

GREEN MIDDLE EAST

PRODUCT LINE PRESENTATION

WHO WE ARE

- WE ARE IN THE MARKET SINCE 2014 WITH VERY LONG EXPERIENCE IN DIFFERENT SECTORS
- (INFRA , CONSTRUCTION , FOUNDATION , MINING , QUARRIES , MARINES AND DREDGING)
- COVERING (MIDDLE EAST , GCC , AFRICA)
- OPERATING WITH BUSINESS MODEL BUILT ON **TRUST** AND **QUALITY**
- OUR CONCEPT IS ...
- (SOLUTION PROVIDER FOR HIGH PERFORMANCE WITH LOW OPERATION COST)

OUR STORY ..

- WHEN WE STARTED IN THE MARKET WITH DIFFERENT PHLOSIFY TO PROVIDE SOLUTIONS AND CONSULTAIONS TO OUR CUSTOMERS
- WITH OUR CONSEPT OF PROVIDING HIGH PERFORMANCE WITH LOW COST
- WE BUILT OUR VALUABLE REPITATION IN THE MARKET BASED ON TRUST AND QUALITY
- WHEN THE WORLD START CHANGING TO SUSTAINABILITY AND LOOKING FOR ENVIRONMENT FRIENDLY TOOLS AND LOW EMISSIONS MACHINES
- IT WAS THE TIME TO EQUIP WITH THE ENVIROMENT AND BECOMING
 - (GREEN MIDDLE EAST MACHINERY)
- SINCE THAT TIME WE ARE PROVIDING SMART SOLUTIONS TO OUR CUSTOMRS PROJECTS TO ..
- >> INCREASE EFFICENCEY AND PERFORMANCE
- >> DECRESE DOWN TIME AND OPERATION COST

OUR VISION

- BE THE NUMBER ONE PROVIDER OF CUSTOMER VALUE AND SOLUTIONS IN ALL TYPES OF PROJECTS .

OUR MISSION

- STRENGTHEN OUR MARKET LEADERSHIP BY CREATING DYNAMIC AND PROFITABLE RELATIONSHIPS WITH CUSTOMERS AND SUPPLIERS THROUGH INOVATIVE SOLUTIONS AND COMMITTED EMPLOYEES

OUR SERVICES ..

- SALES (HEAVY EQUIPMENT MACHINES , ATTACHMENTS , OIL AND BATTERY)
- RENTAL (HEAVY EQUIPMENT MACHINES AND ATTACHMENTS)
- SERVICE (HEAVY EQUIPMENT MACHINES AND SPARE PARTS)
- COUNSALTAIONS (MACHINE OPTEMIZATION AND MATION OF OPERATION)

GREEN PRODUCT LINE

1* SIMEX	(HYDRAULIC ATTACHMENTS FOR EARTH MOVING MACHINERY)	ITALY
2* GARBIN	(MICRO AND FIBER AUTO TRENCHERS)	ITALY
3* YAMAMOTO	(ROCK SPLITTER)	JAPAN
4* WOLF	(ROCK DRILLING EQUIPMENTS)	USA / BRAZIL
5* SURESTRIKE	(ROCK IMPACT HAMMER)	USA
6* SPS RIPPER	(VIBRO RIPPER)	S.KOREA
7* SPS PILLING	(VIBRO HAMMER / PILLING DRIVE)	S.KOREA
8* COSBIN	(TELESCOPIC ARM / CLAMSHELL)	ITALY
9* RIPPER ARM	(ROCK RIPPER ARM)	CHINA
10* RIC	(RAPID IMPACT COMPACTOR)	CHINA
11* MAXIMAL	(FORKLIFT FULL RANGE)	CHINA
12* GREEN LUBE	(FULL RANGE AUTO & MACHINERY OIL AND LUBRICANTS)	UAE
13* GREEN POWER	(FULL RANGE OF AUTO & MACHINERY BATTERIES)	INDIA



HYDRAULIC ATTACHMENTS FOR EARTHMOVING MACHINES

Simex is the technological partner of reference for countless applications, even the most challenging and complex.

Simex Products are many and covering different application ..

* Construction * infra * mining & Quarries * Roads. * Marines.



TF. CUTTER HEADS DOUBLE DRUM

SIMEX TF CUTTER HEADS ARE IDEAL FOR TRENCHING, PROFILING ROCK AND CEMENT WALLS, TUNNELING, QUARRYING, DEMOLITION, DREDGING, FINISHING OPERATIONS AND UNDERWATER WORKS. THEY ARE HIGHLY EFFECTIVE WHERE CONVENTIONAL EXCAVATION SYSTEMS ARE TOO WEAK AND PERCUSSION SYSTEMS HAVE LITTLE EFFECT. THEIR QUIET OPERATION ALLOWS THEM TO BE PUT TO WORK NEAR SENSITIVE AREAS (RESIDENTIAL ZONES, HOSPITALS, SCHOOLS, BRIDGES AND INFRASTRUCTURE). ESPECIALLY RECOMMENDED FOR FINISHING OPERATIONS, WHERE HIGH PRECISION, MINIMUM DISTURBANCE AND OPTIMUM AESTHETIC RESULT ARE REQUIRED.





T/TA WHEEL SAWS

- INTENDED FOR SKID STEER MOUNTING, SIMEX WHEEL SAWS OFFER DIFFERENT SOLUTIONS FOR WORKING ON HARD OR COMPACT SURFACES, INCLUDING ASPHALT, CEMENT AND ROCK: CUTS AND SMALL TRENCHES, SET-SECTION TRENCHES, MINI- AND MICRO-TRENCHES FOR FIBER OPTIC CABLE INSTALLATION. FULL WHEEL PROTECTION AT ANY WORKING DEPTH ENSURES MAXIMUM SAFETY OF PERSONS AND PROPERTY.



PLC ROAD PLANERSSELF-LEVELING WITH CONVEYOR BELT

- SIMEX PLC SELF-LEVELING PLANERS CLEAN THE MILLED TRENCH AND DEPOSIT THE EXTRACTED MATERIAL TO THE RIGHT OR LEFT. THANKS TO THE SELF-LEVELING SYSTEM, PLANING DEPTH IS CONSTANT IN ANY CONDITION. SELF-LEVELING PLANERS ARE INDISPENSABLE FOR OPTIMIZING COLLECTION OF MILLED MATERIAL FOR REUSE ON SITE OR FOR TRANSPORTING AWAY. CAN BE INSTALLED WITH SPRAY SYSTEM FOR DUST CONTROL.

