XG700E Diaphragm Wall Grab

technical specifications

XG700E Diaphragm Wall Grab Advantages(Highlights)

Introduction

1.Mature "H" type telescopic crawler chassis, expanding width 3500-4900mm, wheelbase 5600mm, can be equipped with self-discharging outrigger structure, construction safety and stability, convenient disassembly and transportation;

2. Rear double winch single row rope structure, solve the problem of biting rope abrasion, avoid the risk of dropping bucket, improve the service life of wire rope 1-3 times;

3.Imported Volvo 13L engine, 315kW rated power output, powerful;

4. Adopting Rexroth liquid-controlled main valve and new liquid-controlled double winch synchronization technology to ensure the reliability of equipment construction;

5. High/low speed two-speed control lowering technology, the maximum lowering speed up to 75m/min, improve the efficiency of gripping groove;

6. It has automatic wire rope tightening system in the process of grabbing groove and closing the bucket, which is easy to operate and ensures the accuracy of grooving;

7. The self-manufactured heavy-duty long guiding and large closing force push plate deviation correction grapple has high accuracy of groove formation and strong hard ground gripping ability;

8. Optional ±90°, 0-180° grapple slewing device, to meet the requirements of the construction of narrow space in the city.

catalogs

XG700E Diaphragm Wall Grab Technical Specifications

Product Model:XG700E Diaphragm Wall Hydraulic Grab Bucket

Manufacturer: Xuzhou Xugong Foundation Construction Machinery Co.

XG700E Diaphragm Wall Hydraulic Grab Bucket is a new generation of products for domestic and international diaphragm wall projects for hard strata, deep trench and thick trench construction. XG700E adopts XCMG's mature crawler chassis technology, as well as advanced technologies such as hydraulic control of the main valve and double-reel, single-row rope, etc., and it is a high-tonnage diaphragm wall hydraulic grab bucket with high construction efficiency, strong construction capacity and good reliability.

I. Technical presentation

1. Chassis

XG700E diaphragm wall hydraulic grab adopts TDP series chassis for diaphragm wall hydraulic grab, which has super stability. The chassis has high structural strength and heavy-duty hydraulic telescopic crawler chassis with excellent traveling performance.

Track length	6575mm
tread (on tire)	5605mm
Track width min/max	3500/4900mm

driving force	720kN
gradient	35% (20°)
Track plate width	800mm
Ground Specific Pressure	140kPa
Total working weight	Approx. 133t (bare weight: 98t)

2. Engine

The engine is selected from Volvo engine, which meets the Euro III emission standard, energy saving and environmental protection, strong power, enough power reserve, and the noise reaches the national standard.

Engine Model	TAD1352VE
Rated Power/Rated Speed	315 kW/1900 r/min
Maximum engine torque	2175N.m@1200 rpm
Fuel tank volume	560L

3、Hydraulic system

system pressure	33 MPa
Flow rate (main + auxiliary circuits)	2×380 L/min+1×200 L/min
Hydraulic oil tank volume	900 L

4. Winch system

XG700E diaphragm wall hydraulic grab adopts double winch single-row rope structure, with high/low two lowering speeds (75/50m/min); the single-row rope structure solves the problem of wire rope abrasion and biting, and improves the service life of the wire ropes, and the double winch structure avoids the risk of dropping the bucket.

	front winch	rear winch
Maximum lifting force	350kN	350kN
Wire Rope Model	verotop 36-1960ZS	verotop 36-1960SZ
Wire Rope Rotation	right-hand side	levitra
Rope Diameter	Φ36mm	Φ36mm
Minimum breaking tension of wire rope	1237kN	1237kN
Length of wire rope when the depth of single-row rope grooving is 80m	119m	120m
Rope length at maximum trenching depth of 105m	144m	145m

5. Driver's cab

Noise-proof cab with FOPS feature (Steel Protective Structure), adjustable seats, hot and cold air conditioning, interior and exterior lighting, windshield

wipers. Console with various gauges and joysticks.

6. Electrical systems

The system voltage is 24V, for the actual working conditions and construction technology, it adopts advanced intelligent control technology, CANBUS technology and virtual instrumentation technology to provide users with the safest and most reliable construction experience.

