

施工范例 Construction Cases



XZ3000在印度坎布尔穿越恒河2.2公里
XZ3000 HDD works to get through Ganga River by 2.2Km Kanpur



XZ5000在马来西亚穿越卢穆特海湾
XZ5000 works to get through Lumut Bay in Malaysia



XZ680A水平定向钻机在俄罗斯施工
XZ680A HDD working in Russia



XZ3000水平定向钻机在武汉施工
XZ3000 HDD working in Wuhan



XZ3600水平定向钻机在山东泰安施工
XZ3600 HDD working in Taian Shandong



XZ450水平定向钻机在上海施工
XZ450 HDD working in Shanghai



XZ200水平定向钻机在印度施工
XZ200 HDD working in India



XZ320E入岩钻机在山东临沂施工
XZ320E Rock Machine works in Linyi City, Shandong Province



XZ200水平定向钻机在阿曼施工
XZ200 HDD working in Oman



XZ360E水平定向钻机在河南郑州施工
XZ360E HDD works in Zhengzhou City, Henan Province

随着技术进步产品将不断改进，样本的技术信息与实物可能存在差异
实际产品的供货状态应以销售合同为准，样本仅供参考
如果想获取相关产品的最新信息，请您保持与我们的及时联系

With the development of the technology, the product will improve on, and the difference maybe emerge between the material object and the technical information of the sample.
The condition of the supply goods should go on with the sell contract. The sample only supplies the reference.
If you need the most recent information of our product, please contract with us in time



徐州徐工基础工程机械有限公司
XCMG FOUNDATION CONSTRUCTION MACHINERY CO.,LTD.



XZ系列 水平定向钻机

XZ SERIES HORIZONTAL DIRECTIONAL DRILL



徐州徐工基础工程机械有限公司成立于2010年1月，是徐工集团专业化发展桩工机械、非开挖机械、煤矿机械的全资子公司。目前拥有水平定向钻机、顶管机、旋挖钻机、煤炭掘进机以及连续墙抓斗等高新技术产品，其中多项产品获国家、省机械工业科技进步奖，产品先后出口至南美、中亚、非洲等近60个国家。

Established in January 2010, XCMG Foundation Construction Machinery Co., Ltd. is a wholly-owned subsidiary of XCMG Group specializing in the development of piling machinery, non-excavating machinery, and mining machinery. The main products are horizontal directional drilling rig, jacking machine, rotary drilling rig, coal mine roadheader, and diaphragm wall grab. Multiple products have won national or provincial Prize for Progress in Science and Technology. The company's products have been distributed to over 60 countries in South America, Central Asia and Africa.

XZ系列水平定向钻机主要用于不开挖地表的条件下，铺设及更换各类地下管线，该机性能先进、工作效率高、操作舒适，关键部件采用国际化配套，是供水、煤气、电力、电讯、暖气、石油、天然气等行业施工的理想设备。

XZ Series Horizontal Directional Drills are mainly used in the trenchless piping construction and replacement of the underground pipe. The XZ Series Horizontal Directional Drills have the advantages of advanced performance, high efficiency and comfortable operation. Many key components adopt international famous products to guarantee the quality. They are the ideal machines for the construction of the water piping, gas piping, electricity, telecommunication, heating system, crude oil industry.



徐工水平定向钻机流水线正式运行
XCMG HDD assembly line start to run formally



徐工大型智能化非开挖定向钻机关键技术及产业化项目
荣获中国机械工业科学技术奖最高奖项
XCMG Key Technology for Large Intelligent Trenchless Directional Drill and Its Industrialization was Awarded First Prize by the China Award of Science and Technology of Machinery Industry.



