

Piling & Ground ImprovementHydraulic piling hammers, power packs, piling rigs and rapid impact compactors



No.1 for Piling Hammers & RIC

BSP-TEX products and services are delivered worldwide and benefit from more than 117 years of experience and engineering excellence. All our products are designed and manufactured in the UK and customers are welcome to visit for a tour around our manufacturing facilities.

We produce a wide range of foundation equipment, including hydraulic piling hammers, hydraulic power packs, piling rigs, and rapid impact compactors (RIC). Our piling hammers provide an economical solution for the installation of all types of steel or concrete piles in either land or marine environments. Energy outputs range from 20kNm–590kNm and the hammers are operated from piling rigs, leaders or crane suspended.

BSP-TEX operates a Quality Management System that complies with ISO 9001:2015.











Dropweight Mass 1,500–2,500 kg 3,305–5,510 lbs

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Dropweight Mass 2,500 kg 5,510 lbs

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Dropweight Mass 2,500–5,000 kg 5,510–11,020 lbs

Page 12





Dropweight Mass 4,000–9,000 kg 8,820–19,840 lbs

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Dropweight Mass 9,000-11,000 kg 19,840-24,250 lbs

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Dropweight Mass 12,000–20,000 kg 26,455–44,090 lbs

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Dropweight Mass 25,000–40,000 kg 55,115–88,185 lbs

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Power Output 130-800 kW 175-1,073 hp

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CONTROL



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Dropweight Mass

9,000-16,000 kg

19,840-35,274 lbs



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DX Hammer Range

The DX range of hydraulic piling hammers are designed for small bearing piles of steel, timber, concrete and many sheet piles. The DX hammer is available with back guides for operating from a piling rig or a slider for operating from an excavator.

The DX hammer can be mounted on road-rail or tracked excavators with an operating weight of around 32t/70,548 lbs or greater. Applications include railway equipment installation and maintenance. Specifically developed to drive steel piles to support electrification stanchions, gantries and other railway projects requiring foundation piling. When mounted to the excavator's bucket linkage, the hammer can be quickly



Dropweight Mass 1,500–2,500 kg 3,307–5,510 lbs



Hammer Energy 20-30 kN.m 14,750-22,128 lbs



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Piling & Ground Improvement DX Hammer







erected from a horizontal transport position to a vertical position. Side tilt adjustment of five degrees left and right allows it to cope with the cant of the rail lines. During piling the hammer is automatically guided or crowded in the vertical plane.

Three models are available, the DX20, DX25 and the larger DX30, which offer drop-weights of 1.5t/3,305 lbs, 2.0t/4,409 lbs and 2.5t/5,510 lbs. Maximum impact energy is 20kNm/14,750 ft.lbs, 25kNm/18,439 ft.lbs and 30kNm/22,127 ft.lbs respectively, while blow rate at rated energy for all models is 60 blows per minute.

DX hammers can also be used to drive sheet piles, small bearing piles, tubular steel, timber or concrete piles with ultimate load bearing up to 2500kN/562kips. They can be operated directly from a suitable hydraulic excavator. A feature of the new hammers is an innovative BSP doubleacting cylinder, whereby the ram is accelerated on its downward path to achieve higher impact energy.

Suitable for typical piles driven singly or in pairs. Most Arcelor AZ and AU14 piles. Also, LX / PU / W Ranges, Hoesch H1200 to H3600, 'H' Piles, HP260 to HP400, USA HP10" to HP16". Tubes up to 406mm/16" Dia, Rail Standard 610mm/2' and 762mm/2'6" diameter tubes, plus many others.

Above: The DX hammer is designed to drive steel piles to support electrification stanchions, gantries and other railway projects requiring foundation piling. Side tilt adjustment of five degrees left and right allows it to cope with the cant of the rail lines.

Above left: The DX Hammer driving sheet piles. The manipulator increases the range of movement.

Configured for railway equipment installation and maintenance.



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Piling & Ground Improvement DX Hammer





- Total control of hammer
- Allows precise matching of energy to suit the pile driving requirements
- Double acting cylinder produces high impact energy and fast blow rate
- Economical low hydraulic power requirements
- Available with BSP Hydropacks for optimum hammer performance
- Hammer can be operated directly from hydraulic crane or excavator base
- Can drive piles with ultimate load bearing up to 1800kN



Above: The DX hammer is available with back guides for operating from a piling mast, and is also used on the BSP-TEX JX Piling Rig.

Top: The DX hammer can be operated directly from a suitable hydraulic excavator.



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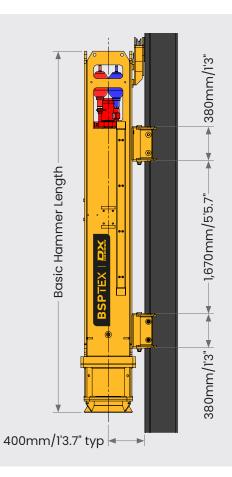


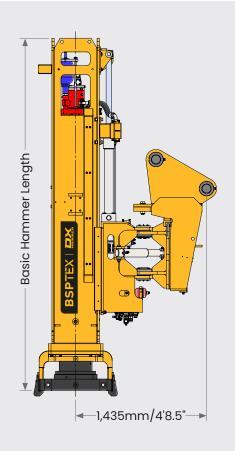
Piling & Ground Improvement / DX Hammer











DX Specifications	DX20	DX25	DX30
Dropweight Mass (kg/lbs)	1,500/3,305	2,000/4,410	2,500/5,510
Hammer Energy (kN.m/ft.lbs)	20/14,750	25/18,440	30/22,126
Max Equivalent Stroke (m/ft-in)	1.2/3'11"	1.2/3'11"	1.2/3'11"
Operating Pressure (bar/psi)	150/2,175	160/2,320	170/2,465
Hyd. Oil Flow Required (L/min/USgpm)	150/40	150/40	150/40
Blow Rate at rated energy (bpm)	60	60	60
Basic Hammer Length (mm/ft-in)	4,000/13'2"	4,000/13'2"	4,300/14'1"
Basic Hammer Weight (kg/lbs)	3,900/8,600	4,500/9,920	5,500/12,125
Compatible Power Pack - Stage III	-	-	-
Compatible Power Pack - Stage V	-	-	-
Operating Mode	PR/EM	PR/EM	PR/EM
Pile Type	SP/TH/CP/WP	SP/TH/CP/WP	SP/TH/CP/WP
Maximum Pile Size (mm/ft-in)	800/2'7.5"	800/2'7.5"	800/2'7.5"
Power Source	PTO	PTO	PTO
Max Pile Bearing Capacity (kN/kips)	1,400/315	1,800/405	2,500/562

FS Freely Suspended, PR Piling Rig/Mast, EM Excavator Mount, SP Sheet Piles, TH Tube & H-Piles, CW Combi-Wall, CP Concrete Piles, WP Wooden Piles, PP Power Pack, PTO Crane/Excavator PTO



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Slim/narrow design allows the hammer to pass between upstanding piles.

SL Hammer Range

The SL hydraulic piling hammers are compact, powerful and versatile. They are designed for driving sheet piles and small bearing piles of concrete, steel or timber.

The SL30 hammer has a drop weight of 2,500kg/5,500 lbs, impact energy of 30kN.m/22,126 ft.lbs, and a maximum blow rate of 84 blows per minute.

The SL30 hammer can drive piles to an ultimate load bearing capacity of 2,500kN/562 kips. They are available with legs and inserts for crane suspended use or with backguides for operating from a piling rig, piling mast or leader.



