

Construction Machine

HS 8300 HD

Litronic®

enUS

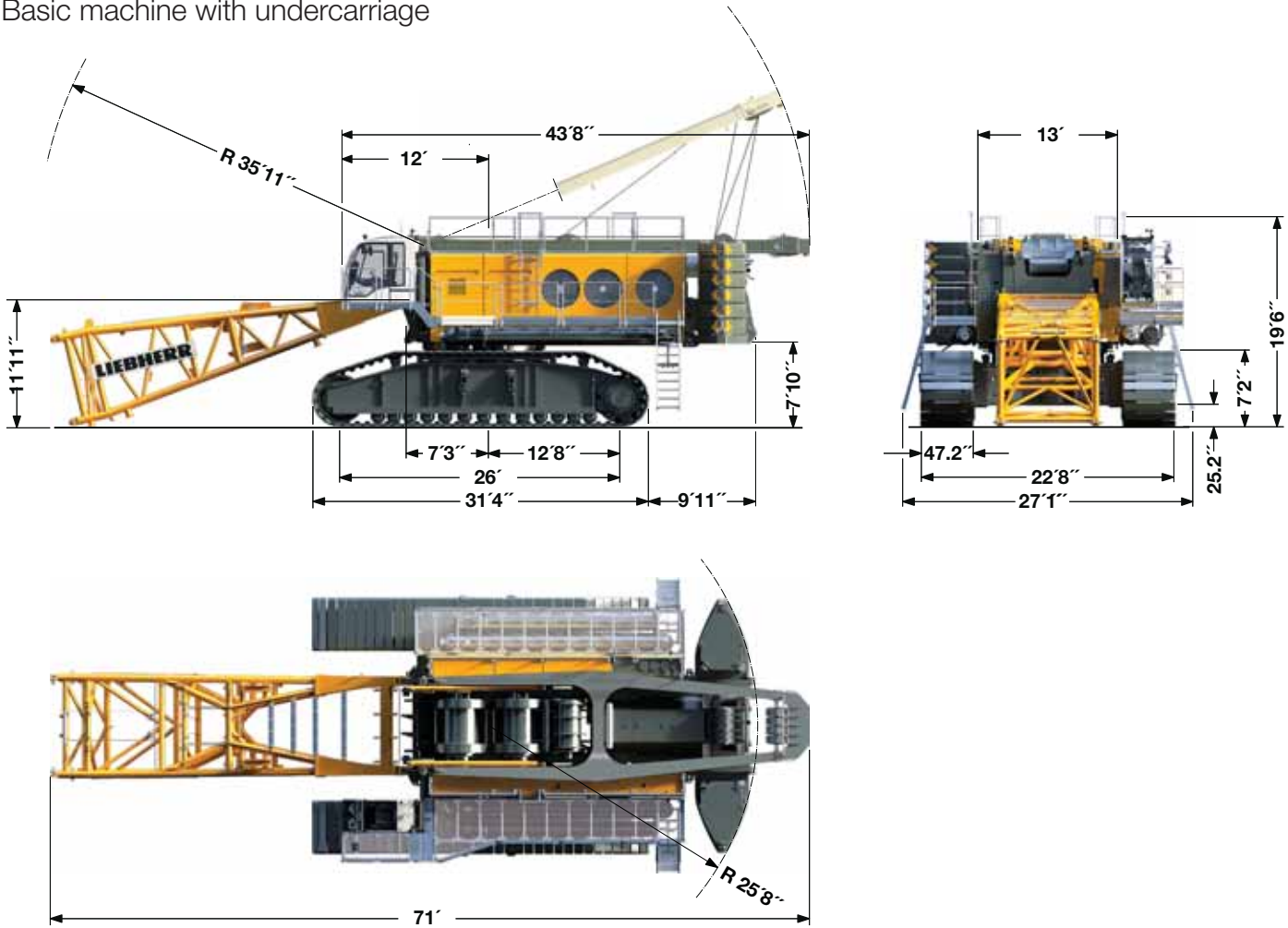
HS 8008.01



LIEBHERR

Dimensions

Basic machine with undercarriage



Operating weight

The operating weight includes the basic machine with HD undercarriage, 2 main winches 112,405 lbf including wire ropes (820 ft) and 66 ft main boom, consisting of A-frame, boom foot (33 ft) and boom head (33 ft), 173,500 lbs basic counterweight, 47.2 inch track pads and 110,300 lbs hook block.

Total weight _____ approx. 776,000 lbs

Equipment

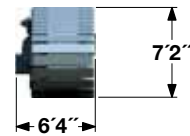
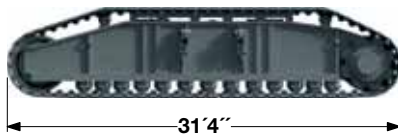
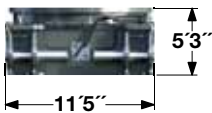
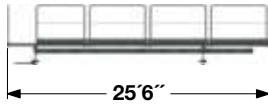
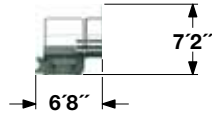
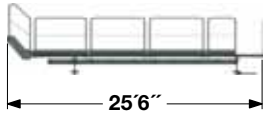
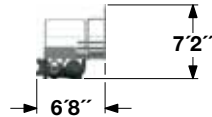
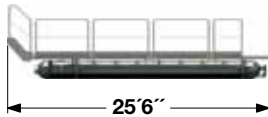
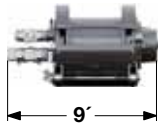
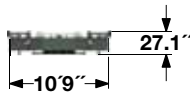
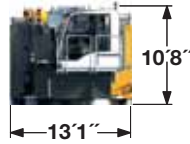
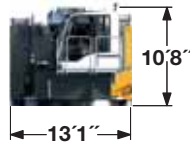
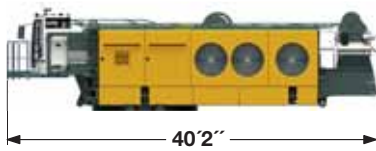
Main boom (No. 2724.35) max. length _____ 223 ft
 Modular designed equipment for lifting operation, with dragline or clamshell.
 For dragline operation, a rotating fairlead is fitted into the boom foot. This minimizes the rope angle to drum, which results in lower rope wear.