徐工水平定向钻机试验台调试作业
XCMG HDD experiment table commissioning activities



技术特点

小型水平定向钻机技术特点

- 虎钳、动力头双浮动专利技术能够极大地保护钻杆螺纹，提高钻杆使用寿命；
- 高低速推拉旋转系统，柱塞变量马达实现动力头推拉高低速，增大钻机工况适应能力，提升钻机施工效率；
- 配置灵活多样，整机可选配自动（半自动）钻杆装卸装置、单（双）自动锚固装置、泥浆防冻、泥浆清洗等装置，也可选配更加环保、节能的东风康明斯欧III A排放发动机。

大型水平定向钻机技术特点

- 数字式仪表，自动显示施工中的实际扭矩、推拉力等施工主参数，操作简单；电子传感技术反应灵敏，能及时反馈瞬时超载，可靠地保护钻机。
- 钻架滑移依靠油缸推拉，结合前摇臂结构，入土角度调节操作简单、方便、安全。
- 双动力系统，任一发动机启动即可完成钻机的全部动作，结合专有多工况调速技术和旋转、推拉的多档控制技术，钻机适用范围广，可使用单机工作，施工成本。
- 负荷敏感、电液比例等先进控制技术，节能降耗、操作灵活舒适，关键液压、电器、传动元件均选用国际著名产品，质量可靠。

Performance characteristic

Performance characteristic of small Horizontal Directional Drills

- Clamp and carriage use double floating patented technology can greatly protect the drill pipe thread, increase the service life of the drill pipe.
- High-speed sliding systems, variable motor to achieve high and low carriage sliding change, increasing the ability to adapt the drilling rig working conditions, improve the efficiency of the drilling rig construction.
- Support the diverse needs of customers, the machine can option configuration with the automatic (semi-automatic) drill pipe handling device, automatic anchoring system, cab, air conditioning wind, cold start, freezing mud, mud washing, mud throttling and other devices, can also be optioned more Eco saving Cummins with EU Stage III A.

Performance characteristic of large Horizontal Directional Drills

- Numerical meter display the working torque, push or pull force and so on parametric in working conditions. Electronic sensor has rapid reaction and can show overload immediately. It also endures accuracy and delay of the traditional hydraulic meter's indication. It solve the matter to depend the operator to calculate the torque and force by the equipment's switch directive.
- Drill frame slide by the cylinder. Combine with link weldment. It is easy safe and simple to adjust the entry angle of the equipment.
- Dual-engines are used. The HDD has all the motion on the condition of any engine starting. Multi-condition technology of adjusting the travel speed combining with the multi-speed control of rotation and push or pull make HDD be suitable to the complex geology. You can use one engine in the condition of small pipe diameter in order to reduce the project cost.
- Hydraulic pilot control, load sensing control help to save energy and operate flexibly. The main part of hydraulic and electric and transmission are made of world first-class brand products, good performance, good reliability.

