ZOOMLION

ZOOMLION ZCC18000 (1600t) CRAWLER CRANE

TECHNICAL SPECIFICATIONS

ZCC18000/27Y

2023

Zoomlion Heavy Industry Science & Technology Co.,Ltd.

Zoomlion ZCC18000 (1600t) Crawler Crane

Technical Specifications

ZCC18000/27Y

1. Overall dimensions and main technical parameters

2. Lifting performance

3. Technical instruction

4. Transport dimensions and weights of major components

5. Working conditions and matters needing attention

5.1 Working environment

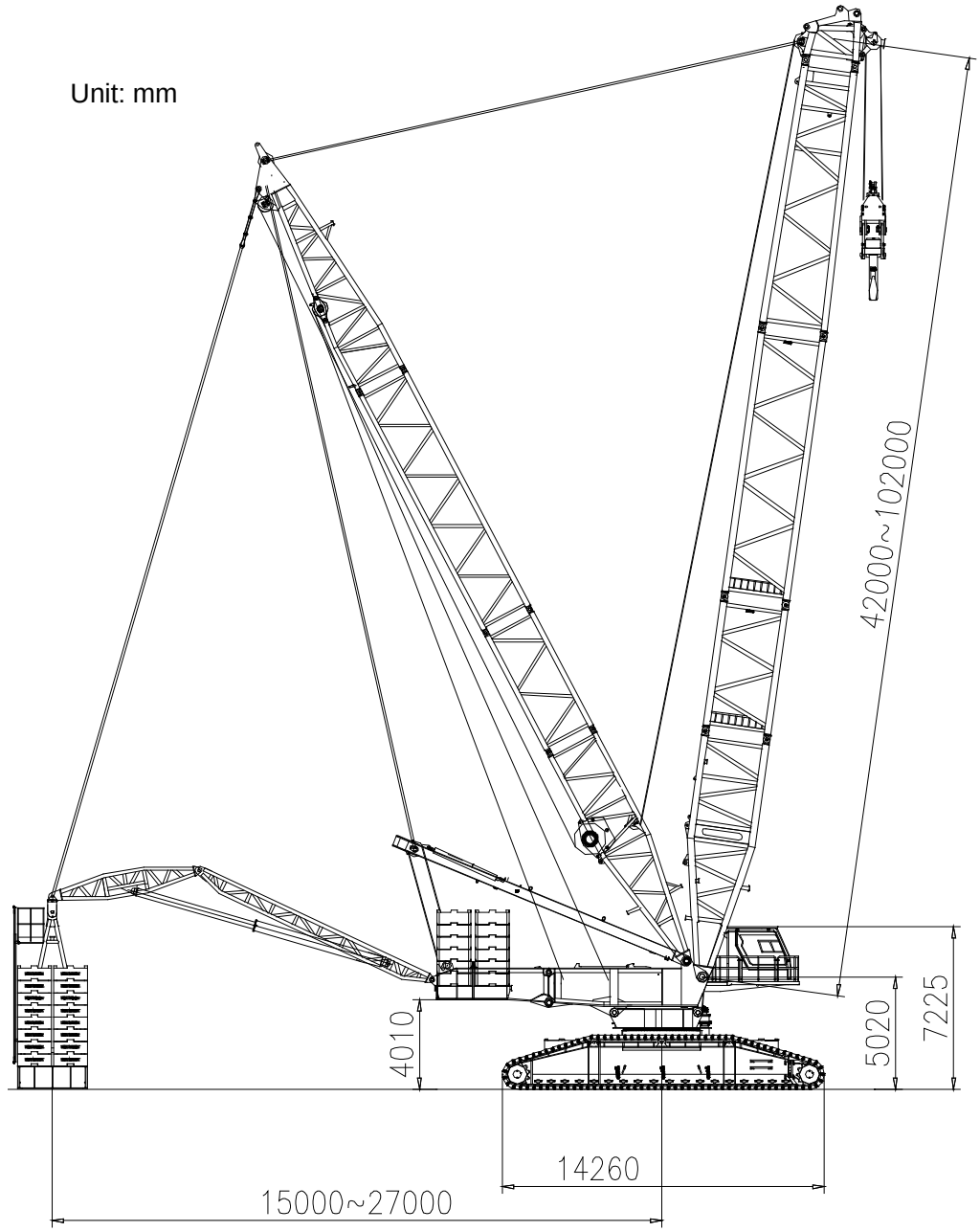
5.2 About load

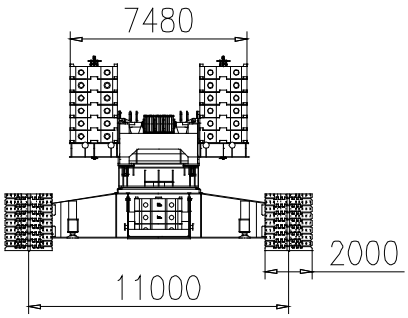
5.3 Hooks and reeving plans

1. Overall dimensions and main technical parameters

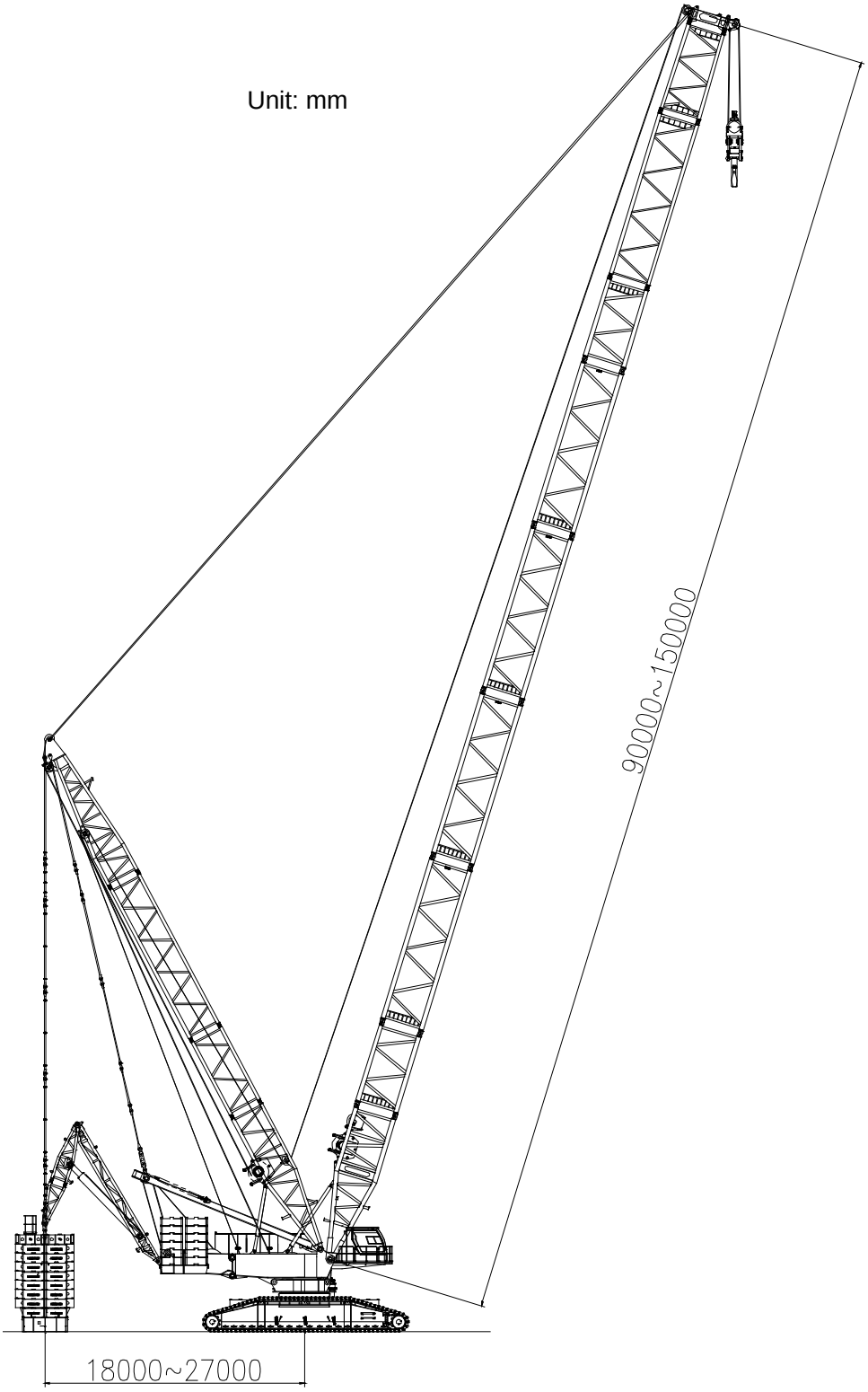
1.1 Overall dimensions of operation mode of SDB

Unit: mm



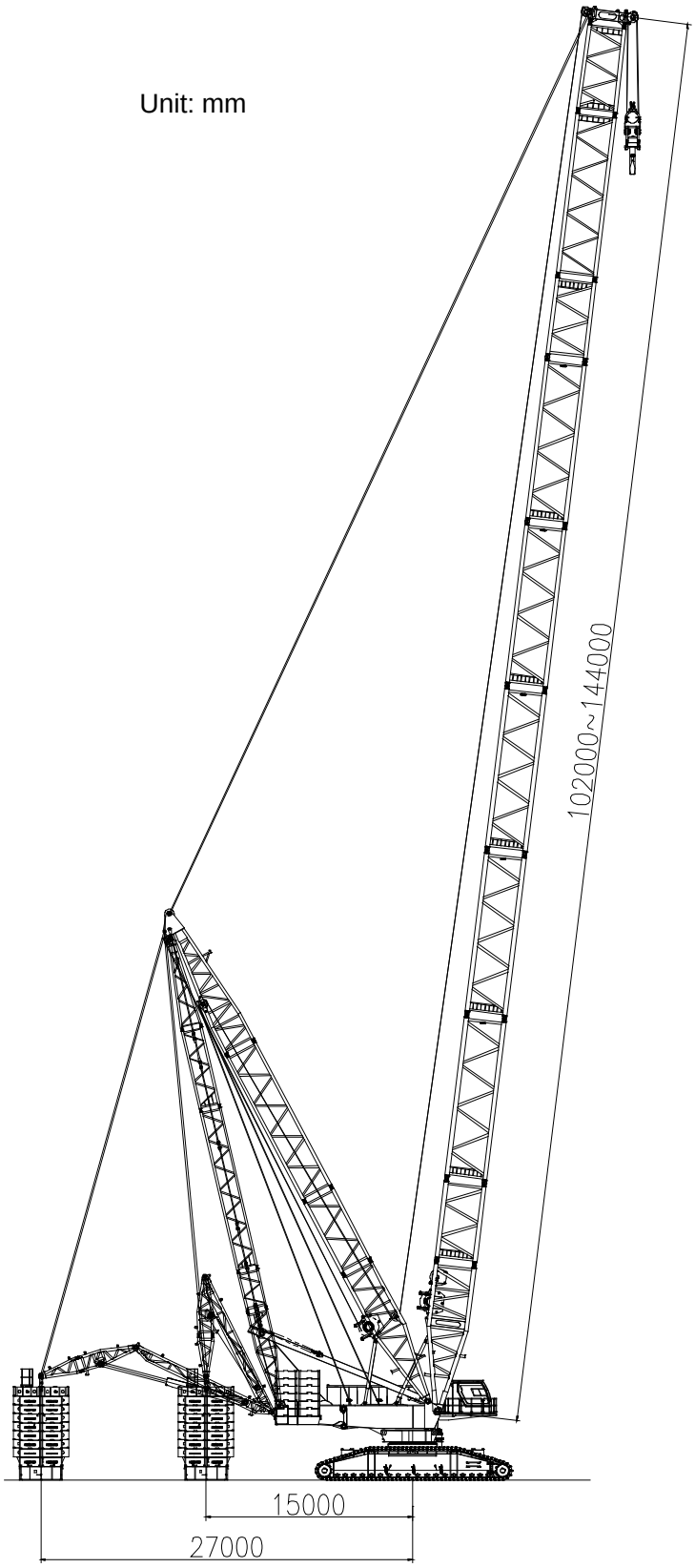


1.2 Overall dimensions of operation mode SLDB-1



1.3 Overall dimensions of operation mode SLDB-2 (for offshore wind turbine)

Unit: mm



1.4 Main technical parameters

Items		Parameters
Max. lifting moment	t．m	18000
S, SL, SHS	Max. lifting capacity × radius t×m	901×7
	Length of heavy main boom	30~78
	Length of light main boom m	60~102
SDB-1/2 SLDB-1/3 SLPDB-1/2/3	Max. lifting capacity × radius t×m	1600×10
	Length of heavy main boom m	42~102
	Length of light main boom m	90~150
SLDB-2	Max. lifting capacity × radius t×m	604×18
	Boom length m	102~144
SLHSDB-1	Max. lifting capacity × radius t×m	220×26
	Boom length m	108~159+7
SLHSDB-2 (220t)	Max. lifting capacity × radius t×m	220×32
	Boom length m	138~174+7
SLHSDB-3 (270t)	Max. lifting capacity × radius t×m	270×26
	Boom length m	138~159+7
SFVDB	Max. lifting capacity × radius t×m	650×21
	Jib angle °	12
	Jib length m	18
	Length of main boom with jib on m	60~102
SWDB	Max. lifting capacity × radius t×m	598×18

Items		Parameters
	Luffing jib length m	30~102
	Length of main boom with jib on m	48~96
	Main boom angle °	85, 75, 65
Derrick boom	Derrick boom length m	40/46
Hoisting winch I & II	Single rope speed of the outermost layer m/min	133
	Rope diameter mm	32
	Single rope tension KN	235
Main derricking winch	Single rope speed of the outermost layer m/min	55×2
	Rope diameter mm	32
	Single rope tension KN	235
Superlift derricking winch	Single rope speed of the outermost layer m/min	127
	Rope diameter mm	32
	Single rope tension KN	235
Luffing jib derricking winch	Single rope speed of the outermost layer m/min	120
	Rope diameter mm	32
	Single rope tension KN	226
Slewing speed rpm		0.7
Crawling speed km/h		0.7
Max. gradeability %		15
Suspended ballast t (radius m)		500 (18~24/27m), 250 (15~27m)

Items		Parameters
Rear counterweight t		250/170
Central ballast t		70
Engine	Model (emission)	QSK23-C860 (CHINA III for Non-road Mobile Machinery)
	Rated power/ rotational speed kw/rpm	641/2100
	Max. torque Nm	3776/1400
Distance between two tracks × contact length of track × width of track pad mm		11000×14260×2000

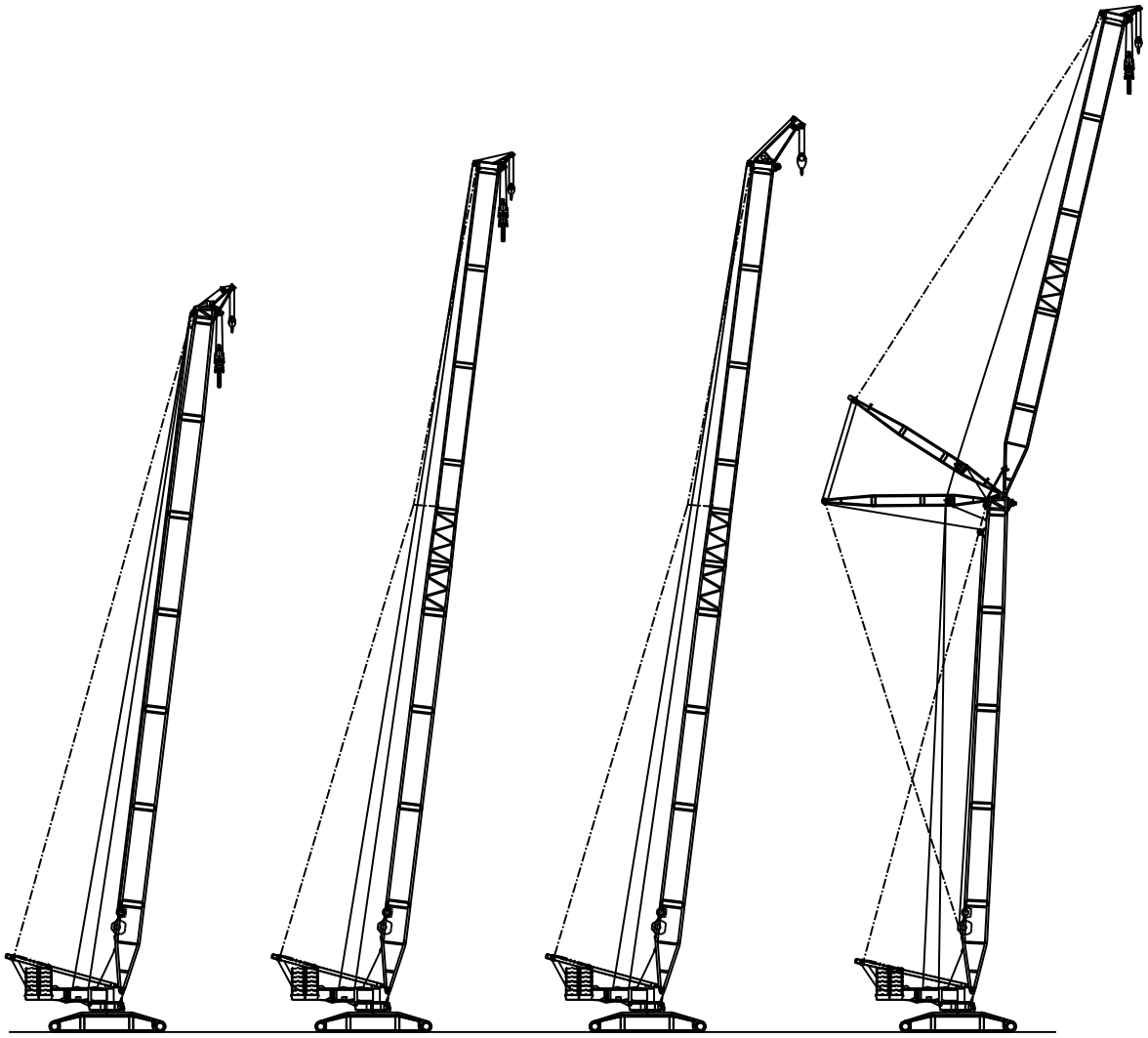
1.5 Description on boom combination

There are two kinds of operating modes, the one without derrick boom and suspended ballast, and the one with derrick boom and suspended ballast. The lattice boom is made of high-strength steel tubes and anchoring rods are made of high-strength plates.

Codes for operating modes:

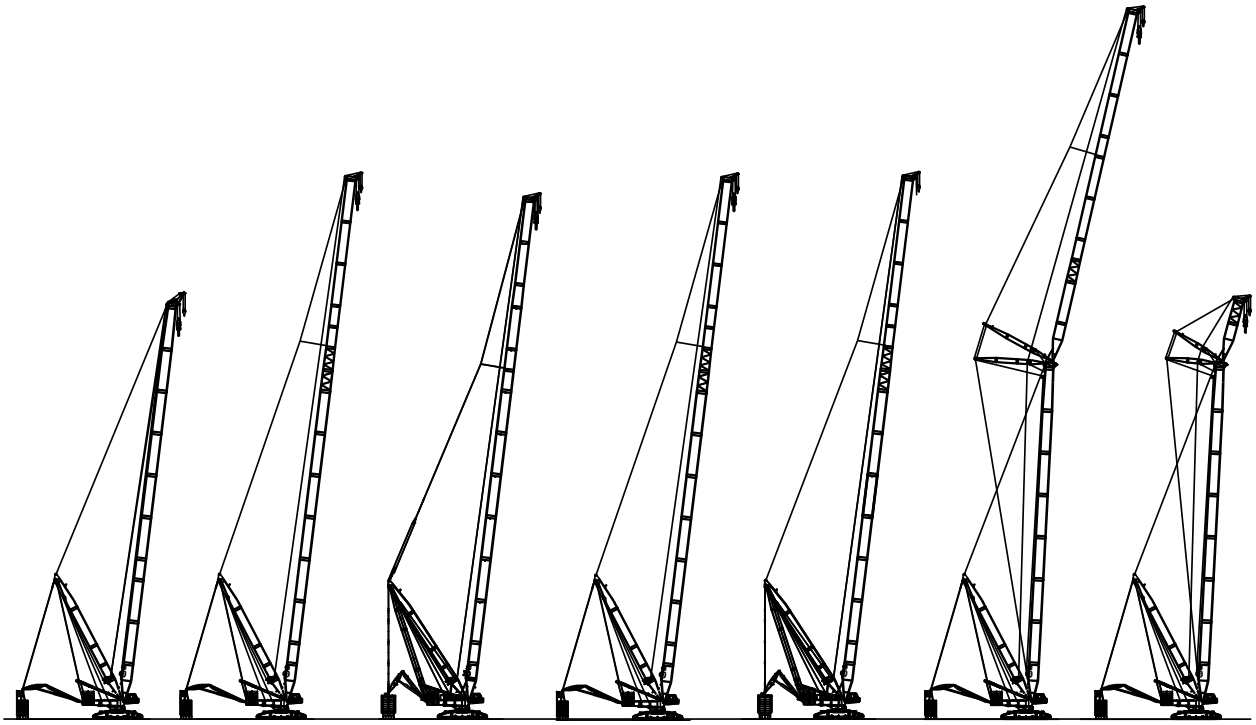
S—heavy main boom; L—light main boom; W—luffing jib; D—derrick boom;

B—suspended ballast; Fv—heavy fixed jib; HS—jib for wind turbine; P—strengthened parallel boom