Remarks

1. Liebherr cable excavator HS 8008.01
2. Designed according to EN 474-1 and EN 474-12.
3. Machine standing on firm, horizontal ground.
4. The weight of the lifting device (hoist ropes, hook block, shackle etc.) must be deducted from the gross lifting capacity to obtain a net lifting value.
5. Additional equipment on boom (e.g. boom catwalks, auxiliary jib) must be deducted to get the net lifting capacity.
6. For max. wind speed please refer to lift chart in operator's cab or manual.
7. Working radii are measured from centre of swing and under load.
8. The lifting capacities are valid for 360 degrees of swing.

Transport dimensions and weights

Basic machine



Basic machine

without HD undercarriage, boom, boom backstops, A-frame, main winches (2x 112,405 lbf), walkways and counterweight.

Weight 152,010 lbs

Basic machine

with A-frame, boom backstops, main winches (2x 112,405 lbf) without wire ropes (820.2 ft), without walkways, HD undercarriage, boom and counterweight.

Weight 220,242 lbs

A-frame

Weight 16,315 lbs

Main winches

2x

Weight winch I without wire ropes 26,455 lbs

Weight winch II without wire ropes 26,455 lbs

Walkway with Pactronic® (left)

option

Weight 14,440 lbs

Walkway with Pactronic® (right)

option

Weight 14,420 lbs

Standard walkway (left)

Weight 1,480 lbs

Standard walkway (right)

Weight 1,390 lbs

Centre section of undercarriage

Weight 79,920 lbs

Crawlers

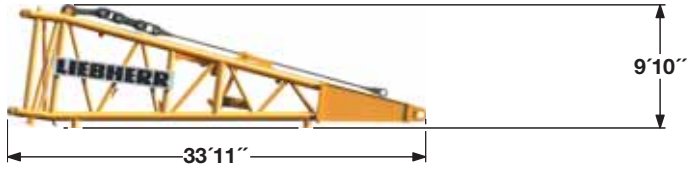
2x

Weight of crawler left (track pads 47.2 inch) 102,300 lbs

Weight of crawler right (track pads 47.2 inch) 102,300 lbs

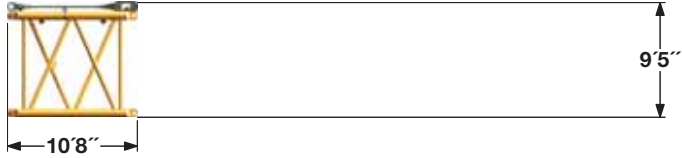
Transport dimensions and weights

Main boom (No. 2724.35)



Boom foot (No. 2724.35)

Width	10'2"
Weight*	22,710 lbs



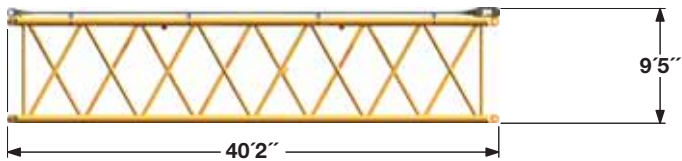
Boom section (No. 2724.35) 10 ft

Width	10'2"
Weight*	5,510 lbs



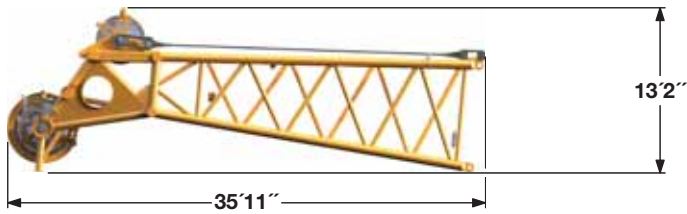
Boom section (No. 2724.35) 20 ft

Width	10'2"
Weight*	7,940 lbs



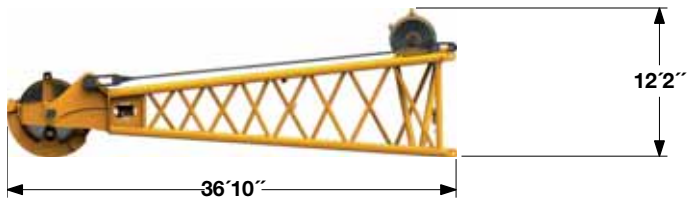
Boom section (No. 2724.35) 40 ft

Width	10'2"
Weight*	13,890 lbs



Standard boom head ** (No. 2724.35)

Width	10'2"
Weight*	22,270 lbs



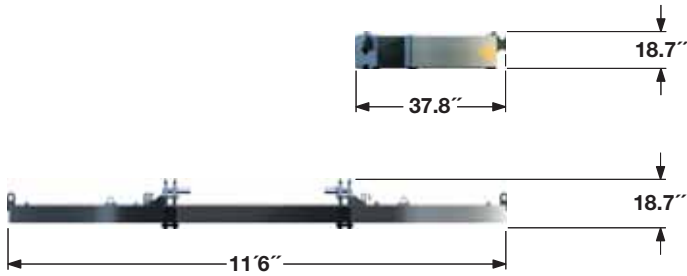
Special boom head ** (No. 2724.35)

Width	10'2"
Weight*	18,420 lbs

*) Including pendant ropes, without auxiliary equipment

**) Steel sheaves

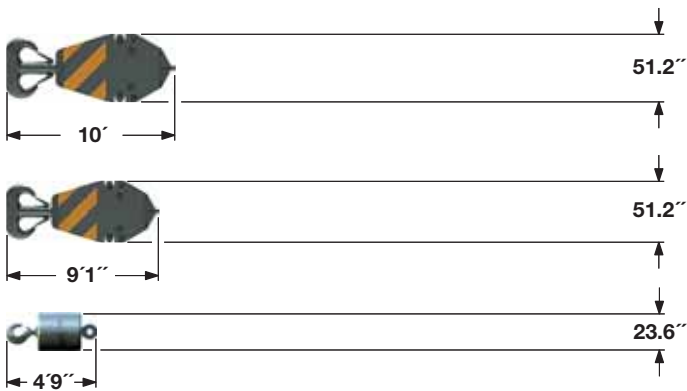
Counterweight



Counterweight	12 x
Width	33.5"
Weight	11,025 lbs

Counterweight	1 x
Width	41.4"
Weight	41,230 lbs

Hooks



110,230 lbs single hook	
Width	23.6 inch
Weight	3,530 lbs

661,400 lbs hook block - 4 sheaves	
Width	33 inch
Weight	8,820 lbs

330,700 lbs hook block - 1 sheave	
Width	24.8 inch
Weight	6,615 lbs

Boom section with hydraulics



Boom section with hydraulics	10 ft
Width	14'2"
Weight*	16,975 lbs

Pedestal



Pedestal	
Width	10'4"
Weight	32,540 lbs

Liebherr Machine HS 8300 HD Hybrid

Powerful, energy-efficient hybrid drive

The new HS 8300 HD is fitted with the Pactronic® system developed by Liebherr. This innovative hybrid drive based on hydraulics offers both economic and ecological advantages. Storing and subsequent regenerating of surplus power allows to increase turnover and to significantly lower fuel consumption. The proven technology of the hydraulic accumulator ensures low maintenance requirements and maximum reliability. The decreased energy consumption considerably lowers emissions and thus improves environmental compatibility.

