

TZY550TK

Mobile Screw Air Compressor
移动式螺杆空压机



TeZhong Machinery

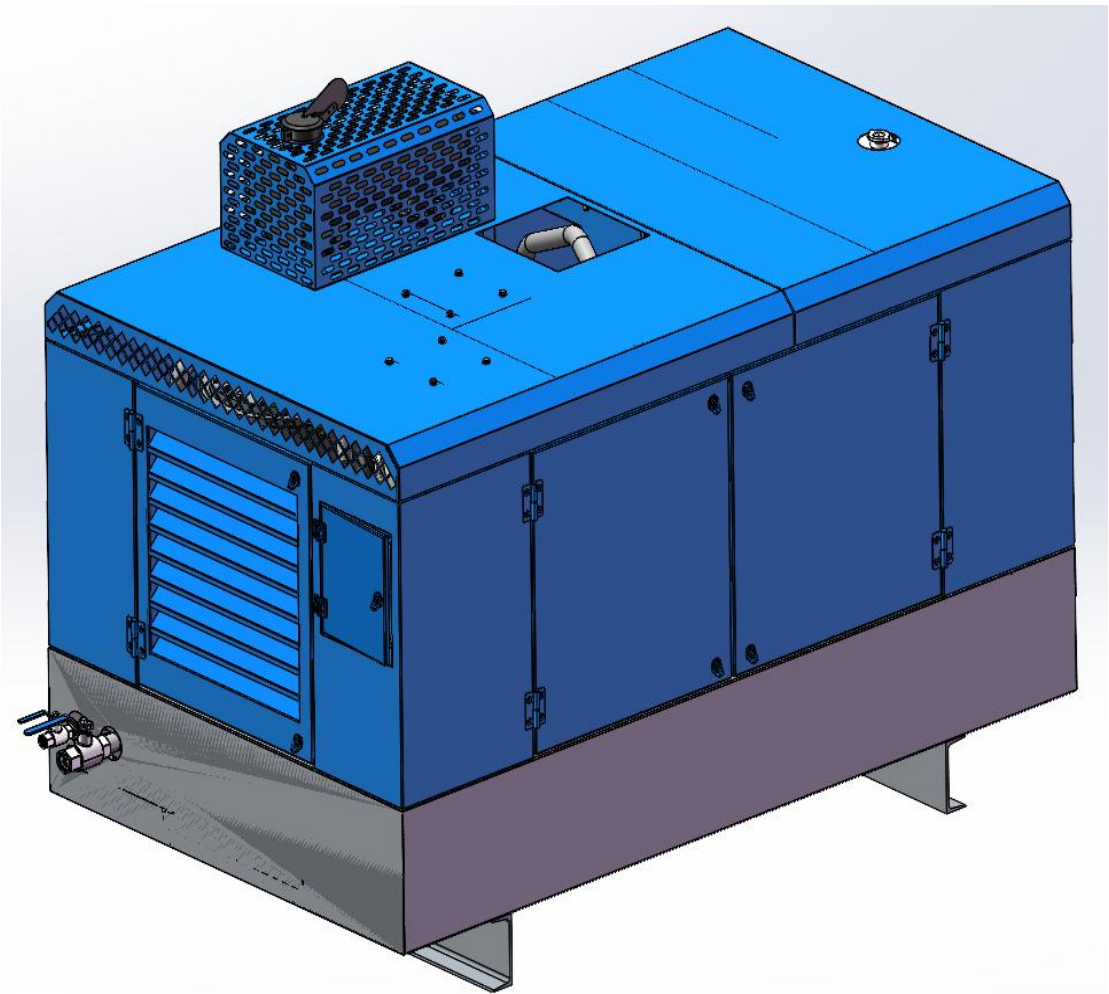
安徽特众机械科技有限公司



This mobile screw air compressor is specially designed for mining, rock drilling, road construction and concrete breaking.
本款移动式螺杆空压机专为矿山开采、岩石钻孔、道路施工及混凝土破碎作业设计

