

A

B

C

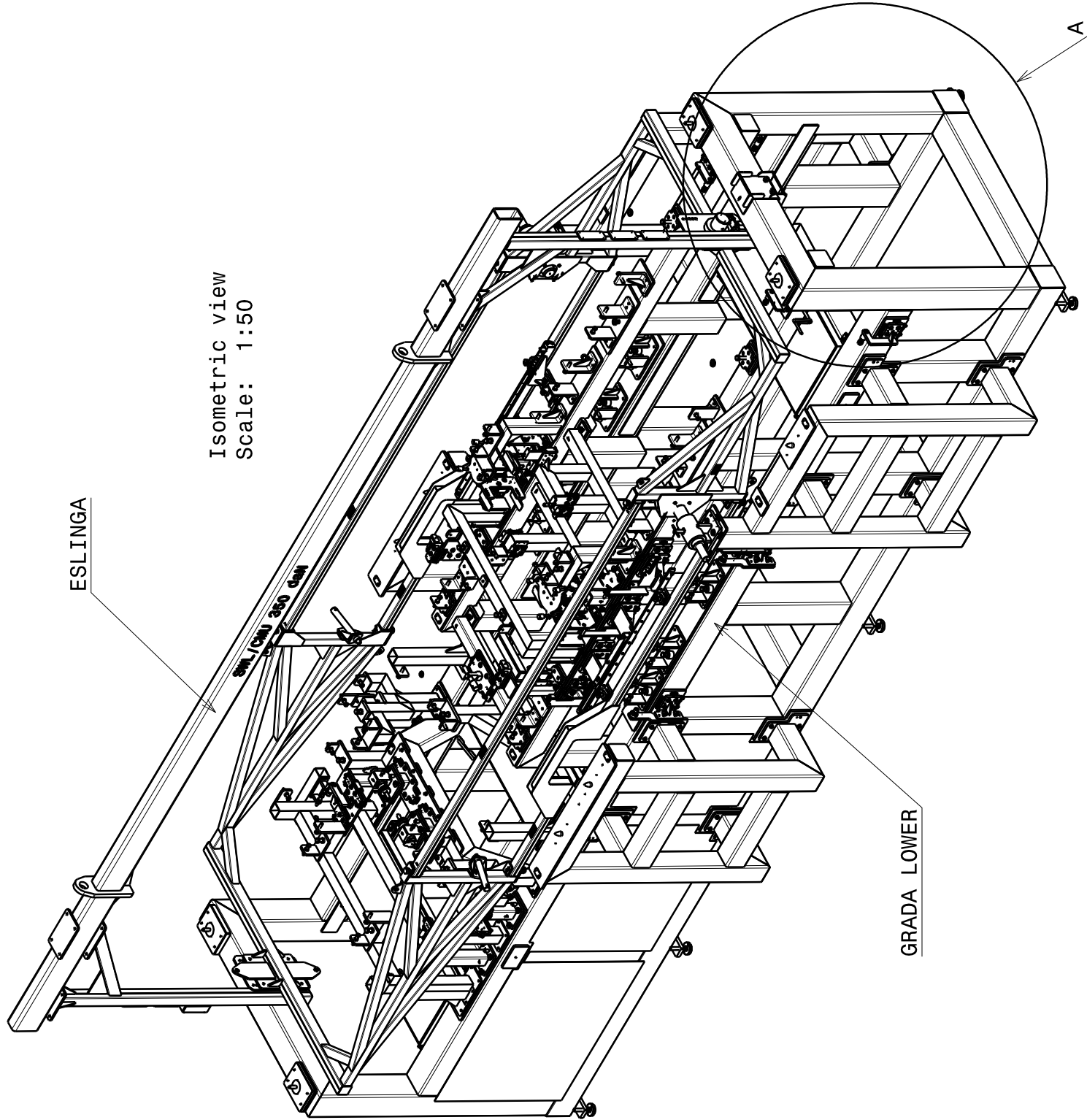
D

4

3

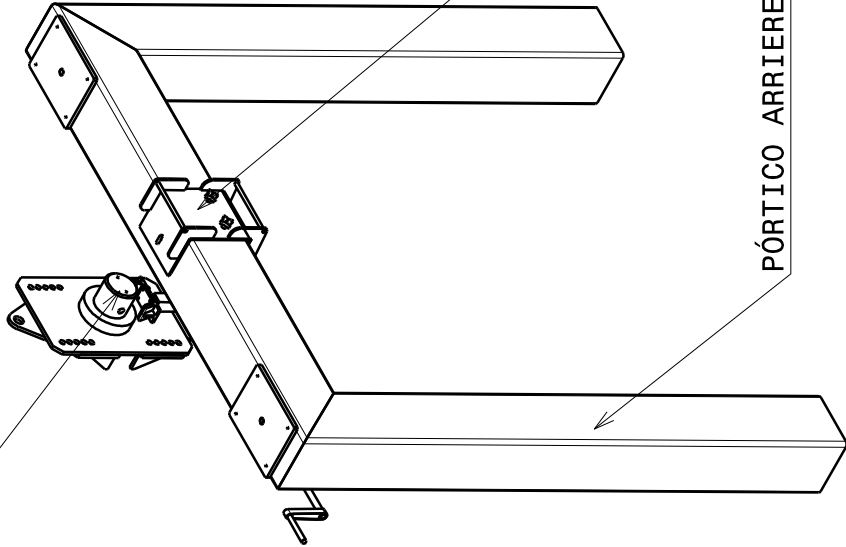
2

1



Isometric view
Scale: 1:50

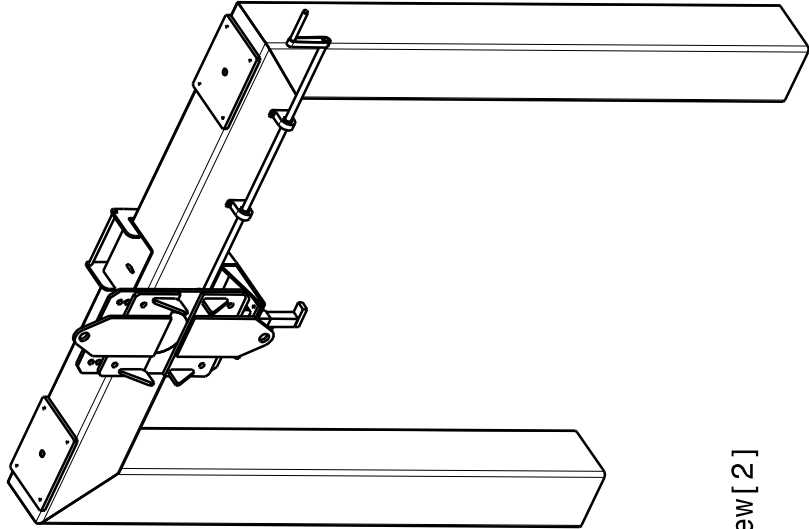
EJE ARRIERE ESLINGA



Detail A
Isometric view
Scale: 1:30

ÚTIL DE IZADO

PÓRTICO ARRIERE GRADA LOWER



Detail A
Isometric view[2]
Scale: 1:30

GRADA LOWER

A

A

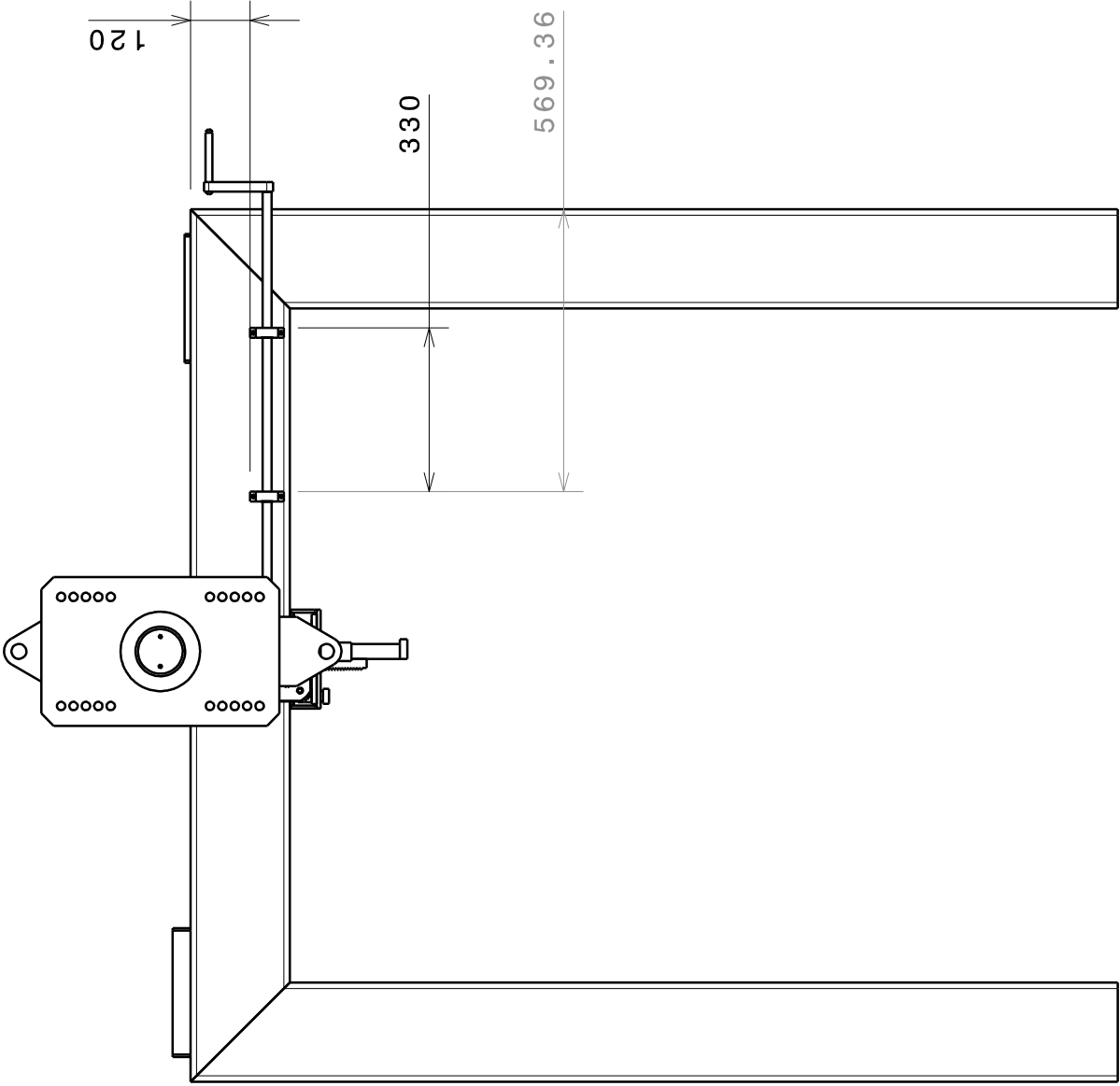
D

