

BRUCETM

PIILING EQUIPMENT

HYDRAULIC IMPACT PILE HAMMER

SHINSEGAE
POWERQUIP
INDUSTRIAL CO., LTD.



SHINSEGAE POWERQUIP

www.powerquip.co.kr

FOUNDATION & CONSTRUCTION MACHINERY





HYDRAULIC IMPACT

BRUCE PILE HAMMER

Makes Success Pile Driving Solution !!

INTRODUCTION

BRUCE Hydraulic Pile Hammer is widely applicable and selectable in any case of pile driving condition. Full model lined up and most wide selectable BRUCE model among world reputable manufacturers.

- Energy ranging from 2.4 ton.m (24 kJ, 24 kNm) to 71 ton.m (696 kJ, 696 kNm) and other large size can be supplied.
- Various pile material, size and shape such as concrete pile, steel casing pile, H-Beam pile, sheet pile and round shape, octagonal shape, square shape can be driven by BRUCE hammers.
- A variety of hammer mounting type is suitable and provided such as fixed leader type from piling rig, crane suspended type, U-Type leads, mounting type follows to customer owns base machine and other types as well.
- Not only BRUCE hammer is suitable for driving capability onshore condition and also it goes perfectly well with offshore pile driving job like under water pile driving up to 5 meters as optional.
- Wide modification and adoptable accessories for any kind of pile driving condition such as rapid speed of Dynamic Compaction works, Sheet Pile driving and other ideal application is provided.
- Hammer operation can be on with an existing power source or by separate BRUCE power pack.

OUTSTANDING FEATURES OF BRUCE HYDRAULIC HAMMER

WIDE RANGE OF PILE DRIVING APPLICATION

Not only onshore and offshore pile driving conditions are covered and also batter piles and under water piling up to 5 meters are applicable optionally. The dynamic compaction application and sheet pile driving are another our pile driving job we mainly focus on.

HIGHER ENERGY EFFICIENCY

BRUCE hammer transfers a high impact energy to the piles with a effective design of hammer body. Compensation of energy drop efficiency to cylinder during ram drop is managed by an accumulator back charging system that can pursuit a minimal energy loss.

RELIABILITY OF ELECTRICAL AND HYDRAULIC SYSTEM

All electrical and hydraulic system can be managed by control panel electronically and automatically. The closed loop type of hydraulic system adjusts speed and oil pressure.

Bio-degradable hydraulic oil creates low engine emission to protect the earth contamination.

VARIOUS HAMMER MOUNTING TYPE

The user may have a wide selection of mounting type on the BRUCE Hammer made up with Fixed Leader Type (Round and Square Type), Crane Suspended Type, Offshore Leader Type, U-Type Leads and others can be adaptable on the user's demand.



SGH-1619 HIGHEST RAM STROKE
with 1.9m STROKE



SGH-3013 30ton RAM WEIGHT
with 1.3m STROKE



SGH-2015 20ton RAM WEIGHT
with 1.5m STROKE

LOW COST OF CONSUMABLE PARTS

The consumable parts for BRUCE hammer are designed to keep your job going when the going gets tough. It provides practical solutions and help keep your most difficult job on schedule.

SIMPLICITY IN DESIGN

The adoption of simple design allows users to gain easy maintenance and quick troubleshooting. The user-friendly remote control is designed to use more conveniently.

HOSE BRACKET FOR EASY CABLE INSTALLATION

The hydraulic hoses from power pack can be mounted on the hose bracket installed on the top of the hammer so that hoses and electrical cables can stay firmly to go for a intended pile driving job.

VERSATILITY OF PILE DRIVING METHOD

BRUCE hammer can be driven all types of piling method such as concrete pile (round shape, square shape and octagonal shape), steel casing pile, H-Beam, sheet pile driving in the most common driving.

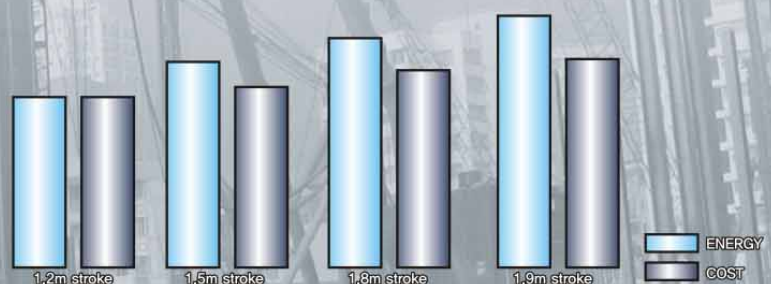
VISIBLE RAM HEIGHT MOVEMENT

Ram drop height indicator on the side of the hammer is standard equipped with height marking so that operator can see ram drop height easily during pile driving and can adjust ram height stroke during pile driving through remote control box provided.

HIGH BLOW RATE & PRECISE RAM STROKE

High blow rate of BRUCE hammer will help you finish your scheduled pile driving job possibly as you planned. **User-friendly designed Remote Control Box** can be compatible with any BRUCE Power Pack and it manages any malfunctions in operations.

