

HTACHI
EX225 USR-LC
Telescopic boom adapter
Soosan SCS1516
Serial number: 14PW011610

Counterweight 2.6 t

Load charts
Euro-Standard

Main boom

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Utrecht, 2015.02.20

Revision 0

Engineer:

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1 GENERAL

1.1 Crane identification

manufacturer	HITACHI
typ	EX225 USR-LC
year built	2001/2006
serial number	14PW011610
Particulars	telescopic boom: SC S1516 Soosan adapter: Avezaat

Crawlers

Crawler path	2.39 m
Crawler shoe size	0.60 m
Overall crawler length	4.46 m

Counterweight

Upper structure	17.5 t 2 parts
Lower structure/Car body	3.8 t (fixed)

Cable breaking load

main hoist 1	min. 181 kN; 14 mm; max. 6 parts
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Length

main boom	6.2 m – (3.78) – 25.1 m
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Reeving

Reeving parts	1	2	3	4	5
Max. main hoist [t]	3.5	7.0	10.4	13.8	15.0

1.2 Standard

The crane classification is in accordance with the following European rules and legislations:

- 1 Crane type: mobile crane for hook duty
- 2 Construction according DIN 15018/3
- 3 Stability according EN13000 (2004)
- 4 Cables according ISO 4308 & ISO 8087*.
- 5 Maximum allowable wind area 1.2 m² per ton rated load.

*) Due to the limited sheave size is an increased inspection regime for all cables (main hoist and telescopic) is necessary.

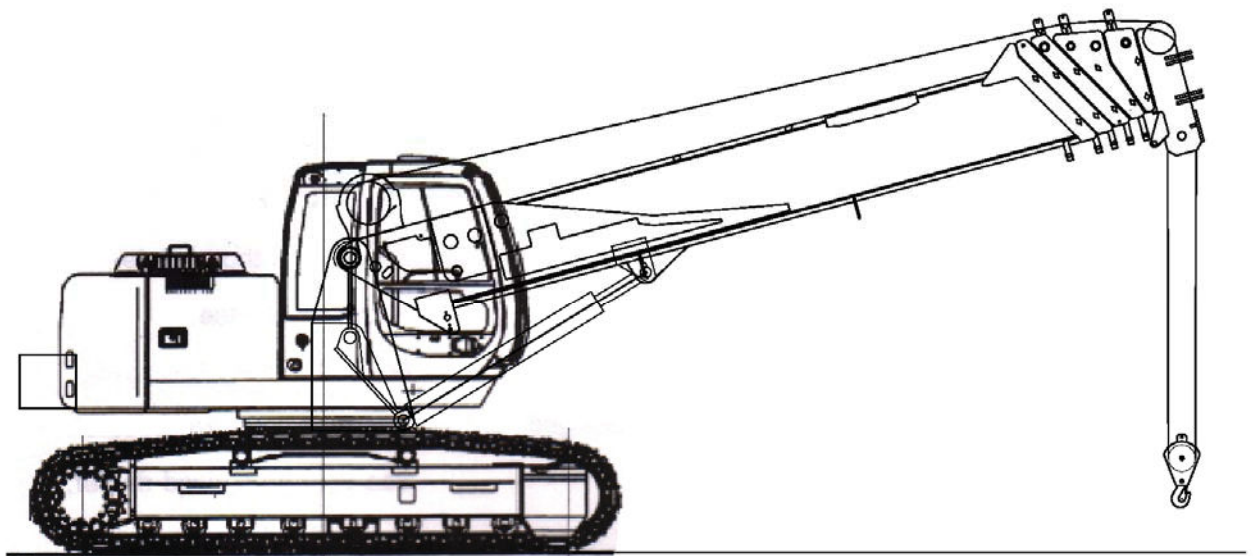
1.3 Application

- 1 Ratings in ton (t) of 1000 kg (2205 lbs).
- 2 Load by the weight of hook block, shackles, spreaders etc. to be considered as part of the Load. Weight of reeved parts is not part of the load.
- 3 Rating charts are for 360° slewing range.
- 4 Crawler side frames must be fully extended.
- 5 Ratings above the thick line are limited by structural strength. Ratings under the line or without lines are limited by stability.
- 6 Values marked with * require reeving with 6 parts.
- 7 Ratings are for operation on a firm and level subsoil, not exceeding 1% gradient. In many cases load spreading mats should be applied. Special care should be taken that the load mats are properly connecting.
- 8 Operation is only allowed with combinations of boom length and radius shown in the rating charts.
- 10 Careful crawling is permitted under the conditions mentioned preceding the load charts.

1.4 Wind

- 1 Permissible wind speeds for lifting and crawling are mentioned in the load charts of the main boom in §2.4
- 2 The crane design is based on a maximum load wind area of 1.2 m² per ton rated load. For wind area's larger than rated load times 1.2, lifting is not allowed for full rated load at this wind speed. A proper reduction must be applied. In special cases the dealer must be consulted. moet worden toegepast. In speciale gevallen moet de leverancier worden geraadpleegd.

