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**XCMG FOR YOUR SUCCESS**



## **XZ SERIES HORIZONTAL DIRECTIONAL DRILL**



**XCMG FOUNDATION CONSTRUCTION MACHINERY BUSINESS DIVISION**

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**XCMG FOUNDATION CONSTRUCTION MACHINERY BUSINESS DIVISION**

Development History of XCMG Horizontal Directional Drill (HDD)

**2002** China's first intelligent HDD

**2006** In August 2002, ZD1245, China's first intelligent HDD, was born in XCMG, and appeared in Shanghai Bauma Exhibition the same year.

**2009** Classic model XZ320

**2011** In 2009, XZ320 series HDD were launched, and by July 2019, the sales volume was nearly 3600, becoming a classic model in the industry history.

**2012** Domestic market share No.1

**2013** In 2012, the domestic market share of XCMG HDD jumped to the first place.

**2014** Entering European and American market

**2016** In 2014, XCMG's small-tonnage HDD passed CE certification and officially entered the European and American market.

**2017** Helping river crossing pipeline laying

**2018** In 2017, XCMG XZ5000 HDD was constructed continuously for 85 hours, successfully laying 3000-meter river crossing pipeline of Harbin Songhua River water supply project, creating a world record of ultra long distance construction of trenchless equipment.

**2019** Breakthrough in output

**2019** On June 15, 2019, XCMG's 1000 HDD were put off the production line. At the end of July, the production and sales volumes both exceeded 1000 and reached a new high.

**New XZ series HDD**

In 2006, XCMG launched a new XZ series HDD for the market.

**Industry milestone promotion meeting**

On September 19, 2011, XCMG Foundation held the industry's first national level HDD user promotion meeting.

**Helping the largest submarine cable project**

In 2013, XCMG XZ5000 successfully crossed the 1200-meter Manjung River in Malaysia's largest submarine cable crossing project.

**E series HDD coming out**

In May 2016, XCMG launched E Series HDD.

**World's largest tonnage HDD**

In 2018, XZ13600, the world's largest tonnage HDD, appeared in Shanghai Bauma Exhibition.

## Performance Characteristics Small horizontal directional drills

- ▶ Patented technology of power head floating and vise floating can greatly protect the drill pipe thread to increase the service life of the drill pipe.
- ▶ High/low speed push-pull and rotation system in which the variable piston motor achieves the high/low push-pull speed of power head improves the ability to adapt to various working conditions and improves the construction efficiency of the drilling rig.
- ▶ The configuration is flexible and diverse. The whole machine can be equipped with automatic (semi-automatic) pipe loader, double automatic anchoring device, mud antifreeze, mud cleaning device, etc. It can also be equipped with more environmentally friendly and energy-saving Dongfeng Cummins EU Stage III A emission engine.

## Large horizontal directional drills

- ▶ The digital instrument automatically displays main construction parameters such as actual torque and push-pull force during construction, and the operation is simple. The electronic sensing technology is sensitive, which can timely show instantaneous overload, reliably protecting the machine.
- ▶ The sliding of drill frame depends on the push and pull of hydraulic cylinder, combined with the front rocker arm, the adjustment of penetration angle is simple, convenient and safe.
- ▶ Dual-power system is adopted, in which either engine can complete all the work; combined with the proprietary speed regulation technology under multiple working conditions and multi-gear control technology of rotation and push-pull, the machine has a wide application range. In the case of small pore diameter construction, it can work with only one engine, which lowers the fuel consumption and construction cost.
- ▶ It adopts advanced control technologies such as load-sensitive control and electric-hydraulic proportional control, which can realize energy saving and consumption reduction as well as flexible and comfortable operation. The key hydraulic, electrical and transmission components are all of international first-class brands with reliable quality.



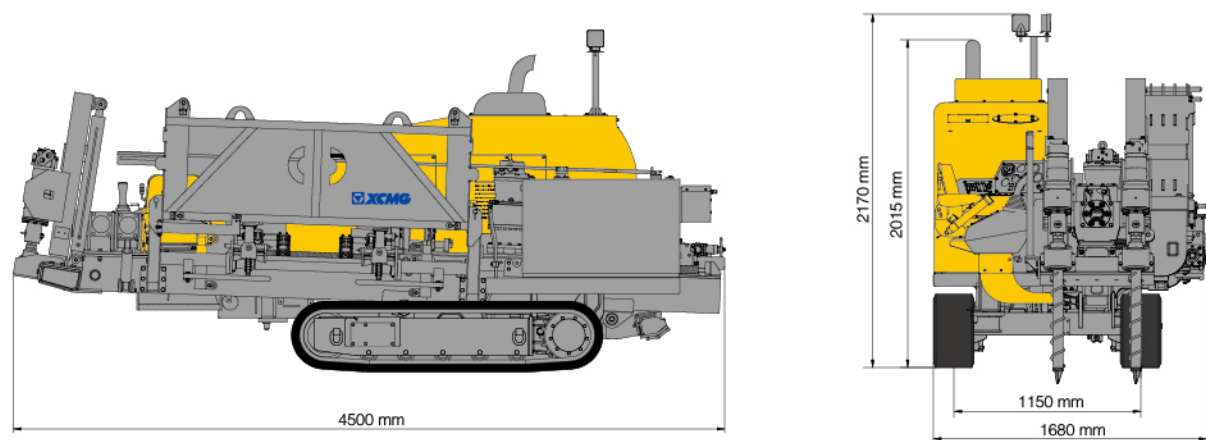
## XZ120E

### Main Technical Parameters

Engine	Model	CUMMINS QSB3.9-110	CUMMINS QSB3.9-110
	Rated power	81 kW/2200 r/min	110 hp/2200 rpm
Push-pull	Push/pull force	130 kN	29200 lbf
	Max. push/pull speed	37 m/min	121 ft/min
Rotation	Torque	3000 Nm	2200 ft · lb
	Max. rotation	220 r/min	220 rpm
Mud pump	Max. flow rate	100 L/min	26.4 US gal/min
	Max. pressure	4 MPa	580 psi
Drill pipe	Diameter × length	Φ52 × 1800 mm	Φ2 × 71in
Max. inclination angle		20°	20°
Max. back reaming diameter		Φ400 mm	Φ15.8 in
Weight		4.5 t	5 ton (US)
Dimension (L × W × H )		4500 × 1680 × 2170 mm	177 × 66 × 85 in
Chassis traveling speed		2.1 km/h	1.3 mph

### Drilling Tools & Accessories

Back reamer	Squeezing & expanding type	φ 200 mm/ φ 300 mm/ φ 400 mm	φ 8 in/ φ 12 in/ φ 16 in/ φ 20 in
	Fluted type		
Accessories	Sonde housing/ Left-handed nut/ Pin pulling head/ Box pulling head/Sub saver	52	52
	Swivel	10 t	11 ton (US)
Mud system	Mud mixing system	2 m <sup>3</sup>	70.6 cu ft



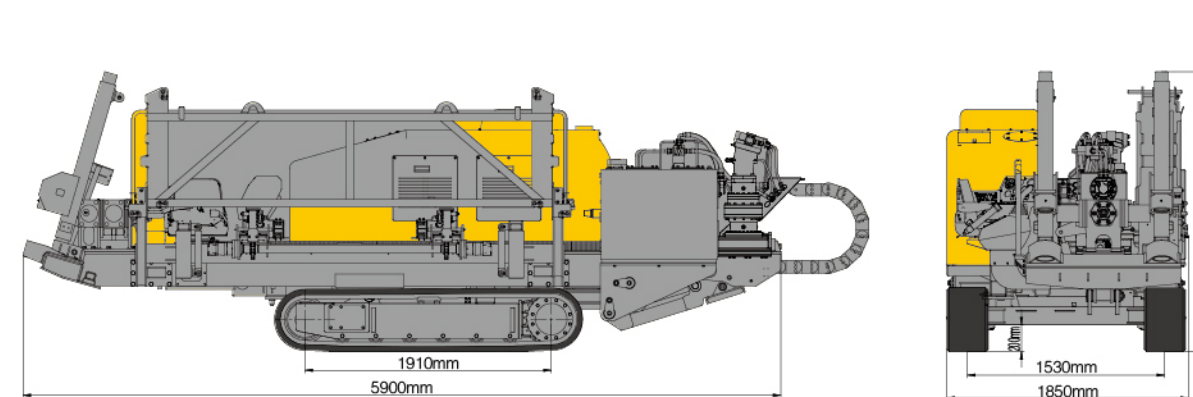
## XZ150E

### Main Technical Parameters

Engine	Model	CUMMINS QSB3.9-C110	CUMMINS QSB3.9-C110
	Rated power	81 kW/2200 r/min	110 hp/2200 rpm
Push-pull	Push/pull force	165 kN	37000 lbf
	Max. push/pull speed	40 m/min	131 ft/min
Rotation	Torque	5400 Nm	3980 ft · lb
	Max. rotation speed	160 r/min	160 rpm
Mud pump	Max. flow rate	200 L/min	53 US gal/min
	Max. pressure	8 MPa	1160 psi
Drill pipe	Diameter × length	Φ60 × 3000 mm	Φ2.4 × 118 in
Max. inclination angle		20°	20°
Max. back reaming diameter		Φ500 mm	Φ19.7 in
Weight		7.5 t	8.3 ton (US)
Dimension (L × W × H )		5900 × 1850 × 2100 mm	232 × 73 × 83 in
Chassis traveling speed		1.6 km/h	1.0 mph

### Drilling Tools & Accessories

Back reamer	Squeezing & expanding type	φ 200 mm/ φ 300 mm/ φ 400 mm/ φ 500 mm	φ 8 in/ φ 12 in/ φ 16 in/ φ 20 in/ φ 24 in
	Fluted type		
Accessories	Sonde housing/Starter rod/ Drill plate/Torque sleeve/ Left-handed nut/Pin pulling head/Box pulling head/ Sub saver	60	60
	Swivel	20 t	13.2 ton (US)
Mud system	Mud mixing system	2 m <sup>3</sup> /3 m <sup>3</sup>	70.6/105.9 cu ft



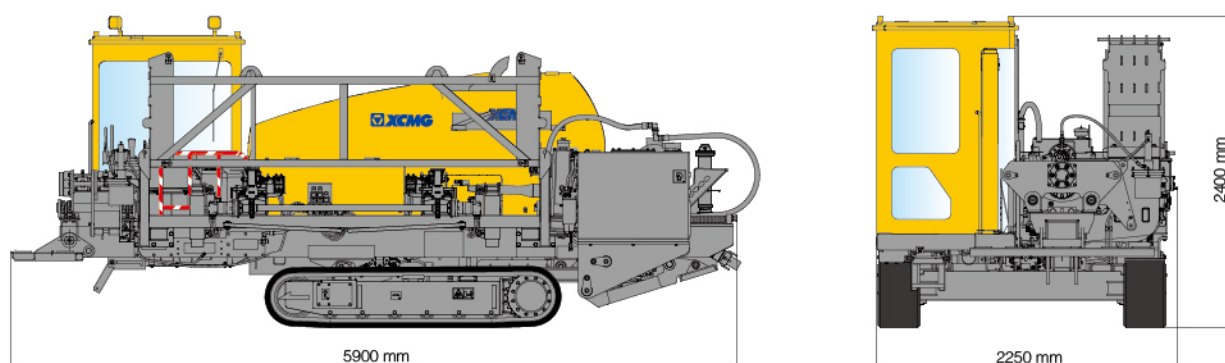
## XZ200

### Main Technical Parameters

Engine	Model	CUMMINS QSB5.9-C150	CUMMINS QSB5.9-C150
	Rated power	113 kW/2200 r/min	150 hp/2200 rpm
Push-pull	Push/pull force	225 kN	50580 lbf
	Max. push/pull speed	32 m/min	105 ft/min
Rotation	Torque	6350 Nm	4680 ft · lb
	Max. rotation speed	160 r/min	160 rpm
Mud pump	Max. flow rate	250 L/min	66 US gal/min
	Max. pressure	8 MPa	1160 psi
Drill pipe	Diameter × length	Φ60 × 3000 mm	Φ2.4 × 118 in
Max. inclination angle		22°	22°
Max. back reaming diameter		Φ600 mm	Φ23.6 in
Weight		8.5 t	9.4 ton (US)
Dimension (L × W × H)		5900 × 2250 × 2400 mm	232.3 × 88.6 × 95 in
Chassis traveling speed		2.2 km/h	1.4 mph

