

[www.powerquip.co.kr](http://www.powerquip.co.kr)

# BRUCE PILING EQUIPMENT

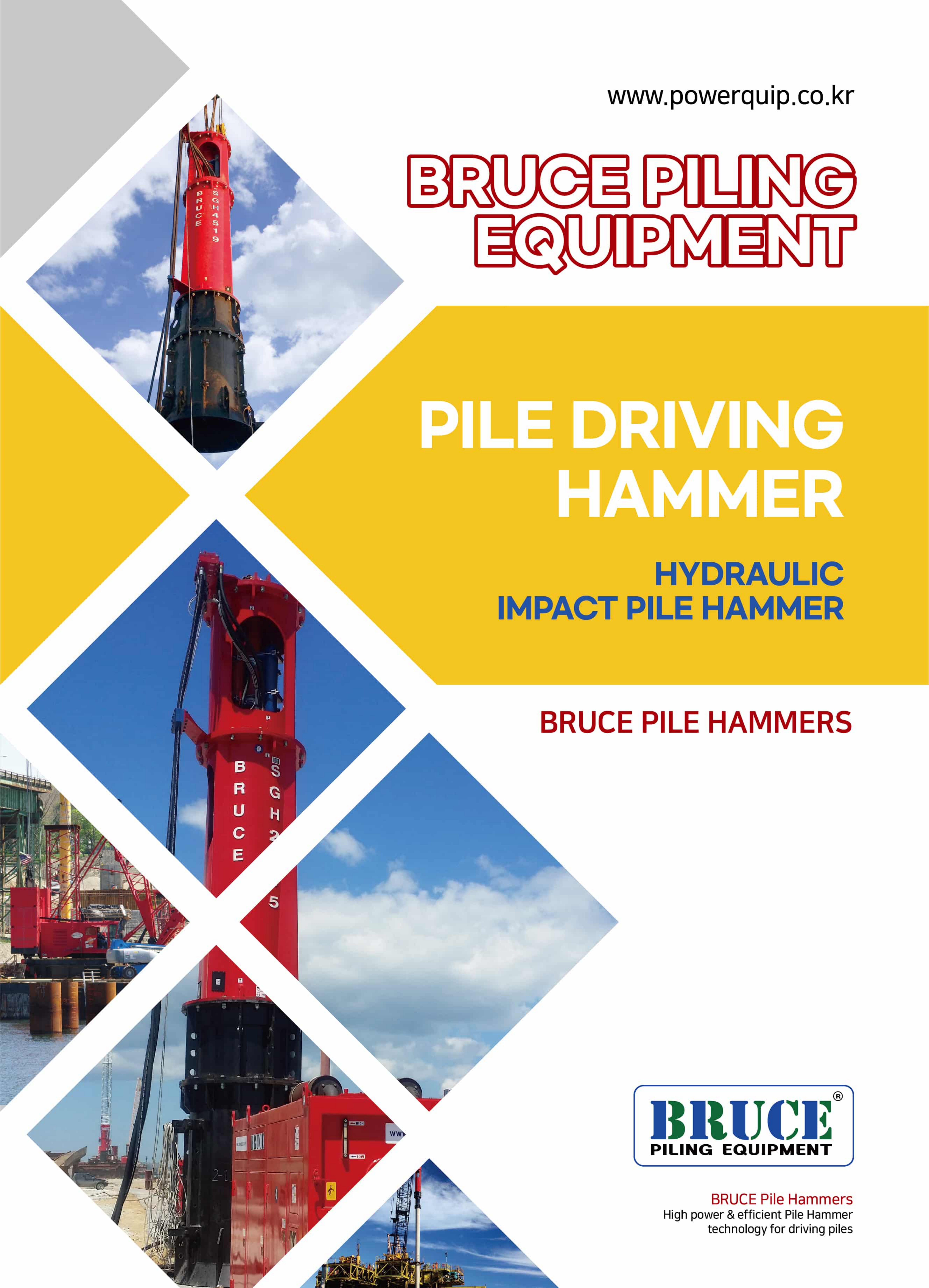
## PILE DRIVING HAMMER

HYDRAULIC  
IMPACT PILE HAMMER

BRUCE PILE HAMMERS

**BRUCE**<sup>®</sup>  
PILING EQUIPMENT

BRUCE Pile Hammers  
High power & efficient Pile Hammer  
technology for driving piles





# HYDRAULIC IMPACT PILE HAMMER



Makes Success Pile Driving Solution

## INTRODUCTION

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

- Energy ranging from 1.2 ton.m (12 kNm) to 120 ton.m (1,178 kNm) and others large size can be supplied on request.
- 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 for piling rig, crane suspended type, U-Type leads and other mounting type can be matched to customer own 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 and also under-water pile driving as optional.
- Wide modification and adoptable accessories for most kind of pile driving condition such as rapid speed of Dynamic Compaction works, Sheet Pile driving and other ideal application is provided on demand.
- Hammer operation can be on with an existing power source or by BRUCE power pack.

### Full Line Up : Energy ranging from 12 kN.m (1.2 ton.m) to 1,178 kN.m (120 ton.m)

for wide selection of hammer range from small sized to large sized impact hammer

### ELECTRIC REMOTE CONTROL SYSTEM for adjusting impact energy

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 LED with high brightness signal so that diagnosis and remedy can be done quickly.

### PROMINENT ENERGY TRANSFERRING RATE

with the help of efficient design of hammer body and the cushion arrangement, impact energy from ram drop can be transferred to pile head with lower energy loss. That means the job efficiency can be maximized.

### HIGH ENERGY EFFICIENCY & ENERGY TRANSFERRING EFFICIENCY

Compensation of energy drop efficiency during ram drop is functioning by equipped accumulator back charging system to cylinder.

### LONGER LIFE TIME OF CUSHION PARTS INCLUDING BUFFER-RINGS

The well-built structure of hammer cap housing and optimum choice of cushion material ensure longer term use of cushion parts. Therefore customers can achieve the economical operation with lower running cost.

### IMPROVED STABILITY AT RAM MOVEMENT

The elaborate design of ram parts and its housing enables the ram to travel minimizing the shock on whole hammer structure and cylinder parts as well. This fact gives improved stability of hammer operation.

### LONG-TERM RELIABILITY

Bruce hydraulic hammers are designed and manufactured for long life service with minimal downtime. For the purpose, accurate and precise workmanship is adopted to electric and hydraulic system ensuring low downtime on both systems and promoted endurance with hoses, cables, couplings and other related parts.

### VERSATILITY AND CONTROLABILITY

Bruce hammer can drive all types of piles on leader or crane suspension and can accept drive cap inserts for most types and sizes of piles. Bruce hammer also controls the stroke precisely to match hammer energy helping prevent pile damage and pile runaway.



# BRUCE IMPACT HAMMER

## MAIN FEATURES OF BRUCE IMPACT HAMMER

### VARIOUS HAMMER MOUNTING TYPE

Fixed Leader Type (Round Shape and Square Type), Crane Suspended Type, Offshore Leader Type, U- Type Leads and others can be adaptable.

### LOWER HOSE VIBRATION

Equipped high quality brand accumulator is assured lower hose vibration during hammer operation.

### VARIOUS KIND OF PILE DRIVING POSSIBILITY

Concrete pile (round shape, square shape and octagonal shape), steel casing pile, H-Beam, sheet pile driving are most frequent pile driving way with Bruce hammer.