Electrical control system content		
System name	make up	corresponds English -ity, -ism, -ization
activation system	Starter Relay, Preheat, Key Switch	Electronic start for better engine protection
surveillance system	Monitors & Cameras	Observe the surrounding environment and the state of wire rope stowage
Display System	monitor (computer)	Displays all data of the whole machine, including hydraulic system data, engine data, grab angle data, etc., controller I/O data, depth, etc.
alarm system	Pressure sensors, temperature sensors, pressure switches, limit sensors, horns, alarm lights, etc.	Alarm system includes high oil temperature alarm, low oil level alarm, height limit alarm, slewing alarm, traveling alarm, filter alarm, air filter alarm and so on.
subsystem	windshield wiper, air conditioner, cigarette lighter, radio, work lights, etc.	Provide comfort and suitability of the whole machine
deskew system	Inclination Sensor and Corrective Solenoid Valve	Guaranteeing trenching accuracy and construction quality
safety protection system	Ground protection, emergency stop switches, safety handles, etc.	Provide more reliable security

7. Jib

It adopts large cross-section box-type boom structure with good flexibility, which effectively ensures the precision of construction trenching.

8. Hose reel system

Adopting hydraulic pipe reeling device, mainly composed of reel, hydraulic motor, reducer and other components, with the control, effectively ensure the

synchronization of the pipe reeling device and the winch.

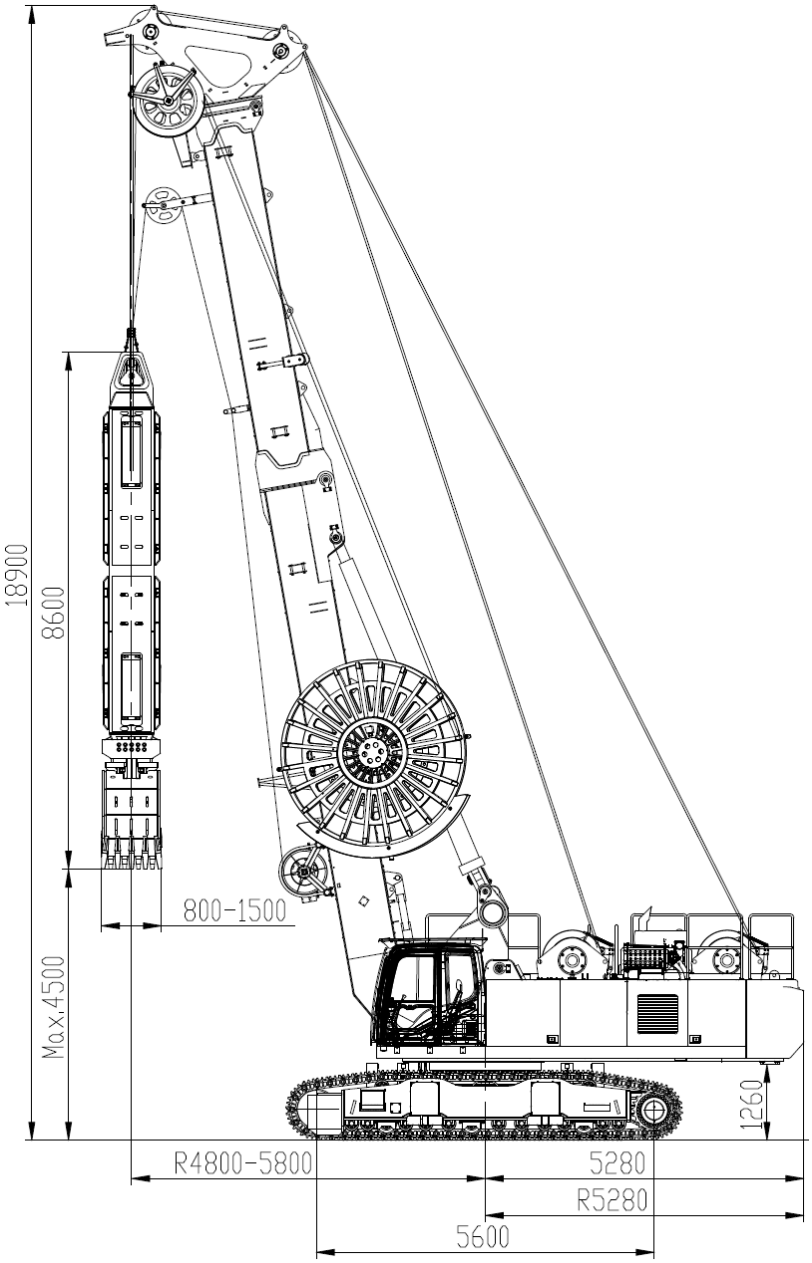
The grapple is arranged with 12 pieces of deflection correction devices, which can realize the angle correction in four directions: front, back, left and right.