主要技术参数 Main Technical Specification

型号Type	XZ120E	XZ200	XZ320D	XZ320E	XZ360E	XZ400	XZ420E	XZ450 / XZ450Plus	XZ680A	XZ900	XZ1000A	XZ1350	XZ1600	XZ2200	XZ2860	XZ3000	XZ3600	XZ5000	XZ6600			
发动机Engine	康明斯Cummins 4BTA3.9-C125	康明斯 CUMMINS QSB5.9-C150	康明斯 CUMMINS QSB5.9-C210	康明斯 CUMMINS QSB5.9-C210	康明斯 CUMMINS QSB5.9-C210	康明斯 CUMMINS QSC8.3-C240	康明斯Cummins QSC8.3-C240	康明斯 CUMMINS QSC8.3-C260	康明斯 CUMMINS QSC8.3-C260	康明斯 CUMMINS QSL8.9-C325	康明斯 CUMMINS QSL8.9-C360	康明斯 CUMMINS QSL8.9-C360	康明斯 CUMMINS QSL8.9-C360	康明斯 CUMMINS QSL8.9-C325	康明斯 CUMMINS QSL8.9-C360	康明斯 CUMMINS QSL8.9-C360	康明斯 CUMMINS NTA855-C400	康明斯 CUMMINS QSL8.9-C360	康明斯 CUMMINS QSL8.9-C360	沃尔沃 VOLVO TAD1345VE	沃尔沃 VOLVO TAD1643VE	
额定功率 Power rating (Kw/r/min)	93 / 2200	113 / 2200	154/2200	154/2200	154/2200	179/2200	179 / 2200	194/2200	194/2200	242/2100	264/2100	264/2100	264/2100	2 × 242/2100	2 × 242/2100	2 × 264/2100	2 × 298/2100	2 × 264/2100	2 × 394/1800	2 × 565/1850		
推拉力 Thrust-Pull	Max pull / thrust force (kN) 最大速度 Max pull / thrust speed (m/min)	130 36	225 26	320 22	345 36	370 32	400 28	420/500 42	480 42	960 28	800 35	1150 40	1075 35	1750 28	1650 35	2200 35	2860 25	3000 25	3600 25	5000 28	6600 28	
旋转Rotation	扭矩Torque (N·m) 最高转速 Max spindle speed (r/min)	4000 200	6350 160	12000 140	12600 140	13200 140	14000 104	18500 145	23500 135	23500 135	35000 110	50000 85	50000 90	75000 90	75000 90	100000 95	110000 76	120000 76	160000 90	160000 90		
泥浆泵Mud pump	最大流量 Max flow rate (L/min) 最大压力 Max pressure (Mpa)	160 8	250 8	320 8	320 8	400 8	450 8	450 8	600 10	600 10	600 10	800 10	800 10	800 10	800 10	外接 External connection	外接 External connection	外接 External connection	外接 External connection	外接 External connection	外接 External connection	外接 External connection
钻杆Pipe	直径 × 长度 Diameter × Length (mm × m)	Φ50 × 2	Φ60 × 3	Φ73 × 3	Φ73 × 3	Φ73 × 3	Φ83 × 3	Φ83 × 3	Φ89 × 4.5	Φ89 × 4.5	Φ102 × 6	Φ114/102 × 6	Φ127 × 6	Φ127 × 6	Φ127 × 6	Φ140 × 9.6	Φ140 × 9.6	Φ140 × 9.6	Φ140 × 9.6	Φ168 × 9.6	Φ194 × 9.6	
随车起重机 Loader Crane	起吊重量Lifting weight (t) 起升力矩 Loading capacity (t·m)	/	/	/	/	/	/	2	2	4	4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	12.5	12.5	
最大入土角 Max inclination angle	(°)	20	22	20	20	20	23	20	20	18	18	18	18	16	16	16	16	16	16	16	16	
最大回扩直径 Max backreamer diameter	(mm)	Φ400	Φ600	Φ800	Φ800	Φ900	Φ900	Φ900	Φ1000	Φ1000	Φ1000	Φ1000	Φ1000	Φ1200	Φ1200	Φ1600	Φ1600	Φ1600	Φ1600	Φ2000	Φ2000	
质量Weight	(t)	6	8.5	10	10	10.5	11.5	11.2	13.3	13.5	21	24	23	25	30	31	46	55	48	55	58	
外形尺寸(L × W × H) Dimension	(mm)	5200 × 2150 × 2400	5900 × 2020 × 2400	6500 × 2250 × 2450	6200 × 2250 × 2450	6200 × 2240 × 2450	7080 × 2450 × 2450	6500 × 2250 × 2450	8800 × 2280 × 2610	8800 × 2280 × 2610	11610 × 2475 × 3115	11200 × 2475 × 3450	11500 × 2900 × 3000	11200 × 2475 × 3450	12700 × 2700 × 3500	12700 × 2700 × 3500	17500 × 3200 × 3550	17300 × 3300 × 3600	17500 × 3200 × 3550	18240 × 3000 × 3600	18240 × 3000 × 3600	