This machine is equipped with a Cummins 6-cylinder, 399HP diesel engine, featuring reliable performance, long service life and low maintenance costs.
该机搭载康明斯6缸 399马力柴油发动机，性能可靠、使用寿命长、维护成本低。

TZY550TK



TZ550-15Y mobile screw air compressor parameter list		
TZ550-15Y移动式螺杆空压机参数表		
Name名称	Unit单位	Value数值
Compressor specified operating conditions压缩机规定工况		
Inspiratory absolute pressure 吸气绝对压力	bar	1
Inspiratory relative air humidity 吸气相对空气湿度	%	0
Air inlet temperature 空气进口温度	℃	20
Nominal exhaust pressure Restrictions 公称排气压力	bar	15
Restrictions限制条件		
Minimum pressure valve opening pressure 最小压力阀开启压力	bar	7.5
Exhaust pressure 排气压力	bar	15
Maximum ambient temperature at sea level 海平面最大环境温度	℃	50
Minimum ambient operating temperature 最低环境使用温度	℃	-15
Minimum ambient operating temperature - equipped with cold start assist 最低环境使用温度-配备冷启动辅助	℃	-35
Maximum operating altitude 最高使用海拔高度	m	4500
Other其它		
Lubricating oil capacity 润滑油容量	L	30
Oil tank volume 油罐容积	L	147
Fuel tank volume 燃油箱容积	L	150
Overall dimensions 外形尺寸	mm	2750x1500x2000

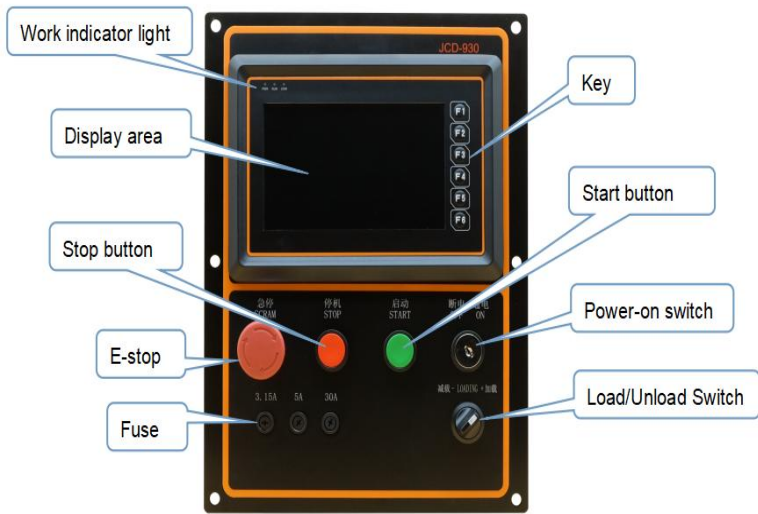
TZY550TK

Compressor parameter table 压缩机参数表		
Item项目	Unit 单位	Value数值
Brand 品牌	/	Bowes 鲍斯
Model 型号	/	YNE204RB
Maximum engine operating speed 发动机最高工作转速	r/min	2000
Engine speed when maintaining pressure 发动机保压时转速	r/min	1300
Engine rated operating speed 发动机额定工作转速	r/min	1850
Compressed volume flow 压缩容积流量	m³/min	15
Compressed air oil content 压缩空气含油量	mg/m³	<5
Oil consumption (maximum) 机油消耗 (最大)	g/m³	±10
Compressed air outlet temperature 压缩空气出口温度	℃	30~110
Noise (1 meter sound pressure level) 噪声 (1米声压级)	dB(A)	85±3

Electronic control system 电控系统		
Item项目	Unit 单位	Value数值
Power supply type 供电型式	/	Battery 蓄电池
Supply voltage 供电电压	V	DC24
Battery capacity 电池容量	Ah	120