RS

PLANERS FOR RUMBLE STRIPS



- SIMEX RS PLANERS ARE DESIGNED TO CREATE RUMBLE STRIPS (LINES MILLED INTO THE PAVEMENT TO PRODUCE NOISE AND VIBRATION AS A SAFETY MEASURE). CAN MILL STRIPS IN DIFFERENT SIZES AND/OR MODIFY THE DISTANCE BETWEEN THE STRIPS ACCORDING TO CLIENT REQUIREMENTS OR LOCAL REGULATIONS. SIZE AND SPACING ARE CONSTANT AND INDEPENDENT FROM THE ADVANCEMENT SPEED. THE OSCILLATING MOTION IS TRANSMITTED TO THE MILLING UNIT ONLY; FRAME IS FIXED WITH RESPECT TO THE PRIME MOVER. NO VIBRATIONS (NO WEAR) ARE TRANSMITTED TO THE LOADER BOOM OR THE OPERATOR. CONVERTIBLE (SIMEX PATENT) INTO:
 - STANDARD PLANER WITH SIMEX SELF-LEVELING SYSTEM
 - SURFACE PLANER FOR REMOVAL OF ROAD MARKINGS OR SURFACE FINISHING.MILLING DRUMS IN DIFFERENT SIZES ARE AVAILABLE ON REQUEST.



MICRO-TRENCHES

With a maximum depth of 30 cm and a maximum width of 4, MakBrent multifunction trenchers are perfect for micro-trenches and are used for the laying optical fiber and FTTH connections.

MINI-TRENCHES

MakBrent trenchers can be used to rapidly and thoroughly prepare the soil for the laying of underground utilities such as power lines, telecommunication facilities, sewage lines and water networks. The width of the dig goes from 5 to 20 cm.

REMOTE CONTROL

In 2014, MakBrent &ndash, Garbin has been the first company in the world to develop a radio-controlled multifunctional trencher, making it possible for operators to reduce their exposure to the risks related to work activities.



Multifunction machine ➔

MakBrent's radio-controlled multifunction excavators are capable of carrying out microtrenching and mini-trenching for laying fiber optics and underground utilities, as well as all the operations necessary to open and close the construction site. Equipment replacement is very fast and safe due to the quick coupling governed by radio control.



Wheel trencher ➔

With technology that has been evolving for several decades, MakBrent wheel trenchers are ideal in excavating hard surfaces such as asphalt and rock. Reliable and safe, thanks to their radio control, they make it easy to operate in excavations for fiber optics and the laying of all underground utilities such as power grids, water pipes and telecommunications pipelines.



Chain trencher ➔

Ideal for trenches in vegetated or mixed soils, MakBrent chain trenchers are characterized by their strength, reliability, safety, maneuverability and ease of use. The range of models covers all kinds of excavation needs: from digging water networks in gardens to laying underground utilities.



Excavator equipment ➔

Hydraulic digging chains and wheel saws for mini excavators, backhoe loaders, skid-steer loaders and conventional diggers, fully compatible with major brands on the market via special ISO attachment.



Implements for tractors ➔

Ideal for trenching in vegetated or mixed soils, MakBrent's mechanical tractor chain and catenary equipment features strength, reliability and safety.

OPTICAL FIBER

TELECOMMUNICATIONS

ELECTRIC GRIDS

WATER NETWORKS

CONSTRUCTION

AGRICULTURE

OIL & GAS

FORESTRY



MAK 75 EVO.1

Technical Data 

Brochure 

Mak75 EVO.1 is a multifunction machine capable of carrying out all site operations. Thanks to its wide range of quick-coupling accessories, it allows to:

- ✓ SAW DIGGING
- ✓ CHAIN TRENCHING
- ✓ LOAD AND MOVING MATERIALS WITH BUCKET
- ✓ ASPHALT AND ROAD MILLING
- ✓ CLEANING SITE
- ✓ LIFTING BY FORKS
- ✓ MOVING MATERIALS WITH BLADE
- ✓ CLOSING DIG USING MIXING BUCKET
- ✓ ATTACHMENTS USE WITH ADAPTER

MWS



Disk equipment

Trench digging on hard surfaces

SCOPRI

MWSN



Digging wheel with conveyor

Excavation and waste material collection

SCOPRI

MCT



Chain trenchers

Trench-digging on soft soils

SCOPRI

MRP



Road planers

Floor preparation and leveling

SCOPRI

APPLICATIONS

BK



Multifunction buckets

Debris collection and discharge

SCOPRI

MBM



Mixing buckets

Track closed with concrete

SCOPRI

MSW



Sweeper

Site cleaning

SCOPRI

DB



Angular blade

Material handling

SCOPRI

APPLICATIONS

ADVANTAGES

vs traditional machinery.

PEOPLE

- Higher comfort for the operator
- Higher safety
- Higher ease of use

ENVIRONMENT

- Less environmental impact
- Less waste material to dispose of
- Lower fuel consumption

SITE

- Higher digging precision
- Higher speed
- Higher efficiency
- Less road space
- Less labour

BUSINESS

- Higher revenues
- Shorter work duration
- Lower operating costs
- Less maintenance
- Less stress from traffic stoppages, delays and penalties to pay

HIGH PRODUCTIVITY

Excavations made at 50 to 200 m/h ensure a high productivity, resulting in reduced times and costs.

SAFETY AND COMFORT FOR THE OPERATOR

The remote control allows you to work in total safety, reducing exposure to workrelated dangers.

PRECISE AND CLEAN READY-TO-USE TRACE

The machine makes it possible to trace a perfect clean track, even with curved sections and challenging grounds.

CARRY OUT ALL SITE OPERATIONS

MAK 75 EVO.1 is a multifunctional machine capable of carrying out all site operations. Thanks to the wide range of rapid hook-on accessories



Remote controlled trencher

Using radio control to manage excavation operations or equipment operation eliminates the need for manual intervention and reduces exposure to hazards. It is thus possible to control and modify in real time all the functions necessary to the multiple needs of the construction site.



Low emissions engine system

MAK 75 EVO.1 is equipped with DEUTZ engine. Deutz is one of the most important manufacturers of drive systems in the international market, their products satisfy the highest technical and engineering requirements of the field.



Hydraulic quick coupling

Formally used to facilitate the operator and fully operated by radio control, the hydraulic hitch allows even the least experienced user to handle operations with ease.



IGFT

The IGFT technology - Intelligence Guide Following Track - allows the machine to independently follow a path and adapt the digging speed to the effort required to move forward, improving productivity and efficiency. This way, even inexperienced operators can obtain the best digging results and performance.



Makguard

The satellite tracking system allows to remotely control the machine location and operations through maps, tables and intuitive diagrams. Operators can analyse system data to schedule interventions, preventive maintenance and ensure maximum performance.



• **ROCK SPLITTER**

YAMAMOTO ROCK SPLITTER

Yamamoto Rock Machine, based in Tojo, Japan, has been the leader in rock drilling and splitting equipment since 1915. It is the first company to produce large diameter hydraulic rock splitter and offers the largest splitter on the market.



The Rocksplitter in action on your worksites

The hydraulic Rock Splitter was specifically designed to **excavate rock with minimal vibrations, debris, and noise**. It is an essential alternative to traditional excavation methods, particularly suited for tunnel work, dense urban areas, or confined spaces.

