SAMHOON

Impossible ? I'm possible !

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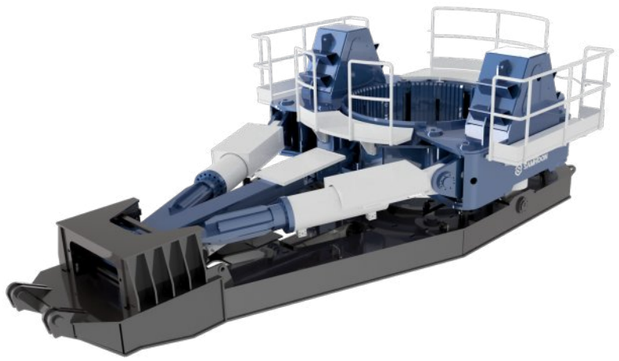
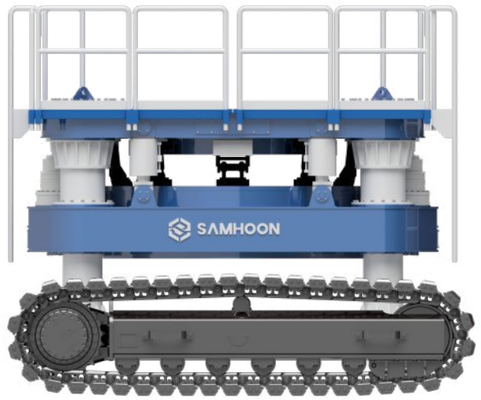
Casing Oscillator & Rotator





Impossible ? I'm possible !

SAMHOON

About SAMHOON

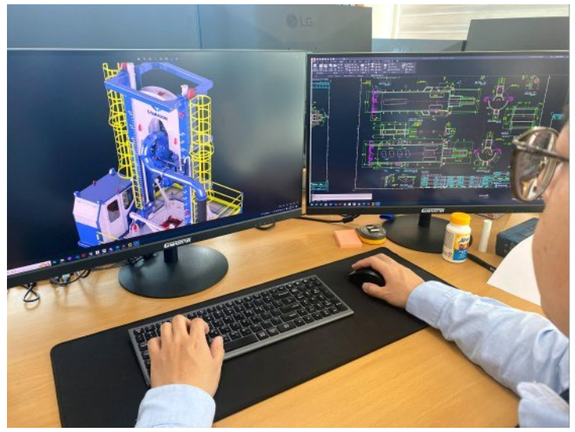
Although the SAMHOON name is new, we have more than 25 years of experience in manufacturing construction machinery. Utilizing these years of experience, we have built a strong foundation in the knowledge of equipment and systems, enabling us to build longlasting machines and parts.

SAMHOON's equipment is widely used for working on onshore drilling, offshore drilling, subsea drilling, and mining.

We fabricate all products by our own designs and drawings, including hydraulics, electrical systems, and control devices. Thanks to this, we are able to make ideal brand-new machines according to each customer's needs. We have referenced block lifters and concrete removing tools to advance and optimize the performance of our machines.

SAMHOON has our own factory and office in South Korea. We have worked with reliable partner vendors for more than 20 years, who meet SAMHOON quality control.

Global networks were built in several areas in the world, such as: USA, Hong Kong, Russia, and Brazil. These networks provide good consultation about SAMHOON products and engineering.



Drilling casing expert

We work closely with our customers throughout the project lifecycle, providing continuous support during the lifetime of the casing oscillator & rotator to allow you to complete your project on time and within budget.

We also have many experiences and case studies to support customer who have issues with drilling casings

Project study & Quotation ▶ Manufacturing & Testing ▶ Shipping ▶ Commissioning & Training ▶ Lifetime Services

Project study and quotation

- Close consultation and sharing experience
- Recommending the type of machine and grab
- Provide quotes with best lead time and price

Manufacturing & test

- Manufacturing under global standard Q/C
- Testing individual movement and control system

Shipping

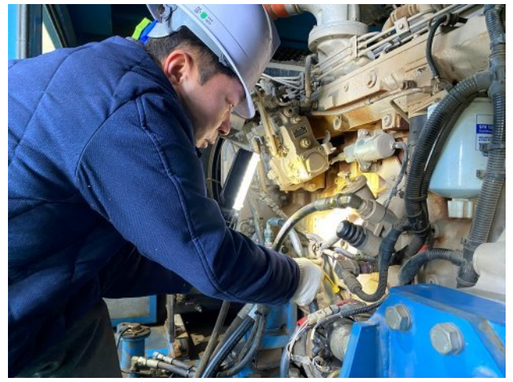
- Every type of Incoterms 2020 according to customer's request
- Provide reasonable packing type and container configuration

Commissioning & training

- On-site installation by skilled engineer
- Crew and operator training(operation, drilling tricks ,maintenance)
- Supervision at initial drilling and maximizing machine performance

Lifetime services

- Wear and spare parts service
- Cutter management
- Supervision and training for advanced operator
- Directing decommissioning in the right way, overhaul and machine conservation service for maximized lifetime and performance



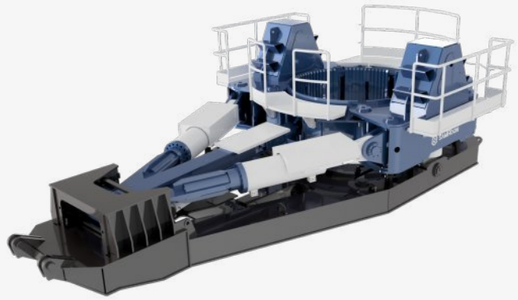
SAMHOON casing oscillator

When soil condition is unstable and easily collapsible, casing is required to make concrete piles for deep foundation. A casing oscillator is the best solution to drive and extract casing.