Accurate Ram Stroke is adjusted by a Remote Control Box thus suspended crane type or piling rig type is safe in case of soft pile driving.



SPECIFICATION

Bruce Hammer Series	SGH	0212	0312	0412	0512	0712	0715	1012	1015	1212	1215	1312	1315	1412	1415
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◆ Model Name Meaning : ex) SGH-3012 **30** : Ram Weight, **12** : 1.2m Stroke

OPERATING DATA

Bruce Hammer Series	SGH	0212	0312	0412	0512	0712	0715	1012	1015	1212	1215	1312	1315	1412	1415
Ram Weight	(ton)	2	3	4	5	7	7	10	10	12	12	13	13	14	14
	(lbs)	4409	6614	8819	11023	15432	15432	22046	22046	26455	26455	28659	28659	30865	30865
Minimum Stroke	(mm)	200	200	200	200	200	200	200	200	200	200	200	200	200	200
	(inch)	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87
Maximum Stroke	(mm)	1200	1200	1200	1200	1200	1500	1200	1500	1200	1500	1200	1500	1200	1500
	(ft)	3.94	3.94	3.94	3.94	3.94	4.92	3.94	4.92	3.94	4.92	3.94	4.92	3.94	4.92
Max. Potential Energy	(ton.m)	2.4	3.6	4.8	6.0	8.4	10.5	12.0	15.0	14.4	16	15.6	19.5	16.8	21.0
	(lb.ft)	17359	26038	34718	43397	60756	75946	86794	108514	104153	115748	112835	141045	121511	151893
	(KJ)	24	35.3	47.1	59	82.4	103	118	147	141	157	153	191	165	206
Blow Rate at Max. stroke	(bpm)	42	42	40	40	40	38	38	36	38	38	35	35	36	35
Operating Pressure	(bar)	230	230	230	230	230	230	250	250	250	250	250	250	250	250
	(psi)	3337	3337	3337	3337	3337	3337	3627	3627	3627	3627	3627	3627	3627	3627
Required Flow Rate	(lpm)	100	100	170	170	190	230	260	320	320	370	320	370	320	370
	(gpm)	22	22	45	45	50	61	69	85	85	98	85	98	85	98

DIMENSIONS

Overall Length (L)	(mm)	4950	5300	5220	5400	5760	6360	5910	6510	6260	6860	6300	6900	6380	6980
	(ft)	16.24	17.39	17.13	17.72	18.90	20.87	19.39	21.36	20.54	22.51	20.67	22.64	20.93	22.90
Overall Width (W)	(mm)	870	870	1240	1240	1240	1240	1130	1130	1130	1130	1400	1400	1400	1400
	(ft)	2.85	2.85	4.07	4.07	4.07	4.07	3.71	3.71	3.71	3.71	4.59	4.59	4.59	4.59
Overall Height (H)	(mm)	1160	1160	1120	1120	1120	1120	1530	1530	1530	1530	1468	1468	1468	1468
	(ft)	3.81	3.81	3.68	3.68	3.68	3.68	5.02	5.02	5.02	5.02	4.82	4.82	4.82	4.82

FIXED LEADER GUIDE & LEADS

Leader Gide (Round Type)	(mm)	330 x Φ 70						600 x Φ 101.6							
Leader Guide (Square Type)	(mm)	\square 80 x 400			\square 100 x 600								\square 120 x 720		
U Type Leads	(inch)	27	27	27	32	32	32	42	42	42	42	57	57	57	57

- Other shape or dimension can be modified upon request, Crane Suspended type and Long Pile Skirt are available.
- Note : The Overall Length of Hammer is not included the length of pile skirt or pile cap.

WEIGHTS

Weight without Drive Cap	(kg)	4000	5500	7000	8200	11000	11500	15300	15800	18600	19210	20800	22000	22300	23600
	(lbs)	8819	12125	15432	18078	24251	25353	33731	34831	41006	41003	45856	48501	49163	52029
Drive Cap Weight	(kg)	1000	1000	1000	1000	1000	1000	1200	1200	1200	1200	1500	1500	1500	1500
	(lbs)	2204	2204	2204	2204	2204	2204	2645	2645	2645	2645	3307	3307	3307	3307
Suitable Power Pack Series		PQ -150	PQ -150	PQ -200	PQ -200	PQ -200	PQ -250	PQ -250	PQ -250	PQ -250	PQ -250	PQ -300	PQ -300	PQ -300	PQ -300

- Other ram weights can be provided depend on request
- We reserve the right to make modifications without further notice.