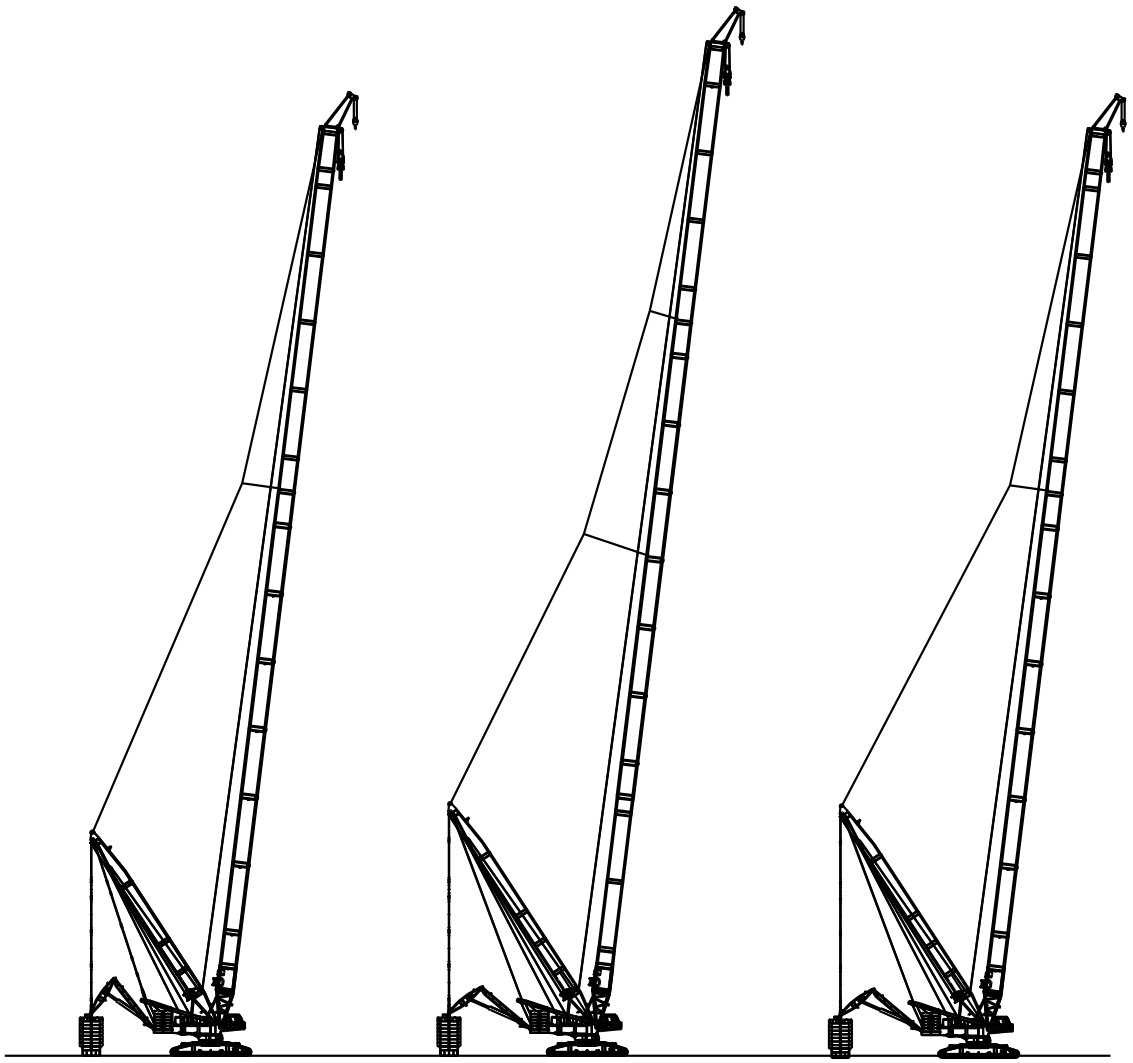
S SL SHS SW

Code	Operating mode	Boom combination
S	Main boom	S=30~78m
SL	Light main boom	SL=60~102 m
SHS	Light main boom (for wind turbine)	S=72~102m HS=7m
SW	Luffing jib	S=42～54m W=30~78 m



SDB-1/2 SLDB-1 SLDB-2/3 SLPDB-1 SLPDB-2/3 SWDB SFvDB

Code	Operating mode	Boom combination
SDB-1/2	Superlift heavy main boom	S=42~102 m
SLDB-1	Superlift light main boom	SL=90~150 m
SLDB-2	Superlift light main boom (for offshore wind turbine)	SL=102~144 m
SLDB-3	Superlift light main boom	SL=90~150 m
SLPDB-1	Superlift light main boom (with parallel boom)	SL=90~150 m
SLPDB-2	Superlift light main boom (with parallel boom)	SL=90~150 m
SLPDB-3	Superlift light main boom (with parallel boom)	SL=90~150 m
SWDB	Luffing jib on superlift heavy main boom	S=48~96m W=30~102m
SFvDB	Fixed jib on superlift heavy main boom	S=60~102m Fv=18 m

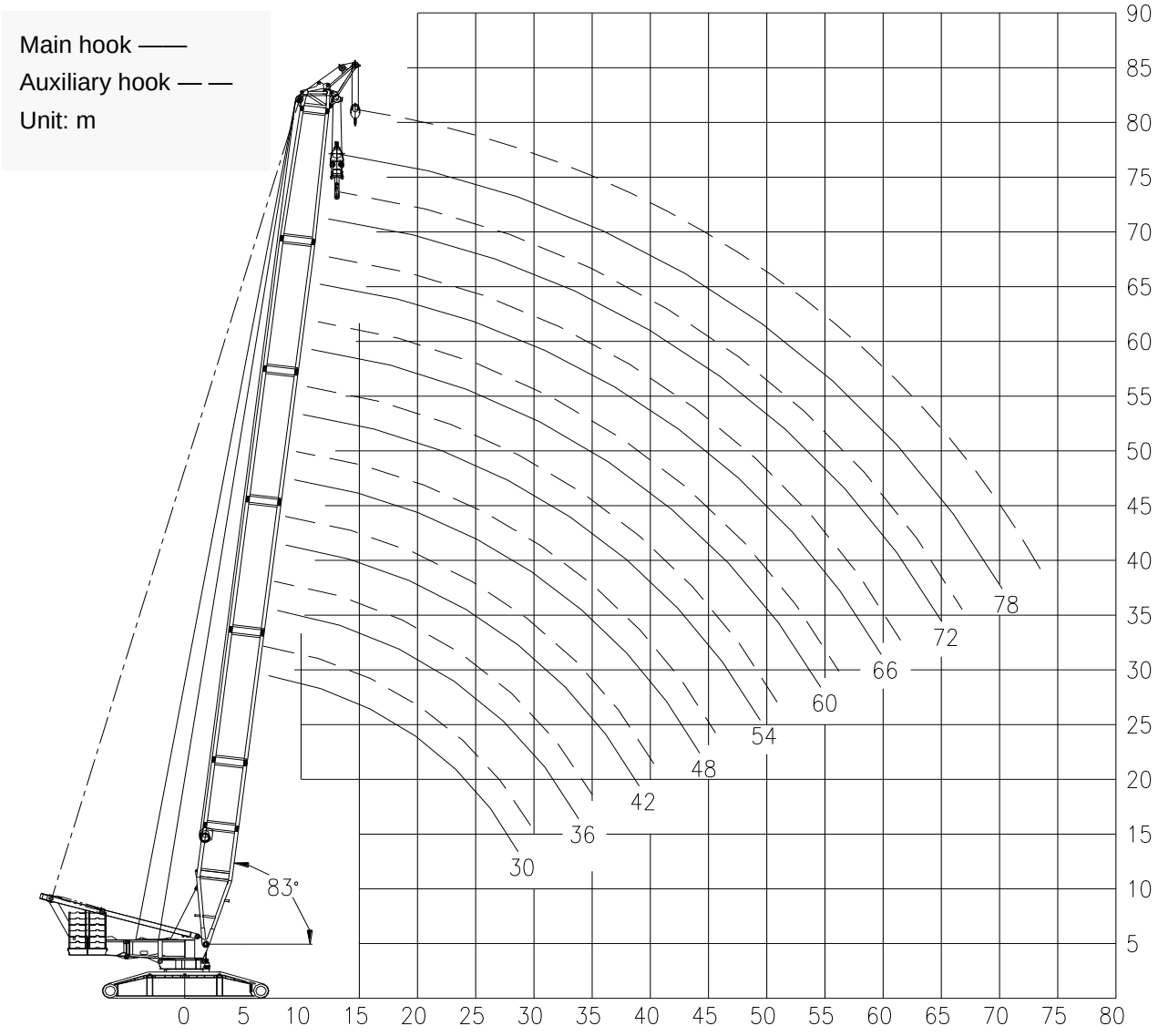


SLHSDB-1 SLHSDB-2 SLHSDB-3

Code	Operating mode	Boom combination
SLHSDB-1	Superlift light main boom for wind turbine	SL=108~159m HS=7m
SLHSDB-2	Superlift light main boom (with parallel boom) for wind turbine (220t)	SL=138~174m HS=7m
SLHSDB-3	Superlift light main boom (with parallel boom) for wind turbine (270t)	SL=138~159m HS=7m

2 Lifting performance

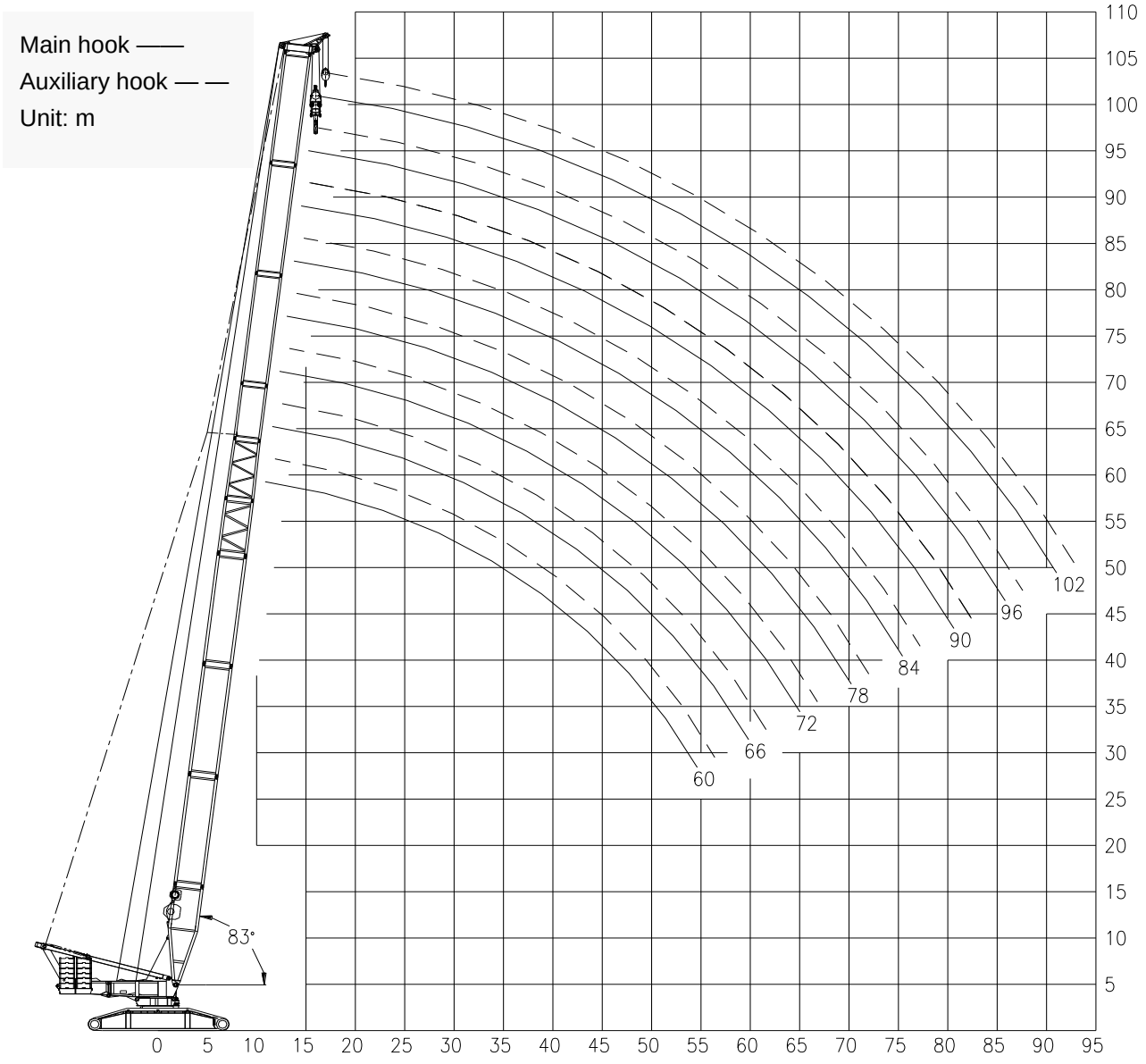
2.1 Hoisting height characteristic curves and lifting capacity charts of S



Lifting capacity chart of S

Rear counterweight: 250t Central ballast: 70t										
Boom (m)	**30**	**36**	**42**	**48**	**54**	**60**	**66**	**72**	**78**	**Boom (m)**
Radius (m)										**Radius (m)**
7	901									7
8	799	789	789							8
9	713	703	703	703						9
10	633	633	633	633	633	633				10
11	573	573	573	563	563	563	553	529		11
12	520	520	514	514	514	514	500	480	461	12
14	434	434	434	434	430	430	419	403	388	14
16	375	375	375	371	371	364	358	346	333	16
18	328	328	328	321	321	321	311	301	291	18
20	289	289	288	287	285	284	274	265	257	20
22	249	249	249	248	247	246	244	236	228	22
24	219	219	218	217	215	215	213	212	205	24
26	194	194	193	192	190	190	188	187	185	26
28	174	174	173	171	170	169	167	166	164	28
30		156	156	154	153	152	150	149	147	30
32		142	141	140	138	137	135	134	132	32
34			128	127	125	124	122	121	119	34
36			117	116	115	113	111	110	108	36
38			108	107	105	104	102	100	98.6	38
40				98.3	96.6	95.5	93.5	92	90	40
44				83.8	82.2	81.1	79	77.5	75.4	44
48					70.3	69.3	67.2	65.7	63.6	48
52						59.5	57.4	55.9	53.8	52
56							49.1	47.6	45.5	56
60								40.5	38.4	60
64								34.3	32.2	64
68									26.8	68

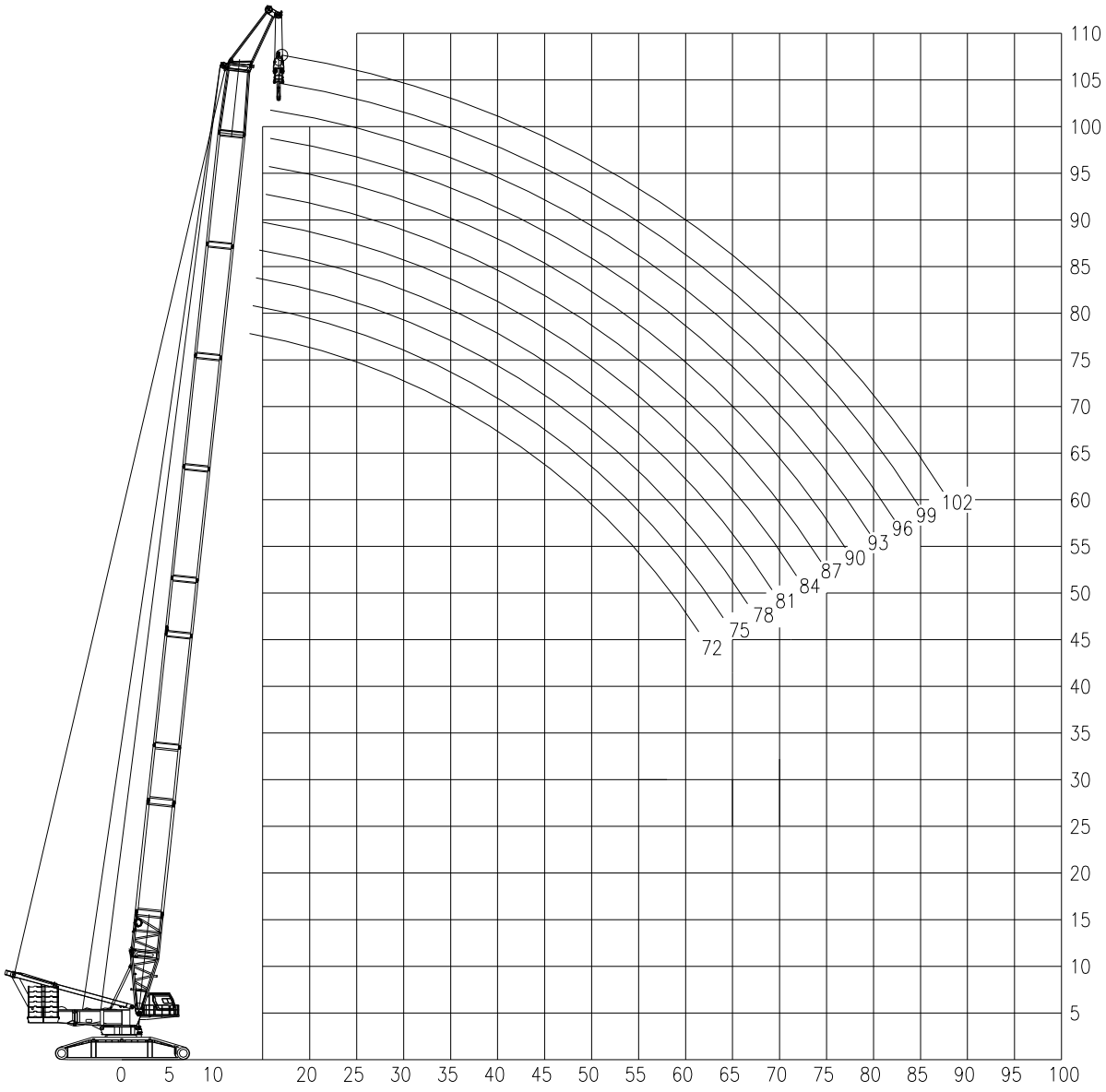
2.2 Hoisting height characteristic curves and lifting capacity chart of SL



Lifting capacity chart of SL

Rear counterweight: 250t Central ballast: 70t									
Boom (m)	**60**	**66**	**72**	**78**	**84**	**90**	**96**	**102**	**Boom (m)**
Radius (m)									**Radius (m)**
10	639								10
11	575	565	543						11
12	519	512	493	474	457				12
14	437	431	416	402	390	376	365	337	14
16	374	370	359	347	338	327	318	308	16
18	325	324	315	305	297	288	281	273	18
20	276	275	275	271	265	257	251	243	20
22	238	238	238	237	237	231	226	219	22
24	209	208	208	207	207	206	204	198	24
26	186	185	185	183	184	182	182	181	26
28	166	165	165	164	164	163	163	161	28
30	150	149	149	148	148	146	146	145	30
32	136	135	135	134	134	132	132	131	32
34	124	123	123	122	122	120	120	119	34
36	114	113	113	111	111	110	110	108	36
38	105	104	103	102	102	101	100	99.2	38
40	97.3	96.1	95.7	94.4	94.3	92.8	92.5	91	40
44	83.6	82.5	82.1	80.6	80.5	79.2	78.8	77.3	44
48	72.6	71.4	71	69.6	69.4	67.9	67.7	66.1	48
52	63.3	62.2	61.8	60.4	60.2	58.7	58.4	56.7	52
56		54.4	54.1	52.6	52.4	50.9	50.6	48.9	56
60			47.4	46	45.8	44.2	43.9	42.3	60
64			41.6	40.2	40	38.5	38.2	36.5	64
68				35.1	35	33.5	33.1	31.4	68
72					30.5	29	28.7	27	72
76						25	24.7	23	76
80						21.4	21.1	19.4	80
84							17.9	16.2	84
88								13.3	88

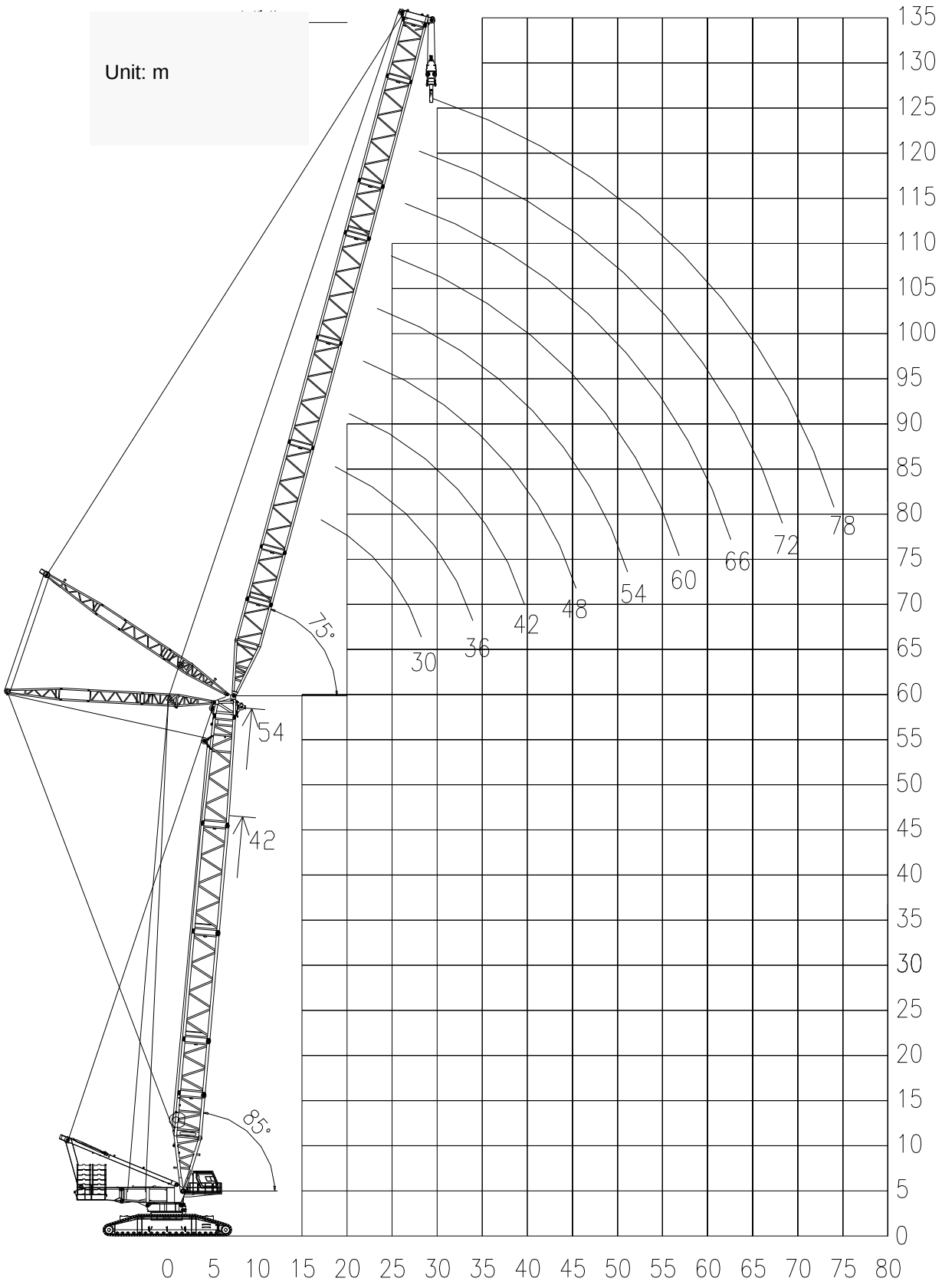
2.3 Hoisting height characteristic curves and lifting capacity chart of SHS



