

FINAL ORIENTATION (90 deg)

U deg	Char id	MT
Root end 1	13.6	
Root end 2	5.5	
Tip end	13.0	

Comp. weight	26.4
Supp. weight	8.7
Higg. weight	0.2

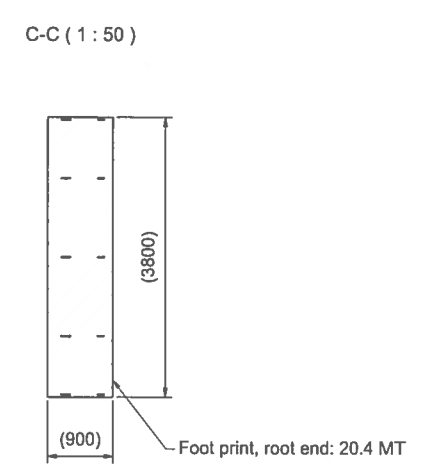
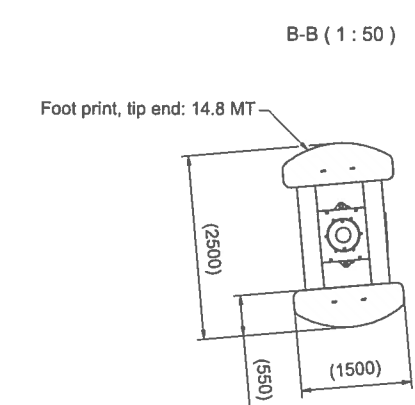
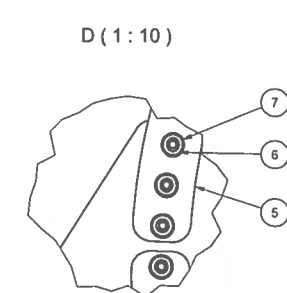
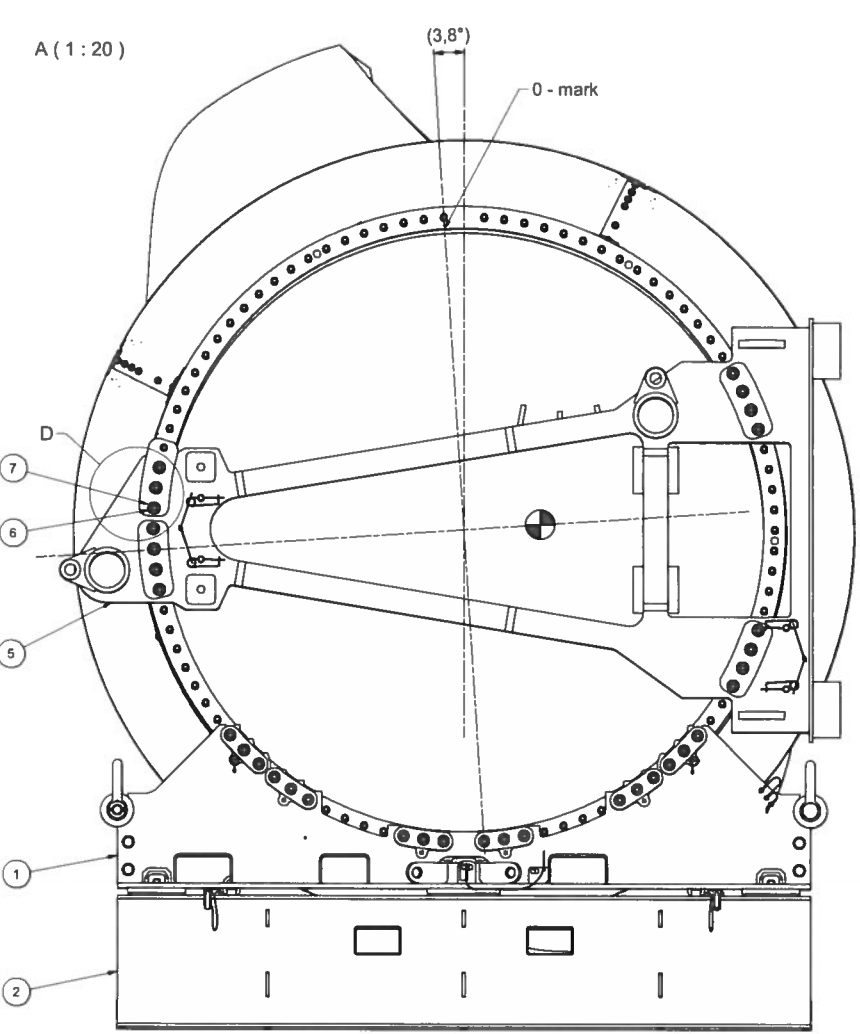
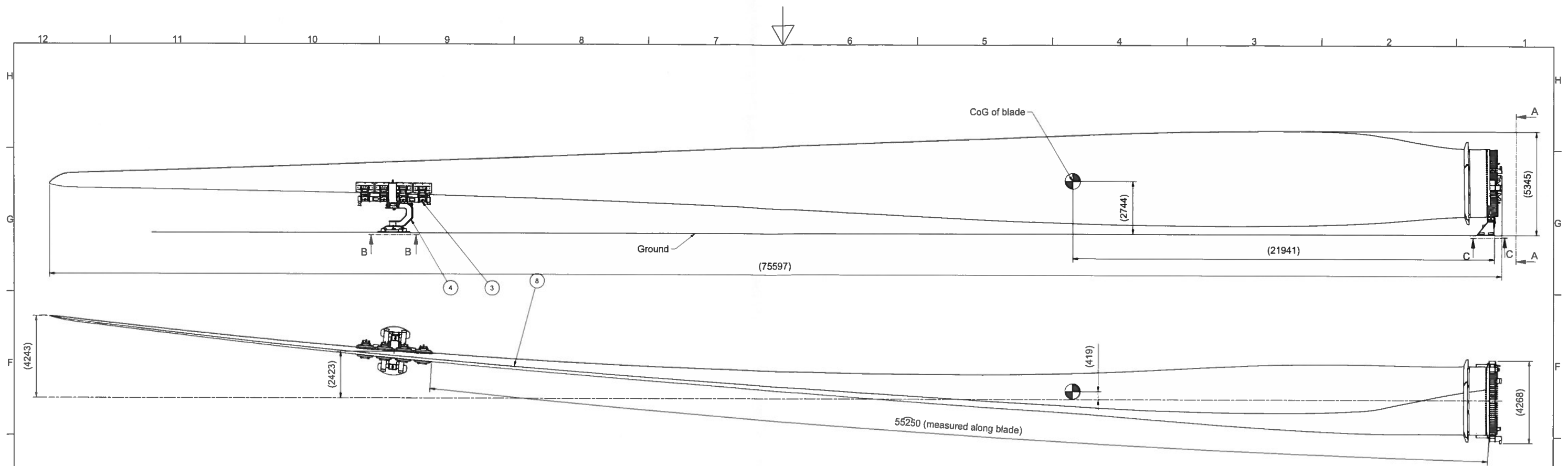
Pos	Qty	Item No	Mat. No	Item name	WtL (Tonne (MT))	Char Id (Tonne (MT))	UoM
1	1			B75 Blade			
2	1	D1031306	ABB 10113948	Blade Foot B75			
3	1	D3179359	ABB 10103215	Storage foot B75			
4	1	D3179320	ABB 10103217	Tip Clamp			
5	1	D3179350	ABB 10103218	Tip support B75			
6	1	D3179315	ABB 10103219	Transport frame B75			
7	8		ABB00018651	Shackle G-4183 WLL 35T	35	13.6	6.39
8	3		ABB 10015498	Roundslab 36MT 4m/8m	60	13.8	6.23

Weight rep: N/A Priority class: Restricted

Part	B75 - Lifting instruction - rotation		Draw. format	ISO	Draw. scale	EC	Draw. no.
			A0		1 : 20		2 / 2