Engine parameter table 发动机参数表		
Item项目	Unit 单位	Value数值
Brand 品牌	/	Dongfeng Cummins 东风康明斯
Model 型号	/	QSB5.9-C190-31
Bore diameter 缸径	mm	102
Number of cylinders 缸数	/	6
Stroke 冲程	mm	120
Displacement 排量	L	5.9
Rated power 额定功率	kW	142
Rated speed 额定转速	rpm	2000
Maximum torque speed 最大扭矩转速	Nm/rpm	800/1500
Minimum specific fuel consumption rate 最低比油耗率	G/kW·h	240
Idle speed setting 怠速设定	rpm	800
Weight 重量	kg	543
Coolant type 冷却液品种	/	-35#
Coolant capacity 冷却液容量	L	33
Engine oil types 机油品种	/	15W-40-CH4
Oil capacity 机油容量	L	16.4
Fuel type 燃油品种	/	0#
Fuel tank volume 燃油箱容积	L	150
Startup form 启动形式	/	Electric start 电启动

TZY550TK



01 Controller 控制器

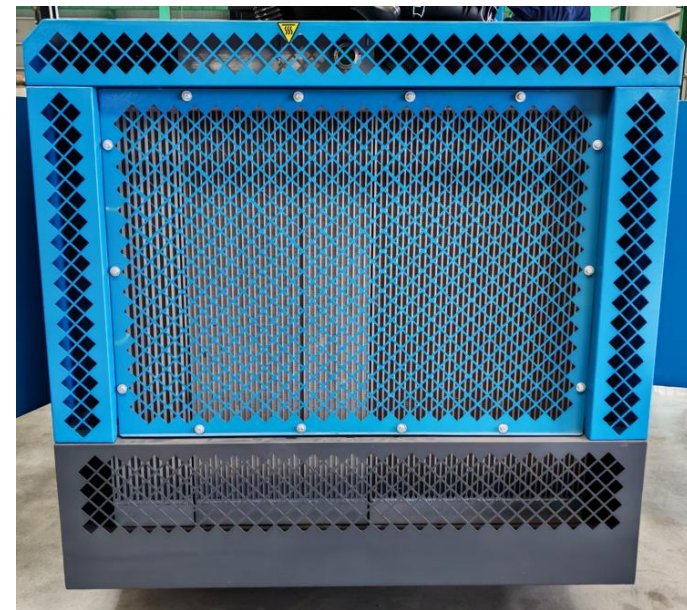
Intelligent control system, easy to operate, with monitoring functions for oil pressure, water pressure, intercooler temperature, air end temperature, fuel level, etc. 智能控制系统，操作简便，具备油压、水压、中冷器温度、主机温度、燃油油位等监测功能。

02 Connecting Pipe 连接管

Core Functions 核心作用:

Delivers high-pressure, dry compressed air generated by the air compressor stably to external pneumatic equipment such as rock drills, jackhammers, and solar photovoltaic pile drivers, serving as the main air outlet for the machine's external air supply 将空压机产生的高压、干燥的压缩空气，稳定输送到凿岩机、风镐、光伏打桩机等外部气动设备，是设备对外供气的“总出口”。

The air supply can be turned on/off at any time via a ball valve / shut-off valve, facilitating easy start/stop of operations, tool changes, or maintenance 通过球阀 / 截止阀，可随时开启 / 关闭供气，方便启停作业、更换工具或检修。



03 Engine Radiator 发动机散热器

A complete cooling system mounted on the portable air compressor, including radiator core, large fan and protective grille 安装在移动式空压机上的完整散热系统，包含散热器芯体、大风扇及防护网罩。

It serves as the body temperature control system of the air compressor. Through efficient heat dissipation, it keeps the "heart" (engine) and "lung" (air end) operating at a healthy temperature, providing a fundamental guarantee for stable power output and compressed air supply 它是空压机的“体温调节系统”，通过高效散热，让“心脏”（发动机）和“肺”（空压机主机）始终在健康的温度下工作，是设备稳定输出动力和压缩空气的根本保障。