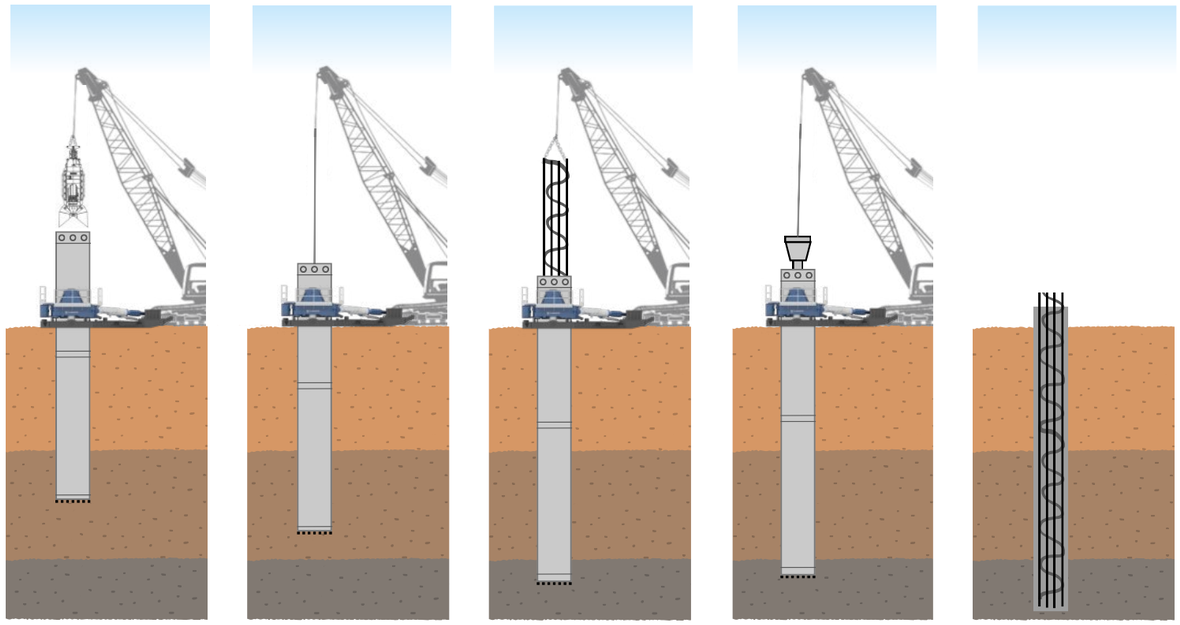
Casing oscillator with super strong torque is very efficient in handling casing in working conditions like large diameter, deep depth and high casing frication due to subsoil. It is mostly applied for highway bridges, sea bridges and monorail, etc.

A rotatory drilling rig is not enough torque to drive casing until required depth. Compact oscillators can work with drilling rigs together to make stronger torque.

The compact size of a casing oscillator enables it to operate in narrow spaces or very close to wall.



1 2 3 4 5



Insertion of the casings | Emptying of casing with grab | Inserting reinforcement | Concreting and extracting of casing | Finished pile

