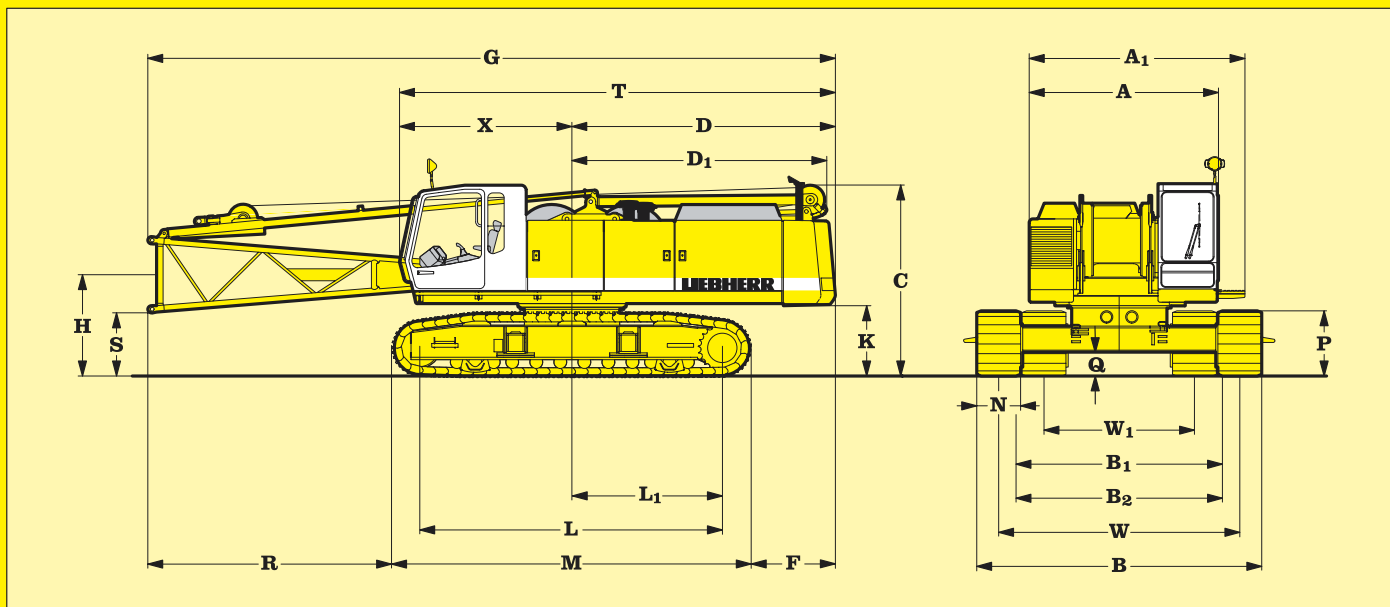


Technical Data Hydraulic lifting crane

LR 843 HD

Litronic®

Basic machine with undercarriage



Dimensions

Dimensions	mm		mm
A Width of superstructure	3000	X Distance from centre of rotation to end of cab	2750
A ₁ Width of superstructure with walk way	3440	N Width of track shoes	800
C Height of basic machine	3100	W ₁ Track width retracted	2400
D Tail reach	4200	W Track width extended	3850
Teil swing radius	4245	B Crawler width extended	4650
D ₁ Tail reach A-frame	4070	B ₁ Crawler width retracted without beam extension	3200
F Distance between rear end of crawler and outside of counterweight	1320	B ₂ Crawler width retracted with folded beam extension	3500
G Overall length of superstructure with lowered A-frame	10980		
H Ground clearance of boom foot pivot	1640		
K Ground clearance of superstructure	1150		
L Wheel base (centre idler to centre tumbler)	4800		
L ₁ Distance from centre of rotation to centre of tumbler	2400		
M Length of crawlers	5760		
P Height of crawler	1070		
Q Ground clearance of crawler	380		
R Distance from edge of horizontal boom foot to crawler	3900		
S Ground clearance of horizontal boom foot	1030		
T Length of superstructure	6820		