Lifting capacity chart of SHS

Rear counterweight: 250t Central ballast: 70t												
Boom (m)	72	75	78	81	84	87	90	93	96	99	102	**Boom (m)**
Radius (m)												**Radius (m)**
14	220	220										14
15	220	220	220	220	220							15
16	220	220	220	220	220	220	220	220				16
17	220	220	220	220	220	220	220	220	220	220	220	17
18	220	220	220	220	220	220	220	220	220	220	220	18
19	220	220	220	220	220	220	220	220	220	220	218	19
20	220	220	219	217	216	214	212	210	210	207	205	20
22	199	197	196	194	193	191	189	188	187	185	183	22
24	180	178	177	175	174	172	171	169	169	167	165	24
26	163	162	160	158	158	156	155	153	153	151	150	26
28	149	148	146	145	145	143	141	140	140	138	136	28
30	137	136	135	133	133	131	130	128	128	126	125	30
32	127	125	124	122	122	121	119	118	118	116	115	32
34	117	116	115	113	113	112	110	109	109	107	106	34
36	109	108	107	105	105	103	102	101	101	99.4	98.2	36
38	101	100	99.4	97.9	97.9	96.3	95.3	93.8	93.7	92.1	90.9	38
40	95.1	93.7	92.7	91.3	91.3	89.9	88.8	87.2	87.3	85.8	84.6	40
44	83.5	82.2	81.2	79.9	80	78.6	77.6	76	76	74.6	73.5	44
48	73.9	72.6	71.6	70.3	70.5	69.2	68.2	66.6	66.7	65.4	64.3	48
52	65.6	64.4	63.6	62.3	62.5	61.1	60.3	58.6	58.9	57.4	56.4	52
56	58.6	57.4	56.6	55.3	55.6	54.2	53.4	51.8	52.1	50.7	49.7	56
60	52.4	51.3	50.5	49.2	49.5	48.2	47.4	45.9	46.2	44.8	43.9	60
64	46.9	45.8	45.1	44	44.3	43	42.2	40.7	41	39.7	38.8	64
68	42	41	40.3	39.2	39.6	38.3	37.6	36.2	36.4	35.1	34.2	68
72		36.6	36	34.9	35.4	34.2	33.4	32	32.3	31	30.2	72
76			32.1	31.1	31.6	30.4	29.7	28.3	28.6	27.4	26.5	76
80					28.1	26.9	26.3	24.9	25.3	24.1	23.3	80
84						23.8	23.1	21.8	22.3	21.1	20.2	84
88								19	19.4	18.3	17.5	88
92										15.7	14.9	92
96											12.5	96

2.4 Hoisting height characteristic curves and lifting capacity chart of SW



Lifting capacity chart of SW

main boom length: 42m angle: 85° rear counterweight: 250t central ballast: 70t unit: t										
jib length(m)	**30**	**36**	**42**	**48**	**54**	**60**	**66**	**72**	**78**	**jib length(m)**
radius(m)										**radius(m)**
16	383									16
18	338	326								18
20	302	292	284							20
22	273	264	257	250						22
24	247	241	234	228	221	215				24
26	227	221	215	209	203	198	192			26
28	205	203	198	193	188	183	178	173		28
30	186	185	184	179	174	170	165	161	156	30
32	170	169	168	167	162	158	153	150	145	32
34	156	155	155	154	151	148	143	140	135	34
36		143	143	142	141	138	134	131	126	36
38		133	132	132	130	129	126	123	118	38
40		123	123	122	121	120	118	115	111	40
44			107	107	106	105	103	102	99.1	44
48				94	93	92.3	90.7	90.1	88.3	48
52				83	82.4	81.8	80.2	79.6	77.8	52
56					73.2	72.8	71.4	70.8	69	56
60						65.1	63.7	63.2	61.4	60
64						58.1	57	56.6	54.8	64
68							51	50.7	49.1	68
72								45.5	43.9	72
76								40.7	39.3	76
80									35.1	80

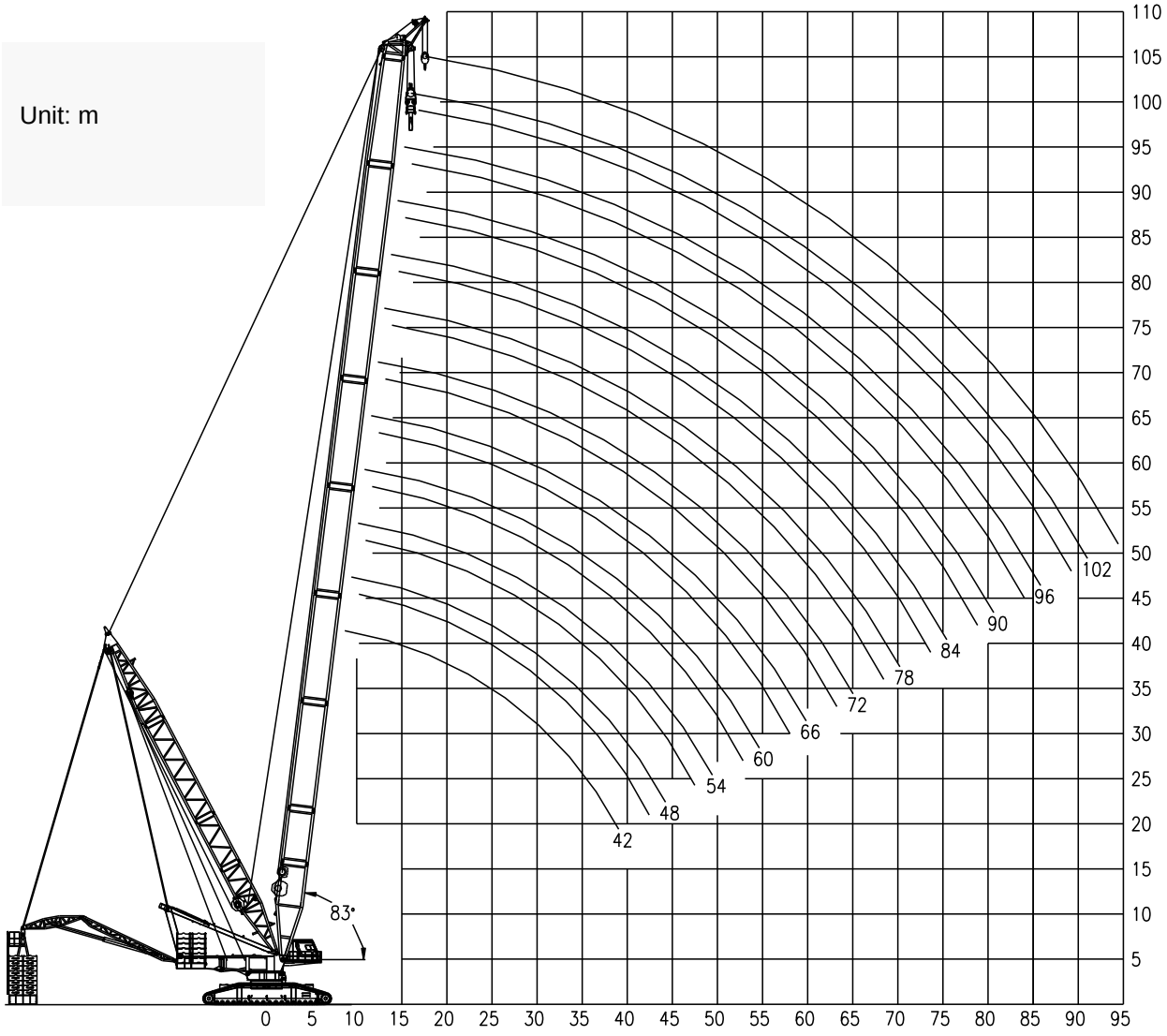
Lifting capacity chart of SW

main boom length: 48m angle: 85° rear counterweight: 250t central ballast: 70t unit: t										
jib length(m)	30	36	42	48	54	60	66	72	78	jib length(m)
radius(m)										radius(m)
18	326	315								18
20	292	282	274							20
22	264	256	249	242						22
24	241	234	227	221	214					24
26	221	215	208	203	197	192	186			26
28	204	198	193	187	182	178	172	168		28
30	186	184	179	174	169	165	159	156	151	30
32	170	168	167	162	157	153	148	145	140	32
34	156	155	154	152	147	143	139	135	131	34
36	143	143	142	141	138	134	130	127	122	36
38		132	132	131	129	126	122	119	115	38
40		123	123	122	121	119	115	112	108	40
44			107	106	105	104	102	99.9	96.1	44
48				93.8	92.7	92	90.3	89.4	85.8	48
52				82.8	82.1	81.5	79.9	79.2	76.9	52
56					73	72.5	71	70.4	68.6	56
60						64.8	63.4	62.8	61.1	60
64						57.9	56.8	56.3	54.5	64
68							50.8	50.5	48.8	68
72								45.3	43.7	72
76								40.5	39.1	76
80									34.9	80

Lifting capacity chart of SW

main boom length: 54m angle: 85° rear counterweight: 250t central ballast: 70t unit: t					
jib length(m)	**30**	**36**	**42**	**48**	**jib length(m)**
radius(m)					**radius(m)**
18	314				18
20	282	272			20
22	256	247	240	234	22
24	234	226	220	214	24
26	215	208	202	197	26
28	199	192	187	182	28
30	185	179	174	169	30
32	169	166	162	157	32
34	155	154	151	147	34
36	143	143	142	138	36
38		132	132	130	38
40		123	122	121	40
44			107	106	44
48			93.5	93.4	48
52				82.6	52

2.5 Hoisting height characteristic curves and lifting capacity chart of SDB-1/2



Lifting capacity chart of SDB-1 (main boom head adaptor for 1250t)

Derrick boom: 40m Suspended ballast: 500t Radius of suspended ballast: 27m
Rear counterweight: 250t Central ballast: 70t Unit: t

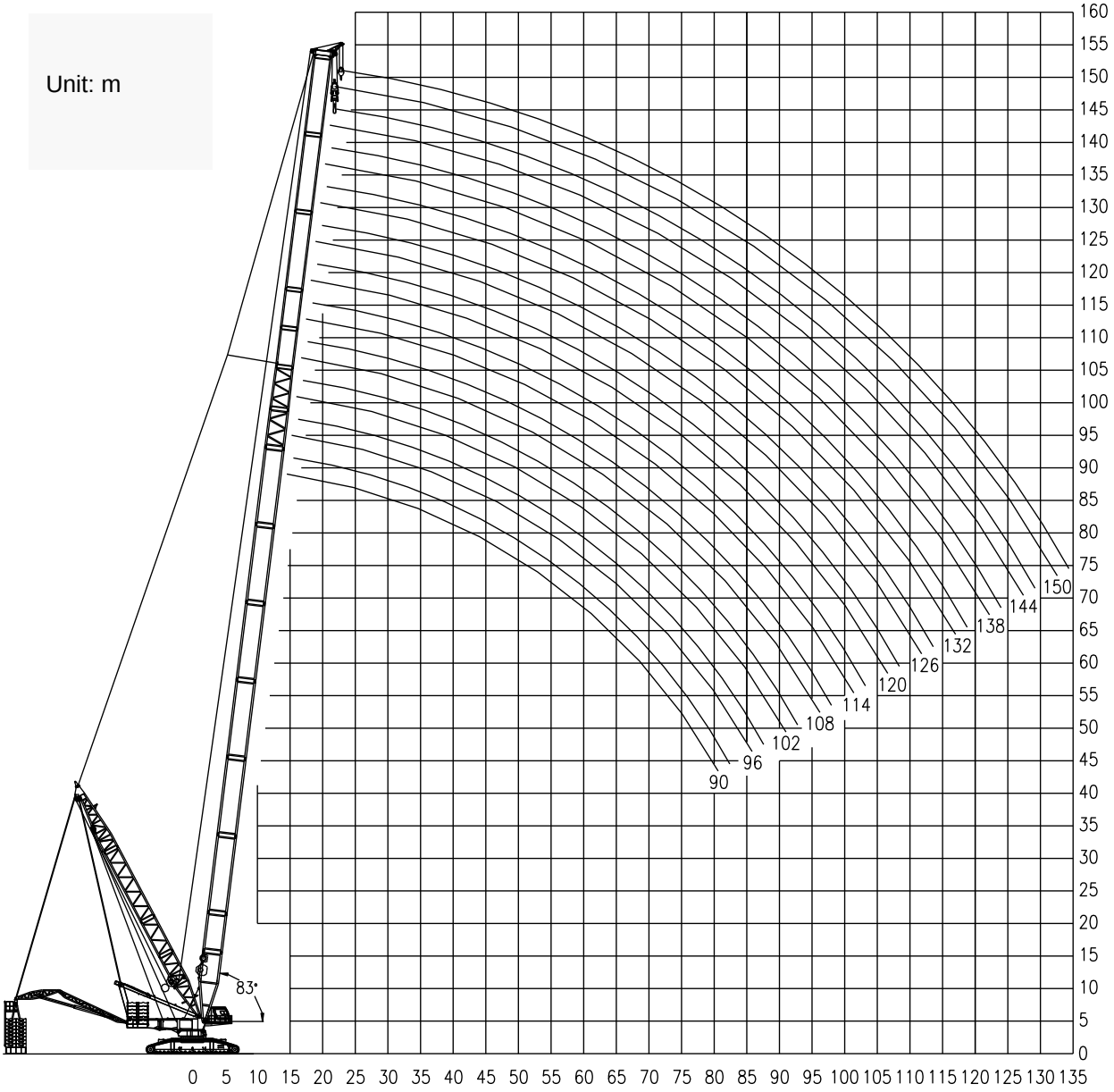
Boom (m)	42	48	54	60	66	72	78	84	90	96	102	Boom (m)
Radius (m)												Radius (m)
9	1250	1250	1197	1058								9
10	1250	1250	1197	1058	986	875						10
12	1250	1250	1197	1058	986	875	799	761				12
14	1203	1200	1197	1058	986	875	799	761	683	643		14
16	1102	1082	1047	1045	986	875	799	761	683	643	579	16
18	1000	963	928	928	922	875	799	761	683	643	579	18
20	859	849	836	832	829	825	799	761	683	643	579	20
22	738	762	756	756	752	750	746	733	683	643	579	22
24	661	696	692	690	686	682	682	676	654	633	579	24
26	596	639	637	633	631	629	627	623	607	589	569	26
28	539	582	590	587	584	580	577	576	566	550	532	28
30	488	531	547	545	543	541	537	534	530	515	499	30
32	443	487	510	508	504	504	500	497	494	484	470	32
34	402	446	475	477	473	471	467	465	463	457	443	34
36	364	410	439	448	444	443	438	436	434	430	420	36
38	327	376	407	422	418	416	414	411	407	405	398	38
40		344	377	397	395	393	391	387	385	383	378	40
42		314	349	370	375	373	368	367	364	361	358	42
44		285	323	346	354	353	350	348	344	342	339	44
46			298	323	337	335	332	330	328	325	321	46
48			274	301	317	320	317	314	311	309	305	48
50				280	297	305	301	299	296	294	291	50
52				260	279	291	289	286	282	281	277	52
54				240	261	275	274	274	271	268	264	54
56					244	259	263	262	258	256	253	56
58					228	244	252	250	248	245	242	58
60						230	239	241	237	234	231	60
62						216	226	230	228	225	221	62
64						202	214	221	219	216	213	64
66							202	210	210	207	205	66
68							190	200	202	200	196	68
70							178	189	194	192	188	70
72								179	185	184	182	72
74								169	176	178	174	74
76									167	172	168	76
78									158	164	162	78
80									149	156	156	80
82										148	150	82
84										140	144	84

Lifting capacity chart of SDB-2 (main boom head adaptor for 1600t)

Derrick boom: 40m Suspended ballast: 500t Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t												
Boom (m)	**42**	**48**	**54**	**60**	**66**	**72**	**78**	**84**	**90**	**96**	**102**	**Boom (m)**
Radius (m)												**Radius (m)**
9	1600	1600	1600	1434								9
10	1600	1600	1600	1434	1265	986						10
11	1524	1519	1519	1434	1265	986	875	761				11
12	1400	1395	1395	1387	1265	986	875	761	683	643		12
14	1201	1201	1196	1196	1188	986	875	761	683	643	579	14
16	1102	1082	1049	1044	1041	986	875	761	683	643	579	16
18	1000	963	928	928	925	920	875	761	683	643	579	18
20	859	849	836	831	828	828	823	761	683	643	579	20
22	738	760	758	755	752	750	747	733	683	643	579	22
24	661	695	692	690	687	684	682	676	654	633	579	24
26	595	639	637	635	632	629	624	624	607	589	569	26
28	538	581	590	585	582	582	577	577	566	550	532	28
30	488	531	548	546	543	540	537	535	530	515	499	30
32	443	486	512	509	506	504	501	499	496	484	470	32
34	402	446	474	476	473	472	467	467	462	457	443	34
36	364	410	439	447	444	442	439	437	432	431	420	36
38	327	376	406	423	419	416	413	411	408	406	398	38
40		344	376	396	395	393	390	389	385	382	378	40
42		314	349	370	374	372	369	367	364	361	358	42
44		285	323	345	354	353	350	348	345	342	338	44
46			298	322	337	335	333	330	327	325	322	46
48			274	301	316	320	317	314	311	309	306	48
50				280	297	304	301	299	296	293	291	50
52				260	279	291	288	285	283	280	277	52
54				240	261	275	275	272	270	267	264	54
56					244	259	264	261	258	256	253	56
58					228	244	252	250	247	244	241	58
60						230	239	240	236	235	231	60
62						216	226	230	227	225	222	62
64						202	214	221	219	216	212	64
66							202	210	210	207	204	66
68							190	200	202	199	196	68
70							178	189	194	192	189	70
72								179	185	185	181	72
74								169	176	178	175	74
76									167	172	168	76

SDB-2 with a main boom head adaptor for 1600t is a customized operating mode. A special boom head section and a main boom head adaptor are needed additionally.

