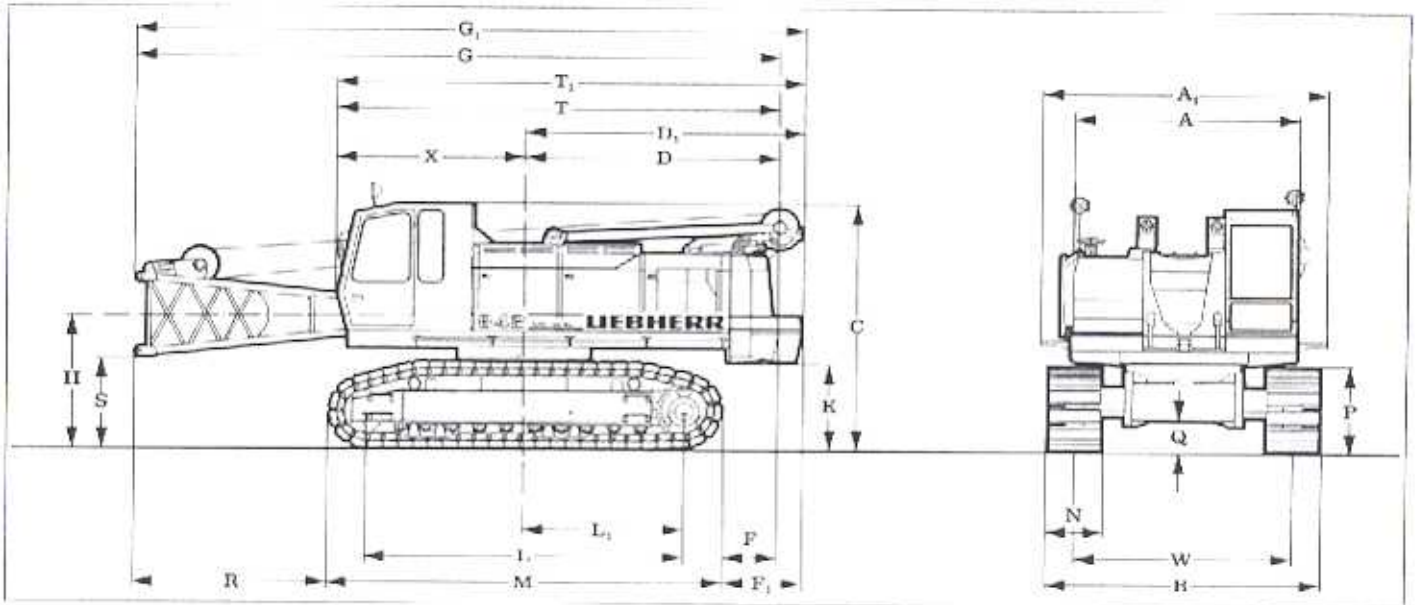


Technical Data Hydraulic Cable Excavator HS 842 Litronic[®]



Basic Machine



Dimensions

	mm				
A	Width of superstructure	3000/3300	R	Distance of horizontal boom foot to crawler	2850
A ₁	Width of superstructure with walk way	3840	S	Ground clearance of horizontal boom foot	1017
C	Clearance height of basic machine	3240	T	Length of basic machine	5815
D	Tail reach	3270	T ₁	Length of basic machine with 4.2 mt counterweight	6175
	Tail swing radius	3350	X	Distance from centre of rotation to end of cab	2545
D ₁	Tail reach with additional counterweight 4.2 mt	3630	N	Width of track shoes	700
	Tail swing radius with additional counterweight 4.2 mt	3705	W	Track width	2800
F	Distance between rear end of crawler and outside of counterweight	920	B	Crawler width	3500
F ₁	Distance between rear end of crawler and outside of add. counterweight	1280			
G	Overall length of superstructure with lowered A-frame	8430			
G ₁	Overall length of superstructure with lowered A-frame and add. counterweight	8790			
H	Ground clearance of boom foot pivot	1632			
K	Clearance under superstructure to ground level	1020			
L	Wheel base (center idler to center tumbler)	3830			
L ₁	Distance from center of rotation to center of tumbler	1915			
M	Length of crawlers	4700			
F	Height of crawlers	985			
Q	Ground clearance of crawler	500			

