



EARTH DRILL SERIES BROCHURES



A STEP AHEAD IN
EARTH DRILLING
TECHNIQUE



COMPANY PROFILE

Ningbo Yichen Environment Tech Co., Ltd., formerly known as Ningbo Ant Heavy Industry, has been committed to the development and manufacturing of excavator attachments and environmental engineering equipment since 2002.

We have a leading market position in China. Our products are also exported to dozens of countries such as to North America, Australia, Europe, and Southeast Asia, which are widely used in the fields of new and renovated highways, airports, tunnels, bridges, heavy engineering infrastructure, and so on.

We provide high-quality products and customized solutions to global users.





DIRECTORY

AUGER DRIVE	1
HIGH SPEED AUGER DRIVE	4
HORIZONTAL DRILL AUGER DRIVE	5
HITCH	7
AUGER	8
PILOT AND TEETH	10
LOG SPLITTER	12
STUMP PLANER	13
HELICAL PILE INSTALLATION SYSTEM	14
HELICAL PILES	16
ANGLE INDICATOR	17
IN-CAB MONITOR	18
TORQUE INDICATOR	19

AUGER DRIVE



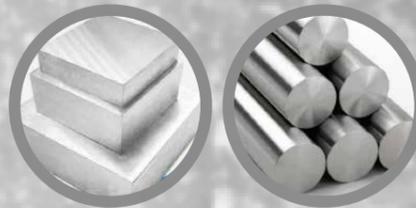
PRODUCT INTRODUCTION

Yichen auger drive YA series is a drilling device that powered by excavator or skid steer loader hydraulic system to drive a earth auger or helical pile into the ground.

Manufactured from high grade materials and precision engineered components. Designed to withstand extreme working conditions. High grade synthetic gear oil used for extra protection and long service life.

The series has a variety of specifications and accessories to meet different operating need.

PRODUCT FEATURES



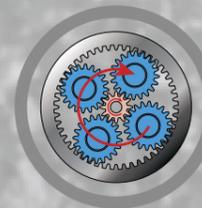
HIGH QUALITY STEEL

Manufactured from high grade materials



EXTREME ENVIRONMENT

Designed to withstand extreme working conditions



LONGER LIFESPAN

Adopting advanced carbon-nitriding technology to achieve unparalleled strength and durability in gears. Precision engineered Planetary Gearbox for more stable use and longer lifespan.



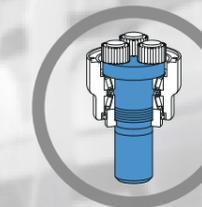
SAFETY DESIGN

The strong ear plate and safety pin design ensure that the drive cannot fall off the hitch.



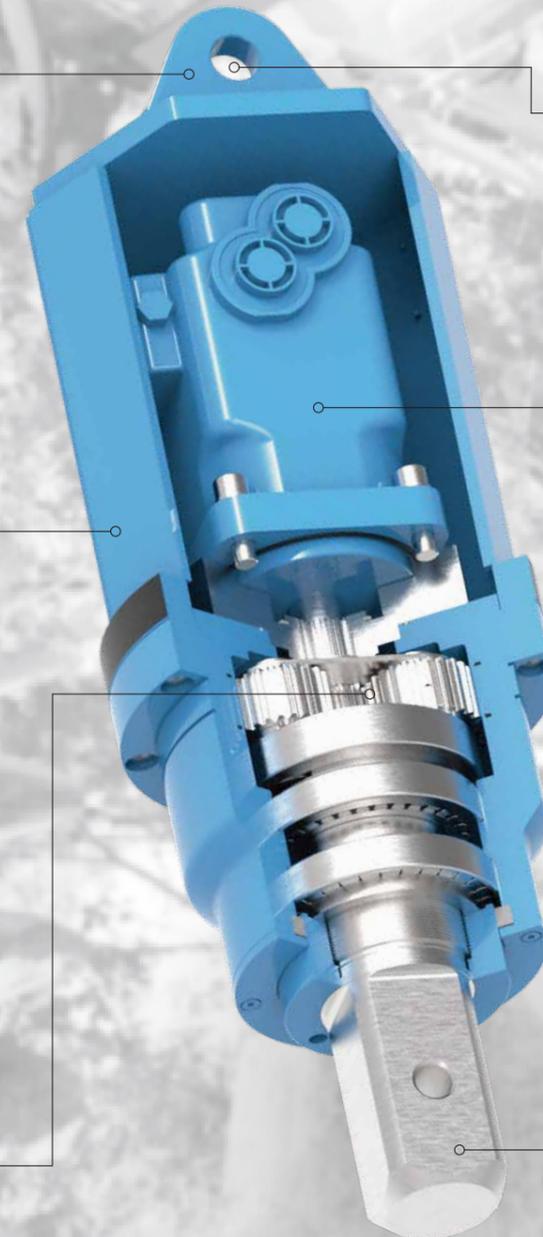
HIGH QUALITY MOTOR

YICHEN has equipped its auger drives with high-quality and reliable motors.



LIFETIME WARRANTY

YICHEN provides a lifetime warranty for its output shaft.