Operating Weight and Ground Pressure

The operating weights include the basic unit with B6 crawler tracks, 2 main winches 12 t and 11 m boom, consisting of A-frame, boom foot (5.5m), boom head (5.5m) and 12.3 t counterweight. All systems are ready.

with 800 mm 3-web shoes 52.5 t - 0.68 kg/cm²

LEIBHERR

The Better Machine

Basic machine

with HD undercarriage, counterweight 12.3 t,
in-line 6 cylinder diesel engine, 2 x 12 t winches
without A-frame

3-web shoes	mm	800
Weight	t	49.0

Crawler retracted

3-web shoes	mm	800
Width	mm	3200
Weight	kg	19600
L Length	mm	5760
H Height	mm	1140

Counterweight

Basic

Width	mm	830
Weight	kg	12300
L Length	mm	3000
H Height	mm	1365

Pulley block with equalizer

Width	mm	480
Weight	kg	300
L Length	mm	1010
H Height	mm	640

A-frame

Width	mm	530
Weight	kg	645
L Length	mm	3825
H Height	mm	1210

Boom foot

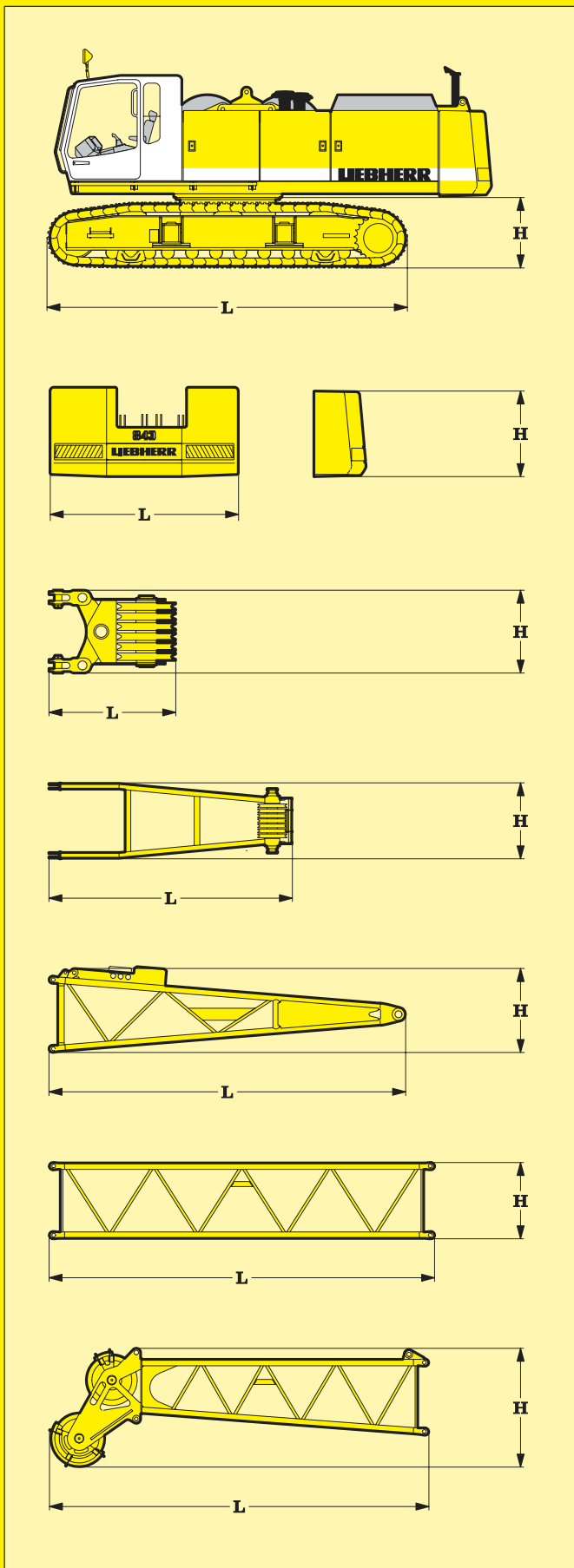
Width	mm	1400
Weight	kg	1250
L Length	mm	5680
H Height	mm	1370