2.6 Hoisting height characteristic curves and lifting capacity chart of SLDB-1



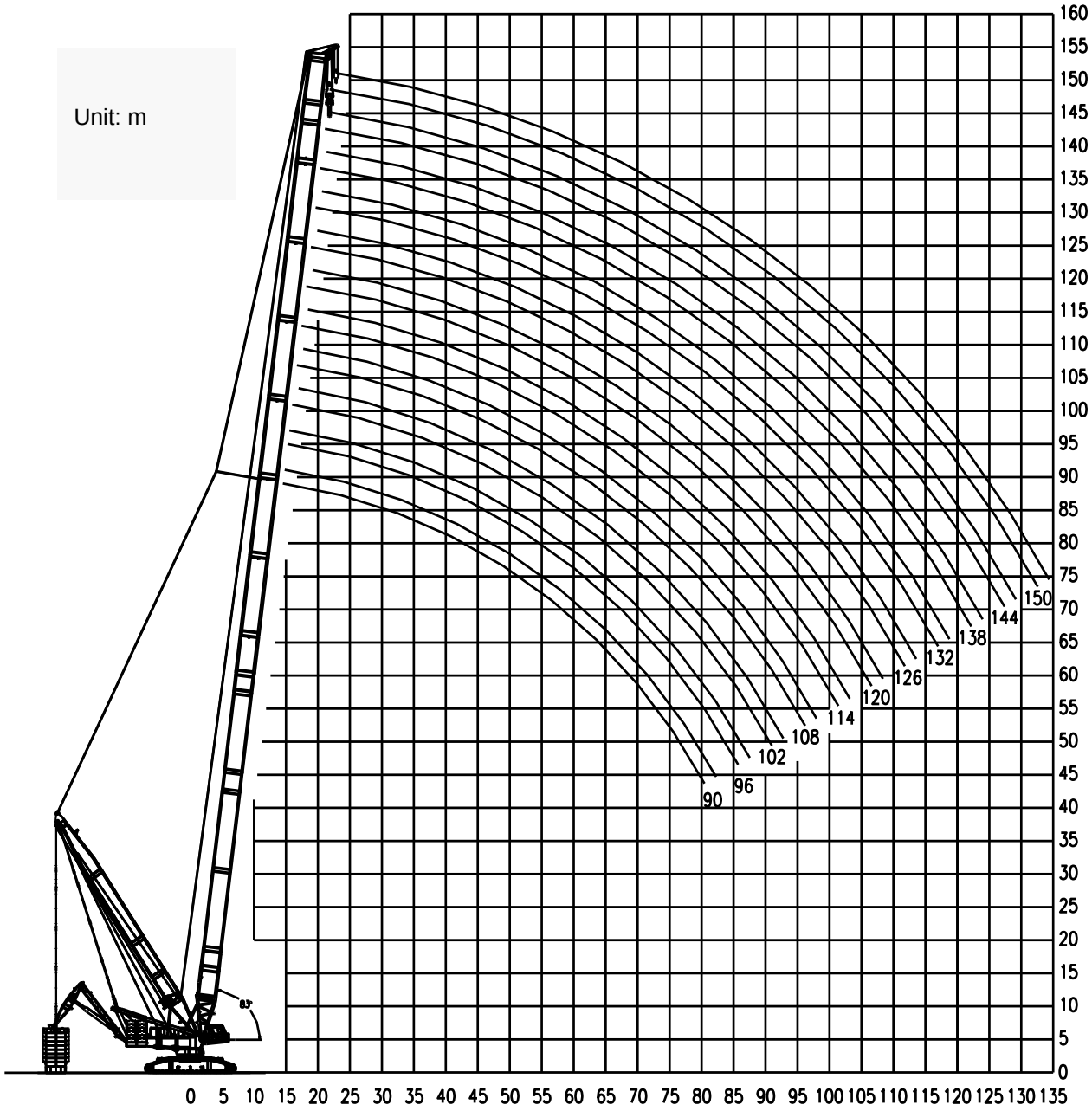
Lifting capacity chart of SLDB-1

Derrick boom: 40m Radius of derrick boom: 21m Suspended ballast: 500t

Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t

Boom (m)	90	96	102	108	114	120	126	132	138	144	150	Boom (m)
Radius (m)												Radius (m)
16	650	644										16
18	650	644	604	551	490							18
20	650	644	604	551	490	435	390	355				20
22	650	644	604	545	490	434	389	354	318	285	250	22
24	650	644	604	538	490	433	388	353	318	285	250	24
26	639	636	597	531	490	433	388	351	318	284	249	26
28	591	589	586	525	490	430	388	349	317	284	249	28
30	550	547	547	518	490	431	388	349	317	284	248	30
32	514	510	508	508	489	430	386	349	316	283	248	32
34	481	479	477	474	474	430	386	348	315	281	246	34
36	452	450	447	447	447	427	386	345	315	276	242	36
38	426	424	421	421	421	419	382	345	314	275	242	38
40	402	402	398	396	396	395	382	343	313	274	240	40
44	362	360	359	357	357	355	355	339	312	271	232	44
48	329	326	324	323	323	321	321	319	306	258	219	48
52	300	298	296	295	293	293	293	291	290	245	210	52
56	276	274	271	269	269	267	267	267	265	263	230	56
60	254	251	250	248	248	246	246	245	244	243	218	60
64	236	233	231	229	229	228	228	226	226	224	223	64
68	219	217	214	213	212	211	211	210	209	207	206	68
72	204	201	199	198	198	196	196	195	194	193	191	72
76	191	189	186	184	184	183	183	181	181	179	178	76
80	179	177	175	173	173	171	171	169	169	167	165	80
84		165	163	162	162	160	161	159	158	157	155	84
88			152	151	151	150	150	149	148	146	145	88
92				142	141	140	140	139	138	137	135	92
96				133	133	131	131	130	129	128	127	96
100					124	123	123	122	121	120	118	100
104						116	116	114	114	112	111	104
108							109	108	107	105	104	108
112								101	101	99	97.7	112
116								95.2	94.7	93.1	91.7	116
120									89.1	87.5	86.2	120
124										82.4	81.1	124
128											76.2	128

2.7 Hoisting height characteristic curves and lifting capacity chart of SLPDB-1

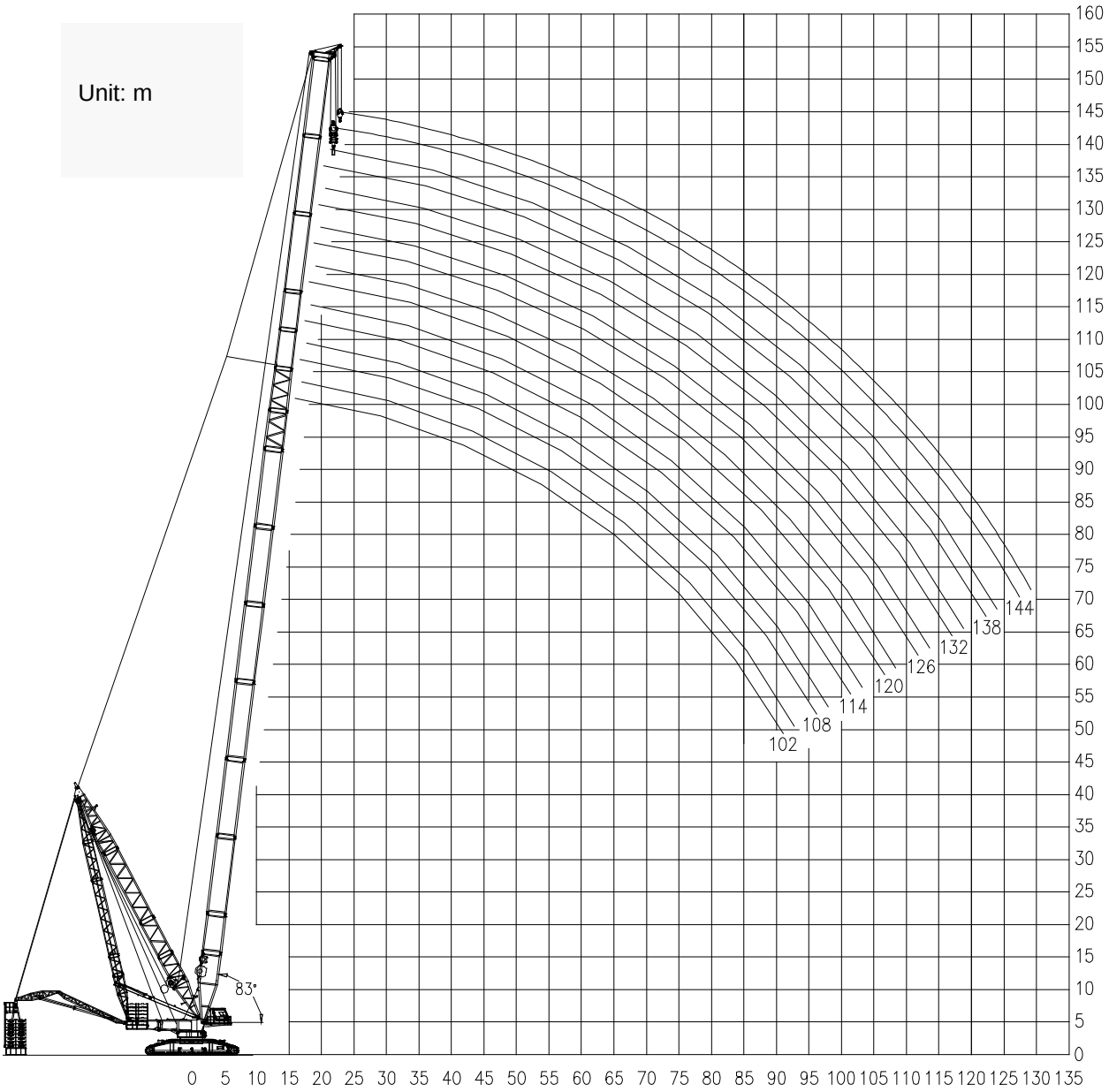


Lifting capacity chart of SLPDB-1

Derrick boom: 40m Radius of derrick boom: 21m Suspended ballast: 500t
Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t

Boom (m)	90	96	102	108	114	120	126	132	138	144	150	Boom (m)
Radius (m)												Radius (m)
16	650	644										16
18	650	644	604	563	522							18
20	650	644	604	561	522	522	474	438				20
22	650	644	604	561	520	519	473	435	402	382	350	22
24	650	644	604	560	519	516	471	432	399	381	347	24
26	631	628	604	560	517	514	468	431	396	380	344	26
28	583	581	576	559	512	511	465	428	394	379	341	28
30	541	538	538	524	512	507	462	426	391	378	340	30
32	505	502	500	493	490	484	460	423	388	377	337	32
34	472	471	469	465	462	456	441	420	385	377	334	34
36	443	441	440	438	435	432	417	410	382	374	331	36
38	418	416	414	410	409	407	396	389	379	371	328	38
40	393	393	390	388	385	385	376	370	360	357	326	40
44	354	352	350	346	345	343	341	336	327	324	312	44
48	321	319	315	314	310	310	307	306	299	296	285	48
52	292	290	288	285	283	281	278	276	274	271	262	52
56	267	265	262	260	257	257	254	252	250	248	241	56
60	245	243	241	239	236	234	232	231	228	226	223	60
64	226	224	223	221	217	215	213	212	209	207	205	64
68	210	208	206	204	200	199	197	195	193	191	188	68
72	195	193	191	189	186	184	182	180	178	176	173	72
76	181	179	177	175	173	172	169	167	164	163	159	76
80	162	167	165	163	161	160	157	155	152	150	147	80
84		153	155	152	150	148	146	144	141	139	135	84
88			143	142	140	138	136	134	131	128	125	88
92				132	130	129	126	124	121	119	115	92
96				120	121	120	117	115	112	110	106	96
100					109	112	109	107	104	102	98	100
104						101	102	99.5	96.2	93.9	90.4	104
108							93.7	92.4	89.2	86.9	83.4	108
112								85.9	82.6	80.4	76.9	112
116								77.8	76.5	74.3	70.8	116
120									70.7	68.5	65.1	120
124										63.2	59.8	124
128											54.7	128
132											49.9	132

2.8 Hoisting height characteristic curves and lifting capacity charts of SL DB-2 (for offshore wind turbine)

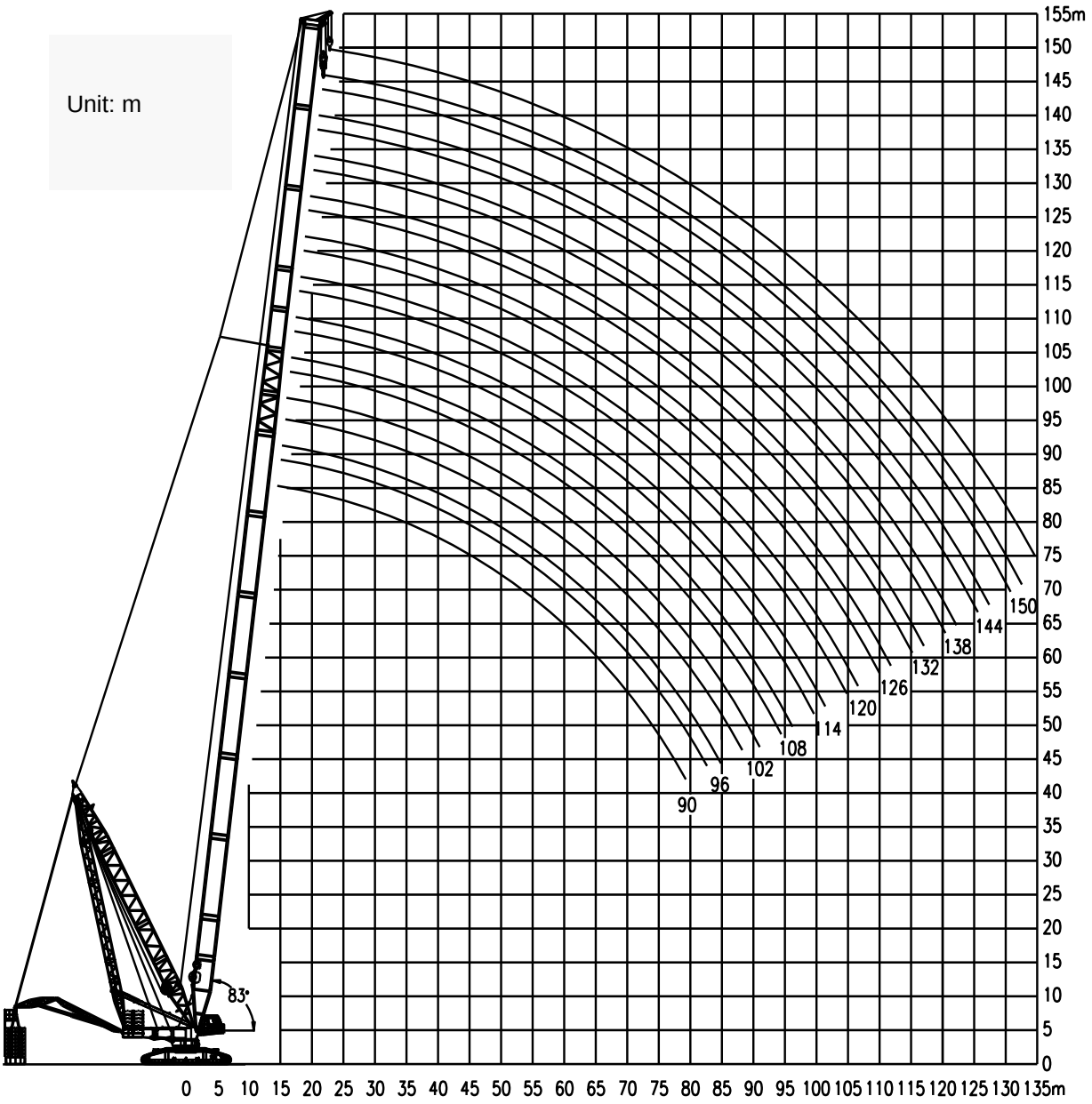


Lifting capacity chart of SLDDB-2 (for offshore wind turbine)

Derrick boom: 40m Radius of derrick boom: 18m Suspended ballast: 250t
Radius of suspended ballast: 27m Rear counterweight: 170t Central ballast: 70t Unit: t

Boom (m)	102	108	114	120	126	132	138	144	Boom (m)
Radius (m)									Radius (m)
18	604	551	494						18
20	560	551	493	435	395	355			20
22	505	500	490	434	394	354	320	285	22
24	459	454	451	433	393	353	318	285	24
26	424	416	413	408	390	353	318	284	26
28	391	388	382	376	374	352	317	284	28
30	360	357	357	351	346	342	317	284	30
32	334	332	331	329	321	317	315	283	32
34	310	310	307	307	299	295	293	281	34
36	290	287	287	286	279	279	274	270	36
38	272	270	269	267	262	262	256	253	38
40	255	253	253	250	249	245	240	237	40
44	225	222	221	218	218	215	213	210	44
48	201	199	198	195	194	192	190	187	48
52	181	179	178	175	175	172	171	168	52
56	164	161	161	158	158	155	154	151	56
60	149	146	146	143	143	140	139	137	60
64	135	133	132	130	130	127	126	124	64
68	124	121	121	119	118	116	115	113	68
72	113	111	111	108	108	106	105	102	72
76	104	102	101	99.3	99.2	96.9	95.9	93.5	76
80	95.3	93.6	93.1	90.9	90.9	88.6	87.6	85.3	80
84	87.6	85.9	85.5	83.3	83.4	81.1	80.1	77.8	84
88	80.6	78.9	78.6	76.4	76.5	74.3	73.3	71	88
92		72.5	72.2	70.1	70.2	68	67.1	64.8	92
96		66.6	66.3	64.3	64.4	62.2	61.3	59.1	96
100			60.9	58.9	59	56.9	56	53.8	100
104				53.9	54.1	51.9	51.1	48.9	104
108					49.5	47.3	46.5	44.3	108
112						43	42.2	40.1	112
116						39	38.2	36.1	116
120							34.5	32.4	120
124								28.9	124

2.9 Hoisting height characteristic curves and lifting capacity charts of SLDB-3 / SLPDB-2 / SLPDB-3



Lifting capacity chart of SLDB-3

Derrick boom: 40m Radius of derrick boom: 18m Suspended ballast: 500t
Radius of suspended ballast: 24m Rear counterweight: 170t Central ballast: 70t Unit: t

Boom (m)	90	96	102	108	114	120	126	132	138	144	150	Boom (m)
Radius (m)												Radius (m)
16	650	644										16
18	650	644	604	551	488							18
20	650	644	604	551	488	435	390	355				20
22	650	644	602	550	488	434	389	353	318	285	250	22
24	622	619	601	548	488	433	388	353	316	283	249	24
26	572	569	567	547	488	433	388	353	316	283	248	26
28	528	524	524	516	487	432	388	352	316	280	247	28
30	490	488	486	483	472	431	388	349	315	279	244	30
32	457	455	452	452	447	430	386	348	315	278	243	32
34	427	426	424	421	421	421	386	345	315	276	242	34
36	402	401	396	396	396	393	386	345	315	276	242	36
38	377	377	374	373	373	371	371	343	314	274	241	38
40	357	355	352	352	352	350	350	340	313	274	240	40
44	321	319	315	315	315	312	314	312	310	272	237	44
48	290	288	287	285	285	283	283	281	281	267	233	48
52	264	262	260	259	259	257	257	256	255	254	230	52
56	242	240	238	236	236	234	234	233	232	231	229	56
60	223	221	219	217	217	215	215	214	213	211	210	60
64	206	204	202	200	199	198	198	197	196	195	193	64
68	190	188	186	184	184	183	183	181	181	179	178	68
72	175	174	171	170	170	169	169	167	167	165	164	72
76	162	161	158	157	157	156	157	155	155	153	152	76
80	151	149	147	146	146	144	145	143	143	141	140	80
84		139	136	135	135	134	134	133	132	131	130	84
88			127	126	126	124	125	123	123	121	120	88
92				117	117	116	116	115	114	113	112	92
96				109	109	108	108	107	106	105	104	96
100					102	101	101	99.6	99.1	97.5	96.4	100
104						93.9	94.4	93	92.4	90.8	89.7	104
108							88.2	86.8	86.3	84.7	83.6	108
112								81.1	80.6	79	77.9	112
116								75.8	75.2	73.7	72.6	116
120									70.3	68.7	67.7	120
124										64.1	63	124
128											58.7	128

Lifting capacity chart of SLPDB-2

Derrick boom: 40m Radius of derrick boom: 18m Suspended ballast: 350t
Radius of suspended ballast: 27m Rear counterweight: 170t Central ballast: 70t Unit: t

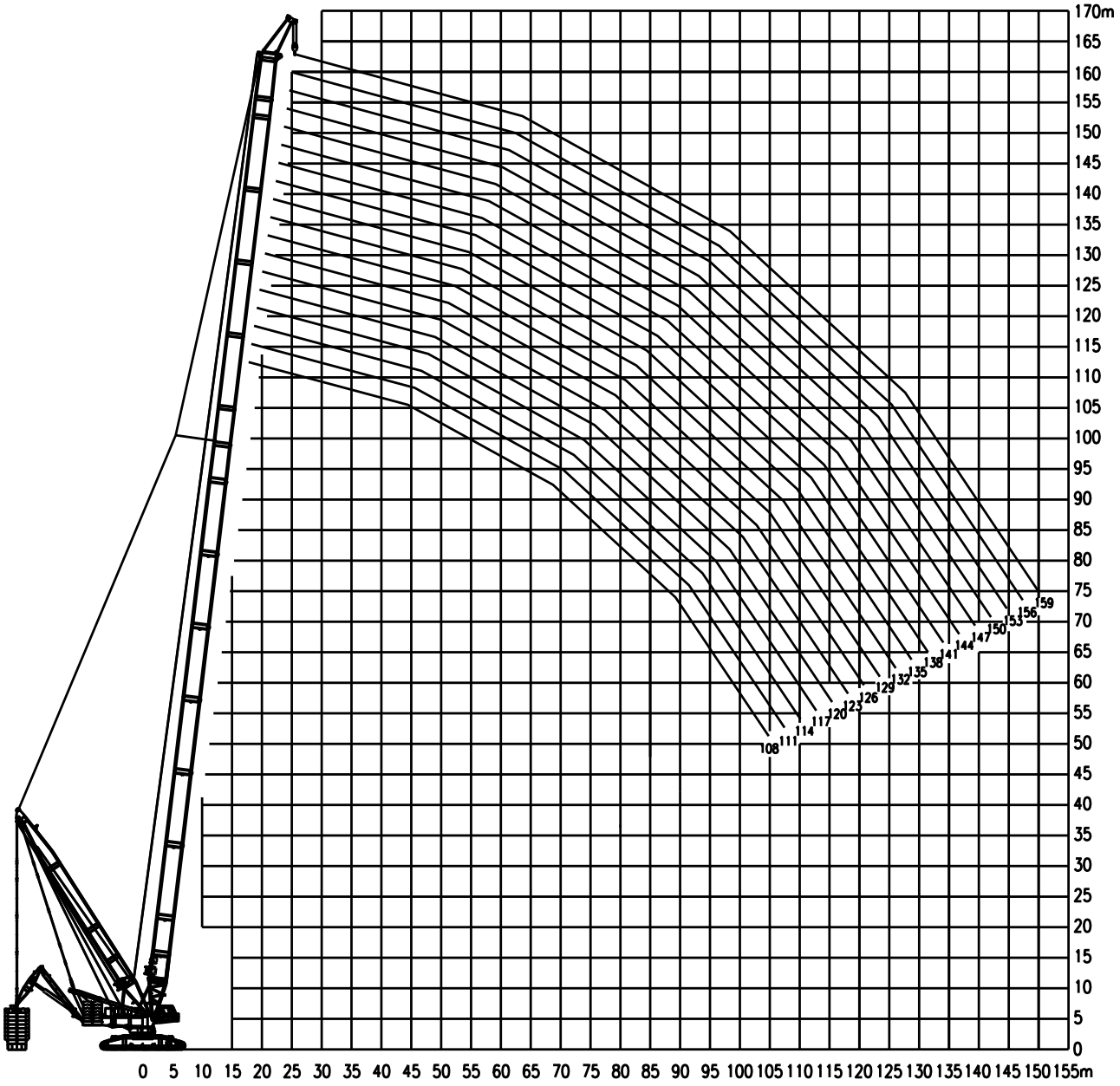
Boom (m)	90	96	102	108	114	120	126	132	138	144	150	Boom (m)
Radius (m)												Radius (m)
16	650	643										16
18	650	643	604	563	522							18
20	650	643	604	561	522	522	474	438				20
22	591	591	586	561	520	519	473	435	402	382	350	22
24	541	538	536	533	519	516	471	432	399	381	347	24
26	496	491	491	488	486	482	468	431	396	380	344	26
28	457	455	452	449	446	446	443	428	394	379	341	28
30	424	421	419	415	413	413	410	407	391	378	340	30
32	393	391	388	388	384	382	379	379	373	367	337	32
34	368	365	362	362	359	357	355	351	348	343	334	34
36	345	343	341	338	334	334	331	329	326	321	316	36
38	324	320	318	317	315	312	310	309	307	302	297	38
40	303	301	300	298	296	295	292	290	287	284	279	40
44	270	269	267	265	262	260	259	257	253	252	248	44
48	240	238	237	235	233	232	229	228	226	224	220	48
52	214	213	211	209	207	206	203	202	200	198	196	52
56	192	191	189	187	185	184	181	180	178	176	174	56
60	174	172	170	169	166	165	163	161	159	158	155	60
64	158	156	154	152	150	149	147	145	143	141	139	64
68	144	142	140	138	136	135	132	131	129	127	125	68
72	132	130	128	126	124	123	120	119	116	115	112	72
76	121	119	117	115	113	112	109	108	105	104	101	76
80	111	109	107	105	103	102	99.4	98.1	95.7	94.1	91.5	80
84		100	98.4	96.5	94.2	93	90.5	89.2	86.8	85.2	82.6	84
88			90.3	88.5	86.2	85	82.5	81.2	78.7	77.2	74.6	88
92				81.2	78.9	77.7	75.2	73.9	71.4	69.9	67.3	92
96				74.5	72.2	71.1	68.5	67.2	64.8	63.2	60.6	96
100					66.1	64.9	62.4	61.1	58.7	57.1	54.5	100
104						59.3	56.8	55.4	53	51.5	48.8	104
108							51.6	50.2	47.8	46.3	43.6	108
112								45.4	43	41.4	38.8	112
116								40.9	38.5	37	34.3	116
120									34.3	32.8	30.1	120
124										28.8	26.2	124
128											22.4	128
132											18.5	132

