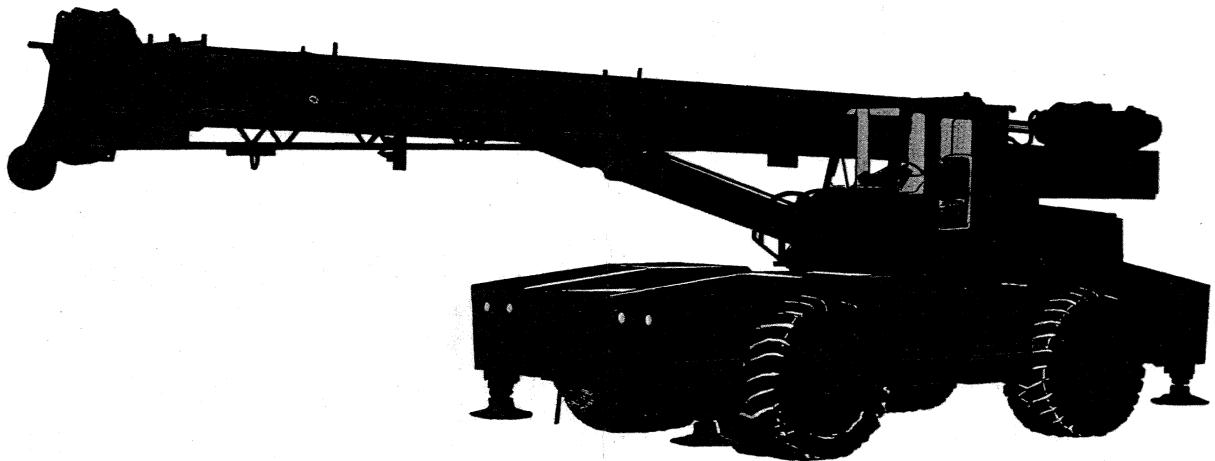


4445



Self-Propelled 45 Ton Hydraulic Crane

**Capacities
Specifications
Operating Ranges**



CONSTRUCTION EQUIPMENT CO.

BADGER MODEL 4445 CRANE LOAD CHART PSCA CLASS 10-186

80.8' BOOM

45 TON CAPACITY FULLY HYDRAULIC SELF-PROPELLED CRANE

ON OUTRIGGERS FULLY EXTENDED-360°(a)																		
RADIUS IN FEET	BOOM LENGTH												30 FT SIDEFLY PLUS 80.8 FT. BOOM	RADIUS IN FEET				
	32.3 FEET		40 FEET		48 FEET		56 FEET		64 FEET		72 FEET				80.8 FEET		110 FEET	
	4°	LBS.	4°	LBS.	4°	LBS.	4°	LBS.	4°	LBS.	4°	LBS.			4°	LBS.	4°	LBS.
10	63	90 000	68	77 100	72	75 200	75	74 100									10	
12	59	81 000	65	75 800	70	73 300	73	69 400	75	61 000							12	
15	52	69 400	60	67 000	66	65 700	69	61 100	72	55 000	74	49 500					15	
20	44	54 900	52	54 000	59	53 500	64	49 900	67	46 400	70	41 800	72	35 200			20	
25	22	41 200	42	43 100	52	42 800	58	40 300	62	39 300	66	35 300	68	30 700	74	18 500	25	
30			29	31 400	44	32 100	52	32 600	57	32 900	61	30 100	65	26 700	71	16 300	30	
35			1	18 900	34	24 000	45	24 500	52	24 800	57	25 000	61	22 900	68	14 600	35	
40					21	18 600	37	19 100	46	19 400	52	19 600	56	19 800	62	13 200	40	
45							27	15 300	39	15 500	46	15 800	52	16 000	62	12 100	45	
50							11	12 300	31	12 700	40	12 900	47	13 100	59	11 100	50	
55									21	10 400	34	10 600	42	10 800	56	10 300	55	
60											26	8 820	37	9 020	53	9 230	60	
65											14	7 310	30	7 540	50	8 240	65	
70													22	6 290	46	7 480	70	
75													9	5 190	43	6 750	75	
80															39	5 880	80	
85															35	5 070	85	
90															30	4 360	90	
95															24	3 730	95	
100															17	3 160	100	
105															2	2 600	105	