### Drilling Tools & Accessories

Back reamer	Squeezing & expanding type	φ 200 mm/ φ 300 mm/ φ 400 mm/ φ 500 mm/ φ 600 mm	φ 8 in/ φ 12 in/ φ 16 in/ φ 20 in/ φ 24 in
	Fluted type		
Accessories	Sonde housing/Starter rod/ Drill plate/Torque sleeve/ Left-handed nut/Pin pulling head/Box pulling head/ Sub saver	60	60
	Swivel	20 t	13.2 ton (US)
Mud system	Mud mixing system	2 m <sup>3</sup> /3 m <sup>3</sup>	70.6/105.9 cu ft



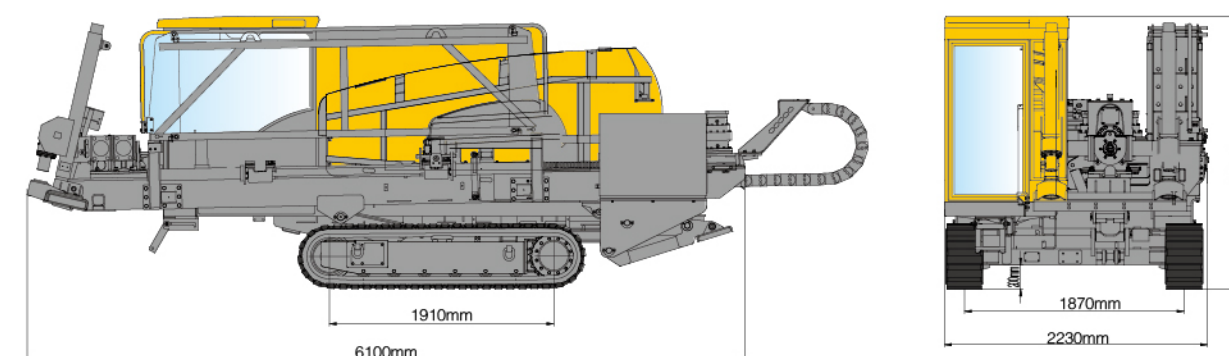
## XZ230E

### Main Technical Parameters

Engine	Model	CUMMINS QSB5.9-C150	CUMMINS QSB5.9-C150
	Rated power	113 kW/2200 r/min	150 hp/2200 rpm
Push-pull	Push/pull force	230/270 kN	51700/60700 lbf
	Max. push/pull speed	55 m/min	180 ft/min
Rotation	Torque	6500 Nm	4794 ft · lb
	Max. rotation speed	175 r/min	175 rpm
Mud pump	Max. flow rate	250 L/min	66 US gal/min
	Max. pressure	8 MPa	1160 psi
Drill pipe	Diameter × length	Φ60 × 3000 mm	Φ2.4 × 118 in
Max. inclination angle		24°	24°
Max. back reaming diameter		Φ600 mm	Φ23.6 in
Weight		8.5 t	9.4 ton (US)
Dimension (L × W × H)		6100 × 2230 × 2300 mm	240 × 88 × 91 in
Chassis traveling speed		2.4 km/h	1.5 mph

### Drilling Tools & Accessories

Back reamer	Squeezing & expanding type	φ 200 mm/ φ 300 mm/ φ 400 mm/ φ 500 mm/ φ 600 mm	φ 8 in/ φ 12 in/ φ 16 in/ φ 20 in/ φ 24 in
	Fluted type		
Accessories	Sonde housing/Starter rod/ Drill plate/Torque sleeve/ Left-handed nut/Pin pulling head/Box pulling head/ Sub saver	60	60
	Swivel	20 t	13.2 ton (US)
Mud system	Mud mixing system	2 m <sup>3</sup> /3 m <sup>3</sup>	70.6/105.9 cu ft





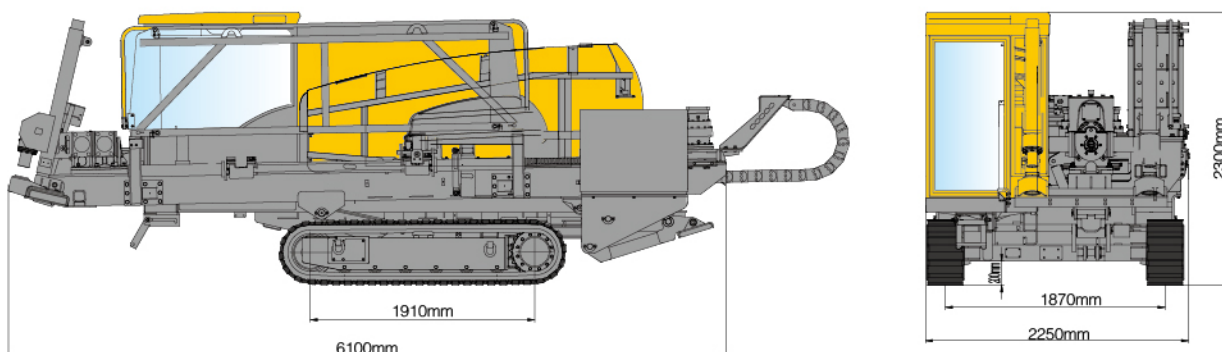
# XZ280E

## Main Technical Parameters

Engine	Model	CUMMINS QSB5.9-C180	CUMMINS QSB5.9-C180
	Rated power	133 kW/2200 r/min	180 hp/2200 rpm
Push-pull	Push/pull force	280/320 kN	62950/71940 lbf
	Max. push/pull speed	50 m/min	164 ft/min
Rotation	Torque	9000 Nm	6638 ft · lb
	Max. rotation speed	160 r/min	160 rpm
Mud pump	Max. flow rate	250 L/min	66 US gal/min
	Max. pressure	8 MPa	1160 psi
Drill pipe	Diameter × length	Φ473 × 3000 mm	Φ 18.6 × 118 in
Max. inclination angle		24°	24°
Max. back reaming diameter		Φ700 mm	Φ27.5 in
Weight		8.5 t	9.4 ton (US)
Dimension (L × W × H)		6100 × 2250 × 2300 mm	240 × 89 × 91 in
Chassis traveling speed		2.4 km/h	1.5 mph

## Drilling Tools & Accessories

Back reamer	Squeezing & expanding type	φ 200 mm/ φ 300 mm/ φ 400 mm/ φ 500 mm/ φ 600 mm/ φ 700 mm	φ 8 in/ φ 12 in/ φ 16 in/ φ 20 in/ φ 24 in/ φ 28 in
	Fluted type		
Accessories	Sonde housing/Starter rod/ Drill plate/Torque sleeve/ Left-handed nut/Pin pulling head/Box pulling head/ Sub saver	73	73
	Swivel	30 t	33 ton (US)
Mud system	Mud mixing system	2 m <sup>3</sup> /3 m <sup>3</sup>	70.6/105.9 cu ft



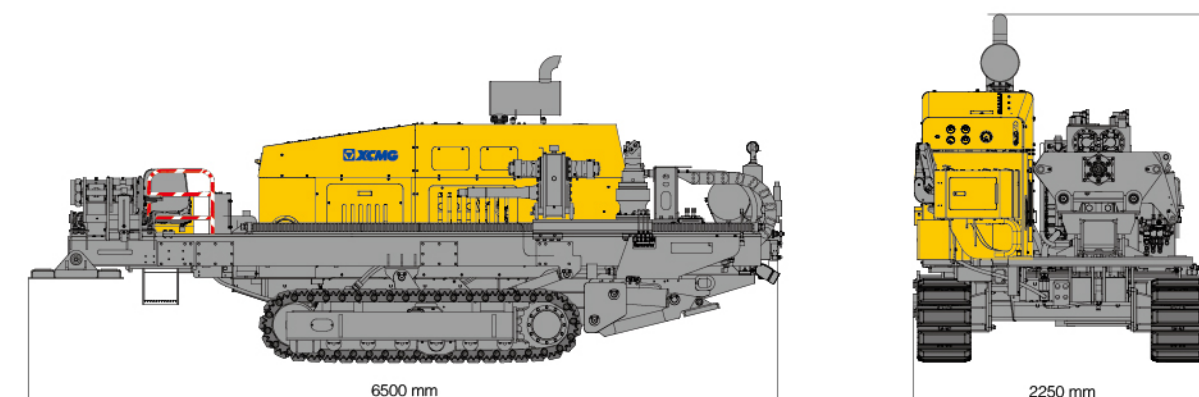
# XZ320D

## Main Technical Parameters

Engine	Model	CUMMINS QSB5.9-C210	CUMMINS QSB5.9-C210
	Rated power	154 kW/2200 r/min	210 hp/2200 rpm
Push-pull	Push/pull force	320 kN	71940 lbf
	Max. push/pull speed	22 m/min	72 ft/min
Rotation	Torque	12000 Nm	8850 ft · lb
	Max. rotation speed	140 r/min	140 rpm
Mud pump	Max. flow rate	320 L/min	84.5 US gal/min
	Max. pressure	8 MPa	1160 psi
Drill pipe	Diameter × length	Φ73 × 3000 mm	Φ2.87 × 118 in
Max. inclination angle		20°	20°
Max. back reaming diameter		Φ800 mm	Φ31.5 in
Weight		10 t	11 ton (US)
Dimension (L × W × H)		6500 × 2250 × 2450 mm	255.9 × 88.6 × 96.5 in
Chassis traveling speed		2.8 km/h	1.7 mph

## Drilling Tools & Accessories

Back reamer	Squeezing & expanding type	φ 300 mm/ φ 400 mm/ φ 500 mm/ φ 600 mm/ φ 700 mm/ φ 800 mm	φ 12 in/ φ 16 in/ φ 20 in/ φ 24 in/ φ 28 in/ φ 32 in
	Fluted type		
Accessories	Sonde housing/Starter rod/ Drill plate/Torque sleeve/ Left-handed nut/Pin pulling head/Box pulling head/ Sub saver	73	73
	Swivel	35 t	38.6 ton (US)
Mud system	Mud mixing system	2 m <sup>3</sup> /3 m <sup>3</sup>	70.6/105.9 cu ft



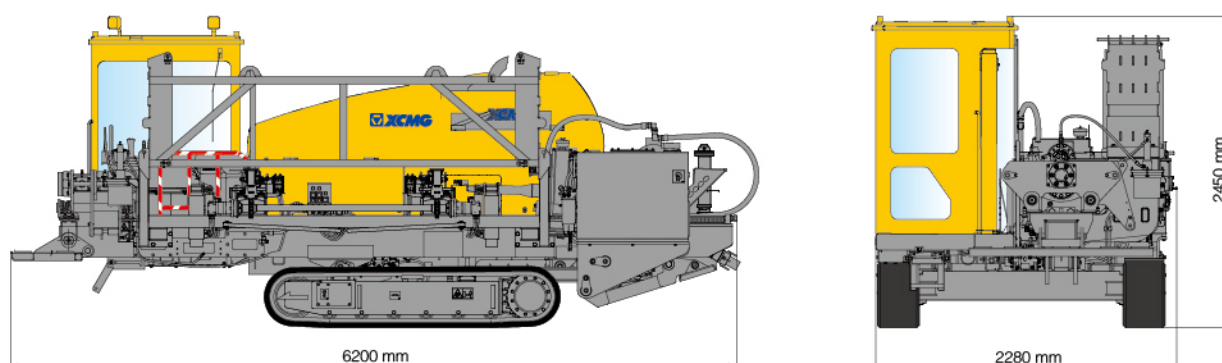
# XZ320E

## Main Technical Parameters

Engine	Model	CUMMINS QSB5.9-C210	CUMMINS QSB5.9-C210
	Rated power	154 kW/2200 r/min	210 hp/2200 rpm
Push-pull	Push/pull force	345 kN	77560 lbf
	Max. push/pull speed	38 m/min	125 ft/min
Rotation	Torque	12600 Nm	9290 ft · lb
	Max. rotation speed	140 r/min	140 rpm
Mud pump	Max. flow rate	320 L/min	84.5 US gal/min
	Max. pressure	8 MPa	1160 psi
Drill pipe	Diameter × length	Φ73 × 3000 mm	Φ2.87 × 118 in
Max. inclination angle		20°	20°
Max. back reaming diameter		Φ800 mm	Φ31.5 in
Weight		10 t	11 ton (US)
Dimension (L × W × H)		6200 × 2280 × 2450 mm	244.1 × 90 × 96.5 in
Chassis traveling speed		2.6 km/h	1.6 mph