AUGER DRIVE SERIES



PRODUCT PARAMETER



Model	YA 2000	YA 3000	YA 5000	YA 8000	YA 10000	YA 18000	YA 30000	YA 50000	YA 80000	YA 100000	
Excavator	0.5-2 ton	1-3 ton	3-4.5 ton	4.5-8 ton	5-10 ton	8-15 ton	15-22 ton	20-36 ton	26-40 ton	32-52 ton	
Max.Output Torque	1900 Nm	3000 Nm	5000 Nm	8000 Nm	10000 Nm	18000 Nm	30000 Nm	50000 Nm	80000 Nm	100000 Nm	
Pressure	70- 240 Bar	70- 240 Bar	80- 240 Bar	80- 260 Bar	80- 260 Bar	80- 240 Bar	160- 260 Bar	220- 350 Bar	220- 350 Bar	250- 300 Bar	
Oil Flow	27- 75 LPM	27- 75 LPM	50- 95 LPM	60- 135 LPM	60- 135 LPM	80- 170 LPM	80- 170 LPM	100- 300 LPM	200- 400 LPM	300- 477 LPM	
Rated Power	19 kw	24 kw	42 kw	67 kw	80 kw	80 kw	94 kw	157 kw	167 kw	157 kw	
Output Shaft Size	65mm round / 2" hex / 57mm square	65mm round / 2" hex / 57mm square	65mm round / 2" hex / 57mm square	2.5" hex / 75mm square	2.5" hex / 75mm square	75mm square	75mm square	110mm square	110mm square	110mm square	
Output Shaft Speed	30- 95 RPM	35- 88 RPM	42- 80 RPM	35- 80 RPM	35- 80 RPM	20- 42 RPM	12- 28 RPM	0- 30 RPM	0- 20 RPM	0- 15 RPM	
Weight	41 kgs	41 kgs	66 kgs	124 kgs	131 kgs	165 kgs	255 kgs	460 kgs	770 kgs	1050 kgs	
Overall Length	606 mm	606 mm	687 mm	808 mm	808 mm	937 mm	1158 mm	1354 mm	1572 mm	1725 mm	
Hydraulic Hose	1/2" BSP	1/2" BSP	1/2" BSP	1/2" BSP(或 3/4" BSP)	1/2" BSP(或 3/4" BSP)	3/4" BSP	1" BSP	1" BSP 1-1/4"	SAE FS- 20 1- 1/4"	SAE FS- 20 G1- 1/4"	
Recommended Hitch	 Single Pin Hitch  Double Pin Cradle Hitch	 Single Pin Hitch  Double Pin Cradle Hitch	 Single Pin Hitch  Double Pin Cradle Hitch	 Single Pin Hitch  Double Pin Cradle Hitch	 Single Pin Hitch  Double Pin Cradle Hitch	 Single Pin Hitch  Double Pin Cradle Hitch	 Single Pin Hitch  Double Pin Cradle Hitch	 Single Pin Hitch  Double Pin Cradle Hitch	 Single Pin Hitch  Double Pin Cradle Hitch	 Single Pin Hitch  Double Pin Cradle Hitch	 Single Pin Hitch  Double Pin Cradle Hitch
Recommended Auger Hub	 65mm round  2" hex	 65mm round  2" hex	 65mm round  2" hex  2.5" hex	 75mm square  2.5" hex	 75mm square  2.5" hex	 75mm square	 75mm square	 110mm square	 110mm square	 110mm square	
Recommended Auger Diameter	 150-400 mm	 150-500 mm	 150-900 mm	 150-900 mm	 150-1000 mm	 150-1200 mm	 150-1500 mm	 300-1800 mm	 300-2000 mm	 300-2200 mm	
Auger Extension	Customizable	Customizable	Customizable	Customizable	Customizable	Customizable	Customizable	Customizable	Customizable	Customizable	



