



BSP INTERNATIONAL FOUNDATIONS LIMITED

WORLD LEADERS IN PILING HAMMERS &
DYNAMIC COMPACTION EQUIPMENT
SINCE 1906



MAKING A GLOBAL IMPACT



MAKING A GLOBAL IMPACT

CLAYDON BUSINESS PARK, GIPPING ROAD, GREAT BLAKENHAM, IPSWICH, SUFFOLK IP6 0NL ENGLAND
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SPEED

The unit is mounted on standard excavators, typically in the 40-90 tonne class and can be mobilised in minutes from arrival on site.

CONTROL

The machine is accurately controlled from the excavator cab and the degree of compaction electronically monitored.



SAFETY

The impact foot is in contact with the ground at all times and eliminates the risk of flying debris. Unlike conventional DC, other activities can take place in close proximity.



QUALITY

The impact energy and soil deflection are recorded by the on-board computer for presentation of compaction data to site managers. The data can highlight weak zones where extra fill is required or zones where underground obstructions were present (i.e. previously hidden old foundations).



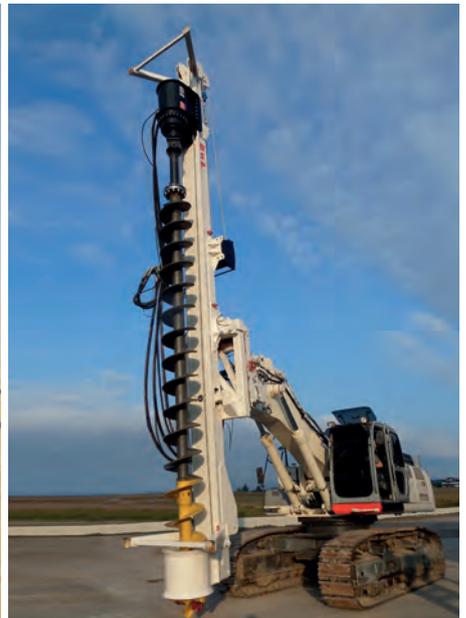
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RAPID IMPACT COMPACTION



RIC CAN BE FITTED WITH POSITION MONITORING (OPTIONAL EXTRA)



RIC WITH DRILLING ATTACHMENT

WHAT IS RIC?

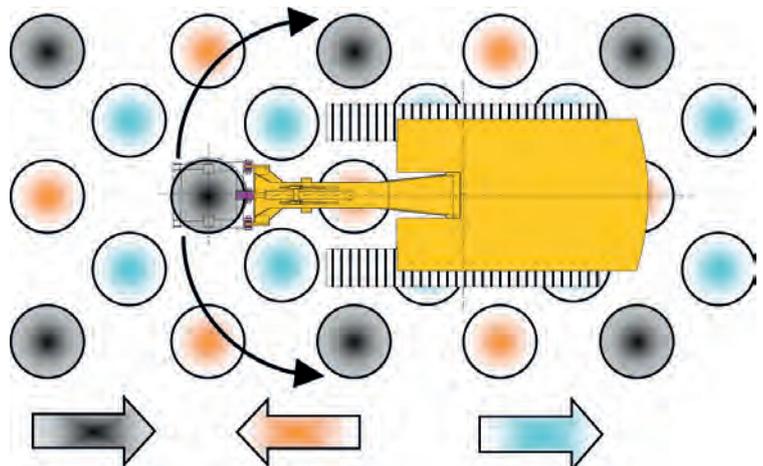
RIC is a technique allied to Dynamic Compaction that can be used to increase the bearing capacity of soils through controlled impact. The treatment is effective in the top layers typically up to 6m depth, though improvements up to 9m have been seen in some conditions. A drop weight of 5 to 16 tonnes (depending on size) is dropped onto a special foot assembly 40-60 times a minute. The foot remains in contact with the ground at all times.

METHODOLOGY

The method for efficiently covering the ground varies from country to country. A common pattern used to cover uses a track in three passes (see diagram below). The outer (black) points being compacted first, followed by the intermediate (orange) lastly the infilling (blue) positions. This has the effect of achieving the best depth of influence. The first pass effecting the ground to a deeper level than the latter.

RESULTS

Most granular fills and some silts are compactable, The best results being achieved where the fill is well-graded particle size. An area of 800m² - 16000m² can be covered in an average day (depending on the 'blow-per-position' setting.) This also allows time for routine maintenance and rotation of the special dolly pads located in the foot assembly which transfers the force of the blow through to the ground.