2 MAIN BOOM



2.1 General conditions

2.1.1 Erection main boom

Erection of main boom is allowed provided the following conditions have been met:

- 1 All conditions assume crawler side frames fully extended.
- 2 Load carrying devices must be on the ground during boom erection.
- 3 Erection overside or 360°: maximum 21.3 m
- 4 Erection over front maximum 25.1 m

2.1.2 Crawling

Careful crawling with load is allowed according to the restrictions:

- 1 Boom in crawling direction.
- 2 Surface must be stable and level.
- 3 Load secured from swinging.
- 4 During crawling no other crane movements are allowed.
- 5 Crawling with 100% of rated load is not allowed.
- 6 Crawling with 75 % of rated capacity is allowed for boom lengths not exceeding 13.8 m.
- 7 Crawling with 50 % of rated capacity is allowed for boom lengths not exceeding 17.5 m.
- 8 Crawling with any load is not allowed for booms over 21.3 m.
- 9 Crawling without load is allowed for boom angles of approx. 70 deg to horizontal.
- 10 Crawling speed must be very slow (creeping; 0.4 m/s).
- 11 Lifted height of load above surface may not exceed 0.5 m.
- 12 The upper structure must be secured from swinging.

2.1.3 Complementary conditions

- 1 Reeving main hoist according § **Fout! Verwijzingsbron niet gevonden.**2.
- 2 Due to the limited sheave size of the main hoist and lead sheave an increased inspection regime for all cables (main hoist and telescopic) is necessary.

2.2 Load charts main boom



Hita c h i EX225 USR-IC; Telescopic boom adapter SCS1516

serial number: 14WP011610

Ratings 360°; according Euro-standard; counterweight 2.6 t + 3.8 t

Main boom boom length

radius m	6.2 m			10.0 m			13.8 m			17.5 m		
	wind 14 m/s 4 parts			wind 14 m/s 4 parts			wind 14 m/s 4 parts			wind 14 m/s 4 parts		
	load t	boom angle °	top m	load t	boom angle °	top m	load t	boom angle °	top m	load t	boom angle °	top m
2.0	15.0 *	79.9	8.2									
2.5	13.6	75.0	8.0	9.6	80.9	12.0						
3.0	12.2	70.0	7.8	8.7	77.9	11.8						
3.5	12.1	64.8	7.5	8.1	74.9	11.7	6.4	79.2	15.6			
4.0	11.9	59.2	7.2	7.6	71.9	11.5	5.8	77.0	15.5	5.1	79.8	19.3
4.5	10.6	53.1	6.7	7.2	68.8	11.3	5.5	74.9	15.3	4.8	78.2	19.2
5.0	8.9	46.4	6.2	6.8	65.5	11.0	5.1	72.7	15.2	4.4	76.5	19.0
5.5	7.7	38.6	5.5	6.6	62.2	10.7	4.9	70.5	15.0	4.2	74.8	18.9
6.0	6.7	28.4	4.5	6.3	58.8	10.4	4.7	68.2	14.7	4.0	73.0	18.7
6.5				5.9	55.2	10.0	4.5	65.9	14.5	3.8	71.3	18.5
7.0				5.2	51.4	9.6	4.3	63.5	14.2	3.6	69.5	18.3
7.5				4.7	47.4	9.1	4.2	61.1	13.9	3.5	67.7	18.1
8.0				4.2	43.1	8.5	4.0	58.6	13.6	3.4	65.9	17.9
9.0				3.5	32.8	7.0	3.4	53.5	12.9	3.1	62.2	17.3
10.0				2.9	16.3	4.3	2.8	47.8	11.9	2.7	58.3	16.7
11.0							2.4	41.6	10.8	2.3	54.3	16.0
12.0							2.0	34.4	9.4	2.0	50.0	15.1
13.0							1.7	25.1	7.4	1.7	45.4	14.2
14.0										1.4	40.4	13.0
15.0										1.2	34.7	11.6
16.0										1.0	27.9	9.8
18.0												
20.0												
22.0												
24.0		*) Use 5 parts for loads above 13.8 t										
26.0												
IMCcode boom	00			01			02			03		

