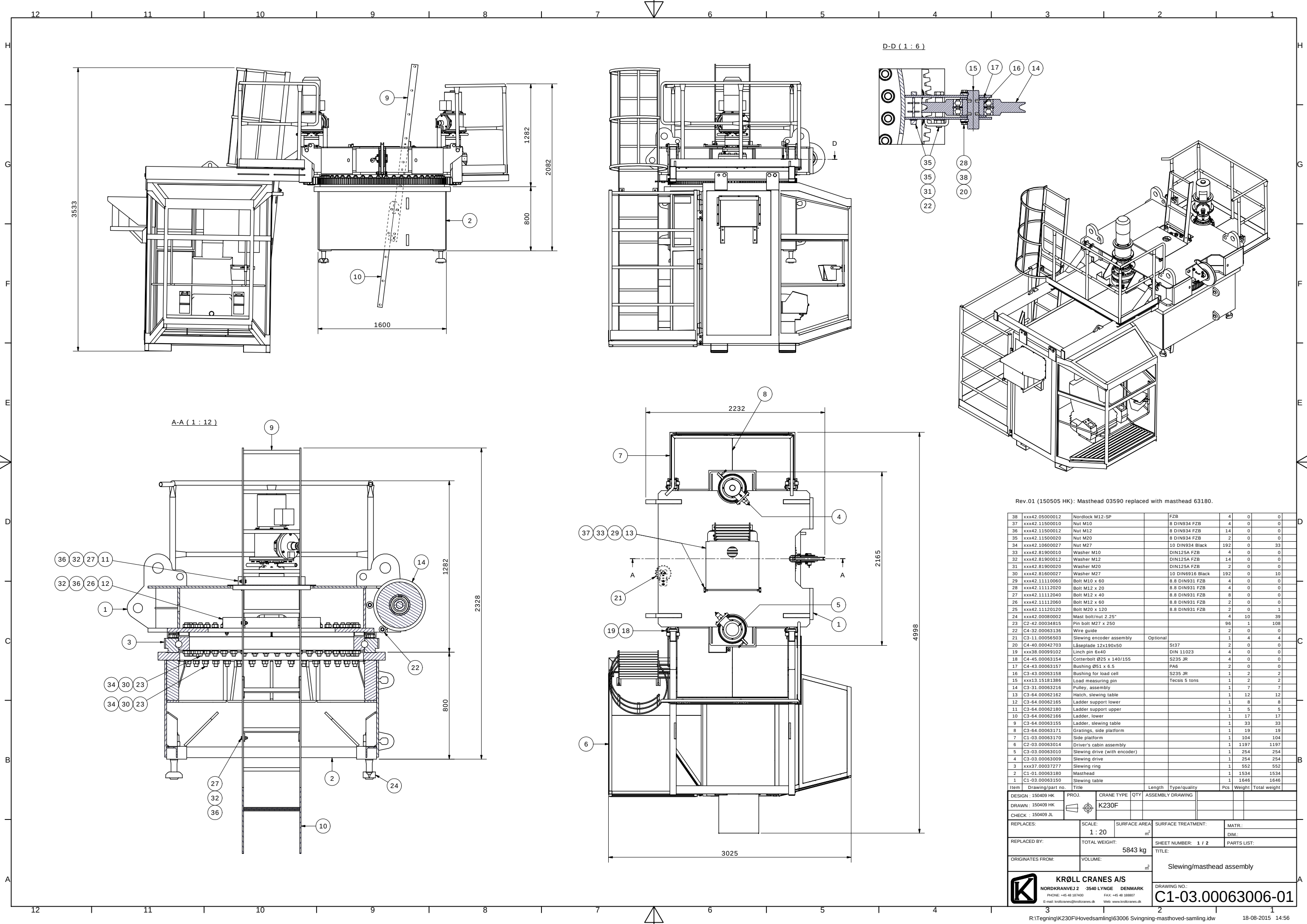


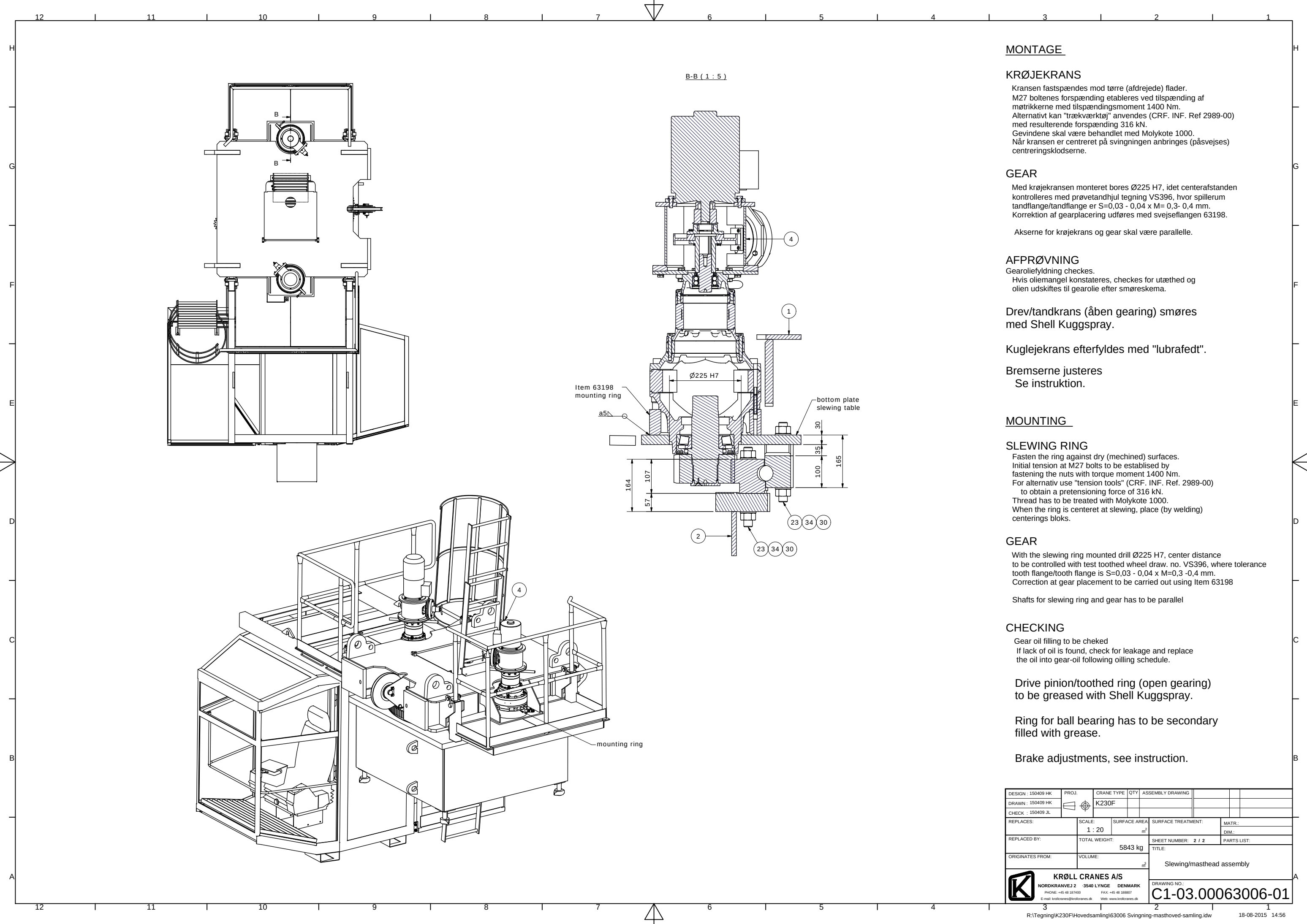
Section	Designation	DWG. No.
1	Main assembly	
	K230F top crane assembly	C1-00.00063000-00
2	Masts	
	N22-1 Nedstøbningsmast	
	M22-1 Mastsections	
3	Masthead / Slewing	
	Slewing / masthead assembly (2 sheets)	C1-03.00063006-01
	Slewing drive assembly – Without encoder	C3-03.00063009-00
	Slewing drive assembly – With encoder	C3-03.00063010-00
	Coupling housing assembly – Slew drive	C2-03.00057215-00
	Driver's cabin assembly	C2-03.00063014-00
	Driver's cabin	C3-12.00059250-00
	Cabin rear platform	C3-64.00062154-01
	Pulley, assembly $\varnothing 315$ / $\varnothing 360$ / $\varnothing 12$	C3-31.00063216-01
	Slewing encoder assembly ! OPTIONAL !	C3-11.00056503-00
4	Top Tower	
	Top tower assembly	C1-04.00063005-00
	Pulley assembly. Same as for masthead / slewing	
	Overload assembly	C2-11.00062135-00
5	Counter jib	
	Counterjib assembly	C1-04.00063003-00
	Hoist winch assembly 10T, 37 kW	C1-05.00063007-00
	Hoist winch drum assembly	C2-05.00063201-01
	Rear stays assembly	C2-09.00063004-00
	Counterweight block 2000 kg	C2-72.00062020-00
	Counterweight block 500 kg	C2-72.00062021-00
6	Jib	
	Jib assembly, 60m	C1-02.00063001-00
	Swivel assembly	C3-32.00062260-00
	Safety wire assembly L = 60 m	C3-09.00062017-00
	Trolley winch, 6 kW – 10T	C1-06.00063008-00
7	Trolley / Hook system	
	Trolley / hook assembly, 5/10 tons	C1-06.00063015-00
	Trolley assembly	C1-06.00063011-00
	Support roller assembly	C3-58.00062230-00
	Hook block – 10 Mp	C1-06.00063013-00



Rev.01 (150505 HK): Masthead 03590 replaced with masthead 63180.

38	xxx42.0500012	Nordlock M12-SP	FZB	4	0	0
37	xxx42.1150010	Nut M10	8 DIN934 FZB	4	0	0
36	xxx42.1150012	Nut M12	8 DIN934 FZB	14	0	0
35	xxx42.1150020	Nut M20	8 DIN934 FZB	2	0	0
34	xxx42.1060027	Nut M27	10 DIN934 Black	192	0	33
33	xxx42.8190010	Washer M10	DIN125A FZB	4	0	0
32	xxx42.8190012	Washer M12	DIN125A FZB	14	0	0
31	xxx42.8190020	Washer M20	DIN125A FZB	2	0	0
30	xxx42.8160027	Washer M27	10 DIN6916 Black	192	0	10
29	xxx42.11110060	Bolt M10 x 60	8.8 DIN931 FZB	4	0	0
28	xxx42.11112020	Bolt M12 x 20	8.8 DIN931 FZB	4	0	0
27	xxx42.11112040	Bolt M12 x 40	8.8 DIN931 FZB	8	0	0
26	xxx42.11112060	Bolt M12 x 60	8.8 DIN931 FZB	2	0	0
25	xxx42.11120120	Bolt M20 x 120	8.8 DIN931 FZB	2	0	1
24	xxx42.00080002	Mast bolt/nut 2.25"		4	10	39
23	C2-42.00034815	Pin bolt M27 x 250		96	1	108
22	C4-32.00063136	Wire guide		2	0	0
21	C3-11.00056503	Slewing encoder assembly	Optional	1	4	4
20	C4-40.00042703	Laseplade 12x190x50	St37	2	0	0
19	xxx38.00099102	Linch pin 6x40	DIN 11023	4	0	0
18	C4-45.00063154	Cotterbolt Ø25 x 140/155	S235 JR	4	0	0
17	C4-43.00063157	Bushing Ø51 x 6.5	PA6	2	0	0
16	C3-43.00063158	Bushing for load cell	S235 JR	1	2	2
15	xxx13.15181386	Load measuring pin	Tecsis 5 tons	1	2	2
14	C3-31.00063216	Pulley, assembly		1	7	7
13	C3-64.00062162	Hatch, slewing table		1	12	12
12	C3-64.00062165	Ladder support lower		1	8	8
11	C3-64.00062180	Ladder support upper		1	5	5
10	C3-64.00062166	Ladder, lower		1	17	17
9	C3-64.00063155	Ladder, slewing table		1	33	33
8	C3-64.00063171	Gratings, side platform		1	19	19
7	C1-03.00063170	Side platform		1	104	104
6	C2-03.00063014	Driver's cabin assembly		1	1197	1197
5	C3-03.00063010	Slewing drive (with encoder)		1	254	254
4	C3-03.00063009	Slewing drive		1	254	254
3	xxx37.00037277	Slewing ring		1	552	552
2	C1-01.00063180	Masthead		1	1534	1534
1	C1-03.00063150	Slewing table		1	1646	1646

Item	Drawing/part no.	Title		Length	Type/quality	Pcs	Weight	Total weight
DESIGN : 150409 HK	PROJ.	CRANE TYPE	QTY	ASSEMBLY DRAWING				
DRAWN : 150409 HK		K230F						
CHECK : 150409 JL								
REPLACES:		SCALE:	SURFACE AREA	SURFACE TREATMENT:		MATR.:		
		1 : 20	m ²			DIM.:		
REPLACED BY:		TOTAL WEIGHT:		SHEET NUMBER: 1 / 2		PARTS LIST:		
		5843 kg		TITLE:				
ORIGINATES FROM:		VOLUME:		Slewing/masthead assembly				
		m ³						
				DRAWING NO.:				
KRØLL CRANES A/S				C1-03.00063006-01				
NORDKRANVEJ 2 3540 LYNØ DENMARK								
PHONE: +45 48 387600 FAX: +45 48 388807								
E-mail: krollcranes@krollcranes.dk Web: www.krollcranes.dk								



MONTAGE

KRØJEKRANS

Kransen fastspændes mod tørre (afdrejede) flader. M27 boltenes forspænding etableres ved tilspænding af møtrikkerne med tilspændingsmoment 1400 Nm. Alternativt kan "trækværktøj" anvendes (CRF. INF. Ref 2989-00) med resulterende forspænding 316 kN. Gevindene skal være behandlet med Molykote 1000. Når kransen er centreret på svingningen anbringes (påsejses) centeringsklodserne.

GEAR

Med krøjekransen monteret bores Ø225 H7, idet centerafstanden kontrolleres med prøvetandhjul tegning VS396, hvor spillerum tandflange/tandflange er S=0,03 - 0,04 x M= 0,3- 0,4 mm. Korrektur af gearplacering udføres med svejseflangen 63198.

Akserne for krøjekrans og gear skal være parallelle.

AFPRØVNING

Gearoliefyldning checkes. Hvis oliemangel konstateres, checkes for utæthed og olien udskiftes til gearolie efter smøreskema.

Drev/tandkrans (åben gearing) smøres med Shell Kuggspray.

Kuglejekrans efterfyldes med "lubrafedt".

Bremserne justeres
Se instruktion.

MOUNTING

SLEWING RING

Fasten the ring against dry (mechined) surfaces. Initial tension at M27 bolts to be established by fastening the nuts with torque moment 1400 Nm. For alternativ use "tension tools" (CRF. INF. Ref. 2989-00) to obtain a pretensioning force of 316 kN. Thread has to be treated with Molykote 1000. When the ring is centeret at slewing, place (by welding) centerings bloks.

GEAR

With the slewing ring mounted drill Ø225 H7, center distance to be controlled with test toothed wheel draw. no. VS396, where tolerance tooth flange/tooth flange is S=0,03 - 0,04 x M=0,3 -0,4 mm. Correction at gear placement to be carried out using Item 63198

Shafts for slewing ring and gear has to be parallel

CHECKING

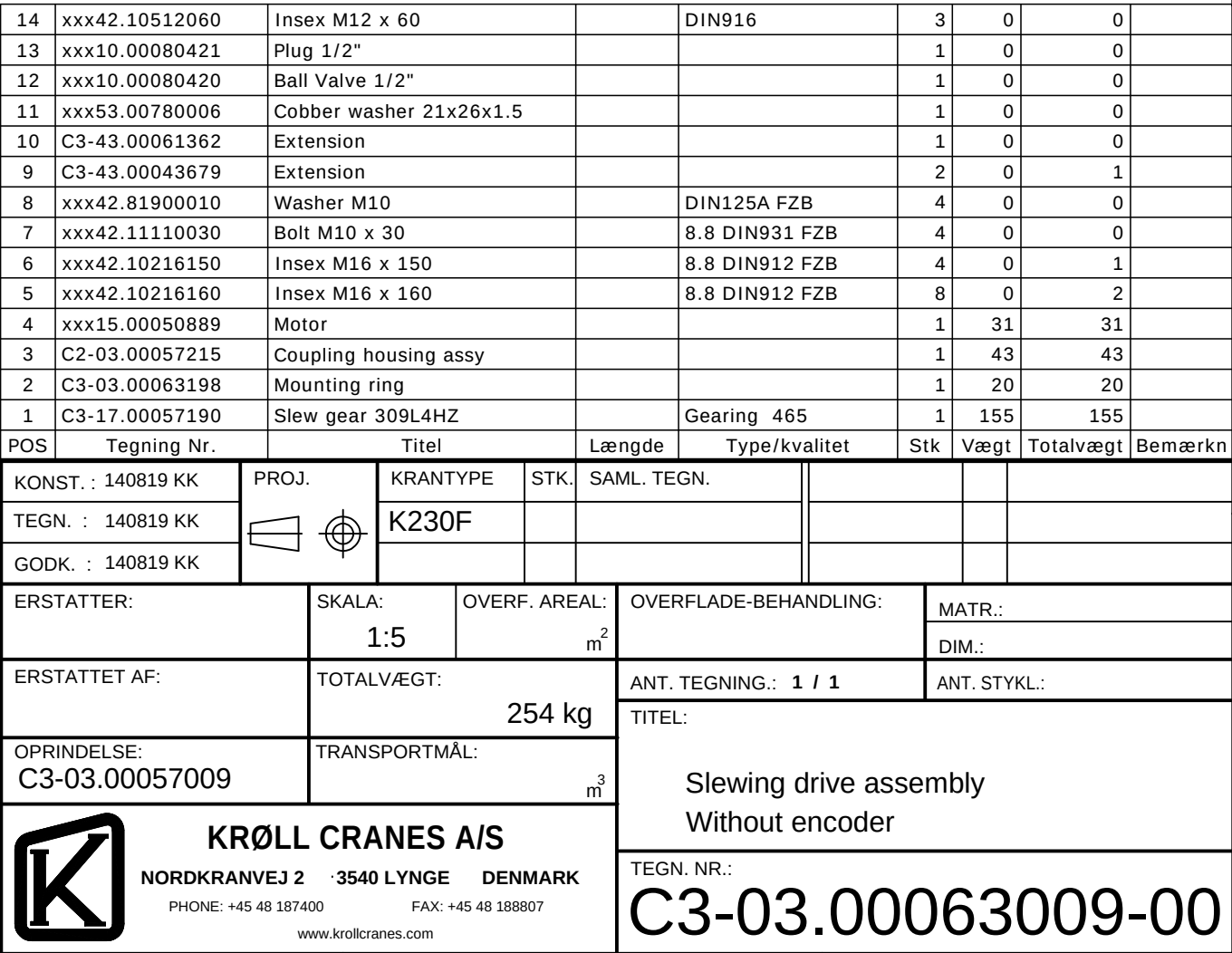
Gear oil filling to be cheked
If lack of oil is found, check for leakage and replace the oil into gear-oil following oiling schedule.