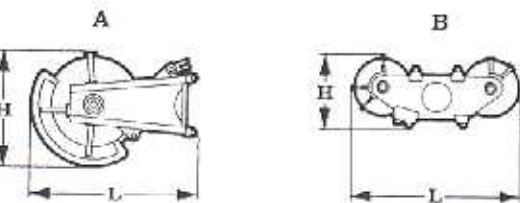
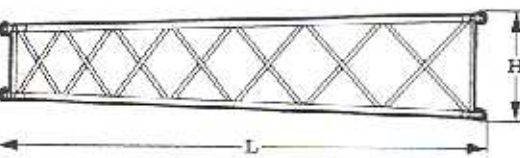
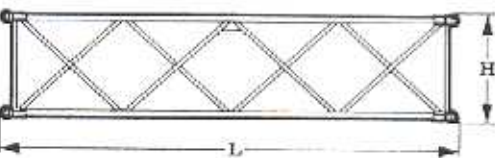
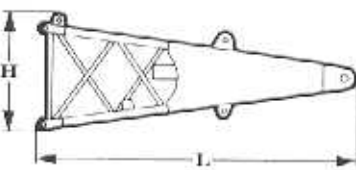
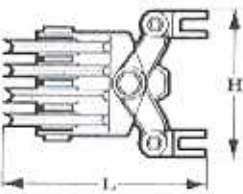
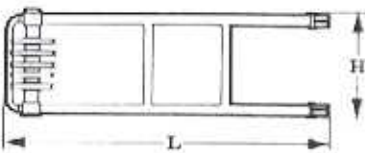
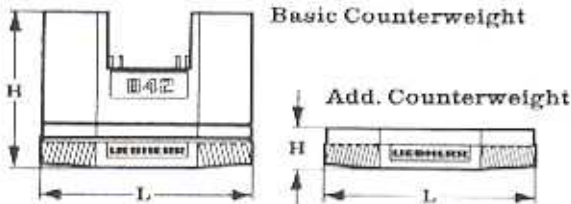
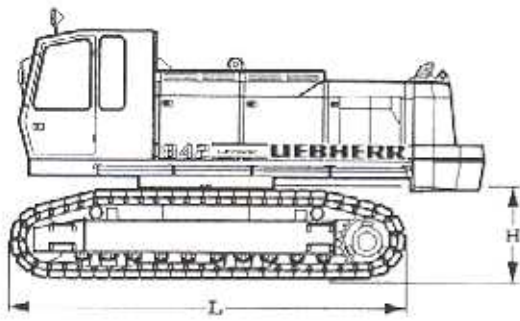
Operating Weight and Ground Pressure

The operating weight includes the basic machine with B5 crawler tracks, 2 main winches and 11 m HD-boom, consisting of A-frame, boom foot (4 m), boom head section (6.5 m), boom head (0.5 m) and 7.6 mt counterweight.

with 700 mm 3-web shoes: 37.6 mt - 0.65 kg/cm²

LIEBHERR

The Better Machine.



Basic Machine

with undercarriage and 7.6 mt counterweight

Shoes	mm	600	700	800
Weight	mt	33.5	33.9	34.3

Crawler Retracted

Shoes	mm	600	700	800
Width	mm	3400	3500	3600
Weight	kgs	9600	10000	10400
L = Length	mm	4700		
H = Height	mm	1050		

Counterweight

		Basic	Additional
Width	mm	595	720
Weight	kgs	7600	4200
L = Length	mm	3000	3000
H = Height	mm	1430	570

A-Frame

Width	mm	600
Weight	kgs	700
L = Length	mm	3420
H = Height	mm	1110

Sheave Frame

Width	480
Weight	300
L = Length	970
H = Height	750

Boom Foot Section

Width	mm	1180
Weight	kgs	960
L = Length	mm	4160
H = Height	mm	1230

Tubular Boom Extensions

		3 m	6 m
Width	mm	1120	1120
Weight	kgs	440	700
L = Length	mm	3100	6130
H = Height	mm	1120	1120

HD Boom Head Section 6.5 m

Width	mm	1120
Weight	kgs	790
L = Length	mm	6600
H = Height	mm	1120

Boom Head

		A	B
Width	mm	830	660
Weight	kgs	1010	860/970
L = Length	mm	2230	2100/2240
H = Height	mm	1300	870/950

Transport Dimensions and Weights.