DESIGNED BY: J_Santos		I	—
DATE: 05/08/2014		H	—
CHECKED BY: J_Santos		G	—
DATE: 06/08/2014		F	—
SIZE A3		E	—
SCALE 1:1		D	—
WEIGHT (kg) -		C	—
DISEÑO Y ANALISIS DE MEJORA DE UTILLAJE AERONÁUTICO PARA EL MONTAJE DEL LOWER DE UN HELICOPTERO		B	—
This drawing is our property; it can't be reproduced or communicated without our written agreement.		A	—

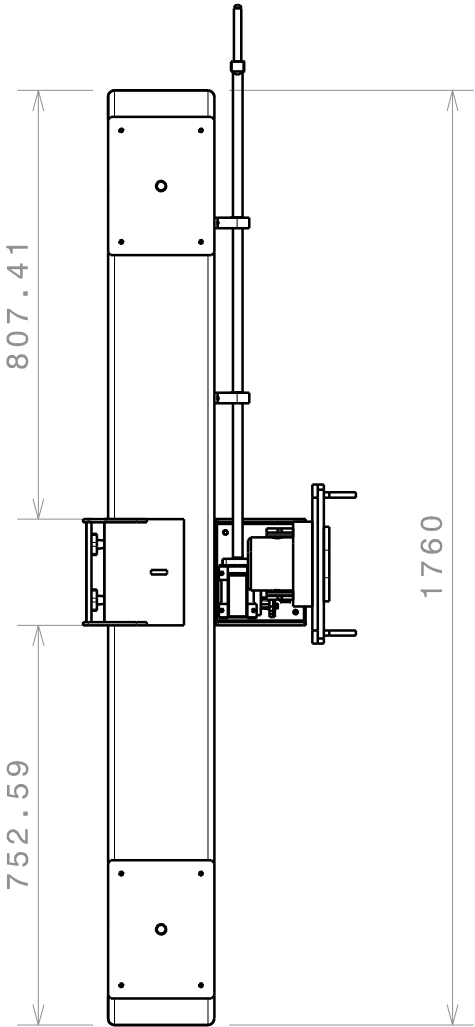
MONTAJE EN GRADA LOWER. VISTA
ISOMÉTRICA

SHEET

1/15



Front view
Scale: 1:20



Top view
Scale: 1:20

DESIGNED BY: J_Santos		MONTAJE EN GRADA LOWER. ALZADO Y PLANTA		I	—
DATE: 05/08/2014	CHECKED BY: J_Santos			H	—
				G	—
				F	—
DATE: 06/08/2014				E	—
SIZE A3				D	—
SCALE 1:1	WEIGHT (kg) -			C	—
				B	—
				A	—
				This drawing is our property; it can't be reproduced or communicated without our written agreement.	