Comes standard with 800mm grab body, expandable to 1000mm, 1200mm, 1500mm.

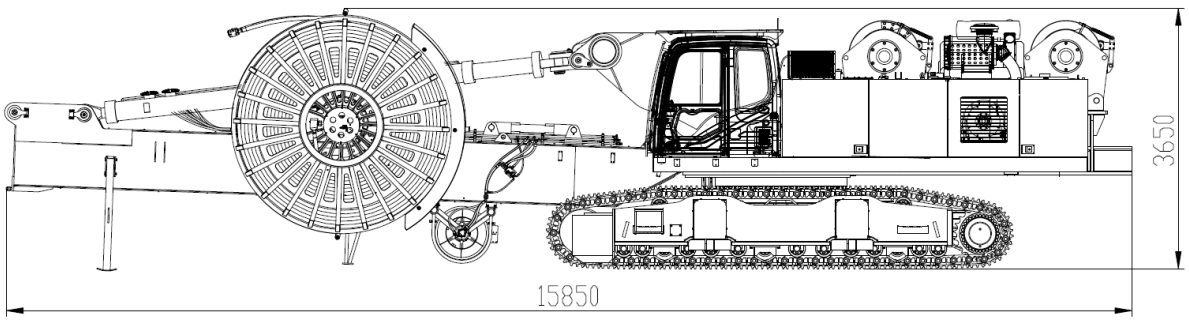
Forms of deskewing	Available grab models	Body thickness	Grapple weight	Groove thickness	note
deskewing grab With 12 guiding plates	TZD800(T8).00 Grab Bucket Assembly	800mm	24-28t	800mm	Basic Configuration
	TZD1000(T8).00 Grab Bucket Assembly		26-30t	1000mm	Need to add push plate pads and guide plate
	TZD1200(T8).00 Grab Bucket Assembly		28-32t	1200mm	
	TZD1500(T8).00 Grab Bucket Assembly		31-36t	1500mm	

II. Main technical parameters

name (of a thing)		unit (of measure)	XG700E
motor	factory owners	VOLVO	
	model number	TAD1352VE	
	rating	kW/r/min	315/1900
Groove thickness		mm	800-1500
Grooving depth		m	105
Single slotting length		mm	2800
Grapple weight		t	24-36
Grab Closing Force		kN	2000
Grab opening time		s	6
Grapple closing time		s	7
system traffic		L/min	2 x 380 + 180
system pressure		MPa	33
a whirlwind	Maximum lifting force	kN	2 x 350
	Maximum winch lifting/lowering speed	m/min	40/75
	Winch rope diameter	mm	Φ36
shoes and belt	Track width	mm	800
	Overall track width (min-max)	mm	3500-4900
	Center distance between two longitudinal wheels of the track	mm	5605
hosts	Trenching operating range (from center of rotation)	mm	4800-5800
	rotation angle	360°	
	Maximum travel speed of the whole machine	km/h	1.5
	Maximum climbing degree of the whole machine	30%	
	Dimensions in working condition (length, width, height)	mm	11500×4900×18900
	Dimensions in transported condition (length, width, height)	mm	16100 x 3500 x 3560
Overall weight (without grapple)		t	98