Pactronic® - Lowering mode

- A secondary energy source is added to the drive system.
- The accumulator is charged by regenerating the reverse power while lowering the load.
- The additional surplus power of the primary energy source is used for charging.

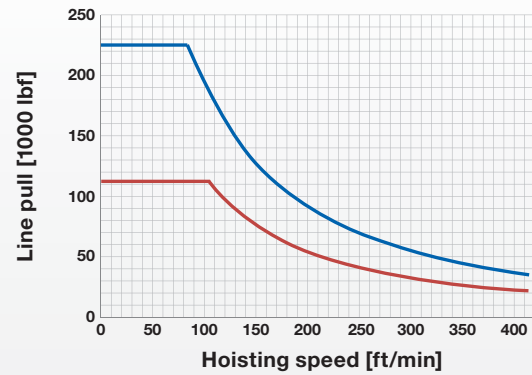
Pactronic® - Hoisting mode

- Stored energy is transferred to the system when the machine requires peak power for hoisting.
- The total hoisting power is the sum of the conventional hydrostatic power and the secondary energy from the accumulator.

Key advantages of Pactronic®

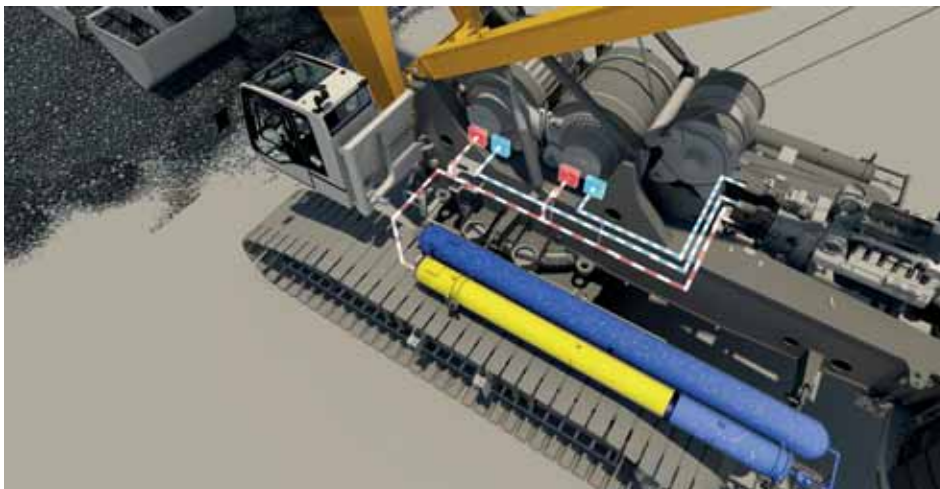
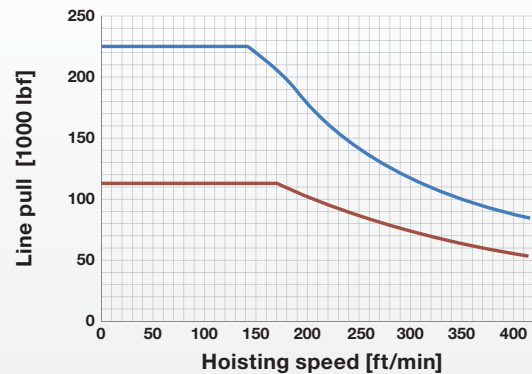
- 725 kW diesel engine combined with Pactronic® allows to achieve a system power comparable to a conventional drive system with 1,250 kW
- Effective hoisting power of 800 kW
- Reduced fuel consumption resulting in less CO₂ emission
- Lower noise emission
- Increased hoisting power
- Increased lowering power
- Higher turnover with identical prime mover

Winch diagram without Pactronic®



— 2-winch operation
— 1-winch operation

Winch diagram with Pactronic®



Machine class ————— 330 US t
 Engine power according to
 EPA/CARB Tier 4i ————— 1005 hp
 System power with Pactronic® — 1250 kW
 Winches ————— 112,405 lbf
 Boom - lifting operation ————— 223.1 ft
 Boom - clamshell ————— 223.1 ft

Technical description



Engine

Power rating according to ISO 9249, 725 kW (972 hp) at 1700 rpm
Engine type _____ Liebherr D 9512 A7
Fuel tank _____ 309 gal capacity with continuous level
_____ indicator and reserve warning
The diesel engine runs with optimum fuel efficiency.

Power rating according to ISO 9249, 725 kW (972 hp) at 1700 rpm
Modell _____ Liebherr D 9512 A7-04
Fuel tank _____ 309 gal capacity with continuous level
_____ indicator and reserve warning
Engine complies with NRMM exhaust certification EPA/CARB Tier 4f.

ECO-Silent-Mode:

For work not requiring high engine power, the diesel engine can be operated in the ECO-Silent-Mode (e.g. for inserting reinforcement cages, for dragline or lifting operation).

Due to the ECO-Silent-Mode which can be preselected by the operator the engine runs with optimum fuel efficiency. This lowers consumption and reduces noise emission.



Hydraulic system

The main pumps are operated by a distributor gearbox. Axial piston displacement pumps work in closed and open circuits supplying oil only when needed (flow control on demand). To minimize peak pressure an automatically working pressure cut-off is integrated. This spares pumps and saves energy. The hydraulic oil is cleaned through electronically controlled pressure and return filters. Possible contamination is signaled in the cabin.