DISEÑO Y ANALISIS DE MEJORA DE UTILLAJE AERONÁUTICO PARA EL MONTAJE DEL LOWER DE UN HELICOPTERO

SHEET
2/15

A

B

C

D

4

3

2

1

A

D

4

3

2

1

4

3

2

1

4

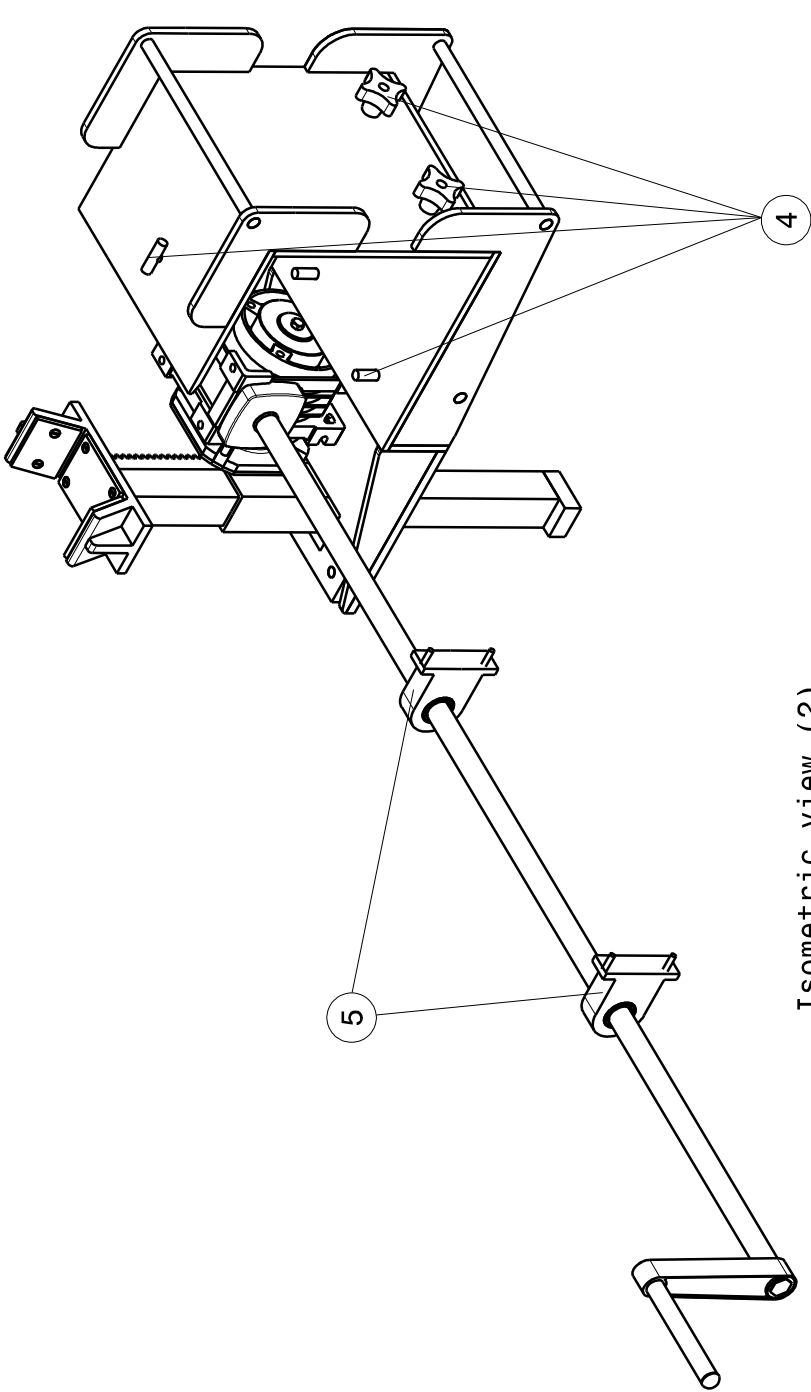
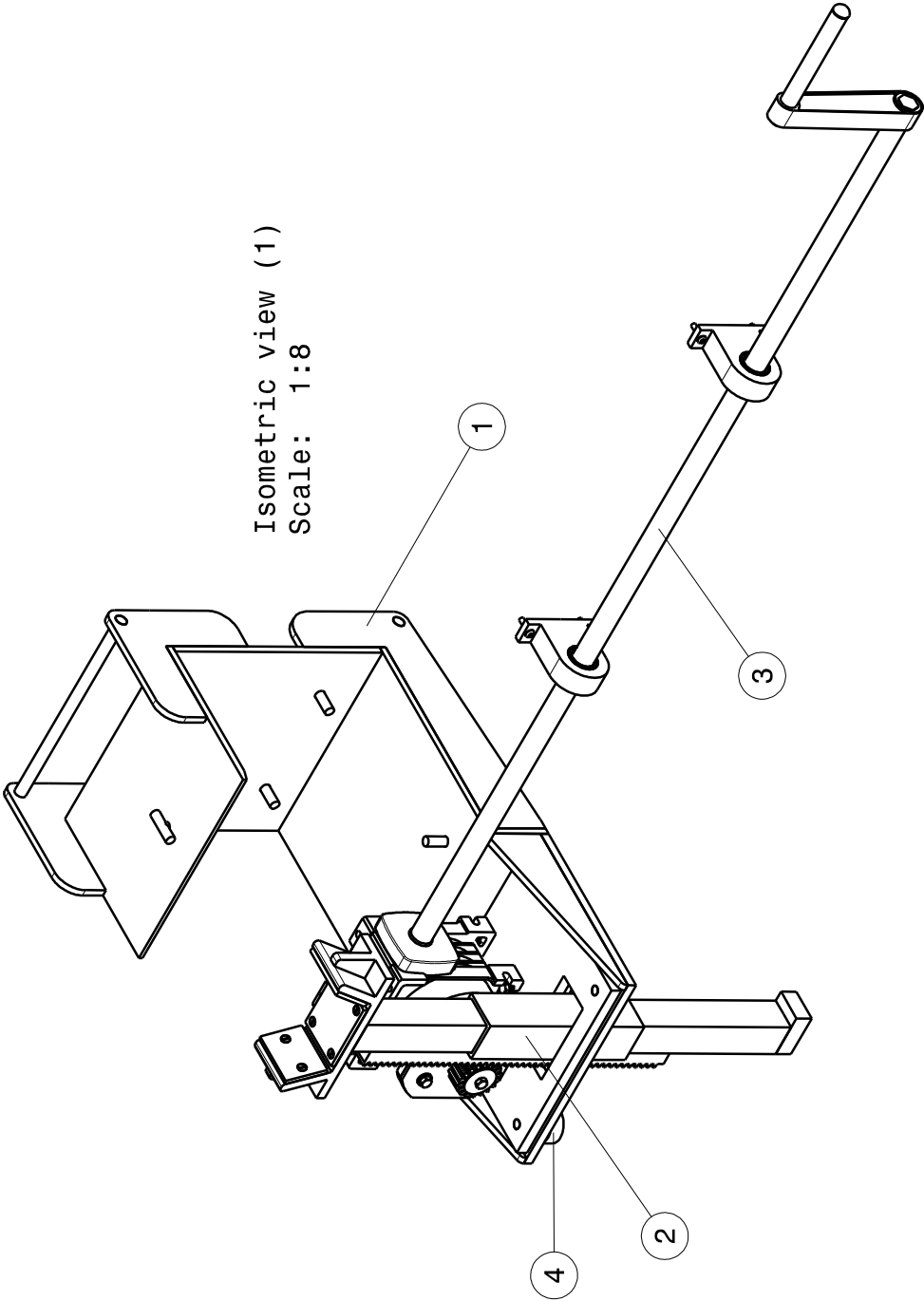
3