operating state



state of transport

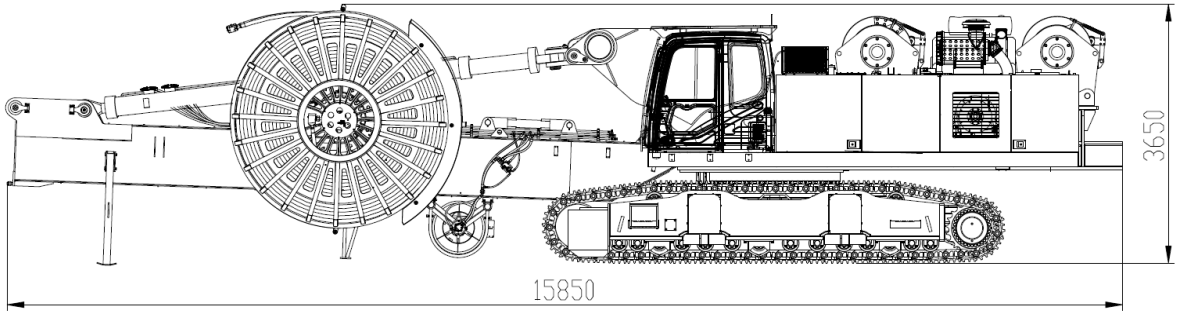
III. Configuration of major components

name (of a thing)	branding	the source (of a product)
motor	Volvo (Swedish car company)	United States of America
Hydraulic main pump	Rexroth	German
Hydraulic main valve	Rexroth	German
Winch motor	Rexroth	China/Germany
Reduction gears for winches	Charles-Augustin Drehlen (1836-1805), German physicist	sino
Slewing reducer	Rexroth	sino
Walking Reducer	Europe and the Middle East	China/Turkey
monitor (computer)	Hersman (name)	sino
controllers	Rexroth	German
power cable	LAPP	German
hydraulic control handle	Princeton, New Jersey	United States of America
Long hydraulic hose	Mar's efforts	Italy
Inclination Sensor	Gemanek (name)	German

IV. Transportation program

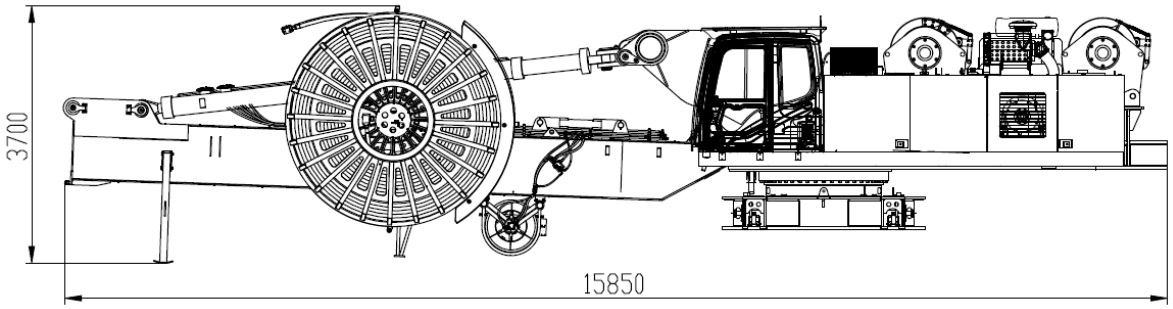
1. Host transportation program

1.1 Transportation Option I:



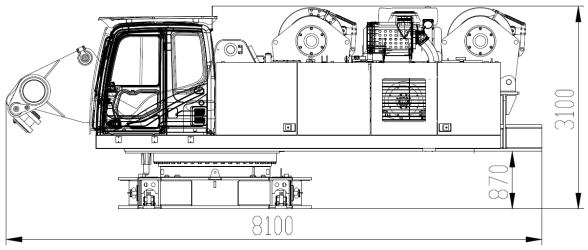
Transportation foot weight	
Transportation dimensions/mm (L x W x H)	15850 x 3500 x 3650
Transportation weight/t	75
Weight of parts to be removed from mainframe/t	
Upper arm and pulley frame assembly	7
counterweight	16
Note: The luffing linkage needs to be laid forward	

1.2 Transportation Option Two:



Transportation foot weight	
Transportation dimensions/mm (L x W x H)	15850×3250×3700
Transportation weight/t	54
Weight of parts to be removed from mainframe/t	
Left and right longitudinal beams	2 x 10.5
Upper arm and pulley frame assembly	7
counterweight	16
Note: The luffing linkage needs to be laid forward	