Ready made hydraulic retrofit kits are available to customize requirements e.g. powering casing oscillators, VM vibrators, hydraulic grabs, fixed leaders etc.

Working pressure _____ max. 5800 PSI
Oil tank capacity _____ 740 gal



Boom winch

Line pull _____ max. 33,725 lbf
Rope diameter _____ 24 mm
Boom up _____ 130 sec. from 15° to 84°



Crawlers

The track width of the undercarriage is changed hydraulically. Propulsion through axial piston motor, hydraulically released spring loaded multi-disc brake, maintenance-free crawler tracks, hydraulic chain tensioning device.

Track pads _____ 47.2 inch
Track pads (option) _____ 59.0 inch
Drive speed _____ 0 – 0.87 mph



Main winches

Winch options:
Line pull (nom. load) _____ 112,405 lbf
Rope diameter _____ 46 mm
Drum diameter _____ 43.3 inch
Rope speed _____ 0-410 ft/min
Rope capacity 1st layer _____ 226.7 ft
The winches are outstanding in their compact design and easy assembly. Clutch and braking functions on the free-fall system are provided by a compact designed, low wear and maintenance-free multi-disc brake. The drag and hoist winches use pressure controlled, variable flow hydraulic motors. This system features sensors that automatically adjust oil flow to provide max. winch speed depending on load.



Swing

Consists of rollerbearing with external teeth for lower tooth flank pressure, fixed axial piston hydraulic motor, spring loaded and hydraulically released multi-disc holding brake, planetary gearbox and pinion. Swing speed from 0–3.6 rpm continuously variable, selector for 3 speed ranges to increase swing precision.

Standard:
4 swing drives



Control

The core of the Liebherr machines is the Litronic control system. Developed and manufactured by Liebherr, this comprehensive system encompasses all control and monitoring functions and is designed to withstand extreme temperature changes and the rough heavy duty tasks common in the construction industry. Complete machine operating data, warnings and failure indications are clearly displayed in the required language on the high resolution monitor in the operator's cab. Documentation of operating data (PDE) enables optimum diagnosis as well as early detection and prevention of more serious defects. An electro-hydraulic proportional control allows several movements to be performed simultaneously. This ensures that all categories of loads can be positioned with utmost precision.

Options:

- PDE: Process data recording
- GSM/GPRS telematics module
- Special demolition control system



Noise emission

Noise emissions correspond with 2000/14/EC directive.
Guaranteed sound pressure level L_{PA} in the cabin _____ 72.3 dB(A)

Guaranteed sound power level L_{WA} _____ 115 dB(A)
Vibration transmitted to the hand-arm system of the machine operator _____ < 2.5 m/s²
Vibration transmitted to the whole body of the machine operator _____ < 0.5 m/s²

Equipment

Orange peel grab and clamshell



HS 8300 HD orange peel grab



HS 8300 HD clamshell

Orange peel grab

Winch options 2 x 112,405 lbf

Clamshell

Winch options 2 x 112,405 lbf

Maximum capacity in duty cycle operation with standard ropes

Line pull (1st layer)	112,405 lbf
Rope diameter	46 mm
Minimum breaking load	399,035 lbf
Line pull - 1-rope duty cycle operation	112,405 lbf
Line pull - 2-rope duty cycle operation ¹⁾	170,406 lbf

- 1) Lifting a load exceeding the line pull of one winch is only allowed if it can be ensured that each individual winch is not overloaded. When working with a mechanical 2-rope grab the total load to be lifted is limited by the line pull of one winch. Rigging and ropes are part of the load. Max. capacities in 1000 lbs do not exceed 66.7% of tipping load.

Capacities in duty cycle operation are for reference only and are not programmed in the LMI system.

All loads and counterweight configurations are max. values and must not be exceeded.

Weight of additional equipment on boom (e.g. walkways, hose drums etc.) must be deducted to get the net capacity.

Load chart for rock handling

Main boom No. 2724.35 with 173,500 lbs counterweight

Capacities in 1000 lbs for boom lengths (66 ft - 223 ft) - with 112,405 lbf winches and 173,500 lbs counterweight

Radius	Boom length in (ft)																Radius		
	66	75	85	95	105	115	125	135	144	154	164	174	184	194	203	213		223	
18,1	440,9																		18,1
20	440,9	440,9																	20
25	440,9	440,9	434,3	417,5	393,2	371,1	352,7												25
30	392,4	392,4	392,3	389,8	366,7	345,9	328,4	310,3	294,1	278,9	265,8	250,0							30
35	310,2	310,1	310,0	309,5	309,1	308,6	306,3	289,0	274,8	261,1	248,3	234,4	223,0	211,8	202,1	190,8	178,7		35
40	255,2	255,0	254,9	254,3	254,0	253,4	252,7	252,0	251,2	243,6	231,0	219,2	209,6	199,2	188,3	178,1	170,4		40
45	217,2	217,0	216,8	216,2	215,9	215,3	214,6	214,0	213,2	212,6	210,0	205,6	196,4	187,0	178,5	169,2	161,6		45
50	187,3	187,1	187,0	186,4	186,1	185,4	184,7	184,0	183,3	182,5	181,7	180,9	178,6	177,6	170,3	162,1	155,2		50
55	163,9	163,8	163,7	163,1	162,8	162,1	161,4	160,6	159,9	159,1	158,3	157,4	156,6	155,8	154,9	150,7	146,9		55
60	145,1	145,1	145,0	144,4	144,2	143,4	142,7	141,9	141,2	140,4	139,5	138,6	137,8	136,9	136,0	135,1	133,5		60
65	129,6	129,6	129,7	129,0	128,9	128,1	127,4	126,5	125,9	125,0	124,1	123,2	122,4	121,5	120,6	119,6	118,7		65
70	116,3	116,7	116,8	116,2	116,1	115,3	114,6	113,7	113,1	112,2	111,3	110,4	109,5	108,6	107,7	106,7	105,8		70
80		95,9	96,4	95,9	96,0	95,1	94,5	93,5	93,0	92,0	91,1	90,1	89,3	88,3	87,4	86,4	85,5		80
90			80,7	80,5	80,7	79,9	79,3	78,3	77,8	76,8	75,9	74,9	74,1	73,1	72,2	71,1	70,2		90
100				68,1	68,7	68,0	67,4	66,5	66,0	65,0	64,1	63,0	62,3	61,2	60,3	59,2	58,3		100
110					58,7	58,3	57,8	56,9	56,4	55,4	54,6	53,5	52,8	51,7	50,8	49,7	48,8		110
120						48,2	49,8	49,0	48,6	47,6	46,8	45,7	45,0	43,9	42,9	41,8	41,0		120
130							39,8	42,2	42,0	41,0	40,2	39,1	38,5	37,4	36,4	35,3	34,4		130
140								32,0	36,3	35,4	34,6	33,6	32,9	31,8	30,9	29,8	28,9		140
150										30,5	29,8	28,7	28,1	27,0	26,1	25,0	24,2		150
165											21,8	22,6	22,0	21,0	20,1	18,9	18,0		165