1612	1615	1618	1619	1812	1815	2012	2015	2512	2515	3012	3013	3015	3512	3515
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1612	1615	1618	1619	1812	1815	2012	2015	2512	2515	3012	3013	3015	3512	3515
16	16	16	16	18	18	20	20	25	25	30	30	30	35	35
35274	35274	35274	35274	39683	39683	44092	44092	55116	55116	66139	66139	66139	77162	77162
200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87
1200	1500	1800	1900	1200	1500	1200	1500	1200	1500	1200	1300	1500	1200	1500
3.94	4.92	5.90	6.53	3.94	4.92	3.94	4.92	3.94	4.92	3.94	4.27	4.92	3.94	4.92
19.2	24.0	28.8	30.4	21.6	27.0	24.0	30.0	30.0	37.5	36	39	45	42.0	52.5
138979	173592	208116	219883	156232	195291	173592	216990	216990	271237	260387	282087	325484	303786	379732
188	236	283	298	212	265	236	294	294	368	353	383	441	412	515
32	30	28	26	30	28	30	28	26	26	26	26	26	26	26
250	250	250	250	250	270	270	270	270	270	270	270	270	270	270
3627	3627	3627	3627	3627	3917	3917	3917	3917	3917	3917	3917	3917	3917	3917
350	410	480	480	410	480	410	480	600	650	600	600	650	800	940
93	108	127	127	108	127	108	127	160	172	160	160	172	211	248

6790	7390	7990	8165	7590	7990	8730	9570	9700	10300	9800	10180	9980	10500	11100
22.28	24.25	26.21	26.79	24.90	26.21	28.64	31.4	31.82	33.8	32.15	33.4	32.74	34.50	36.42
1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	2080	2080	2080	2080	2080
4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	6.82	6.82	6.82	6.82	6.82
1468	1468	1468	1468	1468	1468	1468	1468	1468	1468	2180	2180	2180	2180	2180
4.82	4.82	4.82	4.82	4.82	4.82	4.82	4.82	4.82	4.82	7.15	7.15	7.15	7.15	7.15

600 x Ø101.6	On Request			
□ 120 x 720	On Request			
57	62	76		

26000	26300	26500	26700	28000	29000	32000	32500	39000	41000	53000	53500	54000	61000	62000
57319	57980	58422	58863	61729	63934	70547	71650	85980	90390	116845	117947	119050	134482	136687
3240	3240	3240	3240	3240	3240	3240	3240	4500	4500	8000	8000	8000	8000	8000
7143	7143	7143	7143	7143	7143	7143	7143	9920	9920	17637	17637	17637	17637	17637
PQ-400	PQ-450	PQ-500	PQ-500	PQ-500	PQ-500	PQ-500	PQ-500	PQ-600	PQ-600	PQ-600	PQ-600	PQ-600	PQ-700	PQ-700

SPECIFICATION

Bruce Hammer Series	SGH	4012	4015	4212	4215	4512	4515	4519	4712	4715	4719	5715
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◆ Model Name Meaning : ex) SGH-3012 30: Ram Weight, 12:1.2m Stroke

OPERATING DATA

Bruce Hammer Series	SGH	4012	4015	4212	4215	4512	4515	4519	4712	4715	4719	5715
Ram Weight	(ton)	40	40	42	42	45	45	45	47	47	47	57
	(lbs)	88185	88185	92594	92594	99208	99208	99208	103617	103617	103617	125664
Minimum Stroke	(mm)	200	200	200	200	200	200	200	200	200	200	200
	(inch)	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87
Maximum Stroke	(mm)	1200	1500	1200	1500	1200	1500	1900	1200	1500	1900	1500
	(ft)	3.94	4.92	3.94	4.92	3.94	4.92	6.23	3.94	4.92	6.23	4.92
Max. Potential Energy	(ton.m)	48	60	50.4	63	54	67.5	85.5	56.4	70.5	89.3	85.5
	(lb.ft)	347244	434055	364543	455678	390649	488277	618529	408012	509926	646019	618420
	(KJ)	470	588	494	618	529	662	838	553	691	875	839
Blow Rate at Max. stroke	(bpm)	26	24	26	26	26	24	24	24	24	20	24
Operating Pressure	(bar)	270	270	270	270	270	270	270	270	270	270	270
	(psi)	3917	3917	3917	3917	3917	3917	3917	3917	3917	3917	3917
Required Flow Rate	(lpm)	780	800	800	940	830	1000	1000	830	1000	1000	1400
	(gpm)	206	211	211	248	219	264	264	219	264	264	308

DIMENSIONS

Overall Length (L)	(mm)	11100	11700	12000	12600	11460	12060	12860	12860	12260	13060	12000
	(ft)	36.42	38.4	39.37	41.34	37.6	39.6	42.19	42.19	40.22	42.85	39.37
Overall Width (W)	(mm)	2080	2080	2080	2080	2200	2200	2200	2200	2200	2200	2300
	(ft)	6.82	6.82	6.82	6.82	7.2	7.2	7.2	7.2	7.2	7.2	7.55
Overall Height (H)	(mm)	2180	2180	2180	2180	2200	2200	2200	2200	2200	2200	2400
	(ft)	7.15	7.15	7.15	7.15	7.2	7.2	7.2	7.2	7.2	7.2	7.87

FIXED LEADER GUIDE & LEADS

Leader Guide (Round Type)	(mm)	On Request										
Leader Guide (Square Type)	(mm)	On Request										
U Type Leads	(inch)	84								On Request		