Tubular boom extension

		3m	6m	9m
Width	mm	1400	1400	1400
Weight	kg	390	610	850
L Length	mm	3140	6140	9140
H Height	mm	1215	1215	1215

Boom head

Width	mm	1400
Weight	kg	1250
L Length	mm	5950
H Height	mm	1890



Transport dimensions and weights



Engine

Water cooled, in-line 6 cylinder Liebherr diesel engine, turbocharged with intercooler, model 926 Ti, power rating according to DIN ISO 3046 T1 IFN: 220 kW (300 hp) at 1800 rpm.

The automatic limiting load control adapts perfectly the power of the main users to the present engine speed. The temperature and engine speed controlled cooling system saves energy and reduces the noise emission. Fuel Tank: 800 l capacity with continuous level indicator and reserve warning.



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 a automatically working pressure cut off is integrated. This spares pumps and saves energy.

Winch 1 and 2: Axial piston displacement pumps (swash plate design) with 324 l/min. each.

Crawlers: Axial piston displacement pumps (swash plate design) with 2 x 296 l/min.

Swing gear: Axial piston displacement pump (swash plate design) with 296 l/min.

Boom hoist: Axial piston displacement pump (swash plate design) with 296 l/min.

Max. working pressure: 350 bar.

Hydraulic oil tank capacity: 650 l

The cleaning of the hydraulic oil is made through electronically controlled pressure and return filters.

Eventual contamination is signaled in the cabin.



Winches

Line pull (nom. load)	120 kN
Rope diameter :	24 mm
Drum diameter :	525 mm
Rope speed	0-60 m/min
Rope capacity 1st layer	46 m

The winches stand out for their compact design and easy assembly.

Propulsion is via a planetary gearbox in oil bath. Load support by the hydraulic system; additional safety factor provided by a spring loaded, multi disc holding brake. Clutch and braking functions on the free - fall system are provided by a compact designed, low wear and maintenance free multi disc brake.



Noise emission

Special sound proofing results in a very low noise pressure level of 77 dB(A) at 16 m radius.



Equipment

Lattice boom of tubular construction up to 53 m, universal boom head with 2 + 3 rope pulleys.

Jibs and fly jibs of different lengths are available on request.



Swing Drive

Consists of single row ballbearing 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.

Free swing with hydraulic moment control reduces wear to a minimum, because rotation moment is sustained through the hydraulic system by the diesel engine.

Swing speed from 0 - 4.7 rpm continuously variable, selector for 3 speed ranges to increase swing precision.



Crawler

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. 3 - web track shoes.

Drive speed 0 - 1.6 km/h.



Control

The control system - developed and manufactured by Liebherr - is designed to withstand temperature extremes and the many heavy-duty construction tasks for which this crane has been designed. Complete machine operating data are displayed on a high resolution monitor screen. To ensure clarity of the information on display, different levels of data are shown in enlarged lettering and symbols. Control and monitoring of the sensors are also handled by this high technology system. Error indications are automatically displayed on the monitor in english. The crane is equipped with proportional control for all movements, which can be carried out simultaneously.

An option is the so-called "Redundant" control system, which allows restricted operation of the machine in the event of a failure on the electronic base control or its sensors.

The operation of the crane is done with 2 multi-directional joysticks, right for winch I and boom hoist drive, left for winch II and slewing gear.



Boom hoist drive

Twin drum with internally located planetary gearbox, axial piston hydraulic motor and hydraulically released spring loaded multi disc brake.