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Load chart for clamshell

Main boom No. 2724.35 with 173,500 lbs counterweight

Capacities in 1000 lbs for boom lengths (66 ft - 223 ft) - with 112,405 lbf winches and 173,500 lbs counterweight

Radius	Boom length in (ft)																Radius			
	66	75	85	95	105	115	125	135	144	154	164	174	184	194	203	213		223		
22,1			167,1																22,1	
25	167,1	167,1	167,1	167,1	167,1														25	
30	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1									30	
35	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	166,2	165,5	154,6				35	
40	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	164,6	164,1	153,6	144,5	135,6	128,2		40	
45	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	166,6	167,1	167,0	157,5	152,6	144,1	136,0	127,3	119,3		45	
50	167,1	167,1	167,1	167,1	167,1	165,0	167,1	167,1	165,2	159,2	159,8	152,1	144,2	135,9	128,2	120,1	112,9		50	
55	163,9	163,8	163,7	163,1	162,8	159,4	158,1	160,6	159,9	152,0	146,7	137,7	132,4	128,2	122,4	114,6	107,6		55	
60	145,1	145,1	145,0	144,4	144,2	143,4	142,7	141,9	141,2	140,4	136,1	125,9	118,8	112,8	110,4	107,7	103,7		60	
65	129,6	129,6	129,7	129,0	128,9	128,1	127,4	126,5	125,9	125,0	124,1	116,5	107,6	99,8	97,4	95,0	92,8		65	
70	109,7	116,7	116,8	116,2	116,1	115,3	114,6	113,7	113,1	112,2	111,3	106,1	99,0	89,3	86,6	84,1	81,9		70	
80		82,2	96,4	95,9	96,0	95,1	94,5	93,5	93,0	87,0	86,6	84,4	80,8	74,1	71,0	68,0	65,0		80	
90			63,8	76,6	80,7	79,9	79,3	78,3	77,3	72,3	70,4	68,6	66,7	62,3	59,1	56,1	53,4		90	
100				50,7	62,9	65,8	66,2	65,6	64,5	61,1	59,2	57,3	56,1	53,6	49,9	46,6	44,0		100	
110					42,2	51,0	54,2	54,0	54,1	52,5	50,2	47,9	46,7	44,6	42,3	39,4	36,6		110	
120						34,1	41,6	44,5	44,8	43,5	42,2	40,4	39,0	36,9	34,9	32,4	30,5		120	
130							27,6	33,3	34,4	32,8	31,6	29,9	28,9	27,2	25,7	23,9	22,8		130	
140								21,5	25,1	23,6	22,5	20,8	19,8	18,1	16,7	14,9	13,8		140	
150										15,5	14,5	12,8	11,9	10,3	8,8	7,1	6,8		150	
165												6,6	6,4	6,3	6,1	6,0	5,8	5,6		165

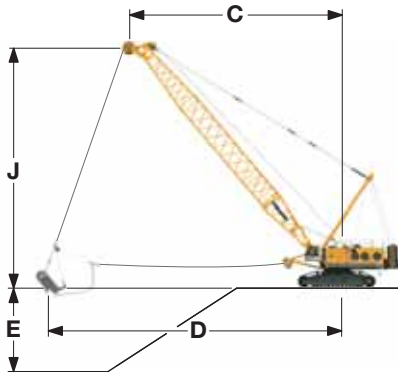
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Max. lifting capacity with mechanical grab is 110,230 lbs. For higher lifting capacities a hydraulic grab with multi-reeving is required.

Above load chart is for reference only. For actual lift duty please refer to load chart in operator's cab or manual. Capacities in duty cycle operation are for reference only and are not programmed in the LMI system.

Equipment

Dragline bucket with standard boom head



Digging diagram

- C = Radius / dumping radius
- D = Max. digging radius = approx.
- C + 1/3 to 1/2 J
- E = Digging depth = approx. 40 - 50 % of C
- J = Height to center rope pulley boom head



Dragline bucket

Winch options

2 x 112,405 lbf

Load chart for dragline equipment (standard)

Main boom No. 2724.35 with 173,500 lbs counterweight

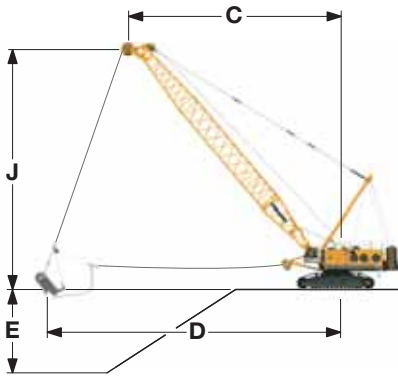
Capacities in 1000 lbs for boom lengths (66 ft - 164 ft) - with 112,405 lbf winches and 173,500 lbs counterweight