## Drilling Tools & Accessories

Back reamer	Squeezing & expanding type	Φ 300 mm/ Φ 400 mm/ Φ 500 mm/ Φ 600 mm/ Φ 700 mm/ Φ 800 mm	Φ 12 in/ Φ 16 in/ Φ 20 in/ Φ 24 in/ Φ 28 in/ Φ 32 in
	Fluted type		
Accessories	Sonde housing/Starter rod/ Drill plate/Torque sleeve/ Left-handed nut/Pin pulling head/Box pulling head/ Sub saver	73	73
	Swivel	35 t	38.6 ton (US)
Mud system	Mud mixing system	2 m <sup>3</sup> /3 m <sup>3</sup>	70.6/105.9 cu ft



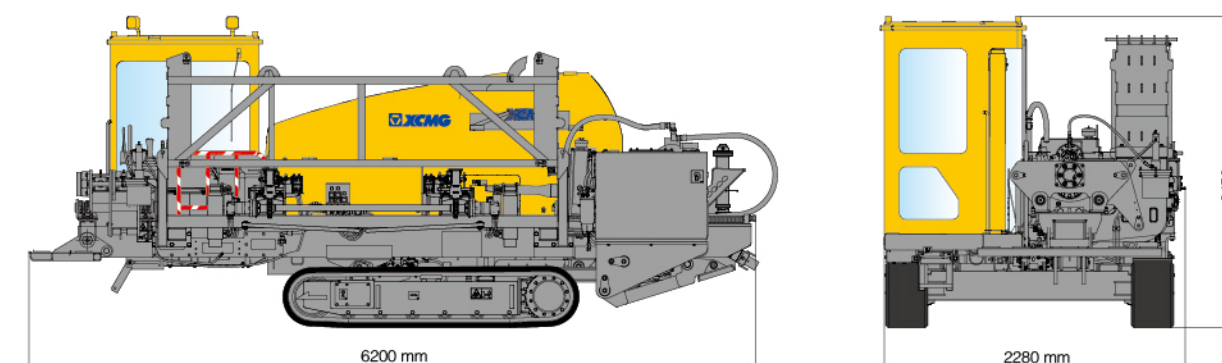
# XZ360E

## Main Technical Parameters

Engine	Model	CUMMINS QSB5.9-C210	CUMMINS QSB5.9-C210
	Rated power	154 kW/2200 r/min	210 hp/2200 rpm
Push-pull	Push/pull force	370 kN	83180 lbf
	Max. push/pull speed	32 m/min	105 ft/min
Rotation	Torque	13200 Nm	9735 ft · lb
	Max. rotation speed	140 r/min	140 rpm
Mud pump	Max. flow rate	400 L/min	105.7 US gal/min
	Max. pressure	8 MPa	1160 psi
Drill pipe	Diameter × length	Φ73/83 × 3000 mm	Φ2.87/3.27 × 118 in
Max. inclination angle		20°	20°
Max. back reaming diameter		Φ900 mm	Φ35.4 in
Weight		10.5 t	11.6 ton (US)
Dimension (L × W × H)		6200 × 2280 × 2450 mm	244.1 × 90 × 96.5 in
Chassis traveling speed		2.6 km/h	1.6 mph

## Drilling Tools & Accessories

Back reamer	Squeezing & expanding type	Φ 300 mm/ Φ 400 mm/ Φ 500 mm/ Φ 600 mm/ Φ 700 mm/ Φ 800 mm/ Φ 900 mm	Φ 12 in/ Φ 16 in/ Φ 20 in/ Φ 24 in/ Φ 28 in/ Φ 32 in/ Φ 36 in
	Fluted type		
Accessories	Sonde housing/Starter rod/ Drill plate/Torque sleeve/ Left-handed nut/Pin pulling head/Box pulling head/ Sub saver	73/83	73/83
	Swivel	40 t	44.1 ton (US)
Mud system	Mud mixing system	2 m <sup>3</sup> /3 m <sup>3</sup>	70.6/105.9 cu ft





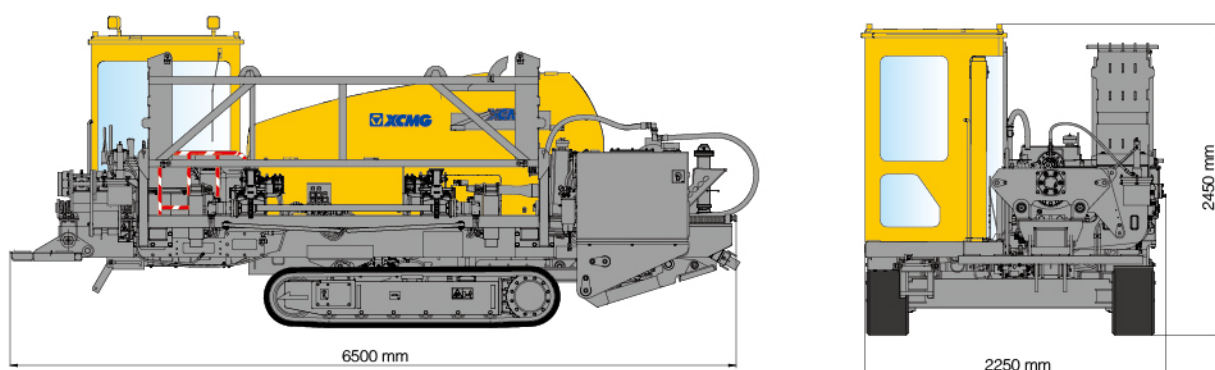
# XZ430E

## Main Technical Parameters

Engine	Model	Dongfeng Cummins 6CTAA8.3-C240/QSC8.3-C240	
	Rated power	179 kW/2200 r/min	240 hp/2200 rpm
Push-pull	Push/pull force	430/520 kN	96670/116900 lbf
	Max. push/pull speed	48 m/min	157 ft/min
Rotation	Torque	18500 Nm	13644 ft · lb
	Max. rotation speed	175 r/min	175 rpm
Mud pump	Max. flow rate	450 L/min	118.9 US gal/min
	Max. pressure	8 MPa	1160 psi
Drill pipe	Diameter × length	Φ83 × 3000 mm	Φ3.27 × 118 in
Max. inclination angle		24°	24°
Max. back reaming diameter		Φ900 mm	Φ35.4 in
Weight		12 t	13.2 ton (US)
Dimension (L × W × H)		6500 × 2250 × 2450 mm	255.9 × 88.6 × 96.5 in
Chassis traveling speed		2.6 km/h	1.6 mph

## Drilling Tools & Accessories

Back reamer	Squeezing & expanding type	φ 300 mm/φ 400 mm/φ 500 mm/ φ 600 mm/φ 700 mm/φ 800 mm/ φ 900 mm	φ 12 in/φ 16 in/φ 20 in/φ 24 in/ φ 28 in/φ 32 in/φ 36 in
	Fluted type		
Accessories	Sonde housing/Starter rod/ Drill plate/Torque sleeve/ Left-handed nut/Pin pulling head/Box pulling head/ Sub saver	83	83
	Swivel	50 t	55 ton (US)
Mud system	Mud mixing system	2 m <sup>3</sup> /3 m <sup>3</sup>	70.6/105.9 cu ft



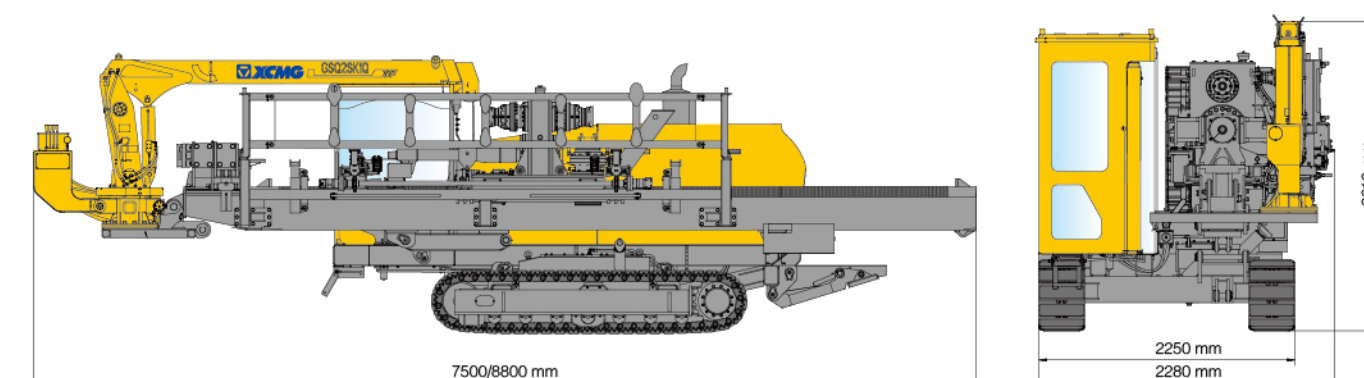
# XZ450/XZ450Plus

## Main Technical Parameters

Engine	Model	CUMMINS QSC8.3-C260	CUMMINS QSC8.3-C260
	Rated power	194 kW/2200 r/min	260 hp/2200 rpm
Push-pull	Push/pull force	480/960 kN	107909/215808 lbf
	Max. push/pull speed	42/40 m/min	138/131 ft/min
Rotation	Torque	27000 Nm	19915 ft · lb
	Max. rotation speed	135 r/min	135 rpm
Mud pump	Max. flow rate	600 L/min	158.5 US gal/min
	Max. pressure	10 MPa	1450 psi
Drill pipe	Diameter × length	Φ89 × 3000/4500 mm	Φ3.5 × 118/177.2 in
Loader crane	Lifting weight	2 t	2.2 ton (US)
	Loading capacity	4 t · m	4.4 ton · m (US)
Max. inclination angle		20°	20°
Max. back reaming diameter		Φ1000 mm	Φ40 in
Weight		13.3 t	14.7 ton (US)
Dimension (L × W × H)		7500/8800 × 2280 × 2610 mm	296/346.5 × 89.8 × 85 in
Chassis traveling speed		2 km/h	1.2 mph

## Drilling Tools & Accessories

Back reamer	Squeezing & expanding type	φ 300 mm/φ 400 mm/φ 500 mm/ φ 600 mm/φ 700 mm/φ 800 mm/ φ 900 mm/φ 1000 mm	φ 12 in/φ 16 in/φ 20 in/φ 24 in/ φ 28 in/φ 32 in/φ 36 in/φ 40 in
	Fluted type		
Accessories	Sonde housing/ Drill plate/Pin pulling head/Box pulling head/ Sub saver	89	89
	Swivel	60/80 t	66.1/88.2 ton (US)
Mud system	Mud mixing system	5 m <sup>3</sup>	176.6 cu ft



