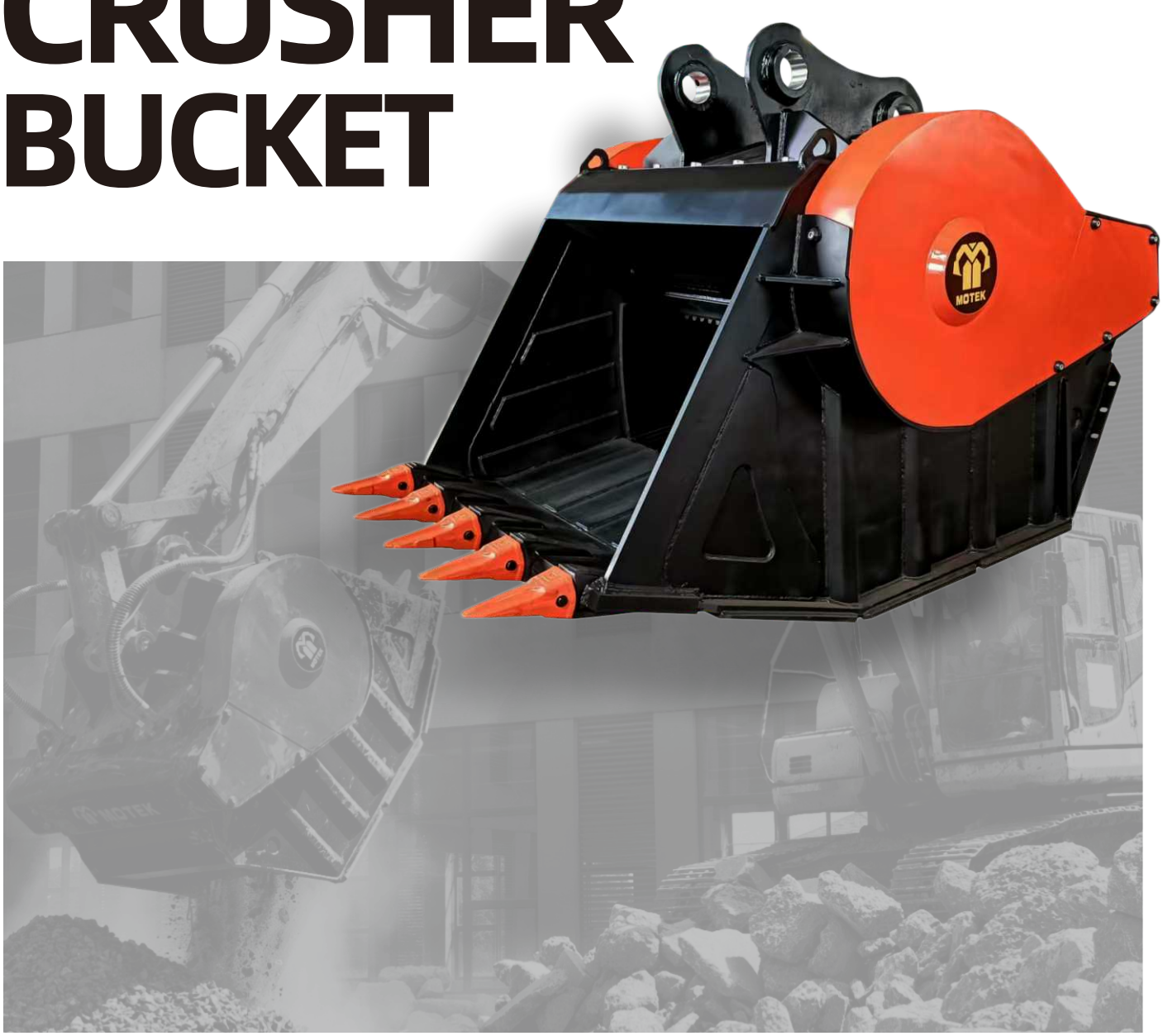
MOTEK

CRUSHER BUCKET



Anhui Motek Construction Machinery Co., Ltd.

www.motek.cn

ABOUT US

Anhui Motek Construction Machinery Co., Ltd. was established in 2014 and is located in Hefei, Anhui. It is a national high-tech enterprise and a professional company integrating R&D, production, sales, leasing and technical services of construction machinery accessories.

