

ICE® PILE DRIVING LEADS

DURABLE - ECONOMICAL - VERSATILE

*ENGINEERED TO PROVIDE MAXIMUM STRENGTH-TO-WEIGHT RATIO
FOR SUPERIOR PILE RIG PERFORMANCE.*



High-strength structural tube front guide-rails for abrasion resistance.

Braced rear tubes are structurally matched with front rails to provide equal moment capacity for both fore and aft batter conditions.

Rigid-bolted or pinned connections provide maximum stability.

Available in various sections for maximum flexibility.

All sections precision-fabricated in production jigs to maintain strict dimensional tolerances that ensure accurate connection and alignment.

Fitted with full-length ladders for easy equipment access.

Swinging, fixed, sliding and offshore configurations available.

20" through 66" sizes available.



HEADBLOCK WITH
AUGER BRACKET



ROOSTER SHEAVE



BOOM POINT CONNECTOR



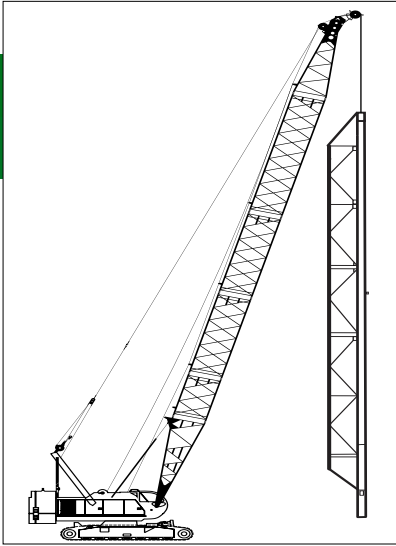
HYDRAULIC SPOTTER



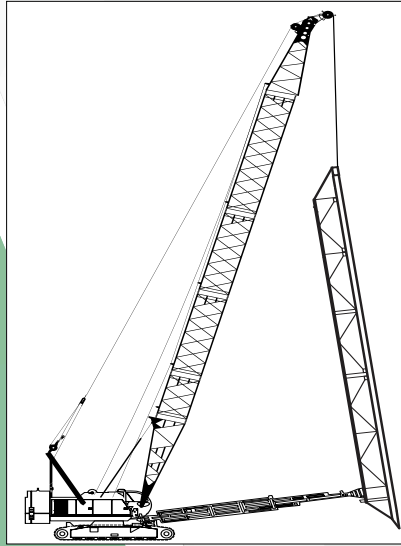
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ICE® PILE DRIVING LEADS

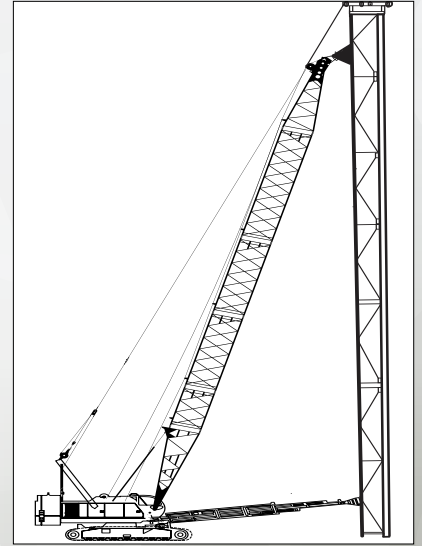
DURABLE - ECONOMICAL - VERSATILE



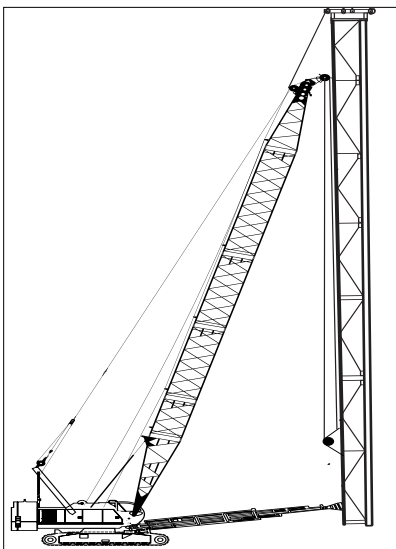
Swinging



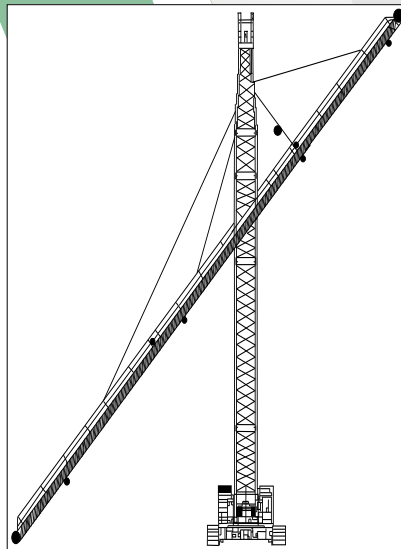
Fixed, Underhung



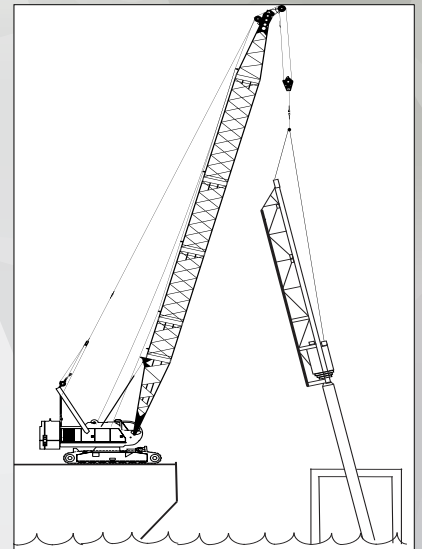
Fixed, Extended



Sliding, Extended



Cable Hung



Offshore



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ICE® LEADS EXTENSIONS

TO EXTEND BOTTOM OF LEADS UP TO 20' (6.1 M) FOR OPERATION BELOW CRANE LEVEL

USE WITH ICE® 26" OR 32" LEADS

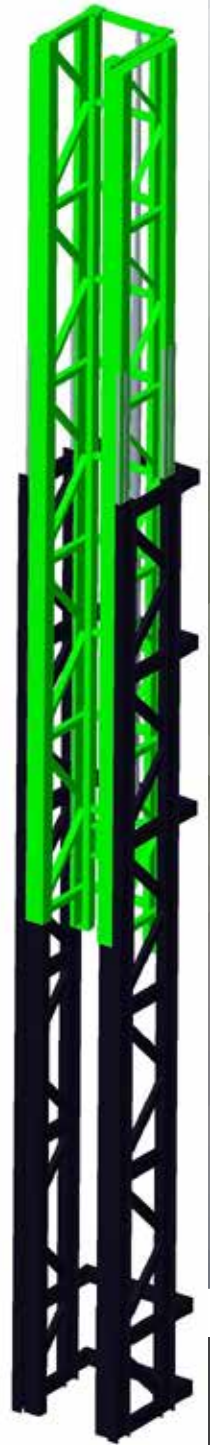
EXTEND UP TO 20' (6.1 M) BELOW THE BOTTOM OF LEADS

INCLUDES 40' (12.2M) BOTTOM SECTION AND 40' (12.2M) SLIDING SECTION

WEIGHT - 24,000 LB (11 900 KG)

HYDRAULIC ACTION FOR EASY CONTROL

POWER WITH ICE MODEL 55 OR 55T POWER UNIT OR CRANE HYDRAULICS (2000 PSI, 140 BAR)



ICE® PILE DRIVING OFFSHORE LEADS

DURABLE - ECONOMICAL - VERSATILE



Offshore leads are hung from the crane boom by a crane line. The bottom of the leads has a guide that slides over the top of the pile. The crane line and boom are positioned to hold the leads plumb or at the desired batter in line with the pile.