### 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.

### NEW CONCEPTUAL DESIGN OF A SILENCE CAP HOUSING & KIT - OPTIONAL

We put a new conceptual design of a Silence Cap Housing instead of an existing cap housing on the Bruce hammers can be equipped to reduce the noise emissions considerably. There are sound absorbing materials which called Noise Insulation in it and it surrounds the Drive Cap to make less noise occurrence from a hard hit to obtain a better result, a piece of MC 904 cushion is used as a cushion material.

### ENVIRONMENTALY FRIENDLY CONCERN

Bio-degradable hydraulic oil and low emission engine is provided earth environmental clean.

### HOSE BRACKET & ELECTRICAL CABLE JUNCTION BOX

The hydraulic hoses from power pack is mounted to hose bracket so that hoses are stayed firm and strongly and electrical cables are as well.

### HIGH BLOW RATE & PRECISE RAM STROKE MOVEMENT ABILITY

High blow rate is effective to fast pile driving and Bruce remote control system is functioning and controlling stable ram stroke and accuracy pile driving works which is very important without failure of pile driving due to sudden unstable ram height movement. In case of soft driving condition, small pitching pile driving is controlled so that preventing from sudden pile drop to the ground thus suspended crane or piling rig is safe.

### IMPACT ENERGY MONITORING SYSTEM (IEA SYSTEM) - OPTIONAL

To meet the demand for precise piling nowadays, Bruce hammer provides energy monitoring system as an optional kit, which enables continuous record of each blow energy on real time basis. Hard print and PC link are available for recording and further analysis.

### BASE MOUNT BRUCE PILE HAMMER

BRUCE PILE HAMMER can be mounted on Excavator or Pile Driving Rig using base machine power without using separate power pack. PLEASE ASK US !

#### SGH-4719

MAX. ENERGY 89.3ton. m

#### SGH-4519

MAX. ENERGY 85.5ton. m

#### SGH-4015

MAX. ENERGY 60 ton. m

#### SGH-1619

MAX. ENERGY 30.4 ton. m





# BRUCE Pile Hammer Equipment

## Specification

Bruce Hammer Series	SGH	0212	0312	0315	0412	0512	0712	0715	0912	1012	1015	1212	1215	1312	1315	1412	1415
---------------------	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

Model Name Meaning : ex) SGH-3015 30ton Ram Weight, 15 : 1.5m Stroke

## OPERATING DATA

Bruce Hammer Series	SGH	0202	0312	0315	0412	0512	0712	0715	0912	1012	1015	1212	1215	1312	1315	1412	1415
Ram Weight	(ton)	2	3	3	4	5	7	7	9	10	10	12	12	13	13	14	14
	(lbs)	4409	6614	6614	8819	11023	15432	15432	19842	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	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	7.87	7.87
Maximum Stroke	(mm)	1200	1200	1500	1200	1200	1200	1500	1200	1200	1200	1500	1200	1500	1200	1500	1200
	(ft)	3.94	3.94	4.92	3.94	3.94	3.94	4.92	3.94	3.94	3.94	4.92	3.94	4.92	3.94	4.92	3.94
Max. Potential Energy	(ton.m)	2.4	3.6	4.5	4.8	6.0	8.4	10.5	10.8	12.0	15.0	14.4	18	15.6	19.5	16.8	21.0
	(lb.ft)	17359	26038	32549	34718	43397	60756	75946	78116	86794	108514	104153	130194	112835	141045	121511	151893
	(KJ)	24	35.3	44	47.1	59	83	103	106	118	147	141	177	153	191	165	206
Blow Rate at max. stroke	(bpm)	40	40	36	40	40	40	38	38	38	35	38	38	35	35	36	35
Operating Pressure	(bar)	230	230	230	230	230	230	230	250	250	250	250	250	250	250	250	250
	(psi)	3337	3337	3337	3337	3337	3337	3337	3627	3627	3627	3627	3627	3627	3627	3627	3627
Required Flow Rate	(lpm)	100	100	100	123	190	190	230	260	260	296	320	370	320	370	320	370
	(gpm)	26	26	26	33	50	50	61	69	69	78	85	98	85	98	85	98

## DIMENSIONS

Overall Length (L) *1 w/o Pile Cap	(mm)	4675	5060	5660	5440	5482	5712	6312	5810	5910	6510	7000	7600	6380	6727	6595	7195
	(ft)	15.3	16.6	18.6	17.9	18.0	18.7	20.7	19.1	19.4	21.4	23.0	25.0	20.9	22.1	21.6	23.6
Overall Width(W) w/o Pile Cap	(mm)	908	1195	1195	1195	1307	1307	1307	1250	1250	1250	1250	1250	1470	1470	1470	1470
	(ft)	3.0	3.9	3.9	3.9	4.3	4.3	4.3	4.1	4.1	4.1	4.1	4.1	4.8	4.8	4.8	4.8
Overall Height(H) w/o Pile Cap	(mm)	1016	1016	1016	1016	1125	1157	1157	1280	1280	1280	1280	1280	1610	1610	1610	1610
	(ft)	3.3	3.3	3.3	3.3	3.7	3.8	3.8	4.2	4.2	4.2	4.2	4.2	5.3	5.3	5.3	5.3

## FIXED LEADER GUIDE & LEADS

Leader Guide (Round Type)	(mm)	330xØ70								600xØ101.6							
Leader Guide (Square Type)	(mm)	□80x400				□100x600				□120x720							
U Type Leads	(inch)	27	27	27	33	33	33	50	50	50	50	50	50	57	57	57	57

\*1. The overall length of hammer is not included the length of pile skirt or pile cap.

\*2. Others shape or dimension can be modified upon request. Long Pile Skirt Type and Offshore Leader Type for crane suspended are available.

## WEIGHTS

Weight with Drive Cap	(kg)	4300	5600	5700	7000	9500	12500	13000	17000	18500	19000	21000	21500	22000	22500	23500	24000
	(lbs)	9480	12346	12566	15432	20944	27558	28660	37479	40786	41888	46297	47399	48502	49604	51809	52911
Suitable Power Pack Series		PQ-150	PQ-150	PQ-150	PQ-150	PQ-200	PQ-200	PQ-250	PQ-250	PQ-250	PQ-250	PQ-250	PQ-300	PQ-250	PQ-300	PQ-250	PQ-300

\* The dimensions and weights are referred to fixed leader type or short skirt type for model range from SGH-0212 to SGH-3015.

\* The dimensions and weights are referred to long skirt type for model range from SGH-3512 to SGH-8015

\* The others ram weight and energy required can be supplied upon request.

\* We reserve the right to make modifications of spec without prior notice.