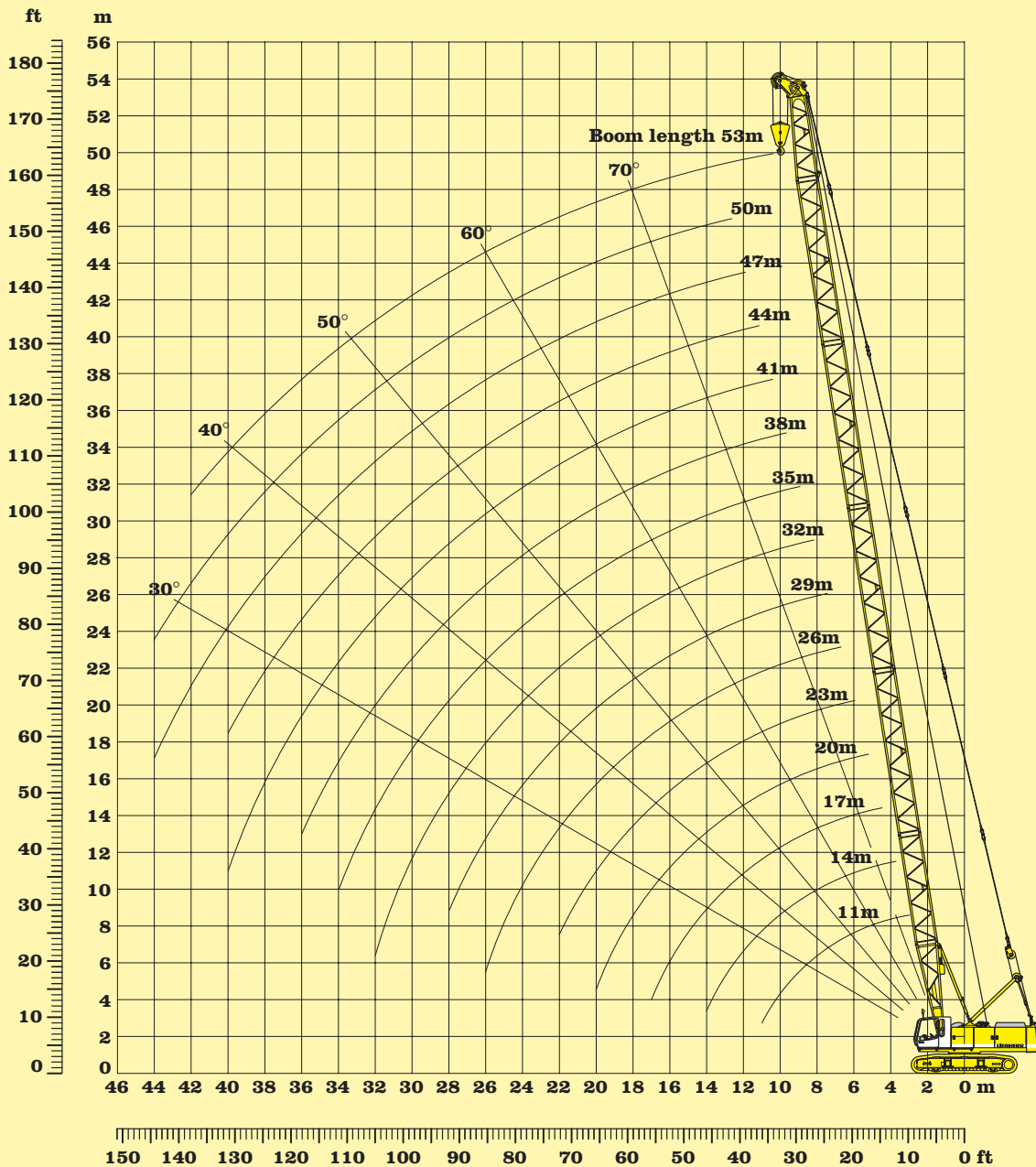
Max. line pull 2 x 50 kN. Rope diameter: 18 mm

Max. line speed: 45 m/min.