Offshore leads are generally used with larger hammers and piles. The pile must have its own support structure.

Offshore leads are assembled from three components – a leads section, lifting gear, and a pile guide. The leads section guides the pile hammer and drive cap. The lifting gear supports the leads section and provides spacing for the ram and has a starting line if a diesel hammer is used. The pile guide aligns the leads, hammer and drive cap with the pile.

CAUTION

ICE leads are designed and built for normal hammers piles and driving conditions. If unusual hammers, piles or driving conditions are encountered or if any question about specific job situation arises, contact ICE before proceeding with pile driving operations.



ICE® PILE DRIVING OFFSHORE LEADS

SPECIFICATIONS

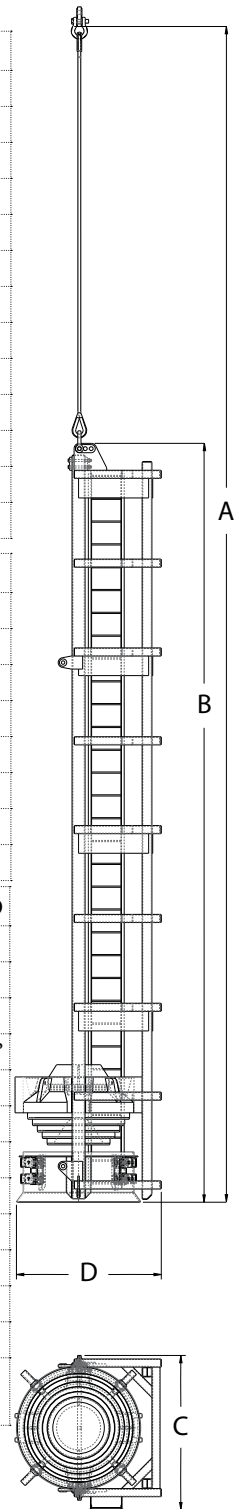
DESCRIPTION & WEIGHT (LBS) BY LEADS SIZE*	26"	32"	36"	42"
8' Intermediate section	926	1,427	1,520	-
16' Intermediate section	1,630	2,648	3,272	-
40' Intermediate section	-	6,353	7,596	8,507
Lifting angles (pair, bolt on)	250	270	330	300
Pile guides (bolt on)				
18" Square	520	775	-	-
20" Square	-	760	-	-
24" Square	-	765	-	-
30" Square	-	1,170	1,430	-
36" Square	-	-	-	1,590
41" (1 meter) Square	-	-	-	1,600
12-30" Round	-	1,950	-	-

* Add weight for drive cap, striker plate & cushion material

DESCRIPTION & WEIGHT (LBS)	48"	60"	66"	66"HD
Maximum pile diameter	48"	60"	66"	66"
40' section	12,800	14,905	15,505	39,175
DHP-48 (24-48" Pipe)	11,570	-	-	-
DHP-66 (42-66" Pipe)	-	-	26,600	26,600
Drive cap (42-60" Pipe)	-	16,100	-	-
Striker plate	1,420	1,410	3,065	3,065
Cushion (nylon & aluminum)	185	185	680	680
Total weight	25,975	32,600	43,850	69,520

Dimensions	26"	32"	36"	42"	48"	60"	66"	66"HD
Overall length (A)*	47'	47'	47'	55'	61' 2"	63'	61' 2"	64' 6"
Lead section length (B)*	32'	32'	32'	40'	38' 10"	40' 8"	38' 10"	42' 3"
Width, including ladder (C)	45 1/2"	52 1/2"	50 1/2"	68 1/2"	6' 5"	7' 5"	7' 11"	9' 3"
Lead guides width	26 1/2"	32 1/2"	36 1/2"	42 1/2"	48 1/2"	60 1/2"	66 1/2"	68 1/2"
Depth including pile guide (D)					6' 8"	7' 4"	7' 5"	9' 3"
18" Square	46"	58 3/8"	-	-				
20" Square	-	59 3/8"	-	-				
24" Square	-	61 3/8"	-	-				
30" Square	-	-	65 1/4"	-				
36" Square	-	-	-	76 1/4"				
41" (1 meter) Square	-	-	-	78 1/4"				
12-30" Round	-	64 1/4"	-	-				

Lengths using two 16' lead sections and square pile guide for 26"-36" leads Add 3' 3" for 12"-30" round pile guide



ICE® PILE DRIVING FIXED, EXTENDED LEADS

Fixed, extended leads extend above the boom-point. They are connected to the boom-point with a swivel connection to allow movement in the fore-aft and side-to-side directions. A spotter connects the bottom of the leads to the front of the crane. A headblock directs the crane lines over the top of the leads. A rooster sheave at the boom-point guides the lines to the headblock.

Extended leads require only a two-line crane (pile & hammer) although a third auxiliary line may be used if desired. Excellent speed, control and accuracy are possible in positioning the leads. Side-to-side as well as fore and aft adjustment is possible. A shorter boom may be used. However, extended leads are more expensive and require more time to set up.

COMPONENTS

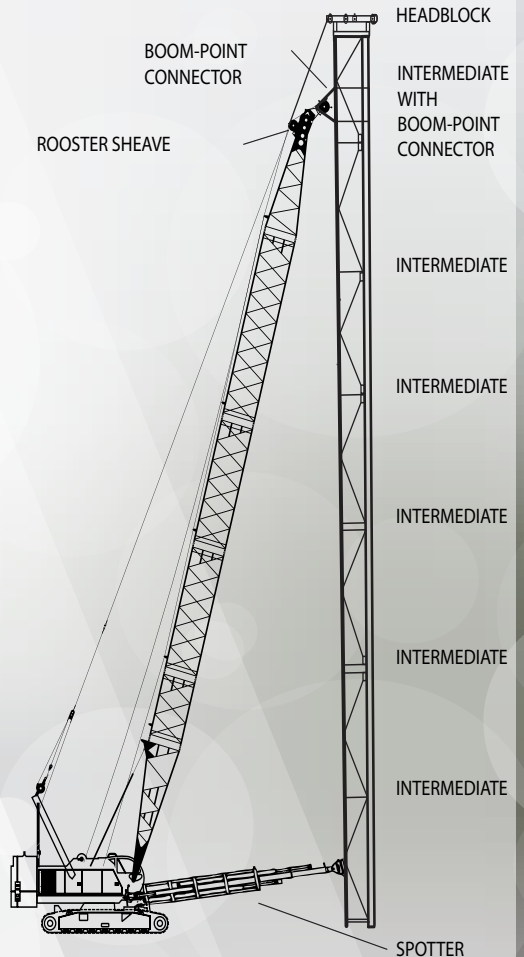
ICE® fixed extended leads are assembled from several components—4, 8, 16, or 40-foot intermediate sections, a headblock, a boom-point connector, a rooster sheave and a spotter.