Engine

Watercooled 6-cylinder-Liebherr-diesel engine D 906 T. Rating per DIN 6271: 132 kW (180 HP) at 2000 RPM.

Optional:

Watercooled V-8-Mercedes-Benz-diesel engine, type OM 442 A. Rating per DIN 6271: 243 kW (330 HP) at 1900 RPM.

Fuel tank capacity: 430 litres, continuous fuel consumption indication with emergency tank level indicator at approx. 40 l.



Hydraulic System

Four main pumps are driven by a distributor gear box. The axial piston displacement pumps work in a closed circuit supplying oil only when needed. A low loss pressure cut-off takes care of the pumps and saves energy.

Winch 1 and 2: Axial piston displacement pumps (swash plate design) 238 l/min. each.

Slewing gear: Axial piston displacement pump (swash plate design) 238 l/min.

Boom hoist: Axial piston displacement pump (swash plate design) 150 l/min.

Max. working pressure: 340 bar

Hydraulic oil tank: 290 l capacity.

Optional:

Possibility of re-direction boom pump flow to the swing gear for higher speed.

Additional hydraulic system to drive external equipment with hydrostatic power.



Winches 1 and 2

Winch options: 8 mt 12 mt 16 mt

Line pull (nominal load):	80 kN	120 kN	160 kN
Rope diameter:	20 mm	24 mm	26 mm
Rope drum diameter:	390 mm	500 mm	550 mm
Line speed 1st layer m/min.	0 - 150	0 - 112	0 - 80

Planetary gearbox in oil bath. Load support by hydraulic system. Additional protection through spring loaded multi disc brake (parking brake). In the freefall mode the clutch and brake function are working through a separate multi-disc brake.

The hoist and drag winches use variable oil motors controlled by high pressure. This allows the complete utilisation of the installed motorpower with partial loads through speed control.

In clamshell operation the oilmotors distribute the load on both winches and so synchronise the speed between them even when working in different cable layers.

Optional:

Crane winch: 80 kN (8 mt) - with multi-disc brake but without free fall device.



Swing Drive

Single row ball bearing with external tothing for lower tooth flank pressure. Fixed axial piston oil motor, planetary gearbox, spring loaded and hydraulically released multi disc brake, swing gear pinion.

A precision swing gear allows variable speed control with 3 selectable speed ranges free slow of superstructure is available which almost eliminates wear caused by moment force induced by diesel engine.

Optional:

Second swing gear.



Boom Hoist Drive

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

Max. line pull 2 x 50 kN (2 x 5 mt).

Rope diameter 18 mm, line speed 0 - 30 m/min.

Optional:

Pre selection switch for 2 speed ranges.



Crawler

Travel control is through axial piston motor, hydraulically released spring-loaded multi-disc brake, planetary gear box, maintenance free crawler tracks, hydraulic-type chain tensioning device, flat track- or 3-web shoes.

Driving speed 0 - 2.1 km/h

Optional:

2 speed oil motor for higher driving speeds.



Control System

Electric control impulses send are programed signals for hydraulic operation. The specially protected electronic components are designed for control lever (cross movement) the hard environment for this type of machine. Master control lever (cross movement) for swing and boom movements, double T-lever for winch 1 and 2 or crawlers. Electro-hydraulic continuous proportioning control for work and displacement motions.

Dragline only: Interlock control. Cinematic reversal energy for drag winch is transmitted to the hoist winch, when lifting full bucket to dump, thus saving brakes and energy.

Please ask for details of our patented automatic free fall device.