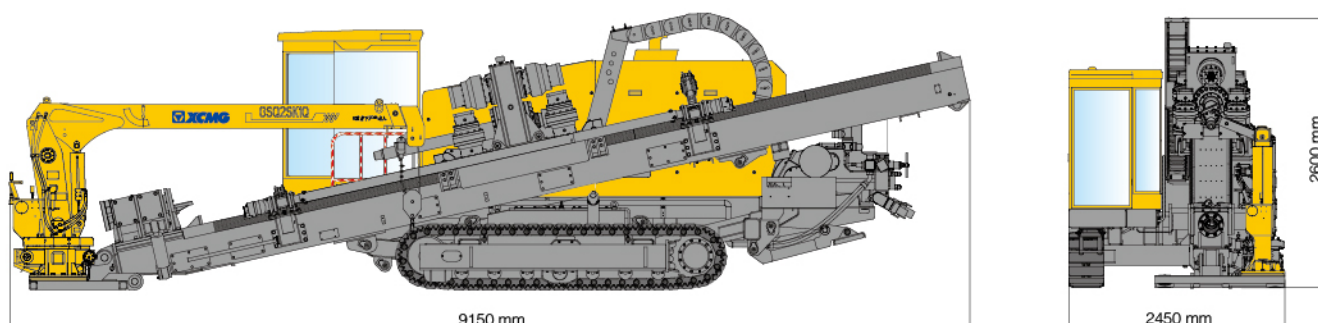
# XZ720E

## Main Technical Parameters

Engine	Model	SDEC SC9DF300G3 /CUMMINS QSL8.9-C295	SDEC SC9DF300G3 /CUMMINS QSL8.9-C295
	Rated power	221 kW/2100 r/min 220 kW/2100 r/min	296 hp/2100 rpm 295 hp/2100 rpm
Push-pull	Push/pull force	730/970 kN	164110/218065 lbf
	Max. push/pull speed	42 m/min	138 ft/min
Rotation	Torque	35000 Nm	25816 ft · lb
	Max. rotation speed	120 r/min	120 rpm
Mud pump	Max. flow rate	600/800 L/min	159/211 US gal/min
Drill pipe	Max. pressure	10 MPa	1450 psi
	Diameter × length	Φ 89/102 × 4500 mm	Φ 3.5/4 × 177.2 in
Loader crane	Lifting weight	2 t	2.2 ton (US)
	Loading capacity	4 t · m	4.4 ton · m (US)
Max. inclination angle		20°	20°
Max. back reaming diameter		Φ 1000 mm	Φ 40 in
Weight		15 t	16.5 ton (US)
Dimension (L × W × H)		9150 × 2450 × 2600 mm	361 × 97 × 102 in
	Chassis traveling speed	10650 × 2450 × 2600 mm	420 × 97 × 102 in
		4 km/h	2.5 mph

## Drilling Tools & Accessories

Back reamer	Squeezing & expanding type	φ 400 mm/φ 500 mm/φ 600 mm/ φ 700 mm/φ 800 mm/φ 900 mm/ φ 1000 mm	φ 12 in/φ 16 in/φ 20 in/ φ 24 in/φ 28 in/φ 32 in/ φ 36 in/φ 40 in
	Fluted type		
Accessories	Sonde housing/ Drill plate/Pin pulling head/Box pulling head/ Sub saver	89 /102	89/102
	Swivel	80 t	88.2 ton (US)
Mud system	Mud mixing system	5 m <sup>3</sup>	176.6 cu ft



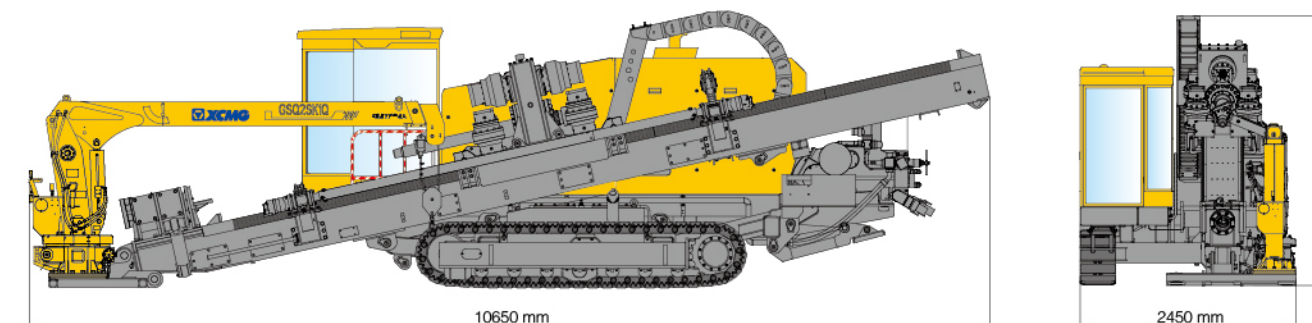
# XZ960E

## Main Technical Parameters

Engine	Model	SDEC SC9DF300G3 /CUMMINS QSL8.9-C295	SDEC SC9DF300G3 /CUMMINS QSL8.9-C295
	Rated power	221 kW/2100 r/min 220 kW/2100 r/min	296 hp/2100 rpm 295 hp/2100 rpm
Push-pull	Push/pull force	970 kN	218066 lbf
	Max. push/pull speed	50 m/min	164 ft/min
Rotation	Torque	35000 Nm	25816 ft · lb
	Max. rotation speed	120 r/min	120 rpm
Mud pump	Max. flow rate	600/800 L/min	159/211 US gal/min
Drill pipe	Max. pressure	10 MPa	1450 psi
	Diameter × length	Φ 102 × 6000 mm	Φ 4 × 236.2 in
Loader crane	Lifting weight	2 t	2.2 ton (US)
	Loading capacity	4 t · m	4.4 ton · m (US)
Max. inclination angle		20°	20°
Max. back reaming diameter		Φ 1000 mm	Φ 39.4 in
Weight		16.2 t	17.9 ton (US)
Dimension (L × W × H)		10650 × 2450 × 2600 mm	419.3 × 96.5 × 102.4 in
	Chassis traveling speed		4 km/h
			2.5 mph

## Drilling Tools & Accessories

Back reamer	Squeezing & expanding type	φ 450 mm/φ 600 mm/φ 750 mm/ φ 900 mm/φ 1000 mm	φ 18 in/φ 24 in/φ 30 in/ φ 36 in/φ 39 in
	Fluted type		
Accessories	Sonde housing/ Drill plate/Pin pulling head/Box pulling head/ Sub saver	102	102
	Swivel	80 t	88.2 ton (US)
Mud system	Mud mixing system	5 m <sup>3</sup>	176.6 cu ft



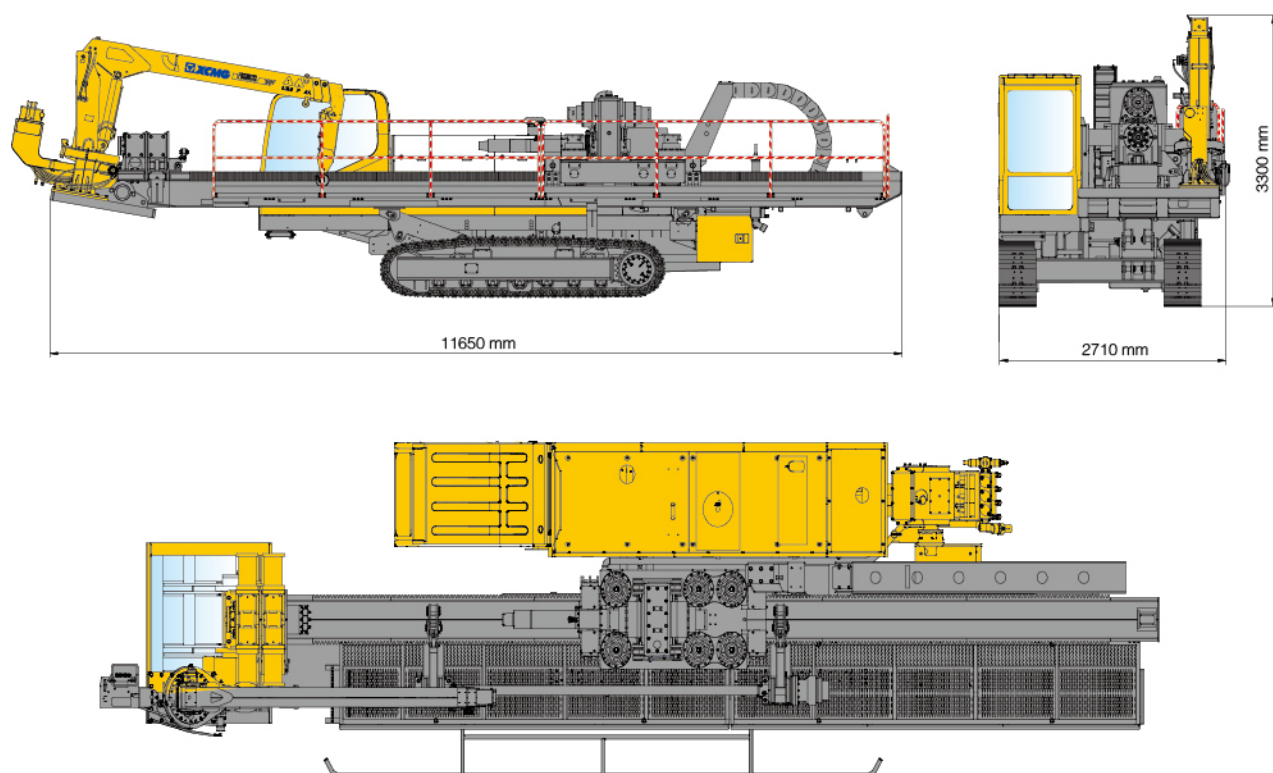


# XZ1000E

## Main Technical Parameters

Engine	Model	CUMMINS QSL8.9-C360	CUMMINS QSL8.9-C360
	Rated power	264 kW/2100 r/min	354 hp/2100 rpm
Push-pull	Push/pull force	1010/1350 kN	227057/303490 lbf
	Max. push/pull speed	45 m/min	148 ft/min
Rotation	Torque	40500 Nm	29873 ft · lb
	Max. rotation speed	115 r/min	115 rpm
Mud pump	Max. flow rate	950 L/min	251 US gal/min
	Max. pressure	10 MPa	1450 psi
Drill pipe	Diameter × length	Φ 114/127 × 6000 mm	Φ 4.5/5 × 236 in
Max. inclination angle		17°	20°
Max. back reaming diameter		Φ 1300 mm	Φ 15.8 in
Weight		25 t	5 ton (US)
Dimension (L × W × H)		11650 × 2710 × 3300 mm	177 × 57 × 71 in
Chassis traveling speed		2.2 km/h	1.4 mph

## Overall Dimension & Transportation

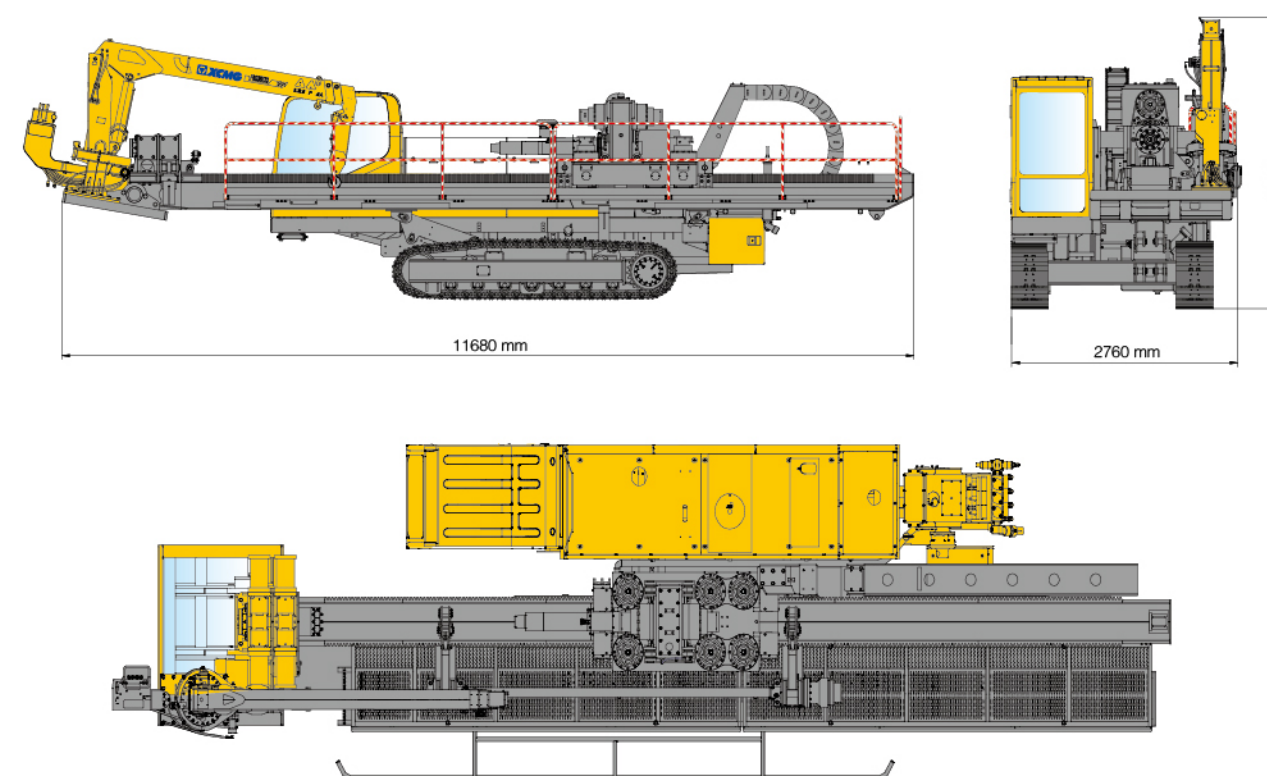


# XZ1350

## Main Technical Parameters

Engine	Model	CUMMINS QSL8.9-C360	CUMMINS QSL8.9-C360
	Rated power	264 kW/2100 r/min	354 hp/2100 rpm
Push-pull	Push/pull force	1795 kN	403534 lbf
	Max. push/pull speed	27 m/min	89 ft/min
Rotation	Torque	50500 Nm	37244 ft · lb
	Max. rotation speed	89 r/min	89 rpm
Mud pump	Max. flow rate	800/950 L/min	211/251 US gal/min
	Max. pressure	10 MPa	1450 psi
Drill pipe	Diameter × length	Φ 127/114 × 6000 mm	Φ 5/4.5 × 236.2 in
Loader crane	Lifting weight	3.2 t	3.5 ton (US)
	Loading capacity	6.4 t · m	7.1 ton · m (US)
Max. inclination angle		17°	17°
Max. back reaming diameter		Φ 1300 mm	Φ 52 in
Weight		25 t	27.6 ton (US)
Dimension (L × W × H)		11680 × 2760 × 3540 mm	459.8 × 108.7 × 139.4 in
Chassis traveling speed		2.2 km/h	1.4 mph