ON OUTRIGGERS FULLY EXTENDED-OVER FRONT (a)																
RADIUS IN FEET	BOOM LENGTH										30 FT SIDEFLY PLUS 80.8 FT. BOOM	RADIUS IN FEET				
	32.3 FEET		40 FEET		48 FEET		56 FEET		64 FEET				72 FEET		80.8 FEET	
	4°	LBS.	4°	LBS.	4°	LBS.	4°	LBS.	4°	LBS.	4°	LBS.	4°	LBS.	4°	LBS.
10	63	90 000	68	77 100	72	75 200	75	74 100								10
12	59	81 000	65	75 800	70	73 300	73	69 400	75	61 000						12
15	52	69 400	60	67 000	66	65 700	69	61 100	72	55 000	74	49 500				15
20	44	54 900	52	54 000	59	53 500	64	49 900	67	46 400	70	41 800	72	35 200		20
25	22	41 200	42	43 100	52	42 800	58	40 300	62	39 300	66	35 300	68	30 700	74	18 500
30			29	31 600	44	32 200	52	32 600	57	33 000	61	30 100	65	26 700	71	16 300
35			1	18 900	34	24 100	45	24 500	52	24 800	57	25 000	61	22 900	68	14 600
40					21	18 700	37	19 100	46	19 400	52	19 600	56	19 900	65	13 200
45							27	15 300	39	15 500	46	15 800	52	16 000	62	12 100
50							11	12 500	31	12 800	40	13 000	47	13 200	59	11 100
55									21	10 600	34	10 800	42	11 000	56	10 300
60											26	9 070	37	9 250	53	9 230
65											14	7 610	30	7 820	50	8 240
70													22	6 620	46	7 480
75													9	5 560	43	6 750
80															39	6 180
85															35	5 400
90															30	4 710
95															24	4 100
100															17	3 550
105															2	3 010

ON RUBBER CAPACITIES (A)					
FOR 21.0 x 25 - 24 PR TIRES (F)					
RADIUS IN FEET	STATIONARY		PICK & CARRY (B)		
	OVER FRONT	360° ROTATION	CREEP SPEED (C)	2.5 MPH	5 MPH
10	48 000	38 300	46 800	38 900	31 300
12	42 200	32 300	40 600	33 600	26 800
15	35 500	22 000	33 500	27 500	21 700
20	27 700	13 200	25 200	20 400	15 700
25	18 600	8 580	18 600	15 600	11 600
30	13 800	6 220	13 800	12 500	9 130
35	10 100	4 110	10 100	9 710	6 720
40	8 120	3 140	8 120	8 100	5 440
45	6 540	2 280	6 540	6 540	4 260
50	5 030	1 390	5 030	5 030	3 050
55	4 110		4 110	4 110	2 280

MAXIMUM ALLOWABLE BOOM LENGTH - 64 FEET

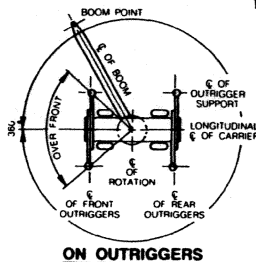
JIB CAPACITY			
30 FOOT SIDEFLY PLUS 25 FOOT JIB COMBINATION (d)			
MAIN BOOM ANGLE	0° JIB OFFSET LBS.	15° JIB OFFSET LBS.	30° JIB OFFSET LBS.
77°	8 500	7 320	4 260
70°	7 220	6 020	3 660
65°	5 780	5 180	3 360
60°	4 740	4 400	3 130
55°	3 750	3 530	2 950

WEIGHT REDUCTIONS FOR BOOM EXTENSIONS (g)	
30 FT. SIDEFLY BOOM EXTENSION	(e) STORED-650 LBS.
(e) STORED-650 LBS.	(e) ERECTED-1530 LBS.
25 FT. JIB	(e) STORED-200 LBS.
(e) STORED-200 LBS.	(e) ERECTED-1670 LBS.

(a) REFER TO AREA OF OPERATION CHART FOR DEFINED WORKING ARC.

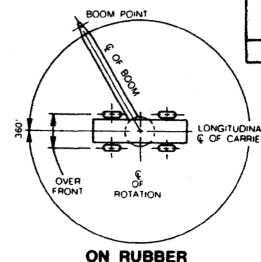
- (b) MECHANICAL HOUSE LOCK PIN MUST BE FULLY ENGAGED.
 (c) TRAVEL RESULTING IN NOT MORE THAN 200 FT. COVERED IN A 30 MINUTE PERIOD.
 (d) BOOM MUST BE FULLY EXTENDED WHEN LIFTING WITH EXTENDED POWER PIN SECTION OR WITH 30 FT. SIDEFLY.
 (e) REDUCTION IN MAIN BOOM CAPACITIES.
 (f) REFER TO TIRE INFLATION CHART.
 (g) DEDUCT 100 LBS. FROM RATED CAPACITIES FOR MACHINES EQUIPPED WITH AUXILIARY BOOM HEAD.

