

# THE MULTI-PURPOSE ABI RIG

VIBRATING



IMPACTING



DRILLING



**HAMMER&STEEL**



PRESSING



## FOR FOUNDATIONS & SHORING

# ABI - THE MANUFACTURER



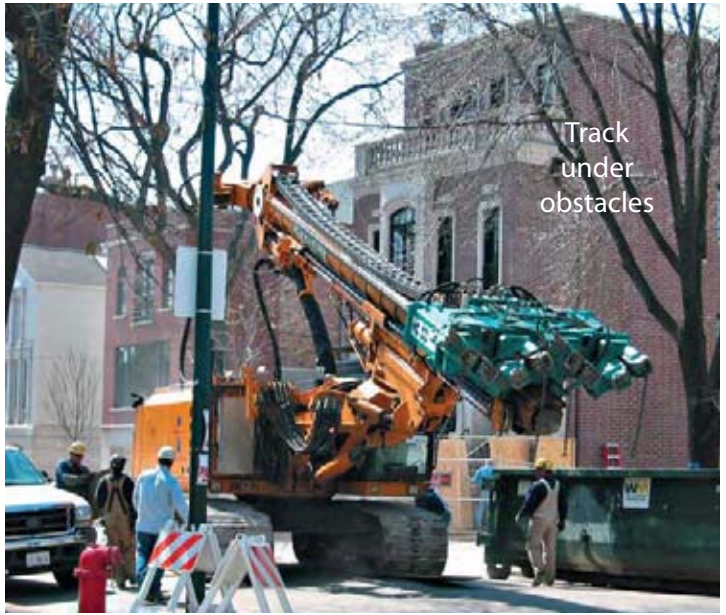
ABI Germany has manufactured over 1800 of its unique Mobilram rigs over the last thirty-five years.

## MOBILRAM MAST

Mast crowd and pullback for all applications including drilling, vibrating & pressing piles.  
Self-leveling mast with one touch of a button.



Telescopic mast



Track under obstacles



180 degree slewing of the mast

# RAPID CHANGING DEVICE



The docking system allows swapping of attachments within 5 minutes

## COMBINED WITH CFA & KNUCKLE FOR HIGH PRODUCTION DRILLING & VIBRATING



**Pre-drilling**

### HIGH PRODUCTION DUE TO:

#### FAST DRILLING:

CFA drilling average = 1500 ft/8hr with down crowd and long strokes

#### FAST AUGER HANDLING:

Knuckle device allows quick handling of an auger



**Vibrating Beams**

### HIGH PRODUCTION DUE TO:

#### FAST DRIVING:

Hard soil (60-100 blows) turns soft with pre-drilling = less time vibrating, less vibration power needed

#### FAST SWAPPING:

Change attachments in under 5 minutes

# JOB SITE HANDLING & MANAGEMENT

Handling of piles is safer, faster and easier than ever before.



1

Chains on the hammer lift the pile.



2

The attachment lifts the pile.



3

The jaws lock the pile to the rig.



4

The pile is locked and is easy to handle at waist level.

Operating either side of the tracks with minimal space



The mast rotates 180 degrees around its own axis



# VARIABLE MOMENT & SPEED HAMMER



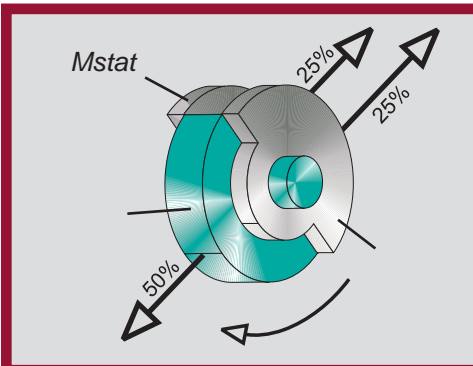
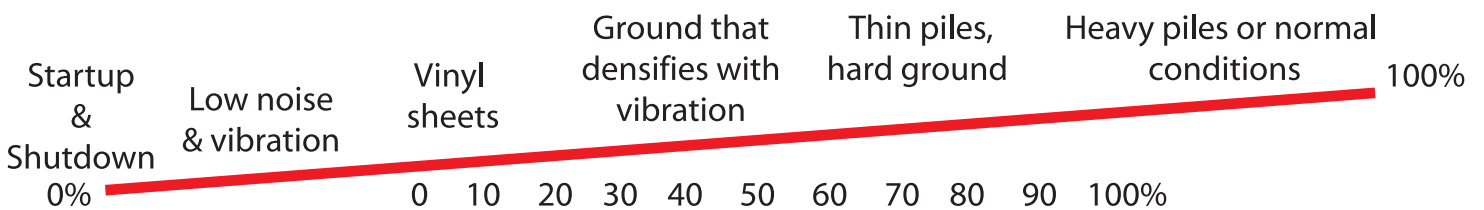
As close as it gets



