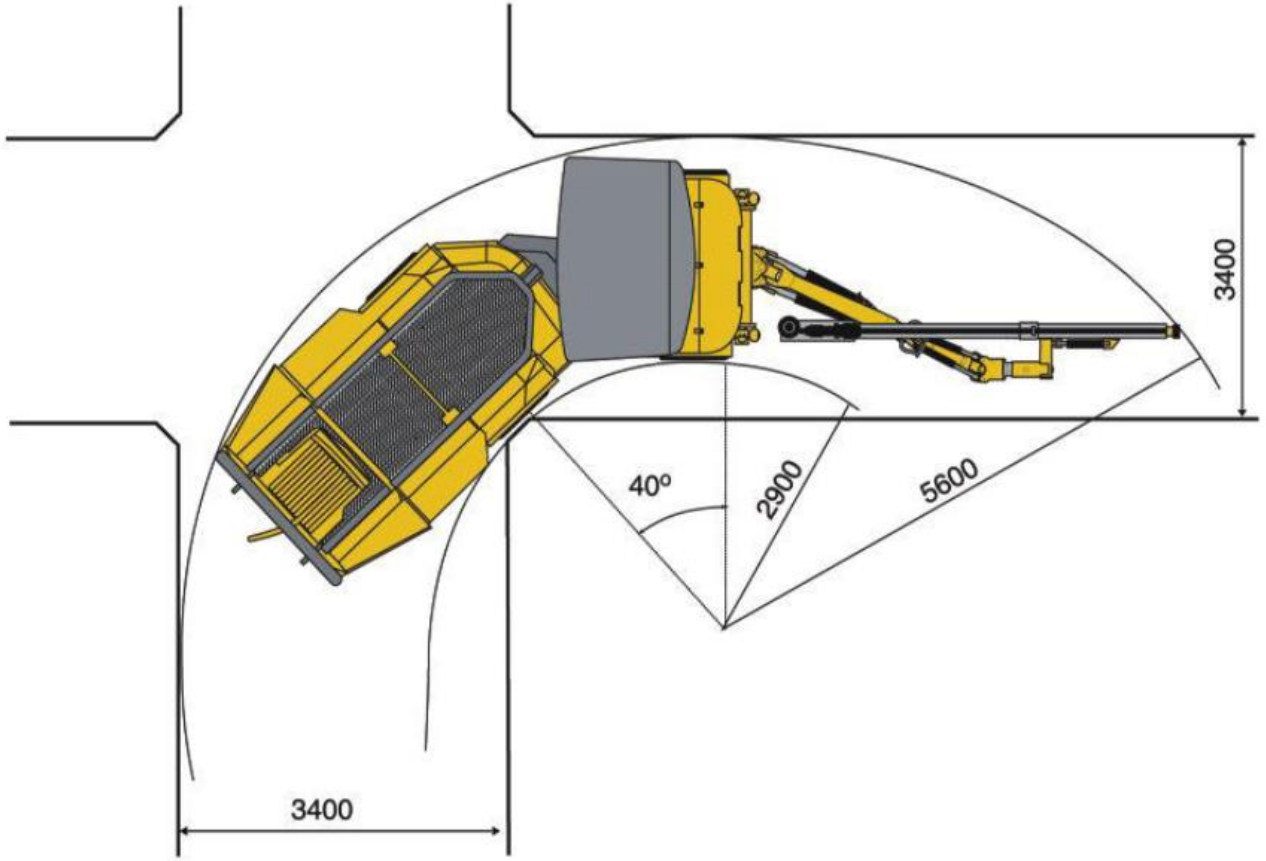
Dimensions

Side view



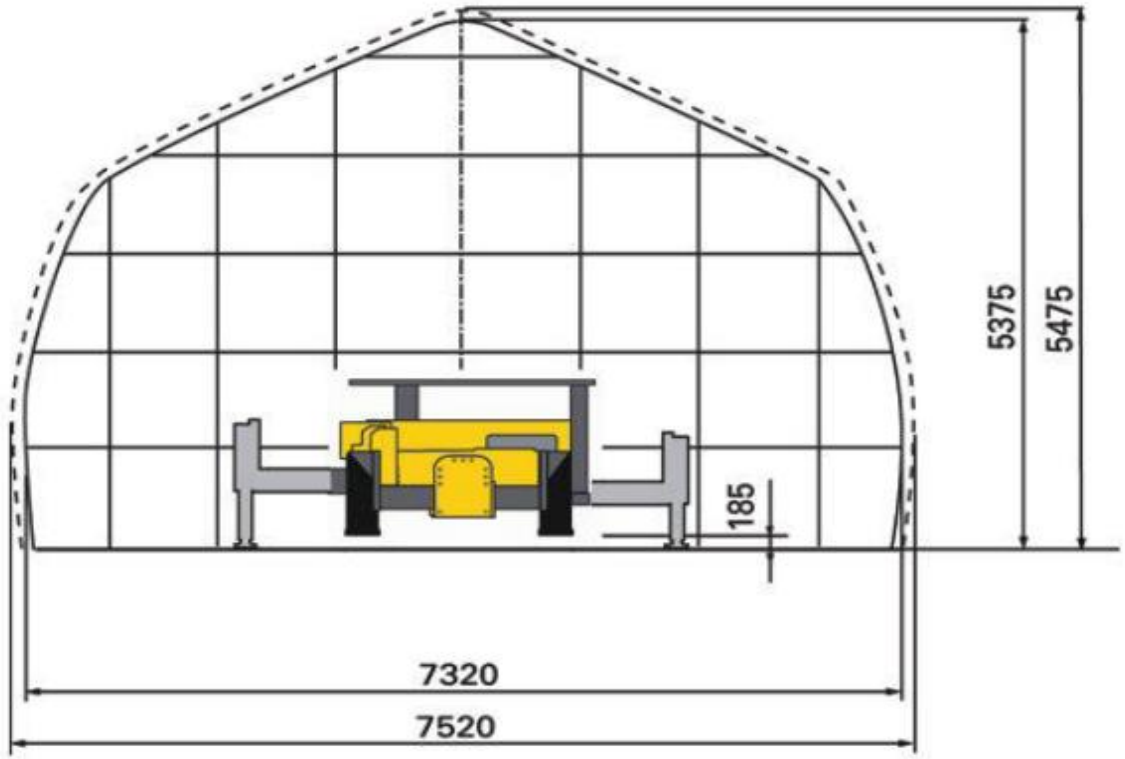
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Turning radius

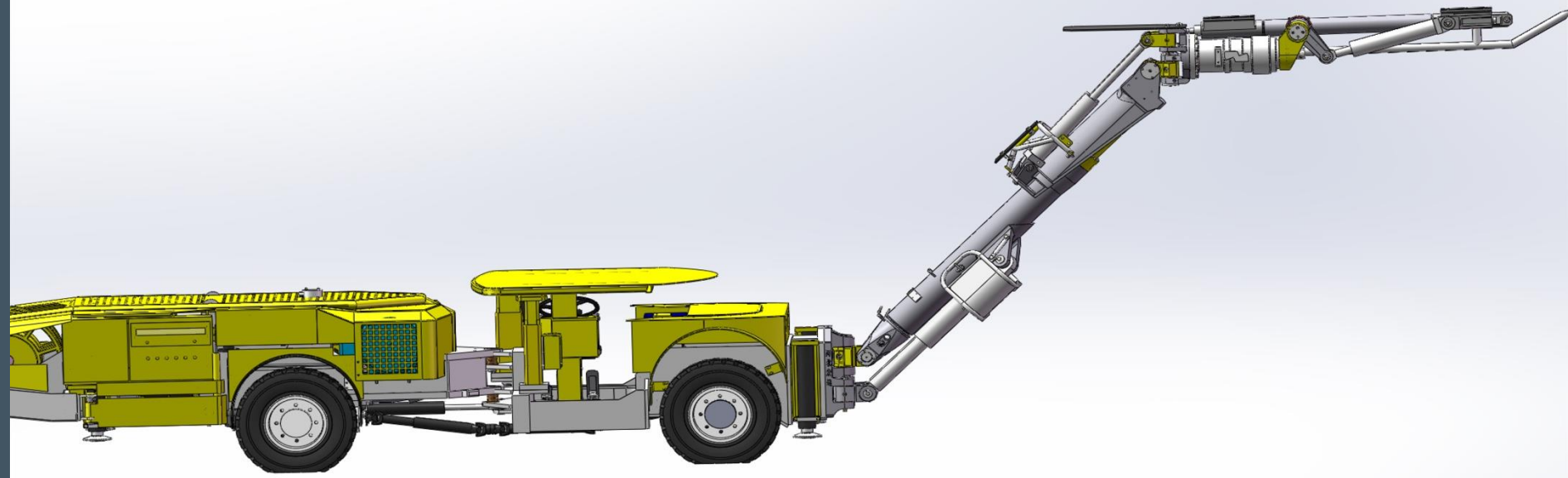


Dimensions

Coverage area



Summary



ZDFJ76B/1

Your first choice for small-vein mining application

- **A low-roof face drilling rig made by ZONGDA**
- **Designed for small-size cross sections**
  - Versatile in different heading sizes
- **High reliability and excellent performance**
  - With high knowledge and experiences base and genuine components
- **Operator and service friendly**
  - Simple operator control and easy service access