Application everywhere

Bridges

Commercial building

Monorail

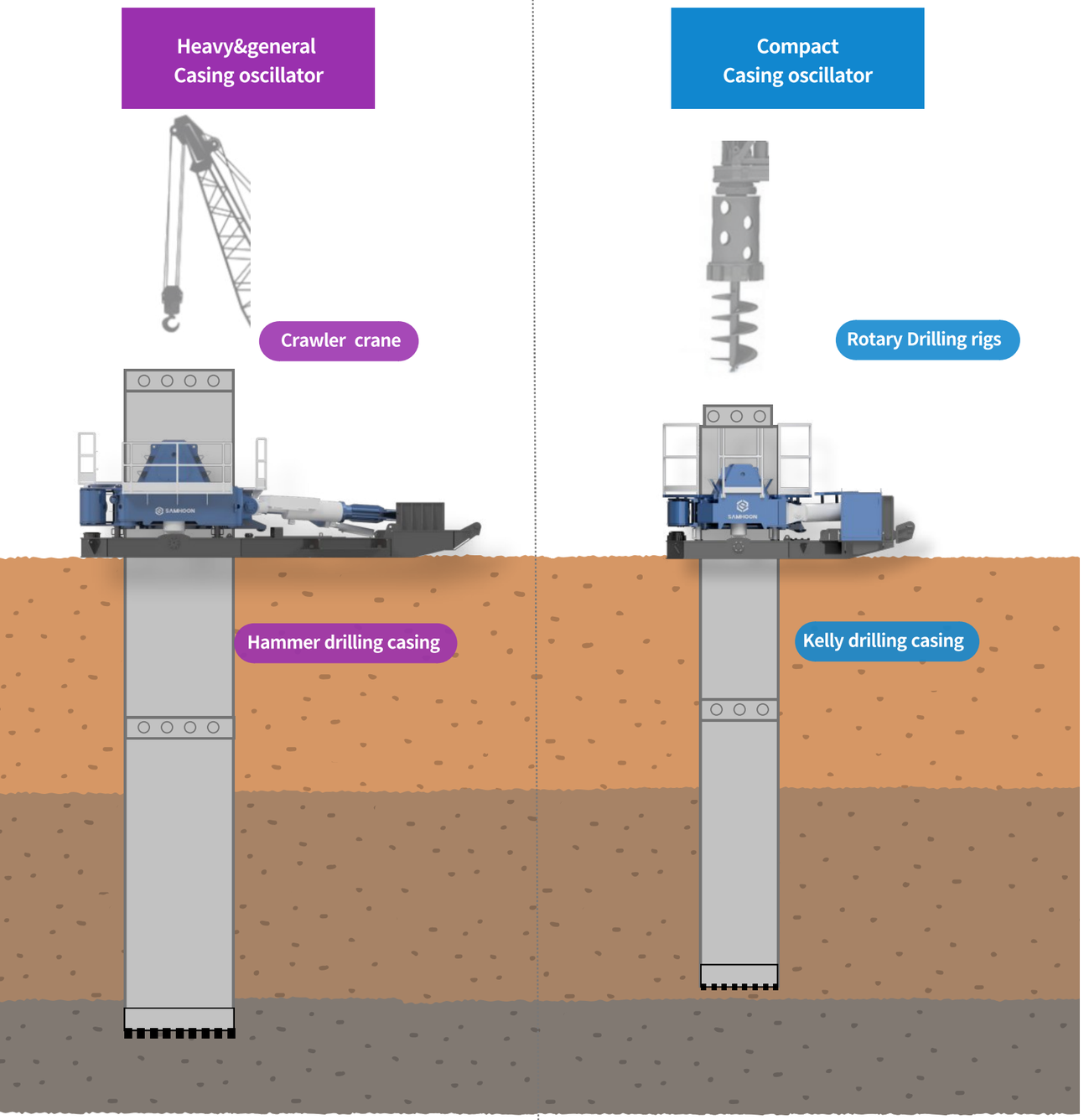
Transmissions Towers

Elevated metro stations

Dam rehabilitations

- Mixed soil layer, inclined and hard soil
- Large diameter from 0.8m to 5m (2.6ft to 16.4ft)
- Super deep foundation up to a depth 100m
- Foundation repair to prevent sinking building

Casing oscillator arrangement



Casing oscillator specification

General type

Model		CG200	CG250	CG300
Max. casing dia.	mm	2000	2500	3000
Lifting stroke	mm	600	650	650
Lifting force	kN	2570	5800	7250
Clamping force	kN	3140	4010	5080
Oscillating torque	kN.m	4770	8290	10090
Weight	ton	30	42	57

Heavy duty type

Model		CH200	CH250	CH300
Max. casing dia.	mm	2000	2500	3000
Lifting stroke	mm	600	650	650
Lifting force	kN	5800	7250	8030
Clamping force	kN	4010	5080	5080
Oscillating torque	kN.m	7190	9400	11780
Weight	ton	42	54	63