## Overall Dimension & Transportation

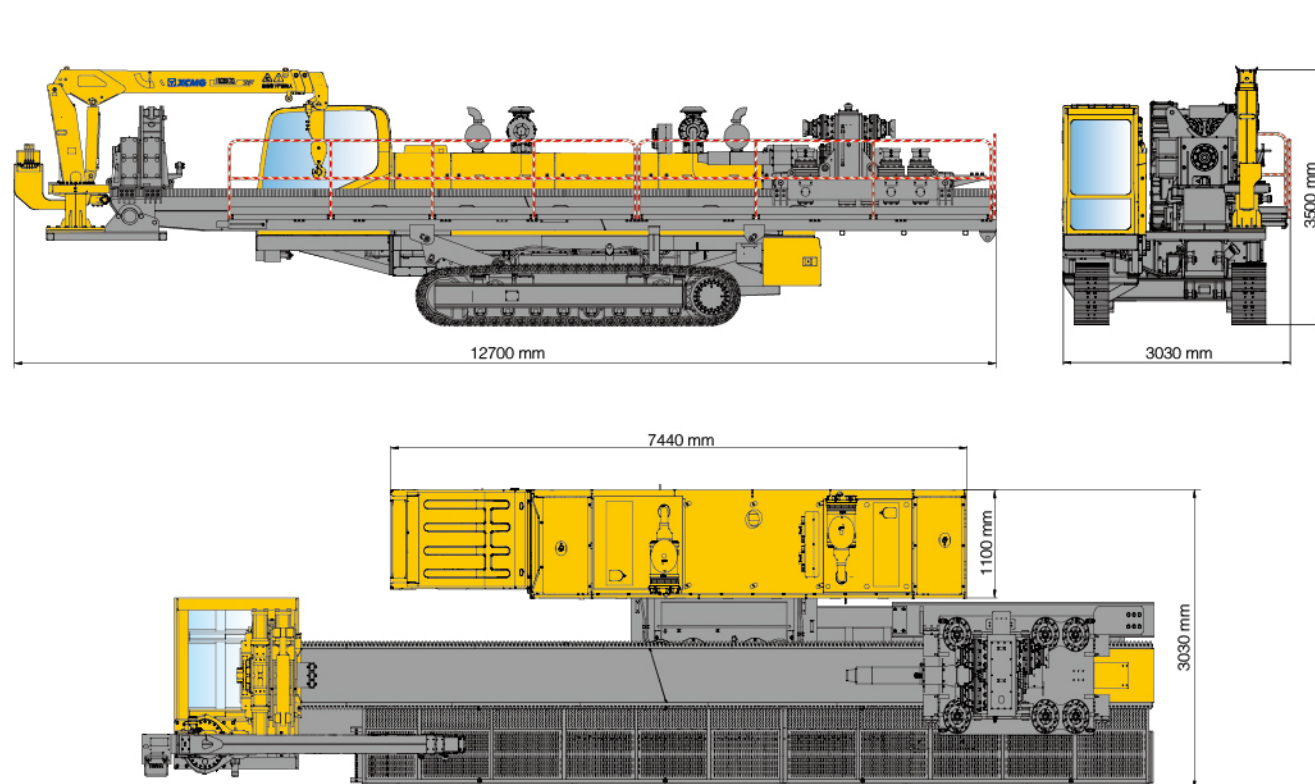


# XZ2200

## Main Technical Parameters

Engine	Model	CUMMINS QSL8.9-C325	CUMMINS QSL8.9-C325
	Rated power	2 × 242 kW/2100 r/min	2 × 324 hp/2100 rpm
Push-pull	Push/pull force	2200 kN	494582 lbf
	Max. push/pull speed	35 m/min	115 ft/min
Rotation	Torque	75000 Nm	55313 ft · lb
	Max. rotation speed	90 r/min	90 rpm
Mud pump	/	External connection	External connection
Drill pipe	Diameter × length	Φ 127 × 6000 mm	Φ 5 × 236.2 in
	Lifting weight	3.2 t	3.5 ton (US)
Loader crane	Loading capacity	6.4 t · m	7.1 ton · m (US)
	Max. inclination angle	16°	16°
Max. back reaming diameter		Φ 1400 mm	Φ 55 in
Weight		31 t	34.2 ton (US)
Dimension (L × W × H)		12700 × 3030 × 3500 mm	500 × 119.3 × 137.8 in

## Overall Dimension & Transportation

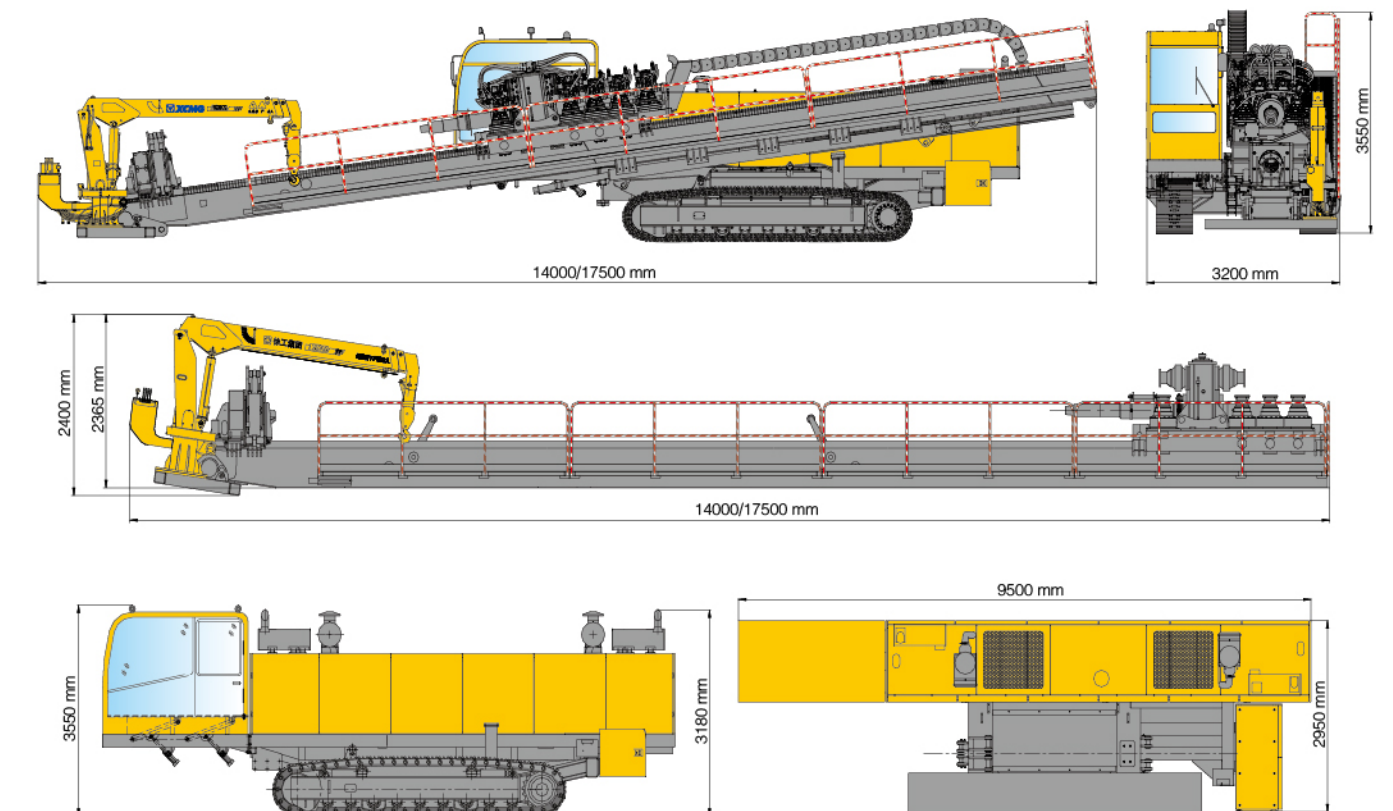


# XZ3600

## Main Technical Parameters

Engine	Model	CUMMINS QSL8.9-C360	CUMMINS QSL8.9-C360
	Rated power	2 × 264 kW/2100 r/min	2 × 354 hp/2100 rpm
Push-pull	Push/pull force	3600 kN	809316 lbf
	Max. push/pull speed	32 m/min	105 ft/min
Rotation	Torque	120000 Nm	88500 ft · lb
	Max. rotation speed	76 r/min	76 rpm
Mud pump	/	External connection	External connection
Drill pipe	Diameter × length	Φ 140/168 × 6000/9600 mm	Φ 5.5/6.6 × 236/378 in
	Lifting weight	3.2 t	3.5 ton (US)
Loader crane	Loading capacity	6.4 t · m	7.1 ton · m (US)
	Max. inclination angle	16°	16°
Max. back reaming diameter		Φ 1600 mm	Φ 63 in
Weight		48 t	52.9 ton (US)
Dimension (L × W × H)		1400/17500 × 3200 × 3550 mm	552/689 × 126 × 140 in