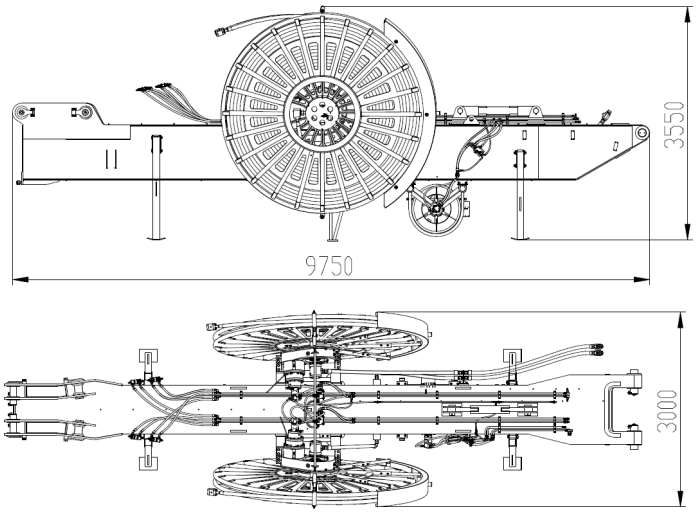
1.3 Transportation Option Three:



Transportation foot weight	
Transportation dimensions/mm (L x W x H)	8100 x 3250 x 3100
Transportation weight/t	40
Weight of parts to be removed from mainframe/t	
Lower boom, hose reels, cable reels	11
Luffing Cylinder	2×1.5
Left and right longitudinal beams	2 x 10.5
Upper arm and pulley frame assembly	7
counterweight	16

2. Remaining components transportation program

2.1 Lower boom, hose reel, cable reel assembly

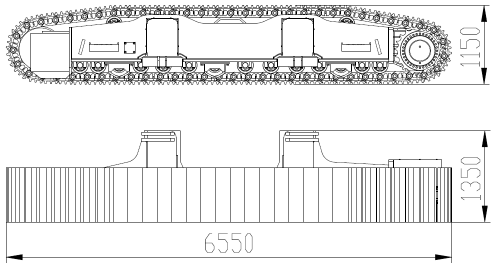


Transportation foot weight	
Transportation dimensions/mm (L x W x H)	9750×3000×3550
Transportation weight/t	11

2.2 Amplification cylinder

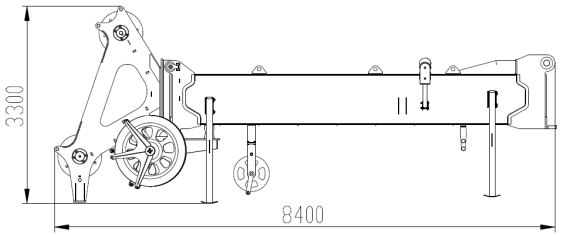
Transportation foot weight	
Transportation dimensions/mm (L x W x H)	6250 x 600 x 360
Transportation weight/t	2×1.5

2.3 Left and right longitudinal beams



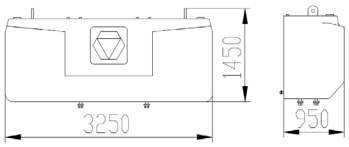
Transportation foot weight	
Transportation dimensions/mm (L x W x H)	6550 x 1350 x 1150
Transportation weight/t	2 x 10.5

2.4 Upper arm frame assembly



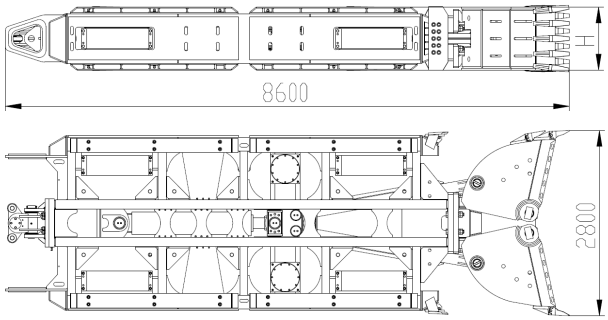
Transportation foot weight	
Transportation dimensions/mm (L x W x H)	8400×2800×3300
Transportation weight/t	7

2.5 Counterweights



Transportation foot weight	
Transportation dimensions/mm (L x W x H)	3250×950×1450
Transportation weight/t	16

2.6 Grapple assembly



Transportation foot weight	
Transportation dimensions/mm (L x W x H)	8600×2800×H (H=800/1000/1200/1500)
Transportation weight/t	24-36

Please understand that we are unable to notify you of product changes effectively due to the continuous advancement of technical design!