2

1

NOTAS GENERALES:

1. TOLERANCIAS GENERALES ISO 2768mk
2. ELIMINAR TODAS LAS ARISTAS VIVAS MEDIANTE CHAFLÁN O RADIO (0.2 A 0.5mm) .
3. RUGOSIDAD GENERAL DE MECANIZADO: 3.2
4. TEMPLE Y REVENIDO.
5. UNIONES SOLDADAS MEDIANTE ARCO ELÉCTRICO USANDO ELECTRODO DE RUTILO DE Ø2.5 (NORMA ASME) .
6. NO PINTAR SUPERFICIES, CARAS Y ÁREAS FUNCIONALES.
7. PREPARACIÓN SUPERFICIAL: SANDING SA 2.5
CAPA PRIMARIA DE 80μ DE EPOXI GRIS.
CAPA DE ACABADO DE 40μ DE GLOSSED POLYURETHANE.
8. PINTURA: RAL 9004.
9. PINTURA: FRANJAS DE 40mm A 45º INTERCALANDO RAL 1003 Y RAL 9004.



⑤	1	GUÍAS MANIVELA	15
④	1	ELEMENTOS DE FIJACIÓN	14
③	1	CONJUNTO MANIVELA	12
②	1	MECANISMO DE IZADO	6
①	1	SOPORTE ESTRUCTURAL	4
SUB.	QTY.	DESIGNACIÓN	MATERIAL
DESIGNED BY:	J_Santos	ÚTIL DE IZADO DE ESLINGA ARRIERE. VISTA ISOMÉTRICA	
DATE:	05/08/2014		
CHECKED BY:	J_Santos		
DATE:	06/08/2014		
SIZE	A3		
SCALE	1:1	WEIGHT (kg)	
		DISEÑO Y ANÁLISIS DE MEJORA DE UTILLAJE AERONÁUTICO PARA EL MONTAJE DEL LOWER DE UN HELICOPTERO	SHEET 3/15
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D

A

4

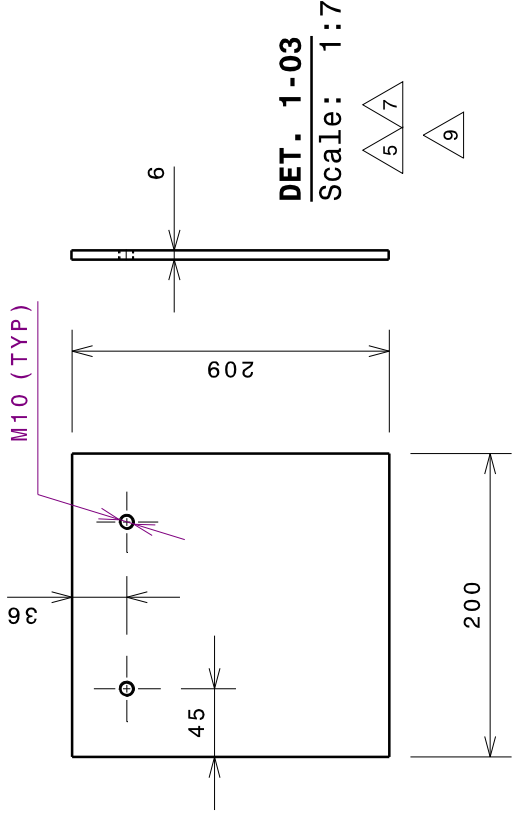
D

C

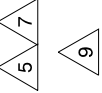
B

A

M10 (TYP)