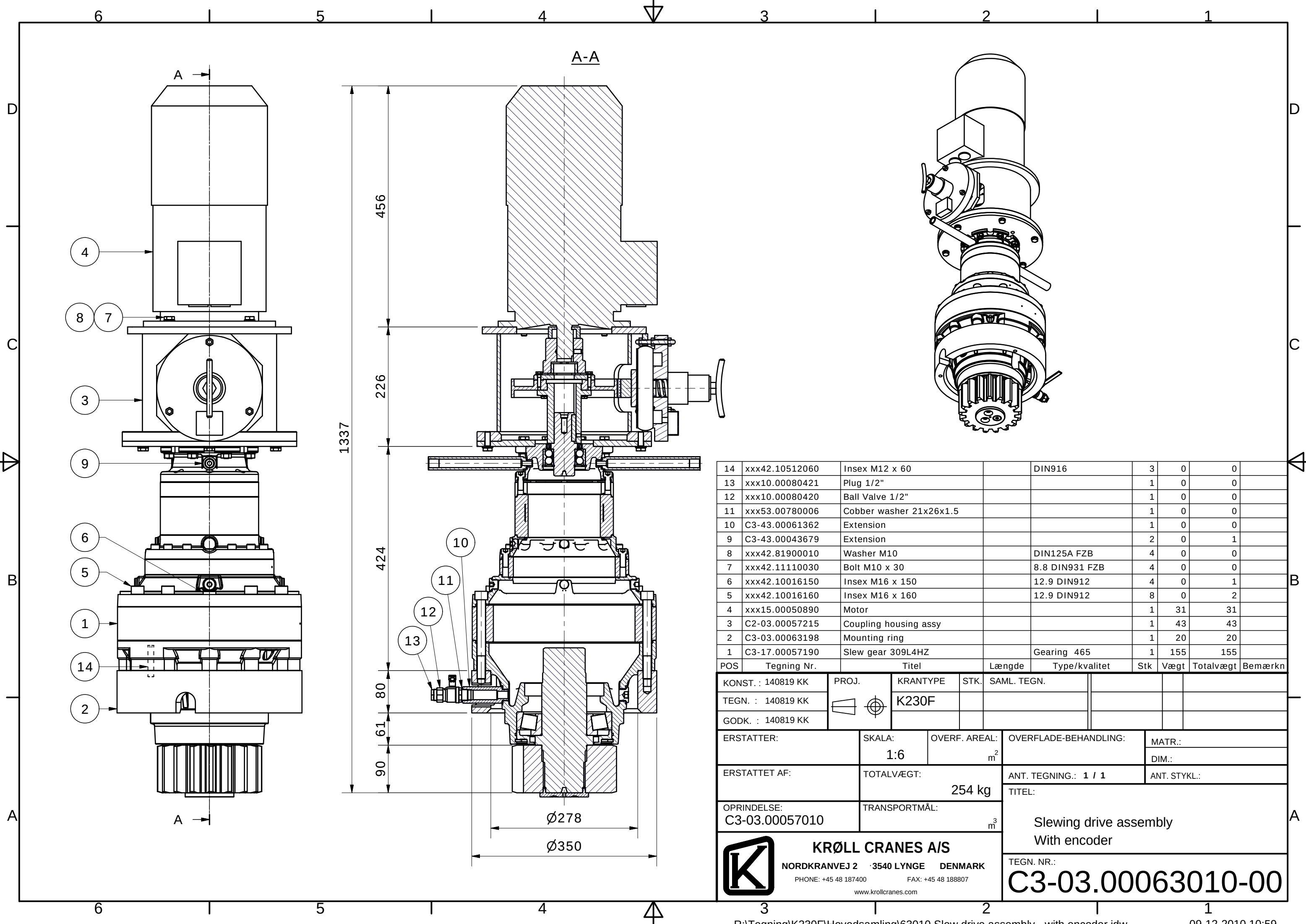
Drive pinion/toothed ring (open gearing) to be greased with Shell Kuggspray.

Ring for ball bearing has to be secondary filled with grease.

Brake adjustments, see instruction.

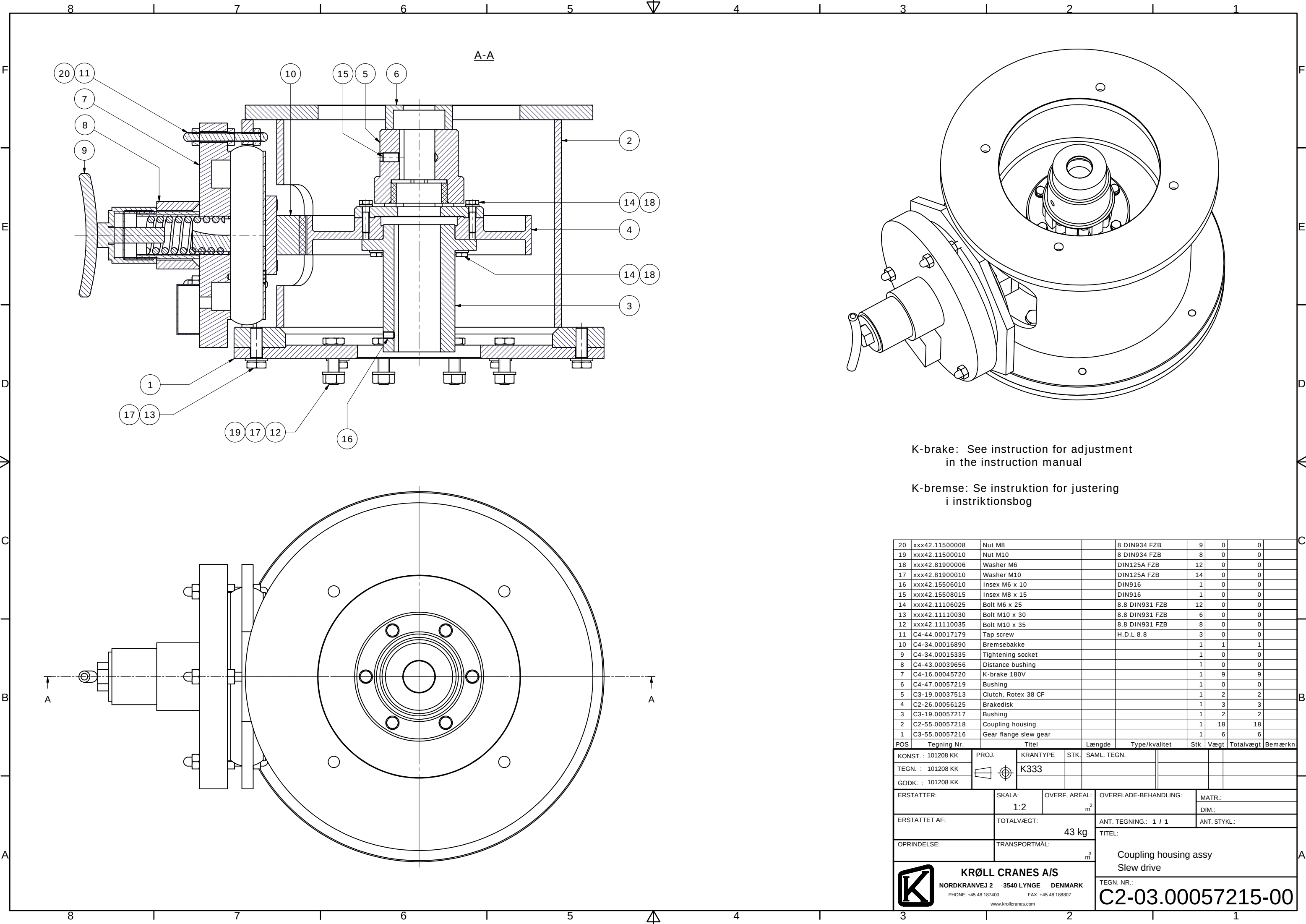
DESIGN : 150409 HK	PROJ.	CRANE TYPE	QTY	ASSEMBLY DRAWING			
DRAWN : 150409 HK		K230F					
CHECK : 150409 JL							
REPLACES:	SCALE:	SURFACE AREA:	SURFACE TREATMENT:	MATR:			
	1 : 20	m ²					
REPLACED BY:	TOTAL WEIGHT:	5843 kg	SHEET NUMBER: 2 / 2	PARTS LIST:			
ORIGINATES FROM:	VOLUME:	m ³	TITLE:				
			Slewing/masthead assembly				
 KRØLL CRANES A/S NORDKRANVEJ 2 3540 LYNØE DENMARK PHONE: +45 48 187400 FAX: +45 48 188807 E-mail: kröllcranes@kröllcranes.dk Web: www.kröllcranes.dk				DRAWING NO.:	C1-03.00063006-01		





14	xxx42.10512060	Insex M12 x 60		DIN916	3	0	0	
13	xxx10.00080421	Plug 1/2"			1	0	0	
12	xxx10.00080420	Ball Valve 1/2"			1	0	0	
11	xxx53.00780006	Cobber washer 21x26x1.5			1	0	0	
10	C3-43.00061362	Extension			1	0	0	
9	C3-43.00043679	Extension			2	0	1	
8	xxx42.81900010	Washer M10		DIN125A FZB	4	0	0	
7	xxx42.11110030	Bolt M10 x 30		8.8 DIN931 FZB	4	0	0	
6	xxx42.10016150	Insex M16 x 150		12.9 DIN912	4	0	1	
5	xxx42.10016160	Insex M16 x 160		12.9 DIN912	8	0	2	
4	xxx15.00050890	Motor			1	31	31	
3	C2-03.00057215	Coupling housing assy			1	43	43	
2	C3-03.00063198	Mounting ring			1	20	20	
1	C3-17.00057190	Slew gear 309L4HZ		Gearing 465	1	155	155	
POS	Tegning Nr.	Titel	Længde	Type/kvalitet	Stk	Vægt	Totalvægt	Bemærkn

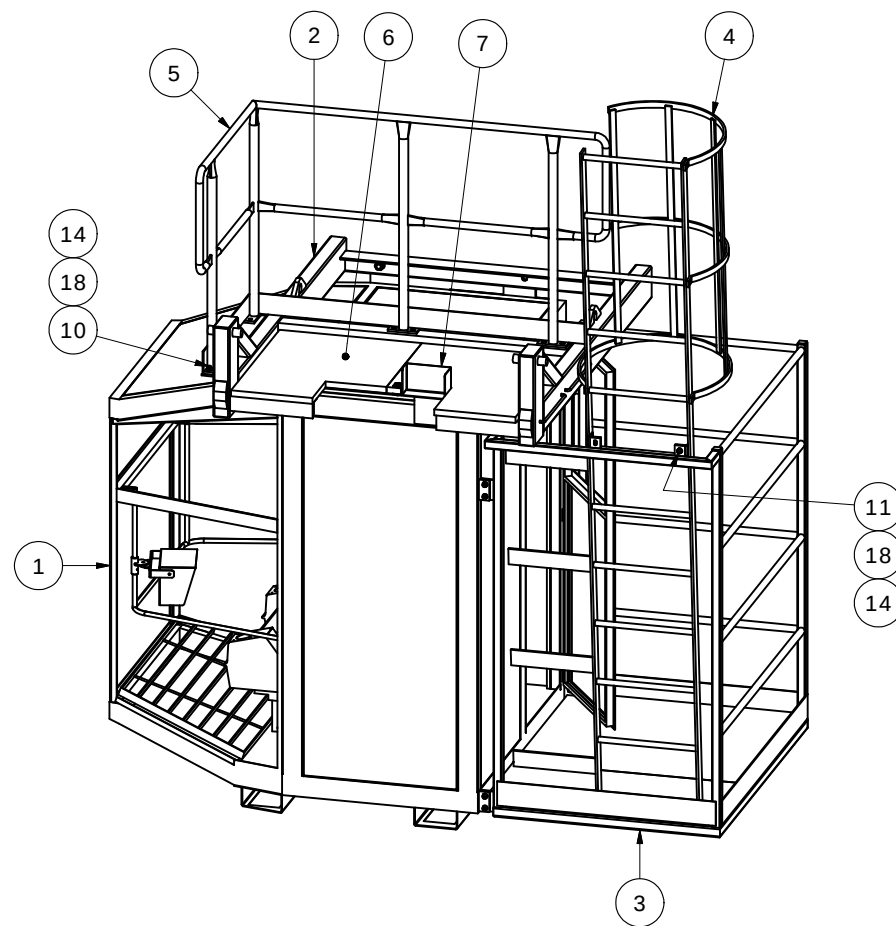
KONST. : 140819 KK		PROJ.	KRANTYPE	STK.	SAML. TEGN.				
TEGN. : 140819 KK			K230F						
GODK. : 140819 KK									
ERSTATTER:		SKALA:	OVERF. AREAL:	OVERFLADE-BEHANDLING:		MATR.:			
		1:6	m ²			DIM.:			
ERSTATTET AF:		TOTALVÆGT:		ANT. TEGNING.: 1 / 1		ANT. STYKL.:			
		254 kg							
OPRINDELSE:		TRANSPORTMÅL:		Slewing drive assembly With encoder					
C3-03.00057010		m ³							
		KRØLL CRANES A/S				TEGN. NR.:			
		NORDKRANVEJ 2 · 3540 LYNGE · DENMARK				C3-03.00063010-00			
		PHONE: +45 48 187400 FAX: +45 48 188807							
		www.krollcranes.com							



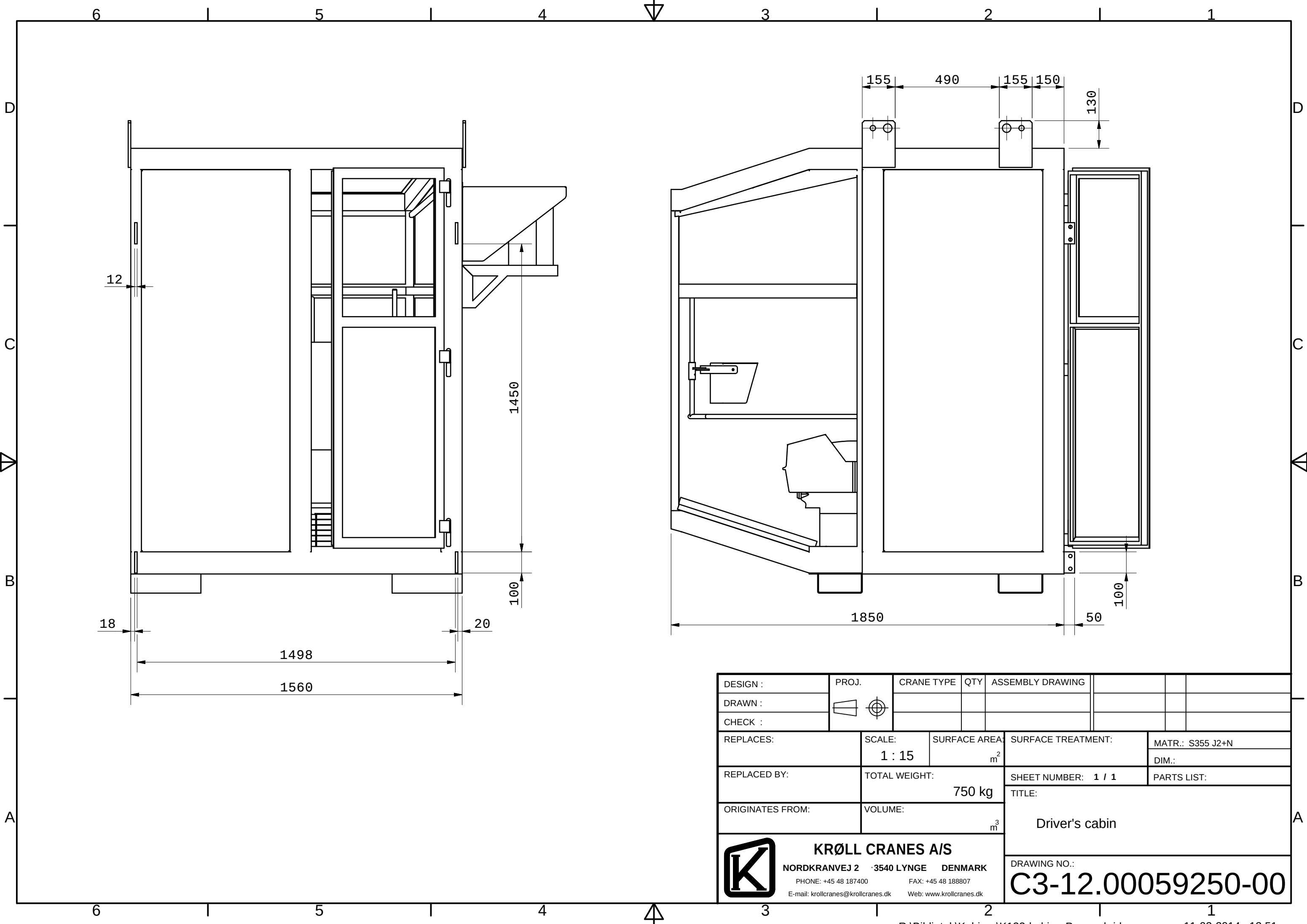
K-brake: See instruction for adjustment
in the instruction manual