Our Products

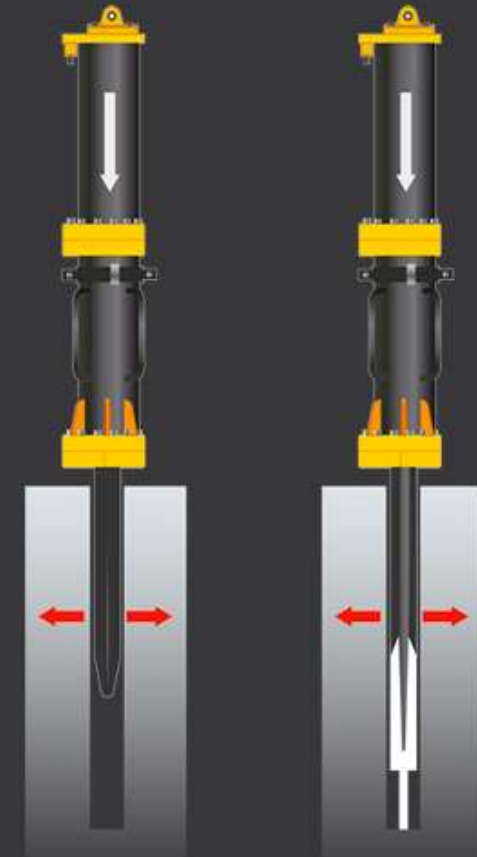
WHAT IS YAMAMOTO HYDRAULIC ROCK SPLITTER?

The use of explosives are the most common methods for excavation of hard rock. However, restrictions on blasting are increasingly strict and requires permits and Inspections. In densely populated or otherwise sensitive areas, blasting may be completely banned due to concerns about vibrations, flyrock or other safety aspects.

Yamamoto Hydraulic Rock Splitter was designed as a mean to excavate hard rock without any concerns for vibrations, flyrock or noise. The method is based on the traditional wedge and feather method but is using hydraulic power to split the rock instead of impact force.

The splitter is normally mounted on a normal excavator and uses the hydraulic power of the carrier. But it can easily be used on a crane or tailor made carrier, all depends on the type of project. The simple installation method allows it to be moved from carrier to carrier without any major modifications so the same splitter can be used in many different types of project.

For large volume rock excavation, in hard rock, there is simply no mechanical method more efficient, safe and quiet than Yamamoto Hydraulic Rock Splitter. This is the reason it has been used in worldwide in some of the most challenging and important construction projects.



Advantages of Yamamoto Hydraulic Rock Splitter

Yamamoto Ultra Large Rock Splitter has been developed and refined over the past 30 years to provide superior quality and maximum output. Key features include:



PRODUCTIVITY

With the largest splitter on the market, it also offers the highest productivity. With larger wedge you can increase the spacing between holes and do deeper with each split.



ROBUSTNESS

The Yamamoto rock splitter is designed with minimal number of parts, utilising the pressure of the excavator to avoid boosters, and manual greasing to allow for greasing all the way out to the tip of the wedges, there is nothing that can fail.



DURABILITY

All components are designed with large safety margins and precise finishing allowing the splitter to run trouble free for a long time. Many customers can use the splitter for a year without any service or repairs.





Rock Drill



SONIC Line

Hydraulic Drilling Accessory



FOX Line

Hydraulic Drilling Rig



SONIC Line

Hydraulic Drilling Accessory



MW Line

Pneumatic Drilling Rig



FOX Line

Hydraulic Drilling Rig



FOX Line

Hydraulic Drilling Rig



MW Line

Pneumatic Drilling Rig



FOX Line

Hydraulic Drilling Rig



MW Line

Pneumatic Drilling Rig



MW Line

Pneumatic Drilling Rig



ROCK IMPACT HAMMER





SURESTRIKE SS SERIES IMPACT HAMMERS

SUPERIOR OUTPUT

PROCESS FLEXIBILITY

REMARKABLE ECONOMICS

PROVEN DESIGN MADE IN THE USA 



Aggregate & Ore



Slag & Steel



Construction

Wide Range Of Sizes:

- *Models ranging from 25,000 foot-pounds striking force all the way up to 150,000 foot-pounds of striking force*

UNSURPASSED EFFICIENCY:

- *Sustainable Design - bottom line profitable*
- *Reliable Design - predictable for plant optimization*
- *Groundbreaking Design - Innovative*

- **HIGH PRODUCTION** • **FAST CYCLE TIMES**
- **EASE OF OPERATION AT LOW DB'S**
- **MINIMAL VIBRATION** • **LOW MAINTENANCE**

IMPACTFUL OPTIMIZATION:

- *Simplified Design - functionally understandable*
- *Versatile Design - naturally operational*
- *Supportable Design - easily maintainable*

Versatile In Most Applications:

- *Granite, Basalt, Limestone, Trap Rock In-ground breaking, Iron Ore, Slag, Concrete Recycle, Airport Runway, Demolition and many more*

POWERFUL CONTROL:

- *High Impact Design - aggressive for the toughest of applications*
- *Robust Design - for maximum adaptability*
- *Controllable Design - for outstanding control*

VIBRO HAMMER

Outstanding work ability and mobility and equipped with high-powered hydraulic piston motor and suitable bearing for high frequency vibration.



VIBRO RIPPER

SPS ENG VIBRO-RIPPER is one of the ECO-friendly rock breakers by reducing noise.



VIBRO HAMMER. & VIBRO RIPPER

VIBRO HAMMER TYPES

Standard type

Vibratory Hammer (Pile Driver) is an useful machine of excavator.

It handles H-beam and Sheet pile at river stream, road wall and building construction job.