DRILLING PERFORMANCE REFERENCE

Auger YA 2000	Diameter(mm)		150	200	250	300	350	400							
	Drilling Depth (m)	Soft	3.5	3.0	2.5	2.5	2.4	2.0							
		Medium	3.5	3.0	2.4	2.4	2.2	1.8							
		Hard	3.0	3.0	2.2	2.2	2.0	1.5							
Auger YA 3000	Diameter(mm)		150	200	250	300	350	400	450	500					
	Drilling Depth (m)	Soft	3.5	3.0	2.5	2.5	2.4	2.0	1.7	1.5					
		Medium	3.5	3.0	2.4	2.4	2.2	1.8	1.6	1.4					
		Hard	3.0	3.0	2.2	2.2	2.0	1.5	1.5	1.3					
Auger YA 5000	Diameter(mm)		150-600	650	700	750	800	850	900						
	Drilling Depth (m)	Soft	4.5	3.2	3.0	2.6	2.0	1.7	1.5						
		Medium	4.2	3.7	2.8	2.4	1.8	1.6	1.3						
		Hard	3.5	3.3	2.5	2.1	1.7	1.4	1.2						
Auger YA 8000	Diameter(mm)		150-500	550	600	650	700	750	800	850	900				
	Drilling Depth (m)	Soft	6.5	4.5	4.0	4.0	4.0	3.6	3.0	2.6	2.5				
		Medium	5.5	4.5	3.7	3.7	3.7	3.5	2.8	2.7	2.2				
		Hard	5.0	3.5	3.5	3.5	3.2	3.0	2.4	2.4	2.0				
Auger YA 10000	Diameter(mm)		150-500	550	600	650	700	750	800	850	900	1000			
	Drilling Depth (m)	Soft	6.5	4.5	4.0	4.0	4.0	3.6	3.0	2.6	2.5	2.3			
		Medium	5.5	4.5	3.7	3.7	3.7	3.5	2.8	2.7	2.2	1.9			
		Hard	5.0	3.5	3.5	3.5	3.2	3.0	2.4	2.4	2.0	1.5			
Auger YA 18000	Diameter(mm)		150-400	500	600	650	700	750	800	850	900	950	1000	1100	1200
	Drilling Depth (m)	Soft	8.6	7.2	7.1	7.0	6.5	6.1	6.0	5.7	5.5	5.3	5.0	4.7	4.5
		Medium	7.6	6.4	6.4	6.2	5.8	5.4	5.3	5.2	5.0	4.6	4.5	4.2	4.0
		Hard	7.0	5.8	5.7	5.5	5.4	5.0	4.8	4.6	4.6	4.3	4.2	4.0	3.7
Auger YA 30000	Diameter(mm)		150-400	450	500	550	600	650	700	800	900	1000	1100	1200	1500
	Drilling Depth (m)	Soft	9.0	8.6	8.6	8.6	8.6	8.4	8.0	7.6	7.0	6.5	6.3	6.0	5.0
		Medium	8.2	7.7	7.7	7.7	7.7	7.5	7.3	6.8	6.3	6.0	5.7	5.5	4.6
		Hard	7.3	7.0	7.0	7.0	7.0	6.8	6.6	6.2	5.7	5.3	5.0	4.8	4.0
Auger YA 50000	Diameter(mm)		300-450	500	550	600	650	700	800	900	1000	1100	1200	1500	1800
	Drilling Depth (m)	Soft	12	12	11	11	11	10	9	9	8	8	7	6	4
		Medium	11	11	10	10	10	9	7	7	6	6	5	5	3.3
		Hard	8	8	7	7	7	7	6	6	5	5	5	4	2.5
Auger YA 80000	Diameter(mm)		300-600	700	800	900	1000	1100	1200	1500	1800	2000			
	Drilling Depth (m)	Soft	15	14	14	14	12	12	10	8	8	7			
		Medium	11	10	10	10	9	9	8	7	7	6			
		Hard	8	7	7	7	7	7	6	6	6	5			





HIGH SPEED AUGER DRIVE

HIGH SPEED AUGER DRIVE

The drive unit is specially designed for **high-speed applications**, which can bring users unparalleled productivity.

Product specifications can be customized according to customer application requirements.



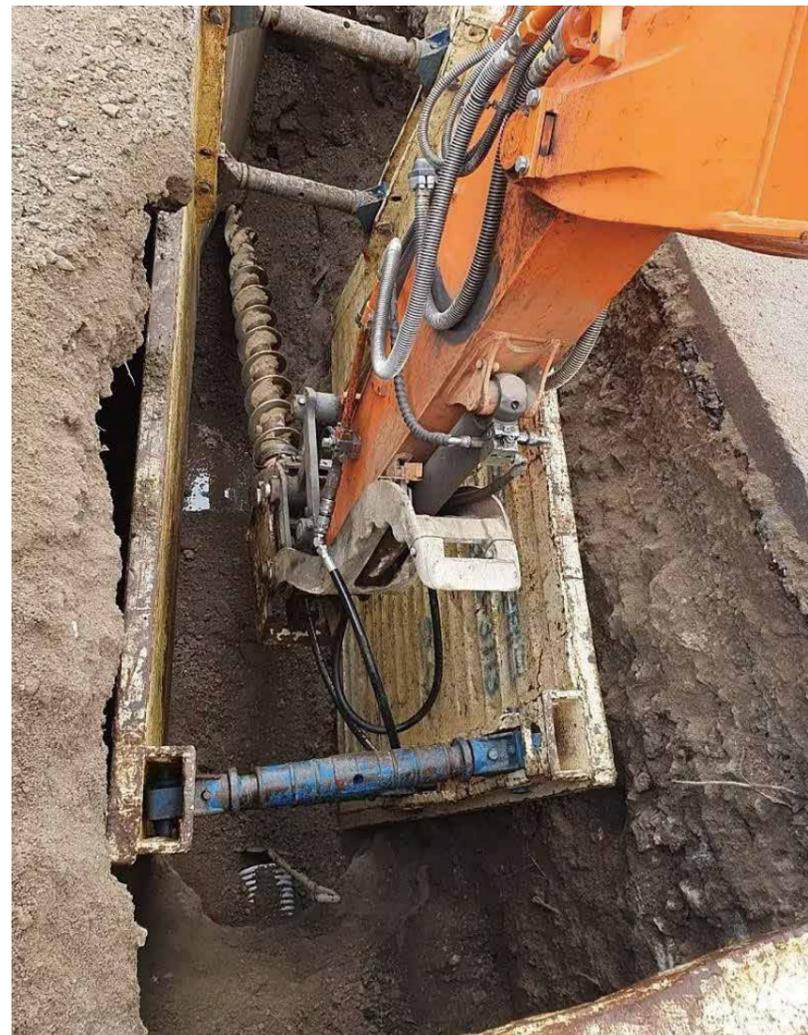
HORIZONTAL DRILL



HORIZONTAL DRILL AUGER DRIVE



It is designed for **horizontal drilling**, often used for some foundation penetrations. Product specifications can be customized according to customer application requirements.