## Overall Dimension & Transportation



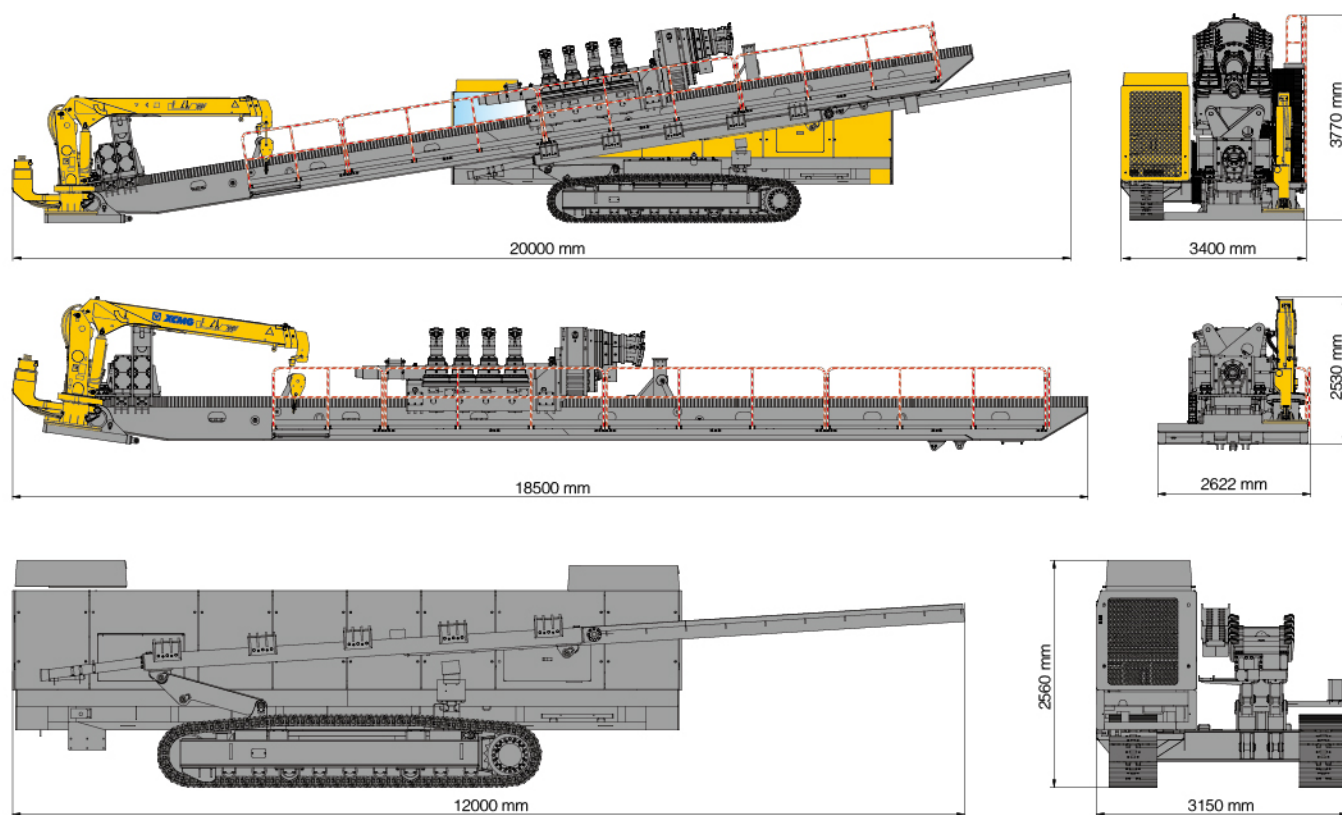


# XZ5060

## Main Technical Parameters

Engine	Model	CUMMINS QSZ13-C475 354	CUMMINS QSZ13-C475 354
	Rated power	2 × 354 kW/1900 r/min	2 × 354 hp/1900 rpm
Push-pull	Push/pull force	5300 kN	1191493 lbf
	Max. push/pull speed	33 m/min	108 ft/min
Rotation	Torque	160000 Nm	118000 ft · lb
	Max. rotation speed	80 r/min	80 rpm
Mud pump	/	External connection	External connection
Drill pipe	Diameter × length	Φ 140/168 × 9600 mm	Φ 5.5/6.6 × 378 in
Loader crane	Lifting weight	5 t	5.5 ton (US)
	Loading capacity	12.5 t · m	13.8 ton · m (US)
Max. inclination angle		16°	16°
Max. back reaming diameter		Φ 2000 mm	Φ 78.8 in
Weight		59 t	65 ton (US)
Dimension (L × W × H)		20000 × 3400 × 3770 mm	787.4 × 133.9 × 148.4 in

## Overall Dimension & Transportation

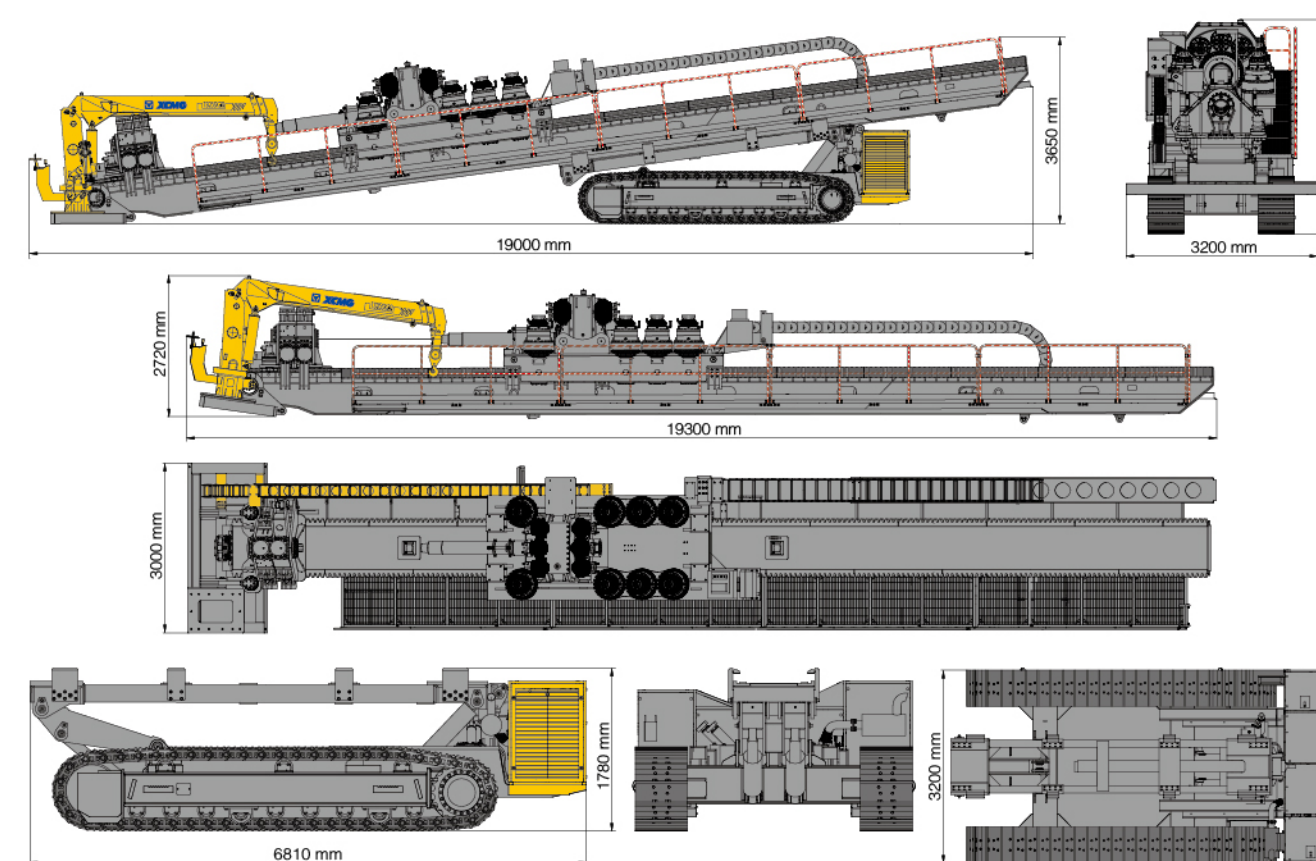


# XZ6600

## Main Technical Parameters

Engine	Model	VOLVO TAD1643	VOLVO TAD1643
	Rated power	2 × 565 kW/1850 r/min	2 × 758 hp/1850 rpm
Push-pull	Push/pull force	6600 kN	1483746 lbf
	Max. push/pull speed	32 m/min	105 ft/min
Rotation	Torque	210000 Nm	154875 ft · lb
	Max. rotation speed	90 r/min	90 rpm
Mud pump	/	External connection	External connection
Drill pipe	Diameter × length	Φ 168/194 × 9600 mm	Φ 6.6/7.64 × 378 in
Loader crane	Lifting weight	5 t	5.5 ton (US)
	Loading capacity	12.5 t · m	13.8 ton · m (US)
Max. inclination angle		16°	16°
Max. back reaming diameter		Φ 2000 mm	Φ 78.7 in
Weight		73 t	80.4 ton (US)
Dimension (L × W × H)		19300 × 3200 × 3650 mm	760 × 126 × 143.7 in

## Overall Dimension & Transportation

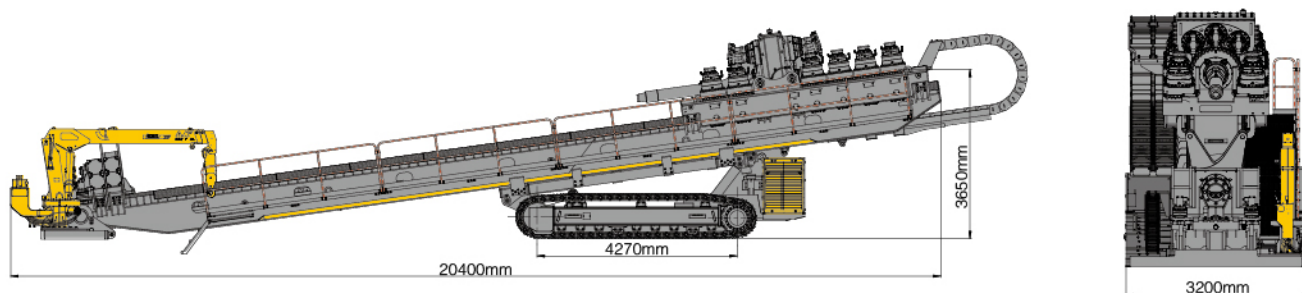


# XZ11000

## Main Technical Parameters

Engine	Model	CUMMINS QSZ13-C550	CUMMINS QSZ13-C550
	Rated power	3 × 410 kW/1900 r/min	3 × 550 hp/1900 rpm
Push-pull	Push/pull force	11000 kN	2472898 lbf
	Max. push/pull speed	32 m/min	105 ft/min
	Torque	240000 Nm	177024 ft · lb
Rotation	Max. rotation speed	90 r/min	90 rpm
	Mud pump	/	External connection
Drill pipe	Diameter × length	Φ 194/219 × 9600 mm	Φ 7.6/8.6 × 378 in
	Lifting weight	5 t	5.5 ton (US)
Loader crane	Loading capacity	12.5 t · m	13.8 ton/m (US)
Max. inclination angle		16°	16°
Max. back reaming diameter		Φ 2500 mm	Φ 78.8 in
Weight		83 t	91 ton (US)
Dimension (L × W × H )		20400 × 3200 × 3650 mm	804 × 126 × 143.7 in

## Overall Dimension & Transportation

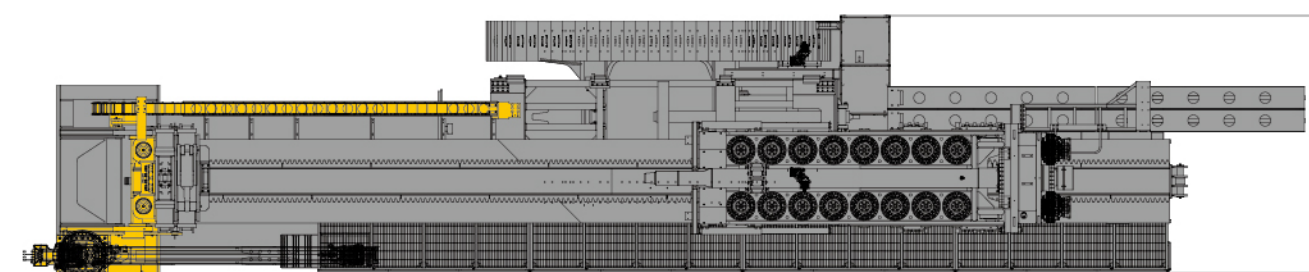
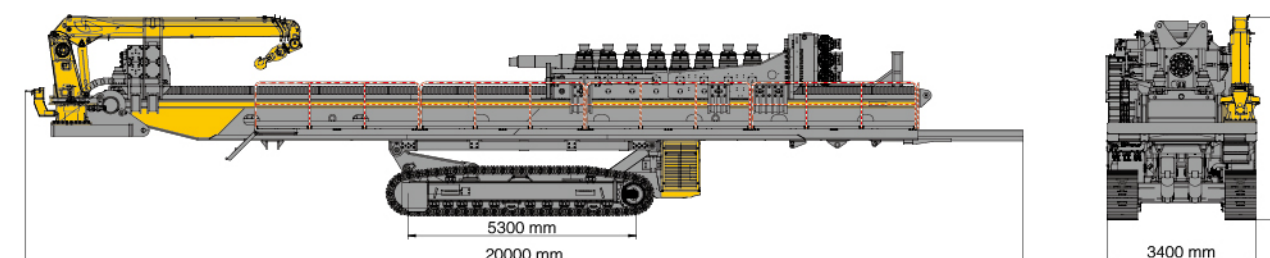