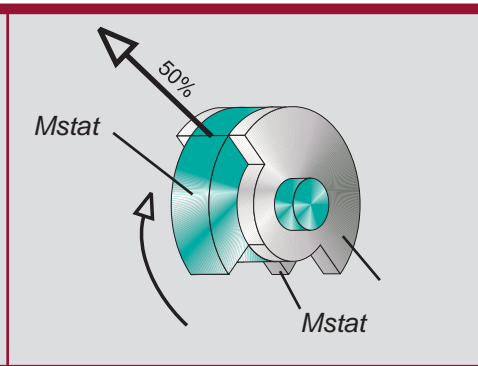
30" interlock to structure



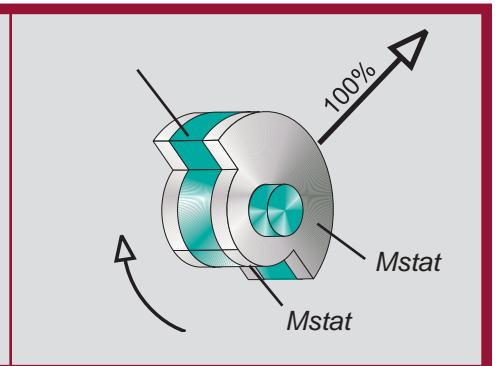
- Vibration free start up/shutdown
- High frequency (3000 rpm)
- Narrow, compact design
- Hammer adjusts power to most ground conditions
- Controls power to minimize vibrations to surroundings



0% static moment, no vibration, 100% RPM, no centrifugal force



50% static moment, moderate vibration, 100% RPM, 1/2 the centrifugal force.



100% static moment, max. vibration, 100% RPM, full centrifugal force.