Since its establishment, our company has been adhering to the philosophy of "integrity-based, responsibility-based, customer success, and win-win ", and continuously provides customers with high-quality products and professional services with stable and reliable quality.

Motek focuses on the R&D and production of construction machinery attachments such as screening buckets, soil improvement products, and crusher buckets. We have formed a sales and service network all over the world with rich industry experience in environmental remediation, solid waste disposal, in-situ solidification and other fields.

Through our company's independently developed innovative patented technologies such as alloy blades, special material blades, drive systems, hydraulic control systems, and years of iterative optimization, our products have excellent stability, reliability, and economy. At the same time, our company can provide customized services based on customer requirements and actual working conditions to satisfy different customers.

Certificates

We have 1 invention patent, 7 utility model patents, as well as other certificates including CE certificate, ISO 9001, SGS, Safety Production License, Quality Management System Certification and High-tech Enterprise Certificate.

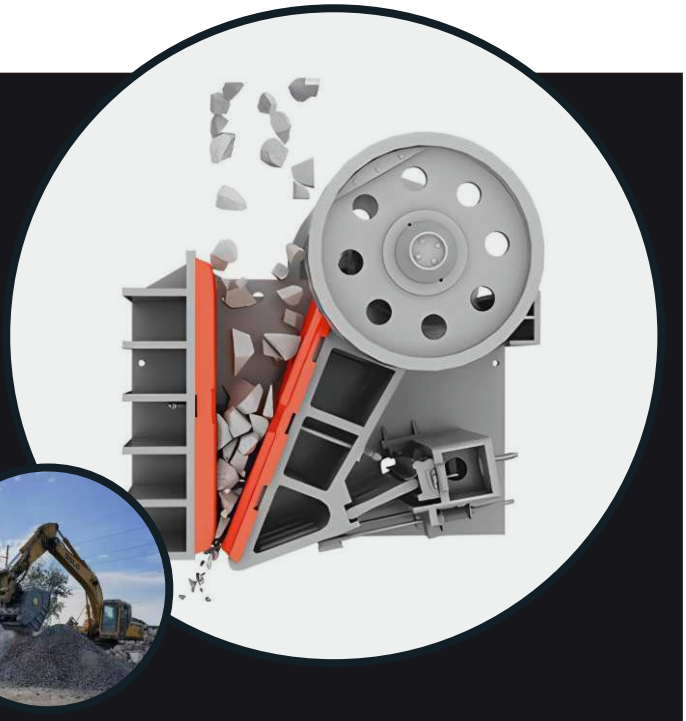
Our products have independent intellectual property rights. The product is designed according to China's high-intensity and high-complexity working conditions and can also meet the needs of international customers.

Working Principle

The crusher bucket is usually installed on excavators, using the hydraulic power of excavators.

The excavator driver controls the crusher bucket by operating the foot valve in the cab, relying on the strong clamping of the jaw plates to crush the stones.

It is widely used in the crushing of various ores and bulk materials in the mining, smelting, building materials, highways, railways, water conservancy and chemical industries.



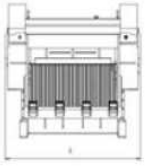
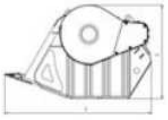
WHY CRUSHER BUCKET?

An excavator installed a crusher bucket which is a small mobile crusher plant with low cost and high mobility.

Crusher buckets can be used for multiple purposes, especially for crushing and recycling building concrete and building roads in mountainous areas, with good flexibility and cost advantages.