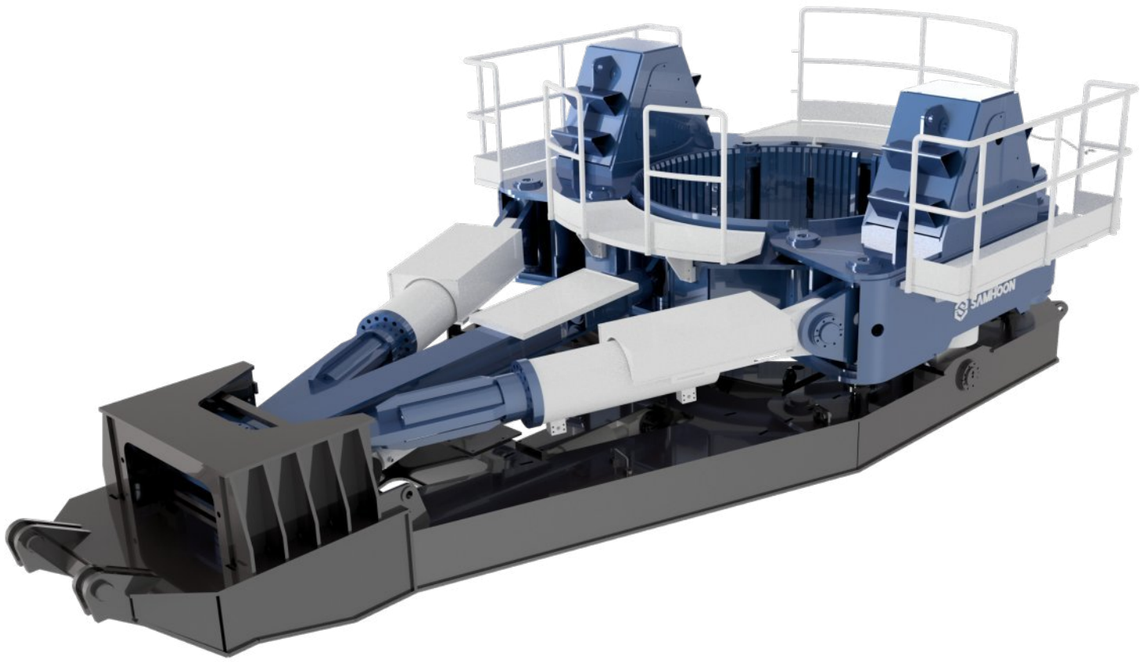
Compact type

Model		CC060	CC100	CC150	CC200
Max. casing dia.	mm	600	1000	1500	2000
Lifting stroke	mm	300	450	450	450
Lifting force	kN	690	980	2010	2430
Clamping force	kN	459	640	1570	1830
Oscillating torque	kN.m	294	1830	2250	3020
Weight	ton	2.5	6	15	20

Casing oscillator

Upper parts

- Auto-clamping system prevents to drop casing
- Large height of the collar (600~800mm) prevents damage to the casings
- Reducing insert can easily convert smaller diameters
- Side steps for safe working during ascent and descent on all four sides
- Plug-in handrail can make for easy transportation
- Bolted cover on clamp for maintenance and repair



Center box

- Spherical-shaped sliding box to release concentrated force
- Crane attachment firmly connected and forced-locked transmission of torques
- Crane attachment made of special material prevents deformation

Basement

- 600 or 650 mm cylinder stroke allows fast oscillating working
- Lifting cylinder's rod hidden frame prevents damage
- We can divide base part in an efficient way for super large machine and shipment

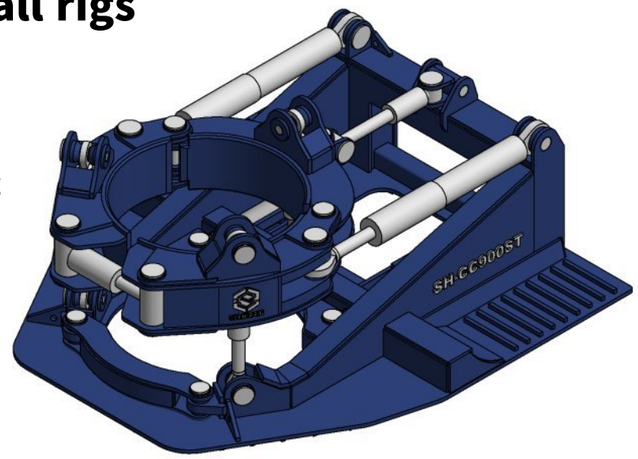
Compact casing oscillator

Compact casing oscillator

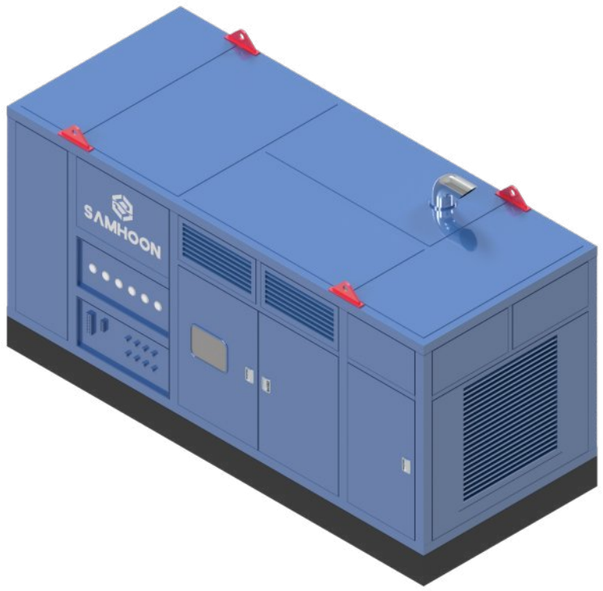
- Five separated clamps to prevent casing's damage
- Low and compact headroom on rig side to allow 360° movement
- Detachable control box for narrow crawler track
- Adjustable crane attachment to fix on any of drilling rigs

Compact oscillator for small rigs

- Crawler track steps on to easily fix casing oscillator
- Three lifting cylinders for efficient oscillating
- Solid base frame design
- Super compact size for driving casing in limited access areas



