Technical DATA

ZDFJ86A/2 Twin-boom Face Drilling Jumbo





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ZDFJ86A/2 are modern hydraulic face drilling rigs suitable for medium sized drifts and tunnels with cross sections up to 112m^2. ZDFJ86A/2 is equipped with a heavy-duty boom and two ZDG550 rock drills for optimized productivity. When you need high performance drilling equipment, you can rely on ZDFJ86A/2 to safely increase your production.

Advanced PLC control system, telescopic drilling feeds, and a FOPS-approved ergonomically designed protective roof all ensure the best production efficiency and safety. The telescopic feed is easily positioned and steadily stays in place during high impact drilling in order to help the miners to achieve desired rates in local ground conditions. ZDG550 rock drilling machine has dual-damping system for shock wave absorption and continuous rock contact for high penetration. And Lubricated and pressurized surfaces give long service intervals. The jumbo is powered by a strong-power diesel engine that currently offer powerful performance and low emissions to reduce environmental impact. The stable four- wheel driven system provides the jumbo with stable and flexible movement.

The hydraulic drilling machines, hydraulic cylinders, hydraulic system, electrical system, structural components, and all heating treatment processes are all designed and manufactured by our own factory. All the standard parts are from high-quality international brands. In addition to the standard parts, independent manu factory rate can reach to 100 %, ensuring the stability and the quality of the equipment.

Main Features of ZDFJ86A/2 Face Drilling Jumbo

Main parts are imported top brand, including Deutz TCD 2013L04 diesel engine, DANA axles, Michelin tyres, ABB electric motor and Pumps, and Bosch Rexroth valves, guarantee the quality.

Best drilling tool cost: ZDG550 hydraulic rock drill is a high frequency model, it has double buffer shock absorption system and the best drill tool life. The impact power reaches 24Kw, self-lubrication material is applied in the rock drills and so the maintenance period is longer.

The jumbo is equipped with the intelligent control system which allows the operator to easily monitor and control all rig functions and maintain a better focus on safe drilling.

Simple operation and maintenance: The ergonomically designed cab provides an ideal working environment for the operator. Remote control operation, PLC control throughout the working process, making work safer, more flexible, and efficient. It also has good maintenance convenience, and all service parts are easy to maintain.

Hydraulic horizontal drilling boom can keep the propelling beam parallel in all directions, which can be directly, quickly and accurately positioned. It can drill parallel holes without manual calibration, supply simple operation and excellent control of the hole-to-hole spacing and parallelism.

Flexible and versatile thanks to the modular boom bracket design which aids in achieving the desired tunnel shape and the W/X – consoles for maximum width/ height.

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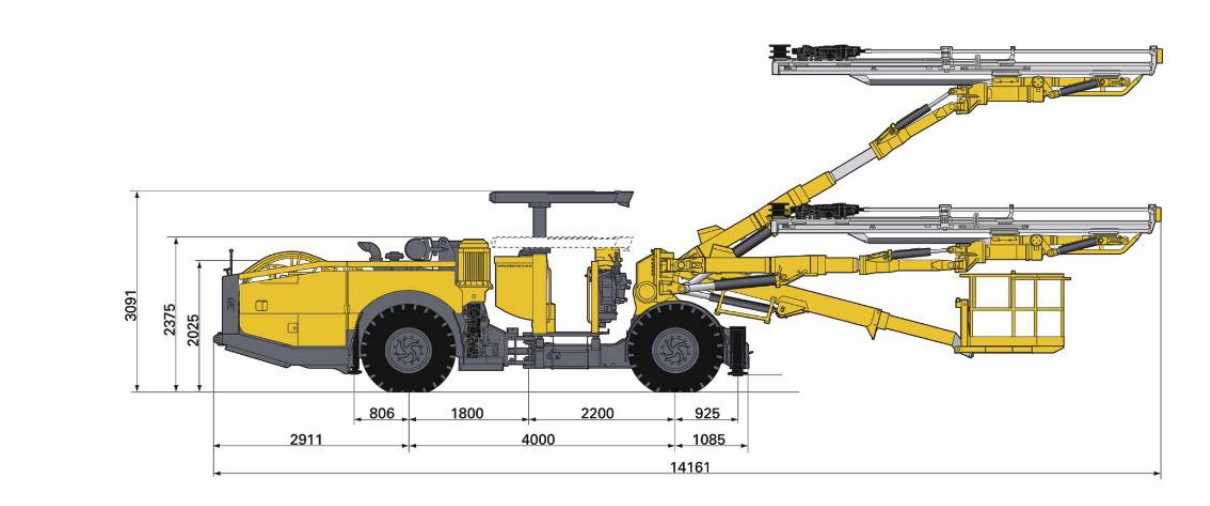
Technical Parameters