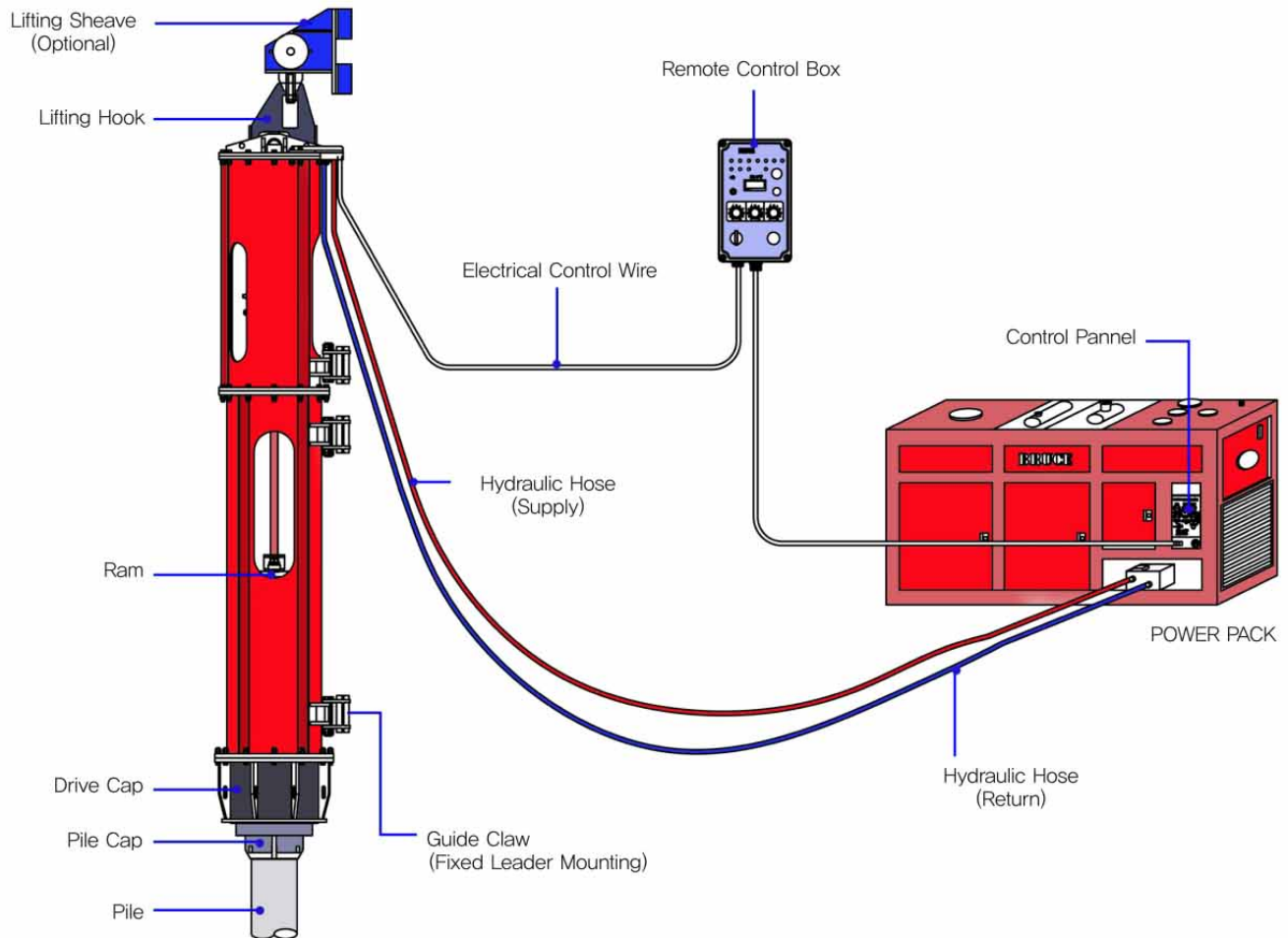
- Other shape or dimension can be modified upon request. Crane Suspended type and Long Pile Skirt are available.
- Note : The Overall Length of Hammer is not included the length of pile skirt or pile cap.

WEIGHTS

Weight without Drive Cap	(kg)	66000	67000	67000	68000	73000	81000	93000	93000	84000	84000	89000
	(lbs)	145497	147702	147710	149914	160929	178574	205030	205030	185188	185188	196211
Drive Cap Weight	(kg)	10000	10000	10000	10000	12000	12000	12000	9840	12000	20000	20000
	(lbs)	22045	22045	22045	22045	26456	26456	26456	21694	26456	44093	44093
Suitable Power Pack Series		PQ -600	PQ -600	PQ -700	PQ -700	PQ -600	PQ -800	PQ -1000	PQ -1000	PQ -1000	PQ -1000	PQ -1200