Lifting capacity chart of SLPDB-3

Derrick boom: 40m Radius of derrick boom: 18m Suspended ballast: 500t
Radius of suspended ballast: 24m Rear counterweight: 170t Central ballast: 70t Unit: t

Boom (m)	90	96	102	108	114	120	126	132	138	144	150	Boom (m)
Radius (m)												Radius (m)
16	650	643										16
18	650	643	604	563	522							18
20	650	643	604	561	522	522	474	438				20
22	650	643	604	561	520	519	473	435	402	382	350	22
24	614	610	604	560	519	516	471	432	399	381	347	24
26	563	560	560	558	517	514	468	431	396	380	344	26
28	519	519	515	513	510	510	465	428	394	379	341	28
30	482	479	479	477	474	472	460	426	391	378	340	30
32	449	446	446	443	441	438	435	423	388	377	337	32
34	421	419	415	413	410	410	407	403	385	377	334	34
36	393	393	391	388	384	384	381	379	370	367	331	36
38	371	368	365	365	362	360	357	357	352	349	328	38
40	350	348	346	343	341	340	338	334	332	331	317	40
44	314	312	310	307	303	303	300	298	296	295	290	44
48	282	281	279	276	274	272	270	267	265	264	261	48
52	257	255	253	250	248	246	244	243	239	237	234	52
56	234	233	231	229	226	224	222	220	217	215	213	56
60	215	214	211	209	206	205	202	201	198	197	193	60
64	198	197	194	191	189	187	185	184	181	179	177	64
68	183	181	179	177	174	172	170	169	166	165	162	68
72	168	167	165	163	160	159	156	155	152	151	148	72
76	155	154	152	150	148	146	144	143	140	138	136	76
80	144	142	140	138	136	135	132	131	128	127	124	80
84		132	129	128	125	124	122	120	118	116	114	84
88			120	118	116	115	112	111	108	107	104	88
92				109	107	106	103	102	99.9	98.3	95.7	92
96				101	99.4	98.2	95.7	94.4	91.9	90.4	87.8	96
100					92.1	90.9	88.4	87.1	84.7	83.1	80.5	100
104						84.2	81.7	80.4	78	76.4	73.8	104
108							75.5	74.2	71.8	70.3	67.6	108
112								68.5	66.1	64.5	61.9	112
116								63.1	60.7	59.2	56.6	116
120									55.7	54.2	51.6	120
124										49.6	47	124
128											42.6	128
132											38.4	132

2.10 Hoisting height characteristic curves and lifting capacity charts of SLHSDB-1



Lifting capacity chart of SLHSDB-1

Derrick boom: 40m Radius of derrick boom: 21m Suspended ballast: 500t
Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t

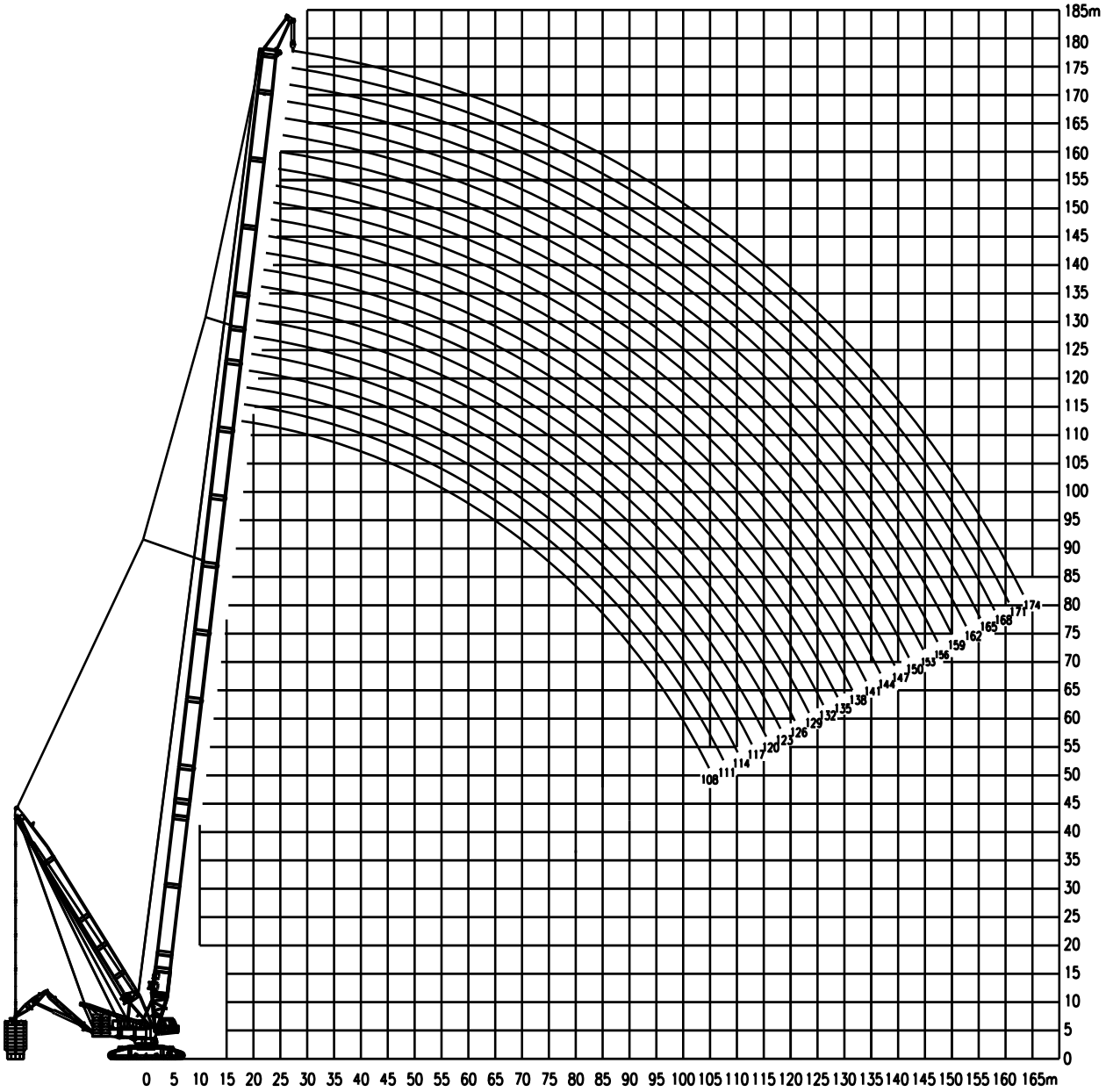
Boom (m)	108	111	114	117	120	123	126	129	132	135	138	Boom (m)
Radius (m)												Radius (m)
18	220	220										18
19	220	220	220	220	220	220						19
20	220	220	220	220	220	220	220	220	220			20
22	220	220	220	220	220	220	220	220	220	220	220	22
24	220	220	220	220	220	220	220	220	220	220	220	24
26	220	220	220	220	220	220	220	220	220	220	220	26
28	219	220	220	220	220	220	220	220	220	220	220	28
30	216	217	218	219	220	220	220	220	220	220	220	30
32	213	214	215	216	217	218	219	220	220	220	220	32
34	211	212	213	214	215	215	216	217	218	219	219	34
36	208	209	210	211	212	213	214	215	215	216	217	36
38	206	207	208	209	210	210	211	212	213	214	215	38
40	203	204	205	206	207	208	209	210	211	212	212	40
44	199	200	201	202	203	204	205	206	206	207	208	44
48	195	196	197	198	199	200	201	202	203	203	204	48
52	191	192	193	194	195	196	197	198	199	200	200	52
56	188	189	190	191	192	193	194	195	195	196	193	56
60	185	186	187	188	189	190	190	191	192	191	185	60
64	182	183	184	185	186	187	188	189	189	183	179	64
68	180	180	181	182	183	184	185	186	187	177	173	68
72	178	178	179	180	181	182	183	184	184	171	166	72
76	176	177	177	178	179	180	181	180	179	166	162	76
80	172	172	173	171	170	169	170	169	168	162	158	80
84	160	160	161	159	158	158	158	158	157	156	153	84
88	149	149	151	148	148	147	148	148	147	146	146	88
92	137	138	140	137	137	137	138	139	138	137	137	92
96	127	128	130	127	127	127	128	130	129	128	128	96
100	116	117	120	117	118	118	119	121	121	120	120	100
104		107	111	108	109	109	111	113	113	113	113	104
108				98.5	99.8	101	102	105	106	105	106	108
112					90.9	92.1	94.1	97.6	98	97.8	99.1	112
116							86	89.9	90.6	90.7	92.2	116
120								82.3	83.3	83.6	85.4	120
124										76.6	78.7	124
128											72	128

Lifting capacity chart of SLHSDB-1

Derrick boom: 40m Radius of derrick boom: 21m Suspended ballast: 500t
Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t

Boom (m)	141	144	147	150	153	156	159	Boom (m)
Radius (m)								Radius (m)
22	220	212	199	188				22
24	220	212	199	188	178	172	165	24
26	220	211	199	187	178	172	164	26
28	220	211	198	187	177	171	164	28
30	220	210	197	186	177	171	162	30
32	220	209	197	185	176	166	158	32
34	220	209	196	185	171	161	153	34
36	218	208	192	180	166	156	146	36
38	215	202	187	175	161	151	142	38
40	212	195	183	171	156	146	139	40
44	202	188	174	162	148	139	130	44
48	193	178	166	155	140	131	123	48
52	185	171	157	146	133	124	115	52
56	176	163	151	139	126	117	109	56
60	170	156	143	133	119	111	104	60
64	163	150	137	126	114	106	98.1	64
68	158	143	131	121	109	101	93.4	68
72	151	139	126	116	104	96.3	88.7	72
76	146	133	122	111	99.2	91.6	84	76
80	142	128	118	108	95.6	88	81.1	80
84	138	125	114	104	91.6	84	77.6	84
88	135	121	110	100	88.7	81.1	73.6	88
92	131	118	107	97.2	85.1	77.6	70.7	92
96	127	114	104	94.3	82.2	74.7	68.2	96
100	119	112	101	91.5	79.3	71.8	66	100
104	112	110	99	88.6	77.6	70	63.5	104
108	105	104	96.1	86.8	74.7	67.8	61.3	108
112	98.6	97.7	94.3	85	72.9	66	59.5	112
116	91.9	91.8	90.8	83.2	71.3	64.2	57.7	116
120	85.3	85.4	85.2	81.7	70	62.4	55.9	120
124	78.9	79.1	79.1	79.9	68.2	60.6	54.4	124
128	72.4	72.9	73.1	74.1	67.1	59.5	53	128
132		66.7	67.1	68.4	66	58.4	51.9	132
136			61.2	62.7	62.7	57.7	50.8	136
140					57.1	57.3	50.1	140
144							49.7	144

2.11 Hoisting height characteristic curves and lifting capacity charts of SLHSDB-2 / SLHSDB-3



Lifting capacity chart of SLHSDB-2

Derrick boom: 46m Radius of derrick boom: 21m Suspended ballast: 500t Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t												
Boom (m)	**138**	**141**	**144**	**147**	**150**	**153**	**156**	**159**	**162**	**165**	**168**	**Boom (m)**
Radius (m)												**Radius (m)**
24	220	220										24
26	220	220	220	220	220	220						26
28	220	220	220	220	220	220	220	220	220	213	205	28
30	220	220	220	220	220	220	220	220	220	212	204	30
32	220	220	220	220	220	220	220	220	220	211	203	32
34	218	219	220	220	220	220	220	220	220	210	202	34
36	216	217	217	218	219	219	220	220	220	209	201	36
38	213	214	215	216	216	217	218	218	220	207	200	38
40	211	212	213	214	214	215	216	216	217	206	199	40
44	207	208	209	209	210	211	212	212	213	203	193	44
48	203	204	205	205	201	207	208	208	210	195	183	48
52	199	200	201	201	190	203	204	205	198	188	177	52
56	196	197	198	190	179	200	201	201	185	175	171	56
60	193	193	192	180	170	197	198	198	172	163	159	60
64	190	191	183	171	161	194	195	195	162	153	148	64
68	187	187	174	164	154	191	192	193	153	144	140	68
72	184	179	167	156	147	183	183	182	144	136	131	72
76	172	172	160	149	140	170	169	168	136	128	124	76
80	160	160	153	143	134	157	157	156	129	121	117	80
84	149	148	148	137	129	146	145	144	123	115	111	84
88	139	138	139	133	123	136	135	134	118	110	106	88
92	129	128	129	128	119	126	126	124	112	105	101	92
96	120	119	120	119	115	117	117	116	108	100	96.2	96
100	112	111	112	111	110	109	109	108	104	96.5	92.1	100
104	105	104	105	104	103	102	101	100	100	92.7	88.4	104
108	98	97.1	98	97	96.3	95.3	94.7	93.5	94.4	89.6	85.2	108
112	91.5	90.6	91.5	90.6	89.8	88.8	88.2	87.1	88	86.5	82.2	112
116	85.4	84.5	85.4	84.5	83.8	82.8	82.2	81.1	82	80.9	79.4	116
120	79.7	78.8	79.8	78.8	78.1	77.1	76.6	75.5	76.3	75.2	74.5	120
124	74.3	73.4	74.4	73.5	72.8	71.8	71.3	70.2	71	70	69.2	124
128	69.3	68.4	69.4	68.5	67.8	66.8	66.3	65.2	66.1	65	64.3	128
132			64.6	63.7	63.1	62.1	61.6	60.5	61.4	60.3	59.6	132
136				59.3	58.6	57.6	57.1	56.1	57	55.9	55.2	136
140						53.4	52.9	51.9	52.8	51.7	51	140
144								47.9	48.8	47.7	47	144
148									45	44	43.3	148

Lifting capacity chart of SLHSDB-2

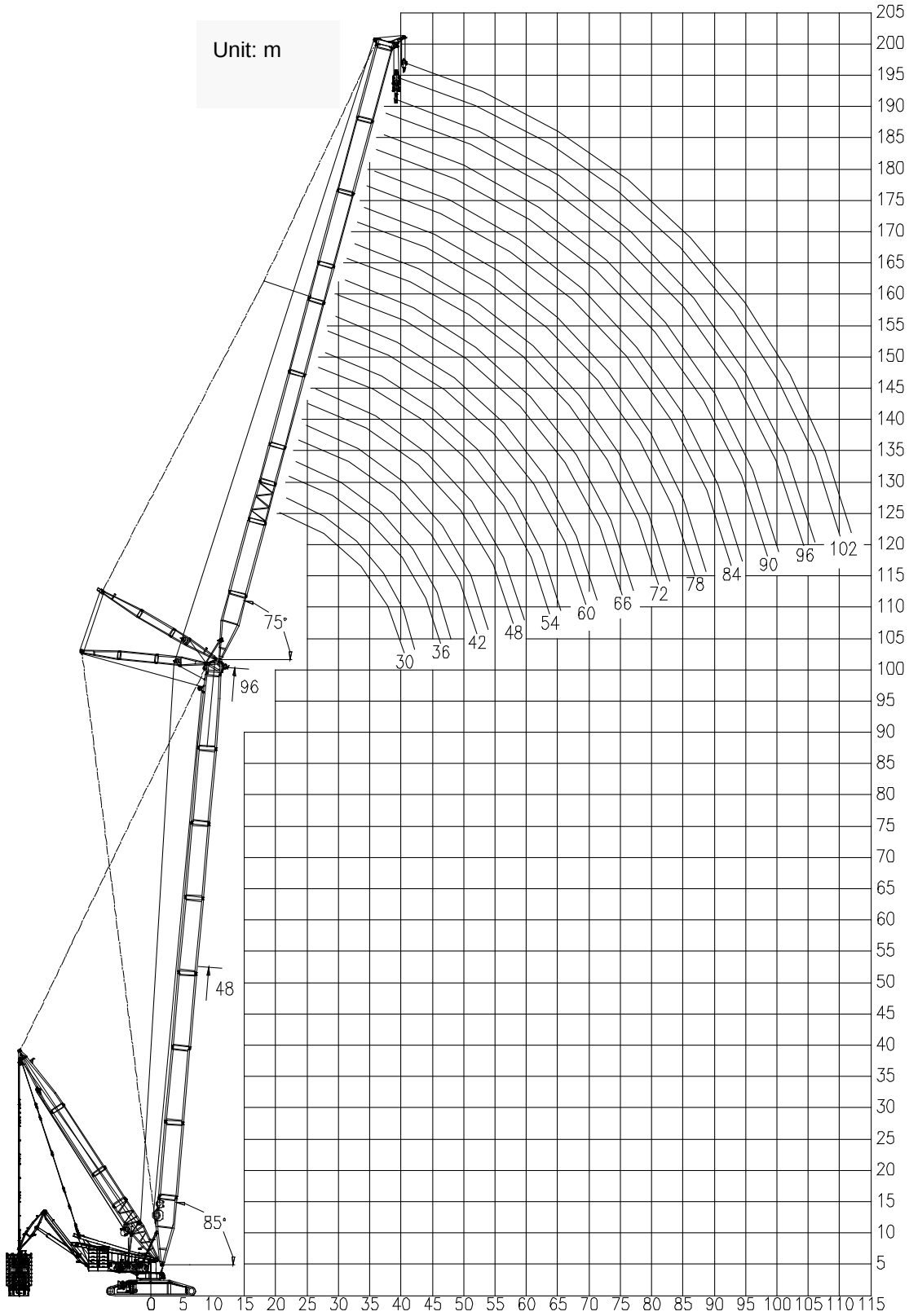
Derrick boom: 46m Suspended ballast: 500t Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t			
Boom (m)	**171**	**174**	**Boom (m)**
Radius (m)			**Radius (m)**
30	195	187	30
32	193	186	32
34	192	185	34
36	191	183	36
38	190	182	38
40	188	178	40
44	179	170	44
48	173	164	48
52	165	156	52
56	160	149	56
60	152	145	60
64	143	138	64
68	133	130	68
72	126	121	72
76	118	114	76
80	112	107	80
84	105	101	84
88	100	95.8	88
92	95.3	90.9	92
96	90.6	86.1	96
100	86.7	81.9	100
104	83	78.4	104
108	79.7	75.1	108
112	76.7	72	112
116	73.9	69.1	116
120	71.5	66.7	120
124	68.1	64.4	124
128	63.2	62.1	128
132	58.5	57.4	132
136	54.1	53	136
140	49.9	48.9	140
144	46	44.9	144
148	42.2	41.2	148
152	38.7	37.6	152
156	35.2	34.2	156

Lifting capacity chart of SLHSDB-3

Derrick boom: 46m Suspended ballast: 500t Radius of suspended ballast: 27m
Rear counterweight: 250t Central ballast: 70t Unit: t