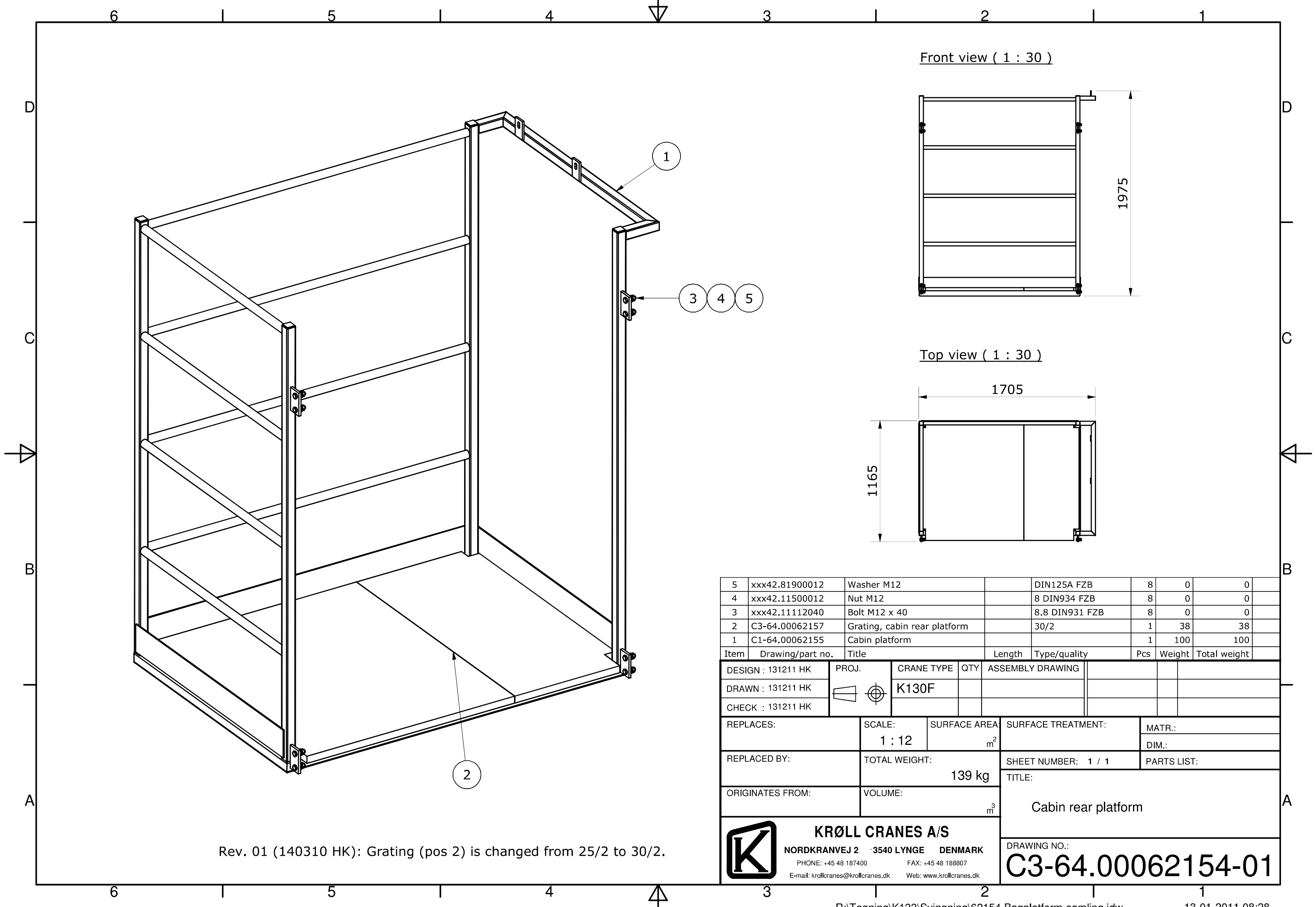
K-bremse: Se instruktion for justering
i instruktionsbog

20	xxx42.11500008	Nut M8		8 DIN934 FZB	9	0	0		
19	xxx42.11500010	Nut M10		8 DIN934 FZB	8	0	0		
18	xxx42.81900006	Washer M6		DIN125A FZB	12	0	0		
17	xxx42.81900010	Washer M10		DIN125A FZB	14	0	0		
16	xxx42.15506010	Insex M6 x 10		DIN916	1	0	0		
15	xxx42.15508015	Insex M8 x 15		DIN916	1	0	0		
14	xxx42.11106025	Bolt M6 x 25		8.8 DIN931 FZB	12	0	0		
13	xxx42.11110030	Bolt M10 x 30		8.8 DIN931 FZB	6	0	0		
12	xxx42.11110035	Bolt M10 x 35		8.8 DIN931 FZB	8	0	0		
11	C4-44.00017179	Tap screw		H.D.L 8.8	3	0	0		
10	C4-34.00016890	Bremsebakke			1	1	1		
9	C4-34.00015335	Tightening socket			1	0	0		
8	C4-43.00039656	Distance bushing			1	0	0		
7	C4-16.00045720	K-brake 180V			1	9	9		
6	C4-47.00057219	Bushing			1	0	0		
5	C3-19.00037513	Clutch, Rotex 38 CF			1	2	2		
4	C2-26.00056125	Brakedisk			1	3	3		
3	C3-19.00057217	Bushing			1	2	2		
2	C2-55.00057218	Coupling housing			1	18	18		
1	C3-55.00057216	Gear flange slew gear			1	6	6		
POS	Tegning Nr.	Titel		Længde	Type/kvalitet	Stk	Vægt	Totalvægt	Bemærkn
KONST. : 101208 KK		PROJ.	KRANTYPE	STK.	SAML. TEGN.				
TEGN. : 101208 KK			K333						
GODK. : 101208 KK									
ERSTATTER:		SKALA:	OVERF. AREAL:	OVERFLADE-BEHANDLING:		MATR.:			
		1:2	m ²			DIM.:			
ERSTATTET AF:		TOTALVÆGT:		ANT. TEGNING.: 1 / 1		ANT. STYKL.:			
		43 kg		TITEL:		Coupling housing assy Slew drive			
OPRINDELSE:		TRANSPORTMÅL:							
		m ³							
		KRØLL CRANES A/S		TEGN. NR.:					
NORDKRANVEJ 2 · 3540 LYNØGE · DENMARK									
PHONE: +45 48 187400 FAX: +45 48 188807									
		www.krøllcranes.com		C2-03.00057215-00					

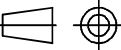
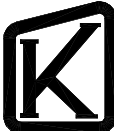


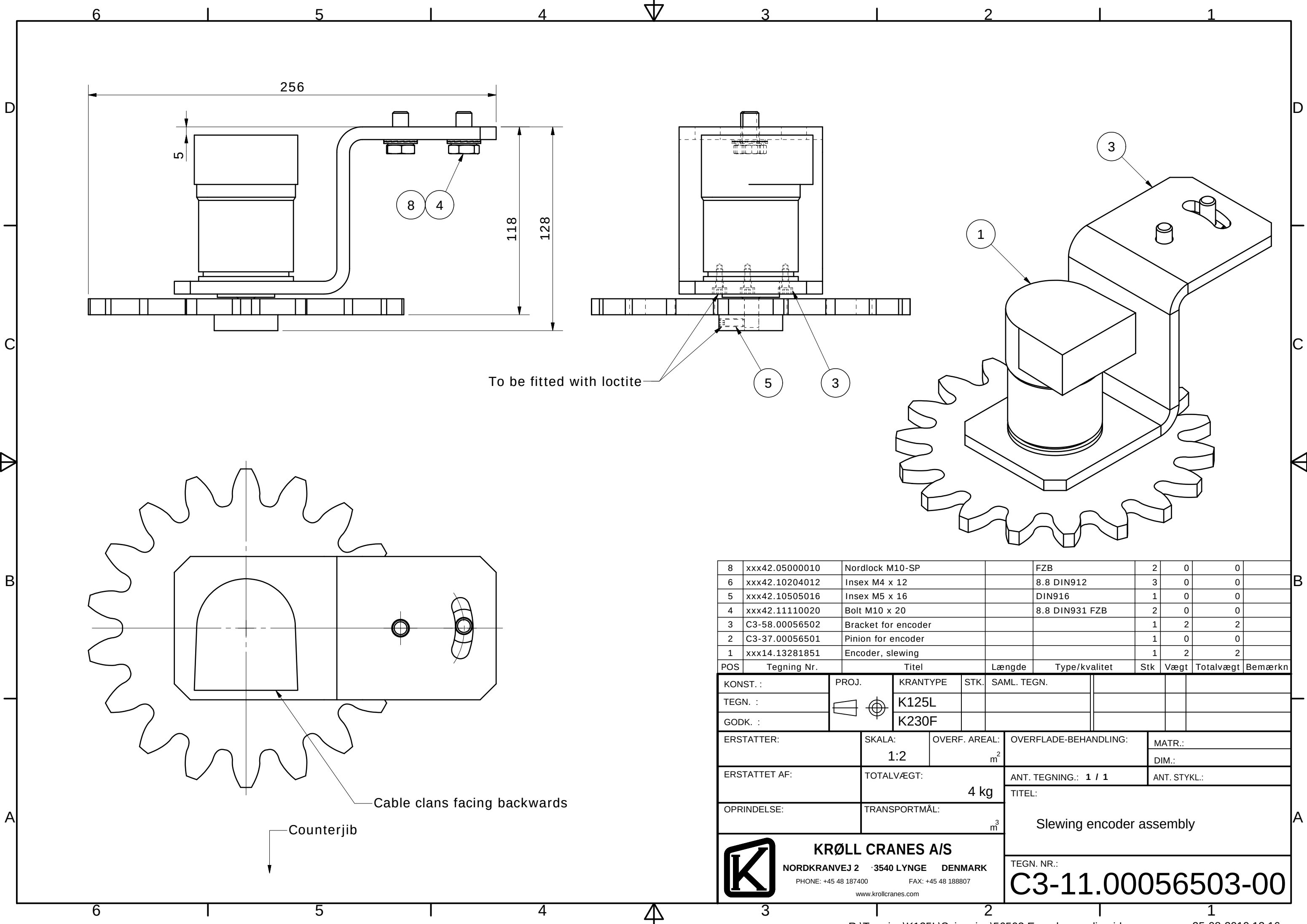
20	xxx42.17900010	Locknut M10		8 DIN985 FZB	5	0	0	
19	xxx42.17900012	Locknut M12		8 DIN985 FZB	2	0	0	
18	xxx42.11500012	Nut M12		8 DIN934 FZB	9	0	0	
17	xxx42.11500024	Nut M24		8 DIN934 FZB	4	0	0	
16	xxx42.83100010	Washer M10 40x40x4		DIN 436	5	0	0	
15	xxx42.83100012	Washer M12 40x40x4		DIN 436	2	0	0	
14	xxx42.81900012	Washer M12		DIN125A FZB	11	0	0	
13	xxx42.81900024	Washer M24		DIN125A FZB	4	0	0	
12	xxx42.11110050	Bolt M10 x 50		8.8 DIN931 FZB	5	0	0	
11	xxx42.11112035	Bolt M12 x 35		8.8 DIN931 FZB	2	0	0	
10	xxx42.11112040	Bolt M12 x 40		8.8 DIN931 FZB	7	0	0	
9	xxx42.11112070	Bolt M12 x 70		8.8 DIN931 FZB	2	0	0	
8	xxx42.11124050	Bolt M24 x 50		8.8 DIN931 FZB	4	0	1	
7	C2-64.00062183	Toe board		AISI 304	1	2	2	
6	C3-64.00063153	Grating, cabin suport			1	23	23	
5	C2-64.00063156	Railing panel			1	39	39	
4	C2-64.00062152	Ladder to cabin			1	70	70	
3	C3-64.00062154	Cabin rear platform			1	139	139	
2	C1-03.00063151	Cabin support			1	174	174	
1	C3-12.00059250	Driver's cabin			1	750	750	
Item	Drawing/part no.	Title	Length	Type/quality	Pcs	Weight	Total weight	
DESIGN : 150413 HK	PROJ.	CRANE TYPE	QTY	ASSEMBLY DRAWING				
DRAWN : 150413 HK		K230F						
CHECK : 150413 JL								
REPLACES:	SCALE: 1:25	SURFACE AREA: m ²	SURFACE TREATMENT:		MATR.:			
REPLACED BY:	TOTAL WEIGHT: 1197 kg	SHEET NUMBER: 1 / 1		PARTS LIST:				
ORIGINATES FROM:	VOLUME: m ³	Driver's cabin assembly						
 KRØLL CRANES A/S NORDKRANVEJ 2 · 3540 LYNGE DENMARK PHONE: +45 48 187400 FAX: +45 48 188807 E-mail: krollcranes@krollcranes.dk Web: www.krollcranes.dk				DRAWING NO.: C2-03.00063014-00				





Rev. 01 (140310 HK): Grating (pos 2) is changed from 25/2 to 30/2.

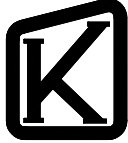
5	xxx42.81900012	Washer M12		DIN125A FZB	8	0	0	
4	xxx42.11500012	Nut M12		8 DIN934 FZB	8	0	0	
3	xxx42.11112040	Bolt M12 x 40		8.8 DIN931 FZB	8	0	0	
2	C3-64.00062157	Grating, cabin rear platform		30/2	1	38	38	
1	C1-64.00062155	Cabin platform			1	100	100	
Item	Drawing/part no.	Title	Length	Type/quality	Pcs	Weight	Total weight	
DESIGN : 131211 HK		PROJ.	CRANE TYPE	QTY	ASSEMBLY DRAWING			
DRAWN : 131211 HK			K130F					
CHECK : 131211 HK								
REPLACES:		SCALE:	SURFACE AREA:		SURFACE TREATMENT:		MATR.:	
		1 : 12	m ²				DIM.:	
REPLACED BY:		TOTAL WEIGHT:		SHEET NUMBER: 1 / 1		PARTS LIST:		
		139 kg				Cabin rear platform		
ORIGINATES FROM:		VOLUME:						
		m ³						
				DRAWING NO.:				
KRØLL CRANES A/S				C3-64.00062154-01				
NORDKRANVEJ 2 · 3540 LYNGE DENMARK								
PHONE: +45 48 187400 FAX: +45 48 188807								
E-mail: krollcranes@krollcranes.dk Web: www.krollcranes.dk								



8	xxx42.05000010	Nordlock M10-SP		FZB	2	0	0	
6	xxx42.10204012	Insex M4 x 12		8.8 DIN912	3	0	0	
5	xxx42.10505016	Insex M5 x 16		DIN916	1	0	0	
4	xxx42.11110020	Bolt M10 x 20		8.8 DIN931 FZB	2	0	0	
3	C3-58.00056502	Bracket for encoder			1	2	2	
2	C3-37.00056501	Pinion for encoder			1	0	0	
1	xxx14.13281851	Encoder, slewing			1	2	2	