TACKLE REEFING MAIN WINCH	
NO. OF PARTS OF HOIST TACKLE	MAX. HOOK LOAD LBS.
1	9 000
2	18 000
3	27 000
4	36 000
5	45 000
6	54 000
7	63 000
8	72 000
9	81 000
10	90 000



ON OUTRIGGERS

AREAS OF OPERATION



ON RUBBER

BADGER MODEL 4445 CRANE LOAD CHART PCSA CLASS 10-179

105' BOOM

45 TON CAPACITY FULLY HYDRAULIC SELF-PROPELLED CRANE

ON OUTRIGGERS FULLY EXTENDED-360° (A)

RADIUS IN FEET	BOOM LENGTH								POWER PIN SECTION EXTENDED (D)	SIDEFLY PLUS 110.66 FEET 81.4 FT. BOOM	SIDEFLY PLUS 105 FT. BOOM 134.31 FEET	RADIUS IN FEET
	32.85 FEET	40 FEET	48 FEET	56 FEET	64 FEET	72 FEET	81.45 FEET					
	4° LBS.	4° LBS.	4° LBS.	4° LBS.	4° LBS.	4° LBS.	4° LBS.	4° LBS.				
10	63 90 000	68 75 200	72 73 300	75 72 200	75 60 000							12
12	59 80 000	65 75 200	70 73 300	73 67 600								15
15	53 68 300	60 66 000	66 63 700	69 59 600	72 53 700	75 48 300						20
20	41 53 900	52 52 900	59 51 200	64 48 700	67 45 300	70 40 800	72 35 200	74 21 100	74 18 500			25
25	25 40 900	42 42 100	52 42 300	58 39 800	62 38 000	66 34 200	69 30 700	71 19 900	71 16 300			30
30		29 31 100	44 31 600	52 31 900	57 31 800	61 28 900	65 26 700	68 17 800	68 14 600	72 10 000		35
35		1 17 300	34 23 400	45 23 700	52 23 900	57 24 200	61 22 900	65 15 700	65 13 200	70 9 550		40
40			21 17 900	37 18 200	46 18 400	52 18 600	57 18 900	62 13 900	63 12 100	68 8 880		45
45				27 14 300	39 14 500	46 14 700	52 14 900	59 12 300	60 11 100	65 7 850		50
50				11 11 300	31 11 600	40 11 800	48 11 900	55 10 800	57 10 300	63 7 260		55
55					21 9 300	34 9 490	43 9 650	52 9 500	53 9 230	61 6 720		60
60						26 7 650	37 7 810	45 6 300	48 7 990	58 6 110		65
65						14 6 100	23 5 040	41 5 660	47 7 150	56 5 590		70
70							11 3 920	36 4 740	39 5 070	50 4 830		75
75								31 3 940	35 4 230	47 4 530		80
80								25 3 230	30 3 500	45 4 200		85
85								18 2 600	25 2 850	41 3 570		90
90								2 1 970	18 2 260	38 3 010		95
95									6 1 710	35 2 510		100
100										31 2 050		105
105										26 1 640		110
110										21 1 261		115
115												120
120												

ON OUTRIGGERS FULLY EXTENDED-OVER FRONT (A)

RADIUS IN FEET	BOOM LENGTH								POWER PIN SECTION EXTENDED (D)	SIDEFLY PLUS 110.66 FEET 81.4 FT. BOOM	SIDEFLY PLUS 105 FT. BOOM 134.31 FEET	RADIUS IN FEET
	32.85 FEET	40 FEET	48 FEET	56 FEET	64 FEET	72 FEET	81.45 FEET					
	4° LBS.	4° LBS.	4° LBS.	4° LBS.	4° LBS.	4° LBS.	4° LBS.	4° LBS.				
10	63 90 000	68 75 200	72 73 300	75 72 200	75 60 000							10
12	59 80 000	65 75 200	70 73 300	73 67 600								12
15	53 68 300	60 66 000	66 63 700	69 59 600	72 53 700	75 48 300						15
20	41 53 900	52 52 900	59 51 200	64 48 700	67 45 300	70 40 800	72 35 200	74 21 100	74 18 500			20
25	25 40 900	42 42 100	52 42 300	58 39 800	62 38 000	66 34 200	69 30 700	71 19 900	71 16 300			25
30		29 31 100	44 31 600	52 32 200	57 31 800	61 28 900	65 26 700	68 17 800	68 14 600	72 10 000		30
35		1 17 300	34 23 400	45 23 900	52 24 100	57 24 300	61 22 900	65 15 700	65 13 200	70 9 550		35
40			21 18 100	37 18 400	46 18 600	52 18 800	57 19 000	62 13 900	63 12 100	68 8 880		40
45				27 14 600	39 14 800	46 15 000	52 15 100	59 12 300	60 11 100	65 7 850		45
50				11 11 600	31 11 900	40 12 100	48 12 200	55 10 800	57 10 300	63 7 260		50
55					21 9 680	34 9 860	43 10 000	52 9 600	53 9 230	61 6 720		55
60						26 8 070	37 8 230	45 8 500	50 8 240	58 6 110		60
65						14 6 580	31 6 770	48 7 340	47 7 480	56 5 590		65
70							23 5 550	41 6 270	43 6 430	53 5 240		70
75							11 4 480	36 5 340	39 5 500	50 4 830		75
80								31 4 540	35 4 690	47 4 530		80
85								25 3 830	30 3 980	45 4 200		85
90								18 3 200	25 3 350	41 3 920		90
95								2 2 570	18 2 780	38 3 480		95
100									6 2 240	35 2 990		100
105										31 2 540		105
110										26 2 130		110
115										21 1 760		115
120										14 1 410		120
125												125