# BRUCE Pile Hammer Equipment

<b>1612</b>	<b>1615</b>	<b>1618</b>	<b>1619</b>	<b>1812</b>	<b>1815</b>	<b>2012</b>	<b>2015</b>	<b>2315</b>	<b>2512</b>	<b>2515</b>	<b>2815</b>	<b>3012</b>	<b>3013</b>	<b>3015</b>	<b>3512</b>	<b>3515</b>
-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

1612	1615	1618	1619	1812	1815	2012	2015	2315	2512	2515	2815	3012	3013	3015	3512	3515
16	16	16	16	18	18	20	20	23	25	25	28	30	30	30	35	35
35274	35274	35274	35274	39683	39683	44092	44092	50706	55116	55116	61729	66139	66139	66139	77162	77162
200	200	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	7.87	7.87
1200	1500	1800	1900	1200	1500	1200	1500	1500	1200	1500	1500	1200	1300	1500	1200	1500
3.94	4.92	5.90	6.53	3.94	4.92	3.94	4.92	4.92	3.94	4.92	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	34.5	30.0	37.5	42	36	39	45	42.0	52.5
138979	173592	208116	219883	156232	195291	173592	216990	249538	216990	271237	303786	260387	282087	325484	303786	379732
188	236	283	298	212	265	236	294	338	294	368	412	353	383	441	412	515
32	30	28	26	30	28	30	28	28	26	26	26	26	26	26	26	26
250	250	250	250	250	270	270	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	3917	3917
350	410	480	480	410	480	410	480	480	600	650	650	600	600	650	640	800
93	108	127	127	108	127	108	127	127	160	172	172	160	160	172	169	211

7500	8100	8700	8900	7950	8550	8400	9000	11783	8803	9403	11180	8820	9020	9420	10500	11100
24.6	26.6	28.5	29.2	26.1	28.1	27.6	29.5	38.7	28.9	30.9	36.7	28.9	30.0	30.9	34.50	36.42
1470	1470	1470	1470	1470	1470	1470	1470	2160	1975	1975	2740	2230	2230	2230	2080	2080
4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	7.1	6.5	6.5	8.99	7.3	7.3	7.3	6.82	6.82
1610	1610	1610	1610	1610	1610	1610	1610	2220	1785	1785	2453	2160	2160	2160	2180	2180
5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	7.3	5.9	5.9	8.05	7.1	7.1	7.1	7.15	7.15

600 x Ø101.6	On Request															
□120x720	On Request															
57	57	76	81	On Request												

30500	31000	31500	32000	33500	34000	37000	38000	44000	48000	50000	52500	56500	57000	58000	69000	70000
67241	68343	69446	70548	73855	74957	81571	83776	97003	105822	110231	115743	124561	125664	127860	152119	154324
<b>PQ-300</b>	<b>PQ-400</b>	<b>PQ-500</b>	<b>PQ-500</b>	<b>PQ-400</b>	<b>PQ-500</b>	<b>PQ-400</b>	<b>PQ-500</b>	<b>PQ-500</b>	<b>PQ-500</b>	<b>PQ-600</b>	<b>PQ-600</b>	<b>PQ-500</b>	<b>PQ-500</b>	<b>PQ-600</b>	<b>PQ-600</b>	<b>PQ-700</b>



# BRUCE Pile Hammer Equipment

## Specification

Bruce Hammer Series	SGH	4012	4015	4019	4212	4215	4512	4515	4519	4712	4715	4719	5015	5715	6015	7015	8015
---------------------	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

Model Name Meaning : ex) SGH-3012 **30:Ram Weight, 12:1.2m Stroke**

## OPERATING DATA

Bruce Hammer Series	SGH	4012	4015	4019	4212	4215	4512	4515	4519	4712	4715	4719	5015	5715	6015	7015	8015
Ram Weight	(ton)	40	40	40	42	42	45	45	45	47	47	47	50	57	60	70	80
	(lbs)	88185	88185	88185	92594	92594	99208	99208	99208	103617	103617	103617	110231	125664	132277	154324	176370
Minimum Stroke	(mm)	200	200	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	7.87	7.87
Maximum Stroke	(mm)	1200	1500	1900	1200	1500	1200	1500	1900	1200	1500	1900	1500	1500	1500	1500	1500
	(ft)	3.94	4.92	6.23	3.94	4.92	3.94	4.92	6.23	3.94	4.92	6.23	4.92	4.92	4.92	4.92	4.92
Max. Potential Energy	(ton.m)	48	60	76.0	50.4	63	54	67.5	85.5	56.4	70.5	89.3	75.0	58.5	90	105	120
	(lb.ft)	347244	434055	549707	364543	455678	390649	488277	618529	408012	509926	646019	542474	618420	650969	759464	867958
	(KJ)	470	588	745	494	618	529	662	838	553	691	875	736	839	883	1030	1178
Blow Rate at max. stroke	(bpm)	26	26	24	26	26	26	26	24	26	26	24	26	26	24	24	24
Operating Pressure	(bar)	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270
	(psi)	3917	3917	3917	3917	3917	3917	3917	3917	3917	3917	3917	3917	3917	3917	3917	3917
Required Flow Rate	(lpm)	683	854	1000	683	854	830	1040	1230	830	1040	1230	1040	1250	1250	1975	1975
	(gpm)	206	211	264	211	248	219	275	325	219	275	325	275	330	330	522	522

## DIMENSIONS

Overall Length (L)	(mm)	11100	11700	12673	12000	12600	11460	12060	12860	11590	12190	12990	12000	12000	13390	16955	17500
	(ft)	36.42	38.4	41.6	39.37	41.34	37.6	39.6	42.19	38.0	40.0	42.6	39.4	39.37	43.9	55.6	57.4
Overall Width (W)	(mm)	2080	2080	2080	2080	2080	2870	2870	2870	2870	2870	2870	2310	2870	2870	2870	2870
	(ft)	6.82	6.82	6.82	6.82	6.82	9.4	9.4	9.4	9.4	9.4	9.4	7.6	9.4	9.4	9.4	9.4
Overall Height (H)	(mm)	2180	2180	2180	2180	2180	2760	2760	2760	2760	2760	2760	2310	2760	2760	2760	2760
	(ft)	7.15	7.15	7.15	7.15	7.15	9.1	9.1	9.1	9.1	9.1	9.1	7.6	9.1	9.1	9.1	9.1

## FIXED LEADER GUIDE & LEADS

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

\* Other shape or dimension can be modified on request. Crane Suspended type and Long Pile Skirt are available.

\* Note : The Overall Length of Hammer is included the length of pile skirt.

## WEIGHTS

Weight with Drive Cap	(kg)	74000	75000	76000	76000	76500	81000	82000	83000	83000	84000	85000	92000	10000	110000	130000	140000
	(lbs)	163142	165347	167551	167551	168654	178574	180779	182984	182984	185188	187393	202825	220462	242509	286601	317466
Suitable Power Pack Series	PQ -600	PQ -700	PQ -1000	PQ -700	PQ -700	PQ -700	PQ -800	PQ -1000	PQ -700	PQ -800	PQ -1200	PQ -800	PQ -1200	PQ -1200	PQ -1500	PQ -1500	

\* The weight is not included pile cap or long skirt.