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EDN no.: 143241
 Revision: 0001
SIEMENS
 D3179339



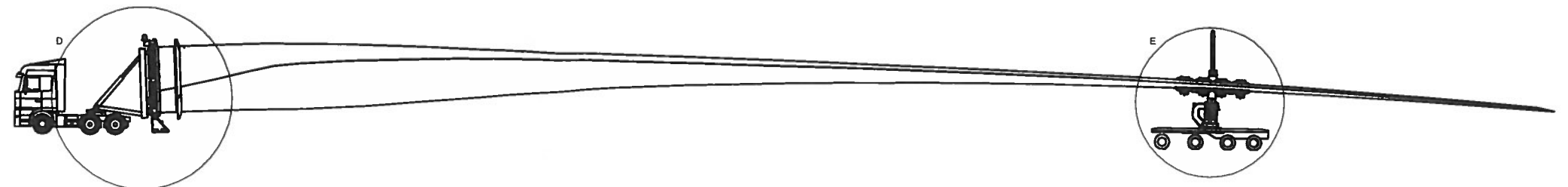
Bolts must be pretensioned 1650Nm

Pos.	Qty	Item No.	Mat. No.	Item name	Material	Mass
1	1	D1031306	A9B10113948	Blade foot, B75, asm		955,8 kg
2	1	D3179359	A9B10103215	Storage foot, B75		1595,9 kg
3	1	D3179320	A9B10103217	Tip Clamp	Generic	2910,6 kg
4	1	D3179350	A9B10103218	Tip support, B75		1778,6 kg
5	1	D3179315	A9B10103219	Transport frame, B75		1415,6 kg
6	33	D1012912	A9B00016284	Nut M36-10 ISO4032 IZn	Steel	0,4 kg
7	33	A9B00016853		Washer M36 HV Izn	Steel	0,1 kg
8	1			B75 Blade		26100 kg

Weight app	N/A	Proprietary Class: Restricted	EC
Part:	Trans. instruction - B75 - storage		Sheet no
Draw format:	ISO	Draw scale	1 : 100
	A1		1 / 1
Siemens Wind Power A/S Borupvej 16 DK-7330 Brande Tel. +45 9942 2222		ECN no.:	Revision:
		144118	001
		Draw no.:	D1019598

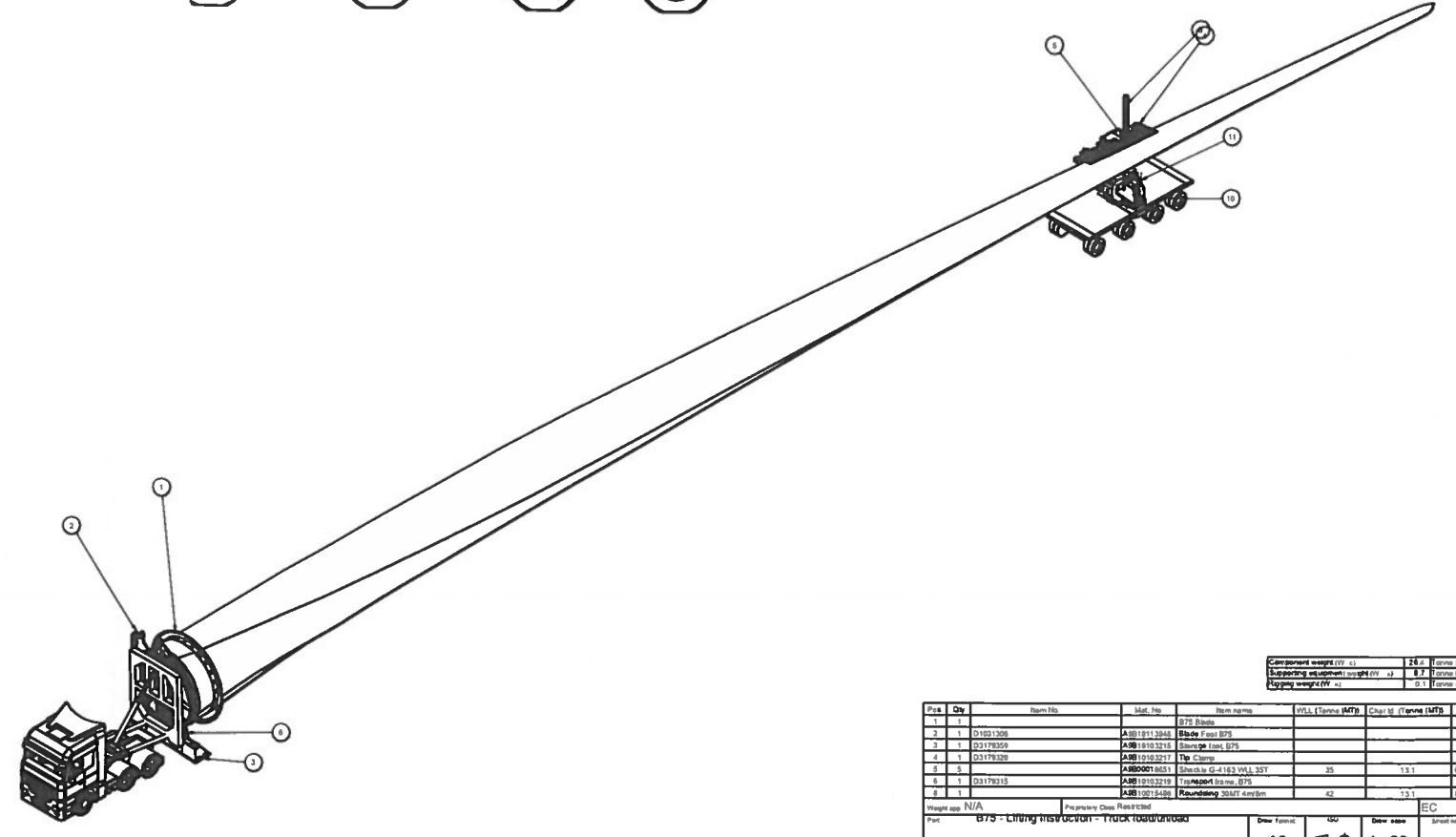
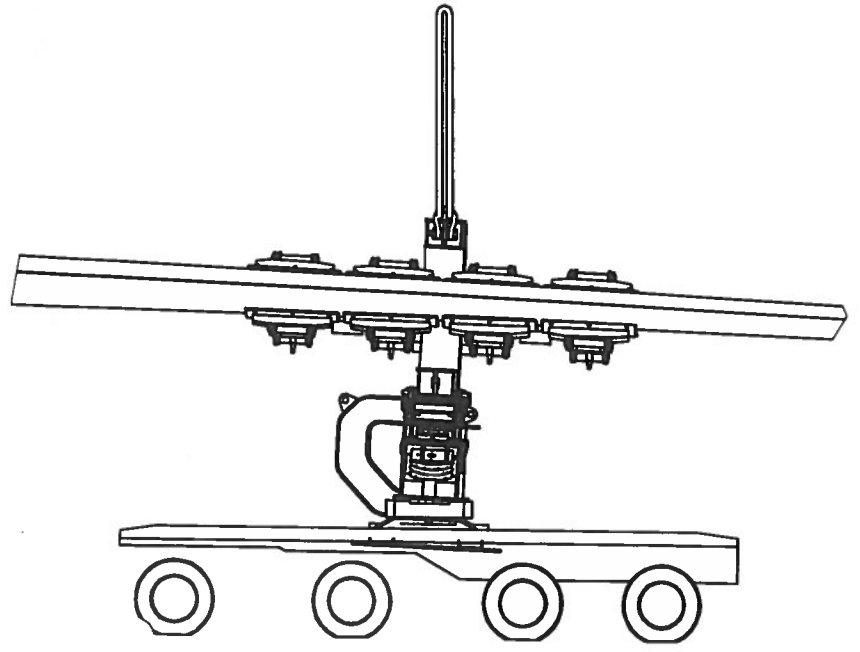
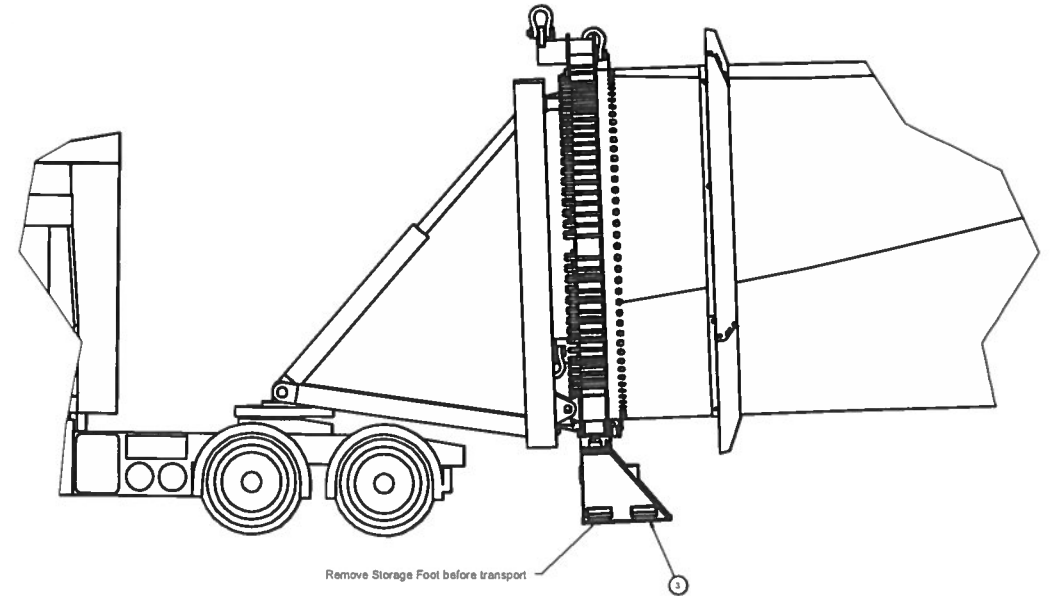
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