Dropweight Mass 2,500 kg 5,500 lbs



Hammer Energy 30 kN.m 22,126 ft.lbs



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Features of the SL range include total control of hammer stroke and blow rate. The BSP-TEX specially designed and developed double-acting cylinder produces high impact energy from a short stroke. SL hammers are economical to operate due to the high blow rate and low hydraulic power requirement. An optional digital read-out of hammer performance is available.

Having a slim design and a width of only 784mm/2'7" allows the hammers to pass between upstanding piles which includes PZ27 sections.

The hammers can be operated directly from a hydraulic crane or are available with BSP-TEX Hydropacks which conform to the latest environmental regulations.

Above: The SL hammer is designed for driving sheet piles and small bearing piles of concrete, steel or timber.

High blow rate and low hydraulic power requirement.



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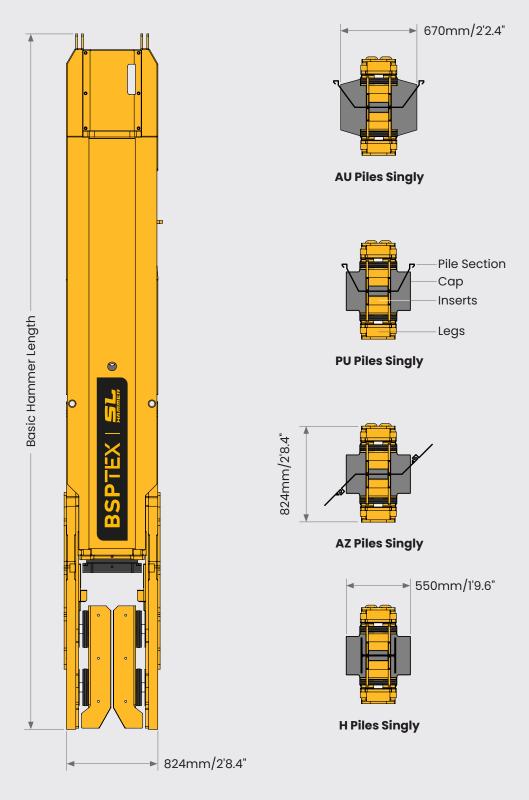














BSP-TEX reserve the right to amend specifications at any time.

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- Total control of hammer stroke and blow rate
- Double acting cylinder produces high impact energy from a short stroke to give a high blow rate
- Slim design allows hammer to pass between upstanding piles
- Low hydraulic power requirement
- Available with BSP-TEX Hydropacks for optimum hammer performance
- Hammer can be operated directly from hydraulic crane or excavator bases
- Can drive piles with ultimate load bearing up to 1800kN/405 kips

SL Specifications	SL30
Dropweight Mass (kg/lbs)	2,500/5,510
Hammer Energy (kN.m/ft.lbs)	30/22,126
Max Equivalent Stroke (m/ft-in)	1.2/3'11"
Operating Pressure (bar/psi)	180/2,611
Hyd. Oil Flow Required (L/min/USgpm)	175/46
Blow Rate at rated energy (bpm)	84
Basic Hammer Length (mm/ft-in)	5,970/19'7"
Basic Hammer Weight (kg/lbs)	5,950/13,117
Compatible Power Pack - Stage III	HP130
Compatible Power Pack - Stage V	HP150
Operating Mode	FS/PR
Pile Type	SP/TH/WP
Maximum Pile Size (mm/ft-in)	650/2'1.6"
Power Source	PP/PTO
Max Pile Bearing Capacity (kN/kips)	2,500/562

FS Freely Suspended, PR Piling Rig/Mast, EM Excavator Mount, SP Sheet Piles, TH Tube & H-Piles, CW Combi-Wall, CP Concrete Piles, WP Wooden Piles, PP Power Pack, PTO Crane/Excavator PTO





Above: The SL hammer can be used in piling rigs and is supported by a wide range of accessories.

Top: Various pile sections are accomodated.



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LX Hammer Range

The LX hydraulic hammer range of powerful yet lightweight hammers have been designed to provide greater stability to piling rigs, especially in applications where a greater reach is required.

The LX hammers provide an economical solution for the installation of all types of piles. The hammers are capable of driving steel, concrete or timber piles in a variety of soil conditions. Drop-weights range from 2,500kg/5,510 lbs up to 5,000kg/11,023 lbs and impact energy ranges from 20kN.m/14,750 ft.lbs to 40kN.m/29,502 ft.lbs.

The special cylinder system offers unique advantages including total control of hammer stroke and blow rate. Precise matching of energy to the pile driving requirement reduces energy loss and maintains a low running cost.



Dropweight Mass 2,500–5,000 kg 5,510–11,023 lbs



Hammer Energy 20–40 kN.m 14,750–29,502 ft.lbs



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Piling & Ground Improvement / LX Hammer





Other important features include optimum power to weight ratio. Due to the cage and drop-weight design, the hammers have a short overall length. The design of the cylinder, drop-weight connection and shock absorber allow easy access for maintenance.

The hammers can be fitted with a single acting hydraulic system to give an equivalent stroke of 800mm/2'7.5" or alternatively a double acting cylinder can be fitted to give an equivalent stroke of 1,200mm/3'11".

Above: The short overall length of the LH hammer is a distinct advantage.



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Piling & Ground Improvement / LX Hammer







A range of standard drive caps and pile helmets are available for the LX range. LX hydraulic piling hammers can be operated from BSP-TEX power packs or from hydraulic piling rigs or cranes.

Above and left: The unique cylinder design provides optimum power to weight ratio.

- Total control of hammer
- Easy maintenance
- Short overall length
- Optimum power to weight ratio
- Can operate from BSP-TEX power pack, hydraulic piling rig or crane
- A range of standard drive caps and pile helmets are available
- Choice of cylinders for 800mm/2'7.5" or 1,200mm/3'11.2" stroke

Greater stability and greater reach.





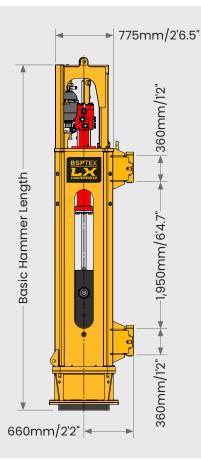








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LX Specifications	LX20	LX30	LX40
Dropweight Mass (kg/lbs)	2,500/5,510	4,000/8,818	5,000/11,023
Hammer Energy (kN.m/ft.lbs)	20/14,750	30/22,127	40/29,502
Max Equivalent Stroke (m/ft-in)	0.8/2'7.5"	0.8/2'7.5"	0.8/2'7.5"
Operating Pressure (bar/psi)	120/1,740	200/2,900	220/3,190
Hyd. Oil Flow Required (L/min/USgpm)	160/42	160/42	160/42
Blow Rate at rated energy (bpm)	45	50	55
Basic Hammer Length (mm/ft-in)	4,800/15'9"	4,800/15'9"	4,950/16'3"
Basic Hammer Weight (kg/lbs)	5,600/12,346	7,100/15,653	8,000/17,637
Compatible Power Pack - Stage III	-	-	-
Compatible Power Pack - Stage V	-	-	-
Operating Mode	PR	PR	PR
Pile Type	TH/CP/WP	TH/CP/WP	TH/CP/WP
Maximum Pile Size (mm/ft-in)	800/2'7.5"	800/2'7.5"	800/2'7.5"
Power Source	PTO	PTO	PTO
Max Pile Bearing Capacity (kN/kips)	1,500/337	2,400/540	3,000/674

FS Freely Suspended, PR Piling Rig/Mast, EM Excavator Mount, SP Sheet Piles, TH Tube & H-Piles, CW Combi-Wall, CP Concrete Piles, WP Wooden Piles, PP Power Pack, PTO Crane/Excavator PTO



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CX Hammer Range

CX hydraulic piling hammers are designed for driving a wide range of bearing or sheet piles. Available with legs and inserts or tube pile guides for use freely suspended, or with back guides for operating from a hydraulic piling rig or leaders. The hammers are capable of driving steel or concrete piles to an ultimate load bearing capacity of up to 8,400kN/1,888 kips.