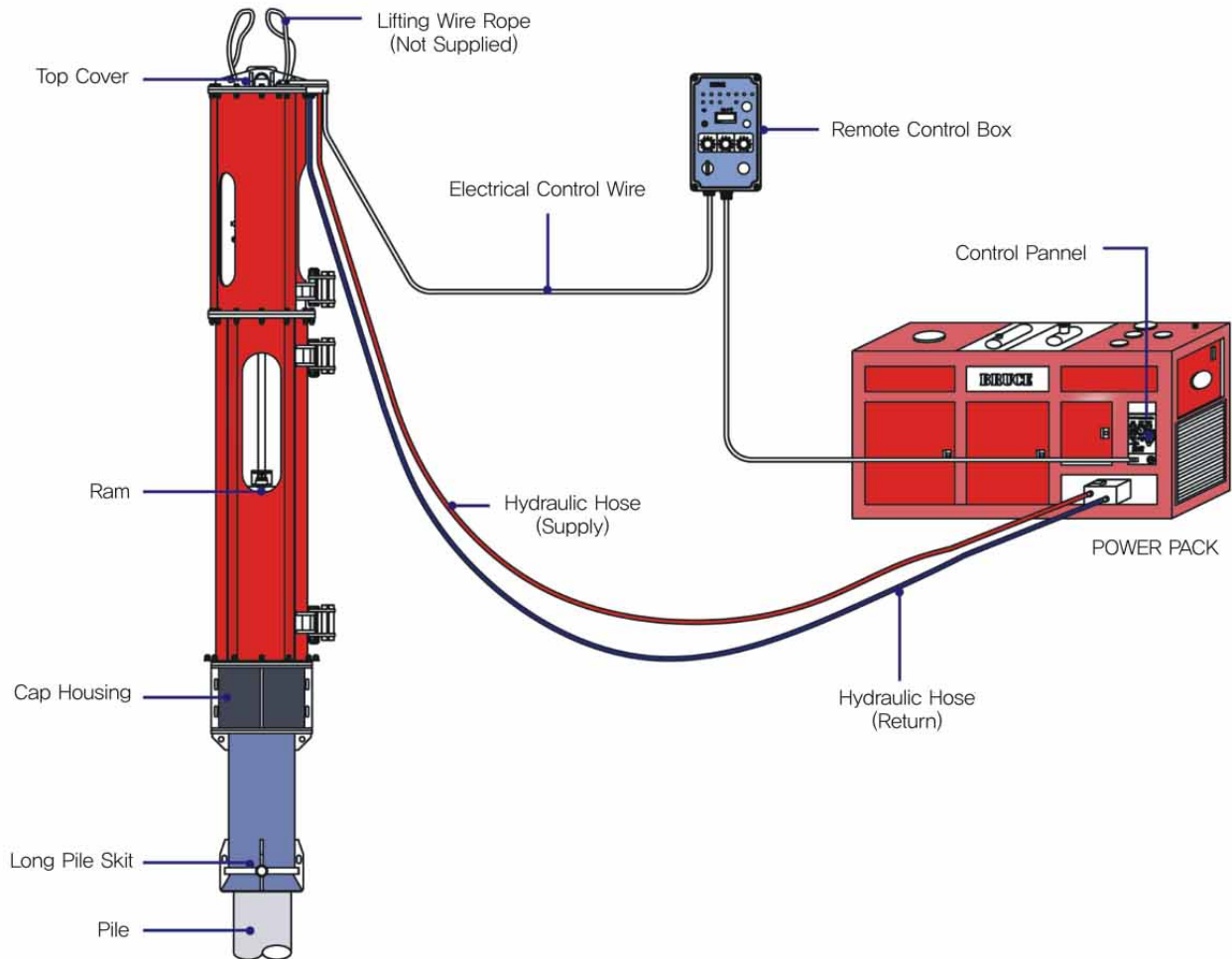
- Other ram weights can be provided depend on request
- We reserve the right to make modifications without further notice.

BASIC STRUCTURE-FIXED LEADER MOUNTING TYPE



The Lifting Sheave and Lifting Hook is supplied for Fixed Leader Mounting Optionally.

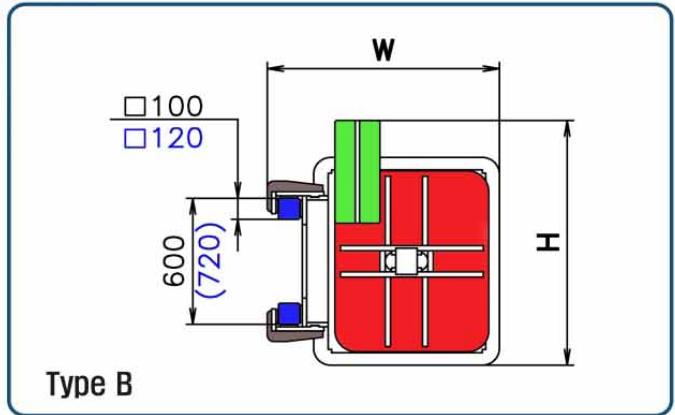
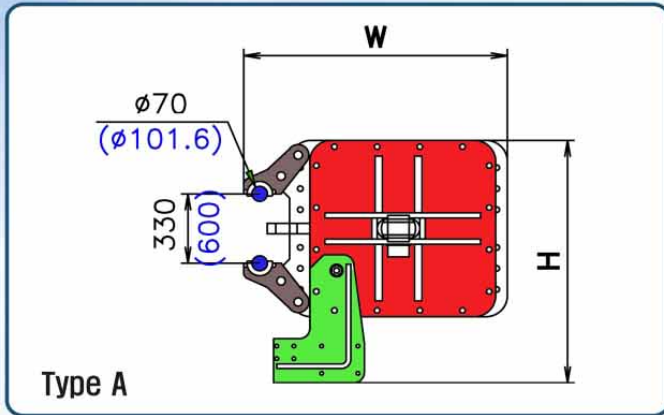
BASIC STRUCTURE-CRANE SUSPENDED TYPE BY LONG PILE SKIRT