ACCESSORY

HITCH

- ① Double Pin Cradle Hitch
- ② Single Pin Hitch
- ③ Double Pin Hitch
- ④ Skid Steer Loader Frame

SENSOR

- ⑤ Angle Indicator
- ⑥ Torque Indicator
- ⑦ In-cab Monitor

TOOL

- ⑧ Log Splitter
- ⑨ Hole Cleaner
- ⑩ Stump Planer
- ⑬ Core Barrel

AUGER

- ⑪ W2 Earth Augers
- W3 Combination Auger
- W4 Rock Auger
- Auger Extension
- ⑫ Helical Piles



HITCH

The choice of hitches varies depending on the application, attachment, and your base machine. Below are four types of Yichen hitches, which can cover most usage scenarios.

SINGLE PIN HITCH



The single pin hitch is lightweight and non-bulky, making it easy to transport and fit and offers a financially economical option.

DOUBLE PIN HITCH



The double pin hitch can be supplied in both loose and fixed pin versions to suit standard and quick hitch solutions on most excavators & backhoes. It is suitable for all Yichen drive unit ranges.

DOUBLE PIN CRADLE HITCH



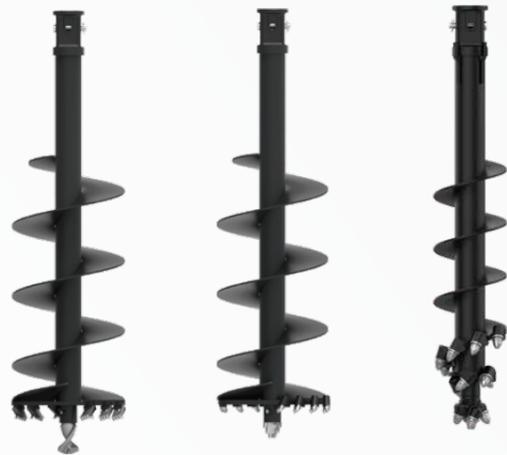
This hitch is suitable for all Yichen drives from the YA2000 to YA100000. Will eliminate Auger swing during dirt shake off, will enable you to safely transport your Earth Drill and Auger on site.

SKID STEER LOADER FRAME



This product is designed to allow you to take your auger drive and add it to a skid steer mounted frame with slide operation. It is suitable for Yichen drives from the YA2000 to YA5000.

AUGER



PRODUCT INTRODUCTION

Yichen auger products can be used perfectly with Yichen auger drives, and are also suitable for drives from most other manufacturers.

In order to cope with different geological conditions, Yichen augers are mainly divided into three categories: W2, W3 and W4. Whether it is clay geology or rock geology, you can find a solution that suits your application. Yichen augers are made of the most advanced design and the best materials. Can effectively improve your production efficiency.

Excellent reliability and durability.

PRODUCT FEATURES



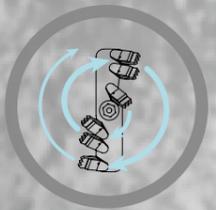
HUB OPTIONS

Yichen augers are available with all major standard hubs on the market, including 65mm Round, 75 and 110mm Square, 2" and 2.5" Hex etc.



SHALLOW PITCH FLIGHTS

This feature design provides **maximum earth moving** capacity of Yichen auger.



EFFICIENT CUTTING ANGLE

Constant Spiral Cut improves productivity. **Fresh cut in every revolution.**



SAFE CONNECTION

The safety pin design ensures that the auger will **not fall off your auger drive at any time.**



HEAVY DUTY TUBE

Yichen only use the **highest grade steel** for our auger shaft, the sizes vary according to the grade of auger drives and applications.

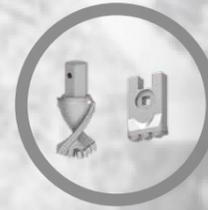


EASY TOOTH LOCKING

No special installation tools are required, simple but effective structure holds teeth secure in all directions.

PILOT AND TOOTH OPTIONS

Yichen augers mainly has three types of pilot and tooth combinations designed to deal with different geological conditions. You can find the most suitable configuration for your application from them. **All of them are tungsten carbide tipped, makes them sturdy and durable.**





W2 EARTH AUGERS
(EARTH/CLAY/SHALES)



All purpose earthauger for general drilling

Efficient and cost effective auger for general purpose drilling in earth, clay shale and soft rocks. Multi-faced tungsten providing longer wear life and greater cutting performance.