Features include total control of hammer stroke and blow rate, precise matching of energy to suit the pile driving requirements. In addition, changing the drive cap dolly is quick and easy.



Dropweight Mass 4,000–9,000 kg 8,818–19,842 lbs



Hammer Energy 50–110 kN.m 36,878–81,132 ft.lbs



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The hammers can be operated directly from a hydraulic crane or used with a BSP-TEX power pack. The cage and drop-weight design result in a short overall hammer length, and the cylinder and drop-weight connection with shock absorbers are readily accessible and easy to maintain.

The accelerated cylinder design is unique to BSP-TEX hammers, and offers superior performance. The hydraulic system is efficient, economical and reliable.

Above: CX hydraulic piling hammers are designed for driving sheet piles, tube and H-piles, concrete piles, combiwall and wooden piles.



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Piling & Ground Improvement / CX Hammer







- Total control of hammer
- Allows precise matching of energy to suit the pile driving requirements
- Highly efficient hydraulic system delivers low energy loss and low running cost
- Simple, fast dolley changing
- Low maintenace and easily accessible
- Cage and drop-weight design gives short overall hammer length
- Available with BSP Hydropacks for optimum hammer performance
- Can be operated directly from hydraulic crane
- Suitable for driving raked/batter piles

Available with legs and inserts or tube pile guides for use freely suspended, or with back guides for operating from a hydraulic piling rig or leaders.

Above: CX hammers are suitable for driving raked/batter piles.

Top left: CX hammers are available with BSP-TEX Hydropacks for optimum hammer performance.



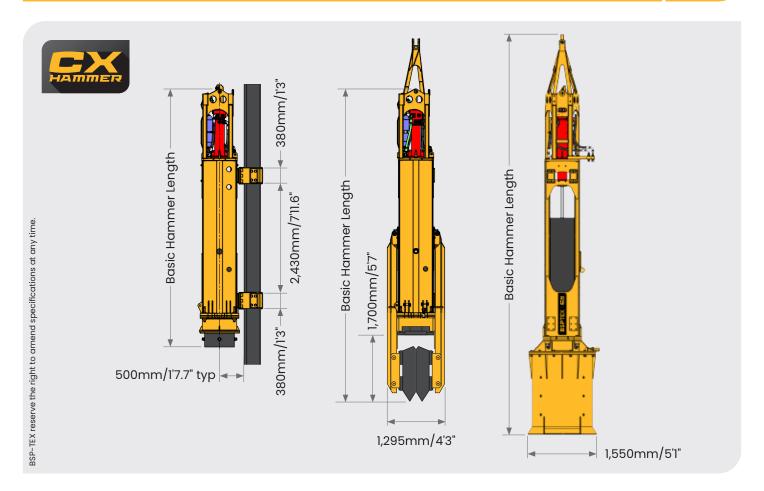






Piling & Ground Improvement / CX Hammer





CX Specifications	CX50	CX60	CX85	CX110
Dropweight Mass (kg/lbs)	4,000/8,818	5,000/11,023	7,000/15,432	9,000/19,842
Hammer Energy (kN.m/ft.lbs)	50/36,878	60/44,254	85/62,693	110/81,132
Max Equivalent Stroke (m/ft-in)	1.2/3'11.2"	1.2/3'11.2"	1.2/3'11.2"	1.2/3'11.2"
Operating Pressure (bar/psi)	200/2,900	240/3,480	250/3,625	260/3,770
Hyd. Oil Flow Required (L/min/USgpm)	180/48	220/58	220/58	220/58
Blow Rate at rated energy (bpm)	46	40	38	35
Basic Hammer Length (mm/ft-in)	5,020/16'5"	5,860/19'3"	5,860/19'3"	6,380/20'11"
Basic Hammer Weight (kg/lbs)	7,800/17,196	9,160/20,194	11,450/25,243	14,110/31,107
Compatible Power Pack - Stage III	HP130	HP130	HP130	HP130
Compatible Power Pack - Stage V	HP150	HP150	HP150	HP150
Operating Mode	FS/PR	FS/PR	FS/PR	FS/PR
Pile Type	SP/TH/CP/WP	SP/TH/CP/WP	SP/TH/CP	SP/TH/CW/CP
Maximum Pile Size (mm/ft-in)	1,000/3'3"	1,220/4'	1,525/5'	1,525/5'
Power Source	PP/PTO	PP/PTO	PP/PTO	PP/PTO
Max Pile Bearing Capacity (kN/kips)	3,700/832	4,600/1,034	6,500/1,461	8,400/1,888

FS Freely Suspended, PR Piling Rig/Mast, EM Excavator Mount, SP Sheet Piles, TH Tube & H-Piles, CW Combi-Wall, CP Concrete Piles, WP Wooden Piles, PP Power Pack, PTO Crane/Excavator PTO



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CXL Hammer Range

CXL hydraulic piling hammers are designed for driving a wide range of bearing or sheet piles. Available with legs and inserts or tube pile guides for use freely suspended, or with back guides for operating from a hydraulic piling rig or leaders. The hammers are capable of driving steel or concrete piles to an ultimate load bearing capacity of up to 11,000kN/2,473kips.

Features include total control of hammer stroke and blow rate, precise matching of energy to suit the pile driving requirements. In addition, changing the drive cap dolly is quick and easy.



Dropweight Mass 9,000–11,000 kg 19,842–24,251 lbs



Hammer Energy 115–140 kN.m 84,820–103,259 ft.lbs



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Piling & Ground Improvement CXL Hammer



The hammers can be operated directly from a hydraulic rig or used with a BSP-TEX power pack. The cylinder and drop-weight connection with shock absorbers are readily accessible and easy to maintain.

The cylinder design is unique to BSP-TEX hammers, and offers superior performance. The hydraulic system is efficient, economical and reliable.

Optional equipment includes a digital readout of hammer performance in a choice of units (stroke or energy) and are also available with BSP-TEX Hydropacks which conform

- with current emissions regulations.
- Total control of hammer stroke and blow rate
- Allows precise matching of energy to suit the pile driving requirements
- Highly efficient hydraulic system delivers low energy loss and low running cost
- Simple, fast dolley changing
- Low maintenace and easily accessible
- Available with BSP Hydropacks for optimum hammer performance
- Can be operated directly from hydraulic crane
- Suitable for driving raked/batter piles



Above: CXL hydraulic piling hammers are designed for driving sheet piles, tube and H-piles, concrete piles, combiwall and wooden piles.

Available with legs and inserts or tube pile guides for use freely suspended.



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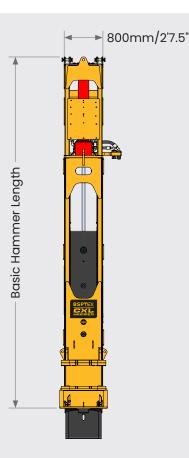








BSP-TEX reserve the right to amend specifications at any time.