Various intermediate sections have the boom-point connection positioned to allow vertical positioning of the leads. Multiple intermediate sections may be used both above and below the section to allow complete flexibility in boom and lead lengths.

The boom-point connector attaches the boom-point intermediate section to the boom-point of the crane. The connector permits full fore-aft and side-to-side movement.

The headblock, which carries the crane lines over the top of the leads, is available with either 4 or 6 sheaves to handle either 2 or 3 lines. An optional auger side-sheave is available.

Model 101, 155 or 225 spotters are available to position the bottom of the leads.



HEADBLOCK WITH
AUGER BRACKET



ROOSTER SHEAVE



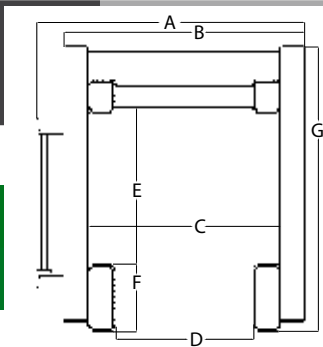
BOOM POINT CONNECTOR



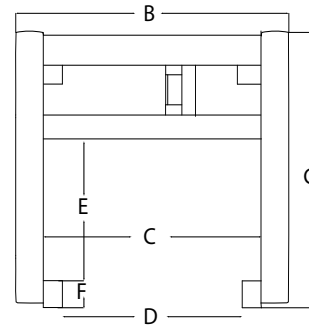
HYDRAULIC SPOTTER



ICE® PILE DRIVING FIXED, EXTENDED LEADS

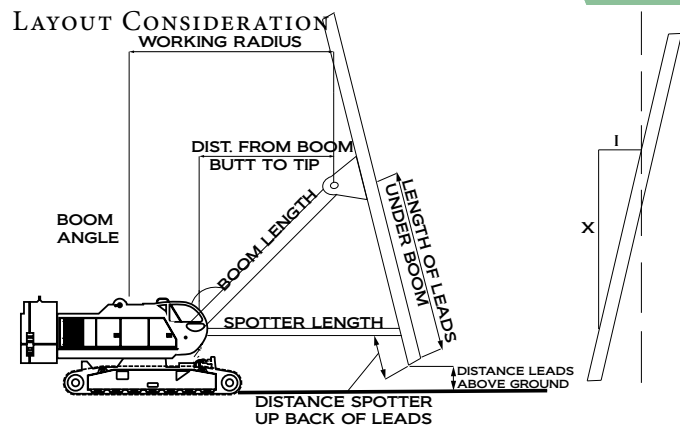


	20 in.	26 in.	32 in.	42 in.
A	39.5"	45.5"	52.5"	68.5"
B	35.5"	41.5"	48.5"	64.5"
C	28.5"	34.5"	40.5"	54.5"
D	20.5"	26.5"	32.5"	42.5"
E	18.8"	20.8"	31"	35"
F	8"	8"	8"	8"
G	34.1"	36.1"	48.6"	53.8"



	36 in.
A	-
B	50.5"
C	43.5"
D	36.5"
E	34.5"
F	8"
G	62"

DESCRIPTION & WEIGHT (LBS) BY LEADS SIZE	26 in	32 in	36 in
4' Intermediate section	570	-	-
8' Intermediate section	947	1,427	1,520
16' Intermediate section	1,660	2,648	3,272
40' Intermediate section	4,146	6,353	7,596
2' Fixed boom-point section	670	-	-
3' Fixed boom-point section	-	1,563	-
40' Fixed boom-point section	-	9,157	11,070
Boom-point connector - 2 axis	1,150	1,150	1,150
Roosted sheave (3 lines x 8" sheaves) - 2 axis	150	150	150
Roosted sheave (3 lines x 8" sheaves) - 3 axis	200	200	200
Roosted sheave (3 lines x 18" sheaves) - 2 axis	500	500	500
Headblock (4 sheaves for 2 lines)	1,200	1,400	1,490
Headblock (6 sheaves for 3 lines)	1,330	1,530	1,620
Headblock with auger bracket (2 lines plus auger line)	1,750	2,000	-
Side auger guides (weight per foot)	33	33	33
Connecting bolts (weight per connection)	13	28	37



PILE GATE WEIGHT (LBS)	26 in	32 in
Pile gate arms without rollers	800	1,000
Rollers for 12" pile - set of 8	280	-
Rollers for 14" pile - set of 8	240	-
Rollers for 16" pile - set of 8	200	320
Rollers for 18" pile - set of 8	160	280
Rollers for 20" pile - set of 8	-	240
Rollers for 22" pile - set of 8	-	200
Rollers for 24" pile - set of 8	-	160



CAUTION

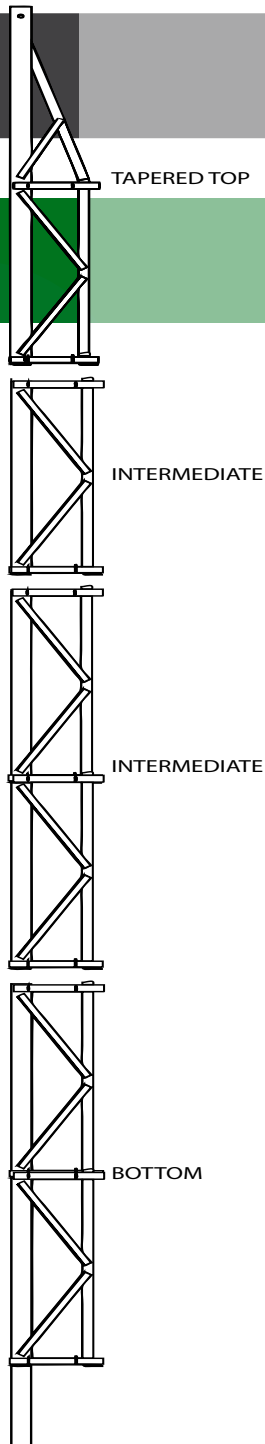
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ICE® PILE DRIVING SWINGING LEADS

Swinging leads are hung from the crane boom by a crane line. The bottom of the leads is held in position by stabbing points. The crane line and boom are positioned to hold the pile plumb or at the desired batter.

Swinging leads are the lightest, simplest, and least expensive. Precise alignment of the crane and pile is not required. It is possible to drive in a hole or over the edge of an excavation. However, swinging leads require a three-line crane (leads, hammer & pile). And precise positioning of the leads is slower and more difficult.



SWINGING LEADS COMPONENTS

ICE swinging leads are assembled from three basic components—a top section, a bottom section, and intermediate sections.

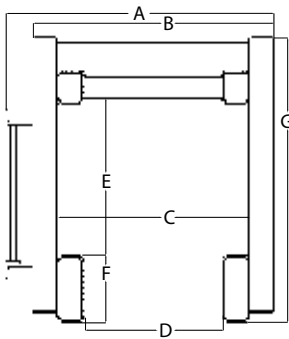
The tapered top section is used at the top of swinging leads. The taper at the back of the leads provides the required clearance for the crane boom. A bail attachment is a standard part of the tapered top section and it accepts a standard shackle. The top section has a full-length ladder (except for the top eight feet).