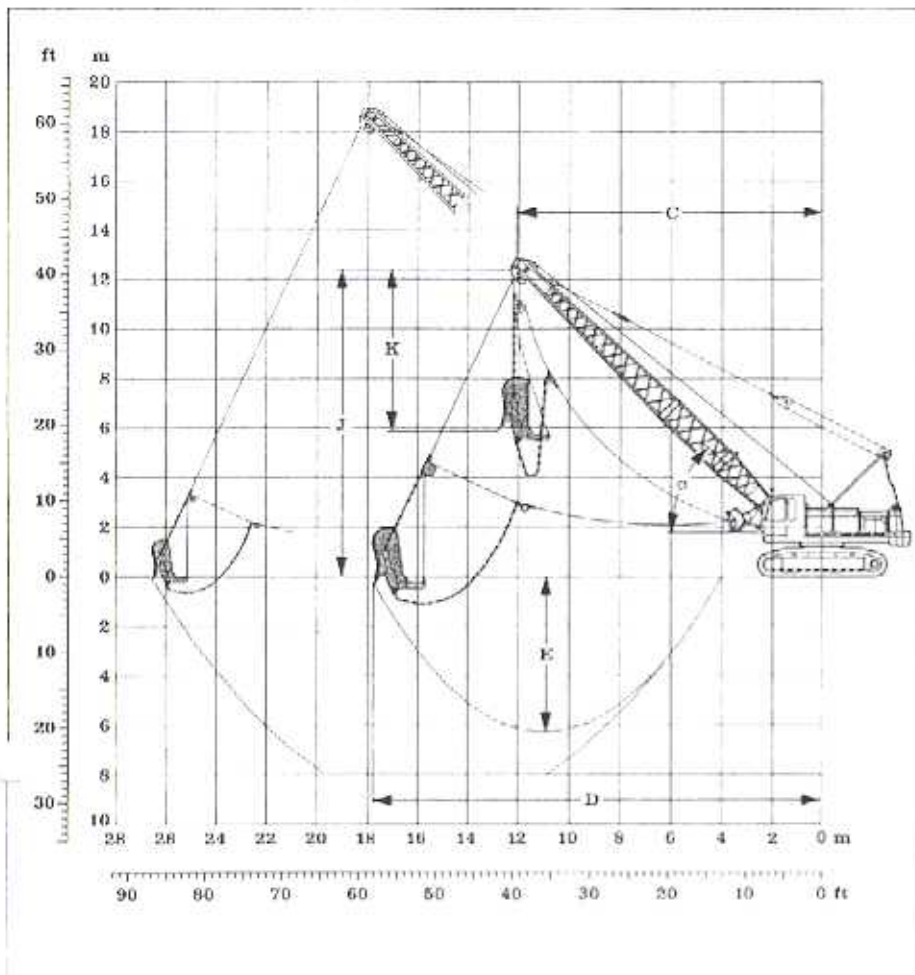


Equipment

- Tubular HD boom up to 32 m.
- Multi sheave HD boom head or dragline boom head.
- Dragline, clamshell or crane equipment.
- Attachments are possible for piling, drilling, oscillating equipment etc.
- For dragline operation a fairlead is attached to the boom foot to minimize cable wear out.

Technical Description

11.8 mt Counterweight



Scope of Delivery:

- Basic machine with corresponding track shoes
- Add. counterweight of 4.2 mt
- A-frame
- Boom foot
- Boom extension 3 m, tubular steel
- Boom extension 6 m, tubular steel
- Boom head extension 6.5 m
- Boom head
- Stay ropes according to boom length
- Main winches according to specification
- Corresponding fair lead
- Corresponding cables
- Dragline bucket

Digging Diagram:

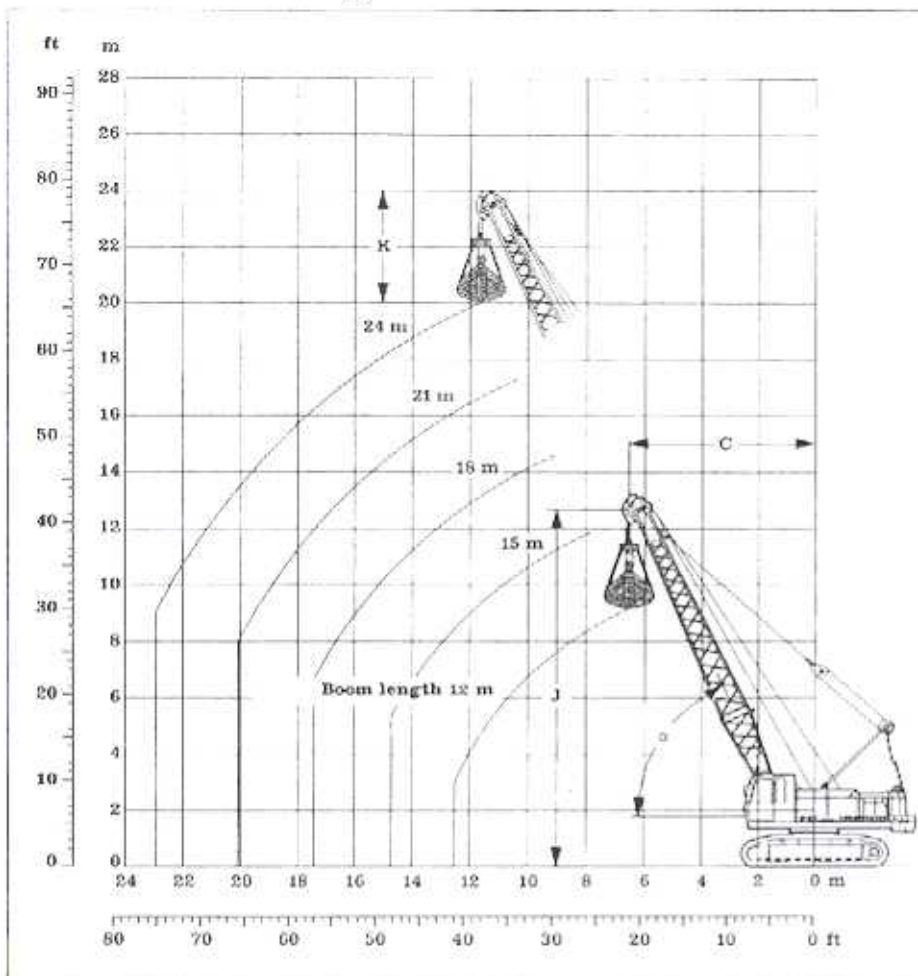
- C = Radius / dumping radius
- D = Max. digging radius
= approx. $C + 1/3$ to $1/2$ of $J - K$
- E = Digging depth = approx. 40 % at 50 % of C
- J = Height of boom head sheave center above ground level
- K = Length of dragline bucket (depending on type and capacity of bucket)

Boom length: 15 m to 24 m			Counterweight: 11.8 mt									
α°	15 m			18 m			21 m			24 m		
	C m	J m	t	C m	J m	t	C m	J m	t	C m	J m	t
45	12.1	12.3	5.4	14.2	14.4	4.2	16.3	16.5	3.2	18.4	18.6	2.4
40	13.0	11.3	4.9	15.3	13.2	3.7	17.6	15.2	2.8	19.9	17.1	2.1
35	13.8	10.3	4.5	16.2	12.0	3.4	18.7	13.7	2.5	21.1	15.4	1.8
30	14.5	9.2	4.2	17.1	10.7	3.1	19.7	12.2	2.3	22.3	13.7	1.6
25	15.1	8.0	4.0	17.8	9.3	2.9	20.5	10.5	2.1	23.2	11.8	1.5
Content of dragline bucket.												
cu.yd.	3			1 1/2			1 1/4			1		
m ³	1.58			1.15			0.98			0.76		

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

Dragline Equipment

11.8 mt Counterweight



Scope of Delivery:

- Basic machine with corresponding track shoes
- Add. counterweight of 4.2 mt
- A-frame
- Boom foot
- Boom extension 3 m, tubular steel
- Boom extension 6 m, tubular steel
- Boom head extension 6.5 m
- Boom head
- Stay ropes according to boom length
- Main winches according to specification
- Corresponding cables
- Clamshell
- 4-rope clamshell on request
- Load moment limiter

Digging Diagram:

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

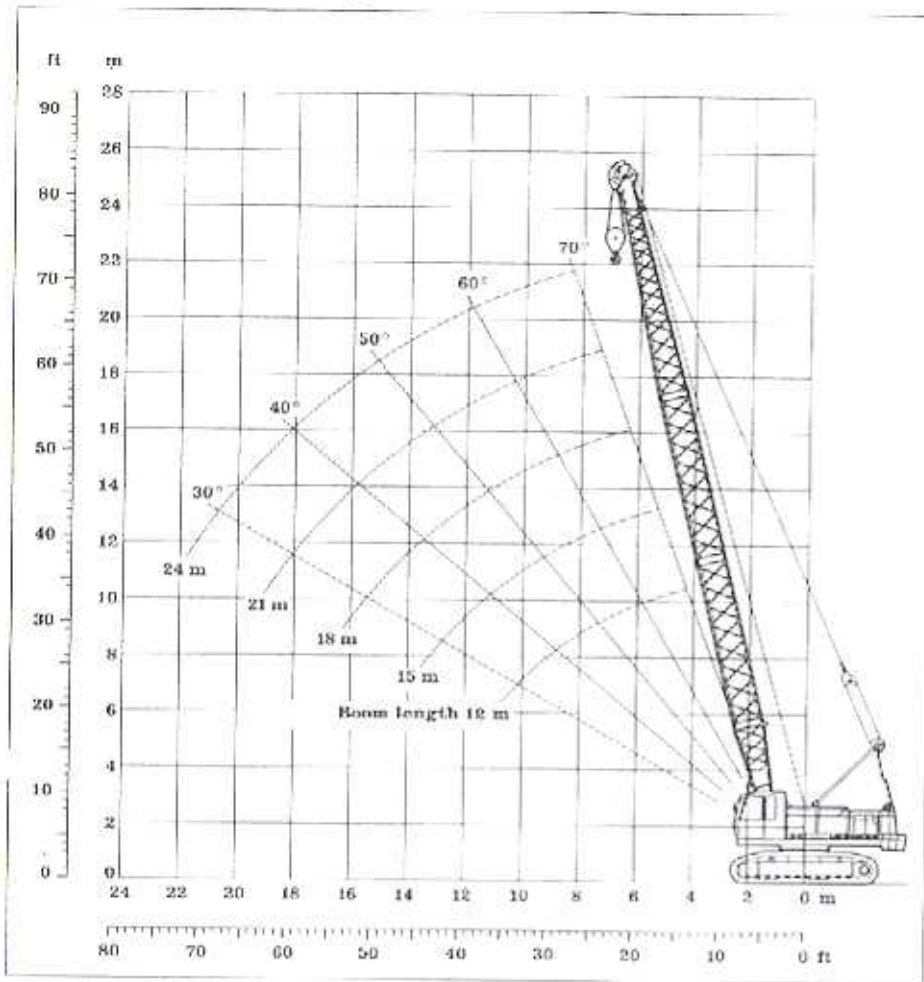
Boom length: 12 m to 24 m			Counterweight: 11.8 mt												
α°	12 m			15 m			18 m			21 m			24 m		
	C	J	t	C	J	t	C	J	t	C	J	t	C	J	t
	m	m	t	m	m	t	m	m	t	m	m	t	m	m	t
65	6.5	12.7	11.6	7.8	15.4	9.0	9.1	18.1	7.1	10.3	20.8	5.8	11.6	23.5	4.7
60	7.5	12.1	9.6	9.0	14.8	7.4	10.5	17.4	5.8	12.0	20.0	4.6	13.5	22.6	3.7
55	8.4	11.5	8.2	10.1	14.1	6.3	11.8	16.5	4.9	13.5	19.0	3.9	15.2	21.4	3.0
50	9.2	10.9	7.2	11.1	13.3	5.5	13.0	15.6	4.2	15.0	17.9	3.2	16.9	20.2	2.5
45	10.0	10.2	6.5	12.1	12.4	4.8	14.2	14.5	3.7	16.0	16.6	2.9	18.4	18.7	2.2
40	10.7	9.4	5.9	13.0	11.4	4.4	15.3	13.3	3.3	17.6	15.3	2.5	19.9	17.2	1.9
35	11.3	8.6	5.4	13.8	10.4	4.0	16.2	12.1	3.0	18.7	13.8	2.3	21.1	15.5	1.6
30	11.9	7.7	5.1	14.5	9.3	3.7	17.1	10.8	2.8	19.7	12.3	2.0	22.3	13.8	1.5
25	12.4	6.7	4.8	15.1	8.1	3.5	17.8	9.4	2.6	20.5	10.6	1.9	23.2	11.9	1.3