CXL Specifications CXL115 CXL140 Dropweight Mass (kg/lbs) 9,000/19,842 11,000/24,251 Hammer Energy (kN.m/ft.lbs) 115/84,820 140/103,259 1.3/4'3" 1.3/4'3" Max Equivalent Stroke (m/ft-in) Operating Pressure (bar/psi) 260/3,770 270/3,916 250/66 Hyd. Oil Flow Required (L/min/USgpm) 250/66 Blow Rate at rated energy (bpm) 35 32 Basic Hammer Length (mm/ft-in) 6,380/20'11" 7,750/25'5" Basic Hammer Weight (kg/lbs) 14,750/32,518 17,000/37,478 Compatible Power Pack - Stage III HP130 HP130 Compatible Power Pack - Stage V HP150 HP150 Operating Mode FS/PR FS/PR SP/TH/CW/CP SP/TH/CW/CP Pile Type Maximum Pile Size (mm/ft-in) 1,600/5'3" 1,600/5'3" **Power Source** PP/PTO PP/PTO Max Pile Bearing Capacity (kN/kips) 8,500/1,910 11,000/2,473

FS Freely Suspended, PR Piling Rig/Mast, EM Excavator Mount, SP Sheet Piles, TH Tube & H-Piles, CW Combi-Wall, CP Concrete Piles, WP Wooden Piles, PP Power Pack, PTO Crane/Excavator PTO



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CG Hammer Range

All the CG piling hammers are designed for driving a variety of bearing piles including steel tube, combipiles, H-sections, raked/batter piles and reinforced/prestressed concrete piles and can be operated from piling rig leaders or crane suspended.

Important features of the CG range include total control of hammer stroke and blow rate, and precise matching of energy to suit the relevant pile driving requirements. These large-capacity hammers are capable of driving piles with an ultimate load bearing of up to 23,700kN/5,328 kips.



Dropweight Mass 12,000–20,000 kg 26,455–44,092 lbs



Hammer Energy 180–300 kN.m 132,761–221,269 ft.lbs



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Piling & Ground Improvement | CG Hammer



Drive cap dolly changing is quick and easy, and cylinder and drop-weight connection with shock absorber is easily accessible for routine maintenance.

CG hammers are economical to operate because they have a low hydraulic power requirement. For optimal performance, use CG hammers with BSP-TEX Hydropacks.



Left: See also the full range of BSP-TEX Hydropack power packs.

Below left: CG hammers are designed for driving a variety of bearing piles including, raked/batter piles.



Suitable for driving raked (batter) piles



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Piling & Ground Improvement | CG Hammer





- Total control of hammer stroke and blow rate
- Allows precise matching of energy to suit the pile driving requirements
- Quick and easy dolly changing
- Cylinder and drop-weight connection with shock absorber is easily accessible
- Economical, low hydraulic power design
- Available with BSP-TEX Hydropacks for optimum hammer performance
- Suitable for driving raked (batter) piles

Above: The CG range of accessories inlude large capacity pile sleeves and custom options are also available.

These large-capacity hammers are capable of driving piles with an ultimate load bearing of up to 23,700kN/5,328 kips.



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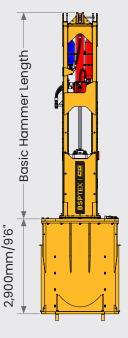


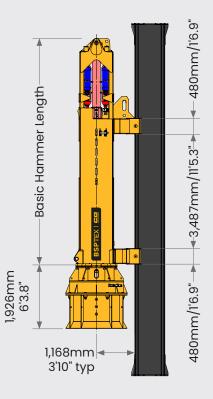


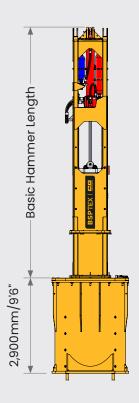




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CG Specifications	CG180	CG210	CG240	CG300
Dropweight Mass (kg/lbs)	12,000/26,455	14,000/30,865	16,000/35,274	20,000/44,092
Hammer Energy (kN.m/ft.lbs)	180/132,761	210/154,888	240/177,015	300/221,269
Max Equivalent Stroke (m/ft-in)	1.5/4'11"	1.5/4'11"	1.5/4'11"	1.5/4'11"
Operating Pressure (bar/psi)	180/2,611	240/3,480	260/3,770	280/4,061
Hyd. Oil Flow Required (L/min/USgpm)	380/100	380/100	420/110	420/110
Blow Rate at rated energy (bpm)	36	36	34	34
Basic Hammer Length (mm/ft-in)	6,270/20'7"	6,600/21'8"	6,930/22'9"	7,590/24'11"
Basic Hammer Weight (kg/lbs)	17,300/38,140	19,350/42,659	21,700/47,840	26,000/57,320
Compatible Power Pack - Stage III	HP252	HP252	HP252	HP252
Compatible Power Pack - Stage V	HP260	HP260	HP260	HP260
Operating Mode	FS/PR	FS/PR	FS/PR	FS/PR
Pile Type	TH/CW/CP	TH/CW/CP	TH/CW/CP	TH/CW/CP
Maximum Pile Size (mm/ft-in)	2,100/6'10.7"	2,100/6'10.7"	2,500/8'2.4"	2,500/8'2.4"
Power Source	PP	PP	PP	PP
Max Pile Bearing Capacity (kN/kips)	14,200/3,192	16,600/3,732	19,000/4,271	23,700/5,328

FS Freely Suspended, PR Piling Rig/Mast, EM Excavator Mount, SP Sheet Piles, TH Tube & H-Piles, CW Combi-Wall, CP Concrete Piles, WP Wooden Piles, PP Power Pack, PTO Crane/Excavator PTO



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CGL Hammer Range

The CGL hammers can be used crane suspended or configured with backguides for leader use. All the CGL piling hammers are designed for driving a variety of bearing piles including steel tubes, combi-piles, H-sections, raked or batter piles and reinforced/pre-stressed concrete piles. Piles up to 2m/6'6.7" in diameter can be driven as standard, and with special attachments, larger diameters can be accommodated.



Dropweight Mass 25,000–40,000 kg 55,115–88,185 lbs



Hammer Energy 370–590 kN.m 272,898–435,162 ft.lbs



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Piling & Ground Improvement | CGL Hammer





Key features of the CGL hammers are the cylinder and drop-weight connection parts are easily accessible for maintenance, the square-section minimises overall height, and the digital readout of hammer performance is available in a choice of units (stroke or energy).

The CGL models are economical to operate due to a low hydraulic power requirement. The hydraulic cylinder is BSP-TEX's own designed and developed system. Choose BSP-TEX Hydropack power packs for optimal performance.

Above: With a maximum dropweight of 40t/88,185 lbs, the CGL range are the largest hammers produced by BSP-TEX.

Piles up to 2m dia. can be driven as standard.









Piling & Ground Improvement | CGL Hammer





- Total control of hammer stroke and blow rate
- Cylinder and drop-weight connection parts are easily accessible
- Digital readout of hammer performance in choice of units (stroke or energy)
- Square section giving a shorter overall height
- Attachment points allowing vertical or raking piles to be driven
- Piles up to 2m/6'6.7" diameter can be driven as standard

Above: CGL hammers can be configured for most piling applications and a wide range of accessories are available.

Custom attachments are available for nonstandard piles and piles greater than 2m/6'6.7" in diameter.