Specifications of Motek Crusher Bucket




DIMENSIONS	MODELS	UNITS	MTC150	MTC200	MTC250	MTC330
 	Recommended excavator	ton	≥15≤25	≥20≤25	≥25≤33	≥33≤40
	Weight	ton	2.3	3.1	3.65	5.1
	Load capacity	m³	0.65	0.8	1	1.3
	Pressure	bar	>220	>220	>220	>220
	Oil flow rate**	l/min	>150<200	>150<220	>180<240	>190<260
	Mouth width	mm	780	910	910	1300
	Mouth height	mm	460	460	510	510
	Size A	mm	1220	1425	1425	1650
	Size B	mm	2080	2080	2500	2500
	Size C	mm	1600	1600	1800	1800
	PRODUCTIVITY					
CRUSHING OUTPUT ADJUSTMENT	15 mm	ton/h	13.5	15	18	22.5
	20 mm	ton/h	15	16.5	19.8	24.6
	30 mm	ton/h	18	19.5	23.25	28.8
	40 mm	ton/h	21	22.5	26.7	33
	50 mm	ton/h	24	25.5	30	37.2
	60 mm	ton/h	27	28.5	33.75	41.4
	70 mm	ton/h	30	31.5	37.2	45.6
	80 mm	ton/h	33	34.5	40.8	49.5
	90 mm	ton/h	36	37.5	44.25	54
	100 mm	ton/h	39	40.5	47.7	58.2
	110 mm	ton/h	42	43.5	51.3	62.4
	120 mm	ton/h	45	46.5	54.75	66.6
	130 mm	ton/h	46.5	49.5	58.2	70.8
	135 mm	ton/h	–	51	61.5	72.9
	140 mm	ton/h	–	–	63	75
	145 mm	ton/h	–	–	–	79.5
	150 mm	ton/h	–	–	–	–
	200 mm	ton/h	–	–	–	–



ADVANTAGES OF MOTEK CRUSHER BUCKET

01 Motek crusher bucket drives by belt, which reduces the damage of crushing vibration to the hydraulic system

02 The excavator can work with a single pump to operate Motek crusher bucket, without the need for dual pump confluence.

03 The installation is simple and convenient, no need to be connected to forward and reverse rotation, normal crushing hammer pipelines are sufficient.

04 The opening width and height of Motek crusher bucket are the largest in China, with high output.

05 The excavator can work with low working pressure, 23MPA hydraulic pressure can achieve high-yield crushing

06 Even if the jaw plate is worn, the shape and size of the output can be guaranteed same as customers demands.

07 The efficient hydraulic system of Motek crusher bucket can ensure that the hydraulic system of the excavator does not overheat even in harsh high temperatures or high-intensity continuous operations.

Application Aeras:

road building | mining | pipeline | urban construction | Tunnel | Demolition

Packing &Transportation

MOTEK

PRODUCT MANUAL

Screening
Crushing
Mixing
Aerating
Loading
Stabilizing

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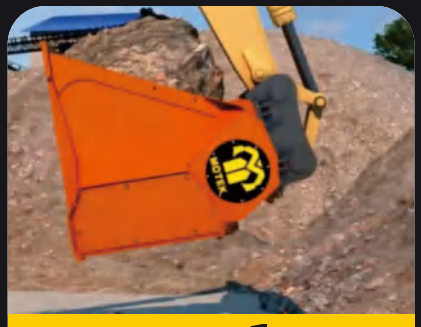
Working Principle

Screening buckets are installed on general construction machinery (host), such as excavators and loaders.

Using the hydraulic power of the host machine, the rollers of the bucket are controlled by operating the foot valve.

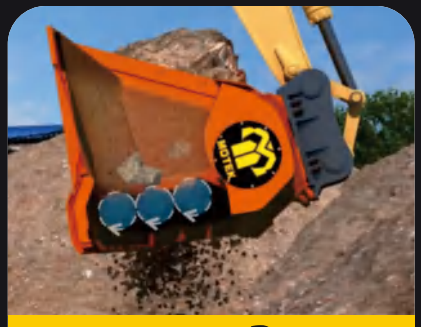
The roller rotates in both forward and reverse directions to crush, mix and stir the materials in the bucket. The mixed materials fall under the action of the roller and the weight of the materials.

The loading process of materials by screening bucket is the same as that of ordinary bucket. If the roller does not move, the materials will not fall.



PHASE 1

- Loading materials



PHASE 2

- Roller rotates in the positive direction to crush and screen
- The roller with spiral line design transports the materials from both ends to the middle, ensuring screening effect and efficiency

PHASE 3

- Screening and crushing completed,
- Impurities removed

Certificates

We have 1 invention patent, 18 utility model patents, and our products have independent intellectual property rights.

The product is designed according to China's high-intensity and high-complexity working conditions and can also meet the needs of international customers.