Tilting type

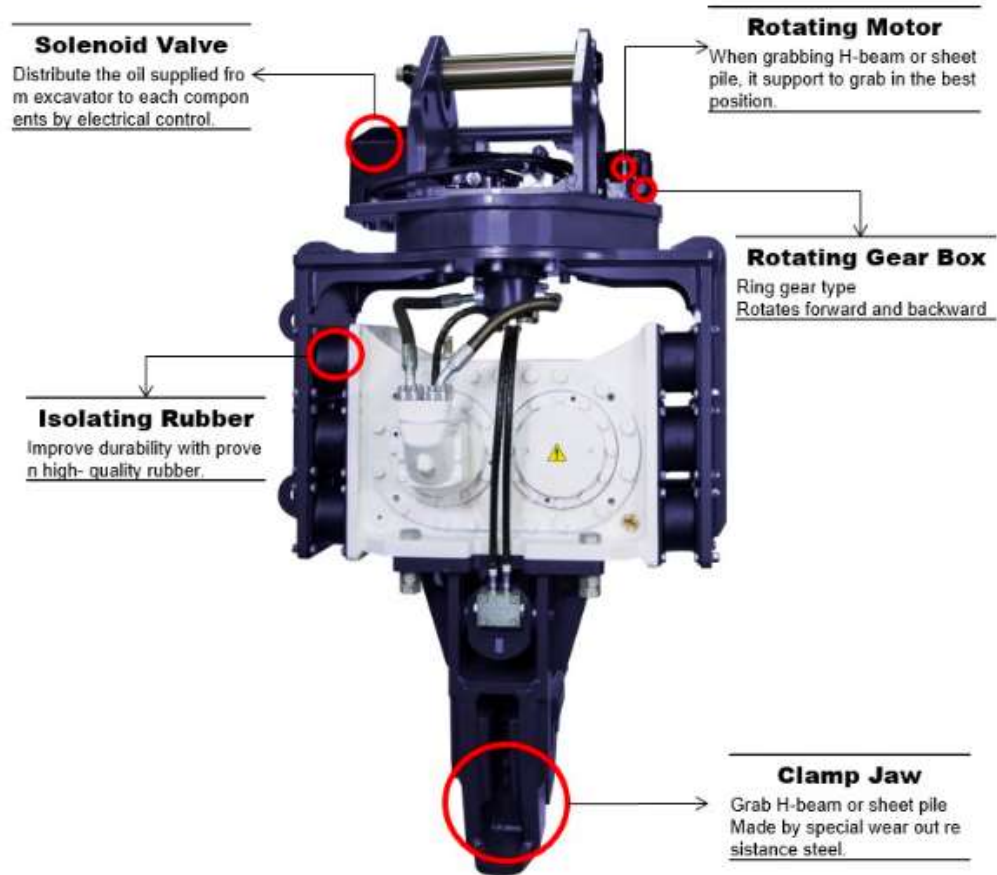
Vibratory Hammer (Pile Driver) is an useful machine of excavator.

It handles H-beam and Sheet pile at river stream, road wall and building construction job.

Side grip type

Side grip pile driver is safe, speedy and economical. With no pile length limit, side grip enables the piling works at all places by adjusting the pile angle.

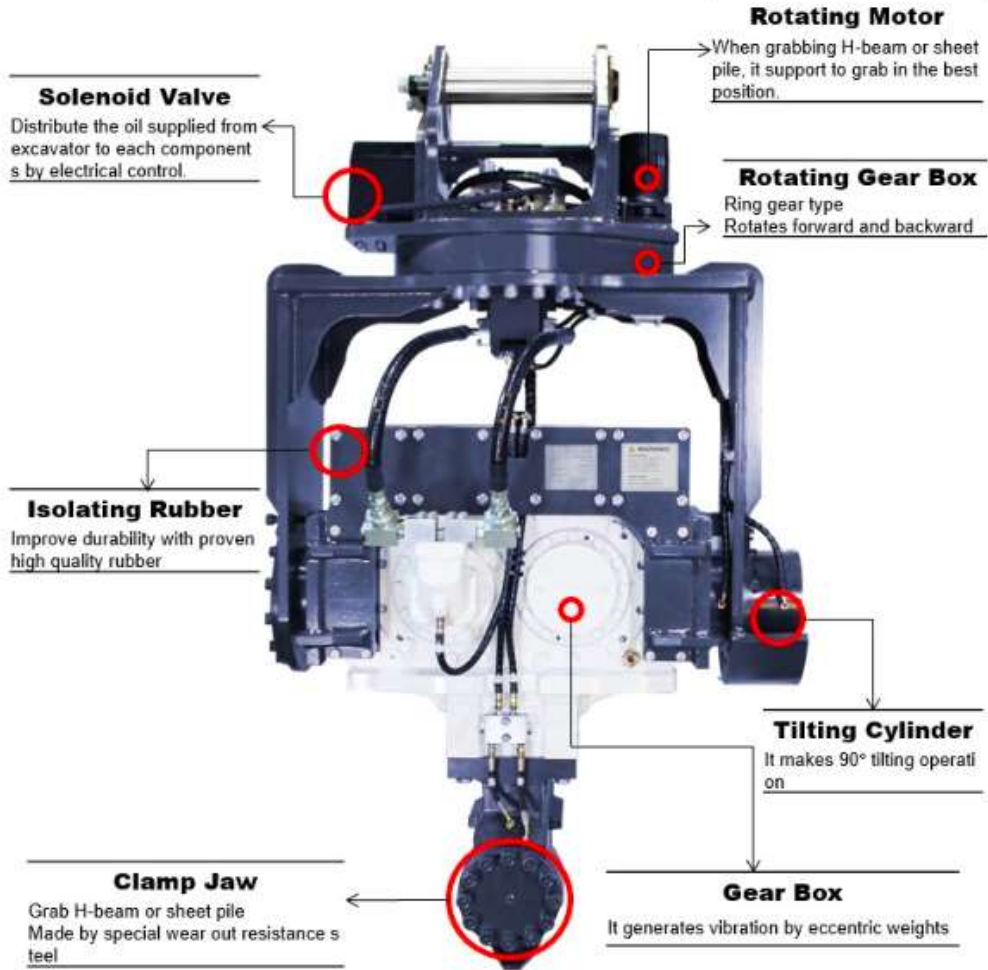
STANDARD TYPE



VIBRO HAMMER

Features

- Lower cost of maintenance than crane hammer.
- Superior mobility at narrow space work environment.
- Easier operate in critical regions such as chaotic section of city, bridge and
- Equipped with high-powered hydraulic piston motor and suitable bearing
- Proven high quality rubber absorbs vibrator.
- Easy connect and disconnect the hammer by the use of excavator's bracket
- The clamping lug can handle and move construction objects easily.
- Pile driving power 20% up compared to the existing equipments.
- Sufficient wear-resistant design and 360-degree revolution.



TILTING TYPE

Features

- 90° tilting refracting function to pick sheet pile and work immediately.※ Improved operation efficiency compared to ordinary type.
- It has auto tilting function for easy grab an object laying down.
- Easy installation using existed pipe line of hydraulic breaker.
- 360° auto rotation function makes it easy to change direction when working with piles.
- Using tested high quality anti-vibration rubber, durability exceeds in strong vibration.
- Excellent performance without power pack.
- Powerful and slip-less clamping jaw.

Tilting Cylinder

It makes 90° tilting operation.