ON RUBBER CAPACITIES (A)

FOR 21.0 x 25 - 24 PR TIRES (F)

RADIUS IN FEET	STATIONARY		PICK & CARRY (B)		
	OVER FRONT	360° ROTATION	CREEP SPEED (C)	2.5 MPH	5 MPH
10	47 500	37 800	46 000	38 200	30 500
12	41 500	31 700	39 800	32 900	26 000
15	34 800	22 200	24 400	26 700	20 900
20	26 900	13 100	18 700	19 600	14 900
25	18 500	8 350	14 900	14 700	10 700
30	13 300	5 700	11 600	11 400	8 010
35	9 500	3 530	9 500	8 560	5 570
40	7 380	2 420	7 380	6 800	4 140
45	5 670	1 470	5 670	5 250	2 840
50	4 140		4 140	3 810	1 620
55	3 130		3 130	2 770	

MAXIMUM ALLOWABLE BOOM LENGTH - 64 FEET

JIB CAPACITY

SIDEFLY PLUS
COMBINATION (D)

MAIN BOOM ANGLE	0° JIB OFFSET	15° JIB OFFSET	30° JIB OFFSET
77°	6 000	5 300	4 260
70°	4 670	4 070	3 660
65°	4 000	3 610	3 360
60°	3 580	3 310	3 130
55°	3 270	3 080	2 950

WEIGHT REDUCTIONS FOR BOOM EXTENSIONS

30 FOOT SIDEFLY BOOM EXTENSION
(e) STORED - 650 LBS.
(e) ERECTED - 1470 LBS.
25 FOOT JIB
(e) STORED - 200 LBS.
(e) ERECTED - 1500 LBS.

(A) REFER TO AREA OF
OPERATION CHART FOR
DEFINED WORKING ARC.

TACKLE REEVING MAIN WINCH

NO. OF PARTS OF HOIST TACKLE	MAX. HOOK LOAD
1	9 000
2	18 000
3	27 000
4	36 000
5	45 000
6	54 000
7	63 000
8	72 000
9	81 000
10	90 000

WARNINGS:

1. MINIMUM WORKING MAIN BOOM ANGLE FOR THE FULLY EXTENDED BOOM WITH POWER PIN EXTENDED PLUS SIDEFLY AND JIB IS 55 DEGREES. TIPPING CAN OCCUR RAPIDLY WITHOUT ADVANCE NOTICE.
 2. FOR OTHER BOOM CONFIGURATIONS, HAVING POWERED SECTIONS NOT FULLY EXTENDED, BUT WITH POWER PIN EXTENDED OR RETRACTED; WITH OR WITHOUT SIDEFLY; AN OR WITHOUT THE JIB, THE RATED LOADS ARE FOUND IN THE COLUMNS HEADED BY THE MAXIMUM LENGTH OF THEIR RESPECTIVE BOOM CONFIGURATIONS.
- THE BOOM ANGLE MUST BE USED TO DETERMINE THE PARTICULAR RATED LOAD. FOR BOOM ANGLES NOT PROVIDED, USE THE RATING OF THE NEXT LOWER BOOM ANGLE.

CAB

Fully-enclosed all steel cab with safety glass windows, removable front window, hinged skylight and sliding rear window, electric windshield wiper and washer, defroster fan, dome light, fire extinguisher, fully adjustable cushioned seat, seat belt. Propane or oil heater optional.

CONTROL

Five levers for all boom, winch, and swing movements. One foot pedal, linked to boom raise-and-lower lever. Dead-man type (except swing) are self-centering: when controls are released, machine movements stop automatically. Swing brake, with free swing. Machine leveling gauge, electric horn, mechanical house lock, emergency brake, parking brake.

Key-operated ignition switch with indicator light, starter button, foot throttle, fuel gauge, voltmeter, hour meter. Gauges for engine oil pressure, transmission oil pressure, transmission oil temperature, engine coolant temperature, air pressure. Hydraulic filter and low air warning lights.

MAIN WINCH

(Model 34) Hydraulic powered up and down.