# VIBRATION APPLICATIONS



S H E E T S



B E A M S



V E R T I C A L  
T I E D O W N S



S T O N E  
C O L U M N S



C A S I N G

# DRILLING APPLICATIONS



DUAL ROTARY  
HEAD FOR  
SECANT PILE



PART  
DISPLACEMENT



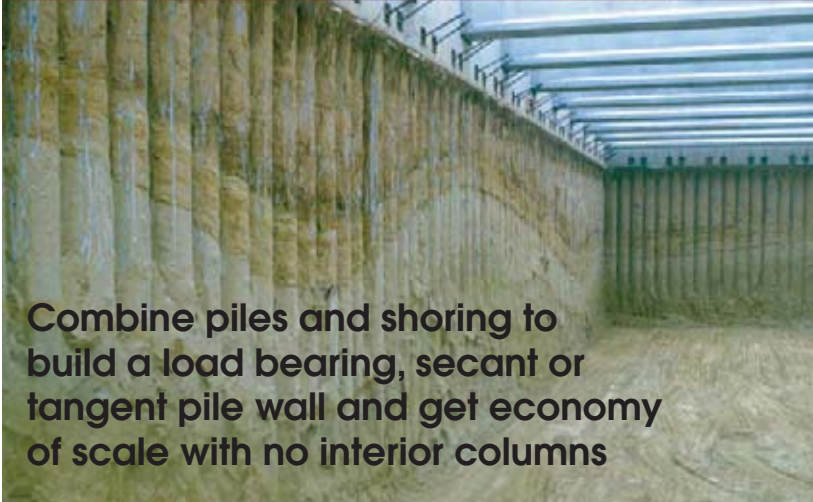
AUGER  
CAST



SOIL  
MIXING

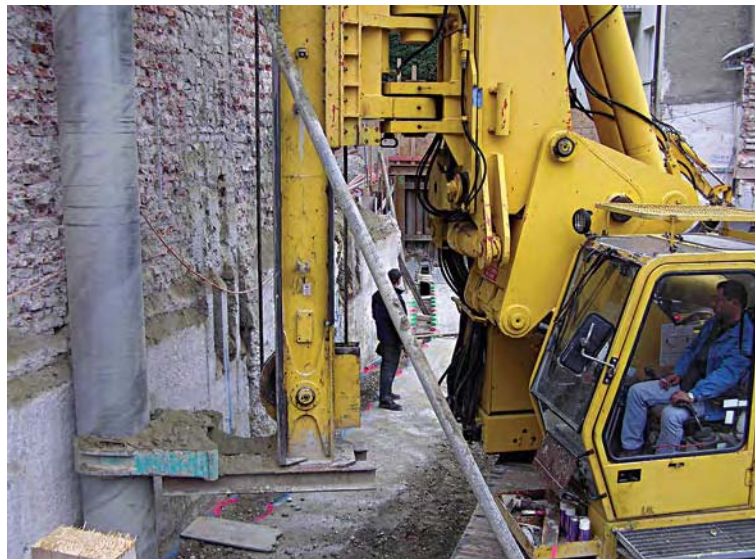


# DUAL ROTARY HEAD



Combine piles and shoring to build a load bearing, secant or tangent pile wall and get economy of scale with no interior columns

Casing and auger rotate in opposite directions drilling very straight, a few inches away from the adjacent structure