Chassis Diesel engine: Deutz TCD2013L04 Power rating Max: 120Kw Torque Max.: 618Nm Fixed seat for tramming: Yes Fuel oil tank volume: 100L Articulated Steering: ± 38° Travelling speed: 17Km/h Gradeability: 25° Horn beacon and reverse: Yes Four-wheel drive: Yes FOPS cabin: Yes Hydrostatic power steering: Yes Hydrostatic transmission: Yes Front axle: Dana 114 Rear axle: Dana 114 Clearance outside axles: Forward 19°,backward 14° Hydraulic jacks, front: 2 extendable Hydraulic jacks, rear: 2 extendable Service brakes: 2 separate circuits Emergency & parking brakes: SHAR Electric system: 24V Batteries: 2x12V, 125Ah	**Dimensions** Width: 2960mm Height roof (up/down): 4990/3090mm Length: 16300 mm Weight: 43000Kg **Rock Drill** Model: ZDG550 Shank adapter: R32, R38, T38, T45 Impact power: 24Kw Impact rate: 60-75Hz Impact pressure: 17-21Mpa Feed impact force: ≤425 J Hydraulic Pressure max: 130bar Rotation system: Separate rotation Rotation speed: 0-300 rpm Rotation torque, max.: 980Nm Water consumption: 50L/min Lub. Air consumption: 5L/s Hole diameter: 32mm-76mm Length without shank: 600mm Height over drill center: Weight: 88mm Sound Level: <110 dB(A)
Boom Model: HYZB4 Parallel holding: Complete Boom extension: 1600mm Feed roll-over: ±180° Max. Lifting angle: +70°/-45° Max. Swinging angle: ±45° Weight, boom only: 1750kg	**Feed** Model: ZDT650-Telescopic Feed Total length: 4760/6590mm Feed extension: 1800mm Drill rod length: 2830/4600mm Weight: 728kg
Water System Pump type: Hydraulic driven booster pump Water inlet pressure, bar, min: 2 bar	**Screw Air System** Rated Power: 7.5Kw Working pressure: 0.8Mpa