Speed — fpm (m/min)

Wrap	Maximum Line Speed		Line Pull Lbs (kg)
	Full Load	No Load	
1	313 (95.4)	375 (114.3)	11,490 (5,212)
2	334 (101.8)	400 (121.9)	10,790 (4,894)
3	354 (107.9)	425 (129.5)	10,160 (4,609)
4	375 (114.3)	450 (137.2)	9,610 (4,359)
5	395 (120.4)	475 (144.8)	9,120 (4,137)

Optional 2-speed main winch:

High Speed — fpm (m/min)

Wrap	Maximum Line Speed		Line Pull Lbs (kg)
	Full Load	No Load	
1	492 (150)	590 (180)	7,670 (3,479)
2	526 (160)	632 (193)	7,160 (3,248)
3	562 (171)	674 (205)	6,710 (3,044)
4	596 (182)	716 (218)	6,310 (2,862)
5	632 (193)	758 (231)	5,960 (2,703)

Low Speed — fpm (m/min)

Wrap	Maximum Line Speed		Line Pull Lbs (kg)
	Full Load	No Load	
1	246 (75)	295 (90)	15,340 (6,958)
2	263 (80)	316 (96)	14,310 (6,491)
3	281 (86)	337 (103)	13,420 (6,087)
4	298 (91)	358 (109)	12,630 (5,729)
5	316 (96)	379 (116)	11,930 (5,411)

Either winch includes 450' (137 m) of 5/8" (15.9 mm) cable. Free fall optional with either main winch.

AUXILIARY WINCH (Optional)

(Model PD12) Hydraulic powered up and down. Optional free fall — consult factory.

Speed — fpm (m/min)

Wrap	Maximum Line Speed		Line Pull Lbs (kg)
	Full Load	No Load	
1	176 (54)	194 (59)	7,500 (3,402)
2	194 (59)	213 (65)	6,830 (3,098)
3	211 (64)	232 (71)	6,260 (2,839)
4	229 (70)	252 (77)	5,780 (2,622)
5	246 (75)	270 (82)	5,380 (2,440)

Optional: 450' (137 m) of 1/2" (12.7 mm) cable.

WIRE ROPE

All winch cable is preformed wire rope, 6x25 strands, right-regular lay, EIPS, steel core.

SWING

Planetary, with internal brake. Spring set, hydraulic release. Free swing or automatic brake.

Speed — 3 rpm.

ENGINE

GM 6V-53N diesel, 6 cyl ohv, 2 cycle, 197 hp (147 kw) at 2800 rpm, 318 cid (5.2L), 3,875" bore x 4.5" stroke (98 mm x 114 mm), 21:1 compression ratio, 431 ft-lbs (59.6 mkg) max torque at 1500 rpm.

Electric starter, 12-volt 65 amp alternator, 225 amp hour battery, 20-hour rate (975 cca).

Air compressor, 12 cfm (5.7 l/sec)

Fuel capacity: 130 gallons (492L)

TRANSMISSION

Six speed with rear axle disconnect. Electric three speed range and directional shift with electric over air high low shift and rear axle disconnect.

Drive	Transmission Range	Gear Shift	Maximum Speed mph (km/hr)
4-wheel	Low	1st	1.5 (2.4)
4-wheel	Low	2nd	3.1 (4.9)
4-wheel	Low	3rd	8.3 (13.3)
2-wheel	High	1st	4.3 (6.9)
2-wheel	High	2nd	8.7 (14)
2-wheel	High	3rd	21.7 (34.9)

Gradeability: NOTE: All performance data is based on standard machines, and may vary due to engine performance and optional equipment. Machine should be operated within a 30° slope limitation due to engine lubrication design.

AXLES

Ratio 22.4:1. Planetary steering. Front axle rigidly mounted to frame. Rear axle pinned for oscillation; automatic oscillation lockout, with manual override. Non-spin differential optional.

BRAKES

Four-wheel air service brakes. Drums 20.25" x 4" (514 mm x 102 mm). Spring-set emergency and parking brakes on all four wheels.

TIRES:

21.00 x 25-24-PR, 15 x 25 rim

Optional:

26.5 x 25-20-PR, 22 x 25 rim

26.5 x 25-26-PP, 22 x 25 rim

29.5 x 25-22-PR, 25 x 25 rim

29.5 x 25-28-PR, 25 x 25 rim

Spare tire, tire inflation kit

STEERING

Two independent systems. Front, hydrostatic controlled by Char-Lynn orbitrol unit. Rear, hydrostatic controlled by toggle switch on dash panel, with rear-wheel centering indicator light.

Turning radius:

Front-wheel steering: 38' (11.6m)

Four-wheel coordinated: 21'6" (6.6m)

OUTRIGGERS

Beam type, hydraulic powered 24" (61cm) diameter floats. 21' (6.4m) spread center-to-center of jacks.

Optional — 30" (76 cm) floats.

WEIGHT—Lbs (kg)	Front Axle	Rear Axle
With 80' boom	76,700 (34,785)	38,500 (17,460)
		38,200 (17,325)
With 105' boom	78,900 (35,782)	41,800 (18,957)
		37,100 (16,825)

STANDARD EQUIPMENT

Dual headlights, tail lights, brake lights, back-up lights, turn signals, parking lights; front and rear fenders, tow loops, rear view mirrors, electronic boom angle indicator, electronic back-up alarm.

OPTIONAL EQUIPMENT

Jib: 25' (7.6 m) self-storing. Can only be erected to the end of the Side Fly.

Deluxe boom angle indicator: Electronic, with adjustable limit settings and audible warning.