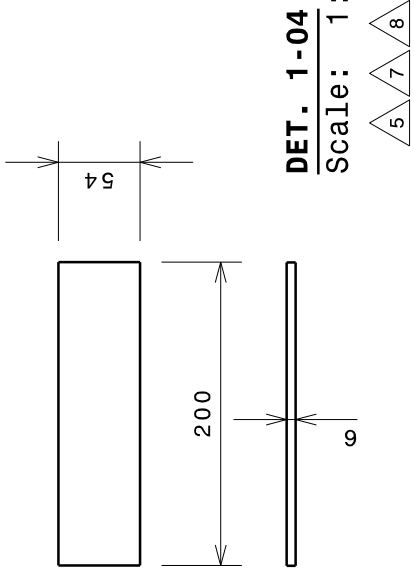


DET. 1-03
Scale: 1:7



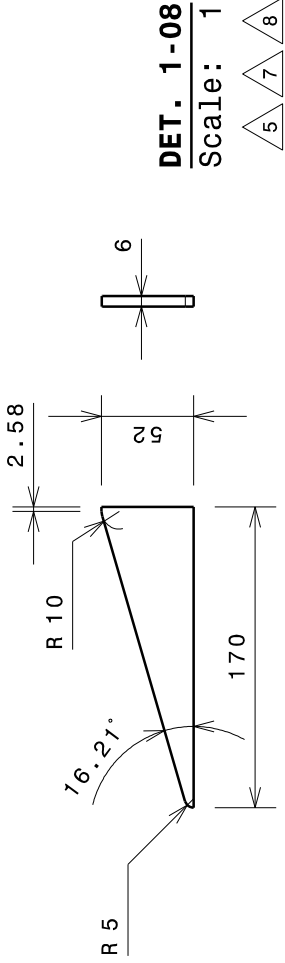
4

DET. 1-04
Scale: 1:7



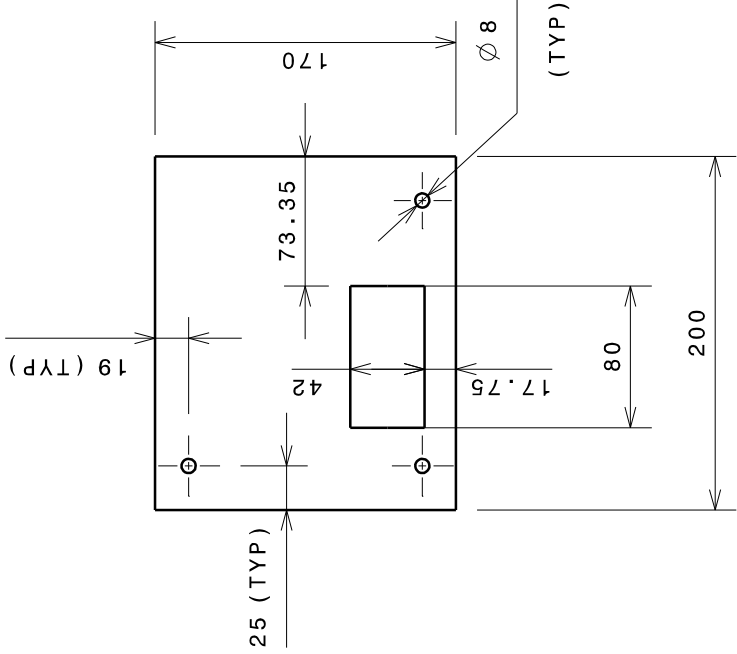
4

DET. 1-08
Scale: 1:6

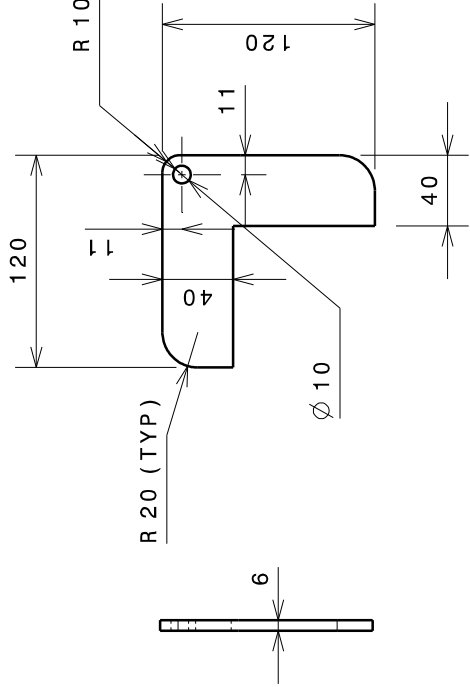


3

19 (TYP)