The bottom section is used at the bottom of the swinging leads. Four-foot stabbing points hold the leads in position during driving. The bottom section has a full length ladder.

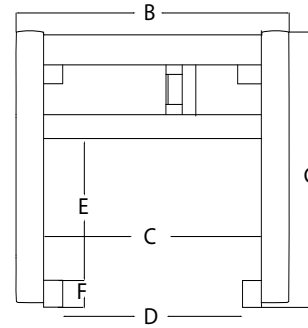
Multiple intermediate sections are used with the above sections to provide various lengths of leads. Intermediate sections have full length ladders.



ICE® PILE DRIVING SWINGING LEADS



	20 in.	26 in.	32 in.	42 in.
A	39.5"	45.5"	52.5"	68.5"
B	35.5"	41.5"	48.5"	64.5"
C	28.5"	34.5"	40.5"	54.5"
D	20.5"	26.5"	32.5"	42.5"
E	18.8"	20.8"	31"	35"
F	8"	8"	8"	8"
G	34.1"	36.1"	48.6"	53.8"



	36 in.
A	-
B	50.5"
C	43.5"
D	36.5"
E	34.5"
F	8"
G	62"

SWINGING LEADS COMPONENTS	20 in	26 in	32 in	36 in	42 in
16' Top Section with lifting bail assembly	1,170	1,495	2,288	-	-
32' Top Section with lifting bail assembly	-	2,990	4,685	-	-
40' Top Section with lifting bail assembly	-	-	-	7,055	-
Lifting angles (pair, bolt on)	-	-	270	330	300
4' Intermediate section	-	570	-	-	-
8' Intermediate section	926	947	1,427	1,520	-
16' Intermediate section	1,630	1,660	2,648	3,272	-
40' Intermediate section	-	4,146	6,353	7,596	8,507
4' Stab point bottom section	390	406	696	960	1,050
20' Stab point bottom section	-	1,930	3,000	-	-
40' Stab point bottom section	-	-	-	7,094	-
Side auger guides (weight per foot)	33	33	33	33	33
Connecting bolts (weight per connection)	13	13	28	37	50

ICE sells and rents a full line of standard pile hammers, leads and accessories to meet a wide variety of job requirements. In addition, ICE engineers and production personnel are fully qualified to design and build special leads and accessories to meet unique and difficult job specifications.

An efficient, productive lead set-up is key to a profitable pile driving operation. Experienced ICE personnel are available to insure that the proper components are provided to achieve the optimum arrangement for each job.

CAUTION

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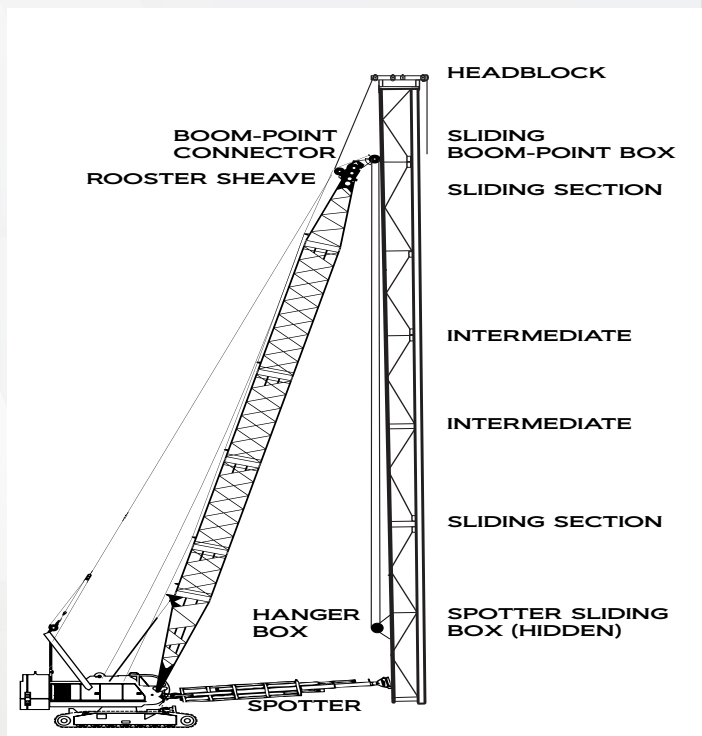


ICE® PILE DRIVING SLIDING, EXTENDED LEADS

Sliding, extended leads have all of the features of fixed, extended leads. In addition, sliding leads may be raised or lowered vertically independent of the boom position. Also, the leads may be rotated 45° each way about their longitudinal axis. The added features provide a number of operating advantages, enabling:

- Leads to be raised or lowered in any batter position.
- Driving of longer piles by raising leads at start of driving, later lowering to cut-off elevation.
- Hammer to be guided to cut-off elevation regardless of boom position.
- Leads can be lifted clear of obstructions.
- Crane to sit on ground higher than pile area and leads to reach cut-off elevation.
- Crane to sit on ground lower than pile area with out leads interfering with ground.
- Leads to be supported on the ground where desired for long reaches or extra heavy piles or hammers.
- Pile hammer to be mounted by first raising and then lowering the lead into the hammer guides, eliminating the need to use a hole in the ground or to unbolt the hammer guides.

Sliding, extended leads require a three-line crane (leads, hammer and pile). The spotter being used must permit lead rotation. Maximum speed, control and accuracy are possible in positioning the leads. Fore-aft, side-to-side, vertical and rotational adjustment is possible. However sliding leads are more expensive and require the most time to set up.



SLIDING, EXTENDED LEADS COMPONENTS

The components which make up ICE sliding, extended leads are shown above.

A sliding section accepts the sliding boom-point connector box to provide of vertical movement of the leads at the boom-point. A second sliding section accepts the spotter sliding box to permit the spotter to be positioned within a 30-foot vertical range at the bottom of the leads. The lead hanger box attaches at the top of the lower 40-foot sliding section to provide an attach point for the leads lifting line.

Multiple 8 and 16 foot intermediate sections may be used between and outside of the 40' sliding sections to permit the use of various lengths of leads and boom.

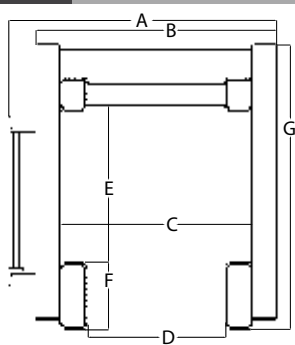
The boom-point connector which connects the crane boom to the boom-point connector box allows movement in six directions—fore & aft, side-to-side, and leads rotation each way.

The rooster sheave swivels in all directions to allow for the six-way movement of the leads at the boom-point.

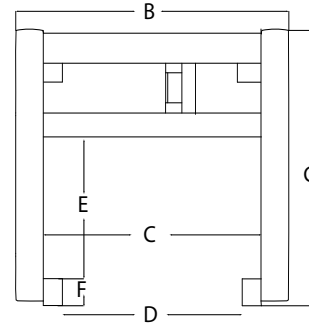
The spotter connects to the leads to allow six-way movement at the bottom of the leads. Optional powered lead rotation is available with Model 155 and 225 spotters.

The headblock, which carries the crane lines over the top of the leads, is available with either 4 or 6 sheaves to handle 2 or 3 lines.