Anti-Two block system: Electric-hydraulic, for boom, Side Fly, or jib. Stops boom lower, boom extended, winch up movements automatically; audible and visual warning signals in cab; manual override. Also available with audible and visual warning signals only, without automatic stop.

Working lights: On front of cab and on boom. Rotating amber beacon: On top of cab.

Vandalism protection package: Padlocks for access and storage doors, fuel tank; Lexan windows; tinted safety glass.

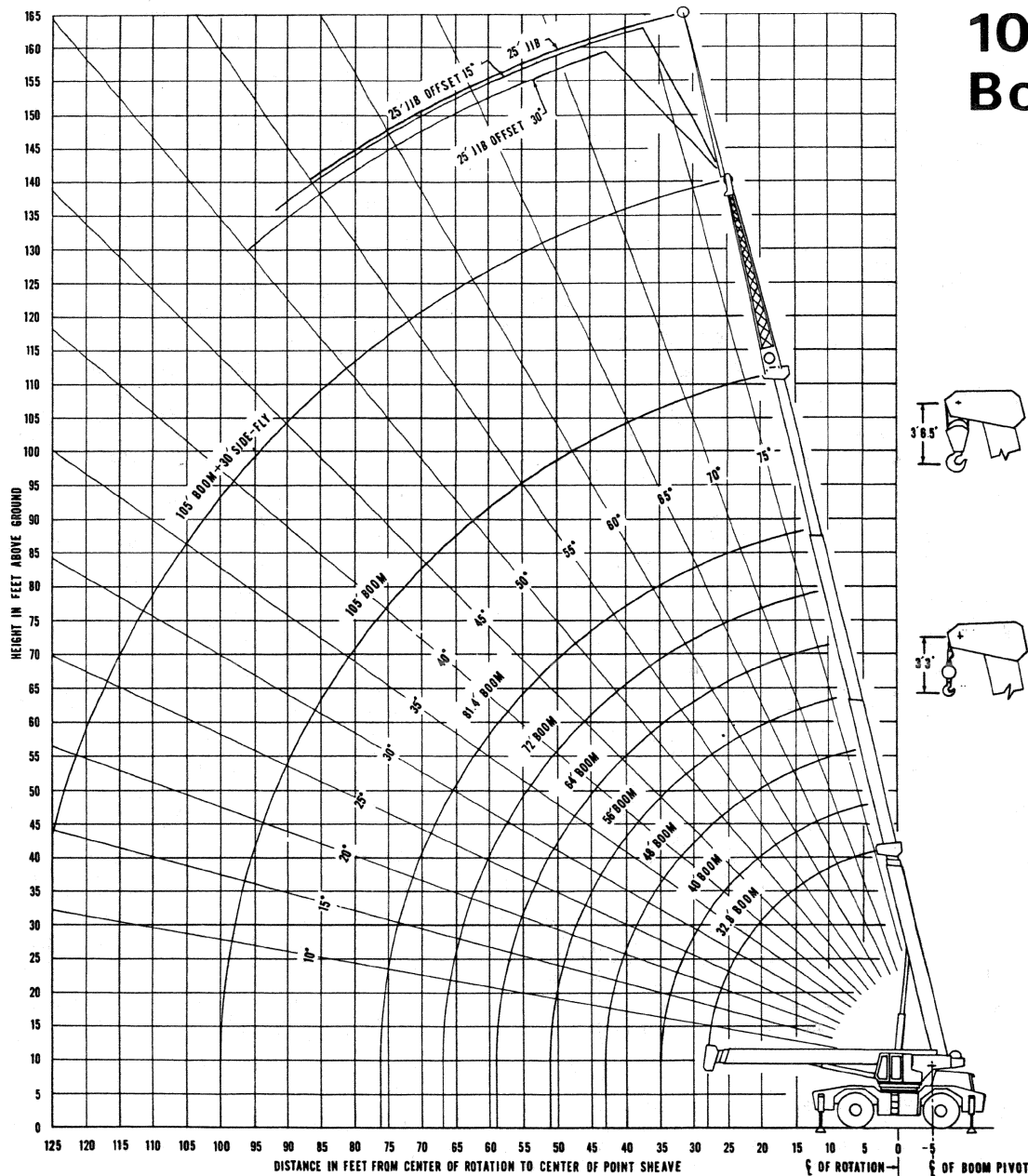
Tow winch: Mounted on front of frame, controlled from cab. Line pull 15,000 lbs. (680 kg).

Rooster sheave, 45-ton 5-sheave hook block, 15-ton single sheave hook block, headache ball with 5-ton swivel hook, headache ball with 3-ton swivel hook for auxiliary winch, drum rotation indicators for main and auxiliary winches, front and rear pintle hooks, cold-weather starting kit with extra battery, electric heating element for hydraulic reservoir.

Fluid capacities in U.S. gallons. Specifications subject to change without notice.

BADGER CONSTRUCTION EQUIPMENT CO.