TRANSPORT ASSEMBLY
 Table
 Char. Id. (M3)
 Tip End 13.1



D (1:25)

E (1:25)



Component weight (kg)	28.7	Volume (m³)
Transporting equipment weight (kg)	8.7	Volume (m³)
Tipper weight (kg)	0.3	Volume (m³)

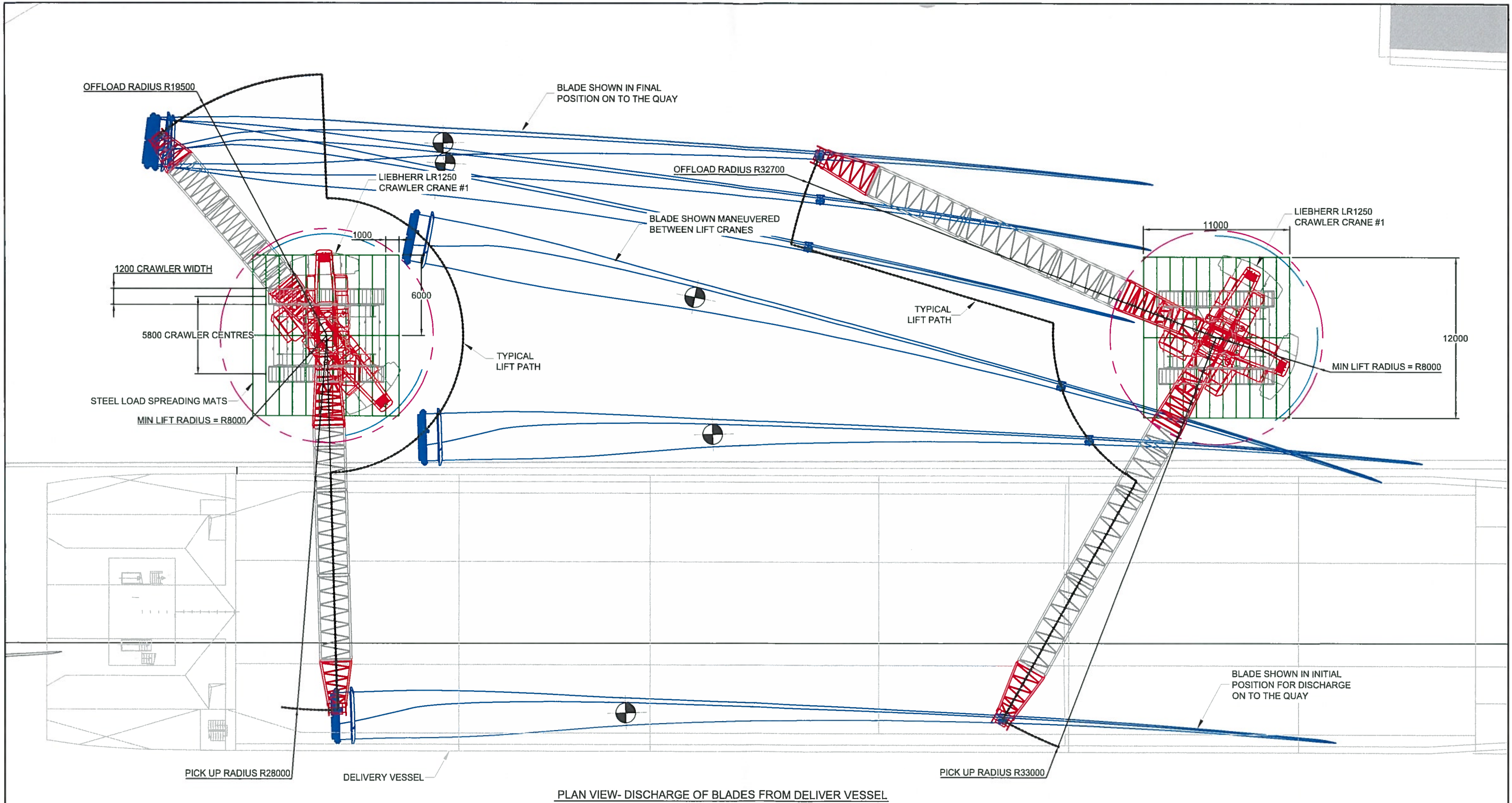
Pos.	Qty.	Item No.	Mat. No.	Item Name	Wt. (kg)	Cap. (m³)	Vol. (m³)
1	1	01801306	A0018113040	075 Blade			
2	1	01801306	A0018113040	Blade Foot B75			
3	1	02178309	A0018103215	Storage Foot B75			
4	1	02178309	A0018103217	Tip Clamp			
5	3	A000016001	0000014183.000.001	Roller	20	13.1	0.31
6	1	02178310	A0018103219	Transport Frame B75			
7	1	A0018015400	A0018015400	Rounding 35AT400mm	42	13.1	0.31

Weight use: N/A Proprietary Class Restricted

Part: B75 - Lifting Truck Unit - Truck Transport Draw Format: A0 Draw Scale: 1:20 Sheet no.: 2 / 2

SIEMENS 165172 002 03179310

16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1



PLAN VIEW- DISCHARGE OF BLADES FROM DELIVER VESSEL

DRAWING NOTES:

- ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED.
- ALL WEIGHTS ARE IN t (METRIC TONNES) UNLESS OTHERWISE STATED.
- ALL DETAILS ARE PROVISIONAL AND ARE SUBJECT TO CONFIRMATION.