W3 COMBINATION AUGER
(ALL GROUND CONDITIONS)



Taper teeth design the ultimate all performance auger

The angle and geometry of the teeth to the pilot is the key to the efficiency in which these augers perform. This auger is fitted with Tungsten Taper Teeth for the ultimate ripping ability in fracturable rock, permafrost and general earth conditions.

W4 ROCK AUGER
(CONCRETE/ SHALE/ FRACTURABLE ROCK)



Heavy duty auger for dedicated rock drilling

YICHEN Rock augers - heavy duty engineered design, with high efficiency cutting heads to maximize your rock drilling performance. Fitted with a range of quality wear parts providing superior wear and performance.



TUNGSTEN CARBIDE TIP IN PLACE

Yichen auger pilot and teeth are **all equipped with tungsten carbide tips**, giving the auger excellent cutting performance, wear resistance and corrosion resistance.

It can maximize the service life of your auger and reduce usage costs.

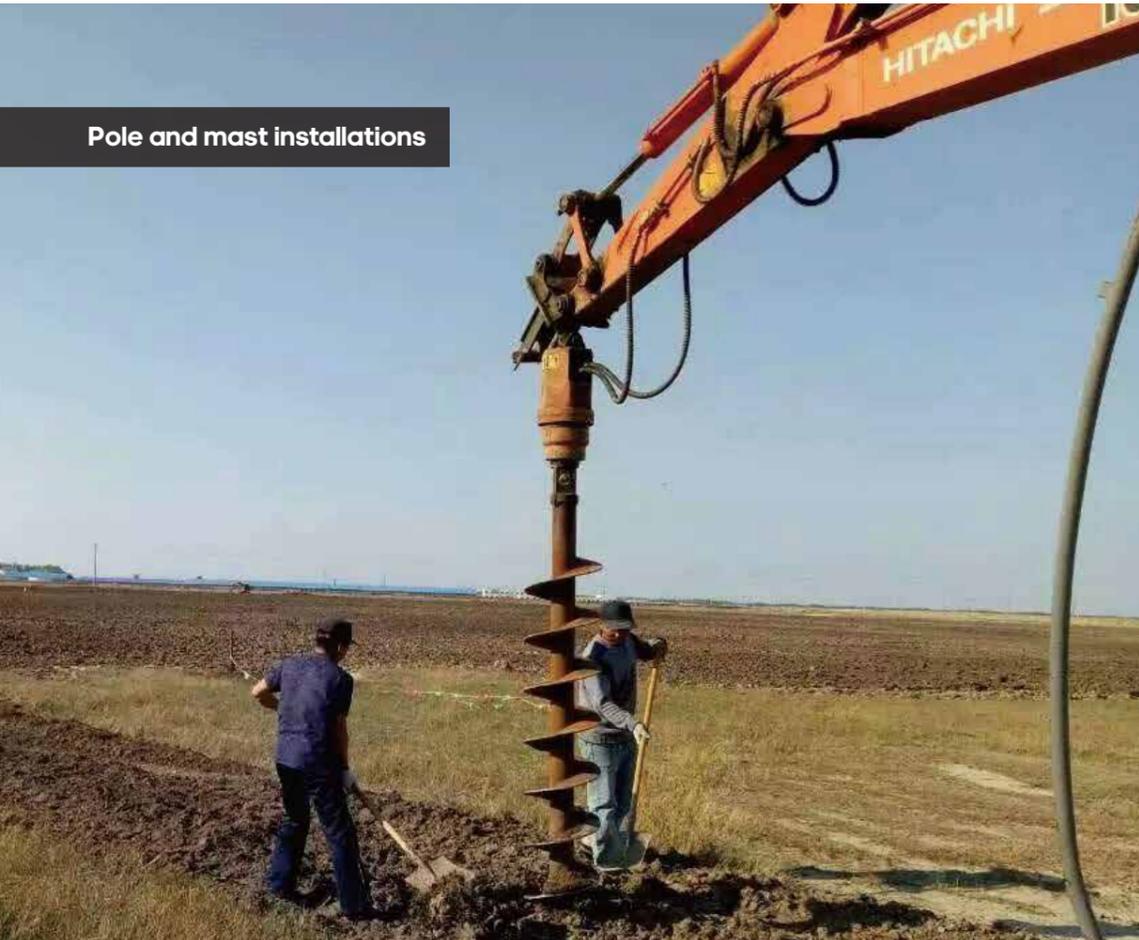




APPLICATIONS

APPLICATIONS

Pole and mast installations



Well drilling



Tree planting



Foundation piles



Frozen soil drilling



LOG SPLITTER



PRODUCT INTRODUCTION

Process and reuse logs with ease.

Suitable for 1–5 ton excavators and skid steer loaders, the compact and durable log splitter produced by Yichen can easily, quickly and efficiently process fallen trees into manageable fragments.

As the log splitter rotates, the self-guided threaded body engages the log and pulls the log splitter into the log. The tip of the cone quickly passes through the log, splitting it in two. For larger logs, the wood splitter can be repositioned to continue splitting along the entire length of the log.

Yichen Log Splitter is a quick and easy attachment to your existing auger.

PRODUCT FEATURES

The Yichen Log Splitter makes the job simple and efficient, and it can quickly dispose of fallen trees into manageable pieces.