105' Boom



OPERATING INSTRUCTIONS:

Radius of the load is the horizontal distance from a projection of the axis of rotation before loading, to the center of vertical hoist line or tackle with load applied.

Boom angles, which represent the unloaded boom angles, are to be used for reference only. These boom angles must be adjusted to maintain the proper load radius while the load is being picked. Load ratings in shaded areas are based on machine's hydraulic or structural competence and not of the machine's stability. Tipping capacities do not exceed 85% of tipping loads for "on outrigger" capacities and 75% of tipping loads for "on rubber" capacities as determined by tests in accordance with SAE recommended practice—"Crane Load Stability Test Code SAE J765a".

Crane load capacities are based on freely suspended loads. They are the maximum covered by the manufacturer's warranty with the machine leveled and standing on a firm supporting surface. Practical working loads depend upon supporting surface, wind, and other factors affecting stability, hazardous surroundings, experience of personnel, and proper handling; all of which must be taken into account by the operator. The weights of all auxiliary handling devices such as boom attachments, hoist block, hooks, and slings, except hoist rope, shall be considered as part of the load ratings.

All powered boom sections are synchronized to be extended equally at all times. Each section extends to a maximum distance of 24.3 feet. The maximum powered boom load which may be telescoped is limited by hydraulic pressure, boom angle, and boom capacity. It is safe to attempt to telescope any load within the stated conditions of the rating chart.

"On outriggers" capacities are based on outriggers being fully extended to a distance of 21 feet from centerline of vertical jack cylinders.

"On rubber" capacities are based on the tire as specified in the table. Machine must be on a firm and smooth, level surface.

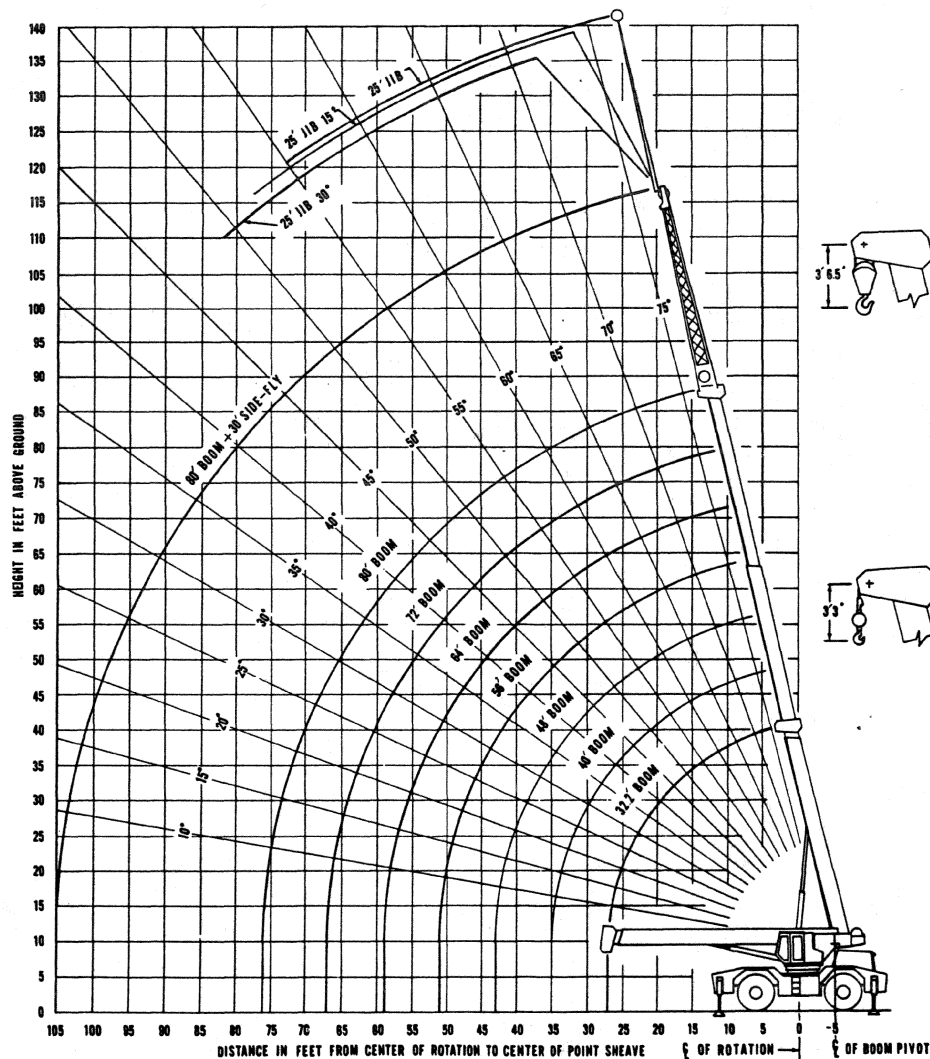
For boom lengths not shown, use load ratings for next longer boom. Positioning or operation at radii and boom lengths beyond the maximums or minimums shown, is not intended or approved.