Counterweight lifting with boom hoist.

Technical Description

12.3 t Counterweight



The following equipment is required:

- Basic machine with 800 mm track shoes
- A-frame
- Pulley block
- Boom foot 5.5 m
- Boom extension 3 m tubular steel
- Boom extension 6 m tubular steel
- Boom extension 9 m tubular steel
- Boom head 5.5 m with 2 + 3 pulleys
- Stay ropes according to boom length
- Main winches 2 x 12 tonnes
- Hoisting limit switch
- Load moment limitation
- Corresponding hook block optional

Remarks:

1. The lifting capacities are valid for wide track.
2. The lifting capacities stated do not exceed 75 % of the tipping load.
3. The lifting capacities are indicated in metric tons with unlimited swing (360 degrees).
4. The weight of the lifting device must be deducted to arrive at the net lifting capacity.
5. Working radii are measured from centre of swing.
6. Crane standing on firm, horizontal ground.
7. Indicated values on load chart are affected by off-lead operation, wind speeds, load under slew and stop/go movements.

Crane configuration

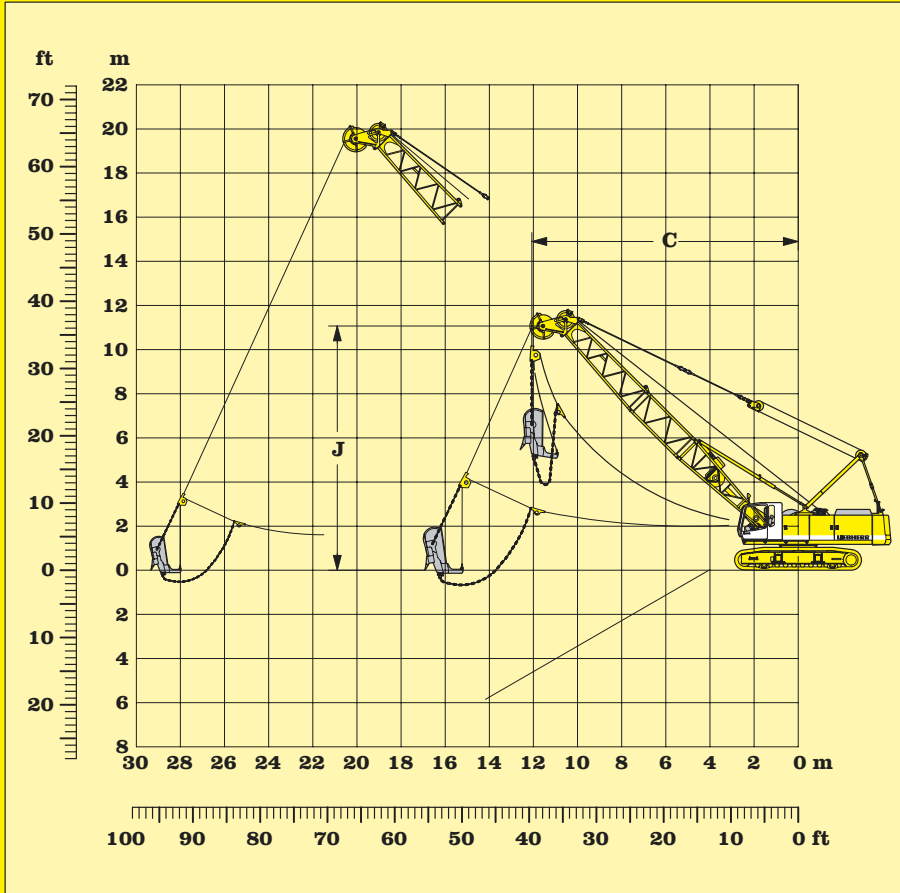
Capacities in metric tons for boom lengths from 11 m to 53 m:											Counterweight 12.3 t				
Boom length	11 m	14 m	17 m	20 m	23 m	26 m	29 m	32 m	35 m	38 m	41 m	44 m	47 m	50 m	53 m
Radius in (m)	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t
3.5	60.0														
4	49.9	45.4													
4.5	47.3	43.8	38.6												
5	39.2	39.2	37.4	34.6											
5.5	33.4	33.4	33.4	33.3	31.0	28.8									
6	29.1	29.0	29.0	29.0	28.9	28.0	25.9								