# PRESSING SHEETS



Press 4 sheets at a time and get high productivity

Low noise

Press sheets near structures

Vibration free shoring

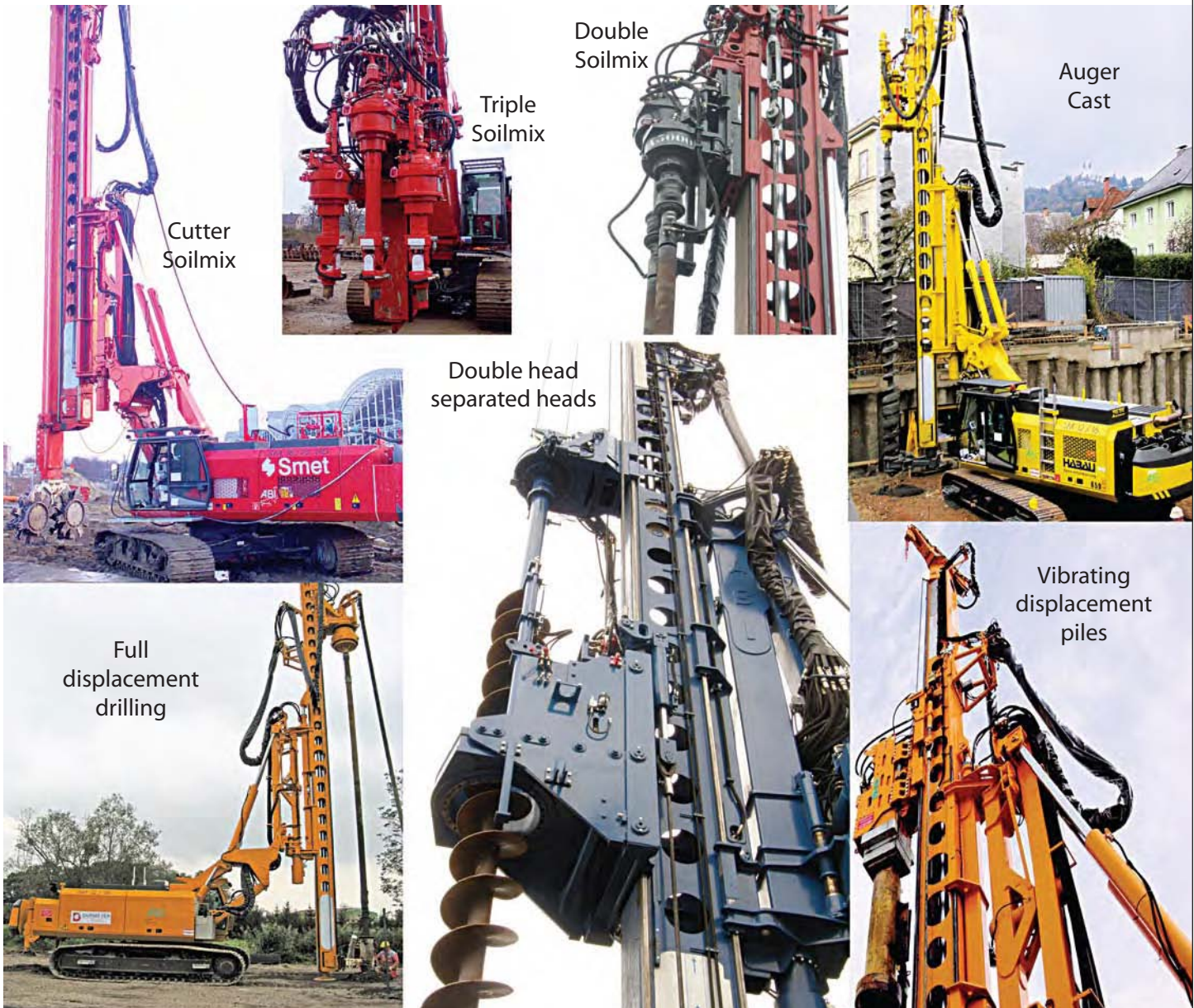


# SINGLE MAST (SM) MOBILRAM


DESCRIPTION		SM 18/24SD	SM 18/22HD	SM 12/16HD	SM 11/14V
Max overall height	ft	97	91	68	63
Min overall height	ft	79	79	55	52
Max stroke	ft	78	72	52	41
Max pulling force**	lbs	110,000	80,000	74,800	44,000
Max torque	ft. lbs	190,000	190,000	110,500	73,700
Max pile & attachment	lbs	55,000	33,000	26,400	22,000
Base Machine		SR 50 T	SR 50 T	SR 35 T	SR 25 T
CAT engine, Tier 3	Model/Hp	C18/700	C18/700	C18/639	C9/354
Rig Weight min	lbs	144,000*	150,000	100,600	93,700
Rig Weight max (no attachments)	lbs	212,000	182,000	127,000	114,000
Rig Length	ft	80	80	57	54
Rig Width	ft	11.2	11.2	10.5	10.5
Rig Height	ft	12.8/13-11.3*	12.5	11.35	11.3