ICE® PILE DRIVING SLIDING, EXTENDED LEADS



	20 in.	26 in.	32 in.	42 in.
A	39.5"	45.5"	52.5"	68.5"
B	35.5"	41.5"	48.5"	64.5"
C	28.5"	34.5"	40.5"	54.5"
D	20.5"	26.5"	32.5"	42.5"
E	18.8"	20.8"	31"	35"
F	8"	8"	8"	8"
G	34.1"	36.1"	48.6"	53.8"



	36 in.
A	-
B	50.5"
C	43.5"
D	36.5"
E	34.5"
F	8"
G	62"

DESCRIPTION & WEIGHT (LBS) BY LEADS SIZE	26 in	32 in	36 in
4' Intermediate section	570	-	-
8' Intermediate section	947	1,427	1,520
16' Intermediate section	1,660	2,648	3,272
40' Intermediate section	4,146	6,353	7,596
2' Fixed boom-point section	670	-	-
3' Fixed boom-point section	-	1,563	-
40' Fixed boom-point section	-	9,157	11,070
Boom-point connector - 2 axis	1,150	1,150	1,150
Roosted sheave (3 lines x 8" sheaves) - 2 axis	150	150	150
Roosted sheave (3 lines x 8" sheaves) - 3 axis	200	200	200
Roosted sheave (3 lines x 18" sheaves) - 2 axis	500	500	500
Headblock (4 sheaves for 2 lines)	1,200	1,400	1,490
Headblock (6 sheaves for 3 lines)	1,330	1,530	1,620
Headblock with auger bracket (2 lines plus auger line)	1,750	2,000	-
Side auger guides (weight per foot)	33	33	33
Connecting bolts (weight per connection)	13	28	37
16' long sliding box track with clamp-plates, bolts, nuts	-	1,075	1,423
Sliding boom point box	-	897	1,115
Lifting box with 3 sheaves	-	448	616
Spotter sliding box	-	361	438

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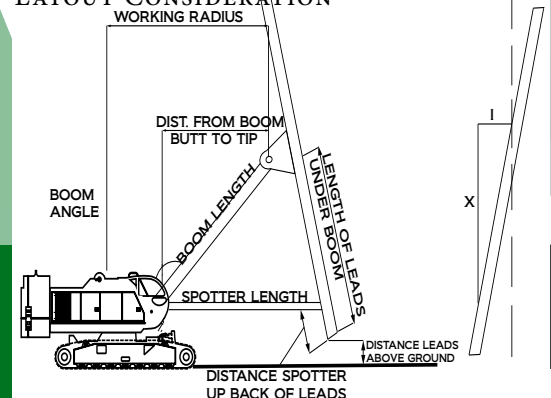
PILE GATE WEIGHT (LBS)	26 in	32 in
Pile gate arms without rollers	800	1,000
Rollers for 12" pile - set of 8	280	-
Rollers for 14" pile - set of 8	240	-
Rollers for 16" pile - set of 8	200	320
Rollers for 18" pile - set of 8	160	280
Rollers for 20" pile - set of 8	-	240
Rollers for 22" pile - set of 8	-	200
Rollers for 24" pile - set of 8	-	160

ICE® sells and rents a full line of standard pile hammers, leads and accessories to meet a wide variety of job requirements. In addition, ICE® engineers and production team are fully qualified to design and build special leads & accessories to meet unique and difficult job specifications.

An efficient, productive lead set-up is key to a profitable pile driving operation. Experienced ICE® team members are available to insure that the proper components are provided to achieve the optimum arrangement for each job.



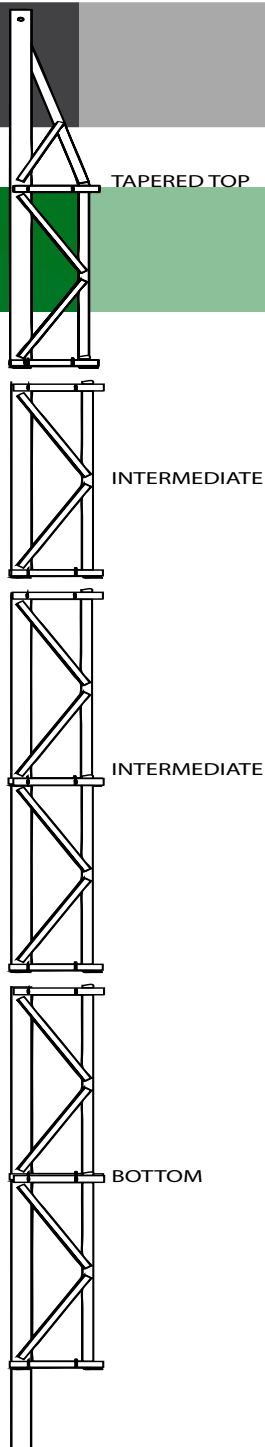
LAYOUT CONSIDERATION



ICE[®] PILE DRIVING PIN-CONNECTED SWINGING LEADS

Swinging leads are hung from the crane boom by a crane line. The bottom of the leads is held in position by stabbing points. The crane line and boom are positioned to hold the pile plumb or at the desired batter.

Swinging leads are the lightest, simplest, and least expensive. Precise alignment of the crane and pile is not required. It is possible to drive in a hole or over the edge of an excavation. However, swinging leads require a three-line crane (leads, hammer & pile). And precise positioning of the leads is slower and more difficult.



SWINGING LEADS COMPONENTS

ICE swinging leads are assembled from three basic components—a top section, a bottom section, and intermediate sections.

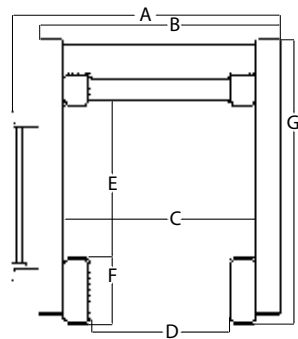
The tapered top section is used at the top of swinging leads. The taper at the back of the leads provides the required clearance for the crane boom. A bail attachment is a standard part of the tapered top section and it accepts a standard shackle. The top section has a full-length ladder (except for the top eight feet).

The bottom section is used at the bottom of the swinging leads. Four-foot stabbing points hold the leads in position during driving. The bottom section has a full length ladder.

Multiple intermediate sections are used with the above sections to provide various lengths of leads. Intermediate sections have full length ladders.