Boom (m)	138	141	144	147	150	153	156	159	Boom (m)
Radius (m)									Radius (m)
24	270	270							24
26	270	270	270	270	270	270			26
28	269	270	270	270	270	270	267	252	28
30	266	267	267	268	269	270	266	251	30
32	263	264	264	265	266	267	265	250	32
34	260	261	261	262	263	264	264	249	34
36	257	258	259	259	260	261	262	248	36
38	254	255	256	257	258	258	259	248	38
40	251	252	253	254	255	256	257	247	40
44	246	247	248	249	250	251	252	245	44
48	241	242	243	244	245	246	247	243	48
52	237	238	239	240	241	242	243	241	52
56	233	234	235	236	237	238	239	238	56
60	229	229	230	229	228	227	227	227	60
64	214	213	212	210	210	208	208	208	64
68	197	196	196	193	193	192	191	190	68
72	182	182	181	178	178	177	176	175	72
76	169	168	167	165	164	163	162	161	76
80	157	155	154	152	151	150	149	149	80
84	145	144	143	141	140	139	138	137	84
88	135	133	133	130	129	128	128	127	88
92	125	124	123	121	120	119	118	117	92
96	116	115	114	112	111	110	109	109	96
100	108	107	106	104	103	102	101	101	100
104	101	99.5	98.7	96.4	95.4	94.6	93.7	93.3	104
108	93.8	92.5	91.7	89.4	88.4	87.7	86.7	86.3	108
112	87.3	86	85.2	82.9	81.9	81.2	80.3	79.9	112
116	81.2	79.9	79.1	76.8	75.8	75.1	74.2	73.8	116
120	75.4	74.2	73.4	71.1	70.2	69.5	68.5	68.2	120
124	70.1	68.8	68.1	65.8	64.8	64.1	63.2	62.9	124
128	65	63.8	63	60.7	59.8	59.1	58.2	57.9	128
132			58.3	55.9	55	54.4	53.5	53.2	132
136				51.4	50.5	49.9	49	48.7	136
140						45.6	44.8	44.5	140
144								40.4	144

2.12 Hoisting height characteristic curves and lifting capacity charts of SWDB



Lifting capacity chart of SWDB (85°)

Main boom: 48m Suspended ballast: 500t Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t														
Jib (m)	30	36	42	48	54	60	66	72	78	84	90	96	102	Jib (m)
Radius (m)														Radius (m)
18	598	574												18
20	568	547	527											20
22	541	522	504	474										22
24	496	499	482	466	426									24
26	444	461	461	446	424	387	341							26
28	401	409	419	416	412	384	337	311						28
30	357	364	377	379	375	372	337	308	270					30
32	314	325	340	347	344	341	337	305	269	232	204			32
34	272	291	308	317	317	314	311	302	269	231	203	176		34
36		260	280	290	294	291	288	286	269	231	203	175	155	36
38		231	254	266	272	269	268	267	264	230	202	175	155	38
40		202	231	244	251	248	250	249	246	230	202	174	154	40
44			188	206	215	214	217	219	217	215	200	173	152	44
48				172	184	185	189	192	192	192	189	171	151	48
52				139	157	160	165	169	170	171	170	168	149	52
56					132	138	144	149	150	152	152	152	148	56
60						117	126	131	134	136	136	137	135	60
64						95.9	108	115	119	121	122	123	122	64
68							91.3	101	105	108	109	110	110	68
72								86.7	92.5	96.6	98.2	99.6	99.6	72
76									80.3	85.5	87.7	89.6	89.8	76
80									67.8	74.9	78	80.4	80.9	80
84										64.4	68.7	71.7	72.7	84
88											59.6	63.5	65	88
92											50	55.5	57.6	92
96												47.4	50.5	96
100													43.4	100

Lifting capacity chart of SWDB (85°)

Main boom: 54m Suspended ballast: 500t Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t														
Jib (m)	30	36	42	48	54	60	66	72	78	84	90	96	102	Jib (m)
Radius (m)														Radius (m)
18	574													18
20	549	528												20
22	525	506	489	465										22
24	502	485	469	452	418									24
26	457	466	450	436	415	378								26
28	412	425	434	420	406	377	332	290						28
30	373	378	390	391	388	374	329	290	252					30
32	328	338	352	358	355	352	329	289	252	218				32
34	286	302	319	327	327	324	321	289	251	217	192			34
36		271	289	299	303	300	297	288	251	217	191	166	147	36
38		241	263	274	279	276	276	274	250	216	191	165	146	38
40		212	239	252	258	255	257	256	250	216	190	165	146	40
44			195	213	221	220	222	224	223	214	189	164	145	44
48				178	190	190	194	197	197	196	188	162	143	48
52				146	162	165	169	173	174	175	174	161	142	52
56					137	142	148	153	154	156	155	155	141	56
60						122	129	135	137	139	139	139	138	60
64						100	112	119	122	124	125	125	125	64
68							95.1	104	108	111	112	113	113	68
72								89.9	95.4	99.2	100	102	102	72
76								74.8	83.1	88	90.1	91.8	92	76
80									70.7	77.4	80.3	82.5	82.9	80
84										66.9	71	73.8	74.6	84
88										55.6	61.9	65.5	66.9	88
92											52.4	57.5	59.5	92
96												49.4	52.4	96
100													45.3	100

Lifting capacity chart of SWDB (85°)

Main boom: 60m Suspended ballast: 500t Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t														
Jib (m)	30	36	42	48	54	60	66	72	78	84	90	96	102	Jib (m)
Radius (m)														Radius (m)
18	547													18
20	525	505												20
22	504	485	468											22
24	484	467	450	436	401									24
26	466	450	434	420	398	401								26
28	423	434	419	406	392	398	307							28
30	384	392	403	391	378	392	307	268	234					30
32	342	350	363	369	366	378	305	267	234	204				32
34	299	313	329	337	336	366	304	267	234	203	180			34
36	258	281	299	308	311	336	301	265	233	203	179	156		36
38		251	271	282	287	311	283	264	232	202	179	156	138	38
40		222	247	259	265	287	263	262	231	202	178	155	138	40
44			203	219	227	265	228	230	228	200	177	154	137	44
48			159	184	195	227	198	201	201	198	175	153	136	48
52				152	167	195	173	177	178	179	173	151	134	52
56					141	167	152	156	157	159	159	149	133	56
60						141	133	138	140	142	142	142	132	60
64						105	115	122	125	127	127	128	127	64
68							98.5	107	111	113	114	115	115	68
72								92.8	97.9	101	103	104	104	72
76								78	85.6	90.3	92.2	93.8	93.9	76
80									73.4	79.7	82.3	84.4	84.7	80
84										69.2	73	75.6	76.3	84
88										58.1	63.9	67.3	68.5	88
92											54.5	59.3	61.1	92
96												51.3	54	96
100												42.6	46.9	100
104													39.6	104

Lifting capacity chart of SWDB (85°)

Main boom: 66m Suspended ballast: 500t Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t														
Jib (m)	30	36	42	48	54	60	66	72	78	84	90	96	102	Jib (m)
Radius (m)														Radius (m)
20	498	479												20
22	479	461	445											22
24	461	445	430	412										24
26	445	430	415	401	364	322								26
28	430	415	401	388	358	319	281							28
30	394	401	388	375	351	316	280	247						30
32	355	362	375	364	343	313	278	246	217	190				32
34	312	324	339	346	335	308	275	244	216	189	168			34
36	271	291	308	316	319	302	272	242	215	189	168	147		36
38		260	280	290	294	291	268	240	213	188	167	146	133	38
40		231	255	266	271	269	264	238	212	187	166	146	133	40
44			210	225	232	231	233	232	208	184	165	144	132	44
48			167	190	200	200	203	205	204	181	163	143	130	48
52				157	172	173	177	181	181	178	160	141	129	52
56					146	150	156	160	161	162	157	140	127	56
60					119	129	136	141	143	145	145	140	126	60
64						108	118	125	127	129	130	130	124	64
68							101	110	113	116	117	117	117	68
72								95.5	100	103	105	106	106	72
76								80.9	88	92.4	94.2	95.7	95.7	76
80									75.8	81.7	84.2	86.1	86.4	80
84										71.2	74.8	77.3	78	84
88										60.3	65.7	69	70.1	88
92											56.4	60.9	62.6	92
96												52.9	55.5	96
100												44.4	48.4	100
104													41.1	104

Lifting capacity chart of SWDB (85°)

Main boom: 72m Suspended ballast: 500t Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t														
Jib (m)	30	36	42	48	54	60	66	72	78	84	90	96	102	Jib (m)
Radius (m)														Radius (m)
20	466													20
22	450	434	414											22
24	434	419	401	367										24
26	420	405	386	357	322									26
28	392	386	370	347	316	284	252							28
30	364	363	354	335	310	280	250	223						30
32	336	341	337	323	302	275	247	221	196					32
34	306	318	320	310	294	270	244	219	195	173				34
36	277	295	302	297	285	263	240	217	194	172	153	138		36
38		269	284	283	274	257	236	214	192	171	153	138	124	38
40		240	262	268	263	250	231	211	190	169	152	137	123	40
44			216	231	238	233	220	203	185	166	150	136	122	44
48			174	195	205	204	207	195	180	163	150	134	121	48
52				163	176	178	181	184	173	158	147	132	119	52
56					150	154	159	163	164	156	144	129	117	56
60					124	133	139	144	146	147	140	127	115	60
64						112	121	127	130	132	132	123	113	64
68							104	112	115	118	119	119	110	68
72							86.7	98	102	106	107	108	107	72
76								83.5	90.1	94.4	96	97.4	97.4	76
80									78	83.6	85.9	87.8	88	80
84										73.	76.	78.	79.	84

										2	5	9	5	
88										62.4	67.4	70.5	71.5	88
92											58.2	62.5	64	92
96												54.5	56.8	96
100												46.1	49.8	100
104													42.6	104

Lifting capacity chart of SWDB (85°)

Main boom: 78m Suspended ballast: 500t Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t														
Jib (m)	30	36	42	48	54	60	66	72	78	84	90	96	102	Jib (m)
Radius (m)														Radius (m)
20	437													20
22	422	402												22
24	396	381	359	327										24
26	368	360	344	318	289									26
28	341	338	328	308	282	255								28
30	315	317	312	297	275	251	226	203						30
32	290	296	295	285	266	245	223	201	180					32
34	265	276	279	273	258	239	219	198	178	159				34
36	239	256	263	261	248	232	214	195	176	158	145			36
38	210	235	247	248	239	225	209	192	174	156	144	128	116	38
40		215	230	235	229	218	204	188	172	155	143	128	115	40
44			199	208	210	202	192	180	169	154	140	126	114	44
48			167	182	188	187	180	171	163	150	137	124	112	48
52				157	167	169	167	164	155	144	133	121	110	52
56					147	152	154	153	147	139	129	118	108	56
60					125	134	139	140	138	132	124	115	105	60
64						115	124	128	128	126	119	111	103	64
68							107	115	117	116	114	107	99.7	68
72							89.9	100	104	107	106	102	96.4	72
76								86	92.2	96.3	97.7	96	92.7	76
80									80.1	85.4	87.6	89	86.7	80
84									67.2	75	78.1	80.4	80.6	84
88										64.3	69	72	72.8	88
92											59.8	63.9	65.3	92
96												55.9	58.1	96
100												47.6	51	100
104													43.9	104

Lifting capacity chart of SWDB (85°)

Main boom: 84m Suspended ballast: 500t Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t														
Jib (m)	30	36	42	48	54	60	66	72	78	84	90	96	102	Jib (m)
Radius (m)														Radius (m)
20	398													20
22	371	353												22
24	345	334	312											24
26	319	314	299	277	254									26
28	294	294	284	267	247	225								28
30	271	274	269	256	239	220	201							30
32	249	256	255	245	231	214	197	179	165					32
34	227	238	240	233	222	208	192	177	163	147				34
36	205	220	226	222	213	201	187	176	161	146	132			36
38	182	203	212	211	204	194	182	172	158	144	131	117		38
40		185	199	199	195	187	180	168	155	142	129	117	106	40
44		149	171	178	177	175	169	160	149	137	126	114	104	44
48			143	157	160	161	157	150	142	132	122	112	102	48
52				135	144	146	144	140	134	126	118	108	99.9	52
56					126	131	133	130	126	120	113	105	97.2	56
60					107	115	120	121	118	114	108	101	94.2	60
64						99.8	107	110	110	107	103	97	90.9	64
68							93.9	99.2	101	100	97.1	92.5	87.3	68
72							80.1	88	91.5	93.2	91.2	87.8	83.5	72
76								76.7	81.9	84.7	85.2	82.9	79.5	76
80									72.2	76.3	77.7	77.9	75.3	80
84									61.6	67.9	70.3	71.3	70.8	84
88										59	62.9	64.8	65	88
92											55.3	58.3	59.2	92
96											46.9	51.7	53.4	96
100												44.7	47.5	100
104													41.4	104
108													34.6	108

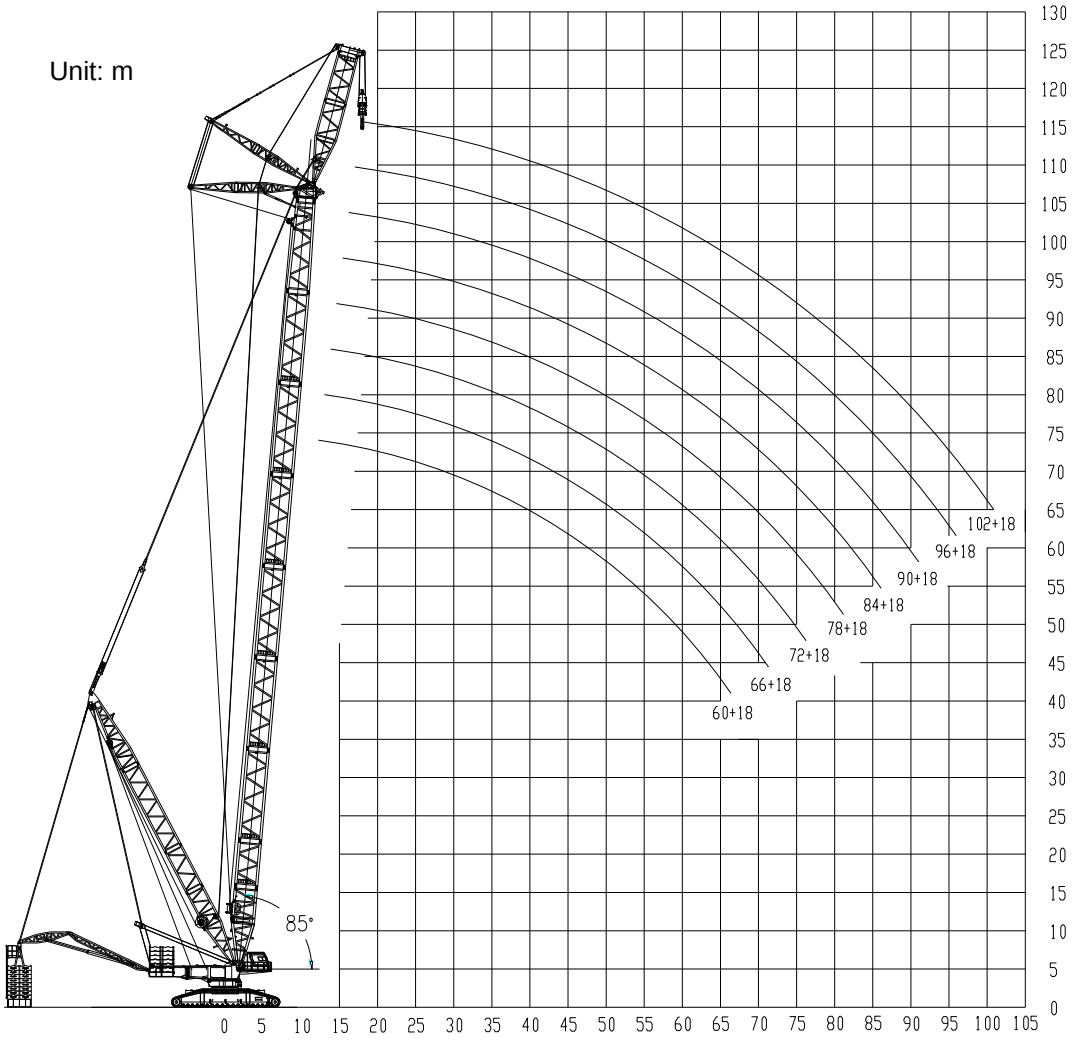
Lifting capacity chart of SWDB (85°)

Main boom: 90m Suspended ballast: 500t Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t														
Jib (m)	30	36	42	48	54	60	66	72	78	84	90	96	102	Jib (m)
Radius (m)														Radius (m)
22	331	312												22
24	307	294	277											24
26	283	276	264	247										26
28	260	258	250	236	220	202								28
30	238	240	236	226	212	197	185							30
32	218	223	222	215	204	194	180	166						32
34	199	207	208	204	195	188	176	162	149					34
36	180	191	195	193	186	181	170	159	146	133	122			36
38	160	176	182	182	181	174	165	155	143	131	120	109		38
40		161	170	172	173	167	159	150	140	129	118	107	98	40
44		131	147	155	156	153	148	141	133	124	115	105	96.1	44
48			125	136	140	139	136	132	126	118	110	102	93.7	48
52				118	124	125	125	122	118	112	106	98.2	90.9	52
56				97.5	110	112	114	113	110	106	100	94.2	87.8	56
60					94.1	100	103	103	102	99.1	95.1	89.9	84.4	60
64						87.2	92.5	94.3	94	92.4	89.4	85.3	80.7	64
68						72.1	82.1	85.4	86.3	85.7	83.6	80.6	76.8	68
72							70.1	76.6	78.6	79	77.9	75.7	72.7	72
76								67	71.1	72.5	72.1	70.8	69.9	76
80									63.1	66	66.4	67.2	65.7	80
84									53.9	59.4	61.8	62.3	61.5	84
88										51.7	55.1	57.2	57.2	88
92											48.4	51.2	52.3	92
96											41.1	45.3	47	96
100												39.2	41.8	100
104													36.4	104
108													30.5	108

Lifting capacity chart of SWDB (85°)

Main boom: 96m Suspended ballast: 500t Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t														
Jib (m)	30	36	42	48	54	60	66	72	78	84	90	96	102	Jib (m)
Radius (m)														Radius (m)
22	287													22
24	265	255	242											24
26	244	238	229	215										26
28	223	222	216	210	197									28
30	204	206	203	199	189	177	164							30
32	186	190	190	189	181	171	159	148						32
34	169	176	178	179	173	164	155	144	133					34
36	153	162	169	169	164	158	149	140	130	120				36
38	136	149	158	159	156	151	144	136	127	117	108	98.5		38
40		138	147	149	148	144	139	132	124	115	106	97.2	88.9	40
44		113	126	132	133	131	127	123	116	109	102	94.1	86.6	44
48			106	115	118	118	116	113	109	103	97.5	90.5	83.8	48
52				99.2	105	106	106	104	101	97.3	92.4	86.6	80.7	52
56				82.8	91.8	94.5	95.9	95.6	93.7	90.9	87	82.3	77.2	56
60					78.8	83.5	86.2	87	86.2	84.4	81.5	77.7	73.5	60
64						72.5	76.9	78.7	78.9	78	75.9	73.1	71	64
68						60.8	67.7	70.7	71.8	71.7	70.4	69.7	67	68
72							58.2	62.9	64.9	65.6	66.3	65	63	72
76								55	59.4	60.9	61	60.4	59	76
80								47.5	52.7	55.1	55.9	55.8	54.9	80
84									45.7	49.4	50.8	51.3	50.9	84
88										43.4	45.8	46.9	46.9	88
92											40.7	42.5	43	92
96											35.2	38	39.1	96
100												33.4	35.2	100
104													31.6	104
108													26.6	108

2.13 Hoisting height characteristic curves and lifting capacity chart of SFVDB



Lifting capacity chart of SFVDB (12°)

Fixed jib: 18m Suspended ballast: 500t Radius of suspended ballast: 27m Rear counterweight: 250t Central ballast: 70t Unit: t									
Boom (m)	**60**	**66**	**72**	**78**	**84**	**90**	**96**	**102**	**Boom (m)**
Radius (m)									**Radius (m)**
15	650								15
16	650	650							16
17	650	650	610	556					17
18	650	650	610	555	505	460			18
19	650	650	610	555	504	460	415	367	19
20	650	650	609	555	504	460	413	365	20
21	650	650	608	555	504	460	412	364	21
22	649	650	608	554	504	459	411	363	22
24	646	646	608	554	503	459	408	360	24
26	636	633	607	552	503	459	405	357	26
28	586	583	583	552	502	458	402	355	28
30	541	541	538	536	500	456	399	352	30
32	505	502	502	500	494	452	395	349	32
34	472	469	467	465	463	447	392	345	34
36	441	440	438	436	432	431	389	342	36
38	415	413	410	409	407	405	385	339	38
40	391	388	388	384	382	379	377	336	40
44	348	346	345	343	341	338	336	330	44
48	314	312	310	307	305	303	301	301	48
52	284	282	281	278	276	274	270	270	52
56	258	257	255	251	250	248	246	246	56
60	227	234	233	230	228	226	224	224	60
64	200	210	213	211	209	205	203	203	64
68	174	186	193	193	191	189	186	186	68
72		163	172	176	176	172	170	172	72
76		140	152	158	161	158	156	158	76
80			132	140	144	145	145	145	80
84				122	128	131	131	133	84
88					113	116	118	121	88
92					97.7	103	105	109	92
96						89.1	93.2	98	96
100							81	86.8	100
104								75.8	104
108								64.7	108

3. Technical instruction

3.1 Mechanisms

Hoisting mechanism

The hoisting mechanism is composed of a variable displacement axial piston hydraulic motor, a reducer, a normally-closed brake and wire rope, which can be controlled independently.

The wire rope is a special type of anti-twist wire rope.

Single rope speed of the outermost layer on hoisting winch I and II is 133m/min.

A synchronous controller is used for the synchronized operation of hoisting winch I and II.

Single rope speed of the outermost layer on the tip boom hoisting winch III is 133m/min.

Derricking mechanism

Derricking mechanism (including main boom derricking mechanism, luffing jib derricking mechanism and superlift derricking mechanism) is composed of a variable displacement axial piston hydraulic motor, a reducer, a normally-closed brake and wire rope.

The wire rope is a new type of wire rope specialized for derricking.

Single rope speed of the outermost layer on the main boom derricking winch is 55×2m/min.