\*removable tracks \*\*mast planted on the ground

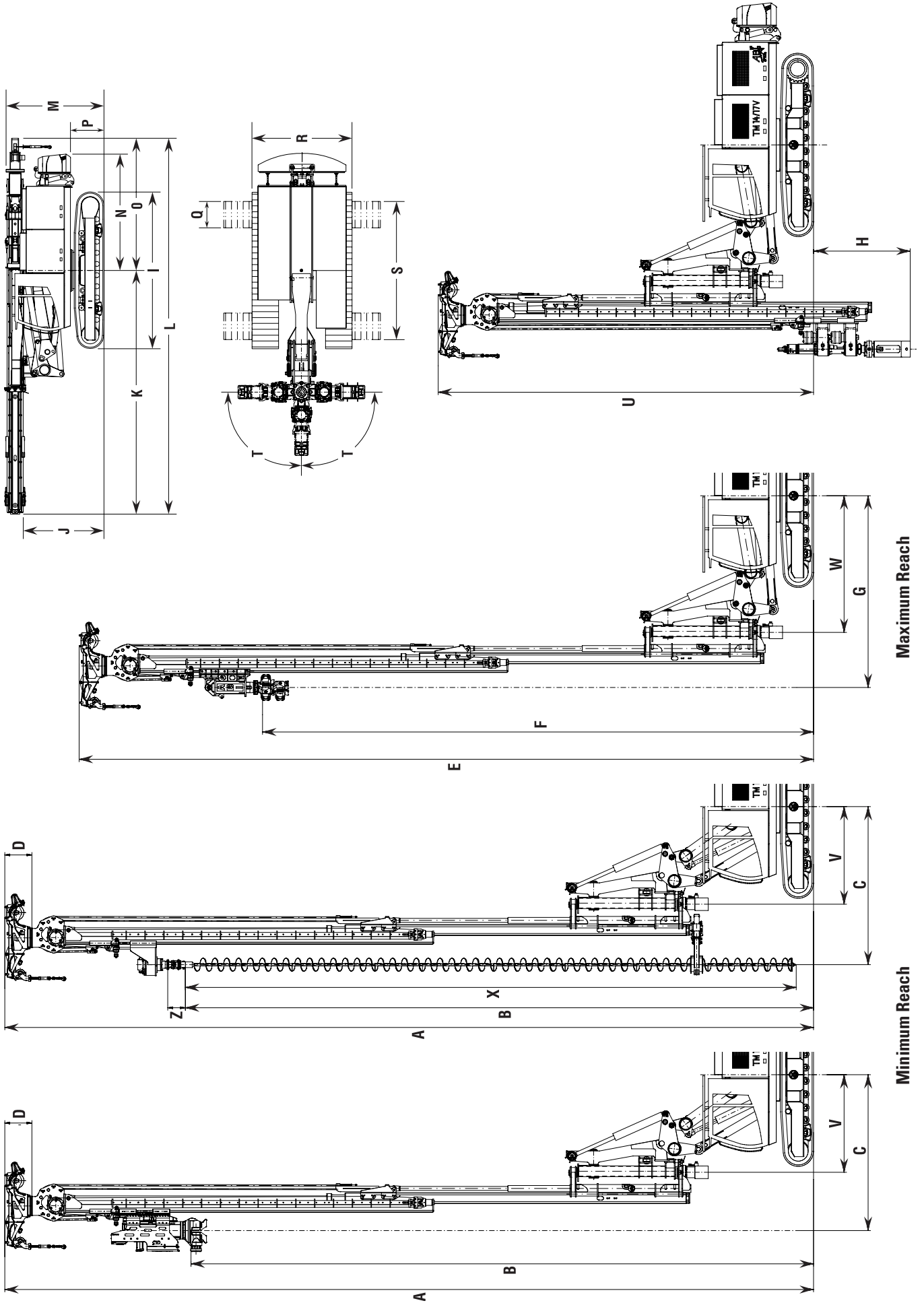
## MORE PULLING FORCE, MORE TORQUE, MORE PILE LOAD, LESS FLEX