Hydraulic power pack

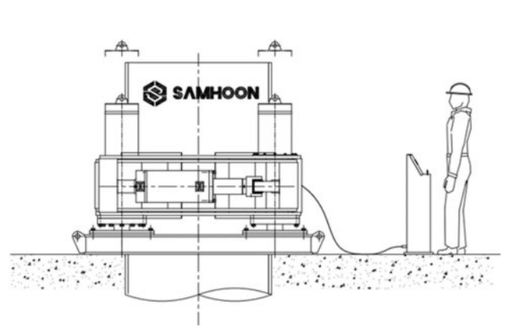


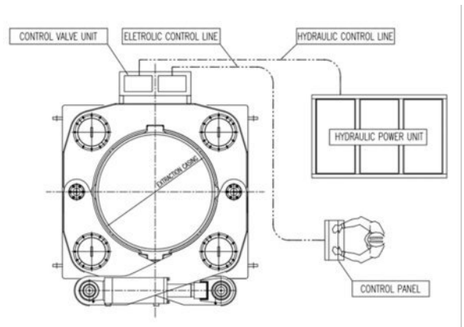
VOLVO PENTA

Kawasaki
Powering your potential

Model	SHP280	SHP380	SHP610	SHP800
Engine output	210kw	285kw	450kw	585kw
Normal rpm	1800rpm	1800rpm	1800rpm	1800rpm
Hydraulic pump	201L/min x 2set	324L/min x 2set	360L/min x 2set	504L/min x 2set
Max pressure(bar)	320	320	320	320
Dimension (WxLxH / mm)	1900x4000x2300	2000x5500x2500	2100x6000x2600	2300x6500x3200
Weight (ton)	7.5	9.0	11.0	15.0

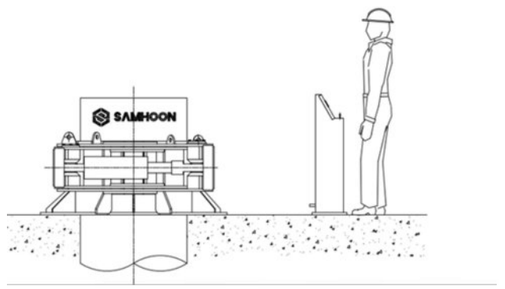
Casing Extractor

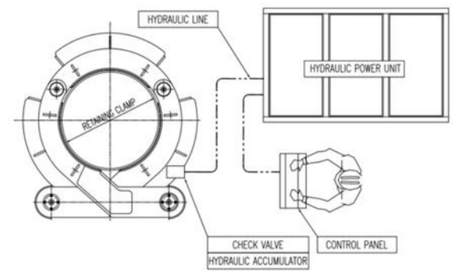




Model		CE100	CE150	CE200
Max. casing dia.	mm	1000	1500	2000
Extracting force	ton	400	580	630
Lifting stroke	mm	800	800	800
Clamping force	ton	160	200	230
Dimension	mm	2200x2200x1600	2800x2800x1600	3400x3400x1600
Weight	ton	8.5	10	12

Casing retaining clamp





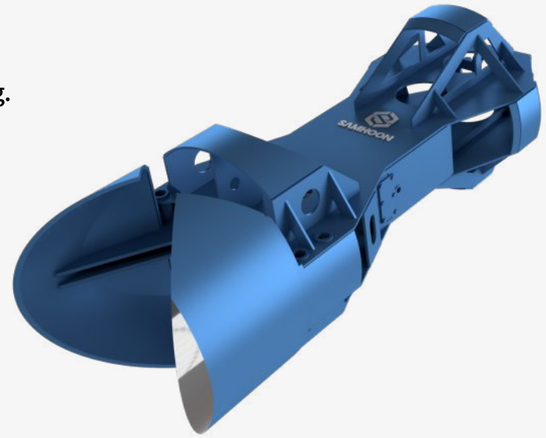
Model		RC088	RC130	RC150
Max. casing dia.	mm	880	1300	1500
Retaining force	ton	440	520	560
Operating force	bar	220	260	280
Weight	ton	0.85	1.1	1.2

Hammer grab

Hammer Grab is equipment used for construction to excavate soil, gravel and soft rock layers inside of casing.

It operates by delivering impacts to the object through hammering action, breaking it down, and then gripping and lifting it out of the ground, typically for extraction outside the casing.

Jaw made of abrasion resistant material enhances durability, And an oil-injection swivel ensures easy maintenance and long life condition.

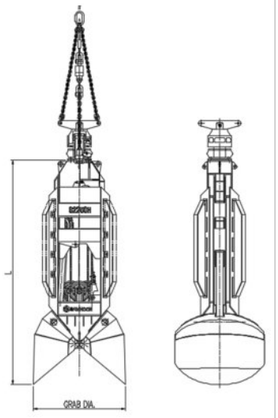


Spherical grab

With the jaw design with teeth, the operator can also open and close the grab several times during the drilling process such as when they want to loosen the ground or empty the grab in very cohesive soil.

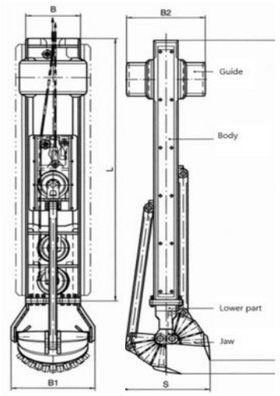
If very large closing forces are required for hard soil and soil mixed with gravel, the use of spherical grabs is recommended.

Due to its high intrinsic mass and additional teeth on the spherical shells, the spherical grab can dig into the ground during the closing process and empect very high splitting forces on the ground to be loosened.



