

TY380G 分体式空气动能钻机

Split type air kinetic energy rig

重新定义空气动能钻机

Redefine the air kinetic energy rig



泰业钻机
Taiye Drilling Machinery

服务文化

一个目标

One goal

让客户更满意

Let the customer more satisfied

一个宗旨

One purpose

客户至上，诚信为本

The customer is supreme, openness
basing on sincerity

一个理念

One concept

成就价值，与客户共同成长

Achievement value, grow together with
customers

一项策略 One strategy

为客户提供专业化，多方位的一站
式整体服务

To provide clients with professional, All-
round one-stop integrated service.

服务内容

售前服务：

泰业钻机根据五大维度来咨询客户需求，为客户制作专业有效的设备购置方案。

Before sales service:

According to the five dimensions to consulting customer requirements,
Taiye drill machine company makes major effective equipment purchase
plan for the customer.

售后服务：

泰业钻机为用户提供免费的安装指导、现场技术培训、开机和调试服务。公司建立了售后服务团队与技术部，配件仓储部的高速信息沟通渠道，保障用户问题得到及时的解决。

After sales service:

Taiye drill machine company supplies free installation guide, onsite training, start the machine and debugging service. Our company that set up after-sales service team and Technology department and spare parts warehouse department of high-speed information communication channels ensures solve user's problem in time.

泰业钻机阳光服务
Taiye Sunshine Service

服务热线：400 6031 370
service hotline

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泰业钻机

TY380G 是泰业钻机根据造孔行业“低成本，高效率”的行业需求，研发制造的一款高性能分体式空气能钻机。

TY380G is TaiYe industry according: "Low cost, high efficiency" development and manufacturing a high performance split type air kinetic energy rig.

TY380G 集合了当下分体式空气能钻机的最尖端技术，原型机通过超3000小时的破坏式的操作实验，4种不同地质环境的现场实验，改进了近10余项机械漏洞。最终解决了分体式空气能钻机以往的“高故障率，高风耗，高使用成本”三大关键技术难题。最终形成易操作的低维护成本，低风力需求，高钻孔速度的两低一高的分体式空气能钻机TY380G。

TY380G set the current small split type air kinetic energy it is the most advanced technology of drilling rig. A prototype by more than 3000 hours of damage type of experiment operation, experiment of four different geological environment, improved the more than 10 mechanical disadvantages. Finally solved "high failure rate, high air loss, high use cost" three key technical problems. Eventually form the easy operation, low maintenance cost, low wind demand and high drilling speed of TY380G.