Solenoid Valve

Distribute the oil supplied from excavator to each components by electrical control

Rotating Gear Box

Ring gear type
Rotates forward and backward

Hook

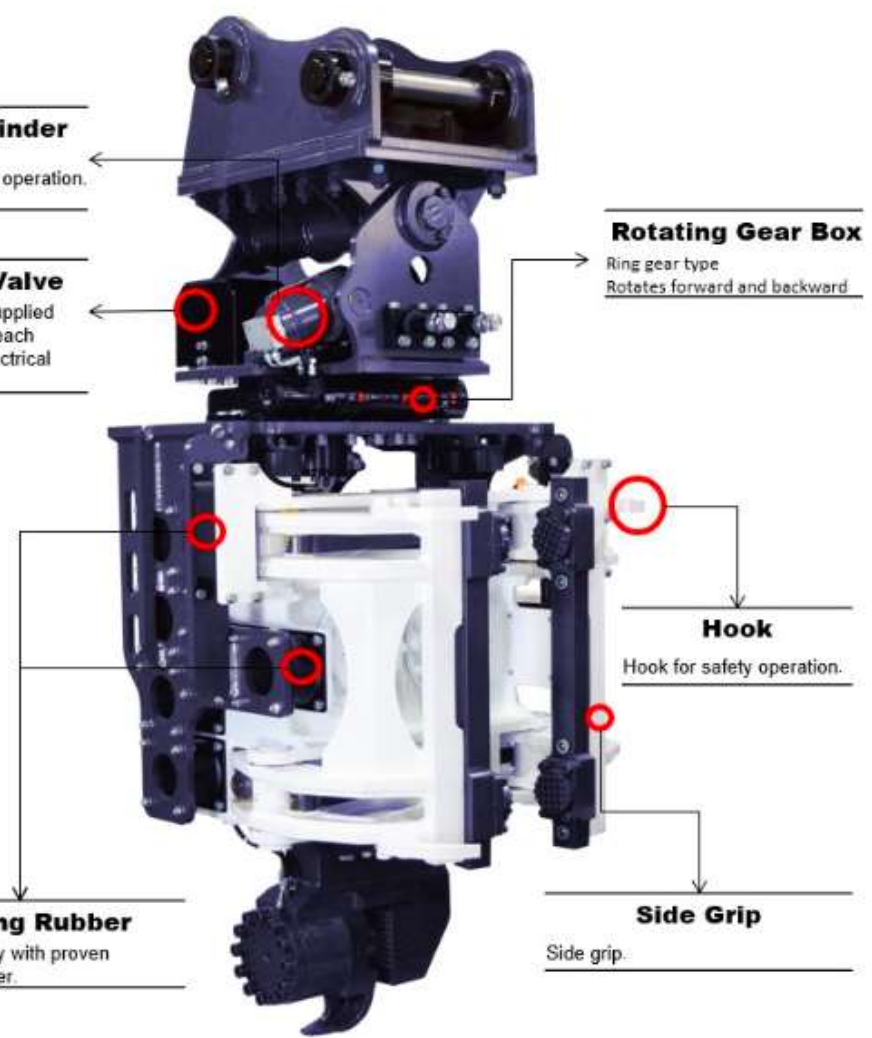
Hook for safety operation.

Isolating Rubber

Improve durability with proven high-quality rubber.

Side Grip

Side grip.

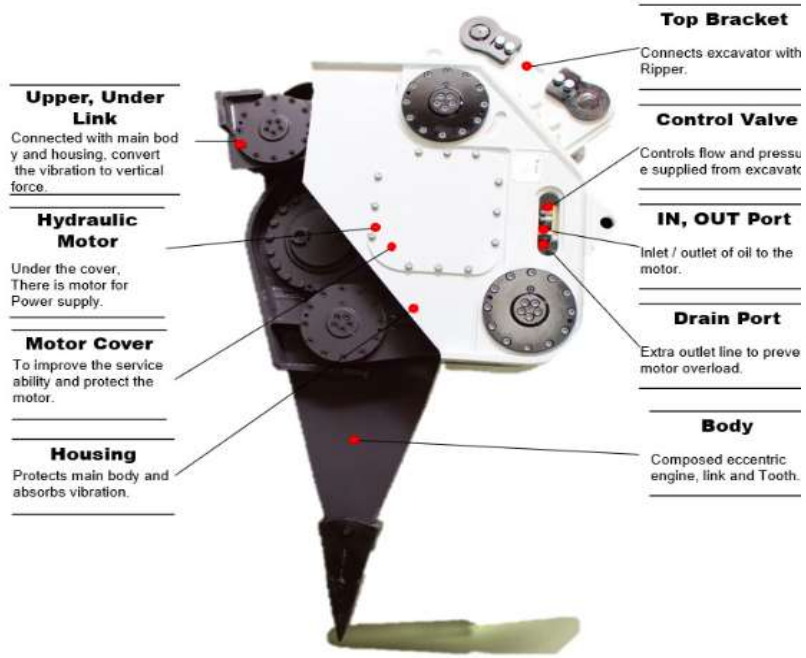


SIDE GRIP

Features

- NO LIMIT – Long sheet pile job available.
- Workable in narrow space.
- Easy to control by rotating and tilting operation system

VIBRO RIPPER



VIBRO RIPPER

VIBRO-RIPPER is one of the ECO-friendly rock breakers by reducing noise.

VIBRO RIPPER

Features

- Minimum noise under 90db..
- High in productivity compared to traditional rock breaker.
- High fuel efficiency.
- Under water operation.
- Easy maintenance.
- Wear out resistant Tooth.
- Optimal design for easy maintenance.



Telescopic Arm

Construction Excavator Customizing
Excavators for construction

Telescopic Arm for excavator – TA

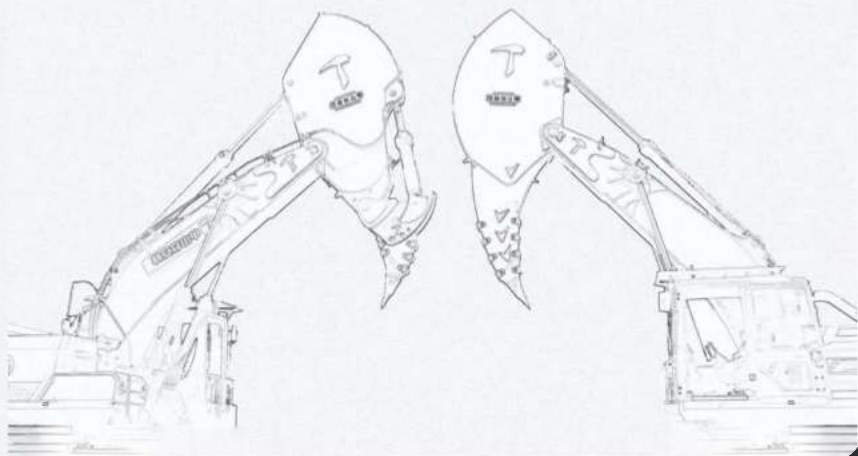
Telescopic Arm for excavator



Indispensable for work that requires **rapid and deep excavations** such as foundations, drains, etc. It is suitable for working with clamshell buckets. The design has been developed to minimize any possible breakage resulting from external contact, such as walls, etc. The hydraulic cylinders of the telescopic section are inside the arm itself. Different versions and lengths are available, along with a wide range of clamshell buckets to meet all of our customers' needs.