Single rope speed of the outermost layer on the luffing jib derricking winch is 120m/min.

Single rope speed of the outermost layer on the superlift derricking winch is 127m/min.

Slewing mechanism

The slewing mechanism is a triple-driven slewing mechanism, consisting of a constant displacement hydraulic motor, a gear reducer, a brake, a small gear and a slewing bearing.

The operation of controllable slewing helps reduce impact and makes starting and braking more stable.

A three-row roller-type external gearing slewing bearing and a slewing reducer are used by the mechanism to guarantee its strong load bearing capacity, high precision, and stable and precise slewing movement.

Stepless speed regulation of slewing from 0 to 0.7r/min.

Crawling mechanism

The crawling mechanism is a quadruple-driven mechanism. Crawling of the two tracks is controlled by joysticks or pedals. It is able to make such movements as crawling in a straight line, steering with one track, differentiate steering, pivot steering and crawling with load with high maneuverability and flexibility.

Traveling speed: 0~0.7 km/h

Max. gradeability: 15%

Track tensioning: Tensioning cylinder is controlled by an independent pump station conveniently and reliably.

A-frame erecting mechanism

The A-frame erecting mechanism is composed of three parts, A-frame, A-frame erecting cylinder, and auxiliary hydraulic system. This mechanism is used for self-assembly and dismantling (or transport). Erect A-frame from the horizontal position to over 90° for the convenience of connecting anchoring rods and assembling boom sections and tracks.

Outrigger erecting and track self-assembly and dismantling mechanism

The mechanism consists of such parts as undercarriage outrigger, outrigger cylinder, outrigger valve, track bolting pin, etc. The cylinder erecting mechanism is the main bearing part for track self-assembly and dismantling. The track self-assembly and dismantling mechanism lifts track assy. through A-frame and A-frame erecting mechanism and connects the chassis with the track assy. through bolting pins. The track assy. can be assembled or disassembled automatically through this mechanism without the help of other auxiliary lifting equipment so as to improve working efficiency, reduce labor intensity and avoid risk of manual operation.

3.2 Systems

Hydraulic system

The hydraulic system is composed of such parts as main pump, hydraulic motor, auxiliary valve, hydraulic oil tank, cooler, etc., including the hydraulic system for hoisting, the hydraulic system for derricking, the hydraulic system for slewing, the hydraulic system for crawling, the servo hydraulic system, the hydraulic system for tilting-back support, the hydraulic system for suspended ballast hoisting, the hydraulic system for cooling, the auxiliary hydraulic system, etc. Hydraulic elements are mainly imported from Germany.

The major hydraulic system is a closed pump-controlled system, which is efficient, energy-saving, reliable and maneuverable. Stable starting, braking and reversing with no impact; quick response, low calorific value, and long service life. Electric proportional control elements help to realize accurate and intelligent control. Various kinds of alarms for pressure and filter element clogging largely improve the security and reliability of the hydraulic system.

Electrical system

Direct current of 24V; negative ground; two storage batteries.

Electrical devices of the crane mainly includes power supply, starting and shutoff device of the engine, indicator light, alarm, illuminating device, fan, wiper, horn, hoisting height limiter, hydraulic oil cooling fan, digital display, PLC controller, load moment limiter, engine preheating device, safety devices, etc. These devices guarantee the safe operation and a good working environment for the crane. Engine, PLC controller, load moment limiter, and digital display are effectively connected together through the CAN bussing technology. It has the function of fault detecting and self-diagnosis. It is also equipped with a GPS/GPRS and a remote fault diagnosis system.

Power system

The engine is a Cummins electronic fuel injection diesel engine with CAN bus interface, imported with original packaging.

Rated output power: 641kw, 2100r/min

Max. output torque: 3776Nm, 1400r/min

Emission standard: China III for non-road mobile machinery / U.S. EPA Tier 2 and EU Stage II

The large volume of the fuel oil tank, which is 1600L, guarantees long enough working hours for the engine.

Centralized display system

The large touch LCD of 10.4 inches displays in multiple languages. It displays all kinds of signals collected by the PLC controller, including engine speed, water temperature, fuel oil pressure, hydraulic pump pressure, pressure of each hydraulic circuit, working condition of winch, working condition of the basic machine, etc. It carries out real-time monitoring on working condition and sends out a yellow or a red alarm when the working condition of the crane is abnormal.

Centralized lubrication system

Three sets of centralized lubrication systems (one for superstructure and two for undercarriage) are convenient for maintenance and reduce abrasion between components.

3.3 Safety devices

The crane is equipped with mechanical, electronic and hydraulic safety devices and alarming devices, which guarantee the safe operation of the crane.

Load moment limiter

Load moment limiter consists of a moment displayer and a digital LCD. When the load moment reaches 90% of the rated load moment, the warning light is on and the buzzer sends out an alarm.

The operation of the crane stops automatically when it reaches the rated load moment so as to avoid accidents caused by overload.

The digital LCD displays data as follows:

- Load moment ratio
- Elevation angle of boom
- Boom length
- Working radius
- Actual lifting capacity
- Rated lifting capacity
- Data of tension sensor
- Max. permitted hoisting height
- Wind speed on boom head

Tilting-back support devices for boom

Both the main boom and the derrick boom are equipped with a pair of tilting-back support cylinders, which are intelligently controlled and can be automatically set with different pressures according to boom angle to avoid vibration and backward tilting during operation.

WA-frame 2 is equipped with a mechanical-locking tilting-back support mechanism, and WA-frame 1 is an intelligent oil-gas tilting-back cylinder of the world's most cutting-edge technology. The force of tilting-back support is self-adaptive according to different angles of the luffing jib. The luffing jib is equipped with a mechanical tilting-back support mechanism that avoids backward tilting of the luffing jib.

Overflow valve of the hydraulic system

Overflow valves fitted in the hydraulic system can restrain abnormal high pressure in the oil circuit, thus protecting such hydraulic elements as hydraulic oil pump and hydraulic motor against damage and preventing the hydraulic system from being overloaded.

Hoisting height limiter

Devices like limit switch and limit weight installed on boom head are used to prevent over-hoisting of load hook. Limit switch sends out a signal if the load hook is hoisted to a certain height, and the electrical system will cut off the hoisting automatically. A sound-light alarm will be sent out through the buzzer and the display in operator's cab to avoid over-hoisting of the hook.

Angle indicator

It is fitted at the lower rear end of the boom pivot section (i.e. on the right side of the operator's cab). The operator can clearly see the boom angle from the cab.

Derricking limiter

The derricking limiter, controlled by a load moment limiter and a limit switch, is able to detect the limit elevation angle of the boom, cut off derricking automatically, and send out a sound-light alarm.

Inclinometer

An electronic inclinometer displays the inclination angle of the crane on a digital screen and sends out a warning sign to guarantee safe operation of the crane.

A bubble mechanical inclinometer is fixed on the cross-shaped support frame.

Mousing on hook

It closes off the hook to prevent a load from slipping off.

Protective device for over-lowering

A device guarantees that there are always three windings of wire rope left on the drum during operation. When there are only three windings of wire rope left on the drum, the lowering limit switch will be triggered, the buzzer will sound, and the lowering will be cut off.

Anemometer

An electronic wind speed sensor fixed on boom head to detect real-time wind speed, which is then displayed on the screen.

Emergency stop button

It shuts down the engine and cuts off all operations in emergent conditions.

Tricolor warning light

The warning light, by showing red, yellow and green colors, can indicate loading status. The green color means the load ratio is less than 90%, the yellow color means the load ratio is between 90% and 100%, and the red color means that the load ratio has exceeded 100% and the crane is overloaded.

Safety monitoring system

Video cameras: monitor winches on the slewing table, the condition at the rear end of the crane and the winch on the main boom pivot section.

High-definition ball-head camera: fixed on the boom head and used to monitor hoisting.

Displayer: Monitored images can be switched over through a button.

The system has the function of recording and storing videos.

3.4 Operator’s cab

It is an all-steel structured cab with tempered glass around. The top and front windows are laminated glasses. The cab is equipped with sun visors, an adjustable seat, a wiper, electronic joysticks, a load moment limiter, a digital display, a warm/cold air conditioner, a head lamp, a fire extinguisher, etc. The operator’s cab has a broad vision and a capacious and comfortable inner space.

3.5 Hooks

Optional hooks are as follows:

Hook for 1250t: It can be decomposed into hooks for 750t, 650t, 400t and 350t. (2×17 pulleys)

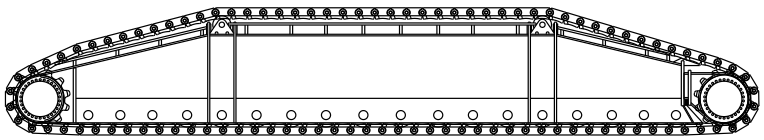
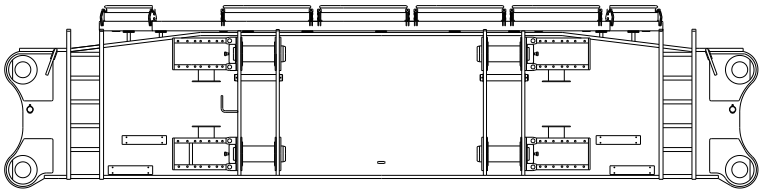
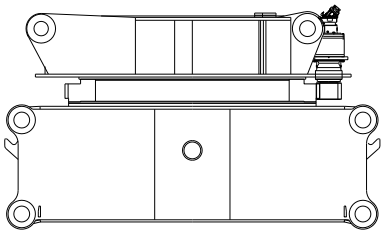
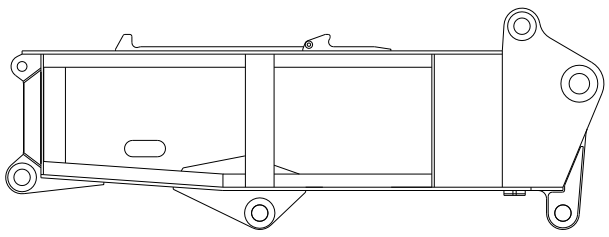
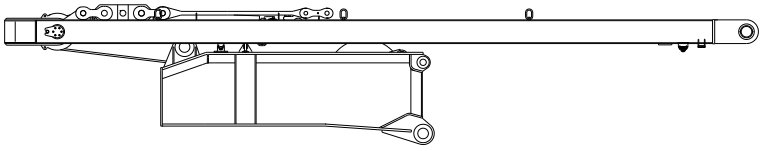
Hook for 500t: 2×8 pulleys

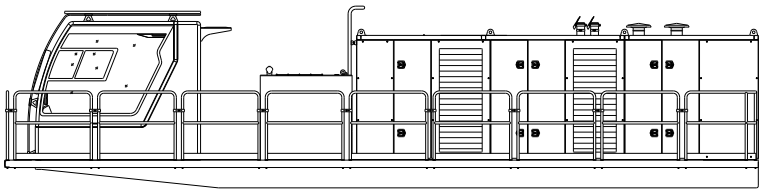
Hook for 300t: 2×4 pulleys

Hook for 200t: 5 pulleys

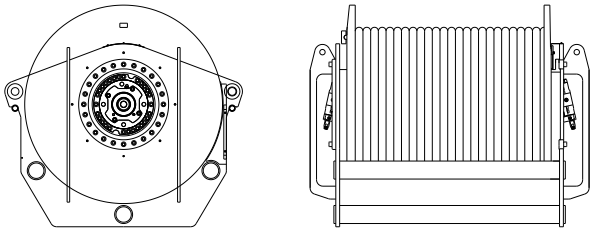
Hook for 80t: 3 pulleys (for tip boom)

4. Transport dimensions and weights of major components

Components in transport	Items	
	Track assy.	×2
	Length	14260 mm
	Width	2000 mm
	Height	2400 mm
	Weight	84t
Crawler carrier and track pads are transported separately. (Track carrier: 44t; track pads: 40t)		
	Cross-shaped support	×2
	Length	10010 mm
	Width	1845 mm
	Height	2300 mm
	Weight	26 t
	Slewing center and chassis frame	×1
	Length	5215 mm
	Width	3600 mm
	Height	3117 mm
	Weight	53 t
Including slewing platform, slewing ring, slewing reducer and chassis frame.		
	Front section of slewing platform	×1
	Length	7300 mm
	Width	3450 mm
	Height	2715 mm
	Weight	35.8 t
	Rear section of slewing platform	×1
	Length	14220 mm
	Width	3300 mm
	Height	2655 mm
	Weight	31 t
Including rear end of slewing platform, A-frame, main derricking winch, main derricking rope, etc.		

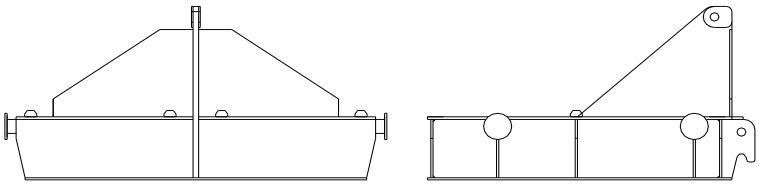


Power platform	×1
Length	12300 mm
Width	3420 mm
Height	2970 mm
Weight	18.1 t

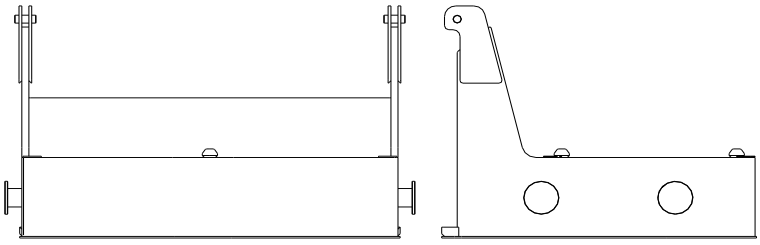


Main hoisting winch	×2
Length	2175 mm
Width	1850 mm
Height	1720 mm
Weight	13.1 t

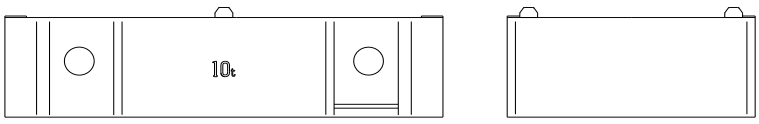
With the main hoisting rope



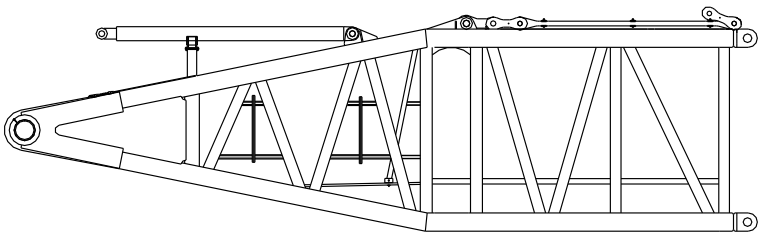
Counterweight pallet	×2
Length	3400 mm
Width	2915 mm
Height	1650 mm
Weight	5.26 t



Bracket for central ballast	×2
Length	2910mm
Width	2235 mm
Height	1760 mm
Weight	15 t

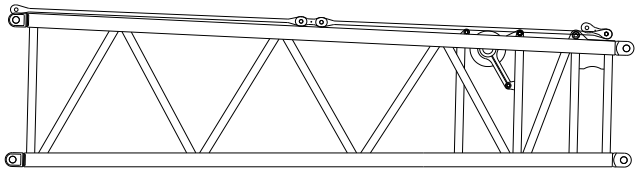
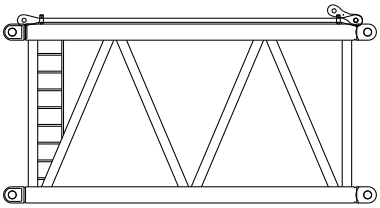
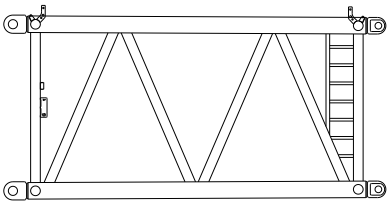
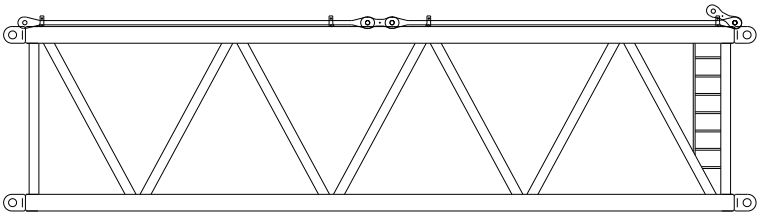
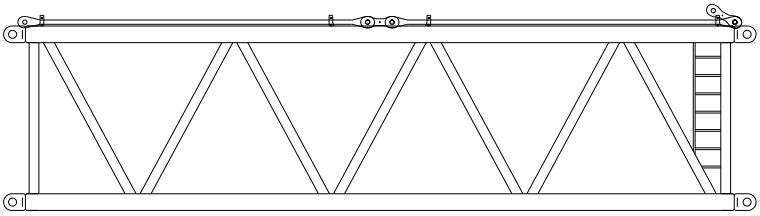


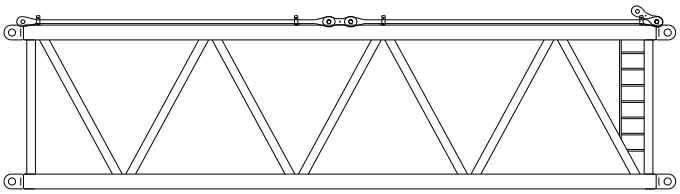
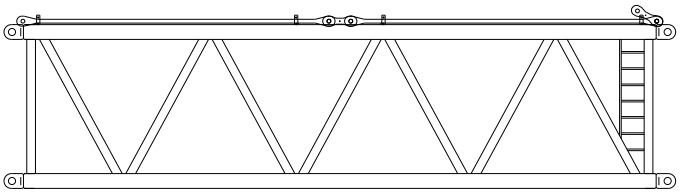
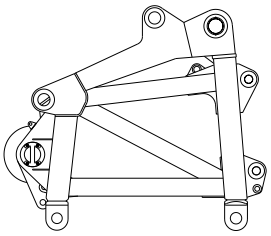
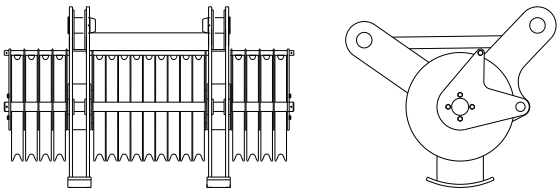
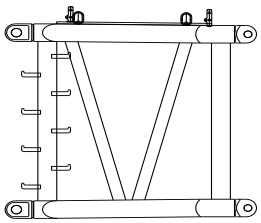
Counterweight slab	×72
Length	2650 mm
Width	1500 mm
Height	705 mm
Weight	10 t

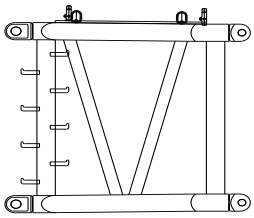
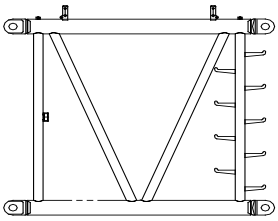
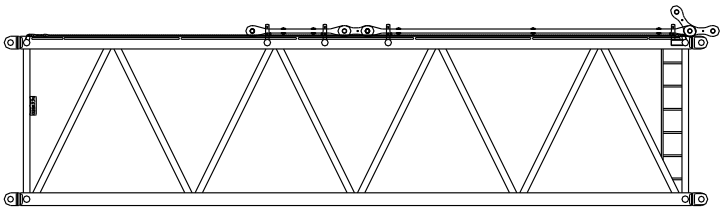
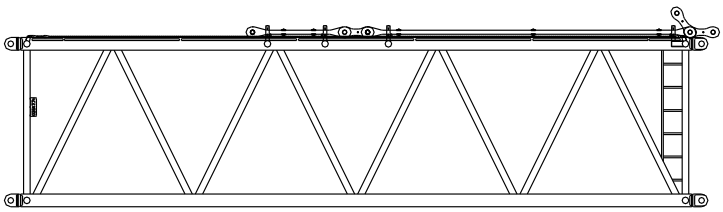
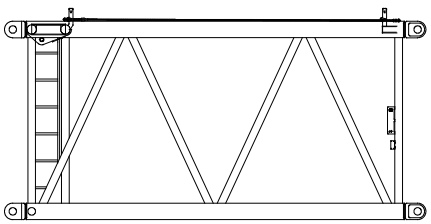


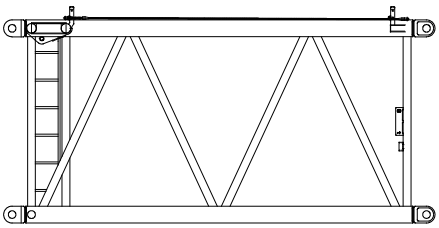
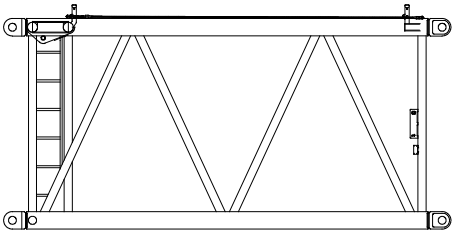
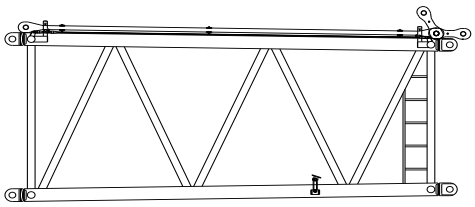
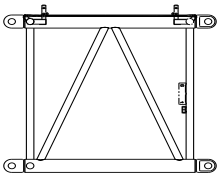
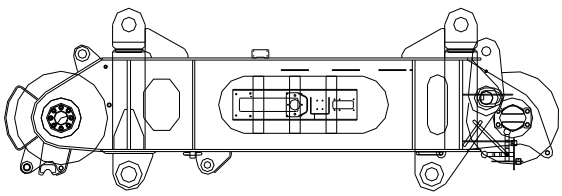
Main boom pivot section	×1
Length	11300 mm
Width	3500 mm
Height	3355 mm
Weight	24.5 t