TECHNICAL NOTES:

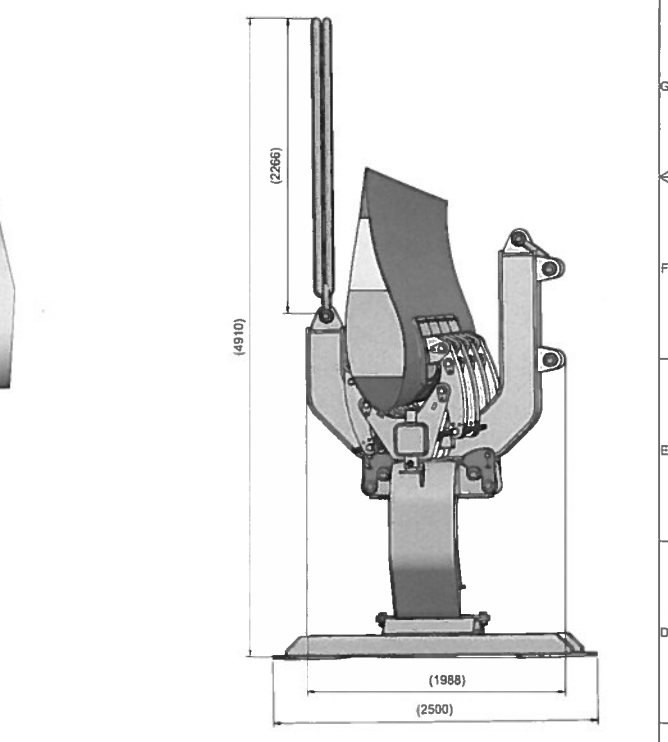
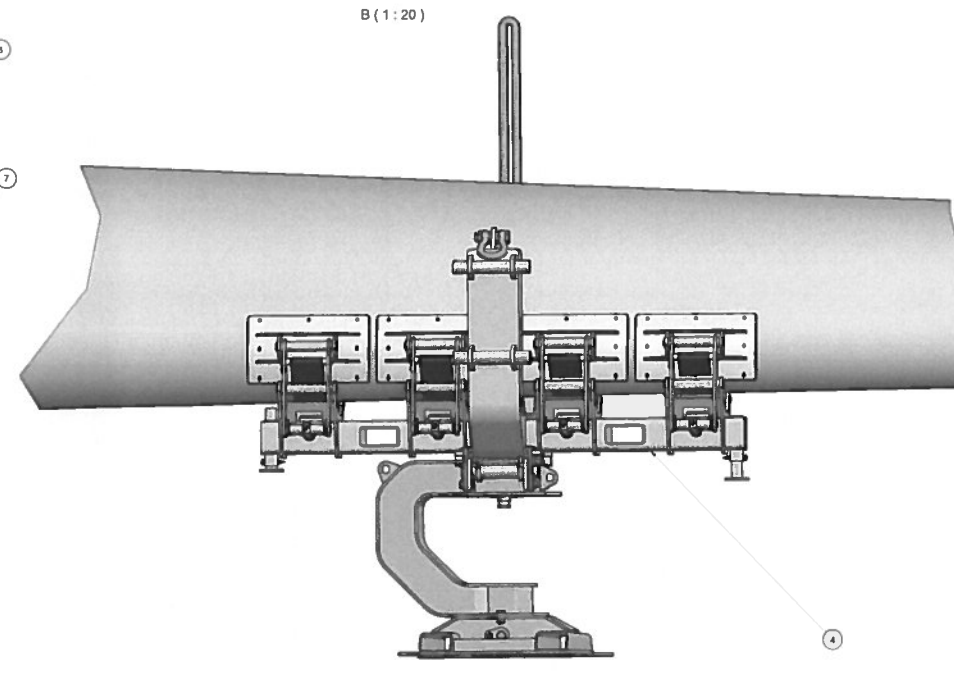
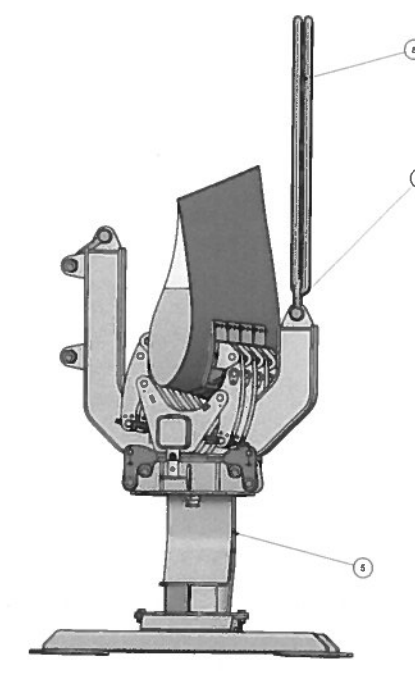
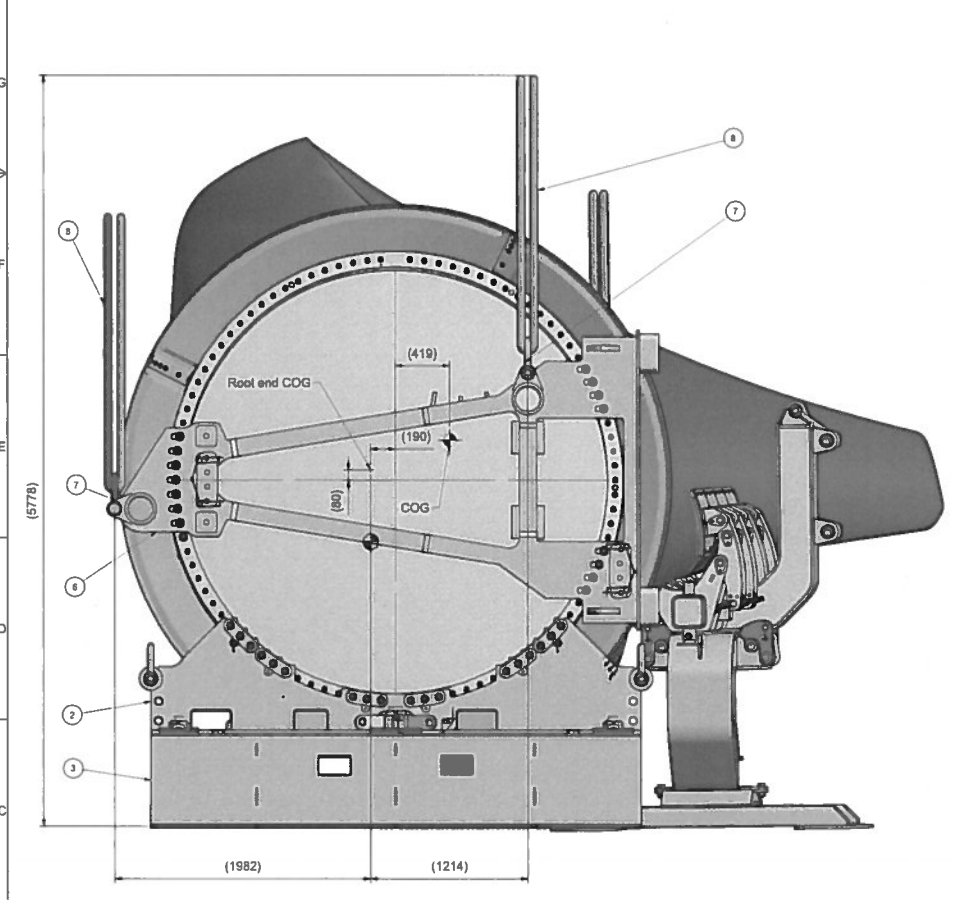
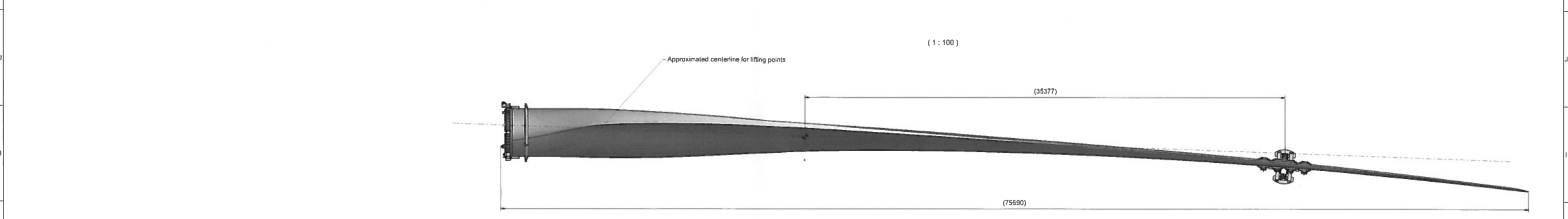
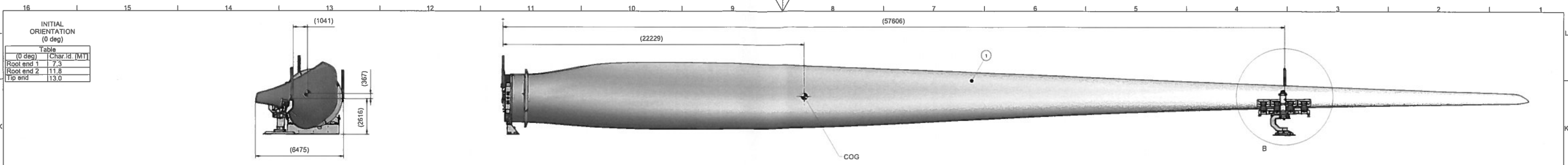
- LOAD SPREADING ASSUMPTIONS -
- STEEL LOAD SPREADING MATS SPREAD THE LOAD WITHOUT ENTIRE WIDTH OF 6.0m
- WOODEN LOAD SPREADING MATS SPREAD THE LOAD AT A 45° ANGLE. USING 300mm THICK MATS GIVES A TOTAL LOAD SPREADING AREA OF 1.628m.