畅安穿山甲
CHANGANCHUANSHANJIA



RIPPER ARM

THERE ARE TWO MODELS ..

- INTEGRATED HOOK ARM
- COMINED ROCK ARM

一体式钩机臂
Integrated
Hook Arm



高效化岩石破碎解决方案
Efficient rock crushing solution

助您一臂之力！
Wish be your helping hand!

助您一臂之力！
Wish be your helping hand!



Integrated Hook Arm

一体式钩机臂

2017年，柳安穿山甲自主研发的实用新型专利技术产品：C系列一体式钩机臂正式面世。该产品通过对岩石臂小臂构造的独特创新设计，在传统岩石臂的基础上大量提升了土石方破碎效率与耐用性，兼具易于维保的优点。

In 2017, the utility model patented technology product independently developed by Chang'an Chuanshanjia Integrated Hook Arm was officially launched. Through the unique and innovative design of the rock arm stick structure, this product greatly improves the earthwork crushing efficiency and durability on the basis of the traditional rock arm, and has the advantages of easy maintenance.

1. 深挖 Deeper

传统分体臂为避免损伤到铲斗油缸，施工深度往往受限于松土器本身的长度规格。一体式钩机臂，整合松土装置与小臂，大幅提高产品整体利用率，打破传统分体臂施工的深度阈值。

The construction depth of the traditional rock arm is often limited by the length specification of the ripper itself in order to avoid damage to the bucket cylinder. The Integrated Hook Arm integrates the ripper and the stick, which greatly improves the overall utilization rate of the product and breaks the depth threshold of traditional rock arm construction.

2. 快速 Faster

一体式钩机臂采用双泵多阀双进双出的中臂油缸设计，汇集铲斗油缸液压，为小臂收放动作带来双倍流量，缩短单次动作间隔，增加单钩破碎强度，为您带来更顺畅的土石方破碎体验。

The Integrated Hook Arm adopts the design of the middle arm cylinder with double inlet, double outlet, double pump and multi-valve, which collects the hydraulic pressure of the bucket cylinder, brings double the flow rate for the retraction and release action of the forearm, shortens the single action interval, and increases the single hook crushing strength. Bring you a smoother earth and stone crushing experience.

3. 耐用 More durable

主板采用低碳高强度合金钢组成，结构致密完整，故障率降低90%，辅以业内首创的耐磨块防护设计，低维护成本，高修复效率，让您不再为耽误施工而操心。

The main board is composed of low-carbon and high-strength alloy steel, with a compact and complete structure, and the failure rate is reduced by 90%. Coupled with the industry's first wear-resistant block protection design, low maintenance costs and high repair efficiency, you no longer need to worry about delaying construction.

2000

良好工况下挖掘深度可达2000mm
The excavation depth can reach 2000mm in good working conditions

30%

双泵油缸双倍动力，出钩效率提高30%
Double power of double pump oil cylinder, working efficiency increased by 30%

90%

一体式结构，故障率减少90%
Integrated structure, failure rate reduced by 90%

Applicable hardness 适用工况

推荐机型

Recommended model

岩石抗压强度

Rock compressive strength



岩层硬度/设备 Rock hardness/Equipment	CSJ300C	30T破碎锤 Hydraulic breaker	CSJ400C	40T破碎锤 Hydraulic breaker	CSJ700C	70T破碎锤 Hydraulic breaker	CSJ900C	90T破碎锤 Hydraulic breaker
10-15Mpa	110-130m ³ /h	30-60m ³ /h	170-190m ³ /h	40-70m ³ /h	210-230m ³ /h	50-70m ³ /h	250-270m ³ /h	55-75m ³ /h
15-20Mpa			150-170m ³ /h	30-60m ³ /h	180-200m ³ /h	40-60m ³ /h	230-250m ³ /h	50-70m ³ /h
20-25Mpa					130-150m ³ /h	45-55m ³ /h	150-170m ³ /h	55-65m ³ /h
25-30Mpa							90-110m ³ /h	≤65m ³ /h

出方效率参考

Excavation efficiency reference

分体式岩石臂
Combined
Rock Arm



通用型岩石破碎解决方案
Universal rock crushing solution



Combined Rock Arm

分体式岩石臂

2019年，物安穿山甲自主研发出了J系列分体式岩石臂产品，该产品更注重施工通用性，在松土器结构、松土器与小臂连接处等多个维度进行迭代优化，与常见岩石臂产品相比，稳定性与灵活性大大提升。

In 2019, Chang'an Chuanshanjia independently developed the J series Combined Rock Arm product, which pays more attention to construction versatility, and iteratively optimizes multiple dimensions such as the ripper structure and the connection between the ripper and the forearm. Compared with common rock arm products, the stability and flexibility are greatly improved.

1. 稳固 more stable

常见松土器采用嵌入式结构，在挖掘碎石过程中，容易出现插销脱落等故障，分散挖掘动力。分体式岩石臂采用了整体式松土器结构，降低额外故障风险，聚力稳固，使用寿命更长。

The traditional ripper adopts an embedded structure. In the process of excavating the crushed rock, failures such as the bolt falling off are prone to occur, which disperses the excavation power. The Combined Rock Arm adopts a integral ripper structure to reduce the risk of additional failures, with stable cohesion and longer service life.

2. 灵活 more flexible

铲斗油缸独立增压，提升分体式岩石臂施工切入角度30°，便于操作员寻找岩石薄弱点破碎，开挖土方事半功倍。

The bucket oil cylinder is independently pressurized, and the construction cut-in angle of the Combined Rock Arm is increased by 30°, which is convenient for the operator to find the weak point of the rock and break it, and excavate the earth more easily.

3. 易更换 easy replacement

非整体化结构，松土器可拆卸，随时随地可进行更换，最大化保障项目施工流畅度。

Non-integrated structure, the ripper is removable and can be replaced anytime and anywhere, to guarantee the smoothness of project to maximum extent.

1500

良好工况下挖掘深度可达1500mm

The excavation depth can reach 1500mm in good working conditions.