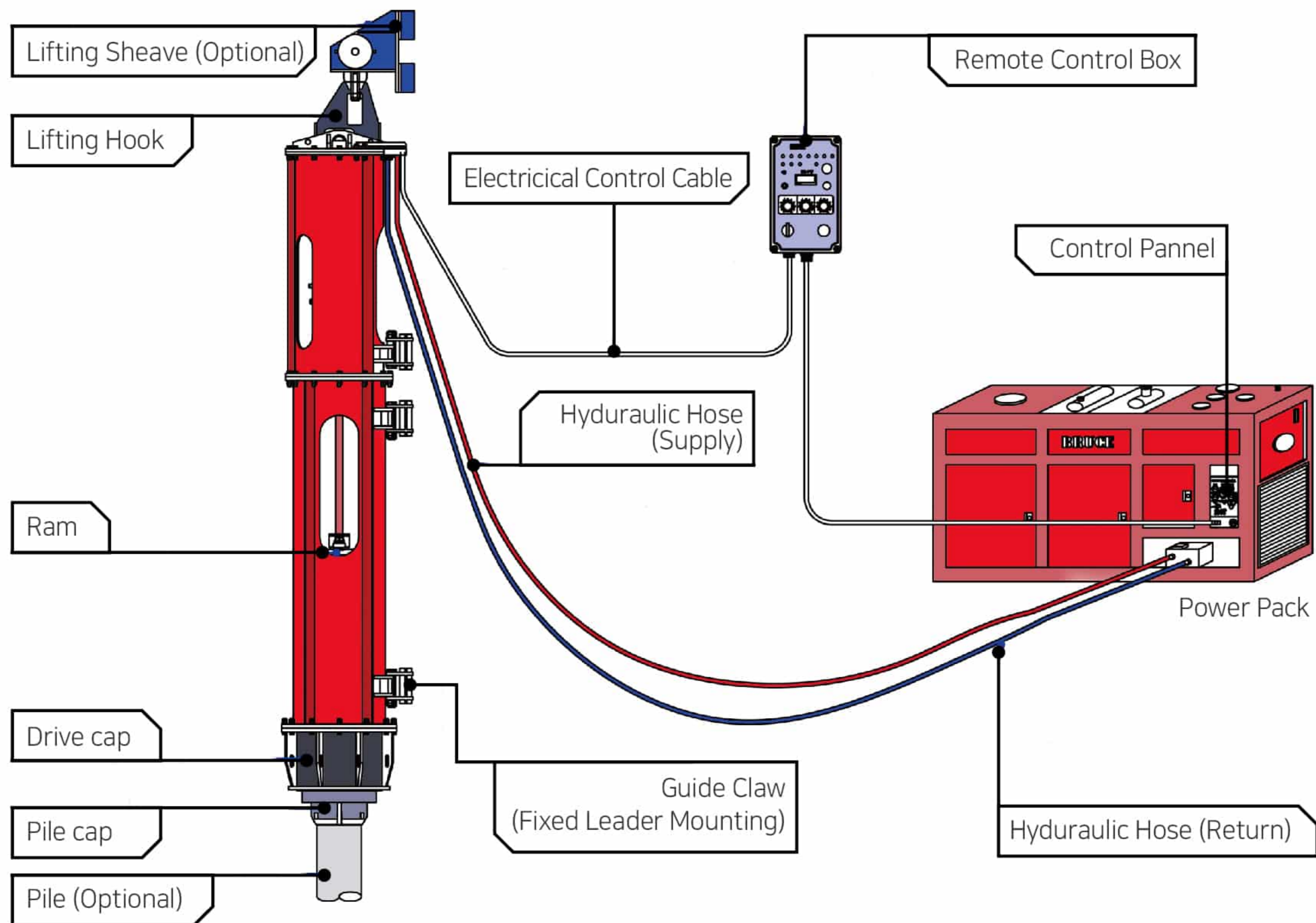
\* The weight will vary depending on pile size.

\* Other capacity hammer can provide on request.

\* We reserve the right to make modifications without further notice.



# BASIC STRUCTURE FIXED LEADER MOUNTING TYPE

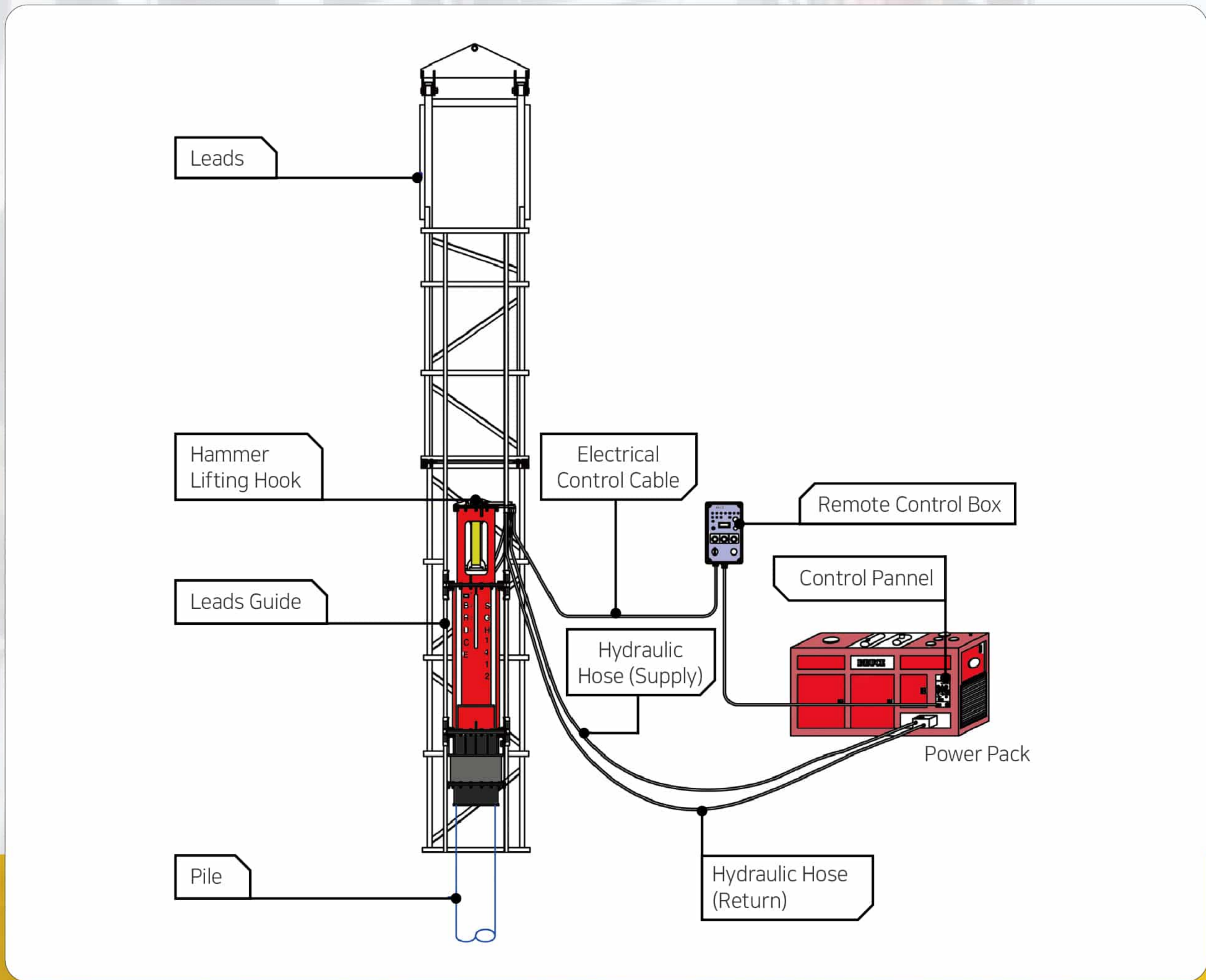


The Lifting Sheave and Lifting Hook are available for Fixed Leader Mounting Optionally.