The boom assembly shall be fully retracted and leveled when crane is out of service.

WARNINGS:

- Minimum working main boom angle for the fully extended boom plus sidefly and jib is 55 degrees. TIPPING can occur rapidly without advance notice.
- For other boom configurations, having powered sections not fully extended, but with or without sidefly; and with or without the jib, the rated loads are found in the columns headed by the maximum length of their respective boom configurations. The boom angle must be used to determine the particular rated load. For boom angles not provided, use the rating of the next lower boom angle.

80' Boom



WARNINGS:

1. Minimum working main boom angle for the fully extended boom with power pin extended plus sidely and jib is 55 degrees. **Tipping** can occur rapidly without advance notice.
2. For other boom configurations, having powered sections not fully extended, but with power pin extended or retracted; with or without sidely; and with or without the jib, the rated loads are found in the columns headed by the maximum length of their respective boom configurations. The boom angle must be used to determine the particular rated load. For boom angles not provided, use the rating of the next lower boom angle.

HYDRAULIC SYSTEM

Two 2-section tandem pumps, 162 gpm (613 L/min) at 2470 rpm, mounted on torque converter with clutch. Steering pump, 18 gpm (68 L/min).

12 double-acting cylinders:

2 boom hoist: 8" (203 mm) ID
6.0" OD x 5.0" ID (152 mm x 127 mm) rod

2 boom telescoping: 6" (152 mm) ID
5" OD x 4" ID (127 mm x 102 mm) rod

Outrigger cylinders:

4 telescoping: 2.5" ID, 1.5" rod
(64 mm x 38 mm)

4 jack: 6.5" ID, 4.5" rod
(165 mm x 114 mm)

Vane-type swing motor.

Operating pressure: 2500 psi (176 kg/cm²) max.

Pressurized reservoir.

Oil capacity: reservoir 182 gal (689 L), system 300 gal (1,136 L)

IMPORTANT INSTRUCTIONS

Radius of the load is the horizontal distance from a projection of the axis of rotation before loading, to the center of vertical hoist line or tackle with load applied.

Boom angles, which represent the unloaded boom angles, are to be used for reference only. These boom angles must be adjusted to maintain the proper load radius while the load is being picked.

Load ratings in shaded areas are based on machine's hydraulic or structural competence and not on the machine's stability.

Tipping capacities do not exceed 85% of tipping loads for "on outrigger" capacities or 75% of tipping loads for "on rubber" capacities as determined by tests in accordance with SAE recommended practice — "Crane Load Stability Test Code SAE J-765-a."

Crane load capacities are based on freely suspended loads. They are the maximum covered by the manufacturer's warranty with the machine leveled and standing on a firm supporting surface.

Practical working loads depend upon supporting surface, wind, and other factors affecting stability, hazardous surroundings, experience of personnel, and proper handling; all of which must be taken into account by the operator.

The weights of all auxiliary handling devices such as boom attachments, hoist block, hooks, and slings, except hoist rope, shall be considered as part of the load ratings.

Powered boom sections are synchronized to be extended equally at all times. Each section extends to a maximum distance of 24 feet. The maximum powered boom load which may be telescoped is limited by hydraulic pressure, boom angle, and boom capacity. It is safe to attempt to telescope any load within the stated conditions of the rating chart.

"On outriggers", capacities are based on outriggers being fully extended to a distance of 21 feet from centerline to centerline of vertical jack cylinders.

For boom lengths not shown, use load ratings for next longer boom. For load radii not shown, use load rating for next larger rated radius. Positioning or operation at radii and boom lengths beyond the maximums or minimums shown, is not intended or approved.

The boom assembly shall be fully retracted and leveled when crane is out of service.

From main boom capacities, deduct: 650 lbs. when Side-Fly stowed; 1,530 lbs. when Side-Fly erected; 200 lbs. when jib stowed; 1,670 lbs. when jib erected.

Hoist reeving should be based on 9,000 lbs. per part of line.

Filtration unit built into reservoir: 10-micron disposable-element filter with automatic safety relief, built-in magnets; visual indicator or filter housing, indicator lights in engine gauge cluster.

Fin and tube type oil cooler.

Main relief valves in all circuits. Holding valves on boom hoist, boom telescoping and jack cylinders; thermal relief protection in telescope and hoist circuits.

BOOM

80' Boom — Three section. Base section plus two self proportioning hydraulically telescoping sections. Extends to 80' (24.4 m), retracts to 32'6" (9.9 m). Modified hexagon cross-section is self-aligning. Five-sheave head.

105' Boom — Four-section, two self-proportioning hydraulically telescoping section, manually pinned end section. Extends to 105' (32 m), retracts to 32'9" (10 m). Modified hexagon cross-section is self-aligning. Five-sheave head.

Side Fly (optional) — 30' (9.1 m) self-storing boom section, hinged to boom head.