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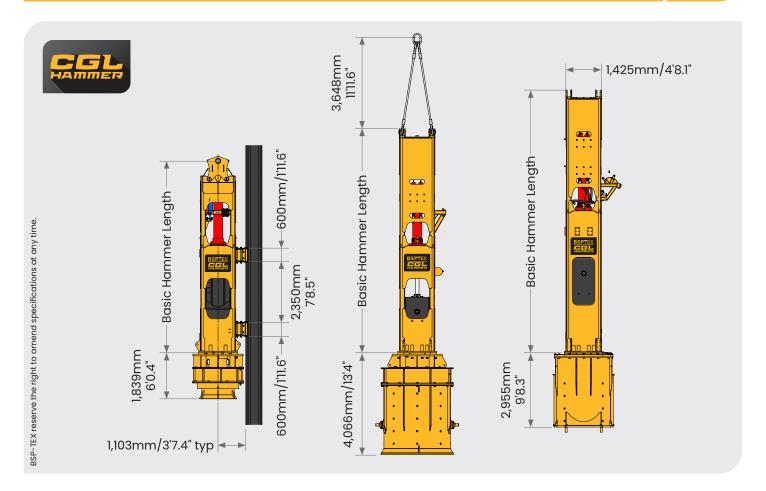






Piling & Ground Improvement / CGL Hammer





CGL Specifications	CGL370	CGL440	CGL520	CGL590
Dropweight Mass (kg/lbs)	25,000/55,115	30,000/66,139	35,000/77,162	40,000/88,185
Hammer Energy (kN.m/ft.lbs)	370/272,898	440/324,527	520/383,532	590/435,162
Max Equivalent Stroke (m/ft-in)	1.5/4'11"	1.5/4'11"	1.5/4'11"	1.5/4'11"
Operating Pressure (bar/psi)	260/3,770	280/4,061	280/4,061	290/4,206
Hyd. Oil Flow Required (L/min/USgpm)	800/211	800/211	1,000/264	1,000/264
Blow Rate at rated energy (bpm)	32	32	32	32
Basic Hammer Length (mm/ft-in)	9,250/30,4.2"	9,750/31'11.9"	10,250/33'7.5"	10,750/35'3.2"
Basic Hammer Weight (kg/lbs)	37,230/82,276	43,700/96,342	50,160/110,584	60,000/132,277
Compatible Power Pack - Stage III	HP570	HP570	HP800	HP800
Compatible Power Pack - Stage V	HP570	HP570	HP800	HP800
Operating Mode	FS/PR	FS/PR	FS/PR	FS/PR
Pile Type	TH/CW/CP	TH/CW	TH/CW	TH/CW
Maximum Pile Size (mm/ft-in)	3,000/9'10.1"	3,000/9'10.1"	3,000/9'10.1"	3,000/9'10.1"
Power Source	PP	PP	PP	PP
Max Pile Bearing Capacity (kN/kips)	29,000/6,519	35,000/7,868	40,000/8,992	46,000/10,341

FS Freely Suspended, PR Piling Rig/Mast, EM Excavator Mount, SP Sheet Piles, TH Tube & H-Piles, CW Combi-Wall, CP Concrete Piles, WP Wooden Piles, PP Power Pack, PTO Crane/Excavator PTO



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Hydraulic Power Packs

BSP-TEX Hydropacks are used to power hydraulic pile driving hammers. Diesel power is provided by either Caterpillar or Perkins series industrial engines. All engines are turbocharged and after-cooled, and Hydropacks are exceptionally reliable and easy to maintain. Engine emission status is selected according to location.

Other features of the hydraulic power pack range include a robust skid frame, central external lifting points, bund for containment of spillages, lockable access doors, and acoustic attenuation. Hydraulic power is produced using Kawasaki variable displacement axial piston pumps.

Control panel functions include system protection shut down, engine rpm, emergency stop, system load test and fault diagnosis using the latest CAN bus technology.



Power Output 130–800 kW 174–1,073 hp



Maximum Flow 215–1,200 L/min 57–317 USgpm

Request a quote for BSP-TEX customised power packs.



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- Turbo charged diesel engines used exclusively for reliability, fuel economy and compliance with the latest EU/EPA regulations
- Open circuit hydraulic system using electronically controlled axial piston pumps
- Robust, welded steel skid frame with bund for containment of spillages
- Lockable doors provide security and easy service access.
- Tank mounted hydraulic filter with sensor for service indication
- Hydraulic oil temperature controlled by independent air blast cooler

Above: Hydropacks are available in a standard range of power outputs from 130-800 kW/174-1,073 hp.

> Hydropacks are exceptionally reliable and easy to maintain.



BSP TEX

BSP-TEX LTD









- CAN bus control panel functions include, engine rpm, emergency stop, system load test & fault diagnosis
- System pressure gauge
- Offline cooling and filtration of hydraulic oil as standard
- Option of hydraulic oil condition monitoring system
- EPA-Tier 4 engines available on larger power packs



Above: Excavator mounts available on request.

Top: For optimal performance, choose BSP-TEX Hydropacks.



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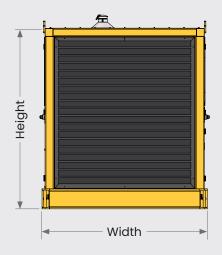


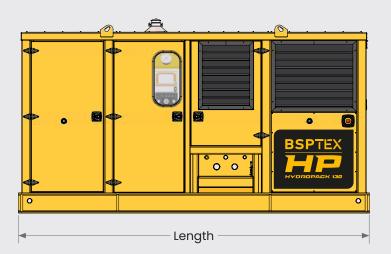






BSP-TEX reserve the right to amend specifications at any time.





HP Specifications	HP130	HP150	HP252	HP260	HP570	HP800
Power Output (kW/hp)	130/174	150/201	252/338	260/349	570/764	800/1,073
Max. Flow (L/min/USgpm)	215/57	250/66	420/110	430/114	900/238	1200/317
Max. Op. Pressure (bar/psi)	300/4,351	300/4,351	300/4,351	300/4,351	300/4,351	300/4,351
Engine Type	Perkins	Perkins	CAT	CAT	CAT	CAT
Engine Model	1106D	1206F	C9	C9.3B	C18	2xC15
Hydraulic Oil Cap. (L/USgal)	600/159	600/159	1000/264	1000/264	2,100/555	3,000/793
Fuel Capacity (L/USgal)	350/93	350/93	500/132	500/132	1,000/264	1,800/476
Weight Dry (kg/lbs)	3,100/6,834	3,700/8,157	5,300/11,685	5,800/12,787	10,000/22,046	12,000/26,455
Weight Inc. Fuel & Oil (kg/lbs)	3,890/8,576	5,000/11,023	6,500/14,330	7,200/15,873	12,700/27,999	16,000/35,274
Length (m/ft-in)	3.50/11'5.8"	3.50/11'5.8"	4.50/14'9.2"	4.50/14'9.2"	5.20/17'1"	7.20/23'7.5"
Width (m/ft-in)	1.65/5'5"	1.65/5'5"	1.80/5'10.9"	1.80/5'10.9	2.00/6'6.7"	2.20/7'2.6"
Height (m/ft-in)	1.75/5'8.9"	1.75/5'8.9"	2.30/7'6.5"	2.30/7'6.5"	2.30/7'6.5"	2.50/8'2.4"
Compatible BSP Hammers	SL/CX	SL/CX/CXL	CG 180-300	CG 180-300	CGL 370-440	CGL 520-590
Engine Emission Status (EU)	Stage-III	Stage-V	Stage-III	Stage-V	Stage-V	Stage-IV
Engine Emission Status (EPA)	Tier 3	Tier 4	Tier 3	Tier 4	Tier 4	Tier 3

FS Freely Suspended, PR Piling Rig/Mast, EM Excavator Mount, SP Sheet Piles, TH Tube & H-Piles, CW Combi-Wall, CP Concrete Piles, WP Wooden Piles, PP Power Pack, PTO Crane/Excavator PTO



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Mobile, self-erecting and radio-controlled (optional extra).

JX Piling Rig

The JX Piling Rig is mobile, self-erecting and radio-controlled. The rig is mounted on a JCB base unit, uses a 12.5m/41' single piling mast, and any one of the three BSP-TEX hydraulically accelerated piling hammers from the DX range. The JX Piling Rig is capable of driving steel, wood or concrete piles up to 8m/26'3" in length.