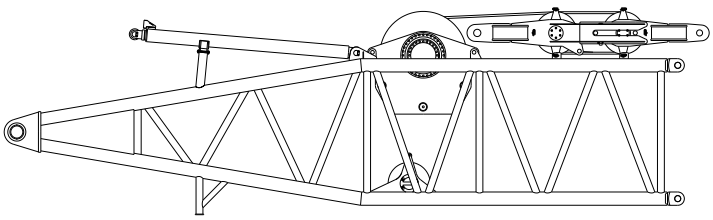
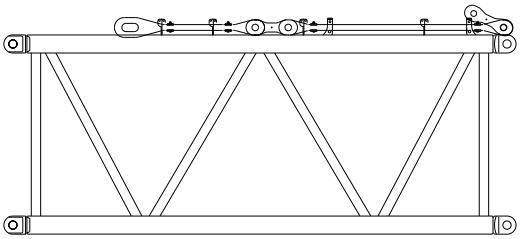
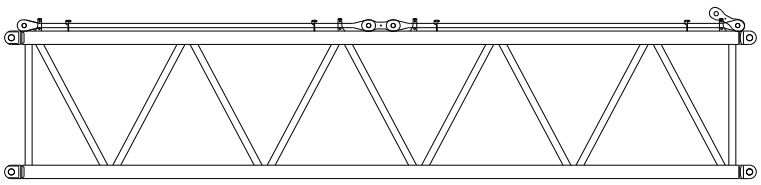
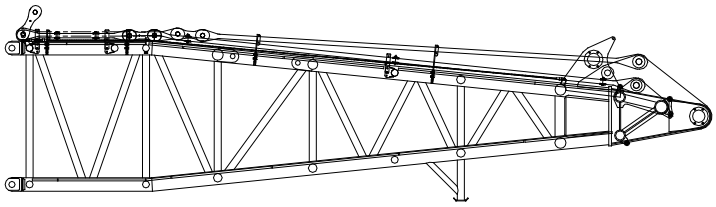
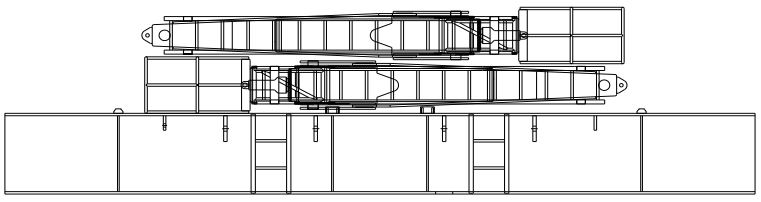
Without winch

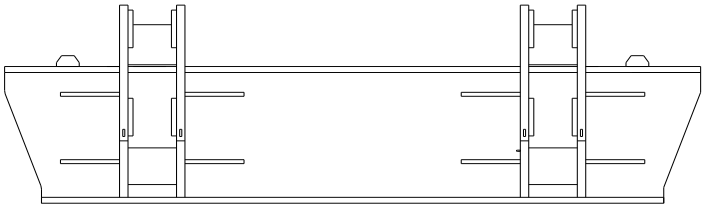
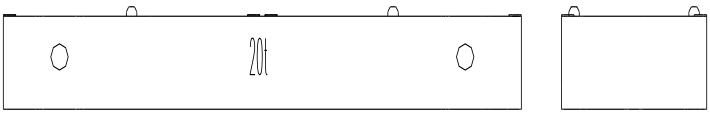
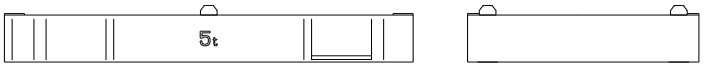
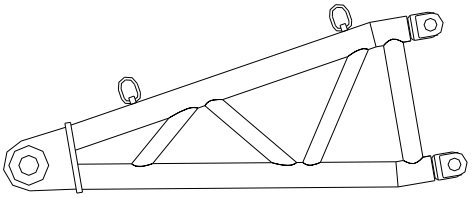
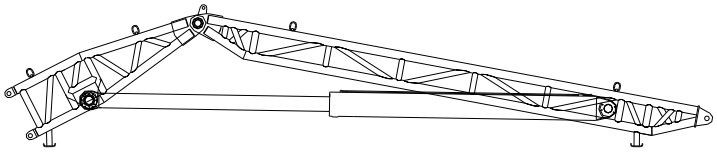
	Main boom head section	×1
	Length	12295 mm
	Width	3500 mm
	Height	3185 mm
	Weight	14.6 t
	6m main boom intermediate section	×1
	Length	6460mm
	Width	3500 mm
	Height	3350 mm
	Weight	7.7t
	Light main boom reducing section	×1
	Length	6275 mm
	Width	3500 mm
	Height	3250mm
	Weight	6.1 t
	12m heavy main boom intermediate section	×2
	Length	12460 mm
	Width	3500 mm
	Height	3380 mm
	Weight	14.7 t
	12m heavy main boom intermediate section (for intermediate section)	×1
	Length	12460 mm
	Width	3500 mm
	Height	3380 mm
	Weight	14.9 t

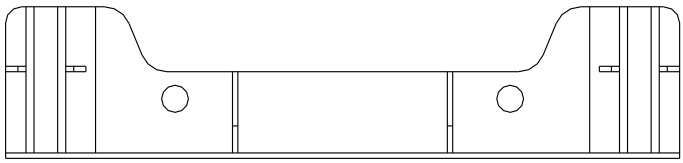
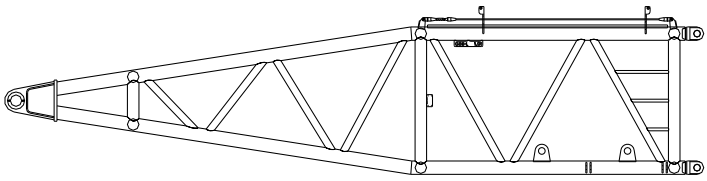
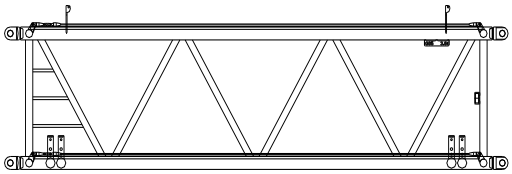
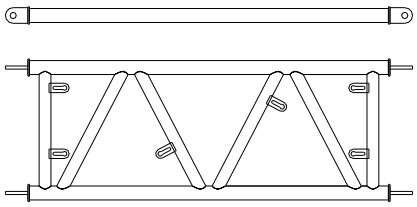
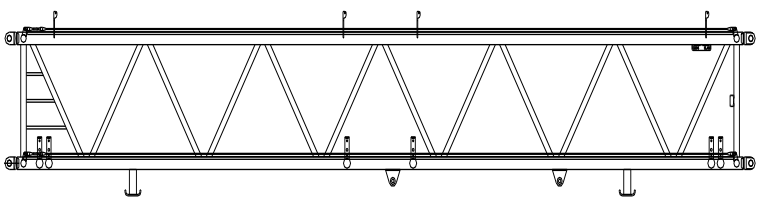
	12m main boom intermediate section	×2
	Length	12460 mm
	Width	3500 mm
	Height	3380 mm
	Weight	13.35 t
	12m main boom intermediate section (for intermediate section)	×1
	Length	12460 mm
	Width	3500 mm
	Height	3380 mm
	Weight	13.79 t
	Main boom head adaptor	×1
	Length	3220 mm
	Width	3295 mm
	Height	2750 mm
	Weight	9.7 t
	Pulley block on main boom	×2
	Length	1875 mm
	Width	1360 mm
	Height	1165 mm
	Weight	1.8 t
	Reducing section A for parallel boom	×1
	Length	3260 mm
	Width	7980 mm
	Height	3290 mm
	Weight	10.25t

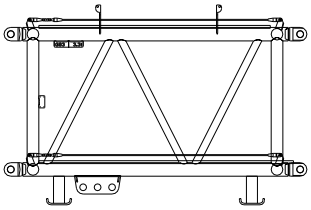
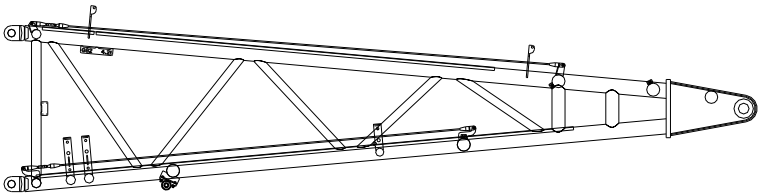
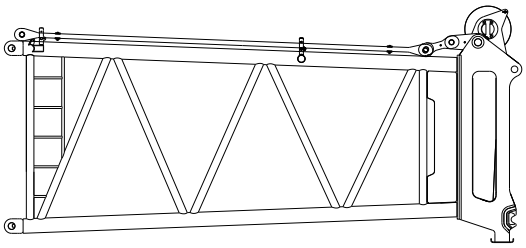
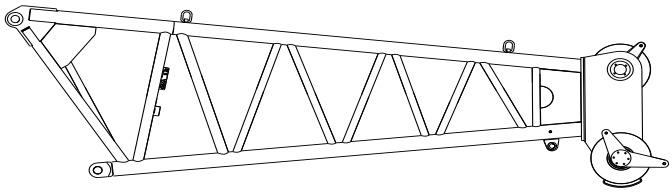
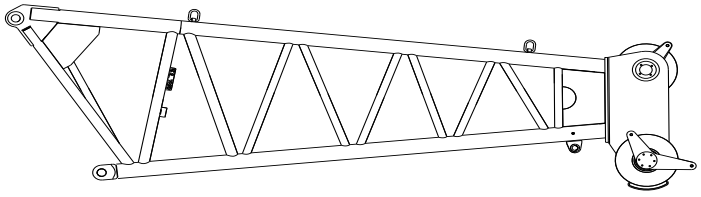
	Reducing section B for parallel boom	×1
	Length	3260 mm
	Width	7980 mm
	Height	3290 mm
	Weight	10.24t
	3m connecting section for parallel boom	×1
	Length	3220 mm
	Width	7950 mm
	Height	3150 mm
	Weight	6.42t
	12m wide luffing jib intermediate section	×1
	Length	12430mm
	Width	3220mm
	Height	3450mm
	Weight	8.4 t
	12m wide heavy luffing jib intermediate section	×1
	Length	12430 mm
	Width	3220mm
	Height	3450 mm
	Weight	9.3 t
	6m wide luffing jib intermediate section (for intermediate tensioner)	×1
	Length	6250mm
	Width	3245mm
	Height	3140mm
	Weight	4.91 t

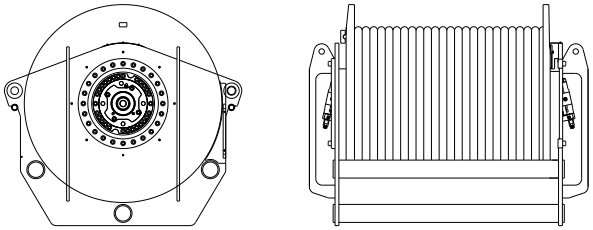
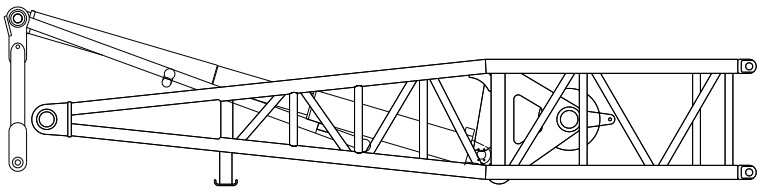
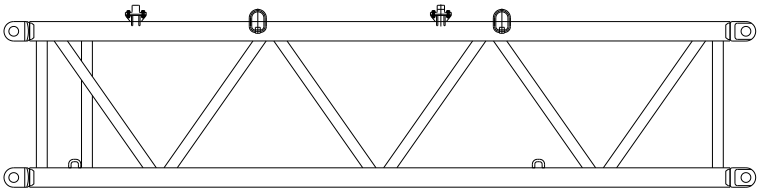
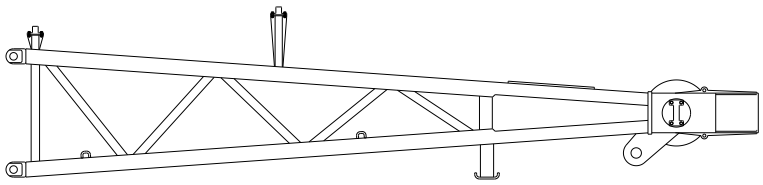
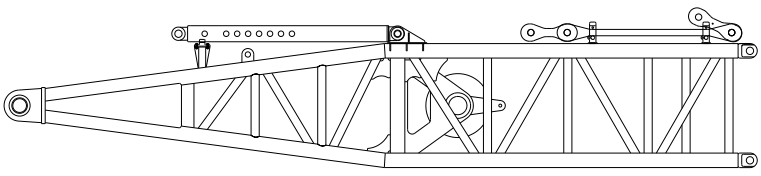
	6m wide heavy luffing jib intermediate section (for intermediate tensioner)	×1
	Length	6250 mm
	Width	3245 mm
	Height	3140 mm
	Weight	5.42 t
	6m luffing jib intermediate section (for intermediate tensioner)	×1
	Length	6250mm
	Width	2950mm
	Height	2940mm
	Weight	4.79 t
	Luffing jib reducing section	×1
	Length	6930mm
	Width	3220 mm
	Height	3370 mm
	Weight	4.85 t
	3m luffing jib intermediate section	×1
	Length	3250mm
	Width	3250 mm
	Height	3130 mm
	Weight	2.82 t
	Luffing jib head adaptor	×1
	Length	4170 mm
	Width	3000 mm
	Height	1370 mm
	Weight	6.7 t

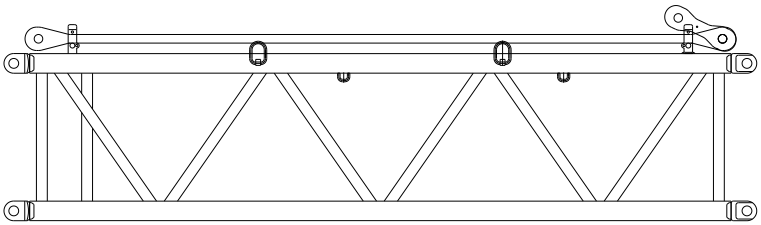
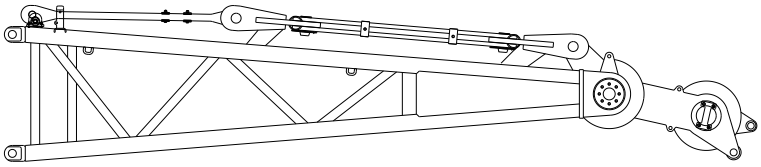
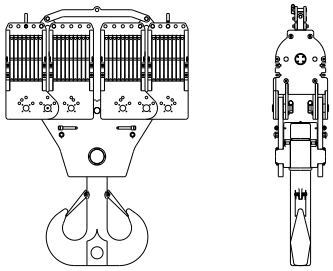
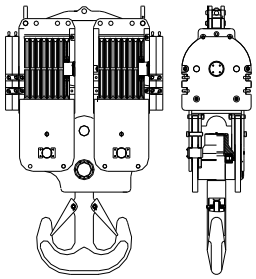
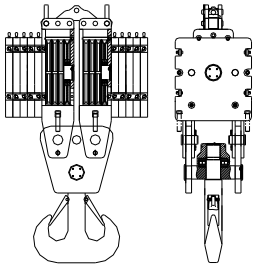
	Derrick boom pivot section	×1
	Length	11850 mm
	Width	3230 mm
	Height	3410 mm
	Weight	27.3 t
With derrick boom tilting-back support cylinder, superlift derricking winch and derricking rope and superlift derricking pulley block.		
	6m derrick boom intermediate section	×1
	Length	6425 mm
	Width	2920 mm
	Height	2780 mm
	Weight	4.3 t
	12m derrick boom intermediate section	×1
	Length	12280 mm
	Width	2920 mm
	Height	2810 mm
	Weight	10.2 t
	Derrick boom head section	×1
	Length	11320 mm
	Width	2920 mm
	Height	3145 mm
	Weight	16 t
	Suspended ballast frame	×1
	Length	8760 mm
	Width	3330 mm
	Height	2320 mm
	Weight	23.1t

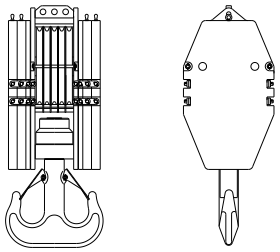
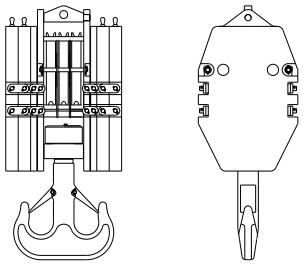
	Detachable base of suspended ballast	×1
	Length	3300mm
	Width	2870 mm
	Height	1000 mm
	Weight	4.1 t
	Counterweight slab of 20t	×1
	Length	5350mm
	Width	1500 mm
	Height	705 mm
	Weight	20t
	Counterweight slab of 5t	×2
	Length	2650mm
	Width	1500 mm
	Height	385 mm
	Weight	5t
	Front section of suspended ballast pushing mechanism	×1
	Length	3300mm
	Width	2780 mm
	Height	1250 mm
	Weight	2.1t
	Middle and rear sections of suspended ballast pushing mechanism	×1
	Length	15050mm
	Width	3060 mm
	Height	3100 mm
	Weight	12.9t

	Adapting structure for rear counterweight	×2
	Length	2510mm
	Width	705mm
	Height	560mm
	Weight	0.75t
	Pivot section of support boom for derrick boom	×2
	Length	7340 mm
	Width	1170mm
	Height	1640 mm
	Weight	1.8 t
	6m intermediate section of support boom for derrick boom	×1
	Length	6140 mm
	Width	2900 mm
	Height	1780 mm
	Weight	1.9 t
	Connecting section of support boom	×1
	Length	2620 mm
	Width	110mm
	Height	910 mm
	Weight	0.1 t
	12m reducing section of support boom	×1
	Length	12140 mm
	Width	2940 mm
	Height	2100 mm
	Weight	3.6t

	3m connecting section	×1
	Length	3140 mm
	Width	4950 mm
	Height	2100 mm
	Weight	2.55t mm
	Head section of support boom for derrick boom	×1
	Length	6995 mm
	Width	2900 mm
	Height	1725 mm
	Weight	2.5 t
	Special head section for wind turbine	×1
	Length	7850 mm
	Width	3240 mm
	Height	3540mm
	Weight	7.22 t
	Jib for wind turbine (220t)	×1
	Length	7850 mm
	Width	2020 mm
	Height	2600 mm
	Weight	4.6 t
	Jib for wind turbine (270t)	×1
	Length	7850 mm
	Width	2020 mm
	Height	2600 mm
	Weight	4.6 t

	Luffing jib derricking winch	×1
	Length	1850 mm
	Width	2175 mm
	Height	1720 mm
	Weight	10.3 t
With luffing jib derricking winch		
	Pivot section of WA-frame 1	×1
	Length	8570 mm
	Width	3170 mm
	Height	1495 mm
	Weight	6.7 t
With luffing jib tilting-back support system and accumulator cylinder		
	6m intermediate section of WA-frame 1	×1
	Length	6160 mm
	Width	2860 mm
	Height	1495 mm
	Weight	1.8 t
	Head section of WA-frame 1	×1
	Length	7945 mm
	Width	2860 mm
	Height	1825 mm
	Weight	4.6 t
	Pivot section of WA-frame 2	×1
	Length	8250 mm
	Width	3170 mm
	Height	1755 mm
	Weight	5.4 t
With tilting-back support for WA-frame 2		

	6m intermediate section of WA-frame 2	×1
	Length	6160 mm
	Width	2860 mm
	Height	1755 mm
	Weight	2.7 t
	Head section of WA-frame 2	×1
	Length	7565 mm
	Width	2860 mm
	Height	1575 mm
	Weight	6.9 t
	Main hook	×1
	Length	3800 mm
	Width	1170 mm
	Height	5365 mm
	Weight	31 t
	Hook (500t)	×1
	Length	2360 mm
	Width	1040 mm
	Height	4005 mm
	Weight	15t
	Hook (300t)	×1
	Length	1955 mm
	Width	1050 mm
	Height	3566 mm
	Weight	15t

	Hook (200t)	×1
	Length	1120 mm
	Width	1040 mm
	Height	2770 mm
	Weight	8.8 t
	Hook (80t)	×1
	Length	935 mm
	Width	800 mm
	Height	2045 mm
	Weight	4.3 t

5. Working conditions and matters needing attention

5.1 Working environment

(1) Temperature of working environment ranges between -20℃ and 40℃.

(2) Wind speed: It shall not exceed 14.1m/s when boom length ≤50m or 9.8m/s when boom length ＞50m.

(3) The ground must be solid and flat with a gradient of less than 1%. The bearing capacity of the ground or the bearing surface should be larger than the maximum ground pressure of the current operating mode.

5.2 About load

(1) Weight of slings and rope are contained in lifting capacity charts. The actual weight of load should be smaller than the value in chart.

(2) Data in lifting capacity charts are provided based on the working condition that the ground is solid and flat and load is freely suspended.

(3) Blank spaces with no capacities represent non-operation areas. Operation is prohibited in these areas.

(4) It is permitted to travel with 100% load when the traveling speed ≤ 0.1m/s (6m/min).

5.3 Load hooks and reeving plans

The rated lifting capacity of the load hook must be larger than or equal to the actual weight of the load (including slings, wire rope, etc.) for any circumstances.

Attention: Data provided in the technical specifications vary with the upgrade of the product. An actual product shall prevail.