ICE[®] PILE DRIVING PIN-CONNECTED SWINGING LEADS



	26 in.	32 in.
A	45.5	52.5
B	41.5	48.5
C	34.5	40.5
D	26.5	32.5
E	20.8	31
F	8	8
G	36.1	48.6



DESCRIPTION & WEIGHT (LBS) BY LEADS SIZE	26 in	32 in
20' Top Section with lifting bail assembly	2,450	2,475
11' Intermediate section	1,750	1,770
20' Intermediate section	2,850	2,885
38' Intermediate section	5,260	5,320
20' Stab point bottom section	2,450	2,475
Lifting angles (pair, pin-on)	550	575
Connecting pins (weight per connection)	18	18

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ICE® HEAVY-DUTY SPOTTER MODEL 160 HD WITH MODEL 55T POWER UNIT



ICE MODEL 160 HD SPOTTER SPECIFICATIONS DESIGNED FOR FORWARD SEATED CABS			
EXTENDED LENGTH	36.2 FT	11.03 M	
RETRACTED LENGTH	16.2 FT	4.93	M
MANUAL EXTENSION	- FT	-M	
HYDRAULC EXTENSION	20 FT	6M	
SIDE SHIFT, EXTENDED	18.2 FT	5.5 M	
SIDE SHIFT, RETRACTED	8.2 FT	2.5 M	
EXTEND FORCE, EXTENDED	16,592 LBS	7526 KG	
EXTEND FORCE, RETRACTED	39,270 LBS	17813 KG	
RETRACT FORCE	14,137 LBS	6413 KG	
SIDE FORCE, EXTENDED	7,050 LBS	3198 KG	
SIDE FORCE, RETRACTED	15,400 LBS	6985 KG	
OPTIONAL FRONT END ROTATOR	YES	YES	
ROTATION ANGLE, EACH SIDE	30°	30°	
MAXIMUM TORQUE	160000 FT-LBS	288106 KG-M	
WEIGHT	6500 LBS	2948 KG	
HYDRAULIC PRESSURE	2000 PSI	137.93 BAR	
HYDRAULIC FLOW	10-20 GPM	40-75 LPM	

ICE SPOTTERS ARE USED TO ENABLE THE PRECISE INSTALLATION OF PILE AND BECOME A NECESSITY WHEN INSTALLING ON A SEVERE OR COMPOUND BATTER OR HIGH TORQUE CFA DRILLING.

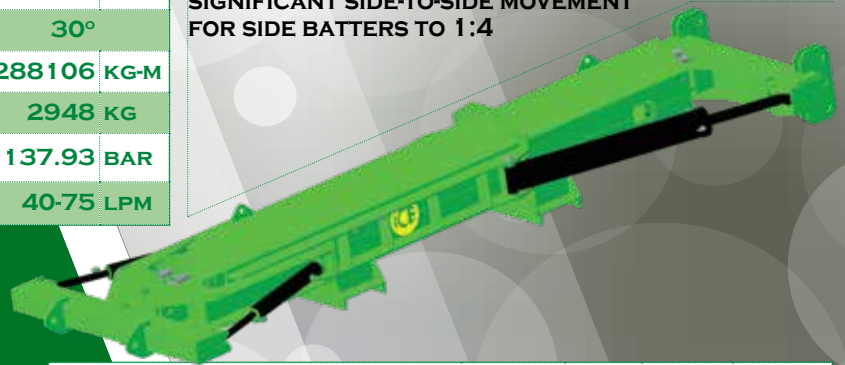
MODEL 160 HD IS DESIGNED FOR THE FORWARD SEATED CRANE CABS.

CONFIGURED ONSIGHT FOR EITHER THE RIGHT OR LEFT SIDE, MAKING THE OPERATOR COMFORTABLE.

ENGINEERED AND FABRICATED TO PROVIDE MAXIMUM STRENGTH-TO-WEIGHT RATIO FOR SUPERIOR PILE DRIVING PERFORMANCE.

HEAVY-DUTY HYDRAULIC LEAD ROTATORS (OPTIONAL) PROVIDE PRECISE PILE POSITIONING FOR COMPOUND BATTER PILES.

REAR PIVOT DESIGN (ON SPECIFIC MODELS) PROVIDES SIGNIFICANT SIDE-TO-SIDE MOVEMENT FOR SIDE BATTERS TO 1:4



ICE MODEL 55T POWER UNIT		
ENGINE	CATERPILLAR C2.2	
EMISSION RATING	TIER 4	STAGE V
POWER	49 HP	36.4 kW
OPERATING SPEED	2800 RPM	2800 RPM
MAXIMUM PRESSURE	3000 PSI	190 BAR
FLOW (NO LOAD)	22 GPM	135 LPM
WEIGHT W/ FULL FLUID & 1/2 FUEL	2750 LBS	1250 KG
LENGTH	60 IN	1525 MM
WIDTH	44 IN	1120 MM
HEIGHT	50 IN	1280 MM
HYDRAULIC OIL CAPACITY	40 GAL	150 LITERS
FUEL CAPACITY	17 GAL	64 LITERS

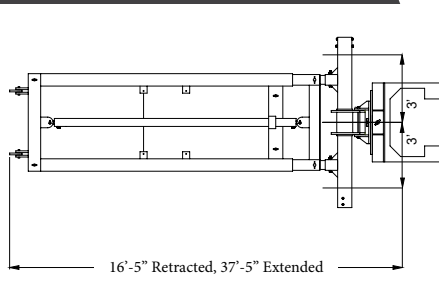


INTERNATIONAL CONSTRUCTION EQUIPMENT, INC
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ICE® HD SPOTTERS

101 - 155 - 225

WITH MODEL 35, 55 & 55T POWER UNITS

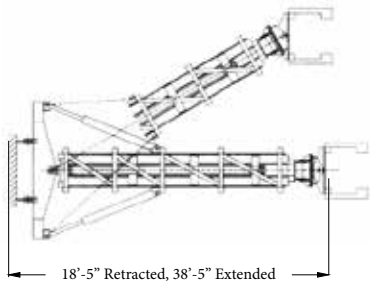


ICE® MODEL 101 SPOTTER

THE ICE® MODEL 101 LIGHT-DUTY, HYDRAULIC LEAD SPOTTER PROVIDES 21 FT (10' HYDRAULIC AND 11' MANUAL) OF FORE-AFT MOVEMENT FOR BATTERS UP TO 1:3 PLUS 6 FT OF SIDE-TO-SIDE MOVEMENT (3' EACH WAY FROM CENTER) FOR PLUMBING. STANDARD ITEMS INCLUDE REAR, UNIVERSAL CRANE PADEYES WITH PINS, FRONT LEAD CONNECTOR PLATE, TWO-SPOOL HYDRAULIC VALVE, AND 15' HYDRAULIC HOSES CONNECTING SPOTTER TO VALVE.

TOTAL WEIGHT = 3,000 LBS (1361 KG).

HYDRAULIC REQUIREMENTS ARE 10 TO 20 GPM AT 1,500 PSI.

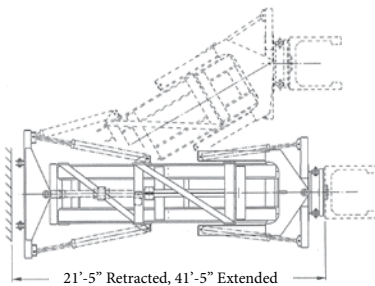


ICE® MODEL 155 SPOTTER

THE ICE® MODEL 155 MEDIUM-DUTY, HYDRAULIC LEAD SPOTTER PROVIDES 17 FT OF HYDRAULIC FORE-AFT MOVEMENT FOR BATTERS UP TO 1:3 PLUS 30° SIDE-TO-SIDE MOVEMENT (EACH WAY FROM CENTER) FOR BATTERS UP TO 1:4. STANDARD ITEMS INCLUDE REAR, UNIVERSAL CRANE PADEYES WITH PINS, FRONT LEAD CONNECTOR ANGLES, TWO-SPOOL HYDRAULIC VALVE, AND 15' HYDRAULIC HOSES CONNECTING SPOTTER TO VALVE. OPTIONAL ITEMS INCLUDE A 30 DEGREE (EACH WAY FROM CENTER) FRONT AND LEAD ROTATOR.