Dropweight Mass 1,500–2,500 kg 3,305–5,510 lbs



Hammer Energy 20–30 kN.m 14,750–22,126 ft.lbs



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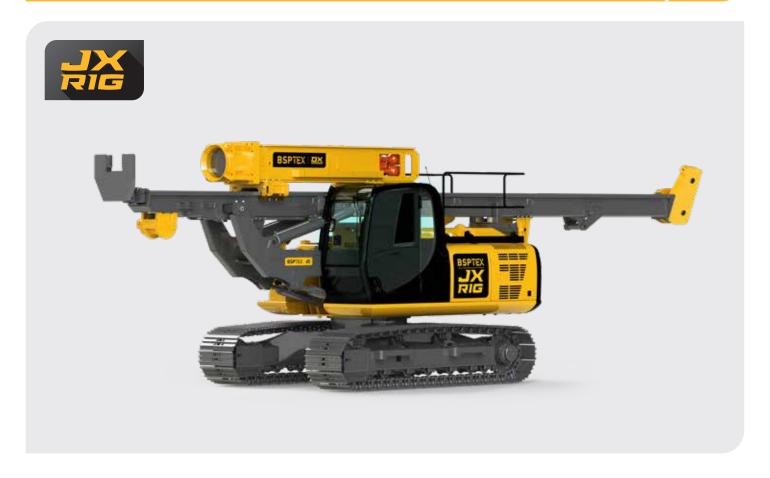






Piling & Ground Improvement / JX Piling Rig





A primary braked piling winch carries the 3.9-5.5t/8,598-12,125 lbs piling hammer, and a secondary winch is used to handle the piles. The rig also incorporates a mast foot and pile guide. Refer to the DX hammer range data sheet for more detailed information.

Requiring just 150 litres per minute/39.6 USGal/min of oil flow at 150-170 bar/2,175-2,465 psi, the high-performance hammer can deliver up to 30kNm of energy at 60bpm. This performance exceeds the requirement on most projects for concrete driven piles, resulting in the machine working at approximately 50% power. Fuel consumption of the JX Piling Rig is an economical 10 litres/2.65 USGal per hour.

The combined weight of the rig is 28.6t/63,052 lbs and this light weight, combined with a wide and long undercarriage, reduces the ground pressure imposed by the machine to just 82kN/m²/18.4 kips/m² without a pile.

28.6t/63,052 lbs transport weight (inc. hammer), 13m/42'7.8" working height, 8m/26'3" max. pile length and 3.09m/ 10'1.6" width.

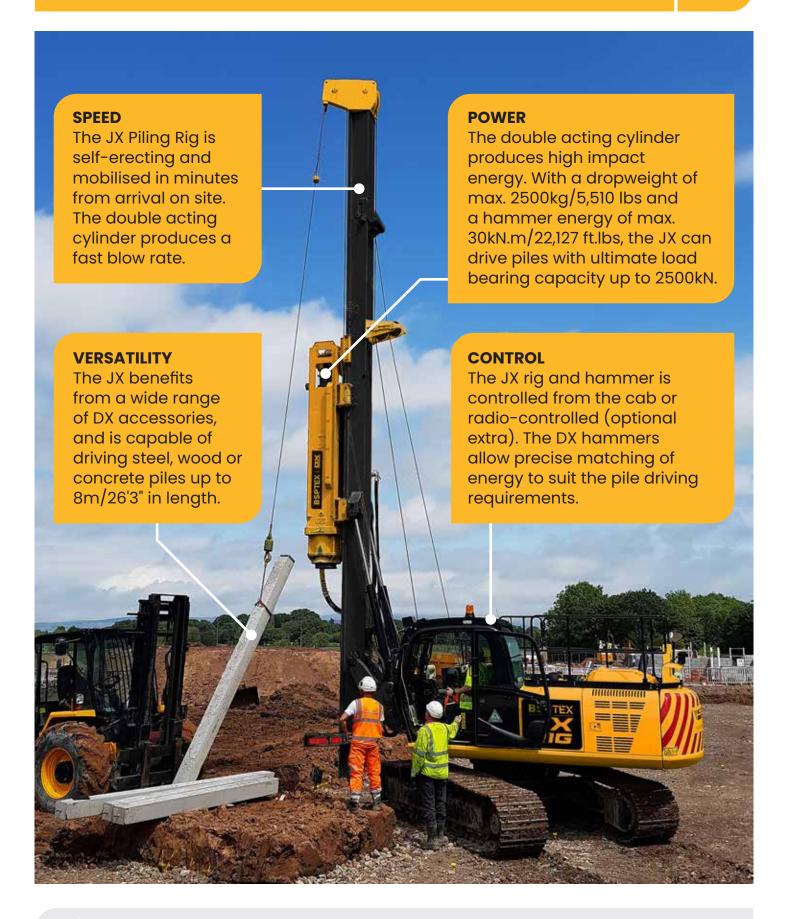














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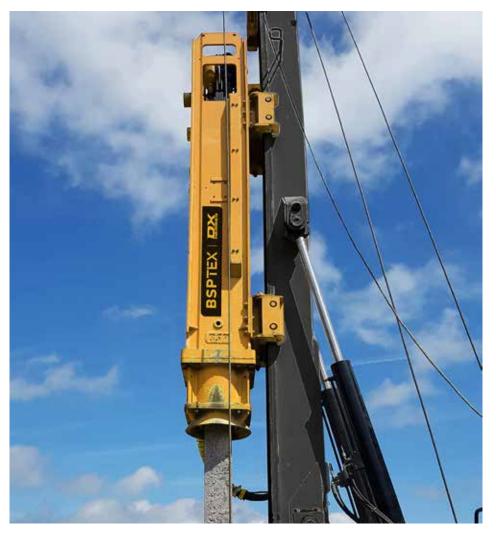






Piling & Ground Improvement / JX Piling Rig









- Mobile and self-erecting
- Radio-controlled option available
- Uses hydraulic hammers from the DX range
- Double acting cylinder produces high impact energy and fast blow rate
- Economical low hydraulic power requirements
- Can drive piles with ultimate load bearing up to 2500kN/562 kips
- Available with synchronised hammer and pile winches

Above: Mobile, self-erecting and radio-controlled.

Above left: Uses hydraulic hammers from the DX range.

Top right: Cab control and monitoring equipment.



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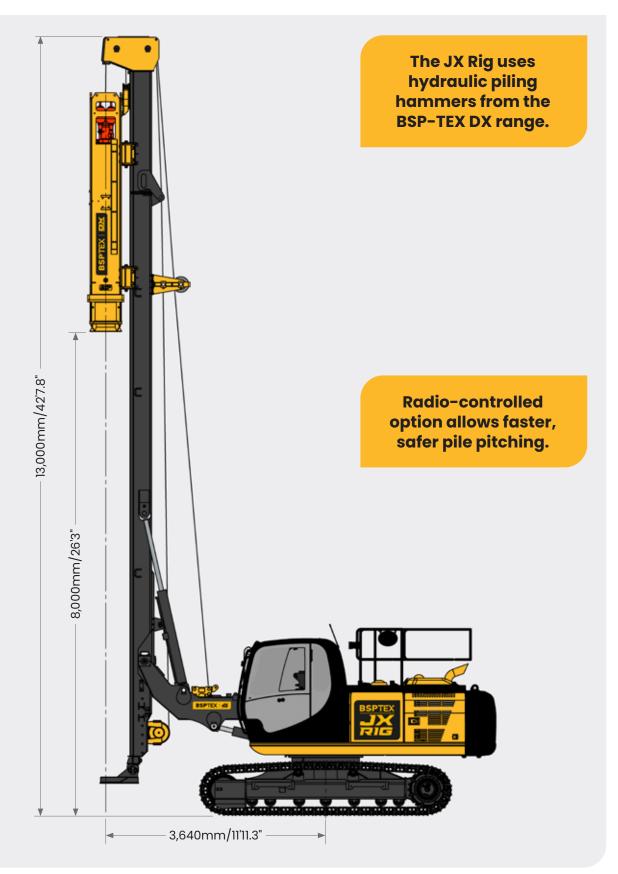