6.5	25.7	25.7	25.6	25.6	25.5	25.4	25.2	23.5							
7	23.0	23.0	22.9	22.9	22.8	22.7	22.6	22.6	21.2						
7.5	20.8	20.8	20.7	20.7	20.6	20.7	20.4	20.4	19.3	17.9					
8	19.0	19.0	18.9	18.8	18.7	18.7	18.6	18.6	18.5	17.5	16.1	14.9			
9	16.1	16.1	16.0	15.9	15.8	15.7	15.6	15.7	15.6	15.5	15.4	14.2	11.6	9.4	
10	13.9	13.9	13.8	13.8	13.6	13.6	13.5	13.5	13.4	13.3	13.2	13.1	10.6	8.6	7.0
11	12.2	12.2	12.1	12.0	12.0	11.9	11.8	11.8	11.7	11.6	11.5	11.4	9.8	7.9	6.5
12		10.9	10.8	10.7	10.6	10.5	10.4	10.4	10.3	10.2	10.1	10.0	9.1	7.3	6.0
13		9.8	9.7	9.6	9.5	9.4	9.3	9.3	9.2	9.1	9.0	8.9	8.5	6.9	5.6
14		8.8	8.7	8.7	8.6	8.5	8.4	8.4	8.3	8.2	8.1	8.0	7.9	6.5	5.2
15			8.0	7.9	7.8	7.7	7.6	7.6	7.5	7.4	7.3	7.2	7.1	6.1	4.9
16			7.3	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.6	6.5	6.4	5.7	4.6
17			6.7	6.6	6.5	6.4	6.3	6.3	6.2	6.1	6.0	5.9	5.8	5.4	4.3
18				6.1	6.0	5.9	5.8	5.8	5.7	5.6	5.5	5.4	5.3	5.1	4.0
19				5.7	5.6	5.5	5.4	5.4	5.3	5.2	5.1	5.0	4.9	4.7	3.8
20				5.3	5.2	5.1	5.0	5.0	4.9	4.8	4.7	4.5	4.4	4.3	3.6
22					4.5	4.4	4.3	4.3	4.2	4.0	4.0	3.9	3.8	3.6	3.2
24						3.8	3.7	3.7	3.6	3.5	3.4	3.3	3.2	3.0	2.9
26						3.4	3.2	3.3	3.1	3.0	2.9	2.8	2.7	2.5	2.4
28							2.9	2.9	2.7	2.6	2.5	2.4	2.2	2.1	2.0
30								2.5	2.4	2.3	2.1	2.0	1.9	1.8	1.6
32								2.2	2.1	1.9	1.8	1.7	1.6	1.4	1.3
34									1.8	1.7	1.5	1.4	1.3	1.2	1.0
36										1.4	1.3	1.2	1.0	0.9	0.8
38											1.1	0.9	0.8	0.7	0.6
40												0.9	0.8	0.6	0.4
42													0.6	0.5	0.3
44														0.3	0.2

The necessary hoist rope reeving arrangement has to be provided according to the load diagram in the cabin.