备注Remark	/	选配：1.全自动抓手（钻杆臂）；2.半自动抓手；3.双锚固；4.泥浆防冻；5.泥浆清洗；6.钻架滑移自动油缸；7.驾驶室；8.冲液空调；Optional：I. Full-automatic pipeloader；II. Semi-automatic pipeloader；III. Dual automatic anchor；IV. Mud antifreeze；V. Mud Cleaning；VI. Automatic thread oil daub；VII. Cab；VIII. Air-condition；IX. Piston pump hydraulic system.	选配：1.全自动抓手（钻杆臂）；2.半自动抓手；3.双锚固；4.泥浆防冻；5.泥浆清洗；6.钻架滑移自动油缸；7.驾驶室；8.冲液空调；Optional：I. Full-automatic pipeloader；II. Semi-automatic pipeloader；III. Dual automatic anchor；IV. Mud antifreeze；V. Mud Cleaning；VI. Automatic thread oil daub；VII. Cab；VIII. Air-condition；IX. Piston pump hydraulic system.	7.驾驶室；8.冲液空调；9.柱塞泵液压系统；VI. Cab；VII. Air-condition；IX. Piston pump hydraulic system.	选配：钻杆 Φ83x3	选配：1.单锚固；2.双锚固；3.泥浆防冻；4.泥浆清洗；5.泥浆清洗；6.钻架滑移自动油缸；7.驾驶室；8.冲液空调；Optional：I. Single automatic anchor；II. Dual automatic anchor；III. Dual automatic pipeloader；IV. Mud antifreeze；V. Mud Cleaning；VI. Automatic thread oil daub；VII. Cab；VIII. Air-condition；IX. Piston pump hydraulic system.	选配：1.全自动抓手（钻杆臂）；2.半自动抓手；3.双锚固；4.泥浆防冻；5.泥浆清洗；6.钻架滑移自动油缸；7.驾驶室；8.冲液空调；Optional：I. Full-automatic pipeloader；II. Semi-automatic pipeloader；III. Dual automatic anchor；IV. Mud antifreeze；V. Mud Cleaning；VI. Automatic thread oil daub；VII. Cab；VIII. Air-condition；IX. Piston pump hydraulic system.	选配：1.全自动抓手（钻杆臂）；2.半自动抓手；3.双锚固；4.泥浆防冻；5.泥浆清洗；6.钻架滑移自动油缸；7.驾驶室；8.冲液空调；Optional：I. Full-automatic pipeloader；II. Semi-automatic pipeloader；III. Dual automatic anchor；IV. Mud antifreeze；V. Mud Cleaning；VI. Automatic thread oil daub；VII. Cab；VIII. Air-condition；IX. Piston pump hydraulic system.	选配：半自动抓手 Optional：Semi-automatic pipeloader.	选配：1.半自动抓手；2.分体式操作房 Optional：I. Semi-automatic pipeloader；II. Split type operating room.	选配：1.半自动抓手；2.分体式操作房 Optional：I. Semi-automatic pipeloader；II. Split type operating room.	选配：1.半自动抓手；2.分体式操作房 Optional：I. Semi-automatic pipeloader；II. Split type operating room.	选配：1.半自动抓手；2.分体式操作房 Optional：I. Semi-automatic pipeloader；II. Split type operating room.	3.增扭矩力头 (100000N·m) Bigger Torque Carriage(100000N·m).	选配：分体式操作房 Optional：Split type operating room.	独立动力站。可选配：分体式操作房 Independent power station. Optional：Split type operating room.	独立动力站。可选配：分体式操作房 Independent power station. Optional：Split type operating room.	独立动力站。可选配：分体式操作房 Independent power station. Optional：Split type operating room.	独立动力站。可选配：分体式操作房 Independent power station. Optional：Split type operating room.	独立动力站。可选配：分体式操作房 Independent power station. Optional：Split type operating room.	独立动力站。可选配：分体式操作房 Independent power station. Optional：Split type operating room.	