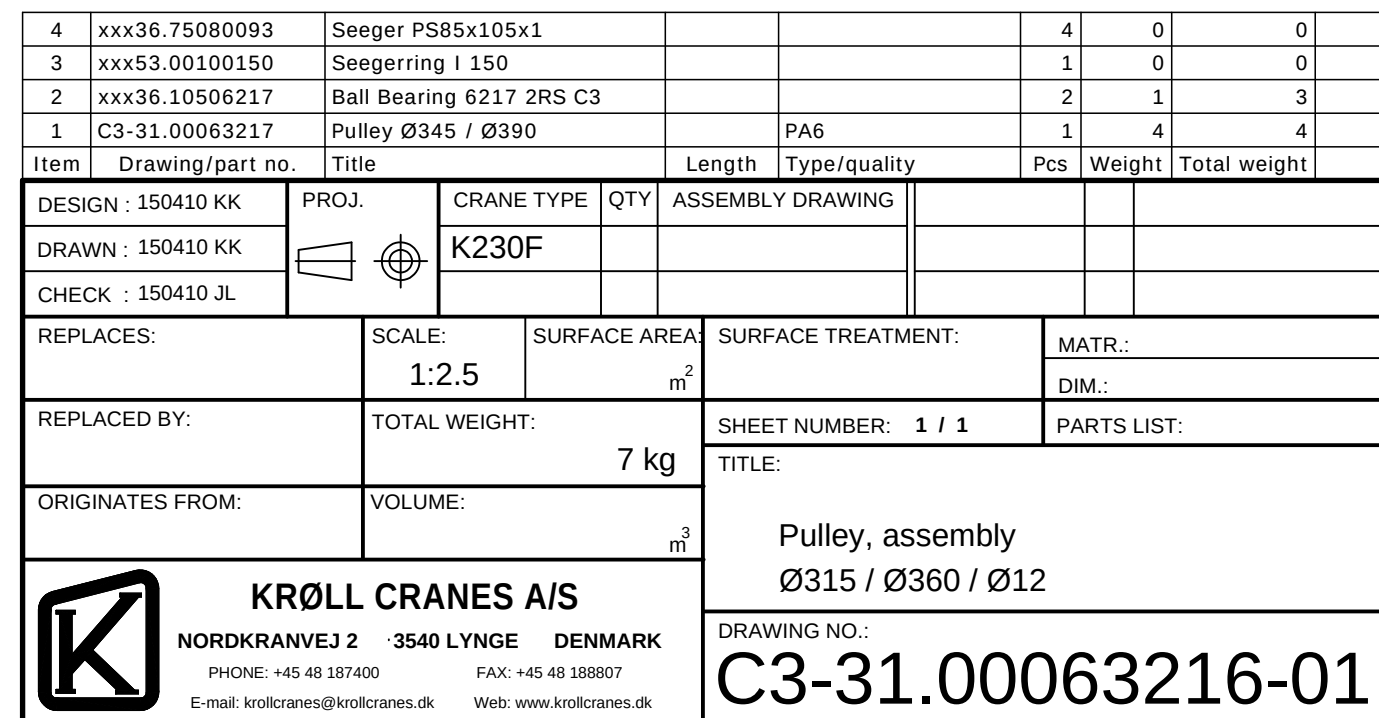
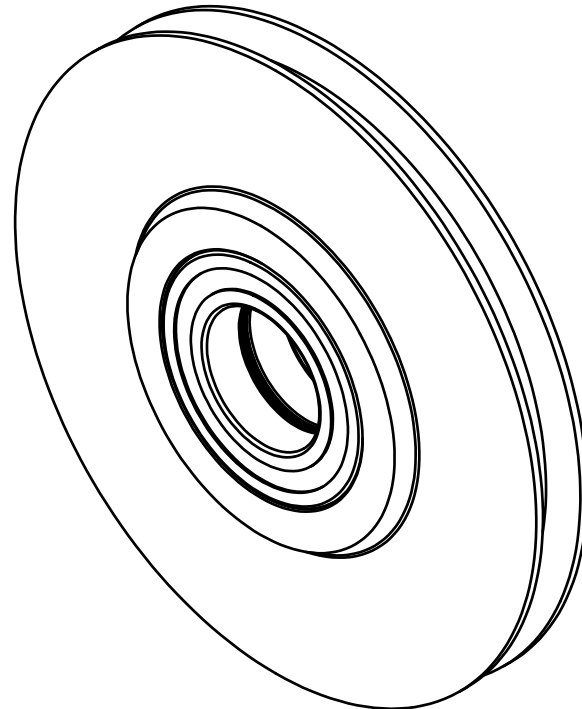
POS	Tegning Nr.	Titel		Længde	Type/kvalitet	Stk	Vægt	Totalvægt	Bemærkn
KONST. :	PROJ.	KRANTYPE	STK.	SAML. TEGN.					
TEGN. :		K125L							
GODK. :		K230F							

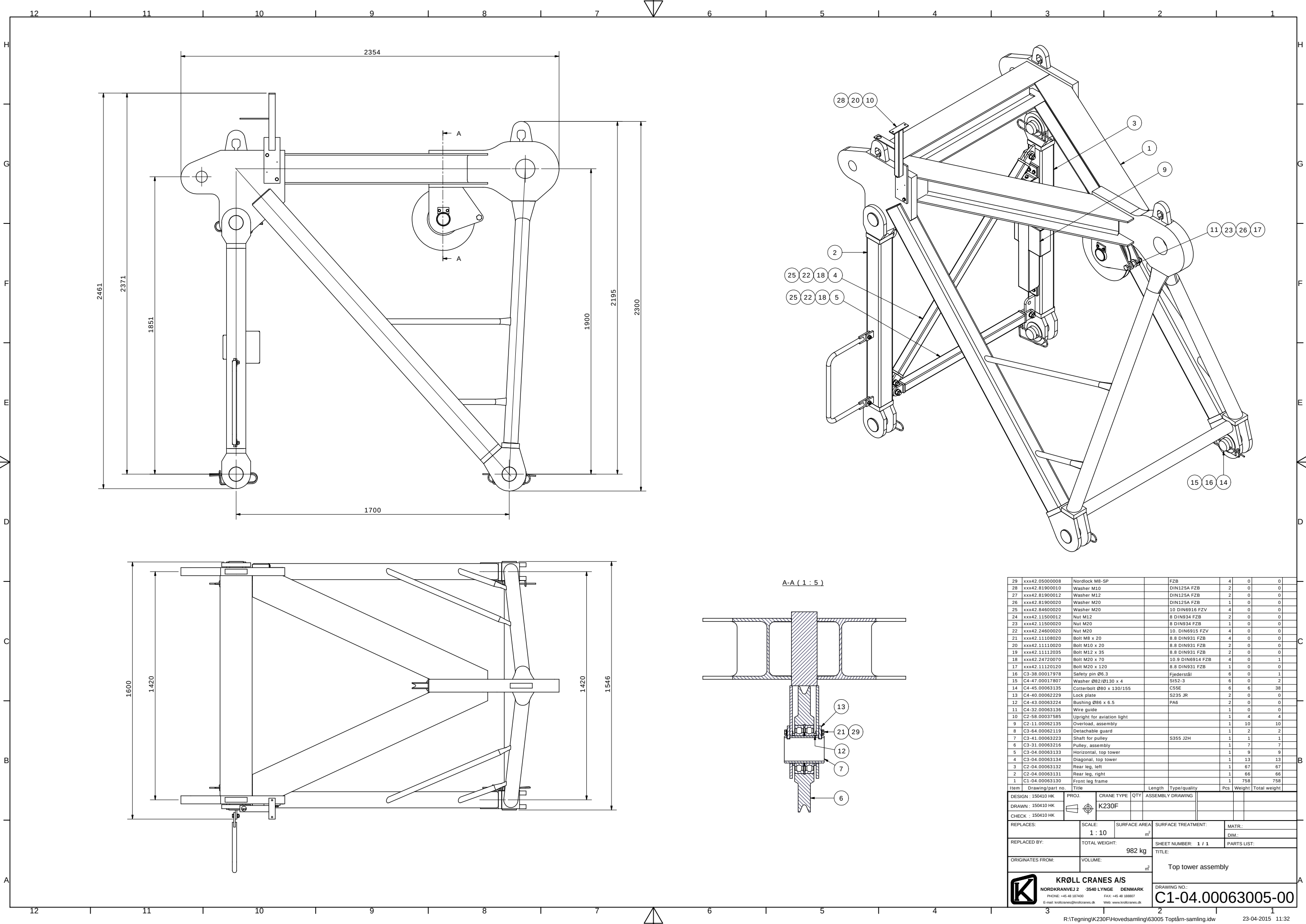
ERSTATTER:	SKALA:	OVERF. AREAL:	OVERFLADE-BEHANDLING:	MATR.:
	1:2	m ²		DIM.:
ERSTATTET AF:	TOTALVÆGT:	ANT. TEGNING.: 1 / 1	ANT. STYKL.:	
	4 kg	TITEL:		
OPRINDELSE:	TRANSPORTMÅL:	Slewing encoder assembly		
	m ³			



KRØLL CRANES A/S
NORDKRANVEJ 2 · 3540 LYNGE · DENMARK
PHONE: +45 48 187400 · FAX: +45 48 188807
www.krøllcranes.com

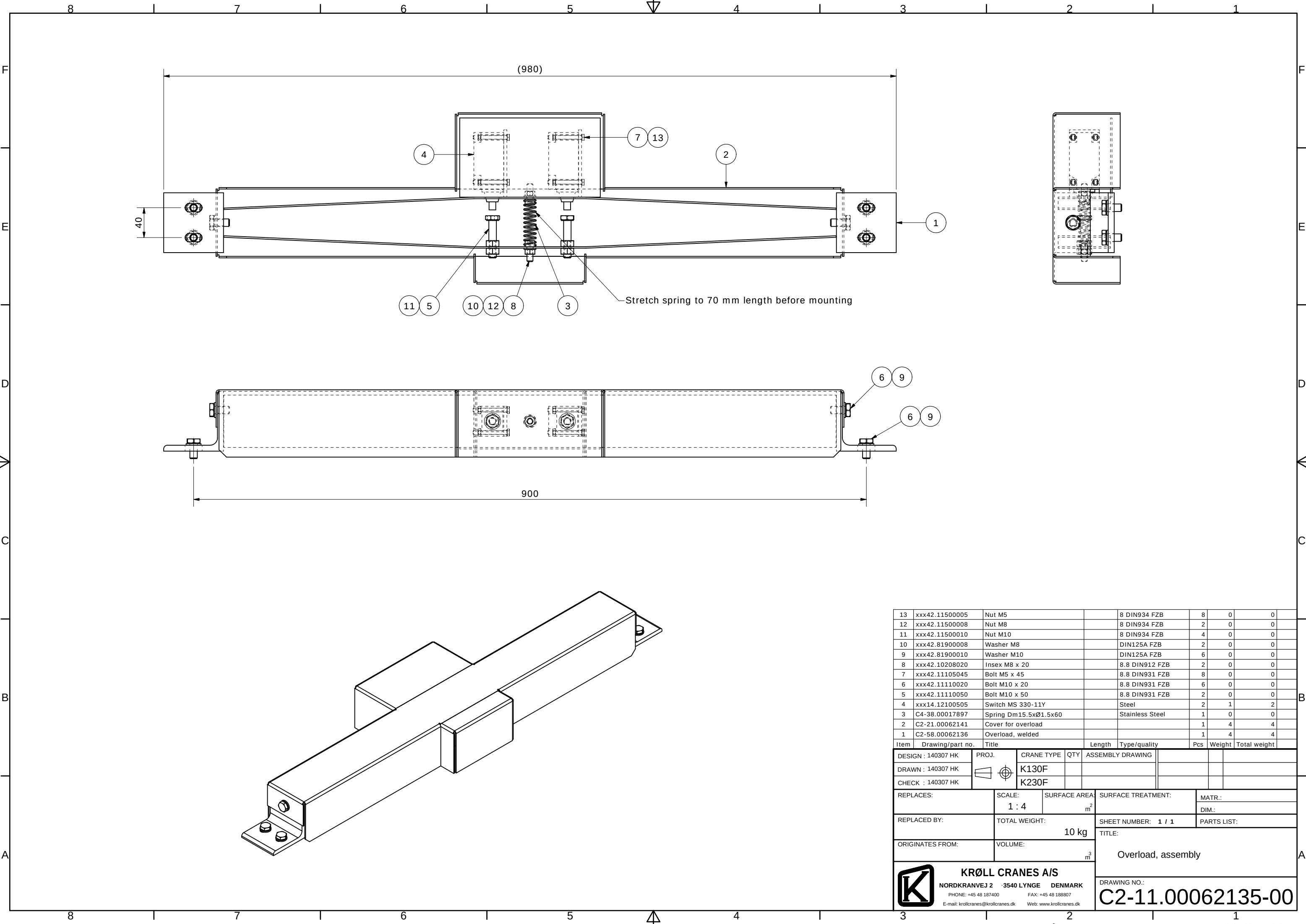
TEGN. NR.:
C3-11.00056503-00



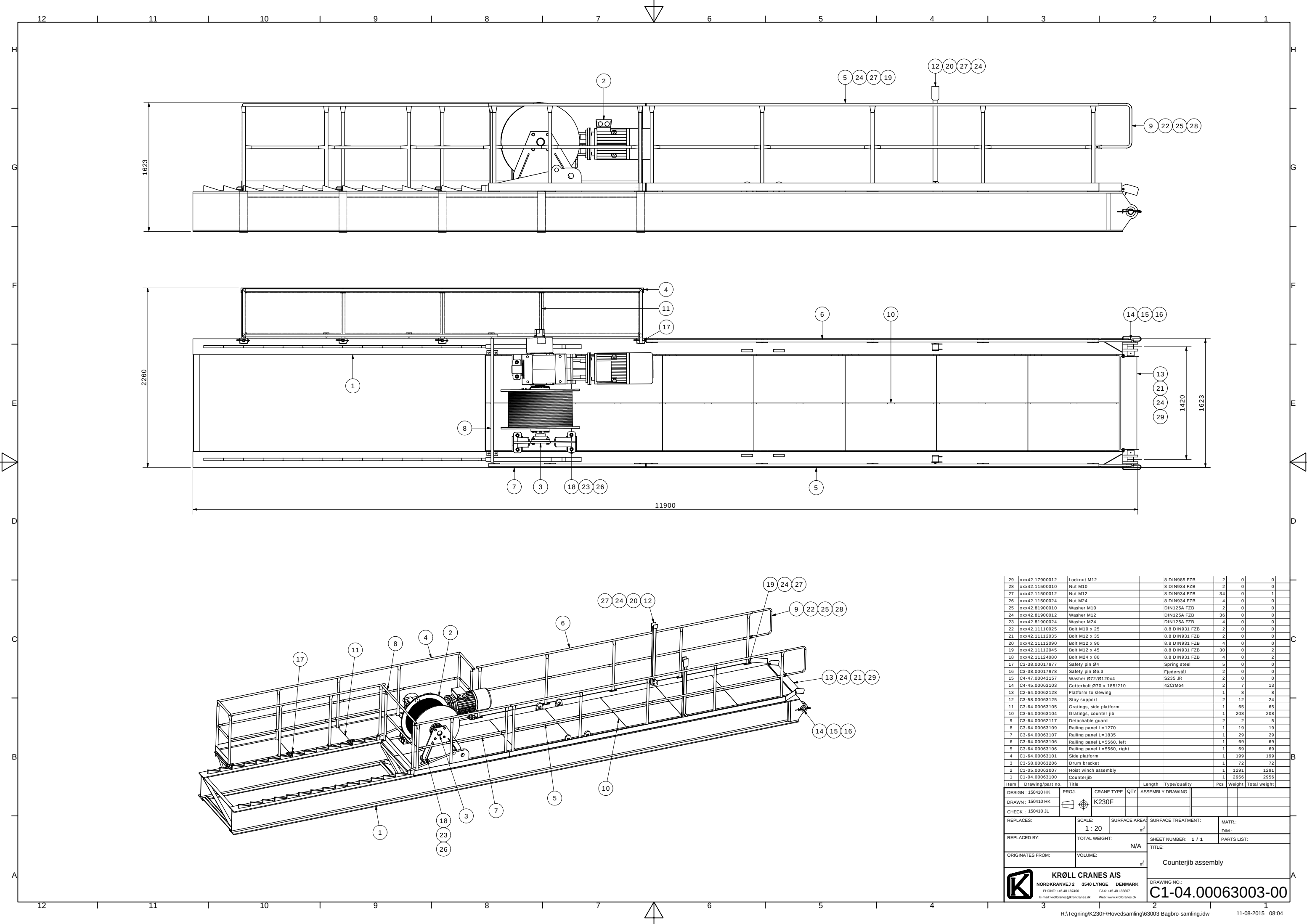


29	xxx42.05000008	Nordlock M8-SP	FZB	4	0	0
28	xxx42.81900010	Washer M10	DIN125A FZB	2	0	0
27	xxx42.81900012	Washer M12	DIN125A FZB	2	0	0
26	xxx42.81900020	Washer M20	DIN125A FZB	1	0	0
25	xxx42.84600020	Washer M20	10 DIN6916 FZV	4	0	0
24	xxx42.11500012	Nut M12	8 DIN934 FZB	2	0	0
23	xxx42.11500020	Nut M20	8 DIN934 FZB	1	0	0
22	xxx42.24600020	Nut M20	10. DIN6915 FZV	4	0	0
21	xxx42.11108020	Bolt M8 x 20	8.8 DIN931 FZB	4	0	0
20	xxx42.11110020	Bolt M10 x 20	8.8 DIN931 FZB	2	0	0
19	xxx42.11112035	Bolt M12 x 35	8.8 DIN931 FZB	2	0	0
18	xxx42.24720070	Bolt M20 x 70	10.9 DIN6914 FZB	4	0	1
17	xxx42.11120120	Bolt M20 x 120	8.8 DIN931 FZB	1	0	0
16	C3-38.00017978	Safety pin Ø6.3	Fjederstål	6	0	1
15	C4-47.00017807	Washer Ø82/Ø130 x 4	St52-3	6	0	2
14	C4-45.00063135	Cotterbolt Ø80 x 130/155	C55E	6	6	38
13	C4-40.00062229	Lock plate	S235 JR	2	0	0
12	C4-43.00063224	Bushing Ø86 x 6.5	PA6	2	0	0
11	C4-32.00063136	Wire guide		1	0	0
10	C2-58.00037585	Upright for aviation light		1	4	4
9	C2-11.00062135	Overload, assembly		1	10	10
8	C3-64.00062119	Detachable guard		1	2	2
7	C3-41.00063223	Shaft for pulley	S355 J2H	1	1	1
6	C3-31.00063216	Pulley, assembly		1	7	7
5	C3-04.00063133	Horizontal, top tower		1	9	9
4	C3-04.00063134	Diagonal, top tower		1	13	13
3	C2-04.00063132	Rear leg, left		1	67	67
2	C2-04.00063131	Rear leg, right		1	66	66
1	C1-04.00063130	Front leg frame		1	758	758