GROUND BEARING PRESSURE NOTES:

LIEBHERR LR1250 CRANE #1 PRESSURES				
LIFT DESCRIPTION	RADIUS (m)	MAX. PRESSURE (t/m ²)	TIMBER MAT LOAD SPREADING (t/m ²)	STEEL MAT LOAD SPREADING (t/m ²)
INITIAL LIFT	33.0	41.0	30.2	8.2
FINAL LIFT	32.7	40.2	29.6	6.5

LIEBHERR LR1250 CRANE #2 PRESSURES				
LIFT DESCRIPTION	RADIUS (m)	MAX. PRESSURE (t/m ²)	TIMBER MAT LOAD SPREADING (t/m ²)	STEEL MAT LOAD SPREADING (t/m ²)
INITIAL LIFT	28.0	46.5	34.3	9.3
FINAL LIFT	19.5	23.0	17.0	4.6

CRANE SPECIFICATION		CRANE SPECIFICATION					
TANDEM LIFT CRANE		TANDEM LIFT CRANE					
LIEBHERR LR1250 CRANE #2 - WORST CASE	LIEBHERR LR1250 CRANE #1 - WORST CASE	A	03/03/2016	DF	GR	ADDITIONAL INFORMATION ADDED	
TRACK CENTRES 5.8 m	TRACK CENTRES 5.8 m	0	02/03/16	WJO	OLS	ISSUED FOR INFORMATION	
CENTRAL BALLAST 82.3 t	CENTRAL BALLAST 82.3 t	Rev.	Date	Drawn	Check	Description QF19 (Issue 5)	
CAR BODY C/W 36.0 t	CAR BODY C/W 36.0 t					Abnormal Load Engineering Ltd. New Road, Hixon, Staffordshire, ST18 0PE, U.K. Tel: +44 (0) 1889 272 500 Fax: +44 (0) 1889 271 750 Web: www.ale-heavylift.com	
MAIN BOOM 50.0 m	MAIN BOOM 50.0 m			Client		SIEMENS	
JIB @ N/A	JIB @ N/A			Project Title			
BACK MAST N/A m	BACK MAST N/A m			CFA FRAMEWORK AGREEMENT			
SUPERLIFT @ N/A	SUPERLIFT @ N/A			Drawing Title			
LIFT SPECIFICATION		LIFT SPECIFICATION		GENERAL LIFTING ARRANGEMENT FOR THE OFFLOADING OF WIND TURBINE BLADES USING 2 No. LIEBHERR LR1250 CRAWLER CRANES			
HOOK BLOCK 1.5 t	HOOK BLOCK 1.5 t			Date	Drawn	Checked	Scale (A1)
TACKLE 0.5 t	TACKLE 0.5 t			02/03/16	WJO	OLS	N.T.S
LOAD 18.0 t	LOAD 12.0 t			Project No.		Sheet	
TOTAL LOAD 20.0 t	TOTAL LOAD 14.0 t			AA0971		1 of 1	
RADIUS 28.0 m	RADIUS 33.0 m			Drawing No.		Rev.	
CAPACITY 26.8 t	CAPACITY 20.9 t			AA0971-001-0		A	
% CHART CAPACITY 74.6 %	% CHART CAPACITY 67.0 %						



INITIAL ORIENTATION (0 deg)

Table	Char. Id. (MT)
(0 deg)	7.3
Root end 1	11.8
Root end 2	13.0

Component weight (W _c)	26.4	(Tonne (MT))
Supporting equipment weight (W _s)	1.7	(Tonne (MT))
Rigging weight (W _r)	0.2	(Tonne (MT))