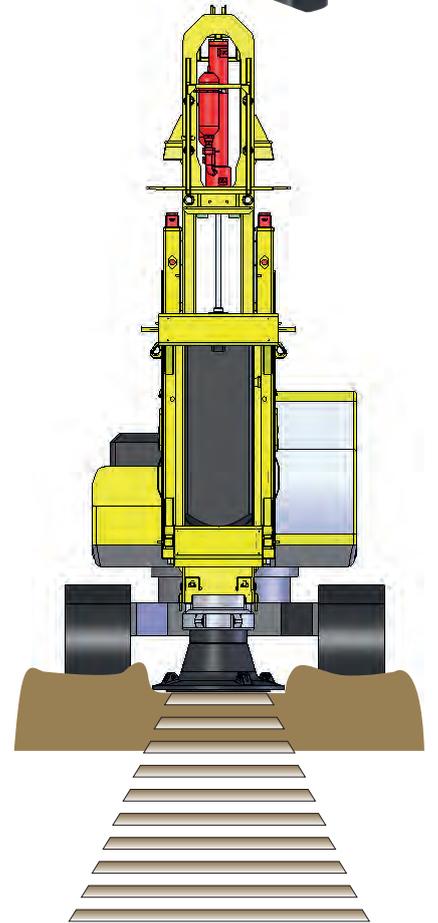
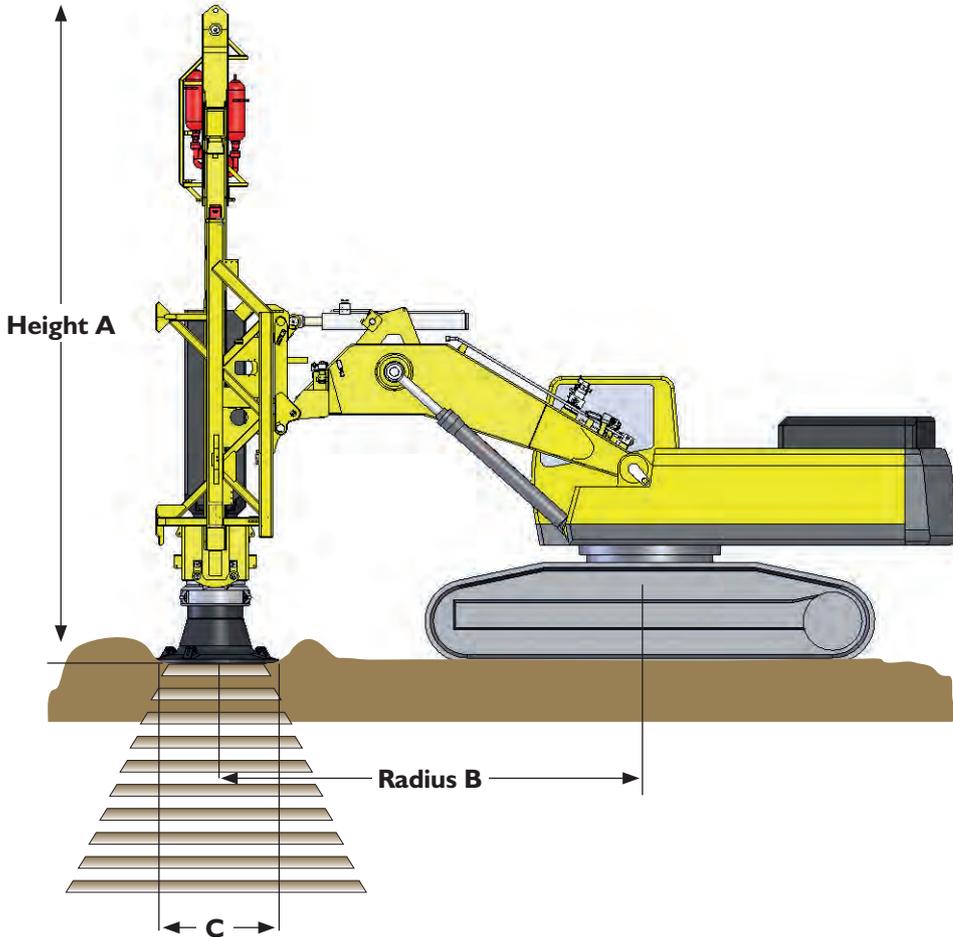


DATA LOGGING

A standard machine has the ability to record work done. Target criteria settings are adjusted for final set, depth and blow counts. The driver then compacts until one of those criteria is reached before moving the machine on. A visual representation of the data is seen in the cab and recorded by the on-board monitor.