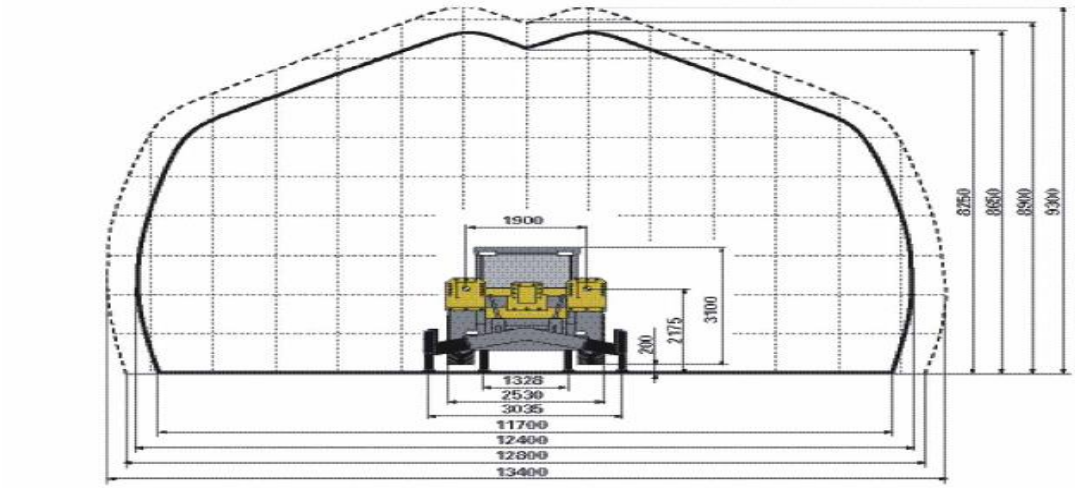
Max. Capacity at 15bar: 250L/min Water flow guard/water pressure guard: Yes	Working Capacity at 9bar: 26L/s Air Pressure gauge: Yes
Hydraulic System Hydraulic pump group: Two separate units Pumps unloaded at start: Yes System pressure, max: 200 bar Oil tank capacity, max.: 250L Refueling filtration accuracy: 10 um	Oil temperature gauge on oil tank: Yes Manual oil filing pump: Yes Oil filter indicator: Yes Water cooled oil: Yes Filtration: Yes
Electric System Motor model: ABB YX3 250M-4(B5) Power rating: 2x 75 Kw Voltage: 380-1000 V Frequency: 50-60Hz Start type: Triangle/Star/Direct start Thermal overload protection: Yes	Digital voltage/current meter: Yes Phase sequence indicator: Yes Leakage indicator: Yes Battery charger: Yes Transformer capacity: 8 Kva Cable coil (inner/outer diameter): 660/1195 mm