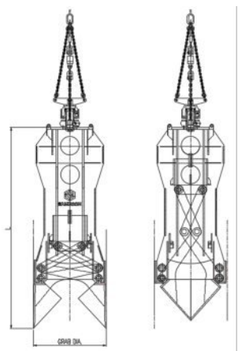
Heavy duty type

Model		G1350H	G1600H	G1800H	G2250H
Max. casing dia.	mm	1500/1400	1800/1680	2000/1880	2500/2380
Grab open dia.	mm	1350	1600	1800	2250
Body length	mm	5150	5300	5400	6400
Jaw capacity	Liter	800	1060	1200	1800
Weight	ton	7	8	9	13.5



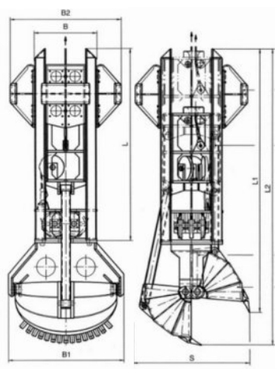
SG1 body

Model		SG1180	SG1350	SG1630
Max. casing dia.	mm	1300/1200	1500/1400	1800/1680
Grab open dia.	mm	1180	1350	1630
Body length	mm	5350	5800	5900
Jaw capacity	Liter	230	410	730
Weight	ton	8.3	10	12



X-link type

Model		G1350L	G1600L	G1800L	G2300L
Max. casing dia.	mm	1500/1400	1800/1680	2000/1880	2500/2380
Grab open dia.	mm	1350	1600	1800	2300
Body length	mm	5040	5590	6050	6350
Jaw capacity	Liter	900	1650	2000	2200
Weight	ton	6.8	7.9	9.6	12.5



SG2 body

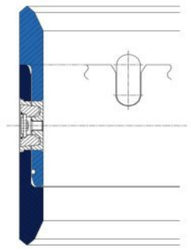
Model		SG1810	SG2310	SG2580	SG2710
Max. casing dia.	mm	2000/1880	2500/2380	2800/2640	3000/2840
Grab open dia.	mm	1810	2310	2580	2710
Body length	mm	5800	6100	6200	6300
Jaw capacity	Liter	970	1650	2100	3900
Weight	ton	6.8	18.5	19.6	20.3

Casing tube & Joint

Casing tube

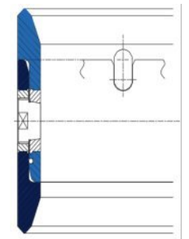
Model		1500	1800	2000	2200	2500	2800	3000
Casing dia.	mm	1500	1800	2000	2200	2500	2800	3000
Casing In-dia.	mm	1400	1680	1880	2080	2380	2640	2840
Weight (L=3m)	kg	3300	3940	4460	5140	6530	8750	9220
Weight (L=6m)	kg	6090	7270	8120	9250	12110	15950	17020
Casing Thickness	mm	25	25	25	25	30	35	35
Joint Thickness	mm	50	60	60	60	60	80	80
No. of bolts	ea	16	20	20	20	20	24	24

Casing Joint(HD)



Model		2000	2500	3000
Casing dia.	mm	2000/1880	2500/2380	3000/2840
Thickness	mm	60	60	80
No. of bolts	ea	20	20	24
No. of key	ea	4	4	6
O-ring	Ø	12	12	12

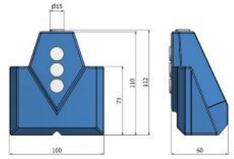
Casing Joint(GN)



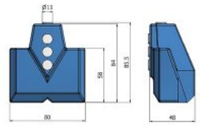
Model		900	1000	1500
Casing dia.	mm	900/820	1000/920	1500/1400
Thickness	mm	40	40	50
No. of bolts	ea	10	10	16
No. of key	ea	4	4	4
O-ring	Ø	10	10	10

Casing shoe bits

Casing shoe bits (Weld-on type for oscillator)

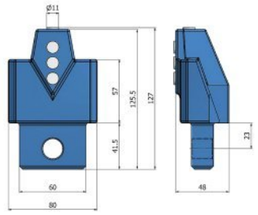


● SB-100

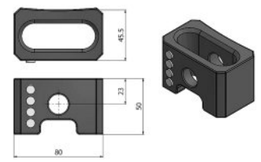


● SB-200

Casing shoe bits (Pocket type for oscillator)



● SBH-100

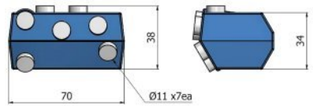


● SBH-101

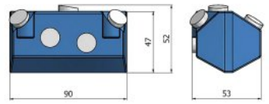
Punching tool

● SBHT-001

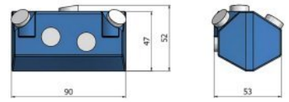
Casing shoe bits (Weld-on type for rock drilling)



● SB-300

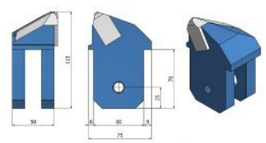


● SB-400L

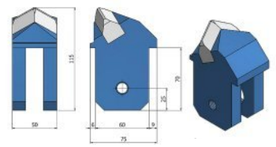


● SB-400R

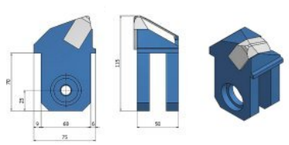
Casing shoe bits (Pocket type for rotator)