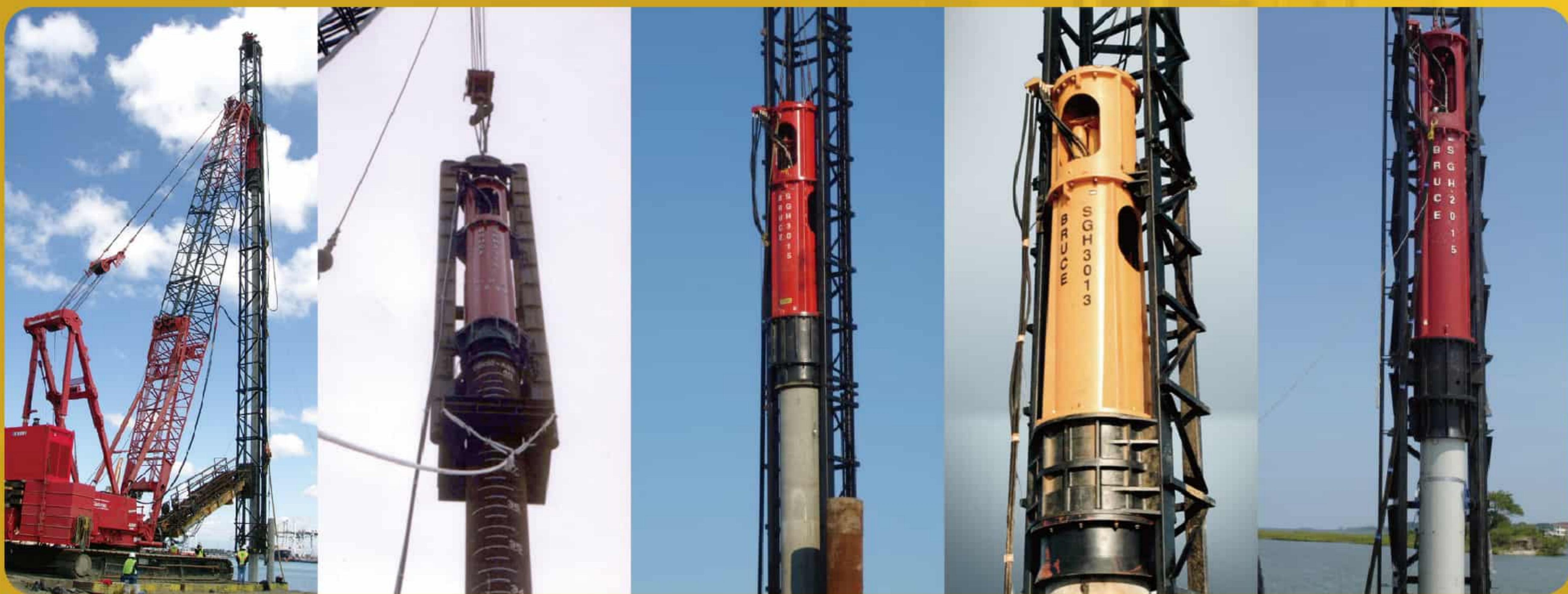




# BASIC STRUCTURE - U TYPE LEADS



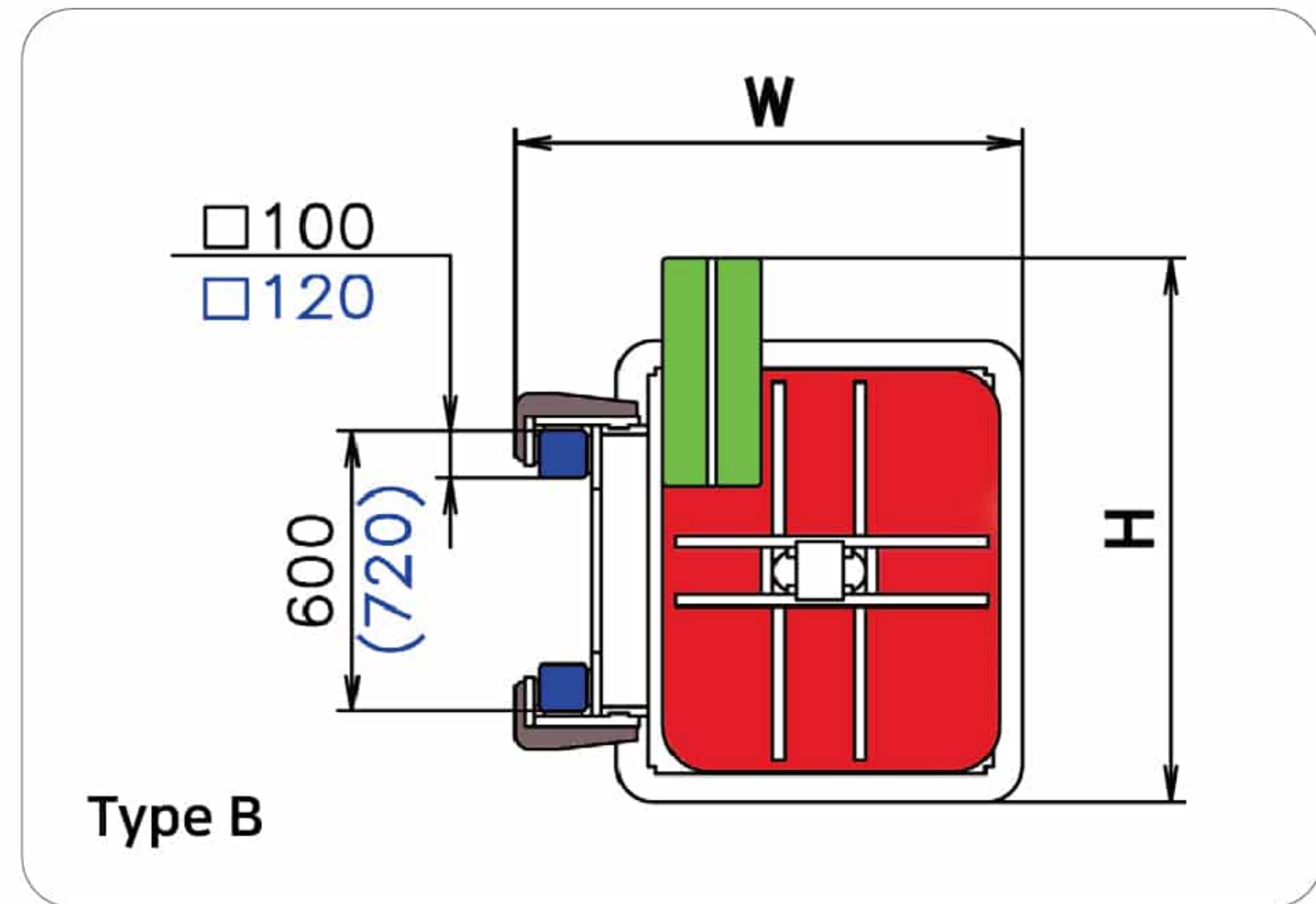
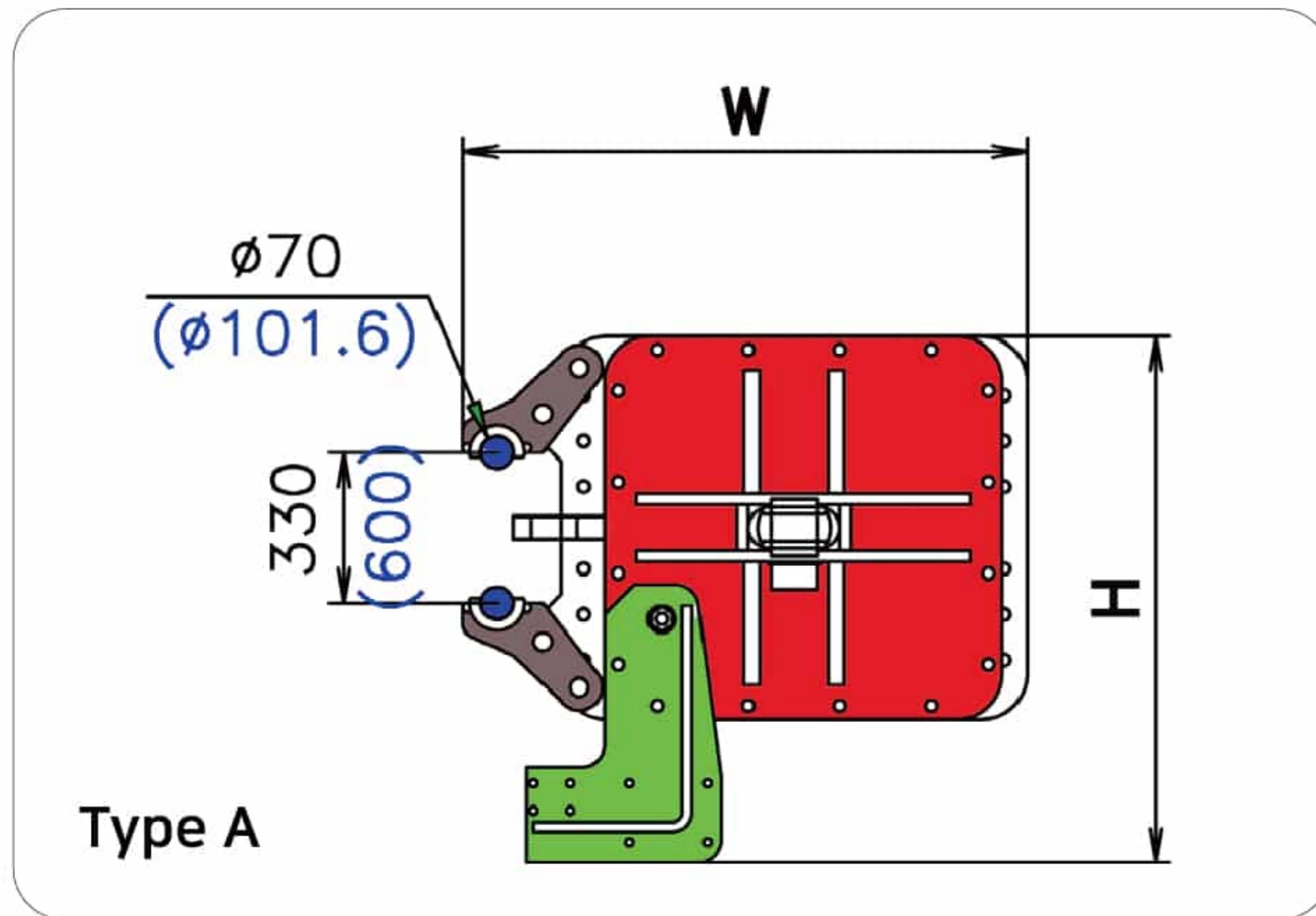
Offshore leader type is also available.





