

KJ421型全液压掘进钻车 / KJ421 Hydraulic Tunneling Drilling Rig

用途及特点 / Application and Features

KJ421型全液压掘进钻车适用于16-68平方米断面的隧道掘进作业，可以钻凿垂直、倾斜和水平的爆破孔和锚杆孔。

The KJ421 hydraulic tunneling drilling rig is suitably qualified for the drilling of tunnels whose section falls in the range of 16-68 square meters, capable of drilling the blast hole and rock bolting in a vertical, inclined and horizontal way.

- 钻车采用对称布置的两套直角坐标万向钻臂，没有作业盲区。推进梁360度翻转和自动持平便于快速方便地实现钻孔定位，同时还可用于侧向开石门和锚杆钻孔作业。
- The drilling rig is fitted with the flexible boom in two symmetric rectangular coordinates, without any operation blind spot. 360° rotation and self-leveling beam make drill positioning easy; it can also be used for the drilling of lateral cross-cut and rock bolting.
- 钻车布置确保司机视野良好；布置平衡，强劲有力的四轮驱动铰接底盘确保在狭窄巷道中能够灵活，快速，安全行驶；
- The drilling rig provides a good view for the operator; balanced layout and the articulated chassis of four-wheel drive ensure the flexible, fast and safe driving in the narrow tunnel;
- 高频冲击凿岩机采用梯级活塞优化了冲击波传递效率，提高钻进速度，降低钎具消耗并提高设备的完好率；
- The stepped piston is used for the high-frequency impacting rock drill and this can improve the transmission efficiency of impact wave and drilling speed and reduce the consumption of drilling tools and make it in good condition;
- 宽敞的作业空间和一系列自动功能有助于司机集中精力安全、快速、准确地钻进；
- Considerable space and automatic functions enable the driver to concentrate on drilling in a safe, fast and accurate manner;
- 各个维修保养部位均受到良好的保护，同时又易于维护保养；
- All the relevant parts are kept in good protection, meanwhile maintenance easily.

技术参数 / Technical Parameters

外形尺寸与重量 / Dimensions and weight		风水路系统 / Air & water system			
长度 / Length	13000mm	空压机 /Air compressor	1 × JN11	润滑耗油量 Oil Consumption of lubrication	2 × 180–250 g/h
宽度 / Width	2200mm	排量 /Capacity of air compressor	1.55 m³/min		
高度 / Height	2400/3100 mm	压力 /Pressure	8 bar	水泵功率 Power of water pump	7.5kW
重量 / Weight	约22000 kg /Appr. 22000 kg	钎尾润滑装置 Device of shank lubrication	电子脉冲润滑泵 Electronic pulse lubrication pump		
行驶速度（水平） Tramming speed on flat ground	10km/h	润滑耗气量 Air consumption of lubrication	2 × 0.3 m³/min	水泵排量 Capacity of water pump	10m³/h
最大爬坡能力 Maximum climbing capacity	25%(14°)				
安全防护 / Safety protection		底盘 / Chassis			
噪音水平 / Noise level	< 100dB(A)	柴油机 Diesel engine	Cummins QSB3.9–C125 /93kW/2200rpm	行走制动 Travelling braking	桥内湿式制动器 Wet bridge brake
可升降安全顶棚 Lifting safety roof	FOPS & ROPS认证	尾气净化 Exhaust purification	尾气催化器 /Exhaust catalyst	驻车制动 Parking braking	机械制动器 Mechanical brake
		传动系统 Drive system	液力变矩器+变速箱 Hydraulic torque converter + gearbox	燃油箱 /Fuel tank	120L
钻进系统 / Drilling system			电动液压泵站 / Electric hydraulic power unit		
凿岩机 /Rock drill	2 × RD 22U/HC95LM	电动机 /Motor		2 × 75kW三相电机 /three-phase motor	
钎尾尺寸 /Rod size	R38、T38	冲击/推进/钻臂 /Impact /Feed/ Positioning		轴向变量柱塞泵 Axial variable displacement piston pump	
冲击功率 /Impact power	22kW/21kW	回转 /Rotation		齿轮泵 /Gear pump	
频率 /Impact Frequency	53 Hz/ 62 Hz	过滤精度 /Filter fineness		10 μ	
孔径 /Hole diameter	Φ42–102mm	液压油箱 /Hydraulic oil tank		400 L	
推进梁翻转 /Beam rotation	360°	液压冷却器 /Hydraulic cooler		水冷却器 /Water cooler	
推进梁补偿行程 /Feed extension	1600mm	工作电压 /Working voltage		380V	
钻臂型号 /Model of drill boom	K40	频率 /Frequency		50Hz	
钻臂形式 /Form of drill boom	自动持平 /Self-leveling	启动方式 /Starting method		星–三角 /Star-triangle	
钻臂伸缩 /Boom extension	1800mm	电缆规格 /Cable specifications		3 × 120+3G25	