alpha	Boom length in (ft)																				
	66			85			105			125			144			154			164		
	C	J	(lbs)	C	J	(lbs)	C	J	(lbs)	C	J	(lbs)	C	J	(lbs)	C	J	(lbs)	C	J	(lbs)
60	45,5	44,9	110,2	55,3	56,3	110,2	65,2	67,7	110,2	75,0	79,2	110,2	84,9	90,6	85,3	89,8	96,4	72,6	94,7	102,1	64,9
55	50,1	42,6	110,2	61,4	53,4	110,2	72,7	64,2	110,2	84,0	75,1	91,9	95,3	85,9	70,0	100,9	91,4	60,2	106,6	96,8	53,0
50	54,5	40,0	110,2	67,1	50,2	110,2	79,8	60,3	108,3	92,4	70,5	77,0	105,1	80,6	59,2	111,4	85,7	51,2	117,7	90,7	44,5
45	58,5	37,3	110,2	72,4	46,6	110,2	86,3	56,0	91,4	100,2	65,4	65,9	114,1	74,7	50,0	121,1	79,4	42,2	128,0	84,1	33,5
40	62,1	34,3	110,2	77,1	42,8	109,5	92,2	51,3	78,0	107,3	59,8	57,2	122,4	68,3	42,4	129,9	72,6	32,9	137,5	76,8	24,7
35	65,3	31,1	110,2	81,4	38,7	95,7	97,5	46,3	68,0	113,7	53,9	50,4	129,8	61,5	34,6	137,8	65,2	25,5	145,9	69,1	17,6
30	68,1	27,8	110,2	85,1	34,3	82,1	102,2	41,0	58,5	119,2	47,6	42,7	136,3	54,2	28,5	144,8	57,5	19,7	153,3	60,8	12,0
25	70,4	24,3	106,0	88,2	29,8	70,4	106,1	35,4	50,4	123,9	41,0	36,2	141,8	46,6	23,6	150,7	49,4	15,0	159,6	52,2	7,6

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Max. capacities in 1000 lbs do not exceed 75% of tipping load. Capacities in duty cycle operation are for reference only and are not programmed in the LMI system. The size of the bucket has to be determined according to local conditions.

Dragline bucket with special boom head



Digging diagram

- C = Radius / dumping radius
- D = Max. digging radius = approx. $C + 1/3 \text{ to } 1/2 J$
- E = Digging depth = approx. 40 - 50 % of C
- J = Height to center rope pulley boom head



Dragline bucket

Winch options

2 x 112,405 lbf

Load chart for dragline equipment (special boom head)

Main boom No. 2724.35 with 173,500 lbs counterweight

Capacities in 1000 lbs for boom lengths (66 ft - 164 ft) - with 112,105 lbf winches and 173,500 lbs counterweight

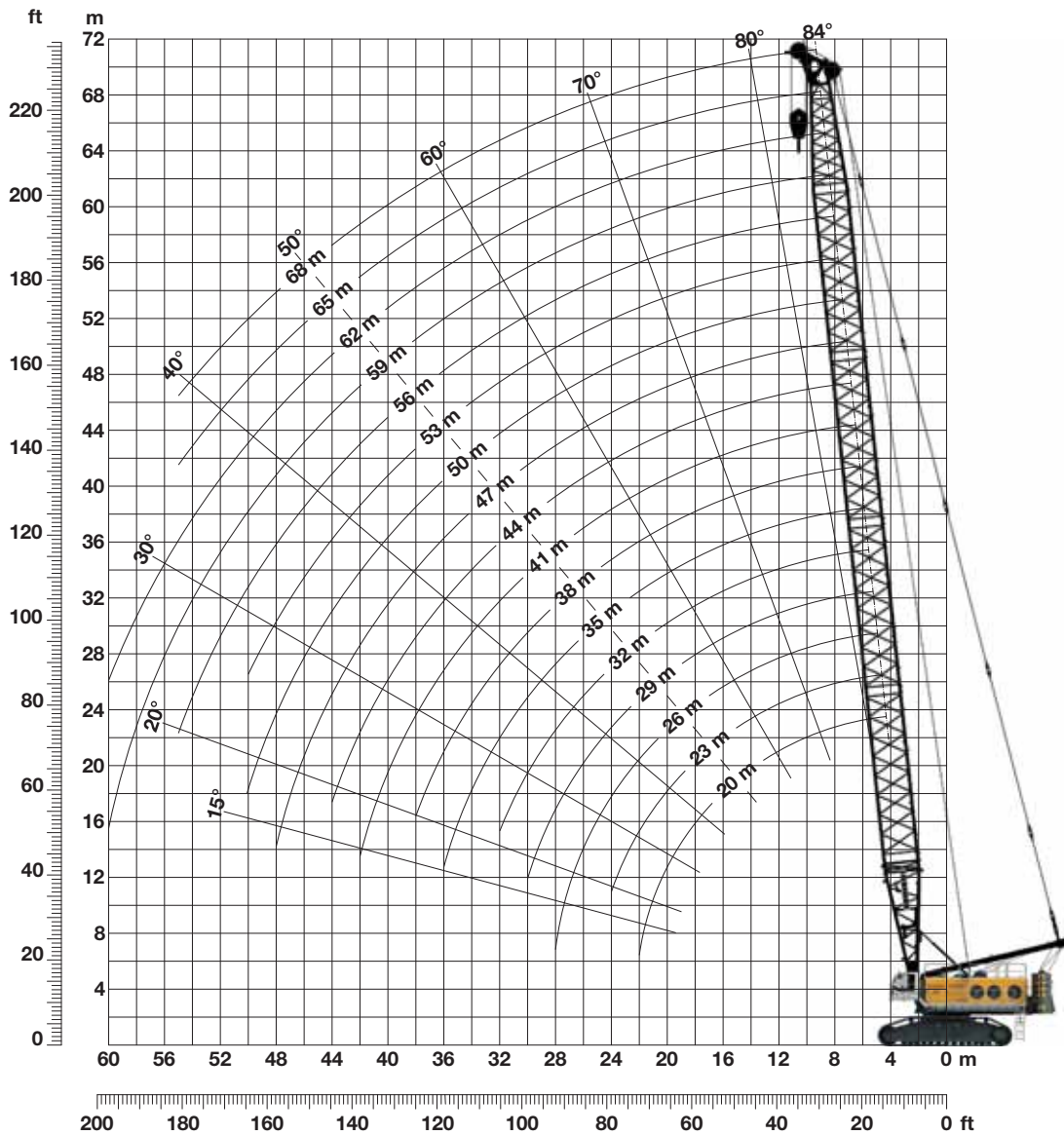
alpha	Boom length in (ft)																				
	66			85			105			125			144			154			164		
	C	J	lbs	C	J	lbs	C	J	lbs	C	J	lbs	C	J	lbs	C	J	lbs	C	J	lbs
60	45,5	66,8	167,1	55,3	83,8	163,8	65,2	100,8	145,9	75,0	117,9	114,0	84,9	134,9	85,3	89,8	143,5	72,6	94,7	152,0	64,9
55	50,1	63,4	167,1	61,4	79,5	159,5	72,7	95,6	125,0	84,0	111,8	91,9	95,3	127,9	70,0	100,9	136,0	60,2	106,6	144,0	53,0
50	54,5	59,6	165,6	67,1	74,7	140,9	79,8	89,8	108,3	92,4	104,9	77,0	105,1	119,9	59,2	111,4	127,5	51,2	117,7	135,0	44,5
45	58,5	55,5	161,5	72,4	69,4	126,6	86,3	83,3	91,4	100,2	97,3	65,9	114,1	111,2	50,0	121,1	118,1	42,2	128,0	125,1	33,5
40	62,1	51,1	157,2	77,1	63,7	109,5	92,2	76,4	78,0	107,3	89,0	57,2	122,4	101,7	42,4	129,9	108,0	32,9	137,5	114,3	24,7
35	65,3	46,3	146,3	81,4	57,6	95,7	97,5	68,9	68,0	113,7	80,2	50,4	129,8	91,5	34,6	137,8	97,1	25,5	145,9	102,8	17,6
30	68,1	41,3	127,5	85,1	51,1	82,1	102,2	61,0	58,5	119,2	70,8	42,7	136,3	80,7	28,5	144,8	85,6	19,7	153,3	90,5	12,0
25	70,4	36,1	106,0	88,2	44,4	70,4	106,1	52,7	50,4	123,9	61,0	36,2	141,8	69,3	23,6	150,7	73,5	15,0	159,6	77,7	7,6