Parts & Accessories

Hydraulic motor:

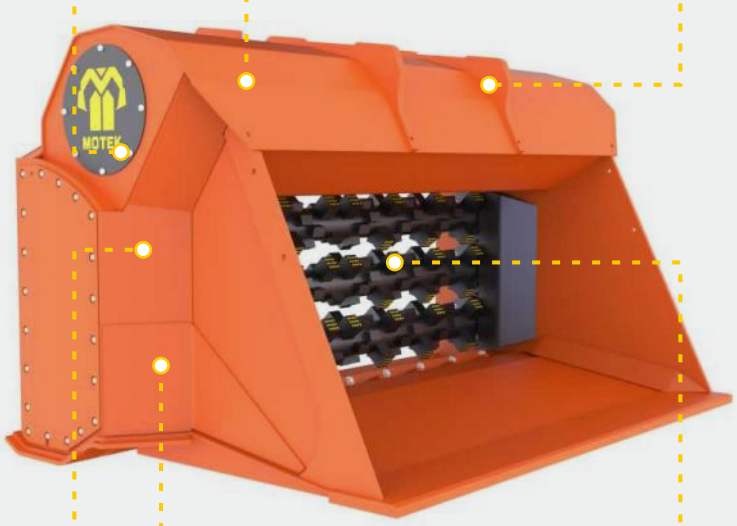
International top brand
stable, reliable, high torque. Unit power is much higher than ordinary hydraulic motors

Control valve block:

International top brand,
Meet the needs of high-flow hydraulic systems, with large flow capacity and sensitive valve core action

Main frame:

International top brand,
the yield strength is more than 3 times higher than that of ordinary steel plates with great wear resistance



Bearings:

International first-line brand,
durable, high transmission efficiency.

Chains:

International first-line brand,
durable, high transmission efficiency. Excellent tensile strength and abrasion resistance, long service life

Shafts:

Screening cutter inlaid with carbide,
super wear-resistant and durable. More than 5 times the wear resistance products currently on the market.

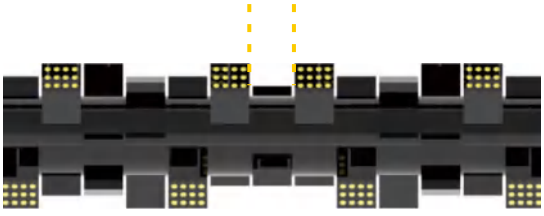
The core hydraulic parts of Motek screening buckets are all from international first-line brands, and the structural parts are made of high-strength wear-resistant steel. The product quality is stable with high efficiency.

Based on hard working conditions, Motek screening bucket is independently developed with a number of core patents, suitable for high-intensity and high-load working conditions at home and abroad.

The coarse screening have 45mm and 75mm gaps for each series.

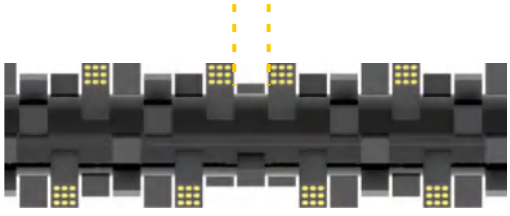
Customers can choose products with different gaps according to the construction site conditions.

L=75mm,outputs ≤75mm(90%)



H-75

L=45mm,outputs ≤45mm(90%)



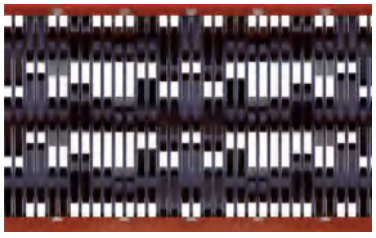
H-45

Model	Applicable Excavator (Ton)	Applicable Loader (Ton)	Bucket Capacity (m^3)	Hydraulic Flow (L/min)	Product Size (cm)	Weight (kg)
MT208	10-18	5-9	0.8	80-200	270*150*145	1350
MT312	18-25	9-14	1.2	120-200	190*150*160	2010
MT317	25-30	12-22	1.7	150-220	240*150*160	2640
MT320	30-45	14-30	2	200-320	270*150*160	3050
Mt427	45-55	30-45	2.7	200-320	270*150*172	3520

We can provide screening buckets with different blade thicknesses.

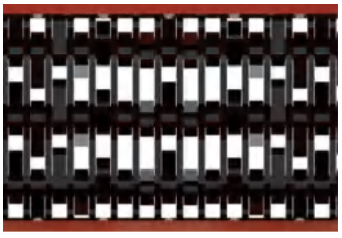
Different blade thicknesses result in different dropping material sizes.

At present, the company can provide blades with thicknesses of 8mm(can change to 16mm), 16mm(can change to 32mm), 25mm((can change to 50mm) and 35mm.