30°

施工切入角度提高30°

Construction cut-in angle increased by 30°

70%

覆盖式松土器，故障率减少70%

Covered ripper, failure rate reduced by 70%

Applicable hardness 适用工况

推荐机型

Recommended model

岩石抗压强度

Rock compressive strength

CSJ900J 匹配90T挖机 Match 90T excavator  25-30 Mpa

CSJ700J 匹配70T挖机 Match 70T excavator  20-25 Mpa

CSJ400J 匹配40T挖机 Match 40T excavator  15-20 Mpa

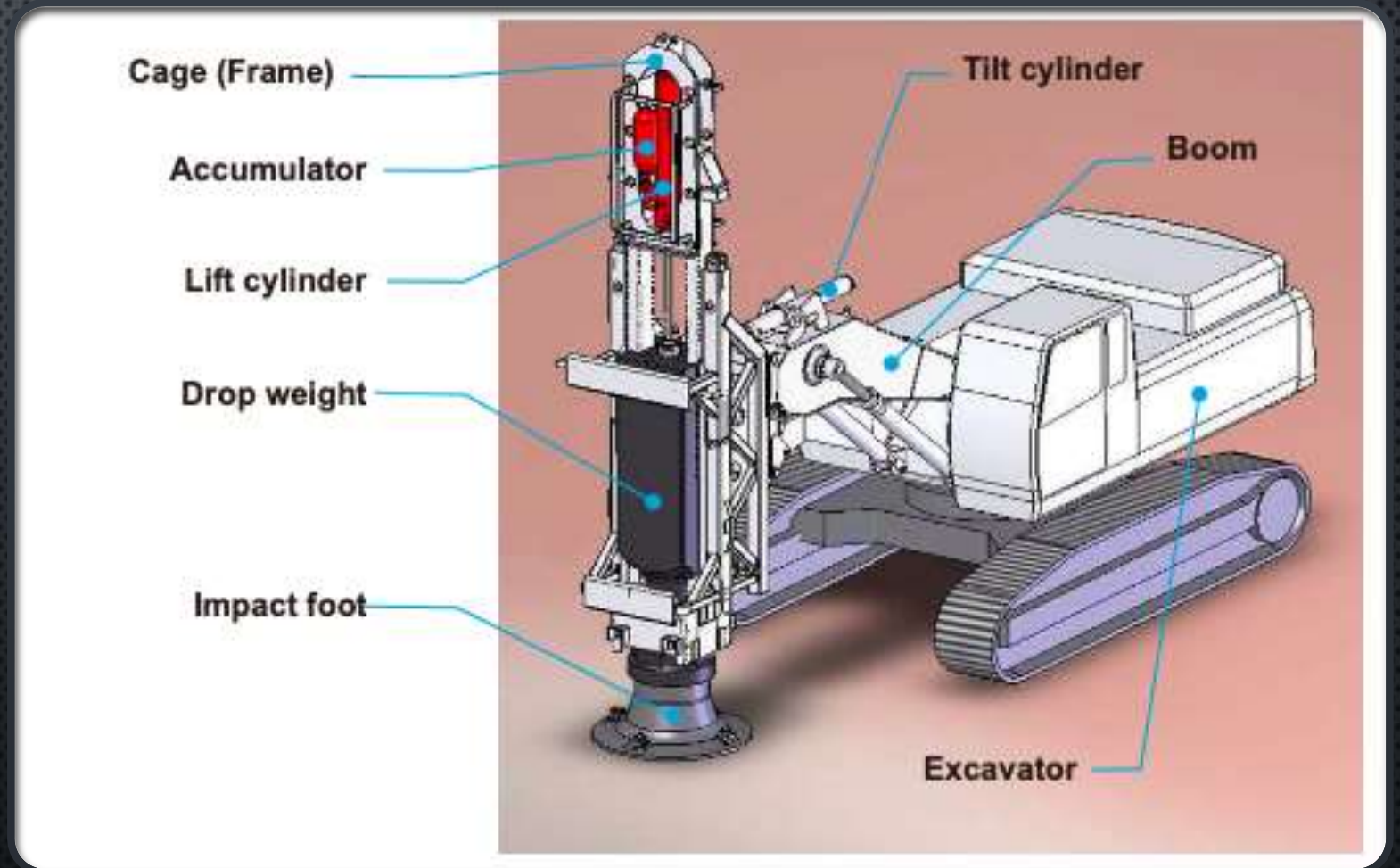


岩层硬度/设备 Rock hardness/Equipment	CSJ400J	40T破碎锤 Hydraulic breaker	CSJ700J	70T破碎锤 Hydraulic breaker	CSJ900J	90T破碎锤 Hydraulic breaker
10-15Mpa	150-170m ³ /h	40-70m ³ /h	190-210m ³ /h	50-70m ³ /h	230-250m ³ /h	55-75m ³ /h
15-20Mpa	130-150m ³ /h	30-60m ³ /h	170-190m ³ /h	40-60m ³ /h	220-240m ³ /h	50-70m ³ /h
20-25Mpa			150-170m ³ /h	45-55m ³ /h	170-190m ³ /h	55-65m ³ /h
25-30Mpa					120-140m ³ /h	≤65m ³ /h

出方效率参考

Excavation efficiency reference

- **RAPID IMPACT COMPACTOR**



High Efficiency

The advanced technology and economic operation mode make the hydraulic high-speed compactor highly efficient, and can be widely used for the treatment of various soft soil, backfill and miscellaneous fill.

Safety

Since the hammer foot is always directly grounded, the potential danger and debris splash caused by impact fall are avoided.

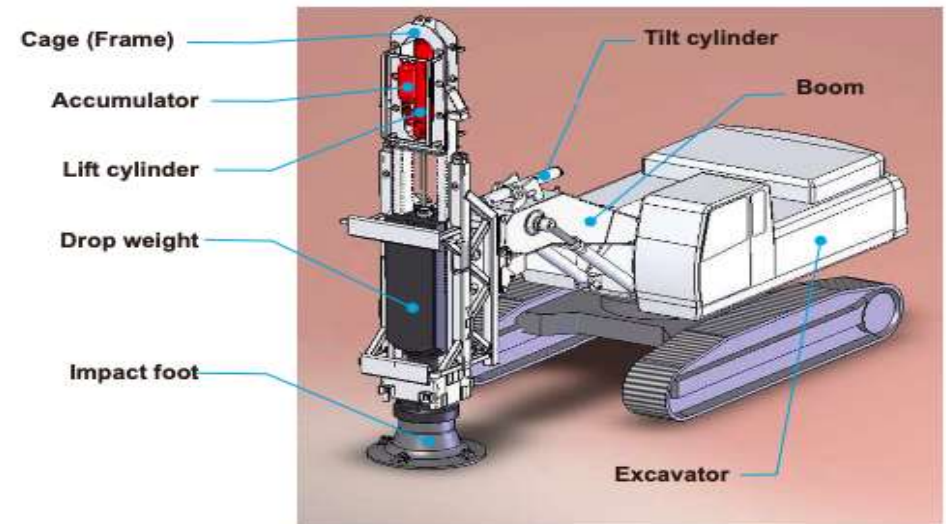
Multiple Functions

It can be installed on loaders or excavators, moving and transporting quickly, and can enter narrow and low sites, such as warehouses.



Scope of Work

- ◆ It is used in traditional dynamic compaction application field or work carried out in coordination with dynamic compaction.
- ◆ Application of port & wharf construction;
- ◆ Application of highway or railway subgrade construction;
- ◆ Compaction or reinforcement of the subgrade of expressway or railway to eliminate the subsequent natural settlement;
- ◆ Solve the problem of vehicle bumping at bridge head, which is common at present;





Features

The attached monitoring system can record operations, which is convenient for quality control and data collection. Recordable data include total energy, total penetration and total settlement.