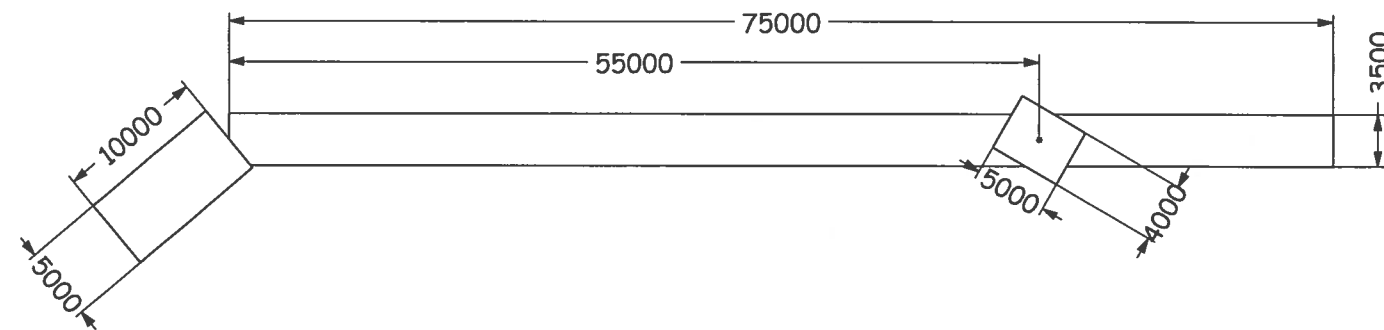
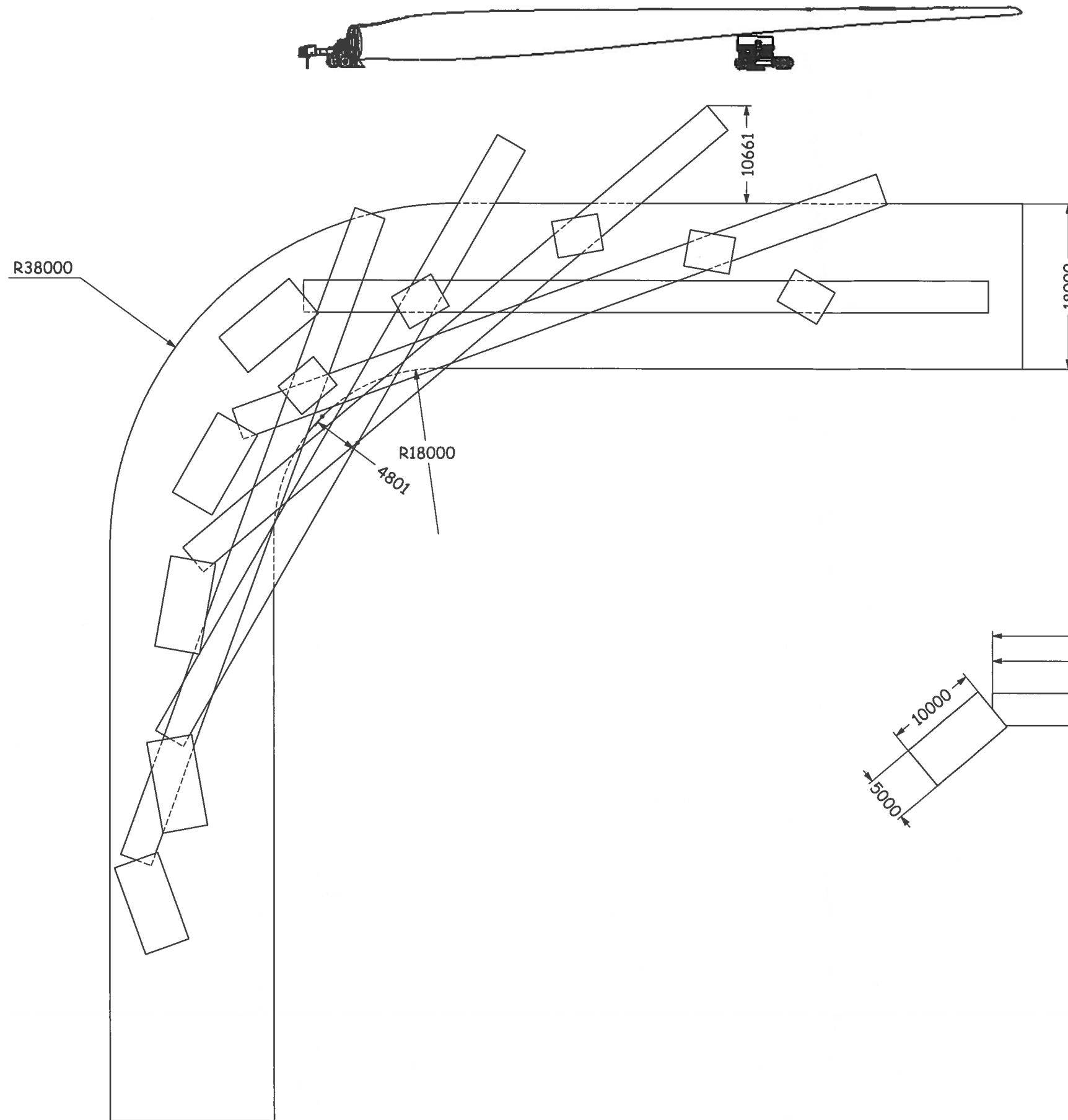
Pos.	Qty.	Item No.	Mat. No.	Item name	Wt. (Tonne (MT))	Char. Id. (Tonne (MT))	UoM
1	1			B75 Blade			
2	1	D1031308	A9810113948	Blade Foot B75			
3	1	D3179339	A9810103215	Storage foot, B75			
4	1	D3179320	A9810103217	Tip Clamp			
5	1	D3179356	A9810103218	Tip support, B75			
6	1	D3179315	A9810103219	Transition frame, B75			
7	8	A9800018651		Shackle G-183 WLL 35T	35	13.6	0.39
8	3	A9810015498		Roundsling 30MT 4m/8m	60	13.6	0.23

Weight app: N/A Proprietary Class Restricted

Part: B75 - Lifting Instruction - rotation Draw. format: ISO Draw. scale: 1:20 Sheet no: 1/2