Baldes thickness 25mm，
90% outputs size 25mm

same model can have 2 different outputs sizes (combining 2 baldes as well as 2 grills)



Blades thickness 50mm,
90% outputs size 50mm

Model	Applicable Excavator (Ton)	Applicable Loader (Ton)	Bucket Capacity (m^3)	Hydraulic Flow (L/min)	Product Size (cm)	Weight (kg)
MT208	10-18	5-9	0.8	80-200	270*150*145	1370
MT312	18-25	9-14	1.2	120-200	190*150*160	2025
MT317	25-30	12-22	1.7	150-220	240*150*160	2660
MT320	30-45	14-30	2	200-320	270*150*160	3070
Mt427	45-55	30-45	2.7	200-320	270*150*172	3560

Remediation of Contaminated Soil

- The excavated materials are screened and crushed by MOTEK screening buckets to form a pile
- A solidifying agent or other additives are added to the pile according to the proportion
- The materials are mixed, stirred and aerated by MOTEK screening
- The materials are mixed evenly by MOTEK screening bucket and then backfilled for use

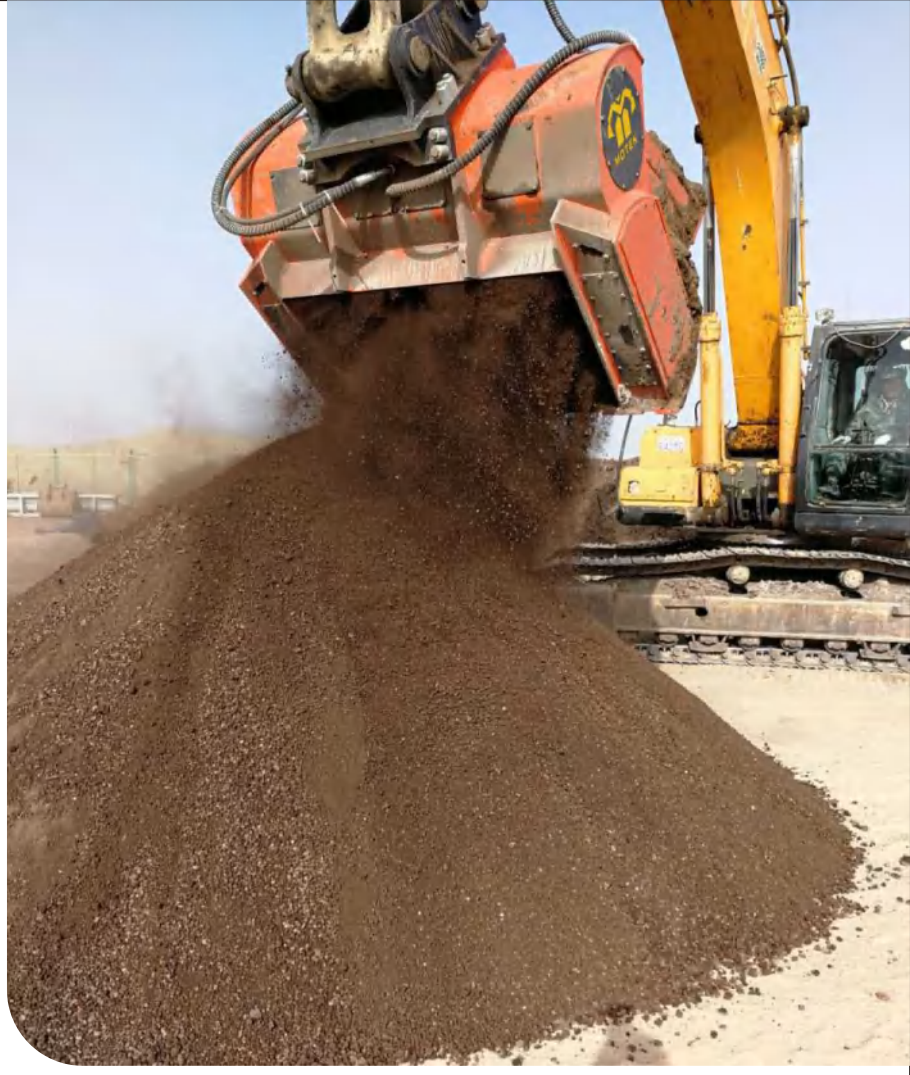
Pipeline Fine Soil Backfilling

- Using a screening bucket with a 16mm blade, 95% of the processed particles have a diameter less than 20mm, which can well meet the fine soil backfill requirements of pipelines.
- The screening bucket has changed the previous construction methods of pipeline foundation and backfill soil, reducing the construction cost and improving the efficiency of pipeline construction; it has improved the foundation quality of the pipeline, thereby increasing the service life of the pipeline. This construction technology can be widely used in the construction of water supply and drainage pipelines, gas and liquefied gas pipelines, power and telecommunication optical cable pipelines, etc.