# TELESCOPIC MAST (TM) MOBILRAM

Rig Dimension in feet		TM 20/25	TM 18/22HD	TM 18/22B	TM 16/20B	TM 14/17V	TM 13/16	TM 11/14
<b>Min reach</b>								
Overall height	A	103.93	92.72	91.83	85.48	73.9	66.78	61
Max stroke vibro hammer	B	86.22	72.85	71.95	65.60	56.89	52.49	45.9
Max stroke drill	B	87.41	72.39	71.39	66.50	57.4	52.85	47.06
Max stroke double head	B	81.56	71.00	70.01	63.00	53.74	49.31	n/a
Max stroke press	B	86.99	72.10	71.26	63.07	57.13	n/a	n/a
Center rig to center vibro	C	15.1	16.06	16.02	15.86	14.25	13.4	14.33
Center rig to center drill	C	15.83	16.10	16.09	16.10	14.45	13.51	14.19
Center rig to center double head	C	15.99	16.30	16.30	16.30	15.09	14.17	n/a
Center rig to center press	C	14.87	15.15	15.15	15.15	15.09	n/a	n/a
Winch height	D	2.24	2.48	2.47	2.48	2.47	2.47	2.47
Center rig to center mast slewing	V	8.9	10.00	13.6	9.77	8.92	8.92	9.59
Max Auger Length	X	83	68	68	63	55	51	45
Knuckle Joint Length	Z	special	special	2.5	2.01	1.73	1.73	1.73
<b>Max Reach</b>								
Overall height	E	102.42	91.21	83.80	77.46	67.11	56.93	52.82
Max stroke vibro hammer	F	84.71	71.34	63.94	57.58	50.10	42.65	38.48
Max stroke drill	F	85.90	63.40	63.37	58.00	50.60	43.01	38.87
Max stroke double head	F	80.05	62.00	61.99	54.70	46.94	39.46	n/a
Max stroke press	F	85.48	63.28	63.23	55.05	50.34	n/a	n/a
Center rig to center vibro	G	18.53	18.70	19.86	19.70	17.81	18.99	19.12
Center rig to center drill	G	19.25	18.80	19.93	19.85	18.02	18.86	18.98
Center rig to center double head	G	19.42	19.14	20.14	19.23	18.66	19.52	n/a
Center rig to center press	G	18.3	18.50	18.99	19.07	17.53	n/a	n/a
Center rig to center mast slewing	W	12.33	12.65	9.76	13.61	12.50	14.27	14.38
<b>Attachment's Lowest Position</b>								
Height below grade vibro	H	-0.59	-0.84	-8.23	-8.04	-5.67	-9.87	-7.44
Height above grade drill	H	0.60	-0.30	-8.81	-8.50	-5.16	-9.48	-7.05
Height below grade double head	H	-5.24	-5.00	-10.18	-10.00	-8.82	-13.02	n/a
Height below grade press	H	-0.18	0.10	-10.68	-10.55	-5.43	n/a	n/a
Lowest mast height	U	63.05	48.69	41.15	47.39	34.30	25.86	25.75
<b>Transport Dimensions</b>								
Track length	I	19.75	18.79	17.46	17.47	16.76	15.41	15.42
Height below mast	J	9.49	9.51	8.72	8.73	8.41	8.30	9.08
Rig center to mast front	K	33.84	28.48	26.62	28.02	22.24	29.90	26.90
Overall length	L	64.43	50.03	49.86	48.72	41.01	39.37	38.56
Overall height	M	12.63	12.34	11.48	11.48	11.15	11.15	11.31
Center rig to rear counterweight	N	15.46	14.86	13.37	13.30	12.99	12.46	11.66
Center rig to rear mast	O	30.59	21.56	23.24	20.70	18.76	less than N	less than N
Ground clearance	P	4.57	4.27	3.74	3.76	3.39	3.60	4.03
Track shoe width standard	Q	2.95	2.95	2.95	2.95	2.95	2.95	2.29
Track width transport	R	11.15	11.15	11.15	11.15	11.15	10.82	10.17
Track width	S	15.74	15.09	16.07	15.42	13.78	10.82	10.17
Mast slewing (Degrees)	T	90	90	90	90	93	100	100
Transport weight	lbs	198,000	162,360	148,000	146,080	113,000	108,000	103,000
Transport weight without counterweight	lbs	164,120	128,480	121,600	119,240	113,080	94,800	83,000
								
<b>Other Specifications</b>								
Max crowd force	lbs	44,945	39,325	39,325	39,325	39,325	20,225	20,225
Max pulling force	lbs	66,180	88,000*	88,000*	88,000*	44,945	39,325	39,325
Max pile & attachment	lbs	33,000	26,900	17,600	17,600	17,600	13,800	10,600
Max line pull aux winch	lbs	11,235	11,235	11,235	11,235	11,235	11,235	11,235
Max variable vibro (Model / tons)		30V/160	30V/160	20V/110	20V/110	20V/110	20V/100	12V/80
Max RPM / Hz (frequency)	RPM	3000/50	3000/50	3000/50	3000/50	3000/50	3000/50	2400
Max torque single head	ft.lbs.	190,000	88,400	88,400	88,400	73,700	31,000	22,100
Max torque double head (ft lbs x 1000)		147/88	118/59	74/48	74/48	74/48	48/24	24/18
Press for Z shaped pile	tons	90	90	90	90	90	90	n/a
Diesel hammer Model		D30	D30	D30**/D19	D30**/D19	D19	n/a	n/a
Soilmixing	type	triple	triple	double	double	double	single	single
Tons torque soil mix	tons	3.5/4.2/3.5	3.5/4.2/3.5	3.5/3.5	3.5/3.5	3.5/3.5	4.2	3
Max TIER 3 CAT engine (Model/Hp)	Hp	C18/700	C18/700	C18/639	C18/639	C15/588	C15/548	C9/354

\*with hydraulic mast foot \*\*D30 only 10 ft above ground ALL SPECIFICATIONS ARE APPROXIMATE AND SUBJECT TO CHANGE, January 2009



# IMPACTING PILES



Impacting sheets, pipe & beams that have been vibrated with the same rig



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