# XZ13600

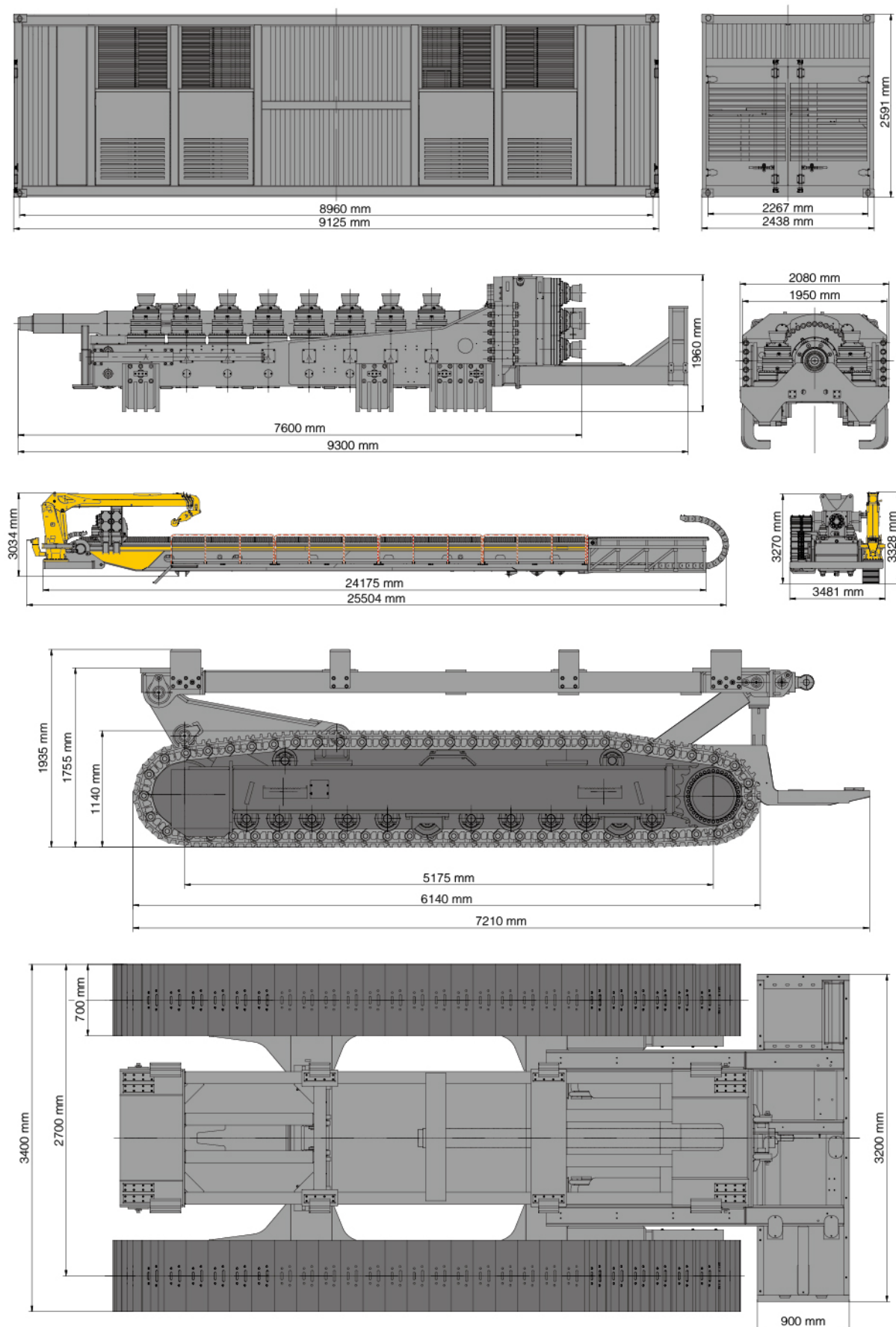
## Main Technical Parameters

Engine	Model	CUMMINS QSZ13-C550	CUMMINS QSZ13-C550
	Rated power	4 × 410 kW/1900 r/min	4 × 549 hp/1900 rpm
Push-pull	Push/pull force	13600 kN	3057416 lbf
	Max. push/pull speed	32 m/min	105 ft/min
Rotation	Torque	260000 Nm	191750 ft · lb
	Max. rotation speed	100 r/min	100 rpm
Mud pump	/	External connection	External connection
Drill pipe	Diameter × length	Φ 219/Φ 254 × 9600 mm	Φ 8.62/10 × 378 in
	Lifting weight	10 t	11 ton (US)
Loader crane	Loading capacity	25 t · m	27.6 ton · m (US)
Max. inclination angle		16°	16°
Max. back reaming diameter		Φ 2500 mm	Φ 98.4 in
Weight		135 t	148.8 ton (US)
Dimension (L × W × H )		20000 × 3400 × 4700 mm	787.4 × 133.9 × 185.0 in

## Overall Dimension & Transportation





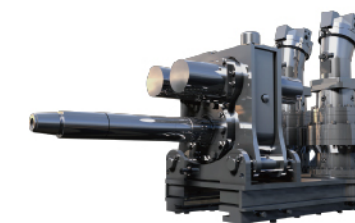


## Technical Features

### Small-tonnage HDD

#### Power head

- ▶ Power head is the main power mechanism of the machine. It drives the drill pipe to realize rotation and push-pull.
- ▶ Large-torque orbit motors are equipped for high-speed rotation with large drilling torque.
- ▶ Variable displacement motor reducer is adopted for steady push-pull operation through rack-and-pinion.
- ▶ Floating structure of power head box is adopted to compensate the drill pipe shackle stroke in real time and provide maximum protection for drill pipe thread.



#### Vise

- ▶ The vise is mainly for clamping, loading and unloading the drill pipe. It mainly consists of front vise, rear vise, clamping cylinders, clamping jaw, holding blocks and springs.
- ▶ Equipped with cambered clamping jaw, it can enlarge the contact area with the drill pipe when clamping and improve the shackle ability.
- ▶ Floating structure of the vise with spring bumper can prevent the drill pipe thread from being damaged and prolong the service life of the drill pipe by 30%.



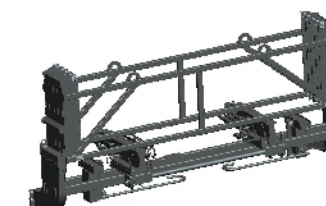
#### Mud antifreeze

- ▶ Anti-freeze solution of mud system is optional to provide anti-freeze protection for mud system of the whole machine in cold climates.



#### Automatic pipe loader

- ▶ The pipe loader of intelligent operation and high structural strength is equipped with a drill pipe box which can contain 48 pieces of  $\Phi 60$  integral drill pipes. And it can continuously supply drill pipes with XCMG patented shuttle arm technology during construction so as to reduce auxiliary working time.
- ▶ Patented anti-collision technology realizes the interlocking between the power head and the arm to prevent collision.



## Automatic anchoring

- ▶ Crowd cylinders with large-torque low-speed motor drives the anchoring rod for lifting or drilling.
- ▶ Rotatable ground anchor ensures the full fitting between the ground anchor and the drilling frame in any inclination angle to achieve balanced force and stable anchoring.



## Drill pipe lubrication system

- ▶ Automatic thread oil daub system with easy operation is adopted to easily lubricate the drill pipe thread.



## Automatic cleaning

- ▶ Water gun with quick connection is equipped to facilitate machine cleaning after work.

## Large-tonnage HDD

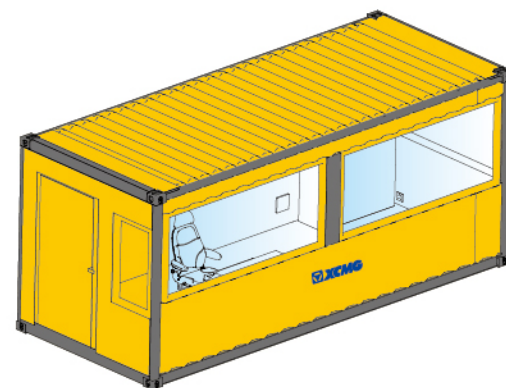
### Semi-automatic pipe loader

- ▶ Rotary rocker arm working mechanism driven by motor reducer and electronically controlled sensing anti-collision protection can realize quick grab, powerful rotation, smooth contact of two limit positions, no impact and high strength overall structure during working.
- ▶ Applicable models:  
XZ1350/XZ2200/XZ3600/XZ4200/XZ5060/XZ8600/XZ11000



### Split-type operating room

- ▶ Split-type operating room with air conditioner, internal lights as well as windshield wiper and control panel with various instruments as well as control handles greatly improve the operating comfort of the machine and make it suitable for long-time operations.
- ▶ Applicable models:  
XZ3600/XZ4200/XZ5060/XZ6600/XZ8600/XZ11000/XZ13600
- ▶ Remote operation:  
On-board crane and chassis move can operate by remote operation.