Used with Thermal Desorption Equipment

Using DB series 25mm blade products, the diameter of the particles after crushing is basically controlled within 3cm, which well meets the needs of thermal desorption equipment, improves pyrolysis efficiency, and effectively treats organic pollution, sludge pollution, etc.

Oily Sludge Treatment



- Db series 8mm or 16mm blade screening buckets can crush and screen the oily sludge.
- The diameter of the particles after treatment is small, and they can be directly purified by microbial degradation or thermal desorption in the later stage.

Tailings Treatment or Pebbles Screening

- In tailings treatment, there are many working conditions where soil is mixed with rocks, and traditional vibrating screens or drum screens cannot screen out the rocks at all
- The use of screening buckets can effectively solve the problem of being unable to screen well. Screening can be completed even if the moisture content is high.

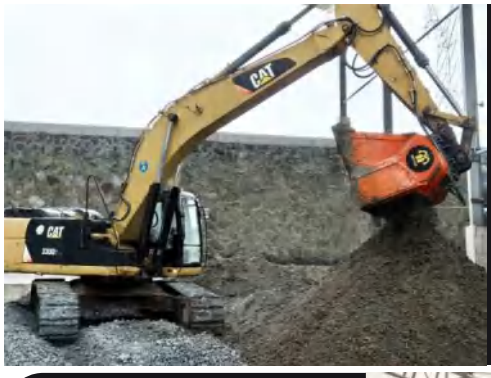
Crushing, Screening and Aerating of Biocompost

- If a loader is equipped with a screening bucket to process biomass compost, one machine will has multiple uses.
- It can be used for crushing, screening, turning, and aeration, it can also be used for loading, reducing equipment investment.

Cooperated
Excavators

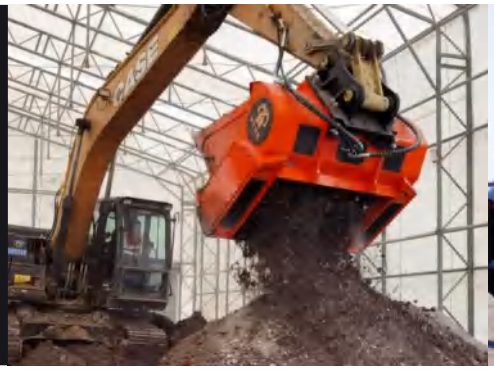
DOOSAN

KATO



CATERPILLER

CASE



Cooperated
Excavators

LiuGong

HITACHI

SANY

KOBELCO

Cooperated
Excavators

VOLVO

HUNYDAI

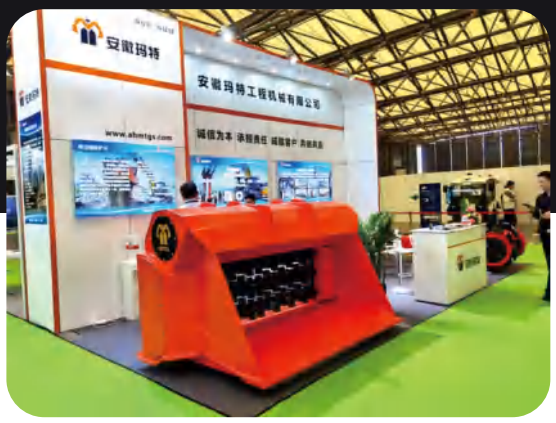
KOMASTU

SUMITOMO

Cooperated
wheel loader


LIUGONG
MATEK


SANY
SANY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MOTEK
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HYUNDAI

Packing & Transportation

MOTEK

Soft Foundation In-situ Solidification System

PRODUCT MANUAL

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About Motek

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Motek has a professional soft foundation in-situ solidification construction team. It has completed more than 2 million m² of solidification project, and is one of the largest and most professional construction teams in China

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Working Principle of Motek Soil Stabilization System

The sludge in-situ stabilization system consists of a power mixer, a medium or large excavator, an intelligent control center, and a solidifying agent storage tank.