TOTAL WEIGHT = 6,000 LBS (2722KG).

HYDRAULIC REQUIREMENTS ARE 10 TO 20 GPM AT 1,500 PSI.



ICE® MODEL 225 SPOTTER

THE ICE® MODEL 225 SUPER-HEAVY-DUTY, HYDRAULIC LEAD SPOTTER PROVIDES 20 FT OF HYDRAULIC FORE-AFT MOVEMENT FOR BATTERS UP TO 1:3 PLUS 35° SIDE-TO-SIDE MOVEMENT (EACH WAY FROM CENTER) FOR BATTERS UP TO 1:3 PLUS 35° (EACH WAY FROM CENTER) LEAD ROTATION. STANDARD ITEMS INCLUDE REAR, UNIVERSAL CRANE PADEYES WITH PINS, FRONT LEAD CONNECTOR BOX, THREE-SPOOL HYDRAULIC VALVE, AND 15' HYDRAULIC HOSES CONNECTING SPOTTER TO VALVE.

TOTAL WEIGHT = 10,000 LBS (4536 KG).

HYDRAULIC REQUIREMENTS ARE 10 TO 20 GPM AT 2,500 PSI.

ICE MODEL 35 POWER UNIT		
ENGINE	CATERPILLAR C1.5	
EMISSION RATING	TIER 3	STAGE 3A
POWER	33 HP	24.4 kW
OPERATING SPEED	2800 RPM	2800 RPM
MAXIMUM PRESSURE	3000 PSI	210 BAR
FLOW (NO LOAD)	17 GPM	64 LPM
WEIGHT (W/ FULL FLUID & 1/2 FUEL)	1315 LBS	595 KG
LENGTH	52 IN	1320 MM
WIDTH	42 IN	1070 MM
HEIGHT	41 IN	1040 MM
HYDRAULIC OIL CAPACITY	30 GAL	110 LITERS
FUEL CAPACITY	15 GAL	56 LITERS

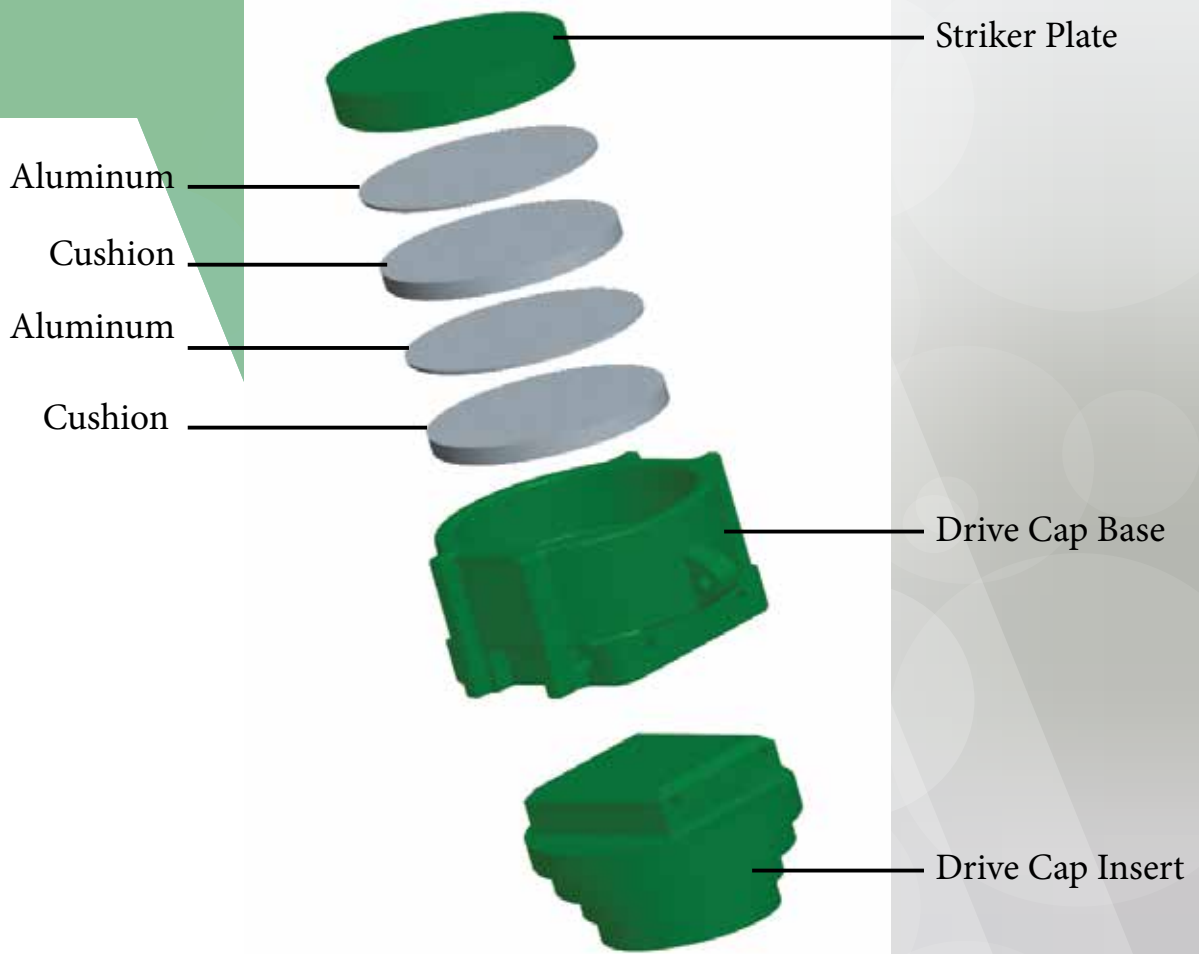
ICE MODEL 55 POWER UNIT		
ENGINE	CATERPILLAR C2.2	
EMISSION RATING	TIER 4INT.	STAGE 3A
POWER	50 HP	37.3 kW
OPERATING SPEED	2800 RPM	2800 RPM
MAXIMUM PRESSURE	3000 PSI	190 BAR
FLOW (NO LOAD)	22 GPM	85 LPM
WEIGHT (W/ FULL FLUID & 1/2 FUEL)	2750 LBS	1247 KG
LENGTH	60 IN	1525 MM
WIDTH	44 IN	1120 MM
HEIGHT	53 IN	1345 MM
HYDRAULIC OIL CAPACITY	40 GAL	150 LITERS
FUEL CAPACITY	17 GAL	64 LITERS

CAUTION: International Construction Equipment, Inc. (ICE®) claims no expertise in crane boom design and thus makes no representation as to the suitability of any crane boom to handle the imposed side and/or torsional loads resulting from batter piling operation. ICE®, therefore, advises the equipment user to consult with their crane boom manufacturer to obtain approval for these loadings prior to erecting or operating a batter pile lead configuration.

ICE® DRIVE CAP SYSTEMS

ICE® drive cap system provides flexibility & cost savings for the contractor who drives various types/ sizes of piles or owns different sizes of pile hammers.

ICE® drive caps may be used with ICE® diesel & hydraulic impact hammers and many other manufacturers' hammers.