## Diagram of Drill Pipes and Tools for XZ200–XZ420E

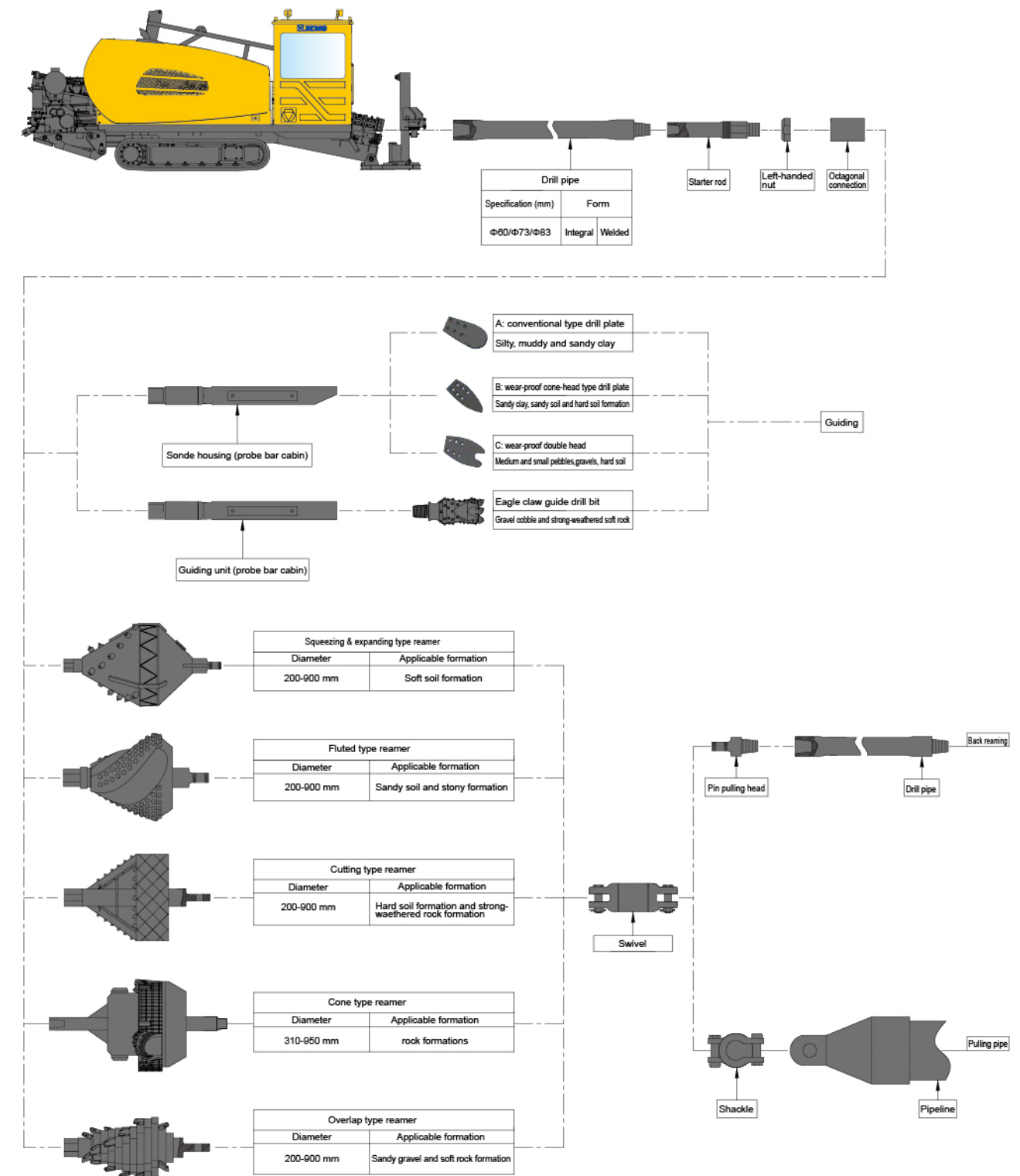
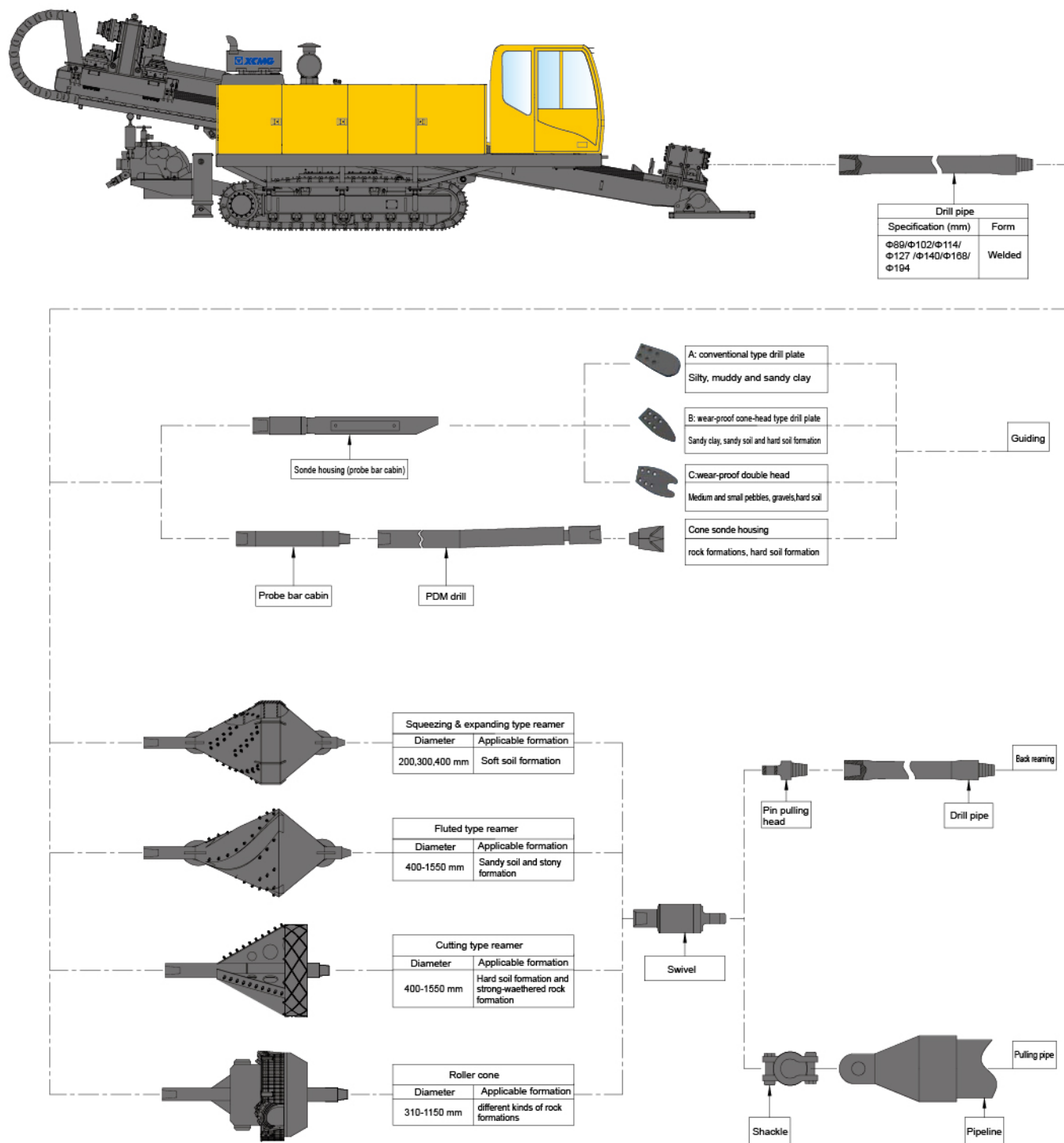




Diagram of Drill Pipes and Tools for XZ450–XZ13600



# X Series Mud Mixer

## Application

X series mud mixer is designed to prepare or mix slurry in constructions such as grooving, boring and non-excitation. It consists of mixing apparatus, pump unit, pipe assembly and tank so as to realize the function of quickly preparing, mixing and stirring bentonite. Customers can choose different models to achieve the tank capacity and mixing speed that they need.



Main technical parameters	Cycling volume		Capacity		Total power		Pipe size		Weight		Largest dimension (L x W x H)	
	m <sup>3</sup> /h	cu ft/h	m <sup>3</sup>	cu ft	kW	hp	mm	in	kg	lb	m	ft
XMM2	50	1766	2	71	4.8	6.4	Φ76	Φ3	300	661	2.6 × 1.25 × 1.6	8.5 × 4.1 × 5.2
XMM3	70	2472	3	106	9.6	12.9	Φ76	Φ3	450	992	3.4 × 1.25 × 1.6	11.2 × 4.1 × 5.2
XMM5	80	2825	5	177	4.8+9.6	6.4+12.9	Φ76	Φ3	1350	2976	3.0 × 1.8 × 2.1	9.8 × 5.9 × 6.9
XMME5	120	4238	5	177	15	20.1	Φ76	Φ3	1550	3417	3.0 × 1.8 × 2.1	9.8 × 5.9 × 6.9
XMME10	120	4238	10	353	15	20.1	Φ152	Φ6	2200	4850	3.5 × 2.0 × 2.5	11.5 × 6.6 × 8.2
XMME20	150	5297	20	706	22	30	Φ152	Φ6	4100	9039	6.0 × 2.0 × 2.45	19.7 × 21.7 × 26.9

# XMD Series Desander

## Application

XMD series desander is a pile foundation auxiliary equipment mainly used in grooving, drilling and HDD foundation constructions. It can effectively control the content and particle size of sand during the construction process. The desander can improve the drilling rate, realize mud recycle and reduce the cost of drilling mud.



Main technical parameters	Unit	XMD100		XMD150		XMD200	
Max. capacity	m <sup>3</sup> /h cu ft/h	100	3531	150	5297	200	7063
Cut point	d <sub>50</sub> mm in	0.04	0.0016	0.04	0.0016	0.06	0.0024
Total power	kW hp	20.7	27.8	24.2	32.5	48	64.4
Power of main pump	kW hp	18.5	24.8	22	29.5	45	60.3
Power of vibrating motor	kW hp	1.1×2	1.5×2	1.1×2	1.5×2	1.5×2	2.0×2
Transport dimension (L×W×H)	m ft	3.0×1.8×2.3	10×6×8	3.0×1.8×2.3	10×6×8	4.16×2.3×2.7	14×8×9
Max. dimension (L×W×H)	m ft	3.2×2.0×2.3	10×7×8	3.2×2.0×2.3	10×7×8	4.5×2.3×2.7	15×8×9
Total weight	kg lb	2550	5622	2600	5732	5500	12125

# Pilot ET Locator

## Application

It adopts advanced design concept and production technology. The electronic devices it uses are all the most advanced. It leads the world in anti-interference and accuracy. All electronic components imported from the United States ensure the performance and quality of the products.



Receiver		Remote display	
System frequency	10; 4kHz-31kHz	Radio frequency	433 MHz
Compatible probe	XCMG1, XCMG2, XCMG3, XCMG50, XCMG60, XCMG70, XCMG90, XNEEDLE-X	Radio channel	4
Protection level	IP65	Communication distance	1200 m (3937 ft)
Radio channel	4	Power supply	Lithium rechargeable battery
Communication distance	1200 m (3937 ft)	Working voltage	12.5 V
Lithium rechargeable battery	12.5 V	Battery life on a full charge	50 h
Battery life on a full charge	50 h	Display	5 inch LCD image
Dimension	68.5 × 13 × 30 cm <sup>3</sup> (27 × 5 × 12 cu in)	Dimension	19 × 13 × 19 cm <sup>3</sup> (7 × 5 × 7 cu in)
Weight	3 kg (6.6 lb)	Weight	1.5 kg (3.3 lb)
		Protection level	IP65

Parameters	XCM50	XCM70
Emission frequency	10; 4 kHz-31 kHz	10; 4 kHz-31 kHz
Power supply	one 18650 lithium rechargeable battery, one 261020 super-strong lithium standby battery	three 18650 lithium rechargeable batteries
Battery life on a full charge	18650 (3.7 V): 20 h in normal mode 261020 (3.7 V): 60 h in normal mode	18650 (3.7 V) × 3: 60 h in normal mode 18650 (3.7 V) × 3: 15 h in enhanced mode
Measuring depth	40 m in normal mode 50 m in enhanced mode	50 m in normal mode 70 m in enhanced mode
Operating temperature	below 85 °C (2873 °F)	below 85 °C (2873 °F)
Waterproof grade	IP67	IP67
Dimension	φ 3.2 × 38 cm (φ 1.3 × 15 in)	φ 3.6 × 39.3 cm (φ 1.4 × 15 in)
V.BAT normal value	2.8 V-4.2 V	8.4 V-12.6 V



# Pilot E Locator

## Application

The locator adopts high-precision and anti-interference Faraday Cage three-dimensional antenna structure, industrial gold-plated antenna aluminum foil shaping processing module, high-performance logic dual core DSP, and two-in-one guidance system. Independent tracking of two locators can ensure higher accuracy and reliability. It can ensure 60m ultra deep measurement depth and its endurance is up to 50 hours.



Receiver		Remote display	
System frequency	4 kHz, 19 kHz, 30 kHz	Radio frequency	433 MHz
Protection level	IP65	Radio channel	4
Radio channel	4	Communication distance	1200 m (3937 ft)
Communication distance	1200 m (3937 ft)	Power supply	lithium rechargeable battery
Rechargeable lithium battery	12.5 V	Working voltage	12.5 V
Battery life on a full charge	50 h	Battery life on a full charge	50 h
Dimension	68.5 × 13 × 30 cm (27 × 5 × 12 in)	Display	5 inch LCD image
Weight	3 kg (6.6 lb)	Dimension	19 × 13 × 19 cm (7 × 5 × 7 in)
		Weight	1.5 kg (3.3 lb)
		Protection level	IP65

Parameters	XCMG1-30K	XCMG2	XCMG3
Emission frequency	30 kHz	4 kHz, 19 kHz	4 kHz, 19 kHz, 30kHz
Power supply	one lithium rechargeable battery, one 261020 battery	one lithium rechargeable battery, one 261020 battery	two lithium rechargeable batteries, two 261020 batteries
Battery life on a full charge	lithium (3 V): 20 h in normal mode 261020 (3 V): 60 h in normal mode	lithium (3 V): 20 h in normal mode, 5 h in enhanced mode 261020 (3 V): 60 h in normal mode, 15 h in enhanced mode	lithium (3 V): 50 h in normal mode, 12 h in enhanced mode 261020 (3 V): 160 h in normal mode, 40 h in enhanced mode
Measuring depth	40 m in normal mode	40 m in normal mode 50 m in enhanced mode	40 m in normal mode 60 m in enhanced mode
Operating temperature	below 85 °C (2873 °F)	below 85 °C (2873 °F)	below 85 °C (2873 °F)
Waterproof grade	IP67	IP67	IP67
Dimension	φ 3.2 × 38 cm (φ 1.3 × 15 in)	φ 3.2 × 38 cm (φ 1.3 × 15 in)	φ 3.2 × 48 cm (φ 1.3 × 19 in)

# Construction Cases



XZ6600 working for the 3 km water supply pipe project with a diameter of 813 mm across the Songhua River



XZ3600 working for water supply pipeline hard rock construction in South Korea



XZ6600 working for crossing the mountains in India





XZ5000 working for the construction of power pipeline crossing gulf in Malaysia



XZ320E working for the communication pipeline construction in Philippines



XZ680A working for the gas pipeline construction in Russia, weathered rock stratum



XZ320D working for power pipeline construction in Cuba



XZ1350 working for gas pipeline construction in Thailand



XZ450 working for the construction of natural gas pipeline in Malaysia