SINGLE FIXING POINT

Securely fix to the Log Splitter to your existing drive unit.

COMPACT AND ROBUST

A solid **one piece construction** for a sturdy, reliable tool.

SELF GUIDING

The **self-guiding threaded** body engages with the timber, drawing the Log Splitter into the log.

CONICAL PROFILE

The conical shape can be drilled in quickly and split the timber.

NO MAXIMUM LOG LENGTH

The Log Splitter can be repositioned to continue the split along the whole length of the log.

REPLACEABLE HARDENED CONE TIP

The cone tip is **hardened** to make it more durable, and the replaceable tip design gives the Yichen log splitter an **extremely long service life**.

MOD.	Base Machine Compatibility	Diameter (mm)	Length (mm)	Hub Options	Unit Weight (kg)	Drive Compatibility
ALS-180	1-5 tonnes excavators or skid steer loaders	180	300	65 Round	14.6	YA2000 YA3000 YA5000

STUMP PLANER



PRODUCT INTRODUCTION

Suitable for 1T-5T skid steers and excavators.

Tree stump removal is a noisy, messy, and time-consuming job. Traditional removal methods shower debris over a large area, making cleanup a time-consuming job. YICHEN Stump Planer is a quick and easy add-on attachment to any soil auger, providing effective, simple and clean removal of stumps of any size, making it a must-have for those involved in ground preparation and woodland maintenance.

**If the stump has a larger diameter than the Stump Planer, use a multi-spot approach by planing in multiple locations and overlapping each location to ensure complete removal.*

PRODUCT FEATURES

Yichen Stump Planer allows you to easily complete the tree stump cleaning work.

SAFE CONNECTION

The safety pin design ensures that the auger will not fall off your auger drive at any time.

EASY CUTTING

The Z-shaped Blade Design can **effectively reduce the resistance in the cutting process**, so that the cutting becomes more smooth. The tip of the blade can easily cut into the stump.

DURABLE

The blade and tip of Yichen Stump Planer **can be replaced** when damage or wear occurs, which can greatly improve the service life of this tool.

HUB OPTIONS

Optional hub makes Yichen Stump planer are able to fit different specification of drive output shaft, including 65mm round, 75mm square, 2" and 2.5" hex, etc.

HIGH EFFICIENCY

The first group of blades of Yichen Stump Planer is used to cut the inner circle near the cutting center, and then the second group of blades will cut the outer ring. **The Two-stage Cutting Design can effectively improve the cutting efficiency.**



MOD.	Base Machine Compatibility	Diameter (mm)	Length (mm)	Hub Options	Unit Weight (kg)	Drive Compatibility
ASP-250	1-5 tonnes excavators or skid steer loaders	250	635	65 Round	25	YA3000 YA5000
ASP-350	4.5-10 tonnes excavators or skid steer loaders	350	675	75 square	33	YA8000 YA10000

HELICAL PILE

INFORMATIZATION INSTALLATION SYSTEM

Yichen helical pile installation system provides strong support for the installation of helical piles/anchors. It consists of a drive system, sensor system, and in-cab monitoring system.

The data transmission between system components is completed through wireless signals, the monitored real-time data will be fed back to the monitoring system in the cab of the base machine. Yichen helical pile installation system can endow operators with the ability to accurately control the installation angle and read real-time changes in the ground state.