The intelligent control center adopts a PLC control system. After setting the parameters, the intelligent control center automatically loads solidifying agent in the storage tank, automatically mixes, slurries, stores, and automatically records the solidifying agent addition time and usage.

The solidifying agent slurry is quantitatively delivered to the front end of the power mixer through a slurry pump. The power mixer uses the hydraulic power and high mobility of the excavator to fully mix and stir the solidifying agent slurry with the soft foundation soil to achieve the purpose of strengthening and solidifying the soil.

Replacing the solidifying agent with a soil remediation agent can achieve in-situ contaminated soil remediation.

Model	Applicable Excavator(MT)	Working Depth(M)	Working Effciency(m^3/h)
MT-200	20-25	1-3	40-70
MT-250	25-30	1-5	40-70
MT-300	30-36	1-7	50-90

Features of Motek Power Mixer

01 The hydraulic motor and hydraulic control valve core of Motek power mixer are both from international first-line brands, with stable and reliable quality.

02 It meets the high-intensity and high-complexity work very well, even continuous operation of 24 hours without stopping.

03 The unique shape design ensures better soil penetration when operating. The mixing blades are made of high-strength wear-resistant steel, with high strength and long service life.

04 The two-way rotation function can realize the insertion and extraction of two mixing operations to ensure the best mixing effect.

05 Automatic speed regulation function, slow mixing of hard mud, fast mixing of soft mud, automatic sensing, automatic speed regulation, and improved work efficiency.

Model	Applicable Power Mixer	Max Power	Outputting speed
HT-250	MT-200	80KW	90-250L/min
HT-320	MT-300	100KW	118-320L/min

Features of the intelligent control center

01 The intelligent PLC control system, according to the customer's construction conditions, inputs the corresponding parameters, and the system automatically loads, weighs, mixes and makes slurry, and delivers slurry agents according to the parameter settings.

02 An intelligent PLC control system can carry two power mixer, reducing customer investments and improving operating efficiency;

03 Adopting a high-pressure mud pump, the maximum delivery distance can reach 700 meters, reducing the relocation of the solidifying agent storage tank and improving economic efficiency.

APPLICATION

01 Road construction and foundation construction

The bearing capacity of the subbase of highways, national roads, municipal roads, construction access roads, etc. is insufficient. The subbase can be solidified with a solidification depth of 1-5 meters. Soil solidification can avoid excavation and replacement, which is low-cost and more environmentally friendly.

02 Wharf construction, site solidification

Wharf heavy cargo storage yard, parking lot, stockpile yard, drilling well site, production and processing plant and other site solidifying construction

03 Pipeline trench anti-collapse solidification

Large-scale oil pipelines, natural gas pipelines, and other pipelines always pass through silt land. There is no need to dig and transport the silt. Just solidify the silt, then dig it, and then solidify it and backfill it.

04 Solidification of sludge pools, sealing and solidification of tailings reservoirs

Solidification and backfilling of domestic sludge; sealing and solidification of tailings reservoirs, after treatment, the surface is covered with planting soil or solar panels are installed for photovoltaic power generation

05 Riverbed Solidification

The riverbed silt can be solidified and then excavated and transported out; the riverbed can also be solidified in situ to solve the problem of eutrophication of soil and water.

06 Landfill Pollution Remediation and Solidification

Landfills have long been piled with various sludge, oil, plastic and other corrosive materials, which can be solidified and repaired to prevent the spread of pollution.

07 Contaminated soil remediation

In-situ stabilization and remediation of heavy metals in soil, engineering treatment of contaminated soil, vegetation restoration, and reducing the potential dangers of heavy metals in contaminated soil to the ecological environment and human health.

TYPICAL CASES

1、In-situ solidification of 1 million㎡ on beach in a Chinese coastal city

Project Overview: An industrial plant is to be built in the reclamation area (2,500 acres). The bearing capacity of the foundation in the entire reclamation area was <30kpa, which was impossible to go infrastructure construction. The cost is high if adopting traditional soil replacement or slag backfilling treatment, which is aslo not environmentally friendly. The in-situ solidification system reached depth 1.2 meters, and improved the bearing capacity to over 100kpa, which well solved the problem of low bearing capacity of the soft foundation and inability to carry out infrastructure construction.