Hammers working in crane suspended type.

HAMMER MOUNTING TYPE & DIMENSION

Fixed Leader Type



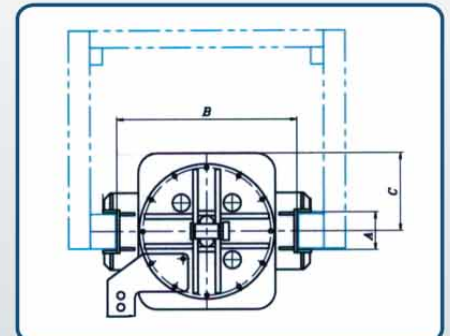
TYPE	GUIDE SHAPE	DIMENSION(mm)
TYPE "A"	ROUND	Φ 70 X 330
		Φ 101.6 X 600
TYPE "B"	SQUARE	□ 80 X 400
		□ 100 X 600
		□ 120 X 720

- Other dimension and type can be modified.
- Cranesuspended Type & Offshore Leader Type are Optional.

U Type Leads

BRUCE Model	U Type Leads Size (inch)	Hammer Dimension (inch)		
		A	B	C
SGH-0212	8 X 27	9	26	18.3
SGH-0312	8 X 27	9	26	18.3
SGH-0412	8 X 27	9	26	18.3
SGH-0512	8 X 32	9	31	18.3
SGH-0712	8 X 32	9	31	18.3
SGH-1012	10 X 42	11	41	21.6
SGH-1212	10 X 42	11	41	21.6
SGH-1312	10 X 57	11	56	27.9
SGH-1415	10 X 57	11	56	27.9
SGH-1612	10 X 57	11	56	27.9
SGH-1812	10 X 57	11	56	27.9
SGH-2012	10 X 57	11	56	27.9
SGH-2015	10 X 57	11	56	27.9
SGH-3012	11 X 76	12	75	40
SGH-3013	11 X 76	12	75	40
SGH-4212	11 X 84	12	83	40

- The Hammer dimension of "A" can be changed upon request.
- Other dimension and type can be modified.



BRUCE HYDRAULIC POWER PACK

The power pack has been designed and built to optimize the hydraulic pressure for a constant stability of the job performance on high efficiency of operation with the BRUCE hammer.

A sound proofed frame style of internal layout enables to obtain an easy access to a quick maintenance.

High cooling capacity of hydraulic system provides a stable hydraulic high efficiency and no overheat problem and auxiliary control powered by fixed displacement pumps in the closed loop type of engine room.



TURBOCHARGED DIESEL ENGINE

BRUCE hammer is powered by Cummins or Doosan diesel engine creates greater productivity by higher horse power and torque ratings.



QUALITY HYDRAULIC PUMP

After being qualified as a powerful pump, the proven Rexroth or Doosan pumps are being selected to obtain a appropriate job performance.



HIGH COOLING CAPACITY

The overheat occurring in the Engine is greatly protected by enhanced air or turbo charged cooling system and large airflow amount.

UNIQUE CONCEPT OF DESIGN

BRUCE power pack is uniquely designed and built to provide a easy access to it for a quick checking the parts and convenient maintenance.

RELIABLE FILTERING UTILIZED

Every filters equipped in the Engine can guarantee a long lasting efficiencies against contaminated oils and a large amounts of dust

SIMPLE HYDRAULIC & ELECTRIC

Simplifying the hydraulic and electrical systems assure that no technical glitch occurrence for its others.



ELECTRIC REMOTE CONTROL SYSTEM

With BRUCE hammer remote control system, User can control piling and failure check in piling rig cabin or long distance of piling area. Abnormalities in each function are monitored on LEDs with a highly bright signal so that electrical diagnosis and Remedy can be done quickly.