Measurements

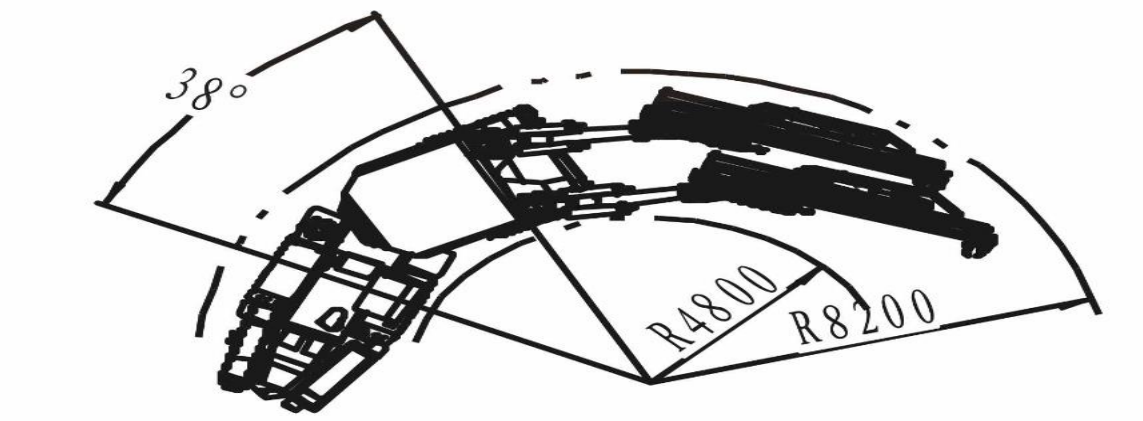
Side view



Coverage area



Turning Radius



Introductions of Main Parts

Rock drill- saving costs for the miners

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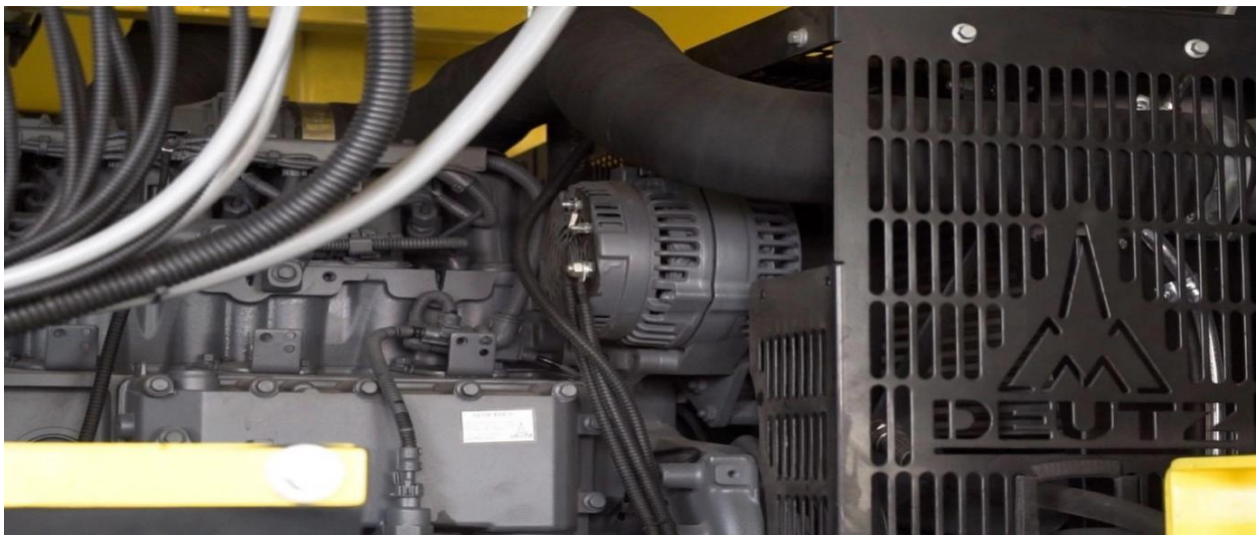


Technical Data

Model	Feed Force Impact J	Pull Force Impact J (optional)	Impact Frequency HZ	Rotation Speed r/min	Max Torque nm	Impact Pressure Mpa	Impact Flow Rate L/min	Revolving Pressure Mpa	Revolving Flow Rate L/min	Weight KG	Impact Power KW
ZDG550	≤400	350	60–75	0–300	980	17–21	100–120	12–15	60–80	190	24

Deutz Engine and Dana Axles

Powered by a strong Deutz TCD203 diesel engine with exhaust system



Sturdy, articulated carrier with four-wheel drive - Dana Axle from Germany

Four jacks for stable set up;

Four stable Jack cylinders;

Signal Reverse and forward;



Control system -PLC system and Anti-jamming system

PLC control system makes the further mining equipment;
Anti-jamming system with the rotation pressure control feed saves the miners on the costs of drilling rods;
Center fire extinguishing system and ANSUL Check fire system installed;
Locking system for stop working;

General - Best quality guaranteed

Firm steel protective FOPS proofed roof for the maximum safety;
Automatic hydraulic -driven cable reel for customer requirements;
Electrically driven compressor;
Michelin tyres from France and spare wheel with tires assembled;
Orange Flashing light;

Main configuration of CYTJ 86A2 Twin-boom Drilling Jumbo			
No.	Description	Manufacturer	Note
1	Hydraulic drill machine	ZDG550	Made by ZONGDA
2	Main pump (Variable Pump)	REXOTH	Mainly from Germany
3	Diesel Engine	Deutz TCD2013	Mainly from Germany
4	Axel	Dana 123	Mainly from USA
5	Spiral swing hydraulic cylinder	HELAC(USA)	Mainly from USA,Global Brand
6	Traveling motor	ABB	Mainly from Germany
7	Tyres	Michelin	Mainly from France
8	Electric Motor	ABB	Mainly from Germany

9	Pressure senor	Helac	Mainly from Germany
10	Proportional triple valve	REXOTH	Mainly from Germany
11	Manual selection valve	REXOTH	Mainly from Germany
12	Impact valve	REXOTH	Mainly from Germany
13	Water pump	ABB 7.5KW	Mainly from Germany
14	Air pump	ABB 5.5KW	Mainly from Germany
15	Oil Cooler	Bowman	Mainly from England
16	Electric Cable	Cavotec	Mainly from Italy
17	Water flow switch	SIKA	Mainly from Germany