The ICE® drive cap system includes the following four components:

- 1) Drive cap base which holds striker plate and cushion material in the top
- 2) Striker plate for single-acting diesels or striker block for hydraulic impact hammers
- 3) Cushion material - either nylon / aluminum or micarta / aluminum
- 4) Drive cap inserts for specific types of piles


Single piece drive caps are also available for larger hammers and piles.





ICE® DRIVE CAP SYSTEM

DRIVE CAP BASES & INSERTS


DRIVE CAP BASES

	DCB-20 700294		DCB-1 700005		DCB-1HD 700245		DCB-2HD 700236		DCB-3HD 700234		
	8" x 20" Leads		8" x 26" Leads		8" x 26" Leads		8" x 32" Leads		8" x 36" Leads		
	I-8, I-12, I-19 30S, 32S, 42S		I-8, I-12, I-19 30S, 32S, 42S		I-12, I-19, I-30 60S, 80S 115, IP2, IP3, IP4		I-36, I-46, I-62 100S, 120S, 205S 160, 220, IP5, IP7		I-80, I-100 275		
	BASE	DCB-20	760 lbs	DCB-1	1065 lbs	DCB-1HD	1245 lbs	DCB-2HD	1670 lbs	DCB-3HD	2340 lbs
	STRIKER	4" x 16.5"	250 lbs	4" x 22.5"	460 lbs	4" x 22 1/2"	460 lbs	6" x 25"	845 lbs	8" x 30"	1410 lbs
ALUMINUM	1/2" x 16.5"	11 lbs	1/2" x 22.5"	20 lbs	1/2" x 22 1/2" (2)	40 lbs	1/2" x 25" (2)	50 lbs	1/2" x 30" (2)	72 lbs	
CUSHION	2" x 16.5"	19 lbs	2" x 22.5"	35 lbs	2" x 22 1/2" (2)	70 lbs	2" x 25" (2)	84 lbs	2" x 30" (2)	120 lbs	
COMBINED WEIGHT	1040 lbs		1580 lbs		1815 lbs		2649 lbs		3942 lbs		

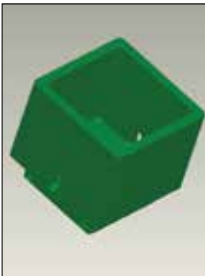
INSERTS FOR H-BEAMS

	DCH-1	700032	780 lbs	10", 12" & 14" H-Beams 12" Pipe PS28 & PS32 sheet piling
	DCH-14	700358	955 lbs	12" & 14" H-Beams either way
	DCH-18	700369	1405 lbs	16" & 18" H-Beams either way
	DCH-2	700193	1010 lbs	14" H-Beams with 360° rotation

INSERTS FOR PIPE PILES

	DCP-16	700035	615 lbs	Pipe and monotube to 16"
	DCP-24	700037	1260 lbs	18" - 24" Pipe
	DCP-30	700040	2530 lbs	24", 26" & 30" Pipe

INSERTS FOR CONCRETE PILES

	DCC-10	700020	545 lbs	10" Square, round or octagonal concrete 10" H-Beams
	DCC-12	700021	725 lbs	12" Square, round or octagonal concrete 12" H-Beams 10" Hexagonal concrete
	DCC-14	700022	1080 lbs	14" Square, round or octagonal concrete 14" H-Beams 12" Hexagonal concrete
	DCC-16	700023	1260 lbs	16" Square, round or octagonal concrete 14" Hexagonal concrete
	DCC-18	700024	1415 lbs	18" Square, round or octagonal concrete 16" Hexagonal concrete
	DCC-20	700025	1590 lbs	20" Square, round or octagonal concrete 18" Hexagonal concrete
	DCC-24	700026	1775 lbs	24" Square, round or octagonal concrete 20" Hexagonal concrete



ICE® DRIVE CAP SYSTEM

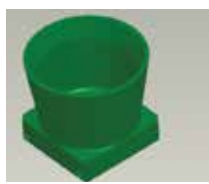
DRIVE CAP BASES & INSERTS

INSERTS FOR SHEET PILES



DCS-1	700029	1165 lbs	12" Deep Z-sheet piles	8" x 26" Leads
DCS-2	700030	1130 lbs	Flat sheet piles	8" x 26" Leads
DCS-3	700031	1870 lbs	14" Deep Z-sheet piles	8" x 32" Leads
DCS-4	700185	1280 lbs	16" Deep Z-sheet piles	8" x 26" Leads
DCS-5	700186	2365 lbs	18" Deep Z-sheet piles	8" x 32" Leads
DCA-1		2600 lbs	ARBED Beam & sheet pile wall, wide-flange beams	8" x 26" Leads

INSERTS FOR TIMBER PILES



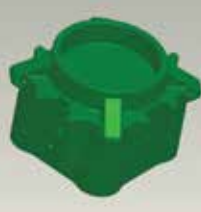
DCT-1	700042	700 lbs	Timber piles to 16" 10" Square concrete 14" Round concrete 12" Pipe
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ICE[®] DRIVE CAP SYSTEM


DRIVE CAPS

DRIVE CAPS FOR CONCRETE



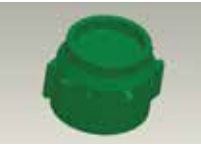
Cap	Item	Application	Leads	Cushion	Striker	Cap Weight
DHC-24	700044	24" Concrete piles	8" x 32" 8" x 36"	1/2"x25" AL (2) 2"x25" Nylon (2)	6" x 25"	4,600 lbs
DHC-24HD	700368		8" x 32" 8" x 36"		8" x 25"	5,635 lbs
DHC-30	700075	30" Concrete piles	8" x 36"	1/2"x30" AL (2) 2"x30" Nylon (2)	8" x 30"	4,485 lbs
DHC-30HD	700122		8" x 36" 8" x 42"		8" x 30"	5,870 lbs
DHC-36HD	700343	36" Concrete piles	8" x 42"		8" x 30"	7,450 lbs

DRIVE CAPS FOR PIPE



Cap	Item	Application	Leads	Cushion	Striker	Cap Weight
DHP-42	700252	20" - 39" Pipe piles	8" x 42"	1/2" x 30" AL (2) 2" x 30" Nylon (2)	8" x 30"	5,200 lbs
DHP-48	700395	24, 30, 36, 42, 48" Pipe piles	8" x 48" 8" x 54"	1/2 x 30 AL (3) 1 x 30 Micarta (3)	8" x 30"	11,570 lbs
DHP-66	700375	36, 42, 54, 60, 66" Pipe piles	66" x 8" 66" x 12"	1/2 x 37 AL (3) 1 x 37 Micarta (3)	12" x 37"	26,600 lbs

DRIVE CAPS FOR CONCRETE CYLINDER PILES



Cap	Item	Application	Leads	Cushion	Striker	Cap Weight
DHCC-36	700266	36" Cylinder piles	8" x 42"	1/2"x30" AL (2) 2"x30" Nylon (2)	8" x 30"	6,480 lbs
DHCC-54	700377	54' Diam. x 6" wall max concrete cylinder piles	66" x 8"	1/2 x 27 AL (3) 1 x 27 Micarta (3)	12" x 27"	13,161 lbs



Constant improvement and engineering progress make it necessary that ICE reserves the right to make specification changes without notice. Please contact ICE for latest available information. ©International Construction Equipment, Inc. All rights reserved. January 2020.