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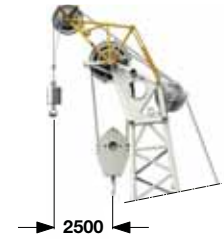
Max. capacities in 1000 lbs do not exceed 75% of tipping load. Capacities in duty cycle operation are for reference only and are not programmed in the LMI system. The size of the bucket has to be determined according to local conditions.

Working range - main boom 84° - 15°

Main boom No. 2724.35 with 173,500 lbs counterweight



Auxiliary jib 110,230 lbs



The maximum capacity of the auxiliary jib is 110,230 lbs. The corresponding load chart is programmed in the LMI system.

Main boom

from 66 ft to 223 ft (table 1 - No. 2724.35)

	Length*	Amount of boom extensions																
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Boom foot	33 ft	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Boom section	10 ft		1		1		1		1		1		1		1		1	
Boom section	20 ft			1	1			1	1			1	1			1	1	
Boom section	40 ft					1	1	1	1	2	2	2	2	3	3	3	3	4
Boom head	33 ft	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Boom length (ft)		66	76	85	95	105	115	125	134	144	154	164	174	184	194	203	213	223
Auxiliary jib applicable		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

*Actual lengths of boom sections are metric (e.g. 3m, 6m, 10m, 12m). The figures shown above are approximate conversions to feet.

Load chart for lifting operation

Main boom No. 2724.35 with 173,500 lbs counterweight

Capacities in 1000 lbs for boom lengths (66 ft - 223 ft) - with 112,405 lbf winches and 173,500 lbs counterweight

Radius (ft)	Boom length in (ft)																Radius (ft)				
	66	75	85	95	105	115	125	135	144	154	164	174	184	194	203	213		223			
(ft)	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	(ft)		
18	*661,5																		18		
20	*661,5	632,0	632,0																20		
25	541,4	522,0	503,7	486,3	469,9	454,4	439,5												25		
30	430,8	417,5	405,1	392,8	381,5	370,3	359,6	349,3	339,3	329,8	320,5	311,6							30		
35	356,3	346,4	337,2	327,9	319,5	311,0	302,7	294,6	286,9	279,4	272,0	264,9	257,8	251,1	244,5	238,1	220,0		35		
40	294,4	294,0	287,7	280,3	273,7	266,8	260,1	253,5	247,3	241,0	234,9	229,0	223,2	217,5	211,9	206,5	201,0		40		
45	248,4	248,0	247,7	243,7	238,5	232,6	227,0	221,4	216,2	210,9	205,7	200,5	195,6	190,7	185,8	181,1	176,4		45		
50	213,7	213,4	213,1	212,2	210,5	205,4	200,6	195,7	191,2	186,5	182,0	177,4	173,1	168,8	164,5	160,2	156,0		50		
55	186,6	186,3	186,1	185,2	184,9	183,2	179,0	174,6	170,7	166,5	162,4	158,3	154,5	150,5	146,6	142,8	139,0		55		
60	164,7	164,6	164,5	163,5	163,3	162,1	161,0	156,9	153,5	149,7	146,0	142,2	138,7	135,1	131,5	127,9	124,5		60		
65	146,5	146,6	146,6	145,7	145,5	144,4	143,4	142,0	138,9	135,3	132,0	128,4	125,3	121,9	118,6	115,2	112,1		65		
70	131,0	131,6	131,7	130,8	130,7	129,5	128,6	127,3	126,4	123,0	119,9	116,5	113,6	110,4	107,3	104,2	101,2		70		
75		118,6	119,0	118,2	118,1	117,0	116,0	114,7	113,9	112,3	109,3	106,2	103,5	100,4	97,5	94,5	91,7		75		
80		107,1	108,0	107,2	107,3	106,1	105,2	103,9	103,1	101,7	100,1	97,0	94,5	91,6	88,8	85,9	84,6		80		
85			98,3	97,7	97,9	96,7	95,8	94,5	93,7	92,4	91,2	88,9	86,5	84,7	82,2	79,5	77,0		85		
90			89,4	89,3	89,6	88,5	87,6	86,3	85,5	84,7	84,0	82,6	80,4	77,8	75,2	72,6	70,2		90		
95				82,7	83,0	82,0	81,2	79,9	79,2	77,8	76,7	75,3	74,0	71,4	69,0	66,3	64,1		95		
100				75,7	76,4	75,4	74,6	73,3	72,7	71,3	70,2	68,7	67,7	65,6	63,3	60,7	58,6		100		
105					70,3	69,5	68,7	67,5	66,8	65,5	64,3	62,9	61,9	60,4	58,1	55,6	53,5		105		
110					64,7	64,1	63,4	62,2	61,5	60,2	59,0	57,6	56,6	55,2	53,3	50,9	48,9		110		
115						59,1	58,5	57,3	56,7	55,4	54,3	52,8	51,8	50,4	49,0	46,6	44,6		115		
120						54,4	54,0	52,9	52,4	51,0	49,9	48,5	47,5	46,1	44,8	42,6	40,7		120		
125							49,9	48,8	48,4	47,0	45,9	44,5	43,5	42,1	40,8	39,0	37,1		125		
130							45,9	45,0	44,6	43,3	42,2	40,8	39,9	38,4	37,1	35,6	33,7		130		
135								41,5	41,2	39,9	38,9	37,4	36,5	35,1	33,8	32,3	30,6		135		
140								38,1	38,0	36,8	35,7	34,3	33,4	31,9	30,7	29,2	27,7		140		
145									34,9	33,8	32,8	31,4	30,5	29,1	27,8	26,3	25,0		145		
150										31,0	30,0	28,6	27,8	26,4	25,1	23,6	22,4		150		
155										28,3	27,4	26,1	25,3	23,8	22,6	21,1	20,0		155		
160											25,0	23,7	22,9	21,5	20,2	18,7	17,6		160		
165											22,7	21,4	20,7	19,3	18,0	16,5	15,4		165		
170												19,2	18,6	17,2	15,9	14,4	13,4		170		
175												17,2	16,5	15,2	14,0	12,5	11,4		175		
180													14,6	13,3	12,1	10,6	9,6		180		
185														12,8	11,5	10,3	8,9	7,9		185	
190															9,8	8,7	7,2	6,2		190	
195																8,1	7,0	5,6	4,6		195