更低的维护成本

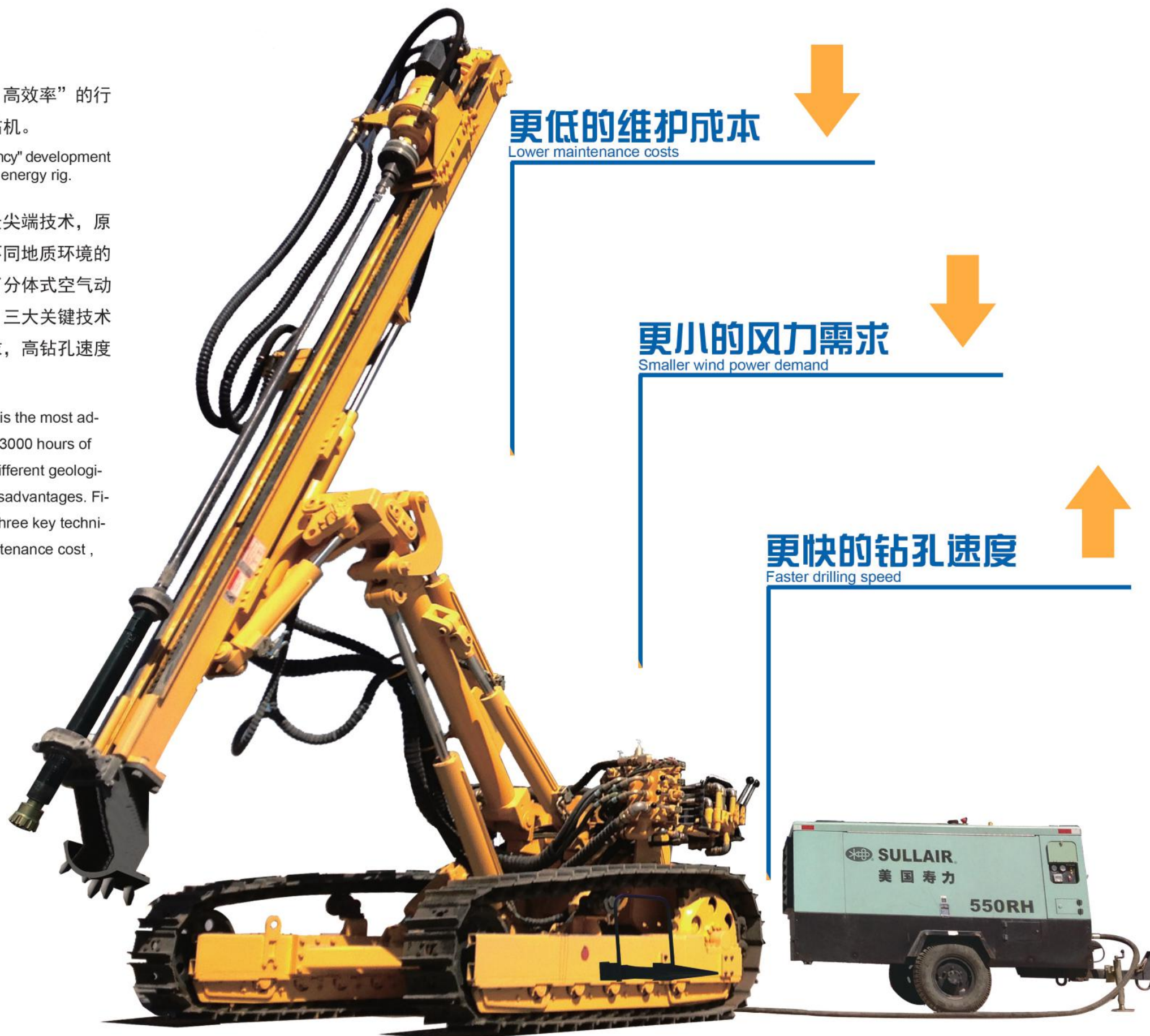
Lower maintenance costs

更小的风力需求

Smaller wind power demand

更快的钻孔速度

Faster drilling speed



强劲底盘 Powerful chassis

高强度的行走机构为整机提供了力量和耐久性，驱动轮、导向轮、支重轮及履带板表面都经过特殊耐磨处理，驱动强劲，适应性强，使设备在复杂地形中也能保持稳定的行走姿势。采取一次性机油润滑，免去使用中经常维护和保养的繁琐。

The high-intensive running mechanism supplies the machine with power and durability. The driving wheel, leading wheel and the surface of track have been made specially anti-wear treatment. The driving is strong, well-adapted, Maintenance Free. The chassis can keep stable in the rough terrain when it is walking.



行走机构与行走履带板 Travelling mechanism Running creeper tread

行走减速箱各部件采用高合金钢及先进的热处理工艺，经久耐磨，使用排气引导的方法实施消音。行走阀联动的自动刹车系统，一旦停止给行走马达供气会瞬时刹车。行走减速箱上的手拔销式离合器经过定位，可使设备在无动力情况下转场拖移，节省设备吊装时间及费用。履带板的宽度为310mm，在不同的工况条件下可实现更高的接地比压。

The one time/ two time walking gearbox adopts high quality steel and advanced heat treatment technics which is tough and wear-resisting. And it carry out to reduce noise by the way of exhausting and leading in body frame. The brake and walking valve connect the autobrake system. The moment we stop supplying power to walking motor, the machine is braking right now. The hand-pin type clutch of walking gearbox has been fixed position so that it is convenient to drag or walk on condition that the motor is not working. The creeper tread width is 310mm, it is the widest among the same other type, pedal design is scientific and reasonable, and it has a strong grip, keep the drilling more stable.