The configuration of high-end components, such as the controller imported from Germany, 3.5 inch color display, shockproof sensing products and valves of international brands, makes the system more advanced and reliable.

The double circuit heavy oil cylinder with high reliability and the heavy universal ball joint connection can eliminate the impact on the oil cylinder when the hammer falls to the pile cap.

The advanced hydraulic system design makes the hydraulic system more efficient. The cylinder lifting speed is faster, the cylinder lowering speed is closer to the free fall speed, and the operation efficiency is higher.

The hammer body is a high toughness manganese steel casting, frame of high strength and guide rail with twist cross pin ensure normal operation under maximum impact energy of hammer.

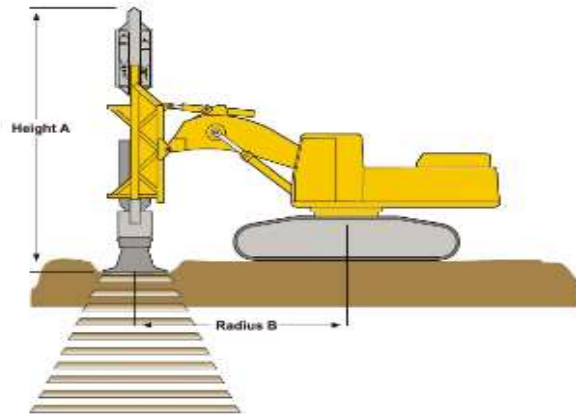
A complete set of safety protection, such as low level start, high level stop, anti hammer misoperation start, etc., to protect the equipment.



Performance Parameters

Model	SWRD36	SWRD42	SWRD60	SWRD85	SWRD110	SWRD180	SWRD240
Ram Max. Mass (Kg)	3000	3500	5000	7000	9000	12000	16000
Imapct Energy (KN.m)	36	42	60	84	108	180	240
Stroke (Range) (mm)	0~1200	0~1200	0~1200	0~1200	0~1200	0~1500	0~1500
Blow Rate @ Rated Energy (bpm)	30~80	30~80	40~120	40~120	40~120	35~120	35~120
Operating Pressure (Bar)	160	200	220	250	280	250	280
Hydraulic Flow Required (L/min.)	120~280	120~280	140~360	220~250	220~250	380~400	380~400
Overall Size (mm)	3650*1080*1520	3650*1080*1520	4900*1430*1465	7600*1560*1765	8200*1560*1765	8100*1960*1900	8800*2560*2000
Foot Diameter (mm)	1000	1000	1000	1500	1500	1600	2000
Excavator Basic Size (ton)	20~30	20~30	30~35	36~42	45~52	65~75	75~95

The above weights and dimensions are typical guidelines only. The design can be changed to adapt to customer specific applications and basic machine. For the sake of quality and performance, we reserve the right to modify the specifications at any time.



Remarks: The above performance is related to the matched excavator.



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maxima

Maximal Forklift
Made in China
With German
Components and
technology

Maximal Full-Line Products

IC FORKLIFT

M series 1.6-Compact12.0T
A series 2.5-70T



Diesel 1.6T series 1.6T-2.5T



Diesel 3.0T series 3-Compact 4T



Diesel 4.5T series 4.5-Compact 9T



Diesel 5.7T series 5-7T



Diesel 6-Compact12T



Diesel 1.6T series 1.6T-2.5T



Diesel 3.0T series 3-3.5T



Diesel 4.5T series 4.5-Compact9T



Diesel 5.7T series 5-7T



Diesel 2.5-3.5T

2021
NEW



Diesel 4.5T series 4.5-Compact 8T

2021
NEW



Diesel 5.7T series 5-7T



Diesel 3.3-3.5T series 3-3.5T

2021
NEW



Diesel 4.5T series 4.5-Compact9T

2021
NEW



Diesel 5-7T series 5-7T

ELECTRIC FORKLIFT

A series 4-wheel 1.5-3.5T | Lithium battery forklift
M series 3-wheel 1.6-2.5T
Rear Drive 3-wheel 1.6T
M series 4-wheel 4.5-5.5T
A series Reach Truck 1.6-2.5T



4-wheel 1.5-3.5T series 1.5-3.5T

2021
NEW



4-wheel 1.5-3.5T series 1.5-3.5T with lithium battery



3-wheel 1.6-2T series 1.6-2T



Rear Drive 3-wheel 1.6T series 1.6T



4-wheel 4.5-5.5T series 4-6T



Reach Truck 1.5-2.5T series 1.5-2.5T



Reach Truck 1.5-2.5T series 1.5-2.5T



Very narrow aisle truck

SPECIAL TRUCK FORKLIFT

2WD 1.6-6.0T
Compact 4WD 1.6-3.5T
Four Way Side Loader 3.5-5.0T



1.6T 2.5T 3.0T



3T 5T



Compact 4WD 1.6T 2.5T 3.0T



Four Way Side Loader 3.5-5.0T

PORT MACHINERY

M series 13.5-32.0T
Reach Stacker 45.0T
Empty Container Handler 9.0T



13.5-32T



Reach Stacker 45T



Empty Container Handler 9T

In 2018, each series of Maximal products have passed internal CE test, which is the only brand in China that 100% meet with CE standards.



**REACH STACKER FOR HANDLING
CONTAINER CRS4532 **45TON****





A SERIES IC FORKLIFT TRUCK

A Series 4 - Compact 5T ICE Forklift

A Series 5 - 7T ICE Forklift



Safety & Stability

Mast and Mast Hydraulic (View improvement) ✓



10%
Visibility increased by 10%

Smart dashboard ✓



Replace the mechanical display with digital one, after entering the menu, the language types can be adjusted according to different customer requirements.

High Efficiency

Hydraulic system improvement □
The overall cleanliness of the hydraulic system is improved by wash machine.



Oil tank wash machine



Hand brake use ratchet type (lighter and easier) ✓



Add counterweight grill, effective dustproof and internal protection, increased safety

Easy Maintenance

Hood opening angle ✓



Use rough terrain truck hinge
Hood opening angle: from old 60 degrees to 80 degrees, better accessibility to maintenance

Electrical elements improvement ✓

Waterproof plug-in, with ratings of IP56. Plug-ins that reserve optional features are easy to install. (M series large tonnage many option not available i.e. handbrake alarm, seat belt sequence) while the new harness has reserved those functions. The corresponding electrical connector plug-ins are all updated to AMP plug-in, with better waterproofing.



Integrated electrical box, smaller in size than for the original M-Series, space-saving
The waterproof rating of the new electrical box is IP56 and the fire rating reaches V0.
The new electrical box integrates the DH296 box function and has a driving safety device.
Will improve vehicle safety performance (M-Series electrical boxes is without this device)



GREEN MIDDLE EAST MACHINERY

THANK YOU