DET. 1-05
Scale: 1:6

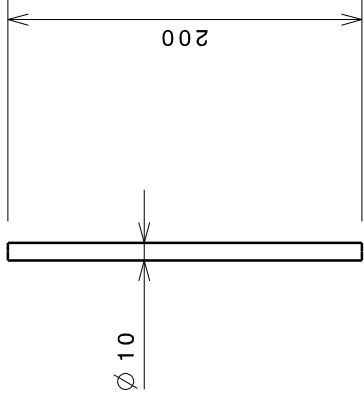


DET. 1-06
Scale: 1:6



3

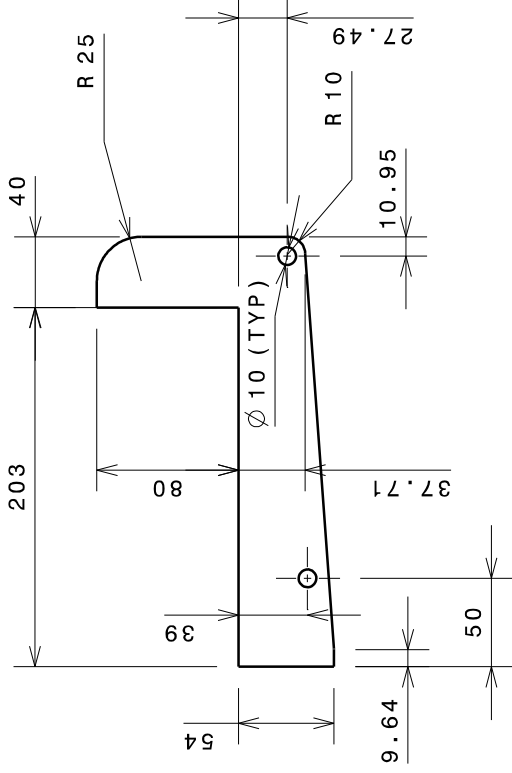
Ø 10



DET. 1-09
Scale: 1:6



2



DET. 1-07
Scale: 1:6



1

D

C

B

A

①		SOPORTE ESTRUCTURAL	
SUB.		DESIGNACIÓN	
DESIGNED BY: J_Santos		SOPORTE ESTRUCTURAL. DETALLES 1-03 A 1-09	
DATE: 05/08/2014			
CHECKED BY: J_Santos			
DATE: 06/08/2014			
SIZE A3			
SCALE 1:1		DISEÑO Y ANÁLISIS DE MEJORA DE UTILLAJE AERONÁUTICO PARA EL MONTAJE DEL LOWER DE UN HELICÓPTERO	
		SHEET 5/15	
		A	
		I	
		H	
		G	
		F	
		E	
		D	
		C	
		B	
		A	

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This drawing is our property; it can't be reproduced or communicated without our written agreement.