MAIN FUNCTION HAMMER OPERATION

- Dwell control for adjusting ram staying time on pile
- Digital blow counter recorder
- Stroke control for adjusting impact energy value
- Flow control for adjusting ram speed – optional
- Operatable in both manual and automatic mode
- Automatic cut-off circuit breaker to prevent electric power abnormality or short circuit
- Engine start and stop
- Emergency stop button and functioning

ABNORMALITY CHECKING ON LEDS

- Coolant temperature
- Checking abnormality of engine oil
- Short-circuit or disconnection of wiring on hammer and solenoid valve wire
- Hydraulic main relief valve checking
- Power supply status on/off on Led
- Sensor function and status
- Battery charge

HYDRAULIC IMPACT PILE HAMMER CONTROL SYSTEM POWER PACK

POWER PACK CONTROL PANEL

SIMPLE DESIGN OF CONTROL PANEL

With user friendly simple design concept but well equipped functions in the control panel is provided easy electrical operational system and hydraulic system.

- Battery recharge & coolant temperature gauge
- Engine start & stop key
- Main electric supply on/off switch
- Engine oil pressure gauge
- Circuit breaker can be protected from short-circuit or fault on electric system
- Engine speed lever enables change the engine speed
- Main hydraulic pressure indication gauge
- Engine speed indication gauge
- Fuel gauge
- Emergency stop button
- Battery charging gauge
- Engine temperature gauge



SPECIFICATION

HYDRAULIC POWER PACK

Power Pack Series		PQ-150	PQ-200	PQ-250	PQ-300	PQ-400	PQ-450	PQ-500	PQ-600	PQ-700	PQ-800	PQ-900	PQ-1000	PQ-1200
Engine Type		Cummins / Doosan												
Engine Power	(PS)	120@ 1800rpm	154@ 1800rpm	230@ 1800rpm	290@ 1800rpm	375@ 1800rpm	425@ 1800rpm	475@ 1800rpm	525@ 1800rpm	700@ 1800rpm	750@ 1800rpm	912@ 1800rpm	998@ 1800rpm	1200@ 1800rpm
	(kW)	90@ 1800rpm	115@ 1800rpm	172@ 1800rpm	216@ 1800rpm	276@ 1800rpm	317@ 1800rpm	354@ 1800rpm	392@ 1800rpm	520@ 1800rpm	560@ 1800rpm	670@ 1800rpm	733@ 1800rpm	895@ 1800rpm
Setting Pressure	(bar)	300	300	300	300	300	300	300	300	300	300	300	300	300
	(psi)	4352	4352	4352	4352	4352	4352	4352	4352	4352	4352	4352	4352	4352
Rated Flow Rate	(lpm)	150	195	325	400	500	600	650	690	930	1000	1200	1400	1400
	(gpm)	40	52	86	106	132	159	172	182	250	264	317	370	370
Hydraulic Oil Tank Capacity	(liter)	300	350	600	700	800	800	800	1000	1200	1500	1800	1800	2400
	(gal)	79	93	159	185	211	211	211	264	317	396	475	475	528
Fuel Tank Capacity	(liter)	200	300	500	500	500	500	500	800	800	800	1500	1500	1922
	(gal)	53	79	132	132	132	132	132	211	211	211	396	396	423

- The DOOSAN Engine is applied as the standard and the CUMMINS is as an optional.
- Engine RPM can be changed by the capacity of hydraulic pumps.

DIMENSIONS

Overall Length	(mm)	2300	2500	2900	3300	3300	3300	3300	3400	3800	3800	4500	4500	5000
	(ft)	7.55	8.20	9.51	10.83	10.83	10.83	10.83	11.15	12.6	12.6	14.8	14.8	16.4
Overall Width	(mm)	1200	1300	1600	1600	1600	1600	1600	1700	2000	2200	2300	2300	4000
	(ft)	3.94	4.27	5.25	5.25	5.25	5.25	5.25	5.58	6.70	7.22	7.55	7.55	13.1
Overall Height	(mm)	1800	1850	2100	2100	2100	2100	2100	2200	2200	2200	2200	2200	3500
	(ft)	5.91	6.07	6.89	6.89	6.89	6.89	6.89	7.22	7.22	7.22	7.22	7.22	11.5

WEIGHT

Dry	(kg)	3000	3500	3800	4000	4000	4000	4000	5000	6000	7000	7500	7500	9000
	(lbs)	6614	7716	8378	8819	8819	8819	8819	11023	13230	15432	16534	16534	19842
Operating	(kg)	3500	4000	4400	5000	5000	5000	5000	6000	7000	7500	8500	8500	12000
	(lbs)	7716	8819	9700	11023	11023	11023	11023	13228	15430	16535	18783	18783	26456
Suitable Bruce Hammer Series		0212 0312	0412 0512/0712	0715/1012 1212/1215	1312/1315 1412/1415	1612	1615	1618/1619 1812/1815 2012/2015	2512/2515 3012/3015	3512/3515 4212/4215	4515 4715	-	4719	5715

- Other power pack can be applied depend on request.
- We reserve the right to make modifications without further notice.