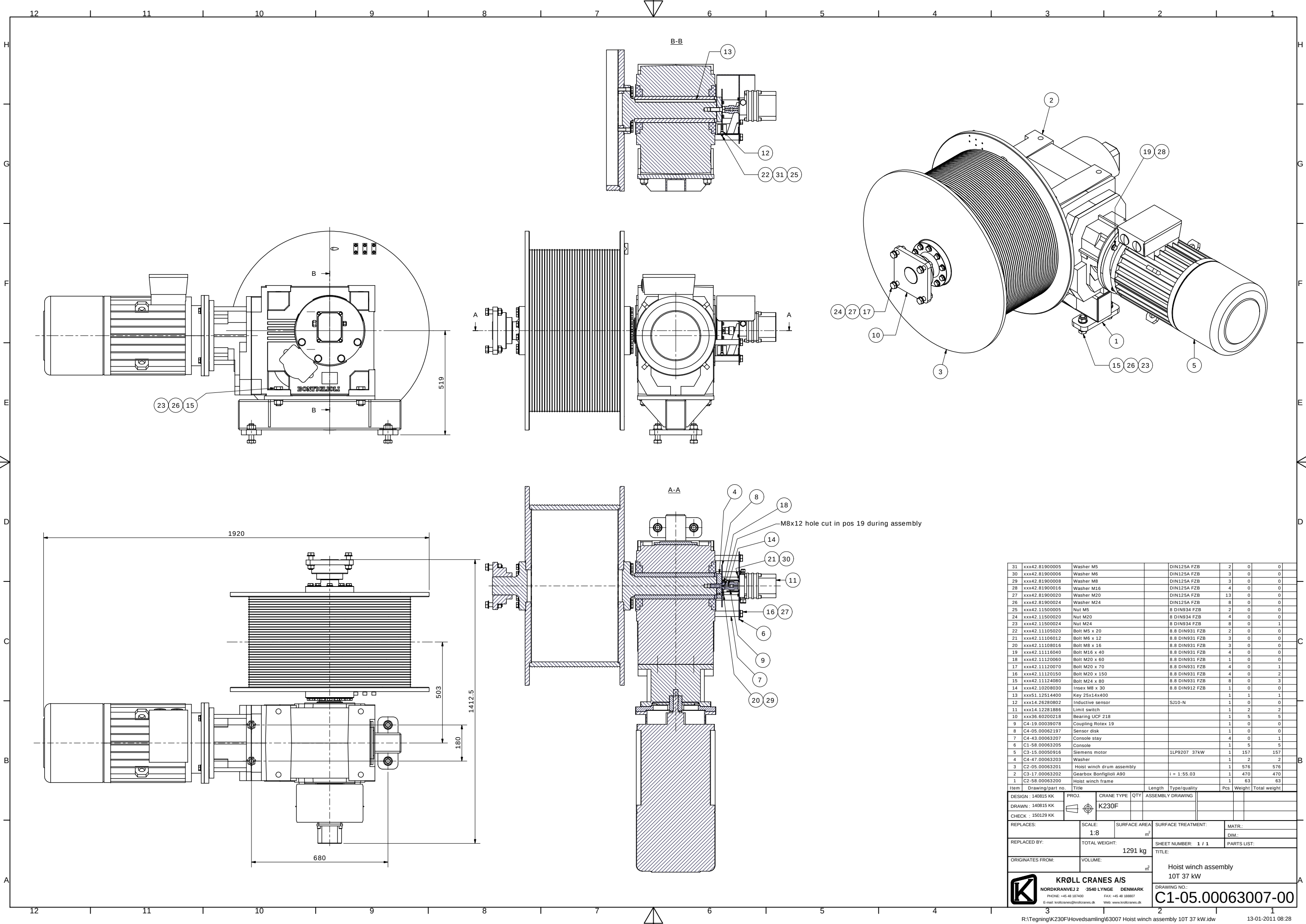
DESIGN : 150410 HK	PROJ.	CRANE TYPE	QTY	ASSEMBLY DRAWING		
DRAWN : 150410 HK		K230F				
CHECK : 150410 HK						
REPLACES:	SCALE: 1 : 10	SURFACE AREA: m²	SURFACE TREATMENT:	MATR:		
REPLACED BY:	TOTAL WEIGHT: 982 kg		SHEET NUMBER: 1 / 1	PARTS LIST:		
ORIGINATES FROM:	VOLUME: m³		TITLE: Top tower assembly			
				DRAWING NO.: C1-04.00063005-00		
NORDKRANVEJ 2 3540 LYNØE DENMARK				E-mail: krøllcranes@krøllcranes.dk Web: www.krøllcranes.dk		
PHONE: +45 48 187600 FAX: +45 48 188807						



13	xxx42.11500005	Nut M5		8 DIN934 FZB	8	0	0	
12	xxx42.11500008	Nut M8		8 DIN934 FZB	2	0	0	
11	xxx42.11500010	Nut M10		8 DIN934 FZB	4	0	0	
10	xxx42.81900008	Washer M8		DIN125A FZB	2	0	0	
9	xxx42.81900010	Washer M10		DIN125A FZB	6	0	0	
8	xxx42.10208020	Insex M8 x 20		8.8 DIN912 FZB	2	0	0	
7	xxx42.11105045	Bolt M5 x 45		8.8 DIN931 FZB	8	0	0	
6	xxx42.11110020	Bolt M10 x 20		8.8 DIN931 FZB	6	0	0	
5	xxx42.11110050	Bolt M10 x 50		8.8 DIN931 FZB	2	0	0	
4	xxx14.12100505	Switch MS 330-11Y		Steel	2	1	2	
3	C4-38.00017897	Spring Dm15.5xØ1.5x60		Stainless Steel	1	0	0	
2	C2-21.00062141	Cover for overload			1	4	4	
1	C2-58.00062136	Overload, welded			1	4	4	
Item	Drawing/part no.	Title		Length	Type/quality	Pcs	Weight	Total weight
DESIGN : 140307 HK		PROJ.	CRANE TYPE	QTY	ASSEMBLY DRAWING			
DRAWN : 140307 HK			K130F					
CHECK : 140307 HK			K230F					
REPLACES:		SCALE:	SURFACE AREA:		SURFACE TREATMENT:		MATR.:	
		1 : 4	m ²				DIM.:	
REPLACED BY:		TOTAL WEIGHT:		SHEET NUMBER: 1 / 1		PARTS LIST:		
		10 kg				Overload, assembly		
ORIGINATES FROM:		VOLUME:		TITLE:				
		m ³						
 KRØLL CRANES A/S NORDKRANVEJ 2 · 3540 LYNØGE · DENMARK PHONE: +45 48 187400 FAX: +45 48 188807 E-mail: krollcranes@krollcranes.dk Web: www.krollcranes.dk				DRAWING NO.:				
				C2-11.00062135-00				

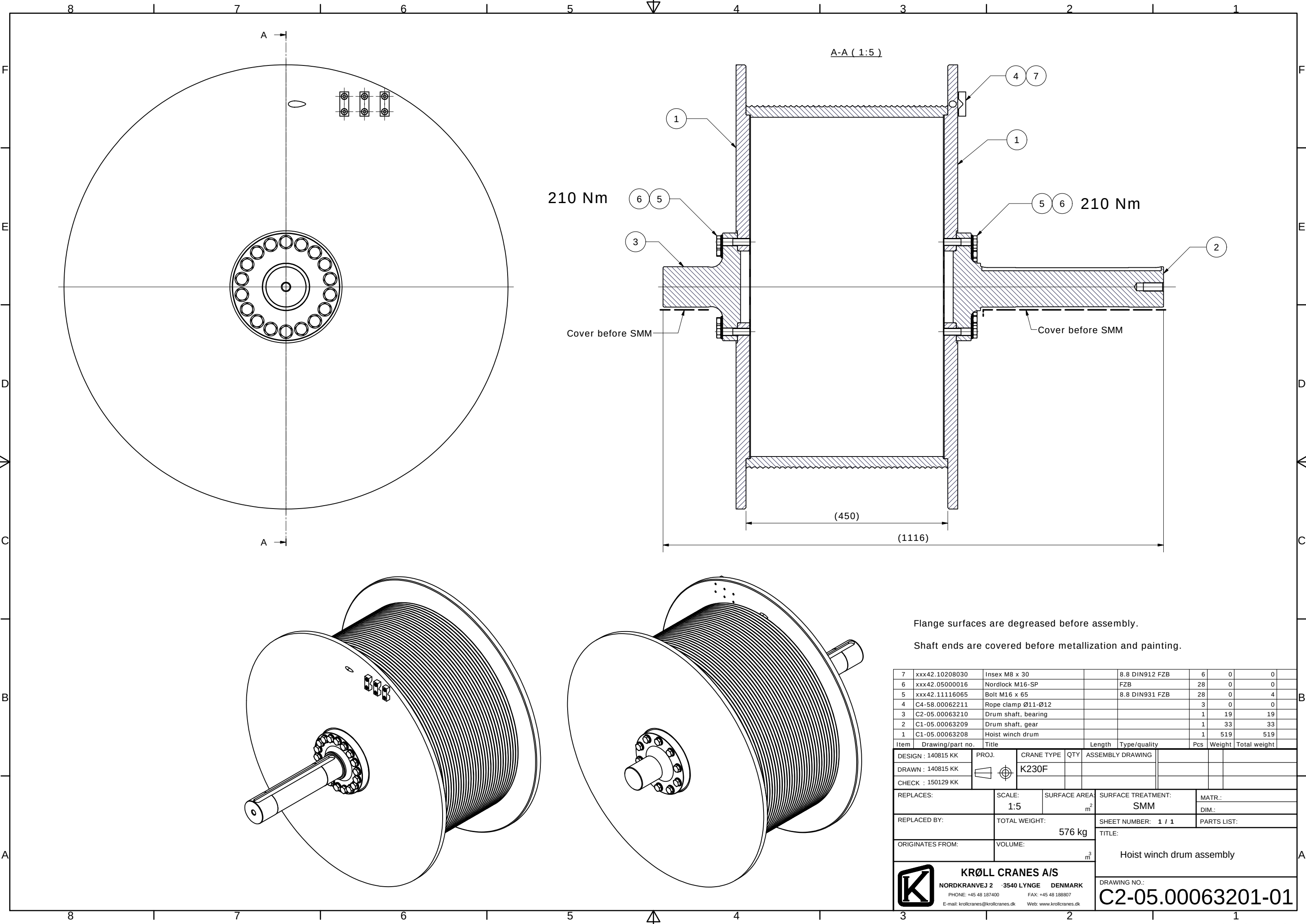


29	xxx42.17900012	Locknut M12		8 DIN985 FZB	2	0	0								
28	xxx42.11500010	Nut M10		8 DIN934 FZB	2	0	0								
27	xxx42.11500012	Nut M12		8 DIN934 FZB	34	0	1								
26	xxx42.11500024	Nut M24		8 DIN934 FZB	4	0	0								
25	xxx42.81900010	Washer M10		DIN125A FZB	2	0	0								
24	xxx42.81900012	Washer M12		DIN125A FZB	36	0	0								
23	xxx42.81900024	Washer M24		DIN125A FZB	4	0	0								
22	xxx42.11110025	Bolt M10 x 25		8.8 DIN931 FZB	2	0	0								
21	xxx42.11112035	Bolt M12 x 35		8.8 DIN931 FZB	2	0	0								
20	xxx42.11112090	Bolt M12 x 90		8.8 DIN931 FZB	4	0	0								
19	xxx42.11112045	Bolt M12 x 45		8.8 DIN931 FZB	30	0	2								
18	xxx42.11124080	Bolt M24 x 80		8.8 DIN931 FZB	4	0	2								
17	C3-38.00017977	Safety pin Ø4		Spring steel	5	0	0								
16	C3-38.00017978	Safety pin Ø6.3		Fjederstål	2	0	0								
15	C4-47.00043157	Washer Ø72/Ø120x4		S235 JR	2	0	0								
14	C4-45.00063103	Cotterbolt Ø70 x 185/210		42CrMo4	2	7	13								
13	C2-64.00062128	Platform to slewing			1	8	8								
12	C3-58.00063125	Stay support			2	12	24								
11	C3-64.00063105	Gratings, side platform			1	65	65								
10	C3-64.00063104	Gratings, counter jib			1	208	208								
9	C3-64.00062117	Detachable guard			2	2	5								
8	C3-64.00063109	Railing panel L=1270			1	19	19								
7	C3-64.00063107	Railing panel L=1835			1	29	29								
6	C3-64.00063106	Railing panel L=5560, left			1	69	69								
5	C3-64.00063106	Railing panel L=5560, right			1	69	69								
4	C1-64.00063101	Side platform			1	199	199								
3	C3-58.00063206	Drum bracket			1	72	72								
2	C1-05.00063007	Hoist winch assembly			1	1291	1291								
1	C1-04.00063100	Counterjib			1	2956	2956								
Item		Drawing/part no.	Title	Length	Type/quality	Pcs	Weight	Total weight							
DESIGN : 150410 HK		PROJ.	CRANE TYPE	QTY	ASSEMBLY DRAWING										
DRAWN : 150410 HK			K230F												
CHECK : 150410 JL															
REPLACES:		SCALE:	SURFACE AREA	SURFACE TREATMENT:		MATR:									
		1 : 20	m ²			DIM:									
REPLACED BY:		TOTAL WEIGHT:	SHEET NUMBER: 1 / 1		PARTS LIST:										
			N/A		TITLE:										
ORIGINATES FROM:		VOLUME:	Counterjib assembly												



31	xxx42.81900005	Washer M5		DIN125A FZB	2	0	0
30	xxx42.81900006	Washer M6		DIN125A FZB	3	0	0
29	xxx42.81900008	Washer M8		DIN125A FZB	3	0	0
28	xxx42.81900016	Washer M16		DIN125A FZB	4	0	0
27	xxx42.81900020	Washer M20		DIN125A FZB	13	0	0
26	xxx42.81900024	Washer M24		DIN125A FZB	8	0	0
25	xxx42.11500005	Nut M5		8 DIN934 FZB	2	0	0
24	xxx42.11500020	Nut M20		8 DIN934 FZB	4	0	0
23	xxx42.11500024	Nut M24		8 DIN934 FZB	8	0	1
22	xxx42.11105020	Bolt M5 x 20		8.8 DIN931 FZB	2	0	0
21	xxx42.11106012	Bolt M6 x 12		8.8 DIN931 FZB	3	0	0
20	xxx42.11108016	Bolt M8 x 16		8.8 DIN931 FZB	3	0	0
19	xxx42.11116040	Bolt M16 x 40		8.8 DIN931 FZB	4	0	0
18	xxx42.11120060	Bolt M20 x 60		8.8 DIN931 FZB	1	0	0
17	xxx42.11120070	Bolt M20 x 70		8.8 DIN931 FZB	4	0	1
16	xxx42.11120150	Bolt M20 x 150		8.8 DIN931 FZB	4	0	2
15	xxx42.11124080	Bolt M24 x 80		8.8 DIN931 FZB	8	0	3
14	xxx42.10208030	Insex M8 x 30		8.8 DIN912 FZB	1	0	0
13	xxx51.12514400	Key 25x14x400			1	1	1
12	xxx14.26280802	Inductive sensor		SJ10-N	1	0	0
11	xxx14.12281886	Limit switch			1	2	2
10	xxx36.60200218	Bearing UCF 218			1	5	5
9	C4-19.00039078	Coupling Rotex 19			1	0	0
8	C4-05.00062197	Sensor disk			1	0	0
7	C4-43.00063207	Console stay			4	0	1
6	C1-58.00063205	Console			1	5	5
5	C3-15.00063203	Siemens motor		1LP9207 37kW	1	157	157
4	C4-47.00063203	Washer			1	2	2
3	C2-05.00063201	Hoist winch drum assembly			1	576	576
2	C3-17.00063202	Gearbox Bonfiglioli A90		i = 1:55.03	1	470	470
1	C2-58.00063200	Hoist winch frame			1	63	63

Item	Drawing/part no.	Title	Length	Type/quality	Pcs	Weight	Total weight
DESIGN :	140815 KK	PROJ.	CRANE TYPE	QTY	ASSEMBLY DRAWING		
DRAWN :	140815 KK		K230F				
CHECK :	150129 KK						
REPLACES:	SCALE: 1:8	SURFACE AREA: m²	SURFACE TREATMENT:	MATR:			
REPLACED BY:	TOTAL WEIGHT: 1291 kg	SHEET NUMBER: 1 / 1	PARTS LIST:				
ORIGINATES FROM:	VOLUME: m³	TITLE: Hoist winch assembly 10T 37 kW					
K		KRÖLL CRANES A/S		DRAWING NO.: C1-05.00063007-00			
NORDKRANVEJ 2 3540 LYNØ DENMARK		PHONE: +45 48 387400 FAX: +45 48 388807		E-mail: kroellcranes@kroellcranes.dk Web: www.kroellcranes.dk			



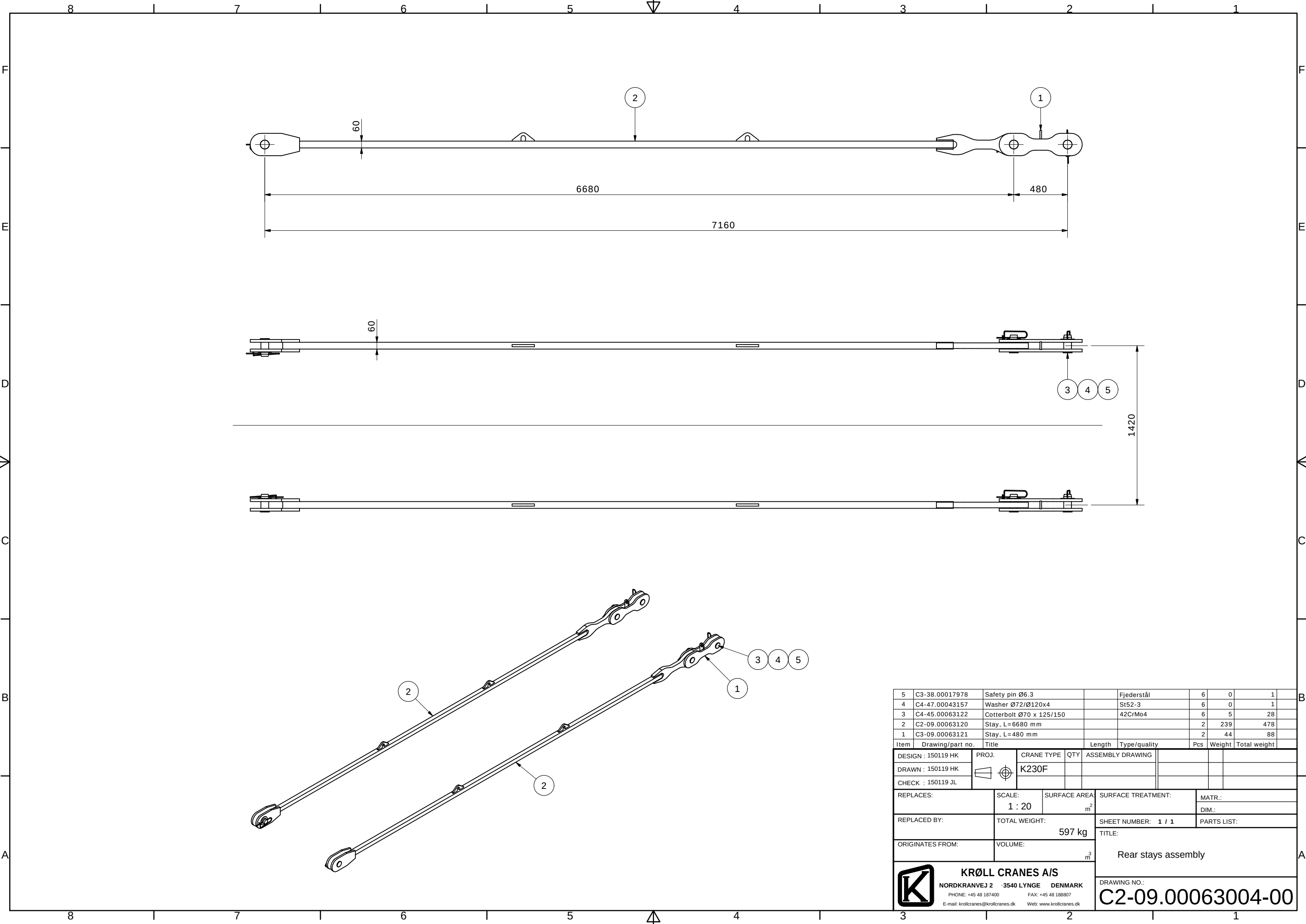
Flange surfaces are degreased before assembly.