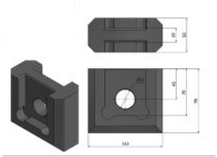
● SBR-100R



● SBR-100L



● SBR-100C



● SBR-100H

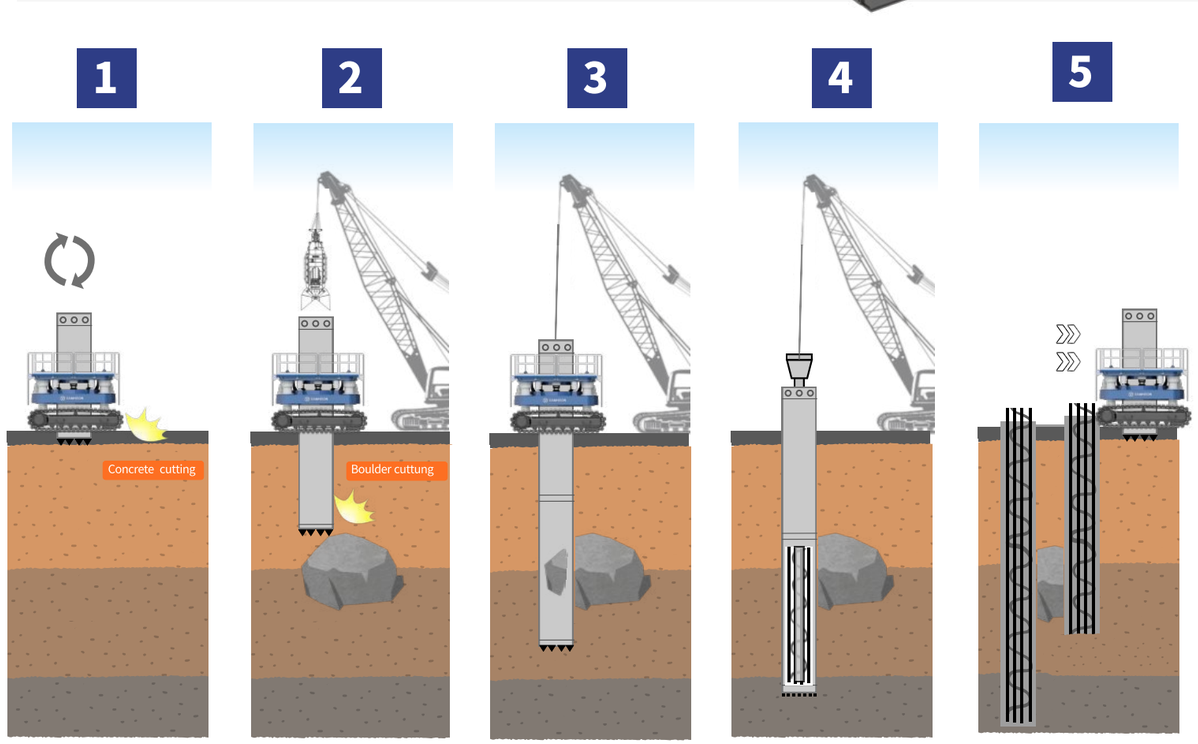
SAMHOON casing rotator

When soil condition is unstable and easily collapsible, casing is required to make concrete pile for deep foundation. A casing rotator is the best solution to drive and extract casing with good verticality. This method is also vibration-free, even with the largest shaft diameter

With 360 degrees drilling, working a rotator with grab, drilling rigs and augers is the efficient method of installing casing in hard & soft soil and rock layer.

Thanks to the rotating and oscillating mode, it has benefits for removing existing concrete piles, cutting through concrete in secant piling and penetrating inclined rock layers or large boulders.

The casing rotator can be equipped with an optional crawler track and power pack deck so it can have its own self-traveling capability.



Key advantages - casing rotator

Upper parts

- Auto-clamping system prevents the casing from dropping
- Oscillating mode available for releasing soil friction
- Reducing insert can easily convert smaller diameters
- Side steps for safe working during ascent and descent on all four sides
- Plug-in handrail can make for easy transportation
- Bolted cover on clamp for maintenance and repair