Siemens Wind Power A/S ECH no: 143341 Revision: 001

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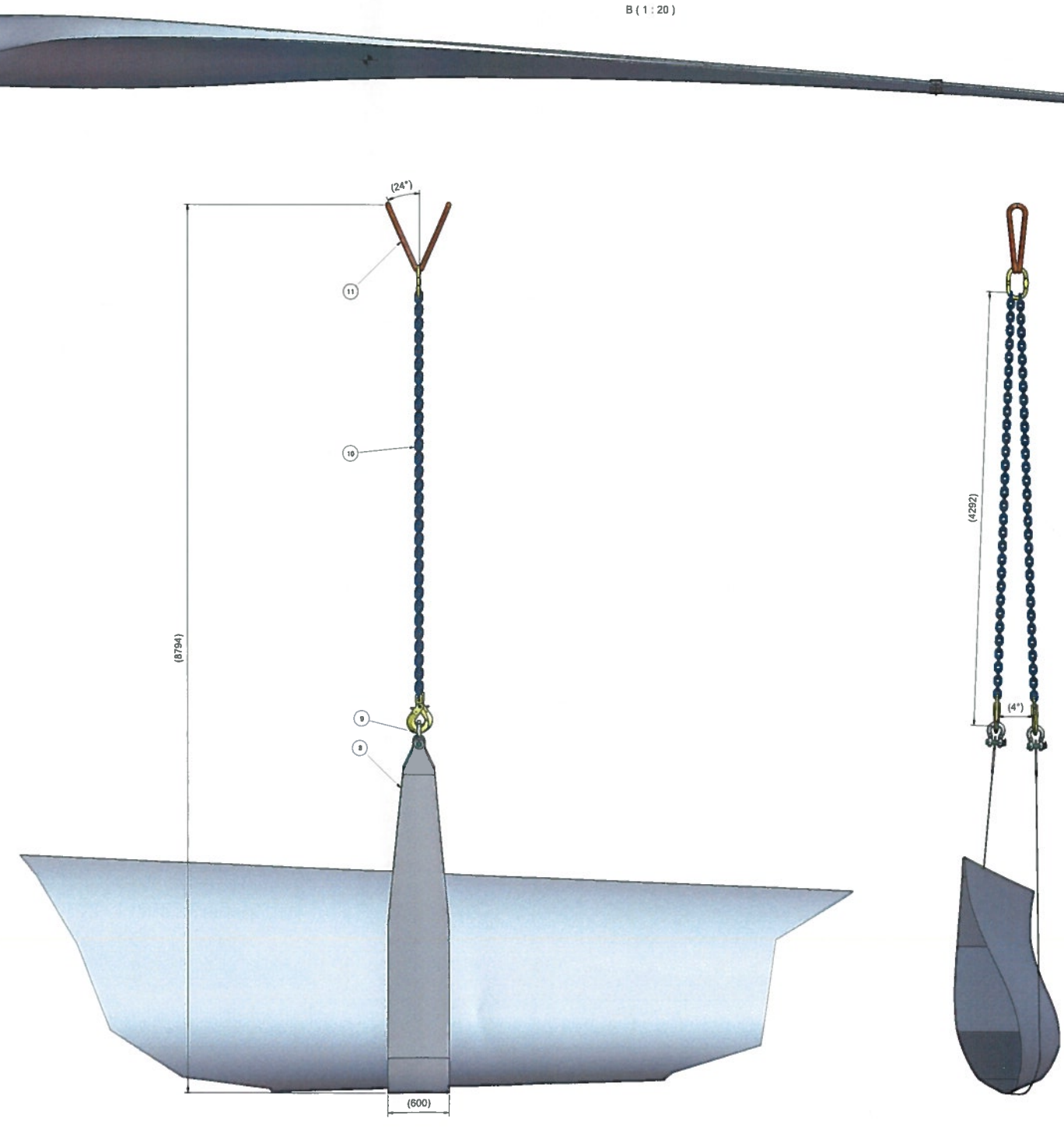
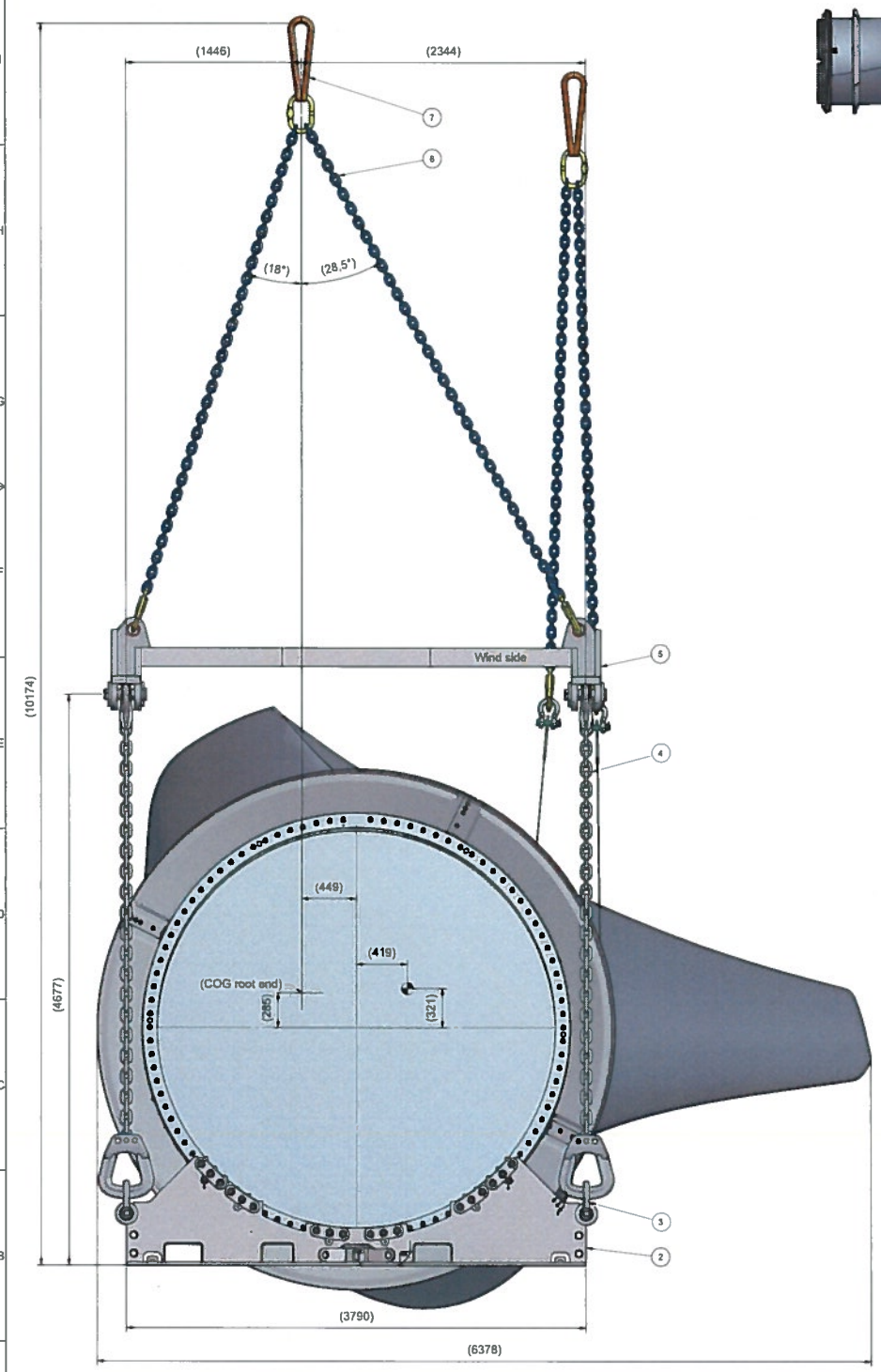
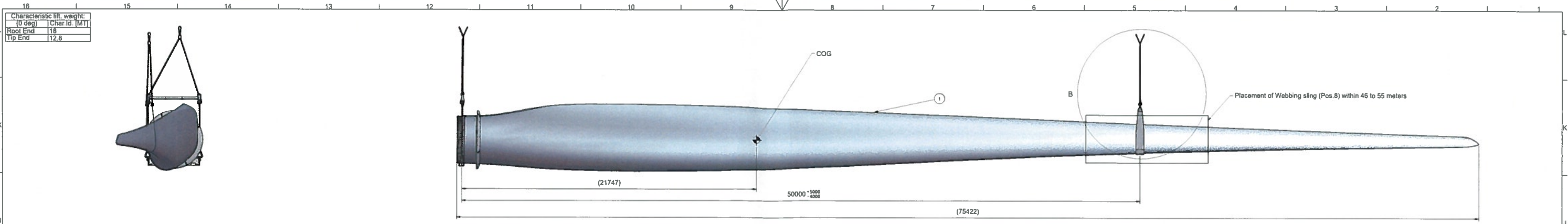
Blaaholm A/S

Limfjordsvej 13 DK-6715 Esbjerg Tel.: +45 7519 5427
E-mail: blaaholm@blaaholm.com Website: www.blaaholm.com



Linear tolerance	0-10 ± 0.1	10-50 ± 0.2	50-500 ± 0.5	500-1000 ± 0.8	1000- ± 1
Angular tolerances		0-50 $\pm 0.5^\circ$	50-500 $\pm 0.3^\circ$	500-1000 $\pm 0.1^\circ$	1000- $\pm 0.05^\circ$

Description					
Type/Number					
Machining					
Technical Specification					
Surface treatment	Colour				Constructor: sk
Created	12. juni 2014 11:44:51	Updated			12. juni 2014 13:00:55
Material	Thickness	mm	Weight	26171780.4 Kg	
A3	Sheet : 1 of 1	SCALE 1:500	Drawing Nr.	Assem1	



Note 1 All dimensions are in mm.
 Note 2 In case of conflict between requirements of 2d-drawing and any received reference 3d file or DXF file, then the requirements on the 2d-drawing shall prevail.

Max allowed windspeed during lifting: 14 m/s
 Min Design Temp.: -20°C/-4°F

Pos.	Qty.	Item No.	Mat. No.	Item name	WLL (Tonne (MT))	Char. Id. (Tonne (MT))	LSI
1	1			B75 Blade	24	24	0.7
2	1	D3179321	A9810153213	Blade Foot B75	24	17	0.7
3	2	A9800018551		Shackle G-4163 WLL 35T	35	19.6	0.3
4	2	A9810116258		Chain sling WLL=18MT 3 Am w. AW28	19	19.6	0.6
5	1	D3179309	A9810153220	Lifting Beam, root end, B75	30	17.6	0.6
6	1	A9810116237		2-leg chain WLL=28 SMT leg L=4.9 short	37.5	18	0.5
7	1	A9800018729		Roundsling 25mt, 1.5m/3m	48	18.1	0.5
8	1	A9810221863		Webbing sling 427.5, 15m/3m/15m UAN	43	12.8	0.3
9	2	A9800018652		Shackle G-4163 WLL 25T	25	8.4	0.3
10	1	A980003609		2-String chain sling 201.5m Av. shorter	20	12.8	0.6
11	1	A9800018908		Roundsling 15mt, 1.5m/3m	15	12.8	0.4

Blade data	
Column 1	Column 2
W/mm	B75
Weight Blade [kg]	21747
Total weight [kg]	26448