TZY550TK



04 Engine 发动机

Equipped with a Cummins 6-cylinder diesel engine, delivering 542 kW (399 horsepower) 配备康明斯六缸柴油发动机，输出功率 542 千瓦（399 马力）。

The engine has strong power, and diesel is more economical, can provide reliable power guarantee for drilling operations 发动机动力强劲，同时柴油更经济，可为钻井作业提供可靠的动力保障。

The engine supports customization .
发动机支持定制。

05 Lubricating Oil Filter 电池

The equipment is fitted with a 24V DC battery with 120Ah capacity, ensuring reliable starting and stable power supply.
本设备配备24V、120Ah蓄电池，确保启动可靠、供电稳定。



06 空气过滤器 Air Filter

Considering its construction operation environment, it is equipped with a cyclone dust removal air filter - a top domestic air filter 考虑到其施工作业环境，配备了旋风除尘空气过滤器——国内顶级的空气过滤器。

There is a lot of dust in drilling operations. The drilling machine can maintain normal operation in this environment 钻孔作业中有很多灰尘，钻机在这种环境下即使长期作业，也可以保持正常运行。



TZY550TK



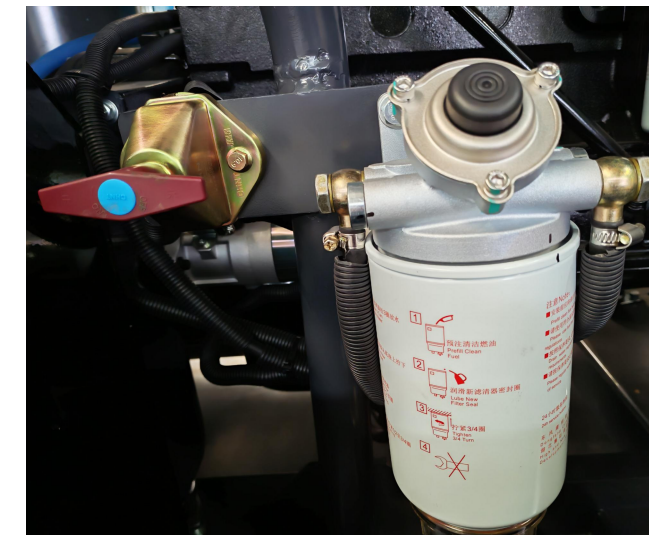
07 Screw Compressor Oil Filter 螺杆油滤芯

Filters lubricating oil impurities, protects screw unit & bearings, stabilizes performance, extends equipment & oil life 过滤润滑油杂质，保护螺杆主机与轴承，稳定性能，延长设备及润滑油使用寿命。

It is usually replaced together with the lubricating oil, and the filter element should be replaced after approximately 800–2000 operating hours, depending on working conditions. 通常与润滑油同步更换，运行约 800–2000 小时（视工况而定）需更换滤芯。

08 Oil Separator 油分离器

It utilizes centrifugal force, gravity, and high-precision fiberglass filter elements to achieve efficient separation of oil-gas mixtures. While purifying compressed air and recovering lubricating oil, it also functions as an oil storage and pressure stabilization unit 它利用离心力、重力及高精度玻纤滤芯，实现油气混合物的高效分离，在净化压缩空气、回收润滑油的同时，兼具储油与稳压功能



09 Diesel Fuel Filter 柴油滤清器

It is mainly used to purify fuel, prevent impurities from entering the fuel injection system, protect precision components, improve combustion efficiency, and extend the service life of the engine 主要用来净化燃油，避免杂质进入燃油喷射系统，保护精密部件，提升燃烧效率，延长发动机的使用寿命

It is typically recommended to replace the filter element after 1500–3000 operating hours. A clogged filter will result in reduced power output and increased fuel consumption 通常运行 1500–3000 小时需更换滤芯，堵塞会导致动力下降、油耗升高。

TZY550TK

Electrical schematic diagram
of the whole machine
整机电气原理图