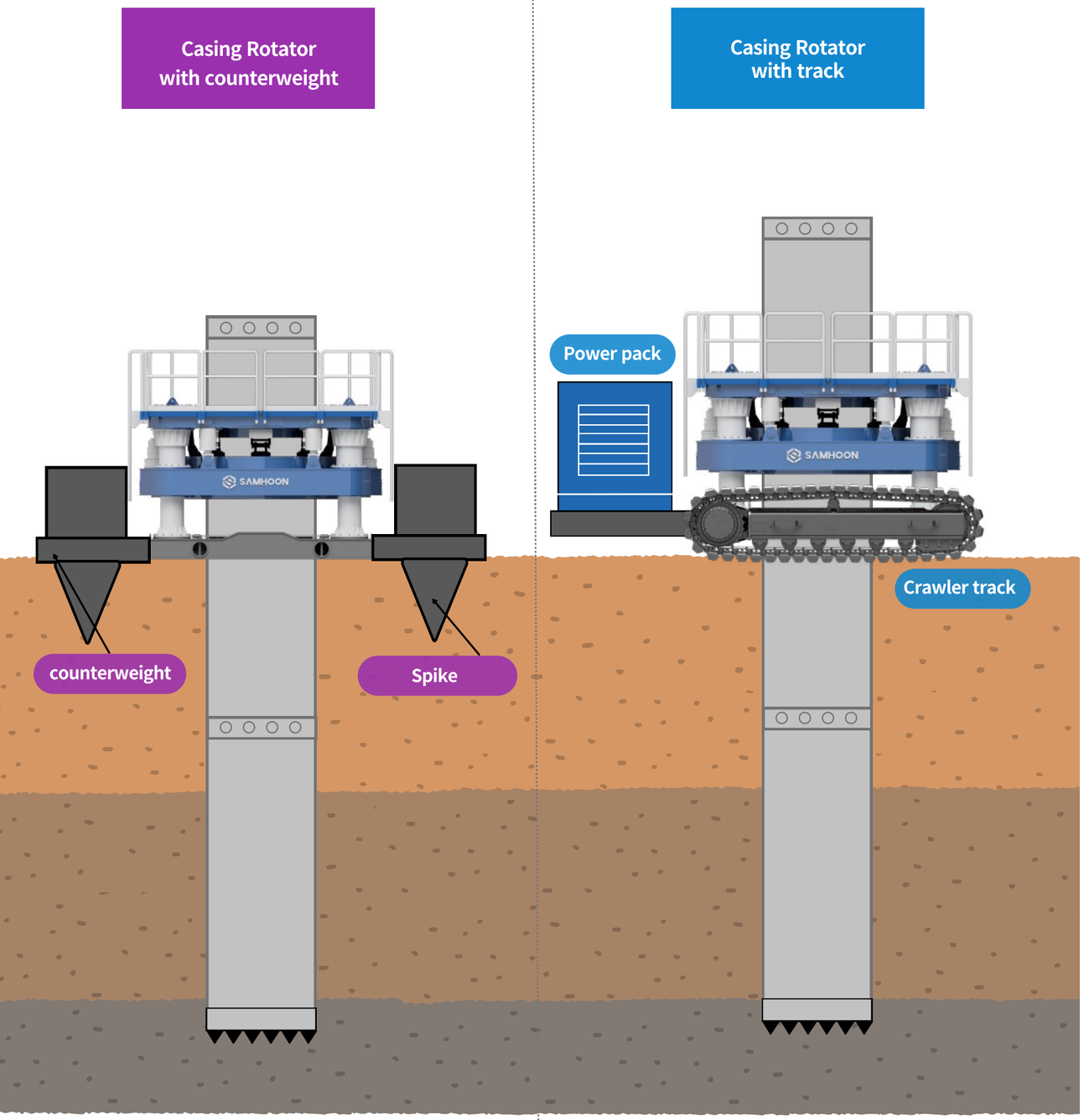
Basement

- Auto-leveling function for keeping verticality and holding weight of casing
- Optional crawler track for self-traveling capability
- Wireless controller for operator friendliness / convenience
- Torque booster function for penetrating rock layers

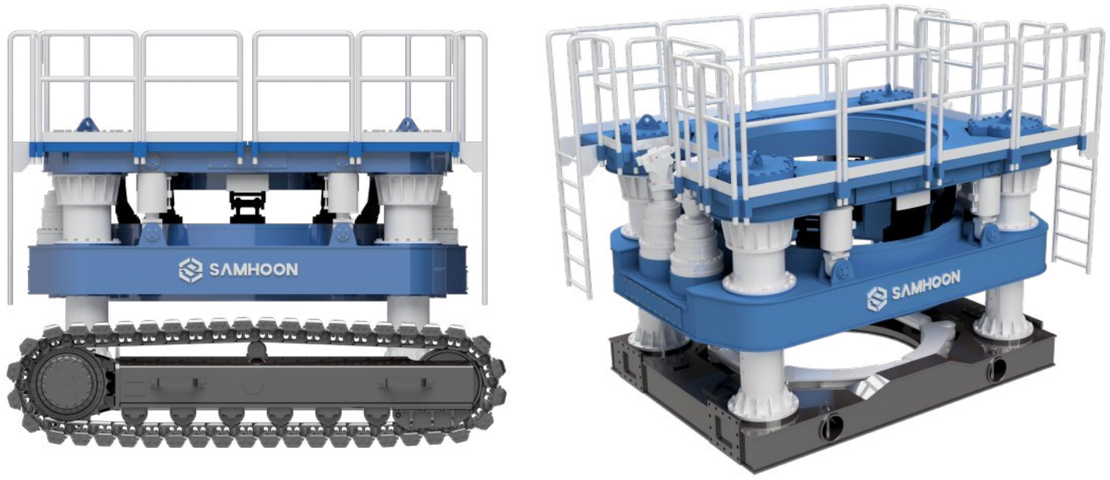
Casing rotator arrangement

Casing Rotator
with counterweight

Casing Rotator
with track



Casing rotator specification



Model		TR150	TR200	TR250	TR300
Max. casing dia.	mm	1500	2000	2500	3000
Drive torque(normal)	kN.m	2100	3100	5100	7100
Drive torque(Emergency)	kN.m	2700	4000	6600	9100
Rotator speed	rpm	0~2.6	0~2.4	0~2.3	0~1.8
Extract force	kN	2060	3530	4710	5200
Extract stroke	mm	750	750	750	750
Weight	ton	30	42	62	80
Engine power	kw	210	285	450	450
Pump flow	cc	2x165	2x165	2x250	2x250