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Above load chart is for reference only. For actual lift duty please refer to load chart in operator's cab or manual.

*) Only possible with special heavy duty boom head.

Equipment

Dredging



Dredging

Winch options 2 x 112,405 lbf

Maximum capacity in duty cycle operation with standard ropes

Line pull (1st layer)	112,405 lbf
Rope diameter	46 mm
Minimum breaking load	399,036 lbf
Line pull - 1-rope duty cycle operation	112,405 lbf
Line pull - 2-rope duty cycle operation ¹⁾	170,405 lbf

- 1) Lifting a load exceeding the line pull of one winch is only allowed if it can be ensured that each individual winch is not overloaded. When working with a mechanical 2-rope grab the total load to be lifted is limited by the line pull of one winch. Rigging and ropes are part of the load.

Max. capacities in lbs do not exceed 66.7% of

Capacities in duty cycle operation are for reference only and are not programmed in the LMI system.

All loads and counterweight configurations are max. values and must not be exceeded.

Weight of additional equipment on boom (e.g. walkways, hose drums etc.) must be deducted to get the net capacity.

Load chart for dredging equipment

Main boom No. 2724.35 with 173,500 lbs counterweight

Capacities in 1000 lbs for boom lengths (66 ft - 223 ft) - with 112,405 lbf winches and 173,500 lbs counterweight

Radius (ft)	Boom length in (ft)																Radius (ft)		
	66	75	85	95	105	115	125	135	144	154	164	174	184	194	203	213		223	
	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	
22,1			167,1																22,1
25	167,1	167,1	167,1	167,1	167,1														25
30	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1									30
35	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	166,2	165,5	154,6				35
40	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	164,6	164,1	153,6	144,5	135,6	128,2		40
45	167,1	167,1	167,1	167,1	167,1	167,1	167,1	167,1	166,6	167,1	167,0	157,5	152,6	144,1	136,0	127,3	119,3		45
50	167,1	167,1	167,1	167,1	167,1	165,0	167,1	167,1	165,2	159,2	159,8	152,1	144,2	135,9	128,2	120,1	112,9		50
55	165,0	167,1	164,0	167,1	167,1	159,4	158,1	165,8	164,1	152,0	146,7	137,7	132,4	128,2	122,4	114,6	107,6		55
60	160,0	164,5	160,9	155,3	166,1	154,8	147,1	148,1	154,0	146,6	136,1	125,9	118,8	112,8	110,4	107,7	103,7		60
65	155,3	146,5	158,4	144,7	148,1	148,8	138,1	133,0	134,3	130,1	126,5	116,5	107,6	99,8	97,4	95,0	92,8		65
70	109,7	131,0	137,6	136,1	132,5	130,9	128,8	120,8	117,6	113,2	111,3	106,1	99,0	89,3	86,6	84,1	81,9		70
75		111,5	117,3	121,4	119,6	115,3	114,0	110,1	104,0	98,8	97,9	94,5	89,5	81,2	77,9	75,1	72,6		75
80		82,2	100,2	104,3	107,6	102,1	101,0	98,6	93,8	87,0	86,6	84,4	80,8	74,1	71,0	68,0	65,0		80
85			82,5	89,3	94,5	91,5	89,9	88,3	85,1	78,9	77,3	75,7	73,2	67,8	64,7	61,8	58,9		85
90			63,8	76,6	82,7	82,1	80,8	79,4	77,3	72,3	70,4	68,6	66,7	62,3	59,1	56,1	53,4		90
95				63,8	72,6	73,5	73,2	72,0	70,4	66,4	64,6	62,7	61,3	57,6	54,2	51,0	48,5		95
100				50,7	62,9	65,8	66,2	65,6	64,5	61,1	59,2	57,3	56,1	53,6	49,9	46,6	44,0		100
105					52,6	59,3	59,8	59,6	59,3	56,6	54,4	52,4	51,2	49,0	46,3	42,7	40,0		105
110					42,2	51,0	54,2	54,0	54,1	52,5	50,2	47,9	46,7	44,6	42,3	39,4	36,6		110
115						42,6	48,5	48,9	49,2	48,0	46,6	44,0	42,7	40,6	38,4	35,8	33,6		115
120						34,1	41,6	44,5	44,8	43,5	42,2	40,4	39,0	36,9	34,9	32,4	30,5		120
125							34,7	39,2	39,6	38,0	36,7	35,0	34,0	32,2	30,8	29,0	27,5		125
130							27,6	33,3	34,4	32,8	31,6	29,9	28,9	27,2	25,7	23,9	22,8		130
135								27,5	29,6	28,1	26,9	25,2	24,2	22,5	21,0	19,3	18,1		135
140								21,5	25,1	23,6	22,5	20,8	19,8	18,1	16,7	14,9	13,8		140
145									20,9	19,5	18,3	16,7	15,8	14,1	12,6	10,9	9,7		145

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Max. lifting capacity with mechanical grab is 110,230 lbs. For higher lifting capacities a hydraulic grab is required.

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