# HAMMER MOUNTING TYPE & DIMENSION

## Fixed Leader Type



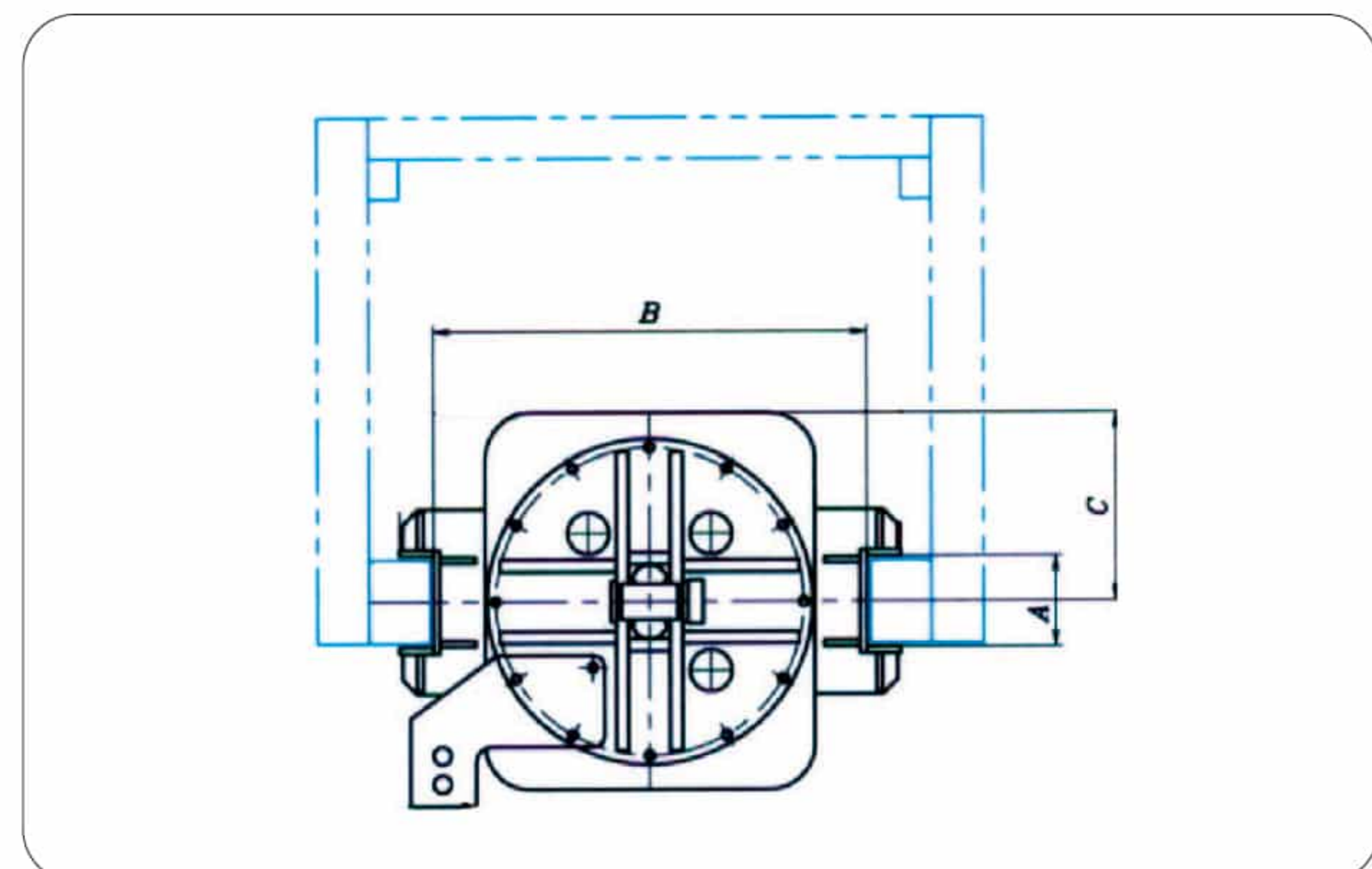
TYPE	GUIDE SHAPE	DIMENSION(mm)
TYPE 'A'	ROUND	Ø 70 x 330
		Ø 101.6 x 600
TYPE 'B'	SQUARE	□ 60 x 500
		□ 80 x 400
		□ 80 x 600
		□ 90 x 515
		□ 100 x 600
		□ 120 x 720

Other dimension and type can be modified. Long pile skirt & Offshore Leader for crane suspended are Optional.