Shaft ends are covered before metallization and painting.

7	xxx42.10208030	Insex M8 x 30		8.8 DIN912 FZB	6	0	0	
6	xxx42.05000016	Nordlock M16-SP		FZB	28	0	0	
5	xxx42.11116065	Bolt M16 x 65		8.8 DIN931 FZB	28	0	4	
4	C4-58.00062211	Rope clamp Ø11-Ø12			3	0	0	
3	C2-05.00063210	Drum shaft, bearing			1	19	19	
2	C1-05.00063209	Drum shaft, gear			1	33	33	
1	C1-05.00063208	Hoist winch drum			1	519	519	
Item	Drawing/part no.	Title	Length	Type/quality	Pcs	Weight	Total weight	
DESIGN : 140815 KK	PROJ.	CRANE TYPE	QTY	ASSEMBLY DRAWING				
DRAWN : 140815 KK		K230F						
CHECK : 150129 KK								
REPLACES:	SCALE:	SURFACE AREA:	SURFACE TREATMENT:	MATR.:				
	1:5	m ²	SMM	DIM.:				
REPLACED BY:	TOTAL WEIGHT:	SHEET NUMBER:	PARTS LIST:					
	576 kg	1 / 1						
ORIGINATES FROM:	VOLUME:	TITLE:						
	m ³	Hoist winch drum assembly						
		DRAWING NO.:						
		C2-05.00063201-01						



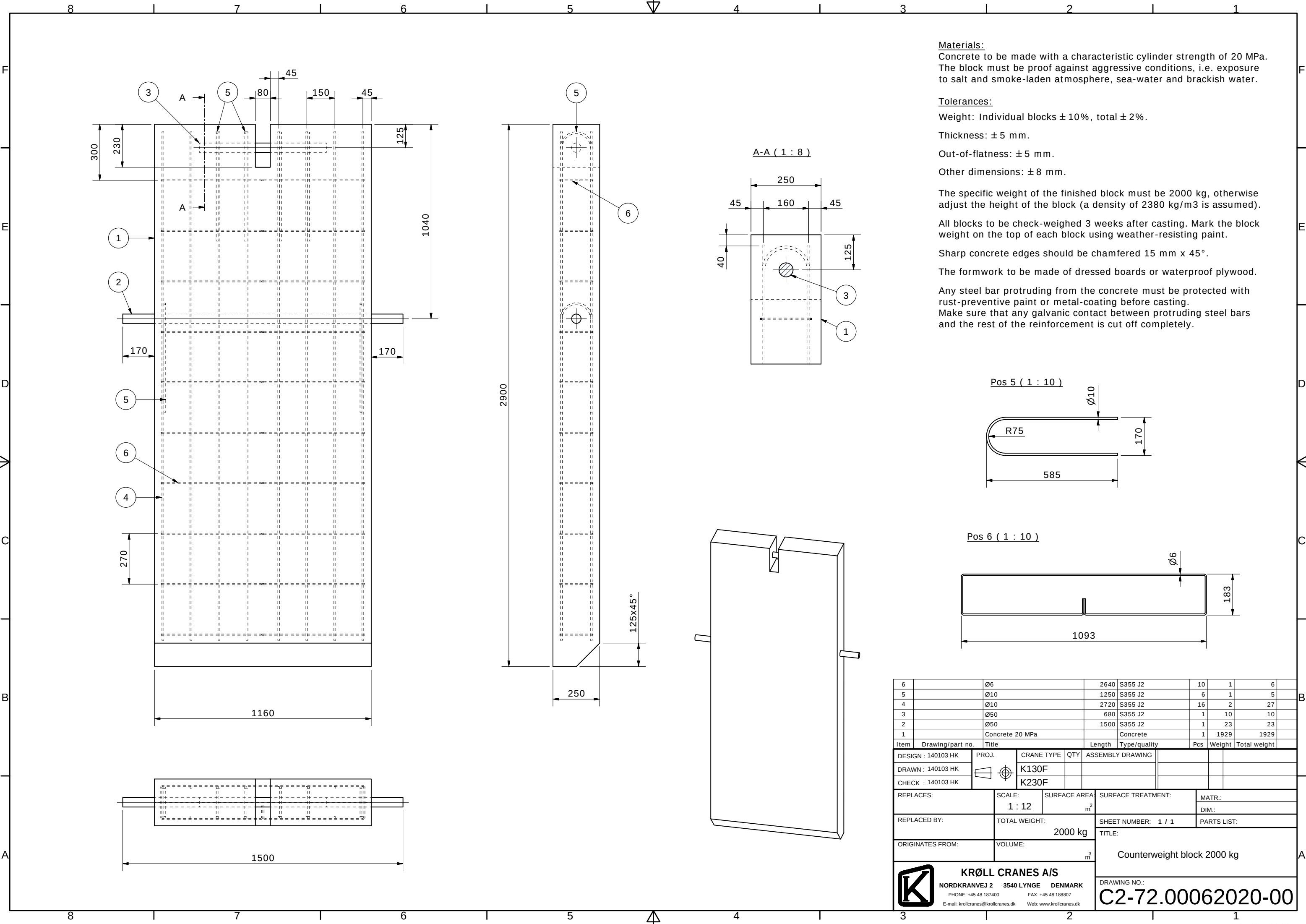
KRØLL CRANES A/S
NORDKRANVEJ 2 · 3540 LYNØGE · DENMARK
PHONE: +45 48 187400 FAX: +45 48 188807
E-mail: krollcranes@krollcranes.dk Web: www.krollcranes.dk



5	C3-38.00017978	Safety pin Ø6.3		Fjederstål	6	0	1	
4	C4-47.00043157	Washer Ø72/Ø120x4		St52-3	6	0	1	
3	C4-45.00063122	Cotterbolt Ø70 x 125/150		42CrMo4	6	5	28	
2	C2-09.00063120	Stay, L=6680 mm			2	239	478	
1	C3-09.00063121	Stay, L=480 mm			2	44	88	
Item	Drawing/part no.	Title	Length	Type/quality	Pcs	Weight	Total weight	
DESIGN : 150119 HK	PROJ.	CRANE TYPE	QTY	ASSEMBLY DRAWING				
DRAWN : 150119 HK		K230F						
CHECK : 150119 JL								
REPLACES:	SCALE:	SURFACE AREA:	SURFACE TREATMENT:	MATR.:				
	1 : 20	m ²		DIM.:				
REPLACED BY:	TOTAL WEIGHT:	SHEET NUMBER:	PARTS LIST:					
	597 kg	1 / 1						
ORIGINATES FROM:	VOLUME:	TITLE:						
	m ³	Rear stays assembly						
		DRAWING NO.:						
		C2-09.00063004-00						



KRØLL CRANES A/S
NORDKRANVEJ 2 · 3540 LYNGBE · DENMARK
PHONE: +45 48 187400 FAX: +45 48 188807
E-mail: krollcranes@krollcranes.dk Web: www.krollcranes.dk



Materials:
Concrete to be made with a characteristic cylinder strength of 20 MPa.
The block must be proof against aggressive conditions, i.e. exposure to salt and smoke-laden atmosphere, sea-water and brackish water.

Tolerances:
Weight: Individual blocks ± 10%, total ± 2%.
Thickness: ± 5 mm.
Out-of-flatness: ± 5 mm.
Other dimensions: ± 8 mm.

The specific weight of the finished block must be 2000 kg, otherwise adjust the height of the block (a density of 2380 kg/m³ is assumed).

All blocks to be check-weighed 3 weeks after casting. Mark the block weight on the top of each block using weather-resisting paint.

Sharp concrete edges should be chamfered 15 mm x 45°.

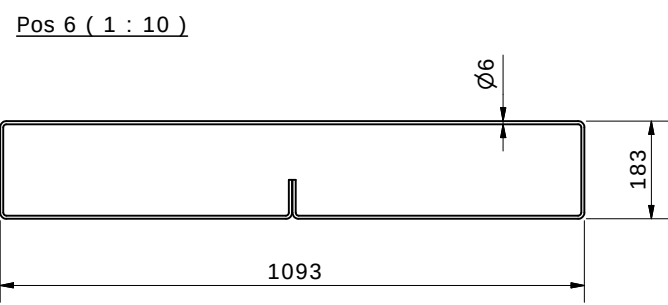
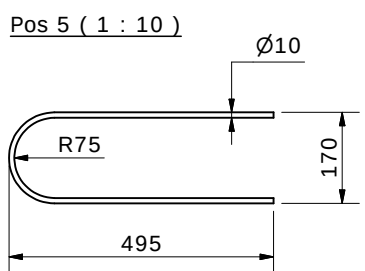
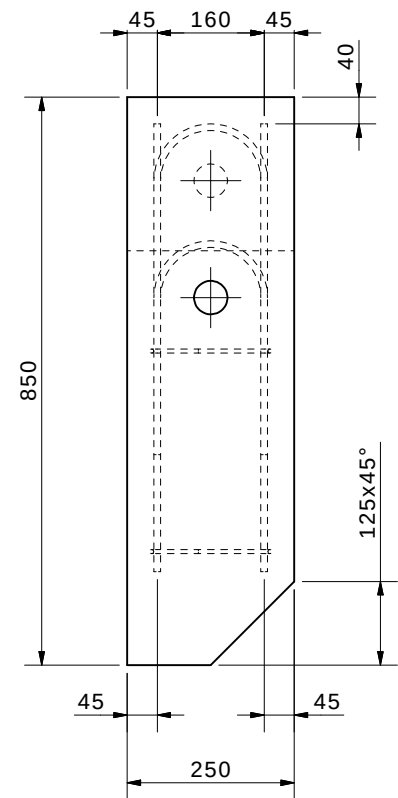
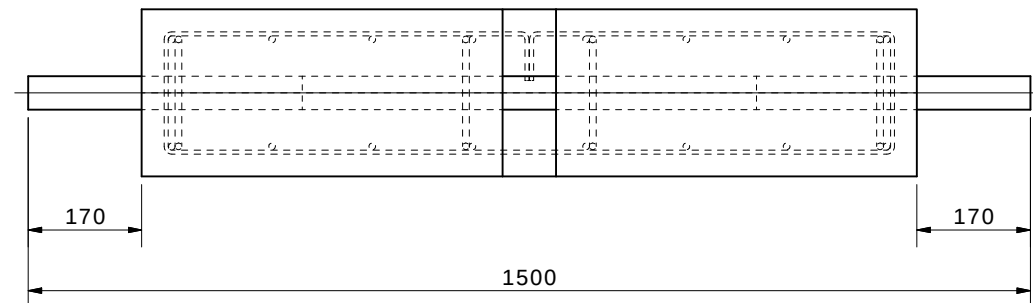
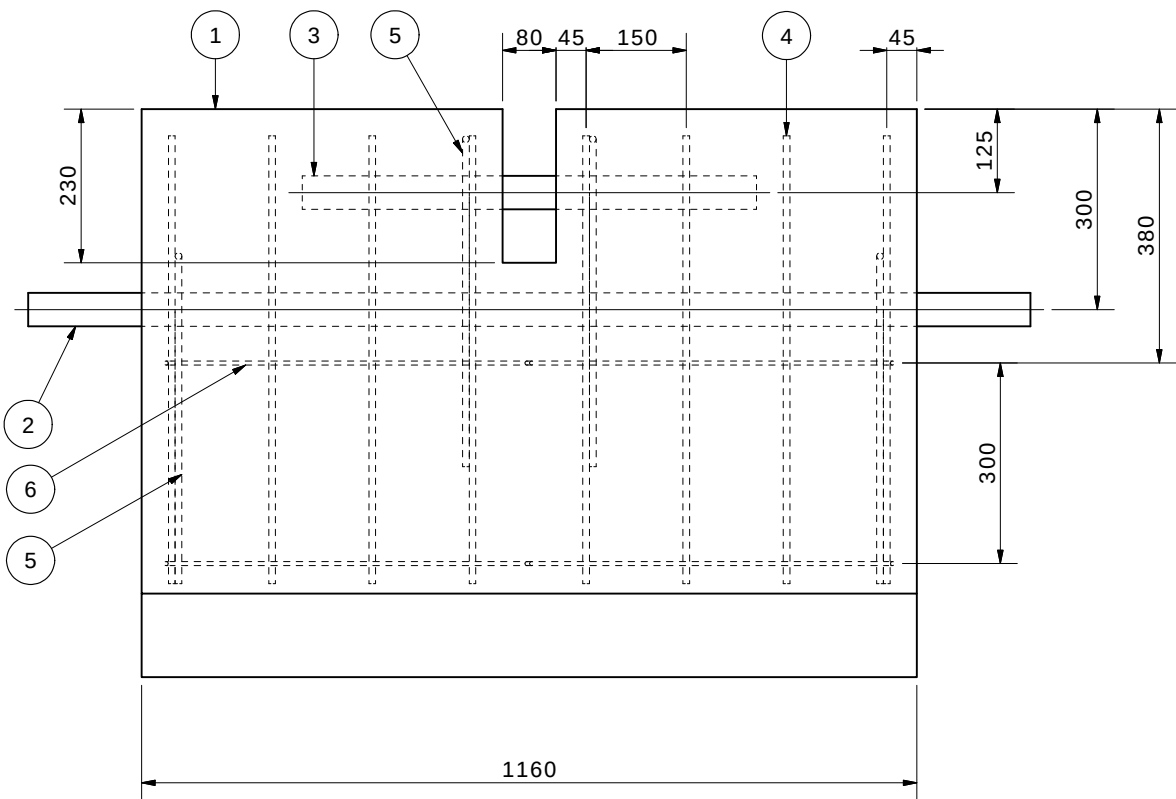
The formwork to be made of dressed boards or waterproof plywood.

Any steel bar protruding from the concrete must be protected with rust-preventive paint or metal-coating before casting.
Make sure that any galvanic contact between protruding steel bars and the rest of the reinforcement is cut off completely.

6		Ø6	2640	S355 J2	10	1	6	
5		Ø10	1250	S355 J2	6	1	5	
4		Ø10	2720	S355 J2	16	2	27	
3		Ø50	680	S355 J2	1	10	10	
2		Ø50	1500	S355 J2	1	23	23	
1		Concrete 20 MPa		Concrete	1	1929	1929	
Item	Drawing/part no.	Title	Length	Type/quality	Pcs	Weight	Total weight	
DESIGN : 140103 HK	PROJ.	CRANE TYPE	QTY	ASSEMBLY DRAWING				
DRAWN : 140103 HK		K130F						
CHECK : 140103 HK		K230F						
REPLACES:	SCALE:	SURFACE AREA:	SURFACE TREATMENT:	MATR.:				
	1 : 12	m ²		DIM.:				
REPLACED BY:	TOTAL WEIGHT:	SHEET NUMBER:	PARTS LIST:					
	2000 kg	1 / 1						
ORIGINATES FROM:	VOLUME:	TITLE:						
	m ³	Counterweight block 2000 kg						
		DRAWING NO.:						
		C2-72.00062020-00						



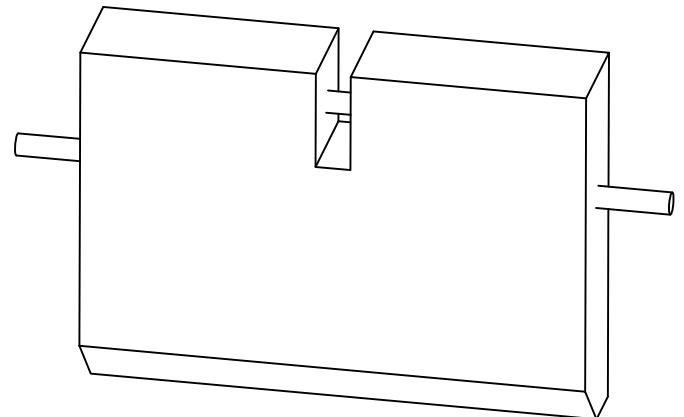
KRØLL CRANES A/S
NORDKRANVEJ 2 · 3540 LYNØGE · DENMARK
PHONE: +45 48 187400 FAX: +45 48 188807
E-mail: krollcranes@krollcranes.dk Web: www.krollcranes.dk



Materials:
Concrete to be made with a characteristic cylinder strength of 20 MPa. The block must be proof against aggressive conditions, i.e. exposure to salt and smoke-laden atmosphere, sea-water and brackish water.