POSITION MONITORING: OPTIONAL EXTRA

It is possible to add GPS coordinates to the compaction points. This allows the data logged to be precisely allocated to real position. Data presentations to the client can then be greatly enhanced.



TYPICAL DIMENSIONS	DIMENSIONS WHEN IN ERECT WORKING MODE			DIMENSIONS WHEN IN SINGLE-PIECE TRANSPORT MODE			OPTIMUM BASIC EXCAVATOR SIZE
MODEL/Ram Mass (Kg)	HEIGHT A (m)	RADIUS B (m)	FOOT DIA C (m)	LENGTH (m)	TRACK WIDTH (m)	APPROX. WEIGHT (T)	(T)
RIC 7000	7.5	5.0	1.3	12.9	3.5	58	35-42
RIC 9000	8.0	5.0	1.5	13.4	3.5	60	40-48
RIC 12000	8.1	5.2	1.6	*	4.0	88	60-75
RIC 16000	8.8	6.0	2.0	*	4.4	100	75-92

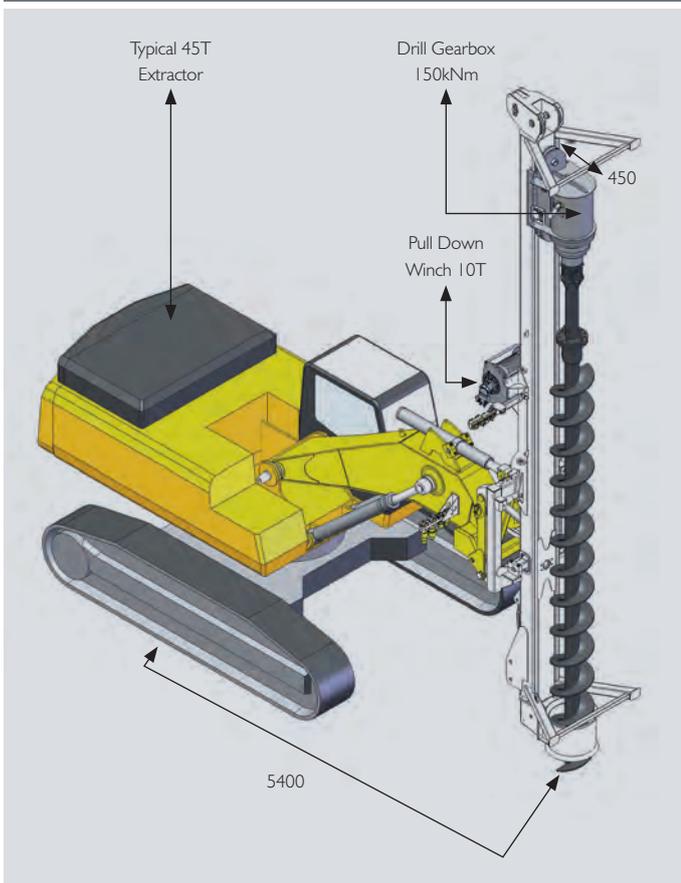
The above weights and dimensions are a typical guide only and may vary slightly depending on the base machine chosen. Lengths marked * would normally be shipped with hammer and excavator on separate trucks.



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NEW RIC DRILLING ATTACHMENT



RIC WITH DRILLING ATTACHMENT



RIC WITH DRILLING ATTACHMENT

RIC has traditionally been used for the compaction of soils consisting of sand and gravels.

Up until now, RIC has been limited on the use of silty and clay material. RIC activities can be combined with other soil improvement techniques to provide a cost effective solution even in these silty/clay conditions. This essentially includes soil mixing and stone columns. To make best use of the base excavator, BSP can now offer a mast and drill attachment to enable shallow holes to be drilled with either CFA or displacement type tools. Filled with stone, these columns can be subsequently treated by RIC to produce a more effective load bearing foundation.

- Robust mounting frame
- Easy removable panels for maintenance
- No reduction in performance
- Can be fitted to existing range of compactors
- Can be tailored for sheet or tube piles

AUGER DIAMETER	DRILL DEPTH	MAX. TORQUE	MAX. SPEED	PULL DOWN	PLUMBING TO VERTICAL
mm	m	kNm	rpm	T	° per side
650	7 (8 overall auger length)	150	20	10	3



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