In-cab Monitor



Drive Unit



Angle Indicator



Torque Indicator

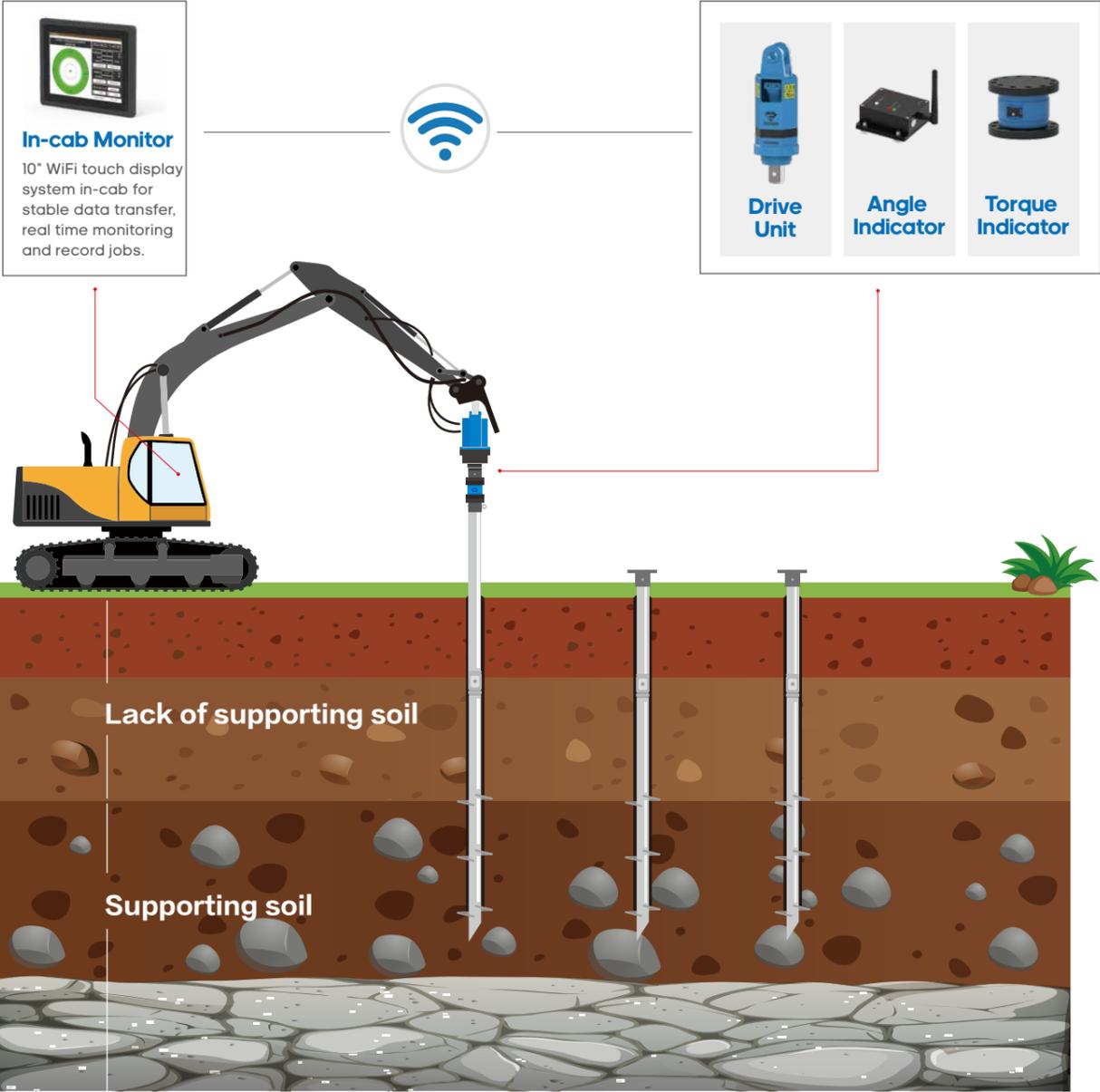




APPLICATIONS

- Pole bases
- Underpin existing foundations
- Walkways, boardwalks
- Telecommunication masts/platforms
- Electrical equipment, pylons and poles
- Buildings/modular buildings (mobile houses)
- Highways structures (signage)
- Concrete slab lifting and stabilization
- concrete-less foundations
- Rail structures (signalling, platforms, overhead line equipment)
- Structural support (compression or tension) for both permanent and temporary structures
- Temporary/permanent seating (stands)
- Anchors (back stays/tension guys)
- Retaining walls, flood defences, sea walls, bulkheads
- Wind turbines
- Solar farms
- Fencing
- Utility and pipeline tie downs
- Slope stabilization,

A helical pile can be used in nearly any situation and where driven or cast in place piles are currently used.



HELICAL PILES

PRODUCT PARAMETER

	AP - 18	AP - 22	AP - 36	AP - 46
Shaft	2.875" x 0.217" Nominal	3.5" x 0.3" Nominal	4.5" x 0.337" Nominal	5.5" x 0.361" Nominal
Bolts	0.875"	0.875"	1"	1"
Helices	0.375" Thick, Helix Die-Pressed8", 10", 12", 14" & 16" Diameter Available	0.5" Thick, Helix Die-Pressed8", 10", 12", 14" & 16" Diameter Available	0.5" Thick, Helix Die-Pressed10", 12", 14" & 16" Diameter Available	0.5" Thick, Helix Die-Pressed10", 12", 14" & 16" Diameter Available"
Pitch	3"	3"	3"	3"
Coating	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
Compression Capacity				
Ultimate Capacity	36 tons	44 tons	72 tons	92 tons
Allowable Capacity	18 tons	22 tons	36 tons	46 tons
Tension Capacity				
Ultimate Capacity	32 tons	36 tons	62 tons	78 tons
Allowable Capacity	16 tons	18 tons	31 tons	39 tons

Product advantages

- Cost Effective
- Quick Installation
- No Curing Time
- Can be battered
- Proven Engineering
- Environmental Friendly
- Installation in All Weather Conditions
- Re-Usable
- Low Construction Noise
- Vibration Free
- Removable for Temporary Structures
- Can Be Grouted After Installation
- Resist Corrosion Through Galvanization





ANGLE INDICATOR

PRODUCT PARAMETER

The Yichen angle indicator can detect the drilling angle of auger or helical piles (anchors) in real-time, and transmit angle data to the In-cabin Monitor through wireless transmission to form a visual image, **assisting the operator in completing precise angle control.**

MOD.	Temp Effect on Output	Operating Temp Range	Data Transmission	Power	Protection Class	Accuracy	Capacity
AAS-360	±0.5° (-40°C~+85°C)	-20° TO 80°C	Wireless	Lithium Battery	IP66	0.1° (static) 0.5° (dynamic)	X: ±180° Y: ±90° Z: ±180°