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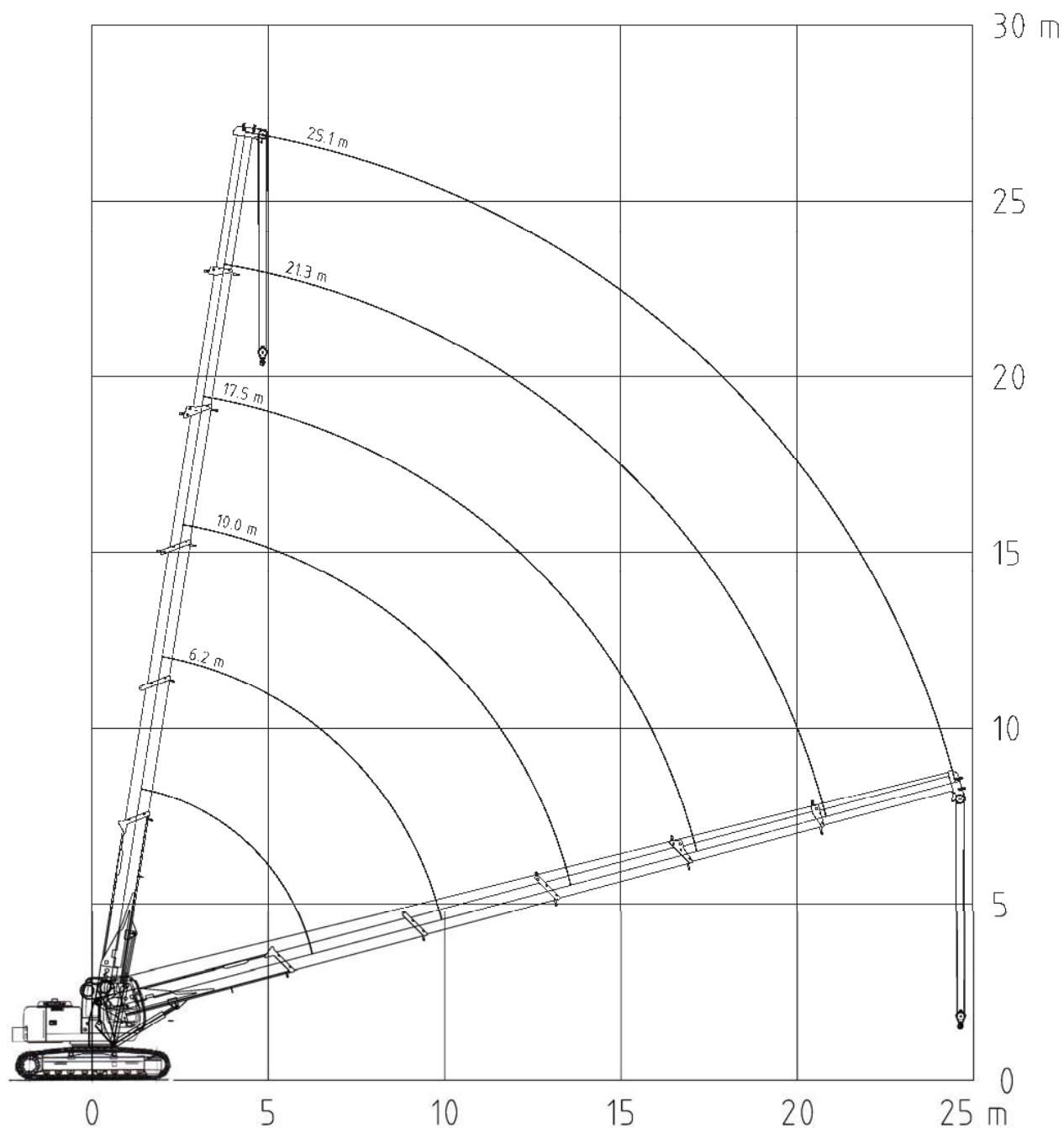
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Main boom boom length

radius m	21.3 m			25.1 m								
	wind 14 m/s 4 parts			wind 14 m/s 4 parts								
	load t	boom angle °	top m	load t	boom angle °	top m						
4.5	4.4	80.3	23.1									
5.0	4.1	78.9	23.0	3.7	80.6	26.8						
5.5	3.8	77.5	22.8	3.5	79.5	26.7						
6.0	3.6	76.2	22.7	3.2	78.3	26.6						
6.5	3.4	74.8	22.6	3.1	77.1	26.5						
7.0	3.3	73.3	22.4	2.9	75.9	26.4						
7.5	3.2	71.9	22.2	2.8	74.8	26.2						
8.0	3.0	70.5	22.0	2.7	73.6	26.1						
9.0	2.8	67.6	21.6	2.5	71.1	25.7						
10.0	2.6	64.6	21.1	2.3	68.7	25.3						
11.0	2.2	61.5	20.6	2.1	66.2	24.9						
12.0	1.9	58.3	19.9	1.8	63.6	24.4						
13.0	1.6	55.0	19.2	1.5	61.0	23.8						
14.0	1.4	51.6	18.4	1.3	58.3	23.2						
15.0	1.2	48.0	17.5	1.1	55.5	22.5						
16.0	1.0	44.1	16.5	0.9	52.7	21.7						
18.0	0.7	35.3	13.9	0.6	46.5	19.9						
20.0				0.4	39.6	17.6						
22.0												
24.0												
26.0												
28.0												
30.0												
32.0												
34.0												
36.0												
LMFcode boom	04			05								

2.3 Working range main boom



2.4 Permissible wind speed main boom

Boom length [m]	Working wind [m/s]	Lower boom at [m/s]
6.2	14	28
10.0	14	28
13.8	14	28
17.5	14	28
21.3	14	28
25.1	14	28