Optimal boom configuration for boom lengths between 11 m and 53 m:																
	Length	Number of boom extensions														
Boom foot	5.5 m	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Boom extension	3.0 m		1			1			1			1			1	
Boom extension	6.0 m			1			1			1			1			1
Boom extension	9.0 m				1	1	1	2	2	2	3	3	3	4	4	4
Boom head	5.5 m	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Boom length		11 m	14 m	17 m	20 m	23 m	26 m	29 m	32 m	35 m	38 m	41 m	44 m	47 m	50 m	53 m

Load diagram for crane configuration

12.3 t counterweight



The following equipment is required:

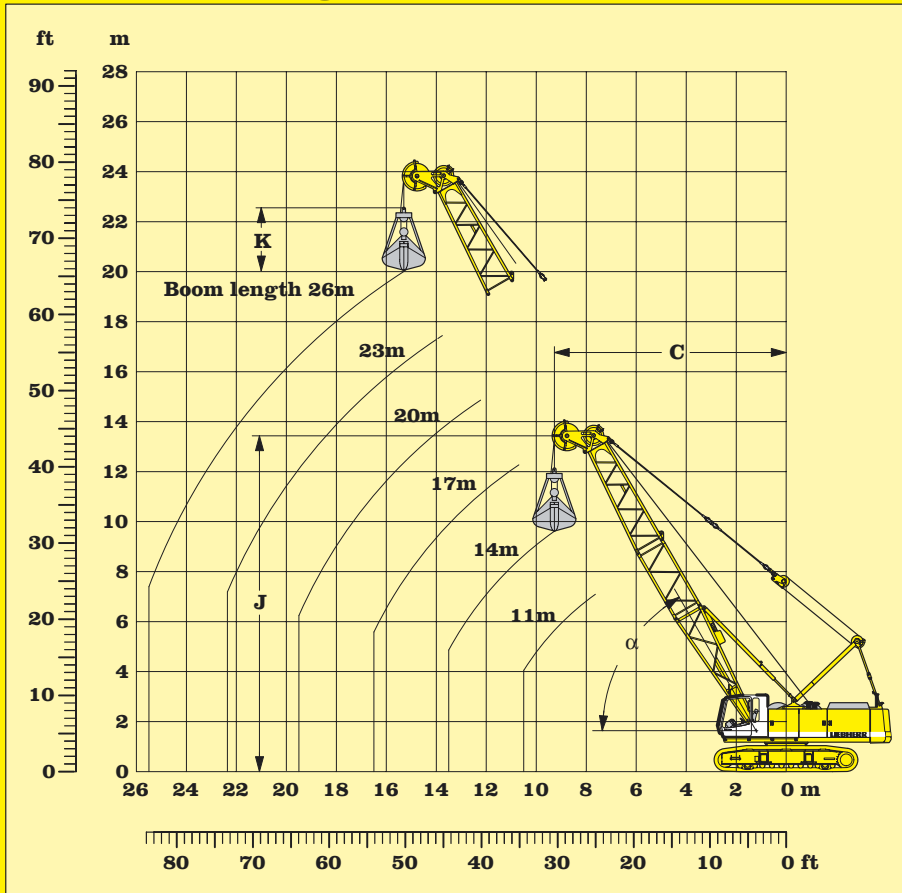
- Basic machine with 800 mm track shoes
- Second swing drive with free swing (optional)
- A-frame
- Boom foot 5.5 m
- Boom extension 3 m tubular steel
- Boom extension 6 m tubular steel
- Boom extension 9 m tubular steel
- Boom head 5.5 m with 1 + 1 pulley (optional)
- Main winches 2 x 12 tonnes
- Drag rope should be 2 mm below nominal diameter
- Fair lead (optional)
- Ropes (optional)
- Dragline bucket (optional)