BRUCE SGH-3013 working at bridge foundation site at Panama City, Florida, USA driving concrete pile (O.D 60" x I.D 45" x 120 feet long)



BRUCE SGH-1618 & 1619 in Hong Kong driving H-beam piles (305mmx 305mm, 223kg/m, 48m long)

IMPACT ENERGY MONITOR SYSTEM-OPTIONAL



IEA system Impact Energy Analyzer 2.0

BRUCE™
PILING EQUIPMENT



IEA S/N : IEA-0005
Project name : USA
Hammer model : SGH 2011
Hammer S/N : 0706252015
Ram weight : 44.09 lb/3
Max. stroke : 4.92 ft
Location : USA
Contractor : AMERICAN BRIDGE
Operator : AMERICAN BRIDGE
Pile No. : A300004
Pile size : 30 INCH
Pile length : 100 FT
Pile type : Round
Pile material : Concrete

IEA S/N : IEA-### ###-###-###
Project name : ##### #####-###-###
Hammer model : ##### #####-###-###
Hammer S/N : ##### #####-###-###
Ram Weight : #####ton #####-###-###
Max. stroke : ##### m #####-###-###
Location : ##### Piling start depth : ## m
Contractor : ##### Piling date : ##/##/###
Operator : ##### Piling start time : ##:##:##
Pile No. : ##### Piling end time : ##:##:##

A - Penetration depth(ft)
B - Blows per step
C - Cumulative blows
D - Blow-rate (bpm)
E - Energy per step (lb/3.ft)
F - Stroke height (ft)

	A	B	C	D	E	F
61.00	1	1	0.0	69.05	1.67	
62.00	2	3	36.3	62.73	1.51	
63.00	1	4	42.2	72.21	1.74	
64.00	2	6	30.3	69.92	1.69	
65.00	2	8	25.0	76.68	1.85	
66.00	1	9	19.5	79.67	1.92	
Piling start depth : 60.00 ft						

Using energy monitoring system, impact energy and blow rate can be monitored and controlled according to soil conditions and piles. The measured blow and energy can be printed on-site or stored in data logger, which enables data transfer to PC. Therefore further analysis of piling procedure can be done.

BRUCE Pile Hammer Equipment

New Standard of Construction and Pile Driving Works for worldwide success



SGH-3013

30 ton Offsho

30ton Ram Weight
1.3m Stroke
Dia. 60inch Prestressed Concrete Pile

BRUCE Pile Hammer Equipment

New Standard of Construction and Pile Driving Works for worldwide success



re Pile Driving

SGH-3015

30ton Ram Weight
1.5m Stroke
Dia. 2.5m Steel Casing Pile

BRUCE Pile Hammer Equipment

New Standard of Construction and Pile Driving Works for worldwide success



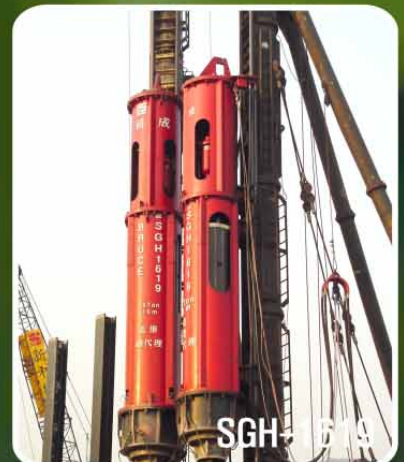
SGH-2015, SGH-2315

23 / 20ton Ram Weight
1.5m Stroke
Dia 36inch Prestressed Concrete Pile
120feet long

20 ton Offsho

BRUCE Pile Hammer Equipment

New Standard of Construction and Pile Driving Works for worldwide success



re Pile Driving

SGH-1412, 1415, SGH-1619

SGH-1619 with highest stroke
SGH-1412, SGH-1415 working in U-type
Power Pack PQ-300/PQ-500

BRUCE Pile Hammer Equipment

New Standard of Construction and Pile Driving Works for worldwide success



SGH-1315



SGH-1315



SGH-1315



SGH-1315



SGH-1415



SGH-1415



SGH-1415



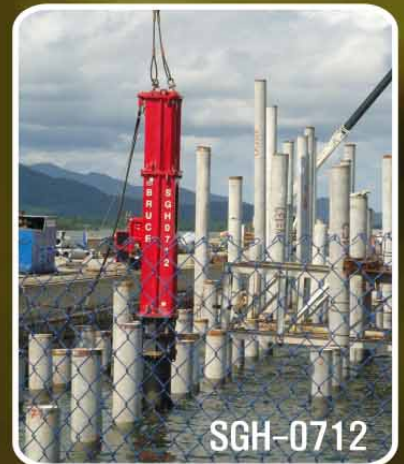
PQ-300

SGH-1315, SGH-1415

SGH-1315 working in Fixed-Leader type
SGH-1415 working in batter pile driving
Power Pack PQ-300

BRUCE Pile Hammer Equipment

New Standard of Construction and Pile Driving Works for worldwide success



SGH-0512, 0712, 1012, 1212

SGH-0512, SGH-1012 working in Fixed Leader type
SGH-0712, SGH-1212 working in Crane suspended type
Power Pack PQ-250



BRUCE™

PILING EQUIPMENT

**SHINSEGAE
POWERQUIP**
INDUSTRIAL CO., LTD



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