托链轮 Carrier roller

托链轮采用锻造轮体，整体强度高，使用寿命长。经过感应淬火的轮缘即使在苛刻的作业条件下也不裂不碎。独特的密封方案可以保证最好的密封效果。大尺寸主轴和轴套设计使其在高强度运作中能够承载超重负荷。

Carrier roller forged wheel body, the overall high strength, long service life. Induction-hardened rim even in harsh operating conditions nor crack is not broken. Unique sealing solution can ensure the best seal. Large spindle and sleeve design make it capable of carrying high-intensity operations overweight load.



行走平衡系统 Walking balance system

车架配备了高车体离地间隙和车体浮动系统，可使履带在13°范围内上下起伏。

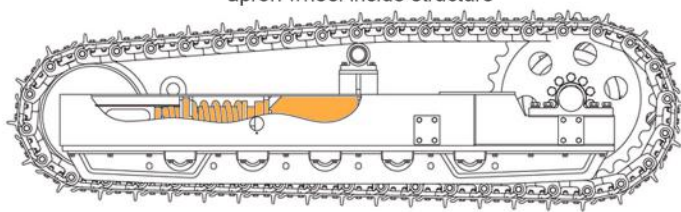
The device adopts strong pneumatic motor. The vehicle frame equipped with high body clearance from the ground and car body oscillating system can make the crawler up and down in the range of 13°.

WBS

无配备行走平衡系统行车状态
Not equipped with walking balance system mode



履带内部结构剖析图
apron wheel inside structure



全新机械臂 Swing arm mechanism

全新结构的机械臂机构，通过五个联接机构和液压油缸，扩大了钻孔方向和作业范围。加长滑架，锰钢滑轨与多组式滚轮设计滑板相配合，可承受大扭矩，抵抗变形，延长滑架的使用寿命。

It is the new construction for mechanical arm, parallelogram design principle, sturdy and durable, equipped with 5 coupling mechanism and hydrocylinder, expand the direction of drill hole and operating range. In addition, heavy construction lengthens sliding frame, manganese -steel sliding rail fitting with roller design slider can bear large torque, resist deformation, prolong the life of slider and sliding frame.



动力回转机构 Powerful swing mechanism

回转减速机内部结构合理，便于维护保养。回转头改用加强型减震器，可降低钻孔的冲击反作用力，齿轮式回转马达速度快、启动扭矩大、启动停止迅速、可靠；有过载保护作用，长时间工作升温小。

The rotary gearbox adopts two-stage planet gears. Output torque 2000N/m, rotating speed 70rpm. The turret head used with intensive damper can reduce the counter-acting force of drilling, reduce wear. The interior structure is simple and convenient to maintain. The interior YX seal ring and needle roller thrust bearing of turret head are imported from USA. IR original products that both the property and lifetime are improved much more. The gear-type rotary motor runs faster, has little impact, needs not to discharge load, has large torque when starting, stop and start rapidly, reliable; has overload protection, slow heating rate for a long working time.



推进机构 Feed mechanism

推进机构使用活塞式气动马达，内部配件均为韩国进口，连接涡轮，蜗杆变速箱，确保推进和提升力，具有自锁功能，保证施工安全性。

The feed mechanism is pneumatic piston motor. All the parts of it imported from South Korea. It connects to turbine, worm gearbox and drives the heavy track so that it ensures the feed and elevating power. What's more, it has self-locking function, high carrying capacity, high transmission efficiency, large output torque, smooth working, long service life and so on.