## U Type Leads

BRUCE Model	U Type Leads Size (inch)	Hammer Dimension (inch)		
		A	B	C
SGH-0212	8x27	9	26	32.7
SGH-0312	8x27	9	26	32.7
SGH-0412	8x27	9	26	32.7
SGH-0512	8x33	9	32	40.2
SGH-0712	8x33	9	32	40.2
SGH-1012	10x50	11	49	56.9
SGH-1212	10x50	11	49	56.9
SGH-1412	11x57	12	56	64.2
SGH-1612	11x57	12	56	64.2
SGH-1812	11x57	12	56	64.2
SGH-2012	11x57	12	56	64.2
SGH-2015	11x57	12	56	64.2
SGH-3012	16x81	17	80	85.8
SGH-3013	16x81	17	80	85.8
SGH-4212	16x81	17	80	85.8

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 system for a constant stability of the pile driving performance on high efficiency of operation with the BRUCE hammer. A sound proofed frame with enough space of internal layout enables to obtain an easy access to a quick and easy maintenance and designed for durability of power pack. High cooling capacity of hydraulic system provides a stable hydraulic high efficiency and no overheat problem and auxiliary control powered by adjustable displacement pumps in hydraulic system of power pack.



## ELECTRIC REMOTE CONTROL SYSTEM

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

### MAJOR FUNCTION OF HAMMER OPERATION

- Dwell control for adjusting ram staying time on pile
- Digital blow counter indicator
- Adjustable 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 from electric power abnormality or short circuit
- Engine start and stop
- Start and stop hammer operation
- Emergency stop button and functioning

### ABNORMALITY CHECK ON LED

- 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





### TURBOCHARGED DIESEL ENGINE

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

### UNIQUE CONCEPT OF DESIGN

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

### QUALITY HYDRAULIC PUMP

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

### RELIABLE FILTERING UTILIZED

Every filters equipped in the Engine and hydraulic system can guarantee a long lasting efficiencies against contaminated oils and a dust.

### HIGH COOLING CAPACITY

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

### SIMPLE HYDRAULIC & ELECTRIC SYSTEM

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



## POWER PACK CONTROL PANEL

### SIMPLE DESIGN OF CONTROL SYSTEM AND PANEL

With user friendly simplicity design concept and equipped useful & convenient functions in the control panel is provided easy electrical operational system and hydraulic system.

- Electronic engine control unit with LCD indicator
- Electronic engine governor
- Battery recharge & coolant temperature indicate
- Engine start & stop
- Main electric supply on/off switch
- Engine oil pressure indicator
- Circuit breaker can be protected from short- circuit or fault on electric system.
- Engine speed lever enables change the engine speed.
- LED lamp for MAIN POWER
- Main hydraulic pressure indication gauge
- Engine speed indicate
- Fuel gauge
- Emergency stop button
- Engine & coolant temperature indicate





## Specification

Power Pack Series		PQ-150	PQ-200	PQ-250	PQ-300	PQ-400	PQ-450	PQ-500	PQ-600	PQ-700	PQ-800	PQ-1000	PQ-1200	PQ-1500
Engine Type		Cummins / Doosan												
Engine Power	(PS)	120@ 1800rpm	154@ 1800rpm	230@ 1800rpm	290@ 1800rpm	360@ 1800rpm	425@ 1800rpm	475@ 1800rpm	525@ 1800rpm	650@ 1800rpm	800@ 1800rpm	1000@ 1800rpm	1300@ 1800rpm	1500@ 1800rpm
	(kW)	89@ 1800rpm	115@ 1800rpm	172@ 1800rpm	216@ 1800rpm	269@ 1800rpm	317@ 1800rpm	354@ 1800rpm	392@ 1800rpm	485@ 1800rpm	597@ 1800rpm	736@ 1800rpm	974@ 1800rpm	1119@ 1800rpm
Setting Pressure	(bar)	280	280	280	280	300	300	300	300	300	300	300	300	300
	(psi)	4061	4061	4061	4061	4352	4352	4352	4352	4352	4352	4352	4352	4352
Rated Flow Rate	(lpm)	150	195	325	400	450	500	540	700	880	1100	1250	1600	2000
	(gpm)	40	52	86	106	119	132	143	185	233	291	330	352	528
Hydraulic Oil Tank Capacity	(liter)	300	350	600	700	800	1000	1000	1400	1400	1800	2400	2400	3000
	(gal)	79	93	159	185	211	264	264	370	370	476	634	634	793
Fuel Tank Capacity	(liter)	200	300	500	500	500	750	750	900	900	1000	1000	1700	2200
	(gal)	53	79	132	132	132	198	198	238	238	264	264	374	484

※ The DOOSAN Engine is as standard and the CUMMINS Engine is as an optional.  
 ※ Engine RPM can be changed according to the capacity of hydraulic pumps.

## DIMENSIONS

Overall Length	(mm)	2700	2700	2900	3300	3500	3700	3700	4000	4000	4600	5000	5500	5500
	(ft)	8.9	8.9	9.5	10.8	11.5	12.1	12.1	13.1	13.1	15.1	16.4	18.0	18.0
Overall Width	(mm)	1300	1300	1600	1600	1800	1800	1800	1900	1900	2200	2200	2500	2500
	(ft)	4.3	4.3	5.3	5.3	5.9	5.9	5.9	6.2	6.2	7.2	7.2	8.2	8.2
Overall Height	(mm)	2060	2060	2100	2100	2200	2480	2480	2265	2265	2459	2600	2700	2700
	(ft)	6.8	6.8	6.9	6.9	7.2	8.1	8.1	7.4	7.4	8.1	8.5	8.9	8.9

## WEIGHT

Dry	(kg)	3200	3500	3800	4200	4500	5000	5000	5500	5800	7000	8000	11000	14000
	(lbs)	7055	7716	8378	9259	9920	11023	11023	12125	12787	15432	17637	24251	30865
Operating	(kg)	3500	4000	4400	5000	5500	6000	6000	6800	7300	9500	10000	14000	17000
	(lbs)	7716	8819	9700	11023	12125	13228	13228	14991	16094	20944	22046	30865	37479

※ Other capacity of power pack can be supplied on request.  
 ※ We reserve the right to make modifications and change without prior notice.



### BRUCE SGH-4719

working at bridge piling site at Sakonet River Bridge, RI, USA  
driving casing pile (O.D 72" x 200 feet long)

### BRUCE SGH-1618 & 1619

at Hong Kong driving H-beam piles  
(305mm x 305mm, 223kg/m, 48m long)



## IMPACT ENERGY MONITOR SYSTEM (IEA SYSTEM) - OPTIONAL

Using energy monitoring system, impact energy, stroke and blow rate can be monitored and managed piling record. The measured blow rate and energy and tohers record 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.