IN-CAB MONITOR



PRODUCT PARAMETER

The In-cab Monitor installed in the cab of the base machine is used to receive and record data from sensors, and convert these data into more intuitive graphics, **providing real-time information for operators and assisting them in completing various precise operations.**

MOD.	Display Size	System	Operating Temp Range	Data Transmission	Power	Protection Class
EM-10W	10.1'	Win	-20° TO 60°C	Wireless	Lithium Battery	IP67





TORQUE INDICATOR



PRODUCT PARAMETER

The Yichen Torque Indicator can achieve real-time measurement of torque and transmit torque data to the In-cabin Monitor through wireless transmission. **For helical piles (anchors) installed through Empirical Torque Factor, it is an essential equipment.**

Operating Temp Range	-20° TO 80°C	Temp Effect on Output	0.05% F.S./10°C
Linearity	0.05% F.S.	Temp Effect on Zero	0.05% F.S./10°C
Hysteresis	0.05% F.S.	Impadance	700Ω
Repeatability	0.05% F.S.	Working Voltage	5-15V
Zero Balance	0.05% F.S.	Data Transmission	Wireless
Safe Overload	150% F.S.	Protection Class	IP66

MOD.	Max. Capacity	Size	Weight
ATS-10	10000N.m	Ø230x180mm	34.5kg
ATS-20	20000N.m	Ø230x180mm	34.5kg
ATS-50	50000N.m	Ø280x190mm	48kg
ATS-100	100000N.m	Ø300x220mm	74.7kg





APPLICATIONS

APPLICATIONS

Structural support (compression or tension) for both permanent and temporary structures



Buildings/modular buildings (mobile houses)



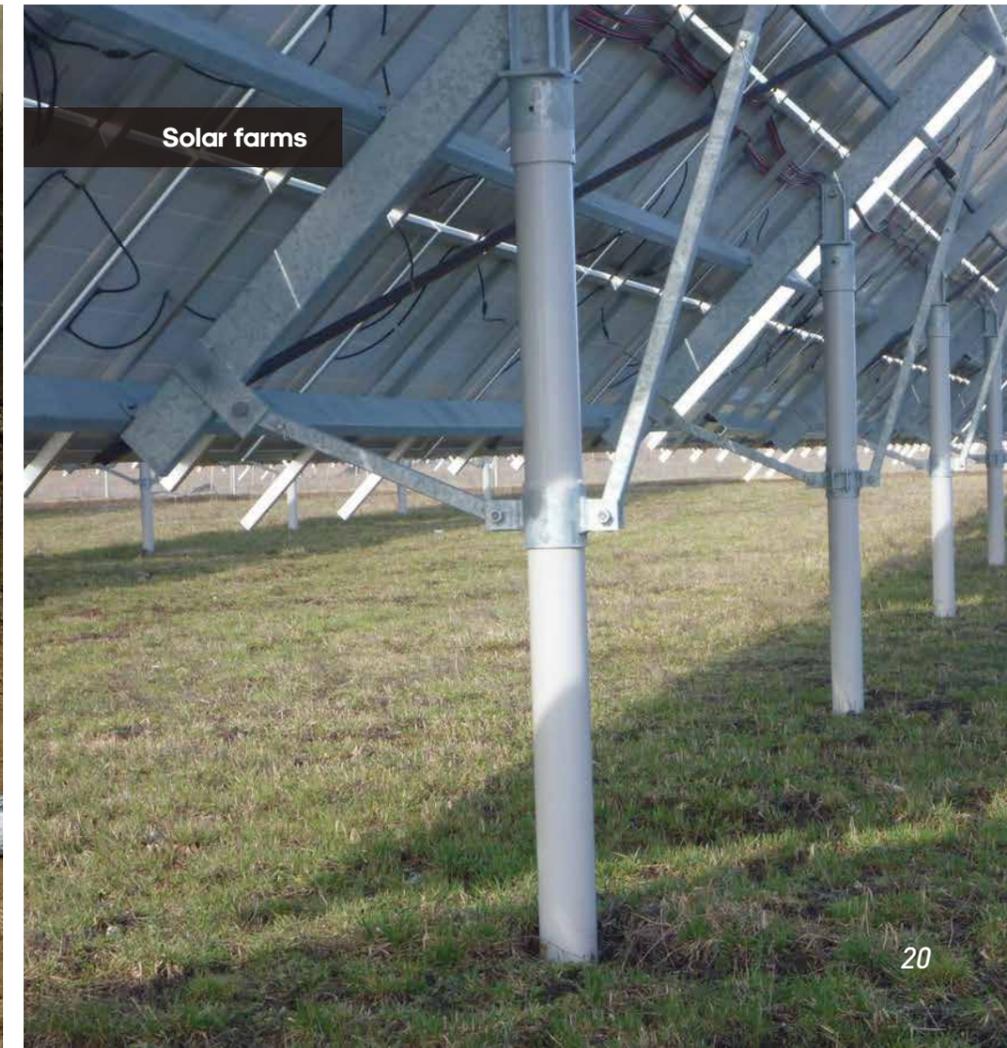
Electrical equipment, pylons and poles



Concrete slab lifting and stabilization



Solar farms





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