Capacities in metric tons for boom lengths from 14 m to 26 m:										Counterweight 12.3 t					
Boom length	14 m			17 m			20 m			23 m			26 m		
	C	J	t	C	J	t	C	J	t	C	J	t	C	J	t
α°	m	m	t	m	m	t	m	m	t	m	m	t	m	m	t
45	12.0	11.1	11.1	14.0	13.2	8.8	16.2	15.3	7.2	18.3	17.4	6.0	20.5	19.6	5.0
40	12.8	10.2	10.2	15.0	12.1	8.1	17.4	14.1	6.6	19.6	16.0	5.5	22.0	17.9	4.5
35	13.5	9.3	9.5	15.9	11.0	7.5	18.4	12.7	6.1	20.8	14.5	5.0	23.3	16.2	4.2
30	14.0	8.3	8.9	16.7	9.8	7.1	19.3	11.3	5.7	21.8	12.8	4.7	24.4	14.3	3.9
Content of dragline bucket															
cu.yd.	2 1/2			2 1/2			2 1/2			2			1 1/2		
m ³	2.7			2.3			1.9			1.5			1.2		

Max. capacities in metric tons do not exceed 75 % of tipping load

Dragline equipment

12.3 t counterweight



The following equipment is required:

- Basic machine with 800 mm track shoes
- A-frame
- Boom foot (5.5 m)
- Boom extension 3 m tubular steel
- Boom extension 6 m tubular steel
- Boom extension 9 m tubular steel
- Boom head 5.5 m with 2 + 3 pulleys
- Stay ropes according to boom length
- Main winches 2 x 12 tonnes
- Tagline winch
- Corresponding ropes optional
- Clamshell optional
- Hoist limit switch
- Load moment limitation

Working diagram

- C = Radius / dumping radius
- J = Height of boom head sheave centre above ground level
- K = Length of clamshell (depending on type and capacity of bucket)

Capacities in metric tons for boom lengths from 11 m to 26 m:										Counterweight 12.3 t								
Boom length	11 m			14 m			17 m			20 m			23 m			26 m		
	C	J	t	C	J	t	C	J	t	C	J	t	C	J	t	C	J	t
α°	m	m	t	m	m	t	m	m	t	m	m	t	m	m	t	m	m	t
65	6.8	11.0	21.4	8.1	13.7	16.8	9.3	16.5	13.6	10.6	19.2	11.4	11.9	21.9	9.7	13.1	24.9	8.3
60	7.6	10.6	18.1	9.1	13.2	14.1	10.6	15.8	11.4	12.7	18.4	9.5	11.9	21.0	8.0	15.1	23.6	6.9
55	8.4	10.1	15.8	10.1	12.6	12.2	11.8	15.0	9.9	13.6	17.5	8.2	15.3	19.9	6.9	17.0	22.4	5.8
50	9.1	9.6	14.1	11.1	11.9	10.9	13.0	14.2	8.7	14.9	16.5	7.2	16.8	18.8	6.0	18.8	21.1	5.1
45	9.8	9.0	12.8	11.9	11.1	9.8	14.0	13.2	7.9	16.2	15.3	6.4	18.3	17.4	5.4	20.4	19.6	4.5
40	10.4	8.3	11.8	12.7	10.2	9.0	15.5	12.1	7.2	17.3	14.1	5.9	19.6	16.0	4.9	21.9	17.9	4.0
35	10.9	7.6	11.0	13.4	9.3	8.4	15.9	11.0	6.7	18.3	12.7	5.4	20.8	14.5	4.5	23.2	16.2	3.7
30	11.4	6.8	10.4	14.0	8.3	7.9	16.6	9.8	6.3	19.2	11.3	5.1	21.8	12.8	4.2	24.4	14.3	3.4
25	11.8	6.0	9.8	14.5	7.3	7.5	17.2	8.5	5.9	20.0	9.8	4.7	22.7	11.1	3.9	25.4	12.4	3.2

Max. capacities in metric tons do not exceed 66.7 % of tipping load.

Load diagram restricted by safety factors of standard ropes:

Winches	120 kN
Rope diameter	24 mm
Calc. breaking load	524 kN
1-rope clamshell	9.5 t
2-rope clamshell	14.1 t

Clamshell equipment

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