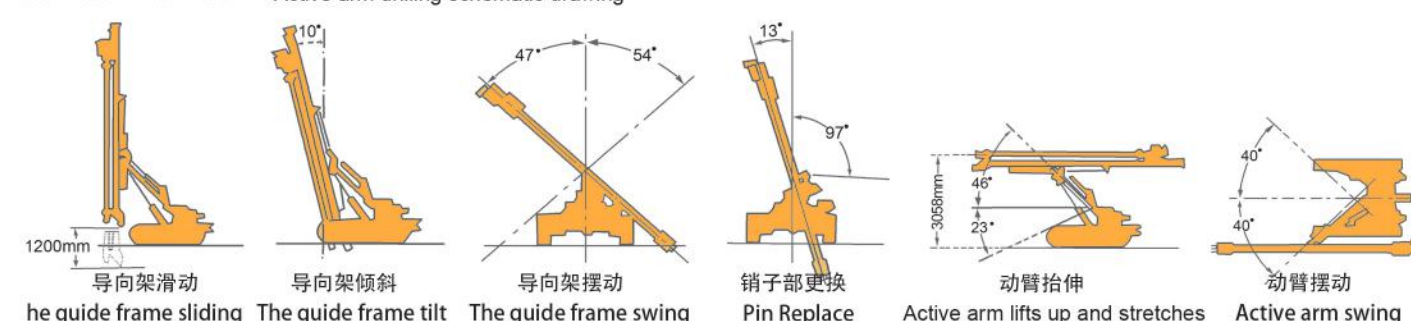
动臂安全装置及角度指示器 Swing arm safety device and angle index

各类液压缸上装有双向液压锁。机身加装机械角度指示器，方便操作者准确调整钻机位置。

A variety of hydraulic cylinders have been equipped with bilateral pilot-controlled valve, prevent the swing arm from all of a sudden falling or declining in nature. The body add the mechanical angle indicator, it could help with confirming hole location, ensuring drilling angle effectively and making operator adjust drilling machine's position expediently and accurately.



动臂钻孔工作示意图 Active arm drilling schematic drawing





全新的中控液压系统

Operating valve assembly

根据工效学设计的集成式操控台，将液压执行机构，钻进系统等集中于一处以优化操作性和作业效率。机身装有可折叠的拆卸式操作踏板，满足单人操作的要求。

According to the integrated console of ergonomic design, make the hydraulic actuator and drilling system together to optimize operability and working efficiency. The machine equipped with folding dismantling pedal can meet operator's need.



行走操作阀

Running operating valve

行走操作阀采用90° 旋转式，为避免牵引空压机时可能发生的夹压事故，可在机体后方或侧面的操作员踏板上进行安全操作。

Running operating valve adopt 90° swivel, in order to effectively avoid clamping pressure accident when air compressor machine is being towed, For safe operation, the rear of the body or the flank of the operator pedal is a right working place.



油雾器

Atomized lubricator

加大容量的油雾器，使工作效率大大提高。

Increase the capacity of the atomized lubricator, the working efficiency is greatly improved.



液压胶管

Hydraulic hose

油管分布排列整齐，安装牢固，另安装有高耐磨、抗老化、抗腐蚀性胶管护套，更能有效的对软管外表面进行保护。

Layout and arrangement of hose is in order, mounted securely, and it is also equipped with hose protecting bush which is high wear resistance, aging resistance and corrosion resistance, it can be more effectively to prevent hose from damage.