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

- Max. lifting capacities:
- 7.5 mt with 120 kN winch (12 mt)
 - 9.0 mt with 160 kN winch (16 mt)
 - 5.2 mt with 80 kN winch (8 mt)

Clamshell Equipment

11.8 mt Counterweight



Scope of Delivery:

- Basic machine with corresponding track shoes
- Add. counterweight of 4.2 mt
- A-frame
- Boom foot
- Boom extension 3 m, tubular steel
- Boom extension 6 m, tubular steel
- Boom head extension 6.5 m
- Boom head
- Stay ropes according to boom length
- Main winches according to specification
- Corresponding hook block
- Load moment limiter

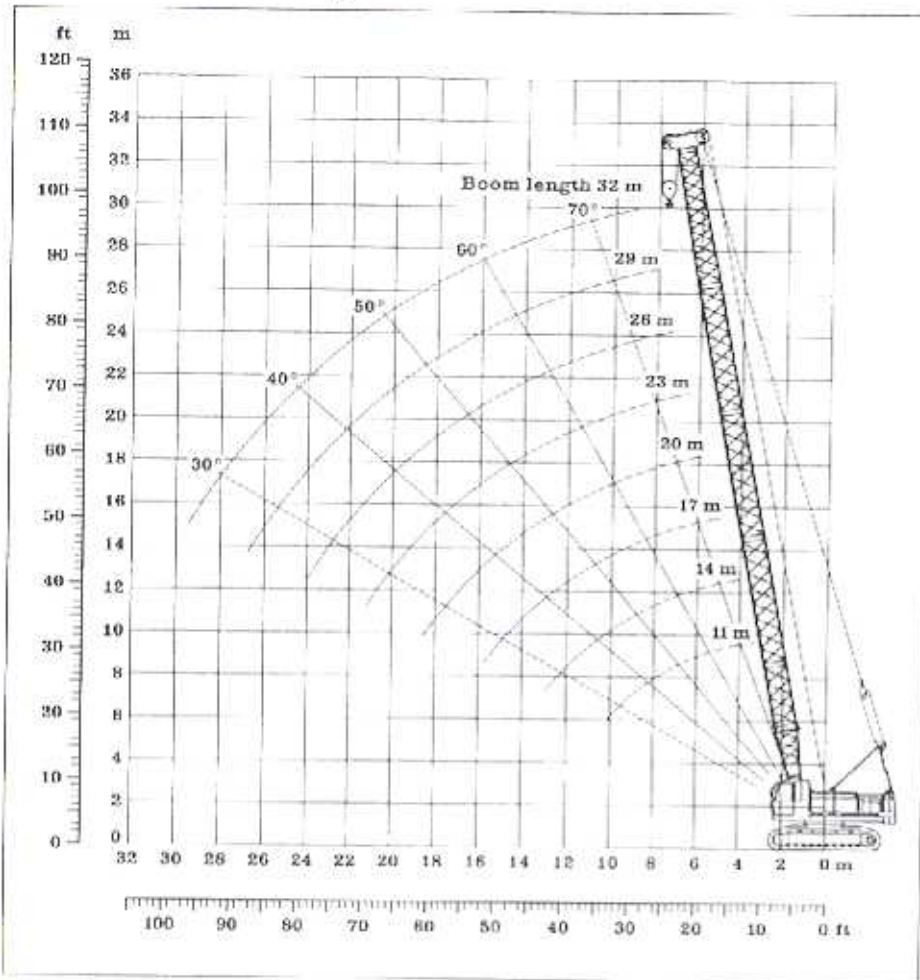
Remarks:

1. The lifting capacities stated do not exceed 75 % of the tipping load.
2. The lifting capacities are indicated in metric tons with unlimited swing (360 degrees).
3. The weight of the lifting device must be deducted to arrive at the net load lifting capacity.
4. Working radii are measured from center of swing.
5. Machine standing on firm, level and uniform ground.

Radius m	Boom length m				
	12	15	18	21	24
4.5	22.5				
5	19.1	19.0			
5.5	16.6	18.5	15.5		
6	14.7	14.5	14.4		
6.5	13.1	12.9	12.8	13.7	
7	11.8	11.7	11.5	11.4	11.2
7.5	10.7	10.8	10.4	10.3	10.1
8	9.8	9.7	9.5	9.4	9.2
9	8.3	8.2	8.1	7.9	7.8
10	7.3	7.1	6.9	6.8	6.6
11	6.3	6.2	6.1	5.9	5.7
12	5.8	5.5	5.3	5.2	5.0
13		4.9	4.7	4.6	4.4
14		4.4	4.2	4.1	3.9
15		4.0	3.8	3.7	3.5
16			3.5	3.3	3.1
17			3.1	3.0	2.8
18			2.9	2.7	2.5
19				2.4	2.3
20				2.2	2.0
22					1.6

Lifting Capacity with Dragline Boom Head

7.6 mt Counterweight



Scope of Delivery:

- Basic machine with corresponding track shoes
- A-frame
- Boom foot
- Boom extension 3 m, tubular steel
- Boom extension 6 m, tubular steel
- Boom head extension 6.5 m
- Boom head
- Stay ropes according to boom length
- Main winches according to specification
- Corresponding hook block
- Load moment limiter

Remarks:

1. The lifting capacities stated do not exceed 75 % of the tipping load.
2. The lifting capacities are indicated in metric tons with unlimited swing (360 degrees).
3. The weight of the lifting device must be deducted to arrive at the net load lifting capacity.
4. Working radii are measured from center of swing.
5. Machine standing on firm, level and uniform ground.

Radius m	Boom length m							
	11	14	17	20	23	26	29	32
3.5	27.1							
4	21.5							
4.5	17.8	17.7						
5	15.1	15.0	14.9					
5.5	13.0	12.9	12.8	12.7				
6	11.5	11.4	11.3	11.1	11.0			
6.5	10.2	10.1	10.0	9.9	9.7	9.6		
7	9.2	9.1	8.9	8.8	8.7	8.6	8.4	
7.5	8.3	8.2	8.1	7.9	7.8	7.7	7.6	7.4
8	7.6	7.5	7.3	7.2	7.1	6.9	6.8	6.7
9	6.4	6.3	6.2	6.0	5.9	5.8	5.6	5.5
10	5.5	5.4	5.2	5.1	5.0	4.8	4.7	4.6
11	4.8	4.7	4.5	4.4	4.3	4.1	4.0	3.8
12	4.2	4.1	3.9	3.8	3.7	3.5	3.4	3.2
13		3.6	3.5	3.3	3.2	3.1	2.9	2.7
14		3.2	3.1	2.9	2.8	2.6	2.5	2.3
15			2.7	2.6	2.4	2.2	2.1	1.9
16			2.4	2.3	2.1	1.9	1.8	1.6
17			2.1	2.0	1.8	1.6	1.5	1.3
18				1.7	1.6	1.4	1.2	1.1
19				1.5	1.4	1.2	1.0	0.8
20				1.3	1.3	1.0	0.8	0.6
22					0.8	0.7	0.5	0.3
24					0.5	0.4	0.2	0.1

Lifting Capacity with Multi Sheave HD Boom Head