2、In-situ Solidification of 300 Thousand㎡ of Silt in An Industrial Area

Project overview: The entire industrial plant area was muddy tidal flats. The original adopted plan was laying slag and riprap to squeeze silt to construct, but the silt was very deep and the water content was too high, so it was impossible to move forward. The silt in-situ solidification solution solved the problem. According to the on-site constuction conditions, the solidification depth varies from 2 to 5 meters, which improved the bearing capacity to over 120kpa.

3、200 Thousand ㎡ of Municipal Sludge Solidification

Project overview: The municipal sludge landfill was solidified in situ, and photovoltaic solar energy was laid on the solidified site.

4、Highway Roadbed Solidification

Project overview: The highway subbase had insufficient bearing capacity, so in-situ solidification solution was carried out. The bearing capacity after solidification reached more than 120kpa.

5、Silt Solidification at The Entrance of Cross-River Tunnel

Project overview: The entrance of the cross-river tunnel shield machine was in the River. A steel sheet pile cofferdam was built in the River with an area of more than 20,000 square meters. The cofferdam adopted the silt in-situ solidification solution, and the solidified site was used as a material storage base.

6、Solidification of Polluted Bottom Mud in Landfills

Project Overview: After the garbage was excavated and sorted in a certain area, the polluted bottom mud was remediated and stabilized in situ.

7、Solidification of Photovoltaic Power Generation Base

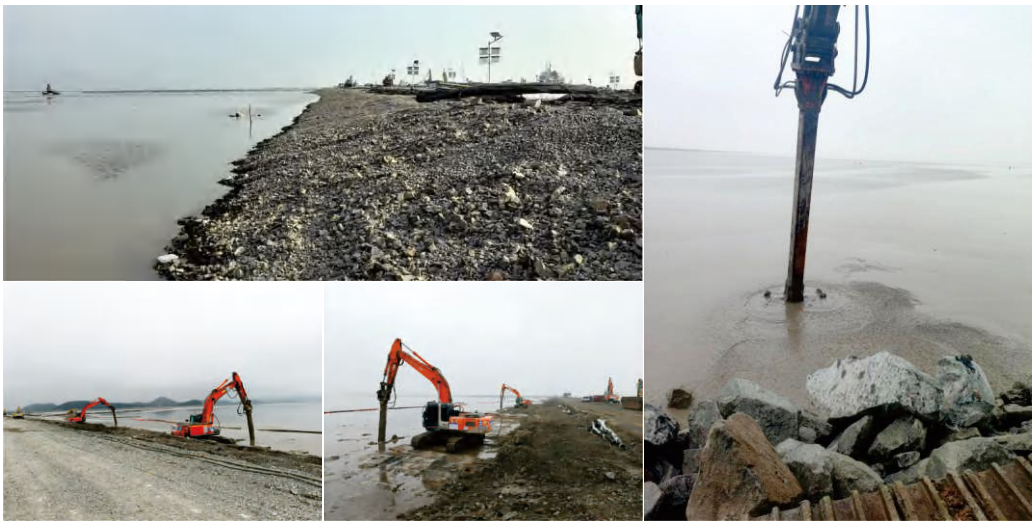
Project Overview: The booster energy storage base for water photovoltaic power generation was about to built on a silt plot. The overall silt was solidified to a depth of 4-5 meters, and the bearing capacity reached more than 150kpa, providing good foundation support for energy storage equipment.

8、A Coastal Port Soft Foundation Solidification

Project Overview: Coastal Port need to store heavy cargo, solidification depth 4.5 meters, bearing capacity reached more than 150kpa.

9、A Coastal Port Dredged Silt Solidification

Project Overview: The density of dredged silt is only 1.3 tons/cubic meter. It is solidified in situ on the inside of the dam and used for anti-seepage and as a construction access road.



10、A Construction Engineering Bureau Mud Pool Solidification

Project Overview: In-situ solidification of pile foundation mud eliminated the need for filtration and external transportation, reducing costs. The bearing capacity of the solidified mud reachedmore than 120kpa, which could be used as roadbeds.

11、Solidification of Construction Access Roads

Project Overview: A extension channel regulation project is located in a coastal city. Two construction access roads are solidified on both sides of the channel to facilitate the later construction of large equipment.

MOTEK