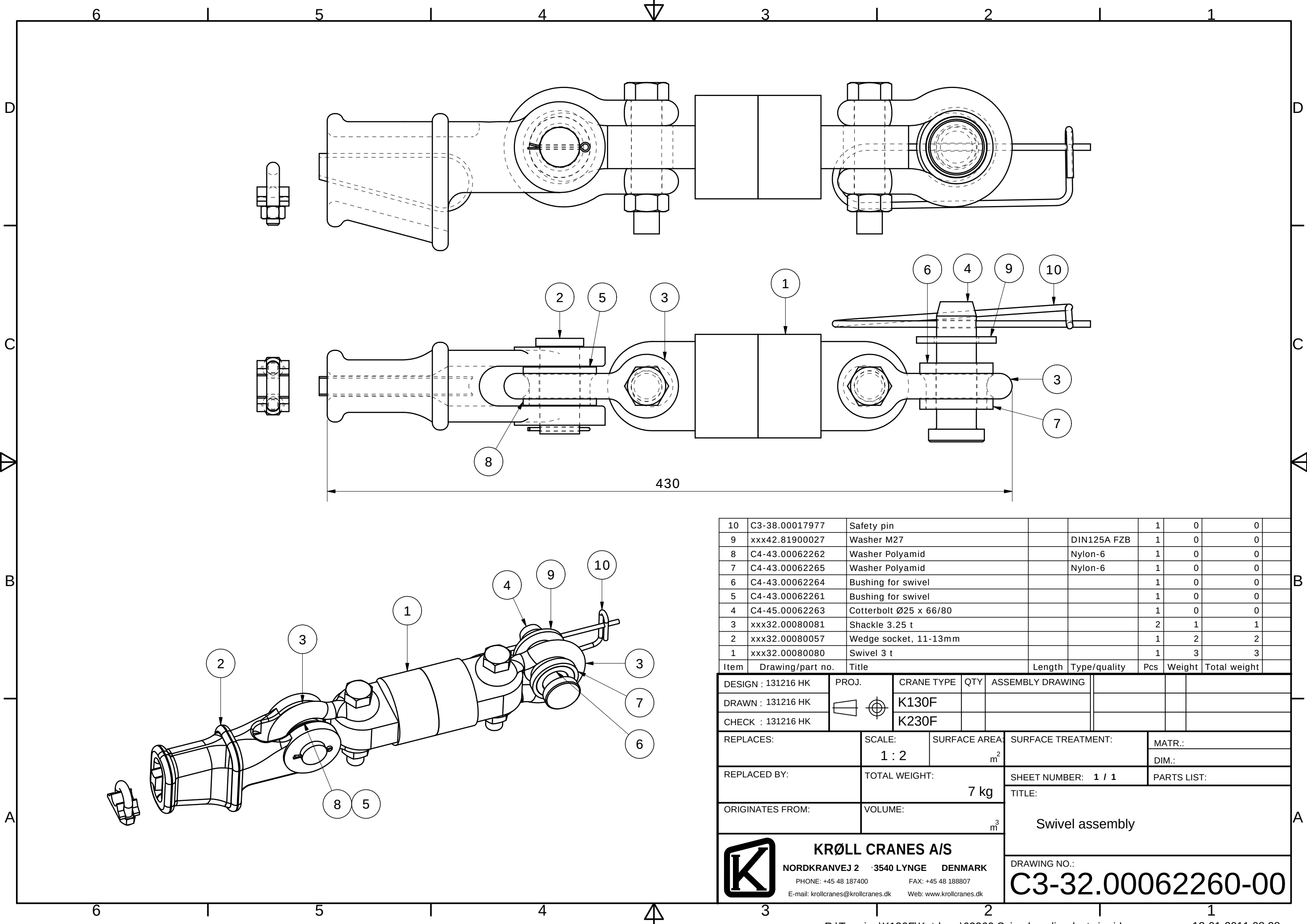
Tolerances:
Weight: Individual blocks $\pm 10\%$, total $\pm 2\%$.
Thickness: ± 5 mm.
Out-of-flatness: ± 5 mm.
Other dimensions: ± 8 mm.

The specific weight of the finished block must be 2000 kg, otherwise adjust the height of the block (a density of 2380 kg/m³ is assumed).
All blocks to be check-weighed 3 weeks after casting. Mark the block weight on the top of each block using weather-resisting paint.
Sharp concrete edges should be chamfered 15 mm x 45°.
The formwork to be made of dressed boards or waterproof plywood.
Any steel bar protruding from the concrete must be protected with rust-preventive paint or metal-coating before casting. Make sure that any galvanic contact between protruding steel bars and the rest of the reinforcement is cut off completely.



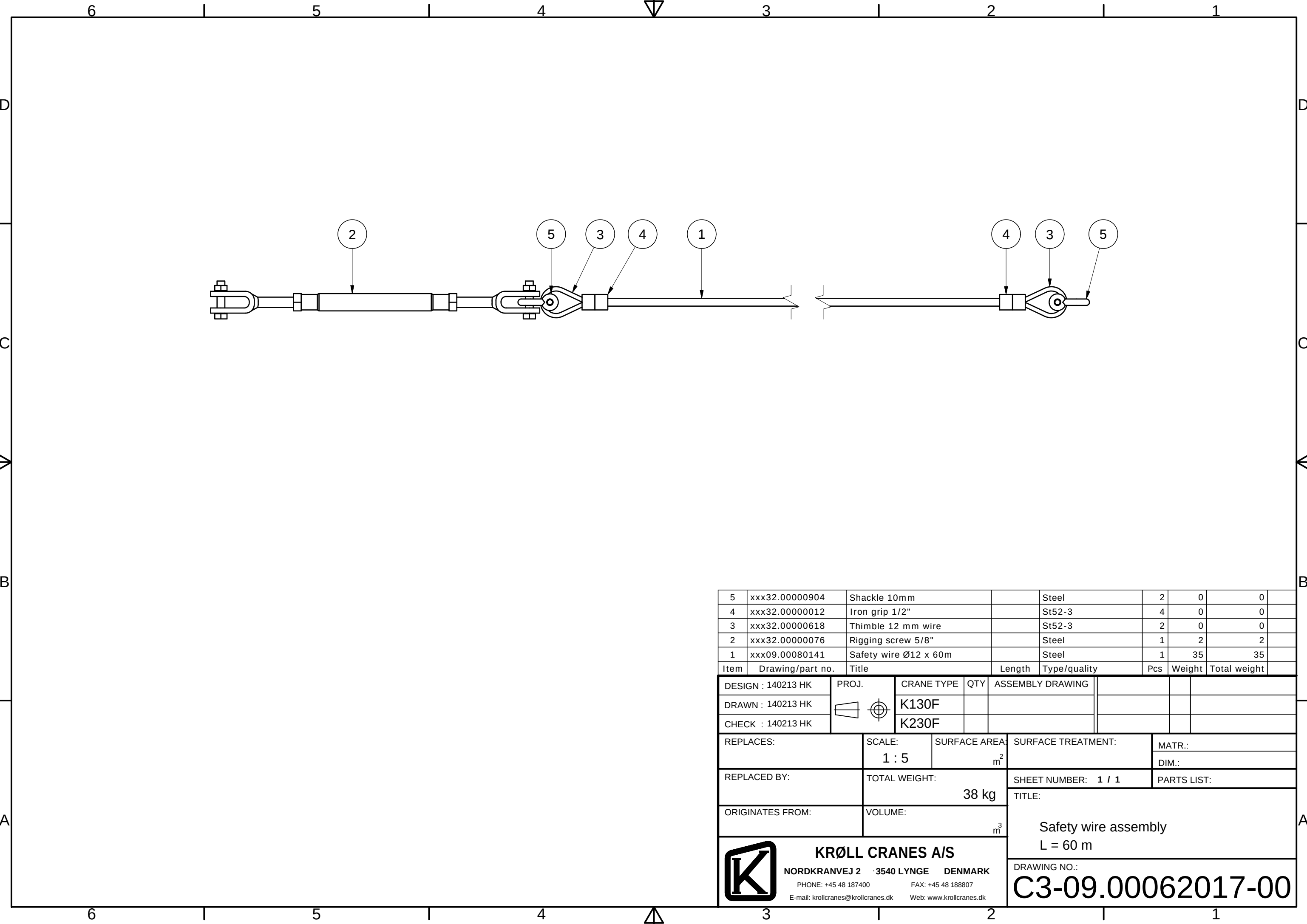
6		Ø6	2640	S355 J2	2	1	1	
5		Ø10	1070	S355 J2	4	1	3	
4		Ø10	670	S355 J2	16	0	7	
3		Ø50	680	S355 J2	1	10	10	
2		Ø50	1500	S355 J2	1	23	23	
1		Concrete 20 MPa		Concrete	1	456	456	
Item	Drawing/part no.	Title	Length	Type/quality	Pcs	Weight	Total weight	
DESIGN : 140103 HK	PROJ.	CRANE TYPE	QTY	ASSEMBLY DRAWING				
DRAWN : 140103 HK		K130F						
CHECK : 140103 HK		K230F						
REPLACES:	SCALE:	SURFACE AREA:	SURFACE TREATMENT:	MATR.:				
	1 : 8	m ²		DIM.:				
REPLACED BY:	TOTAL WEIGHT:	SHEET NUMBER:	PARTS LIST:					
	500 kg	1 / 1						
ORIGINATES FROM:	VOLUME:	TITLE:						
	m ³	Counterweight block 500 kg						
				DRAWING NO.: C2-72.00062021-00				
KRØLL CRANES A/S								
NORDKRANVEJ 2 · 3540 LYNØE · DENMARK								
PHONE: +45 48 187400 FAX: +45 48 188807								
E-mail: krollcranes@krollcranes.dk Web: www.krollcranes.dk								

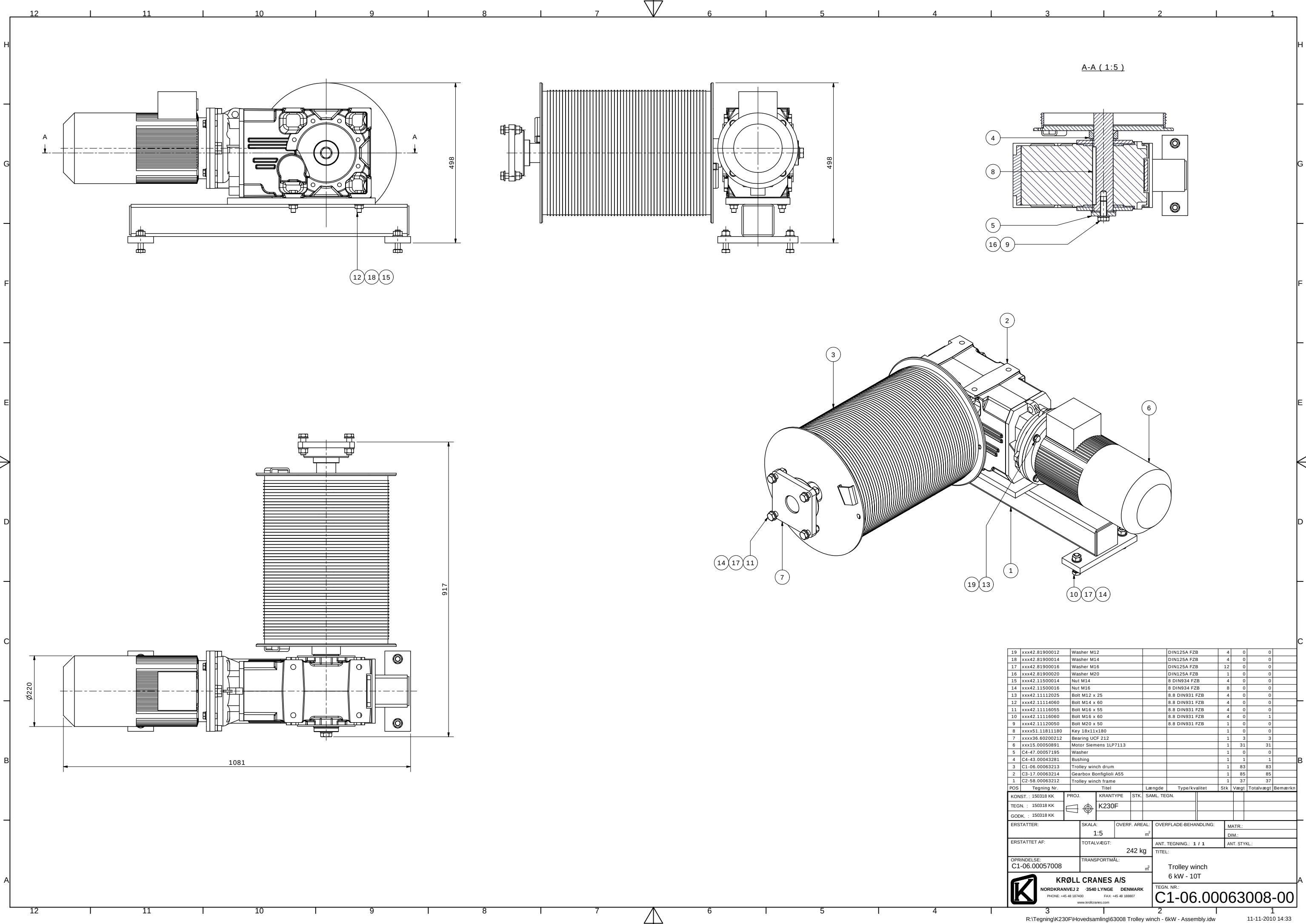


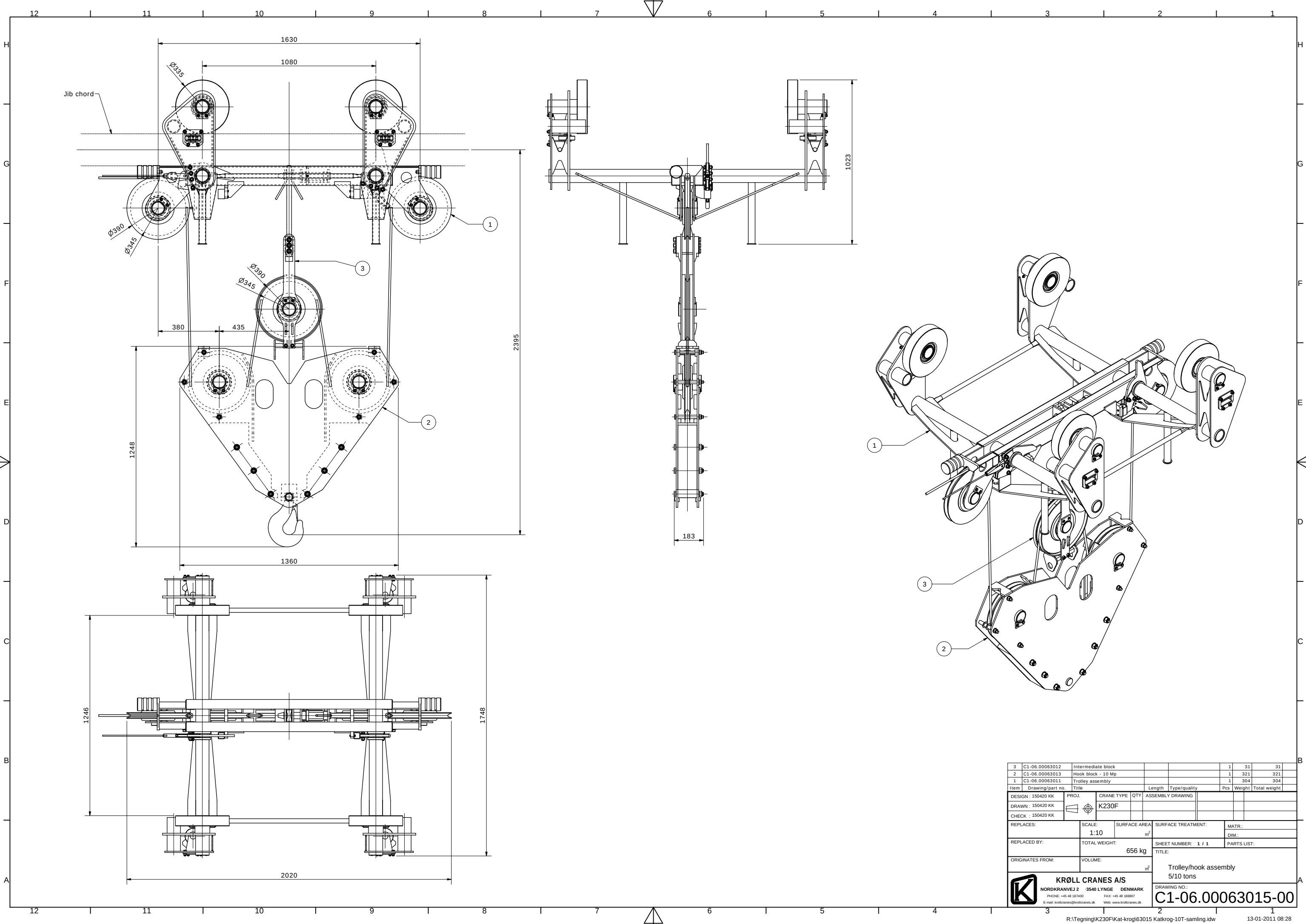


10	C3-38.00017977	Safety pin			1	0	0	
9	xxx42.81900027	Washer M27		DIN125A FZB	1	0	0	
8	C4-43.00062262	Washer Polyamid		Nylon-6	1	0	0	
7	C4-43.00062265	Washer Polyamid		Nylon-6	1	0	0	
6	C4-43.00062264	Bushing for swivel			1	0	0	
5	C4-43.00062261	Bushing for swivel			1	0	0	
4	C4-45.00062263	Cotterbolt Ø25 x 66/80			1	0	0	
3	xxx32.00080081	Shackle 3.25 t			2	1	1	
2	xxx32.00080057	Wedge socket, 11-13mm			1	2	2	
1	xxx32.00080080	Swivel 3 t			1	3	3	
Item	Drawing/part no.	Title	Length	Type/quality	Pcs	Weight	Total weight	