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Piling & Ground Improvement / JX Piling Rig







JX Specifications	DX25-8
Working Height (m/ft-in)	13/42'7.8"
Max Pile Length (m/ft-in)	8/26'3"
Base Unit Model	JCB 220X-LC
Engine Type	Ecomax
Power Output (kW/hp)	129/173
Track Pad Width (mm/ft-in)	700/2'3.5"
Track Footprint (m/ft-in)	4.46 x 3.10/14'7.6" x 10'2"
Operating Radius (m/ft-in) CL Rot'n to Pile	3.64/11'11"
Operating Weight (kg/lbs) inc. hammer & max pile	30,300/66,800 lbs
Transport Weight (kg/lbs) inc. hammer	28,600/63,052 lbs
Transport Length (m/ft-in)	12.38/40'7.4"
Transport Width (m/ft-in)	3.10/10'2"
Transport Height (m/ft-in) incl. hammer	3.60/11'10"
Compatible BSP Hammers	DX20-30
Engine Emission Status (EU)	Stage-V
Engine Emission Status (EPA)	Tier 4



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RIC Range

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/19'8" depth, though improvements up to 9m/29'6.3" have been seen in some conditions. A drop weight of 9–16 tonnes/19,842–35,274 lbs (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.



Dropweight Mass 9,000–16,000 kg 19,842–35,274 lbs



Hammer Energy 110–240 kN.m 81,132–177,015 ft.lbs



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SPEED

The unit is mounted on standard excavators, typically in the 40-90 tonne/88,185-198,416 lbs 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 onboard 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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Above: Within a single shift of say 10 hours, expect to spend 70% compacting with the remaining time given to dolley changing, routine maintenance and site preparation/layout.

Left: BSP-TEX offer sound attenuation for its RIC Mk. 3 range of Rapid Impact Compactors.



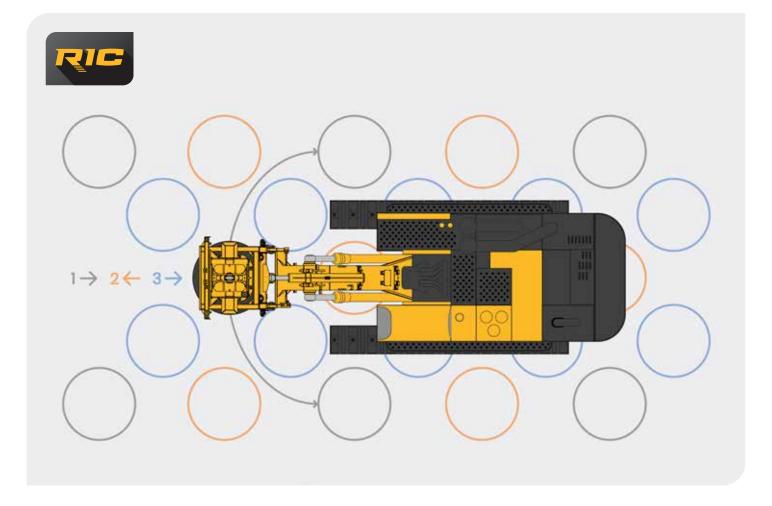
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The method for efficiently covering the ground varies from country to country. A common pattern used to cover uses a track in three passes (see diagram above). The outer (grey) points being compacted first, followed by the intermediate (orange) lastly 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.

Most granular fills and some silts are compactable, the best results being achieved where the fill is well-graded particle size. An area of $800m^2-2500m^2/2,625$ ft²-8,202 ft² can be covered in an average day (depending on the 'blow-perposition' setting.) This also allows time for routine maintenance and rotation of the special dolley pads located in the foot assembly which transfers the force of the blow through to the ground.

Above: Typical method of RIC ground coverage.

RIC is potentially twice as fast and at least 40% cheaper than conventional methods.











A monitor unit is used 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.

A GPS receiver option is available and GPS coordinates may be added 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.



Above: Data logging equipment is used for RIC monitoring, providing visual representation and reporting.



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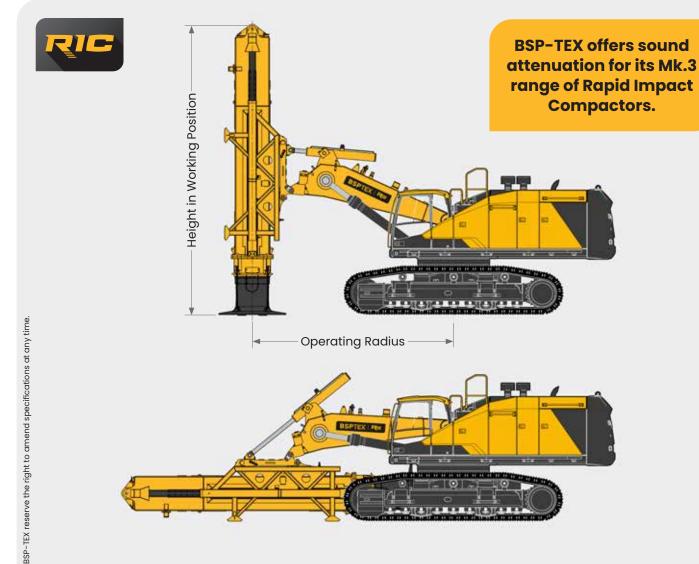
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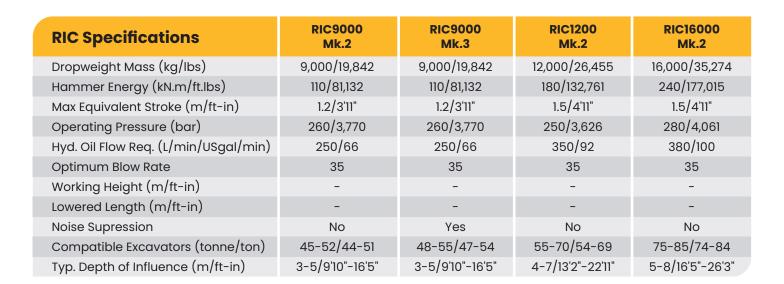














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RIC activities can be combined with other soil improvement techniques to provide a cost effective solution for silty/clay conditions. This essentially includes soil mixing and stone columns. To make best use of the base excavator, BSP-TEX offer a mast and drill attachment for the RIC9000 boom, that 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.

Above: Accessories for the RIC9000 boom include a MX45-8 mast, drill tools (left) and vibroflot (right).