Weight use: Primary Crane Restricted

B75 Lifting Instruction Load out

Draw. format: B0

Draw. scale: 1:100

Sheet no.: 1/1

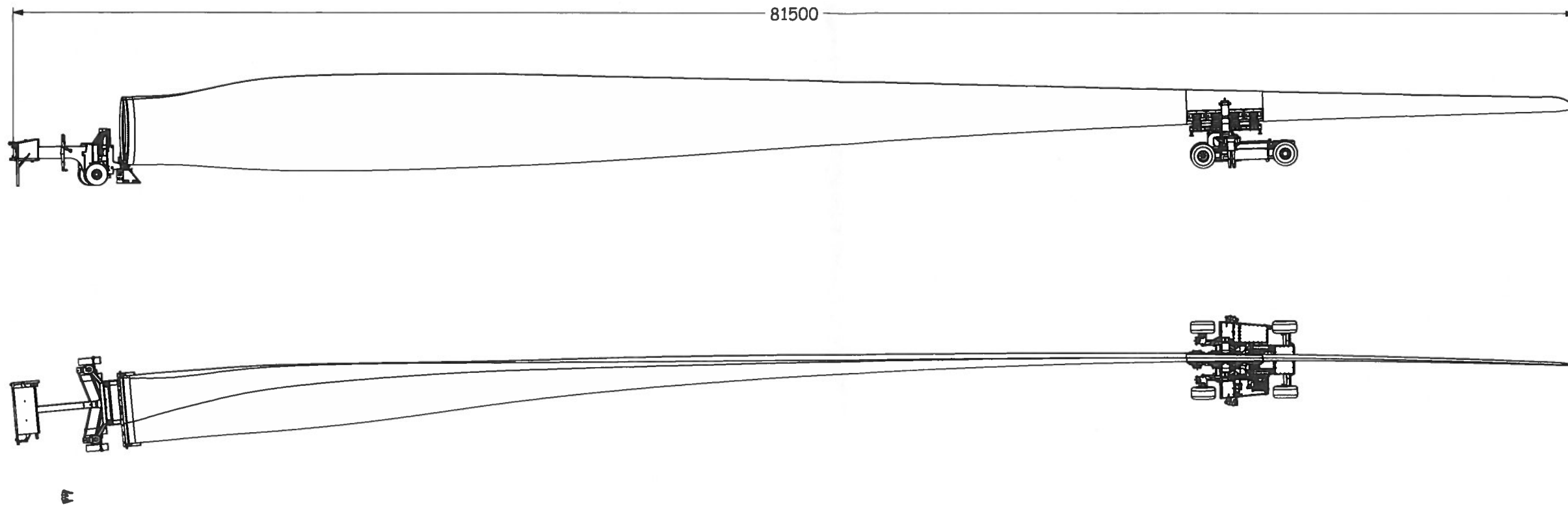
ESN no.: 143418

Revision: 001

EC

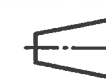
SIEMENS

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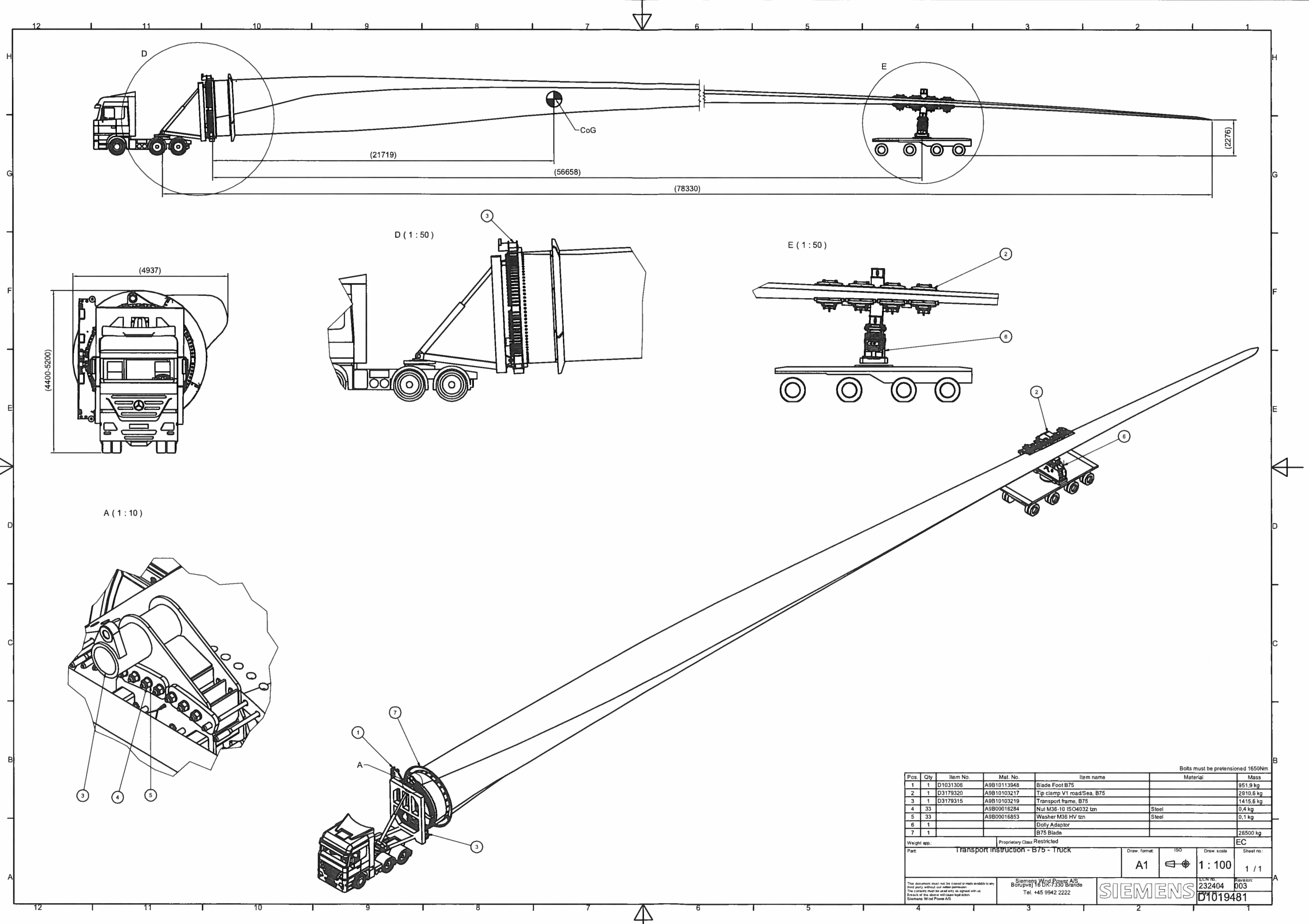
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Linear tolerance	0-10 ± 0.1	10-50 ± 0.2	50-500 ± 0.5	500-1000 ± 0.8	1000- ± 1
Angular tolerances		0-50 ± 0.5°	50-500 ± 0.3°	500-1000 ± 0.1°	1000- ± 0.05°

Description					
Type/Number					
Machining					
Technical Specification					
Surface treatment			Colour		Constructor: sk
Created	25. februar 2014 09:02:12			Updated 26. oktober 2015 09:57:28	
Material			Thickness	mm	Weight 2208431.1 Kg
A3	Sheet : 2 of 2	SCALE 1:250	Drawing Nr.	wing assembly	



Bolts must be pretensioned 1650Nm

Pos.	Qty	Item No.	Mat. No.	Item name	Material	Mass
1	1	D1031306	A9B10113948	Blade Foot B75		951.9 kg
2	1	D3179320	A9B10103217	Tip clamp V1 road/Sea, B75		2910.6 kg
3	1	D3179315	A9B10103219	Transport frame, B75		1415.6 kg
4	33	A9B00016284		Nut M36-10 ISO4032 tzn	Steel	0.4 kg
5	33	A9B00016853		Washer M36 HV tzn	Steel	0.1 kg
6	1			Dolly Adaptor		
7	1			B75 Blade		26500 kg

Weight app.: Proprietary Class Restricted EC

Part: Transport instruction - B75 - Truck

Draw. format: ISO Draw. scale: 1:100 Sheet no.: 1/1

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 D1019481