DESIGN : 131216 HK	PROJ.	CRANE TYPE	QTY	ASSEMBLY DRAWING			
DRAWN : 131216 HK		K130F					
CHECK : 131216 HK		K230F					
REPLACES:	SCALE: 1 : 2	SURFACE AREA: m ²	SURFACE TREATMENT:	MATR.:			
REPLACED BY:	TOTAL WEIGHT: 7 kg	SHEET NUMBER: 1 / 1	PARTS LIST:				
ORIGINATES FROM:	VOLUME: m ³	TITLE: Swivel assembly					
				DRAWING NO.: C3-32.00062260-00			
NORDKRANVEJ 2 · 3540 LYNGE DENMARK							
PHONE: +45 48 187400 FAX: +45 48 188807							
E-mail: krollcranes@krollcranes.dk Web: www.krollcranes.dk							



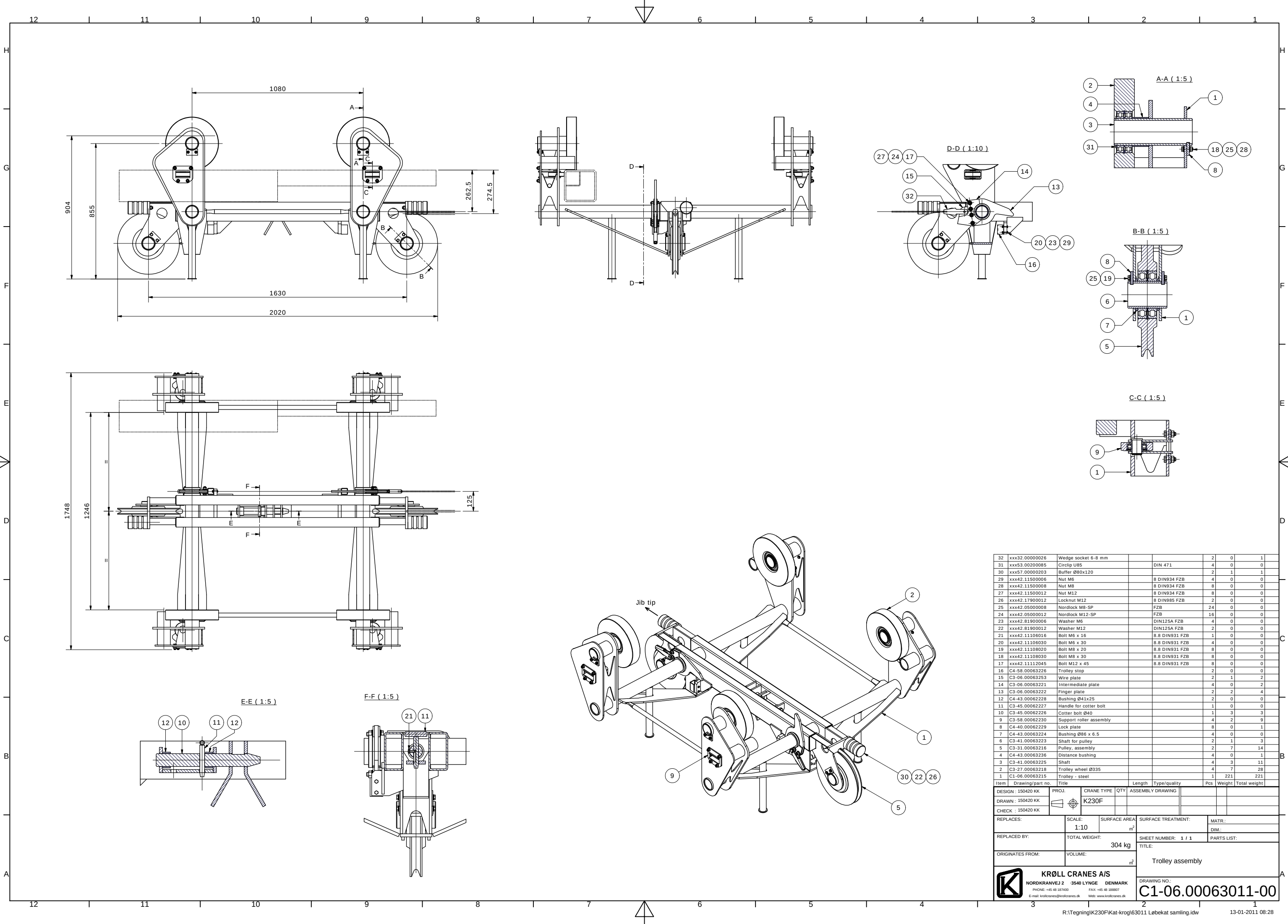


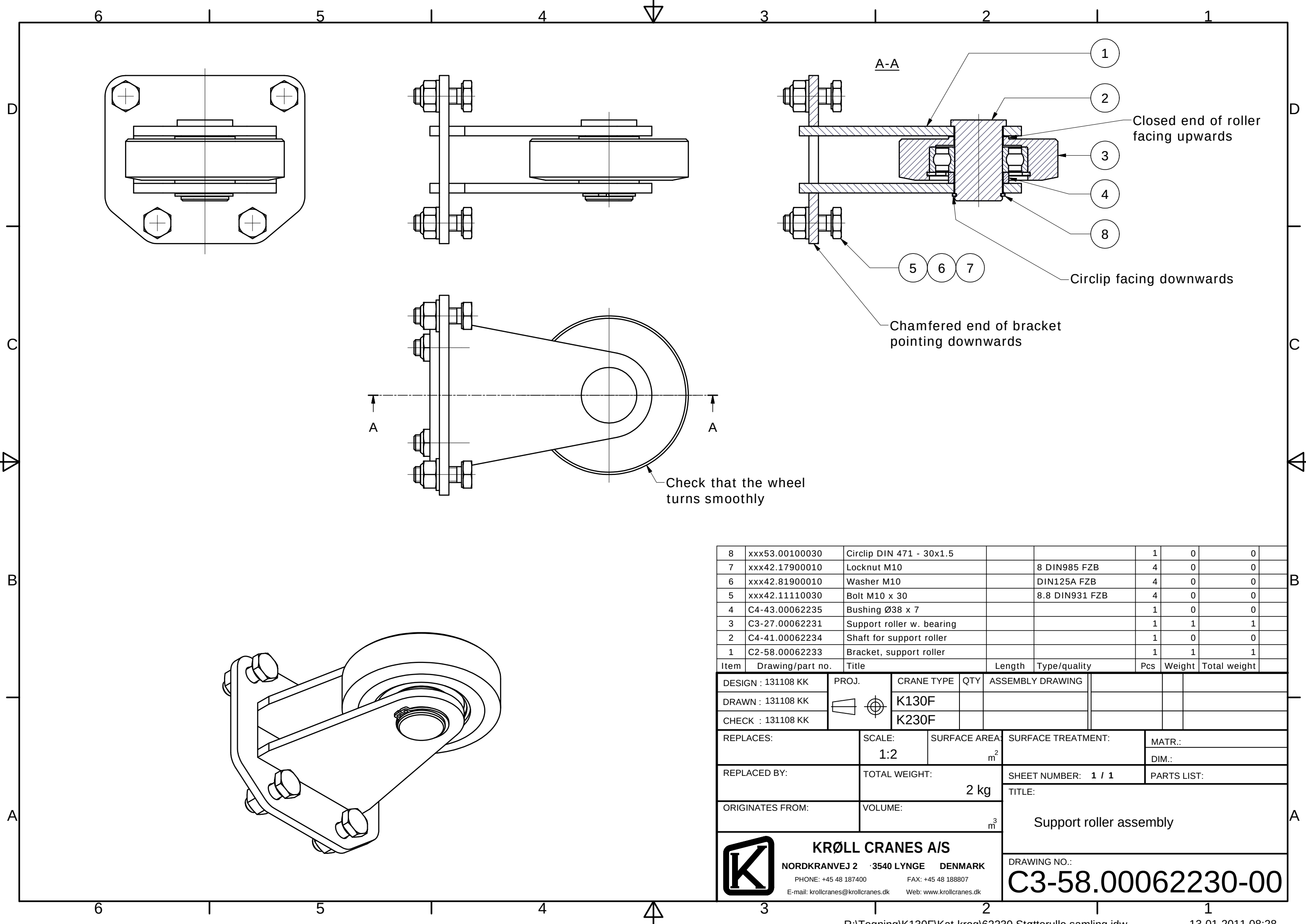


3	C1-06.00063012	Intermediate block				1	31	31
2	C1-06.00063013	Hook block - 10 Mp				1	321	321
1	C1-06.00063011	Trolley assembly				1	304	304
Item	Drawing/part no.	Title	Length	Type/quality	Pcs	Weight	Total weight	
DESIGN : 150420 KK		PROJ.	CRANE TYPE	QTY	ASSEMBLY DRAWING			
DRAWN : 150420 KK			K230F					
CHECK : 150420 KK								
REPLACES:		SCALE:	SURFACE AREA	SURFACE TREATMENT:		MATR.:		
		1:10	m ²					
REPLACED BY:		TOTAL WEIGHT:		SHEET NUMBER: 1 / 1		PARTS LIST:		
		656 kg						
ORIGINATES FROM:		VOLUME:		TITLE:				
		m ³		Trolley/hook assembly 5/10 tons				
				DRAWING NO.:				
				C1-06.00063015-00				



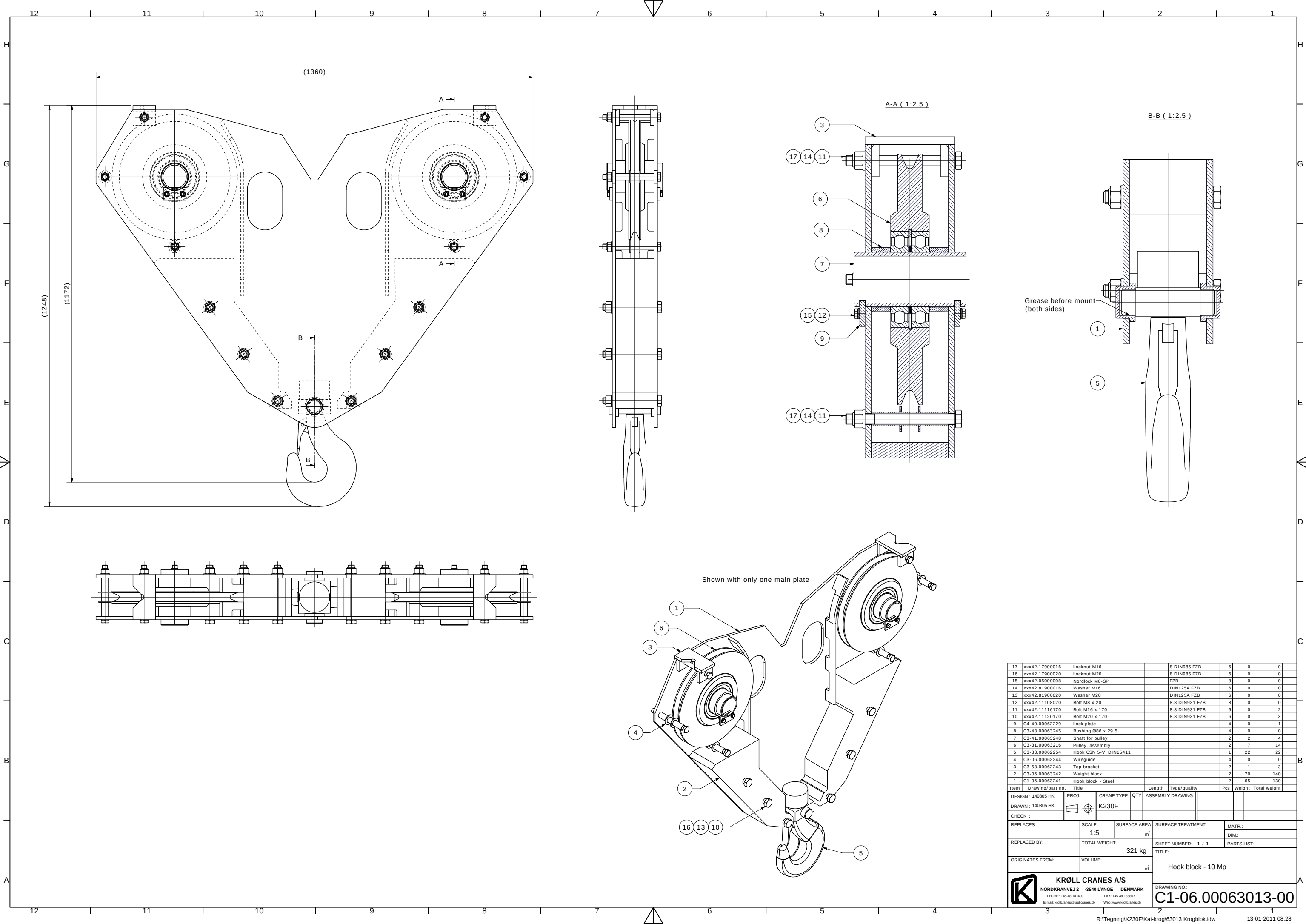
KRØLL CRANES A/S
NORDKRANVEJ 2 3540 LYNØE DENMARK
PHONE: +45 48 387600 FAX: +45 48 388807
E-mail: krolldcranes@krolldcranes.dk Web: www.krolldcranes.dk





8	xxx53.00100030	Circlip DIN 471 - 30x1.5			1	0	0	
7	xxx42.17900010	Locknut M10		8 DIN985 FZB	4	0	0	
6	xxx42.81900010	Washer M10		DIN125A FZB	4	0	0	
5	xxx42.11110030	Bolt M10 x 30		8.8 DIN931 FZB	4	0	0	
4	C4-43.00062235	Bushing Ø38 x 7			1	0	0	
3	C3-27.00062231	Support roller w. bearing			1	1	1	
2	C4-41.00062234	Shaft for support roller			1	0	0	
1	C2-58.00062233	Bracket, support roller			1	1	1	
Item	Drawing/part no.	Title	Length	Type/quality	Pcs	Weight	Total weight	

DESIGN : 131108 KK	PROJ.	CRANE TYPE	QTY	ASSEMBLY DRAWING			
DRAWN : 131108 KK		K130F					
CHECK : 131108 KK		K230F					
REPLACES:	SCALE: 1:2	SURFACE AREA: m ²	SURFACE TREATMENT:	MATR.:			
REPLACED BY:	TOTAL WEIGHT: 2 kg	SHEET NUMBER: 1 / 1	PARTS LIST:				
ORIGINATES FROM:	VOLUME: m ³	TITLE: Support roller assembly					
				DRAWING NO.: C3-58.00062230-00			
KRØLL CRANES A/S NORDKRANVEJ 2 · 3540 LYNGE DENMARK PHONE: +45 48 187400 FAX: +45 48 188807 E-mail: krollcranes@krollcranes.dk Web: www.krollcranes.dk							



17	xxx42.17900016	Locknut M16		8 DIN985 FZB	6	0	0
16	xxx42.17900020	Locknut M20		8 DIN985 FZB	6	0	0
15	xxx42.05000008	Nordlock M8-SP		FZB	8	0	0
14	xxx42.81900016	Washer M16		DIN125A FZB	6	0	0
13	xxx42.81900020	Washer M20		DIN125A FZB	6	0	0
12	xxx42.11108020	Bolt M8 x 20		8.8 DIN931 FZB	8	0	0
11	xxx42.11116170	Bolt M16 x 170		8.8 DIN931 FZB	6	0	2
10	xxx42.11120170	Bolt M20 x 170		8.8 DIN931 FZB	6	0	3
9	C4-40.00062229	Lock plate			4	0	1
8	C3-43.00063245	Bushing Ø86 x 29.5			4	0	0
7	C3-41.00063248	Shaft for pulley			2	2	4
6	C3-31.00063216	Pulley, assembly			2	7	14
5	C3-33.00062254	Hook CSN 5-V DIN15411			1	22	22
4	C3-06.00062244	Wiring guide			4	0	0
3	C3-58.00062243	Top bracket			2	1	3
2	C3-06.00063242	Weight block			2	70	140
1	C1-06.00063241	Hook block - Steel			2	65	130
Item	Drawing/part no.	Title	Length	Type/quality	Pcs	Weight	Total weight
DESIGN : 140805 HK	PROJ.	CRANE TYPE	QTY	ASSEMBLY DRAWING			
DRAWN : 140805 HK		K230F					
CHECK :							
REPLACES:	SCALE: 1:5	SURFACE AREA: m²	SURFACE TREATMENT:	MATR:			
REPLACED BY:	TOTAL WEIGHT: 321 kg	SHEET NUMBER: 1 / 1	PARTS LIST:				
ORIGINATES FROM:	VOLUME: m³	TITLE: Hook block - 10 Mp					
K230F				DRAWING NO.: C1-06.00063013-00			
NORDKRANVEJ 2 3540 LYNGE DENMARK							
PHONE: +45 48 387600 FAX: +45 48 388807							
E-mail: kroellcranes@kroellcranes.dk Web: www.kroellcranes.dk							