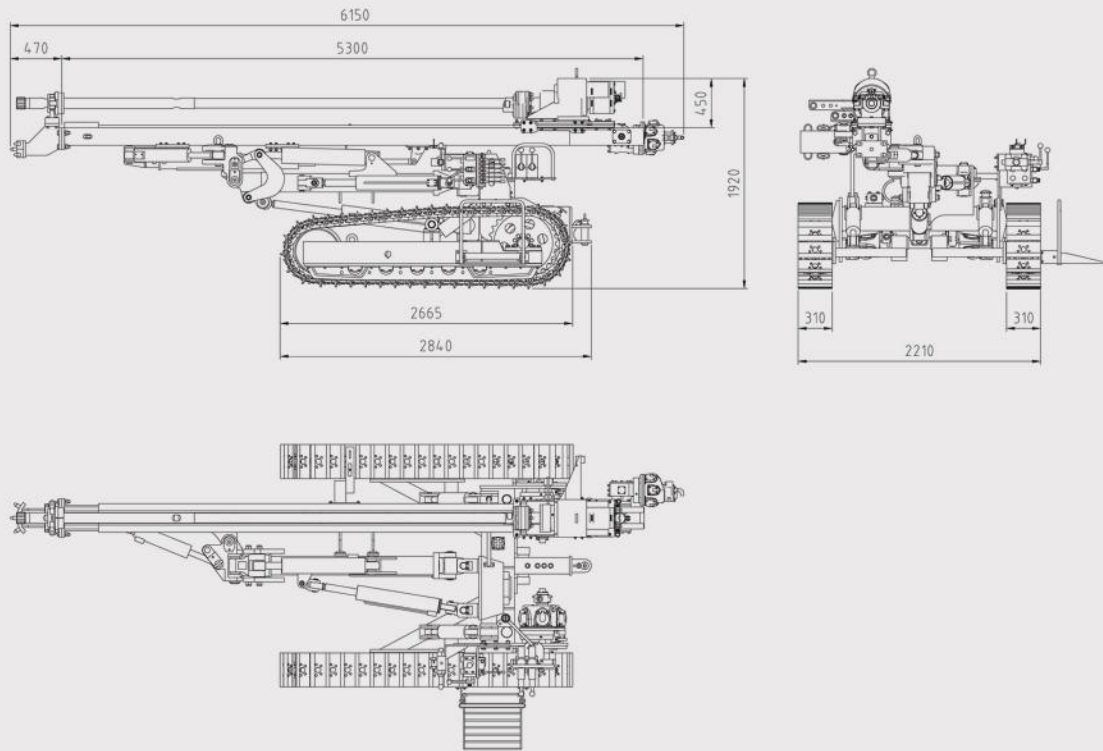
液压泵站

Hydraulic pump station

选用意大利进口油泵，流量均匀、运转平稳、工作压力高，进口的液压调节装置，调节设备所需压力，使设备在运行过程中达到最佳效果。

Hydraulic oil pump is the power source of hydraulic system and driven by pneumatic motor. The device chooses imported pump from Italy, flow uniform, run smoothly, working pressure and volume are high, can meet the pressure and flow of hydraulic system at high pressure. The imported hydraulic adjusting unit which adjust the pressure the device need can get best results when the device is working.

设备规格 Specification of equipment



技术参数

Technical parameters

型号		TY-380G分体式空气动能钻机		
全长 Whole dimension	6,100 mm	回转马达功率 Pneumatic motor power	3.7 kW	
全宽（含操纵踏板） Whole width (including the pedal)	2,360 mm	液压泵压力 Hydraulic pump pressure	14.7 MPa	
全宽（不含操纵踏板） Whole width (excluding the pedal)	2,200 mm	液压油箱容量 Hydraulic tank capacity	18L	
全高（主臂降下姿势） Whole height (drilling boom down)	2,105 mm	空气消耗量 Air consumption	1.73 / 0.3Mpa m3/min	
履带全长 Track shoe length	2,580 mm	最大使用风压 actual air volumes	Max. 2.5 MPa	
履带接地全长 The length of track to ground	1,885 mm	建议空气量 Air amount	15-25m3/min	
履带宽 Track shoe width	310 mm	软管连接端口 Hose connecting to port	Rc 2 in.	
最小离地间隙 Minimum grade clearance	250 mm	杆直径×杆长 Drilling×rod	φ 76, φ 89 ×3,000 mm	
质量 weight	5,400 kg	内部润滑油 Interior lubricant	Gear oil about8L	
行走速度 travelling speed	0~3.5 km/h	滑架全长 Whole length of sliding frame	6,100 mm	
行走马达功率 Travel motor power	8.8 kW x 2	钻臂长度 Length of drilling boom	1912 mm	
爬坡能力 Grade ability	35°	推进长度 Pushing length	3,980 mm	
摆动角度 Swing angle	13°	最大推进力 Maximal pushing forward	11 kN	
样式 Type	减速机Reducer. 风动马达pneumatic motor		滑架摆动角度 Sliding frame swing	左left47° 、 right54°
回转质量 Turning weight	251KG	进给马达功率 Feeding motor power	3.8 kW	
最大回转扭矩 Maximal turning torque	2000 Nm(at 0.7MPa)	钻臂俯仰角度 Drilling boom pitching	上up46° 、 下down23°	
最大回转速度 Maximal turning speed	70 rpm	钻臂摆动角度 Drilling boom swing	左left40° 、 右right40°	