BSP-TEX LTD









- Can be fitted to existing range of RIC9000 compactors
- Can be tailored for sheet or tube piles
- No reduction in performance
- Easily removed panels for maintenance

MX45-8 Mast*	
Mast Length (m/ft-in)	10-14/32'10"-45'11"
Max. Tool Length (m/ft-in)	8-12/26'3"-39'4"
Max. Pentration depth (m/ft-in)	7-11/22'11.5"-36'1"

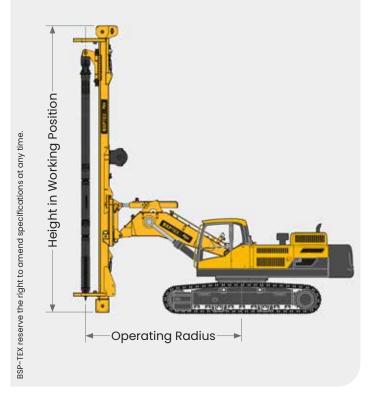
SD70 Gearbox for Anchors & Pre-Drilling*		
Torque (N.m/ft.lbs)	35.7-71.5/26-53	
Speed (rpm)	50-25	
Operating Pressure (bar/psi)	297/4,307	
Hyd. Oil Flow req. (L/min/USgal/min)	380/100	
Auger Dia. Typ. (mm/ft-in)	300-650/11.8"-2'1.5"	

RPH7 Rotary Table for CFA & Pre-Drilling*		
Torque (N.m)	19-83/14-61	
Speed (rpm)	70-19	
Operating Pressure (bar/psi)	320/4,641	
Hyd. Oil Flow req. (L/min)	270/71	
Auger Dia. Typ. (mm/ft-in)	300-650/1'-2'1.6"	

BD300 Vibro-Flot for Top Feed Columns*		
Diameter (mm/ft-in)	310/1'0.2"	
Centrifugal Force (kN/kips)	175-252/39-57	
Frequency (Hz)	30-36	
Operating Pressure (bar/psi)	325/4,714	
Hyd. Oil Flow req. (L/min/USgal/min)	230/61	

^{*}For use on the same boom as RIC9000.







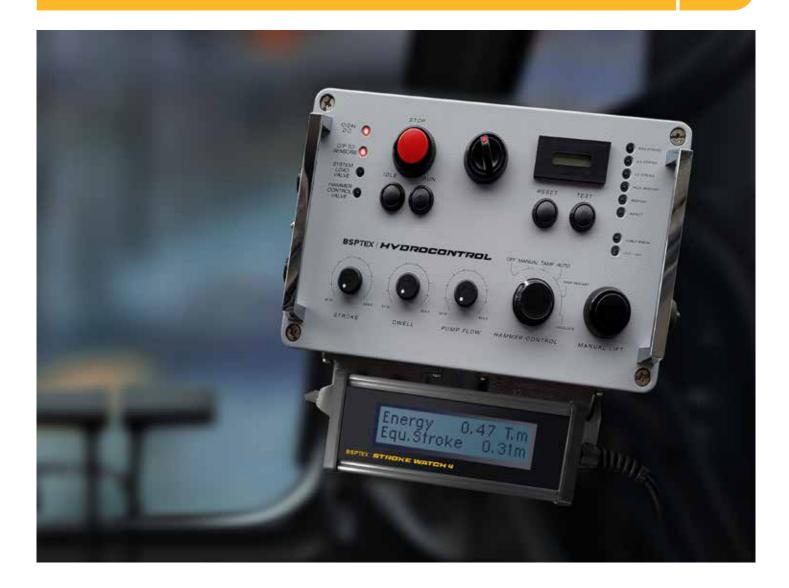
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Control & Monitoring

BSP-TEX supply a range of control and monitoring equipment for their hydraulic hammers, piling rigs and RIC's. From simple hammer controls to GPS monitoring, BSP-TEX deliver a variety of solutions.

The BSP-TEX Hydrocontrol unit is compatible with all BSP-TEX hydraulic hammers and Hydropacks. The Hydrocontrol unit operates the hammer and may be fitted to the Hydropack, used independently, or mounted in a cab. A Stroke Watch is a useful addition to the Hydrocontrol unit and displays the energy and the stroke.









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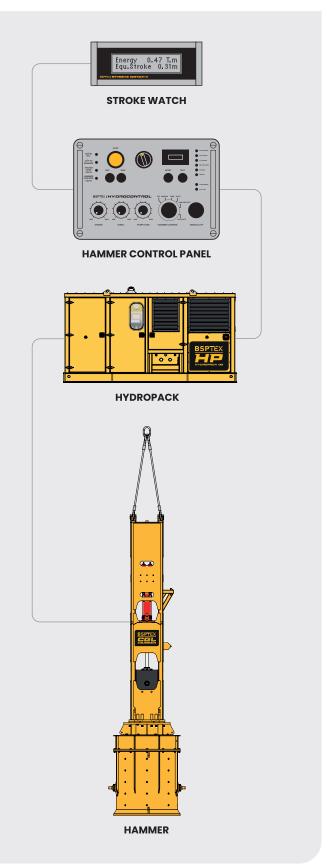
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- Engine run and stop
- Electrical supply on/off switch
- Pump flow selection
- Hammer stroke and dwell adjustment dials
- Automatic/manual operation selector
- Digital blow count display
- Stroke indicator LED display
- Warning light for incorrect hammer to pile location - with hammer cut-out

The Dialog monitor is an optional extra for BSP-TEX hydraulic hammers mounted on piling rigs. Using the monitor, the piling process can be observed for quality control and to provide a documentary record of each pile driven. The data is then transferred to a PC via Bluetooth or USB.

The Dialog monitor is also used with BSP-TEX RICs and can be enhanced with a GPS receiver option (see RIC data sheet for more details).

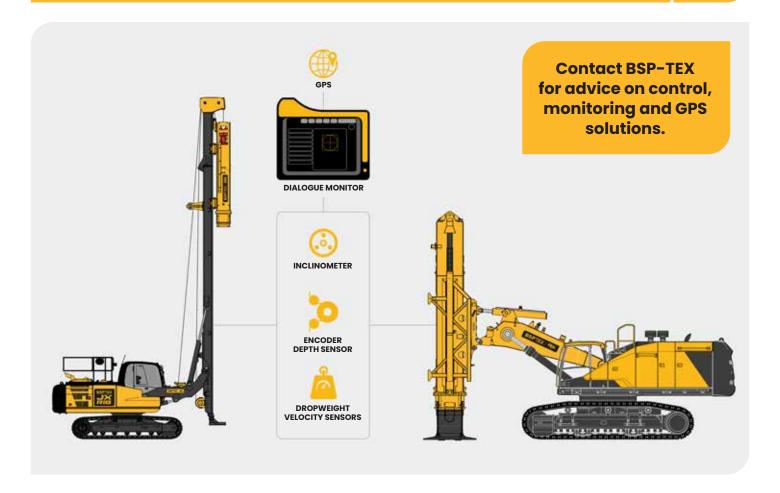
JX Piling Rigs are supplied with a remote control unit (optional extra) and a control unit within the cab (see JX data sheet for more details).













Above: JX Piling Rig cab control.

Right: The Dialog monitor is compatible with BSP-TEX hydraulic hammers mounted on piling rigs and BSP-TEX RIC's.





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More from BSP-TEX

BSP-TEX road maintenance machinery division encompasses well-known brands such as Barters, Belspray, Bitmen, Bristowes, Springfield and Trojan. BSP-TEX design and manufacture all the machines and equipment in the UK. Customers benefit from the BSP-TEX Quality Guarantee and exceptional customer service.

BSP-TEX subcontracted manufacturing services include light and heavy engineering, medium to high volume fabrication (incorporating sheet metal, punching, plasma cutting, laser cutting, welding, machining operations, painting and powder coating), enclosures, custom trailers, burners and electro-mechanical assemblies.











TEX GROUP

BSP-TEX is part of the TEX GROUP and has manufacturing facilities across six UK sites.

- QK-TEX manufactures lightweight honeycomb panels
- G&M EUROTEX provides bespoke containerised generators and engine refurbishment
- TEX PLASTICS produce injection mouldings
- TEX ATC design and manufacture air traffic control rooms
- CAIGATE-TEX provides hybrid energy and smart microgrid solutions