**IEA system**  
Impact Energy Analyzer Model 1127

IEA S/N : IEA-0005  
Project name : USA  
Hammer model : SGH 2011  
Hammer S/N : 070652015  
Ram wt : 44.93 lb/3  
Max. stroke : 4.92 ft  
Location : USA  
Contractor : AMERICAN BRIDGE  
Operator : AMERICAN BRIDGE  
Pile No. : A300004  
Pile dia. : 30 INCH  
Pile length : 100 FT  
Pile type : Round  
Pile material : Concrete

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	09.05	1.07	
62.00	2	3	36.3	02.73	1.51	
63.00	1	4	42.2	72.21	1.74	
64.00	2	0	30.3	09.92	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





# BRUCE Pile Hammer Equipment

Worldwide Reputable Powerful and Efficient Pile Driving Equipment and Designed for successful Piling Works

## SGH-4719, SGH-4519, SGH-4015, SGH-4019

SGH-4719  
Max Energy : 89.3 ton.m  
47 ton Ram Weight 1.9m Stroke  
Pile dia. 72 inch Steel Caing Pile







# BRUCE Pile Hammer Equipment





SGH-4719



SGH-4019



SGH-4519



SGH-4719



SGH-4715

**SGH-3013, SGH-3515**

SGH-3013  
 Max Energy: 39 ton.m  
 30 ton Ram Weight 1.3m Stroke  
 Pile dia. 60 inch Prestressed Concrete Pile



SGH-3013



SGH-3013



SGH-3013



SGH-3515





# BRUCE Pile Hammer Equipment





SGH-3015



SGH-3015



SGH-3015



SGH-2815



SGH-3015

### SGH-1815, 2015, 2315

SGH-2015  
 Max. Engery : 30 ton.m  
 20 ton Ram Weight 1.5m Stroke  
 Pile Dia. 36 inch Prestressed Concrete Pile, 120 feet long



SGH-2015



SGH-2015



SGH-2015





# BRUCE Pile Hammer Equipment



# BRUCE Pile Hammer Equipment

New Standard of Construction and Pile Driving Works for worldwide success

## SGH-1412,1415,1618,1619

SGH-1619 H-Beam driving with conventional pile driver  
SGH-1412, SGH-1415 pile driving with U -type Leads  
Power Pack PQ-300/PQ-500







# BRUCE Pile Hammer Equipment





SGH-1412



SGH-1412



SGH-1412



SGH-1415



SGH-1619

**SGH-1315, 1412, 1415**

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



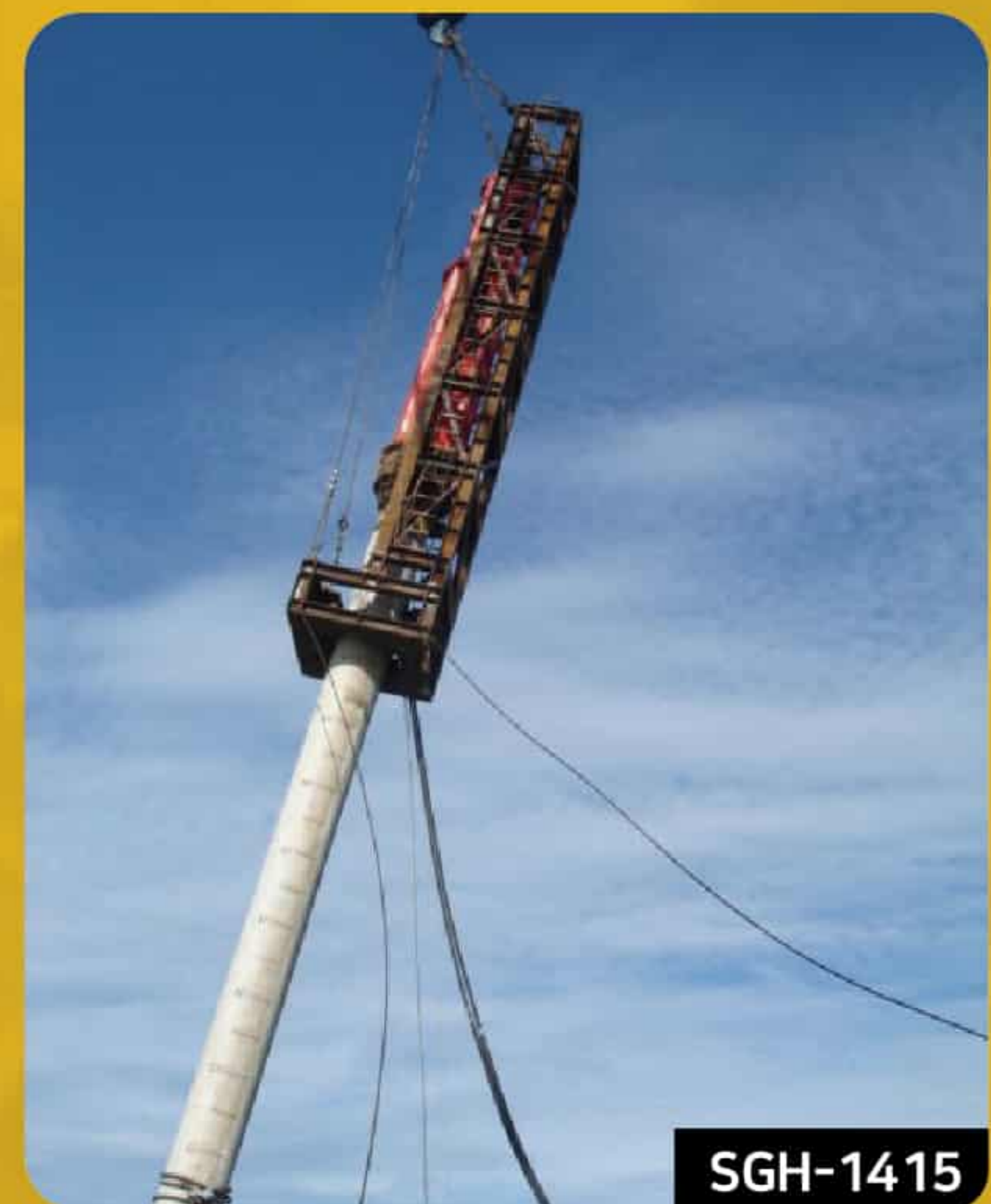
SGH-1315



SGH-1412



SGH-1415



SGH-1415





# BRUCE Pile Hammer Equipment



# BRUCE Pile Hammer Equipment

New Standard of Construction and Pile Driving Works for worldwide success

## SGH-0712,1012,1015,1212

SGH-0712, SGH-1012 pile driving with Fixed Leader type  
SGH-1212 pile driving with Crane suspended type  
Power Pack PQ-200/PQ-250







# BRUCE Pile Hammer Equipment





SGH-1212



SGH-1012 Dynamic Compaction



SGH-1212



SGH-0712



SGH-0712

**SGH-0312, 0315, 0412, 0512**

SGH-0412 pile driving with Fixed Leader type and mounted on Pile Driver  
 SGH-0312 pile driving with Fixed Leader type and mounted on excavator



SGH-0312



SGH-0512



SGH-0412



# BRUCE PILING EQUIPMENT

**BRUCE**<sup>®</sup>  
PILING EQUIPMENT

SHINSEGAE POWERQUIP INDUSTRIAL CO., LTD.  
15091, SIHWA INDUSTRIAL COMPLEX, 44,  
GUNJACHEON-RO, 131 BEON-GIL, SIHEUNG CITY, GYEONGGI-DO, KOREA

T. +82-31-488-8026 F. +82-31-431-7490  
E. inquiry@powerquip.co.kr W. www.powerquip.co.kr