A

m

C

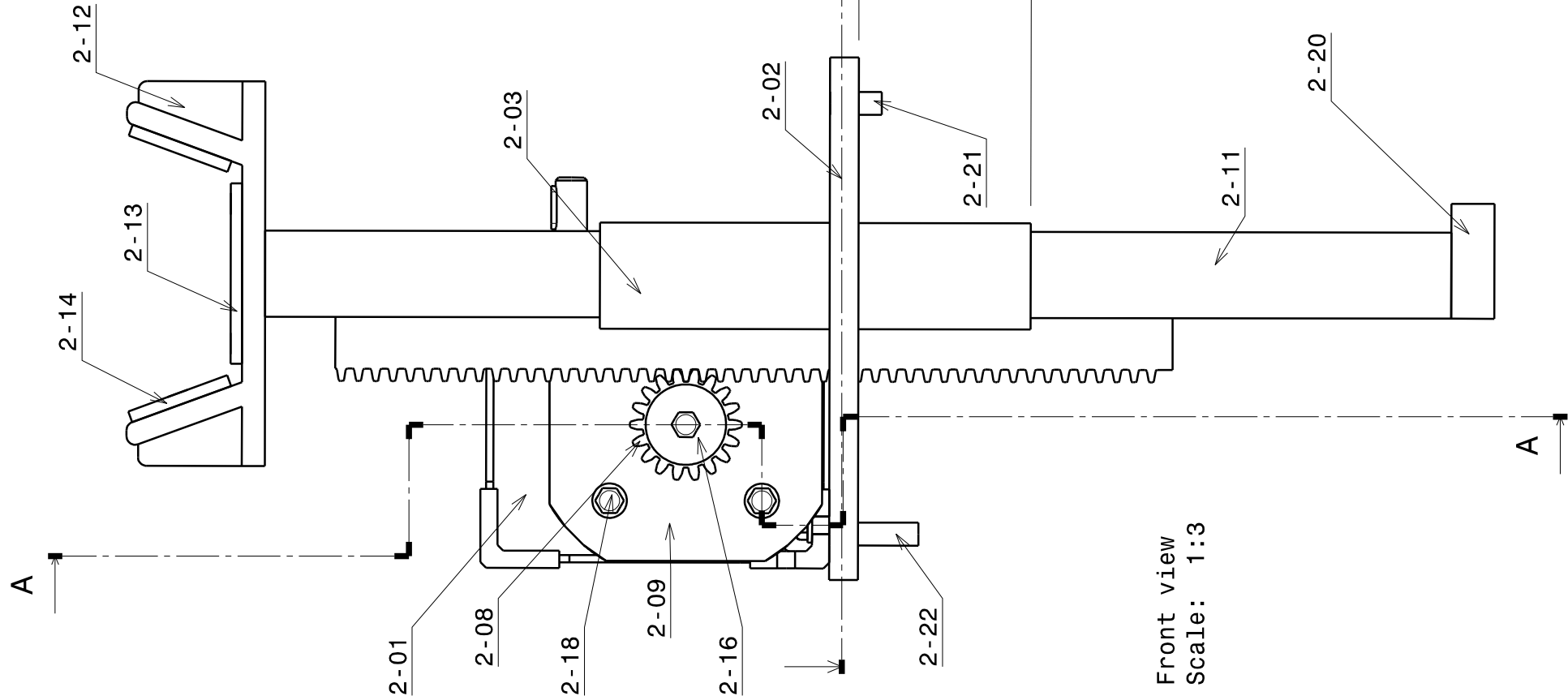
D

4

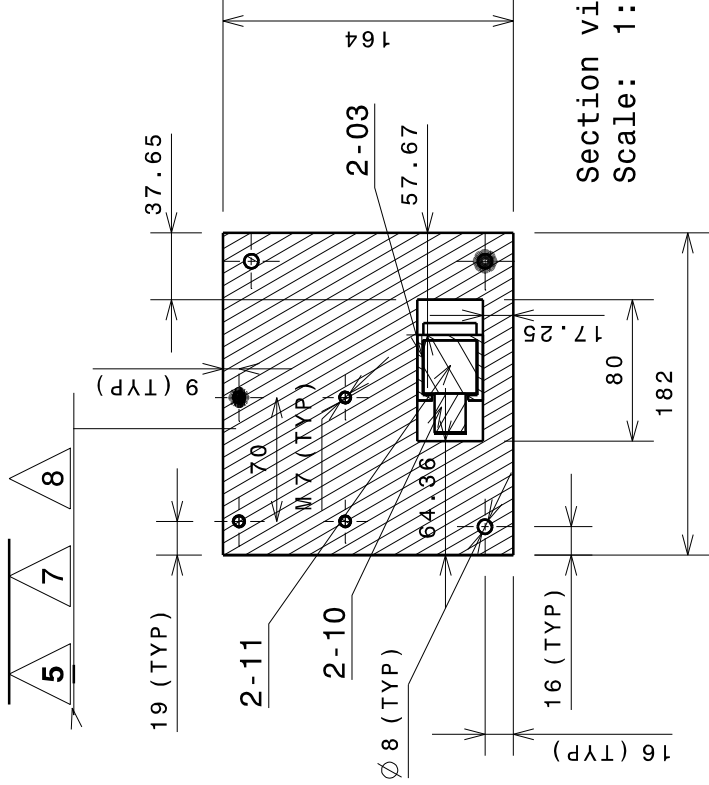
3

2

1



DET. 2-02



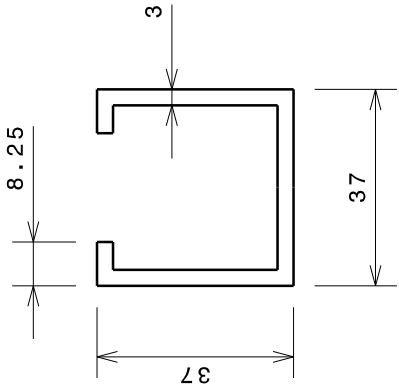
2-23	1	TOPE EJE 2-3 Ø25 X 9	F-0222-T90	7
2-22	1	FIJA ROSCADA Ø8 x 35	F-0222-T90	9
2-21	2	FIJA Ø8 x 20	F-0222-T90	9
2-20	1	TOPE CREMALLERA 40 x 15	F-0222-T90	9
2-19	8	TORNILLO NLM 07175-104x10		11
2-18	4	TORNILLO DIN 933 M6 x 44		6
2-17	8	ARANDELA NLM 07300-106		6
2-16	2	ARANDELA Ø30 x 2	ACERO INOXIDABLE	9
2-15	6	TORNILLO DIN 933 M6 x 17		6
2-14	2	PLACA LATERAL 50 x 4	TEFLÓN	6
2-13	1	PLACA BASE 65 x 4	TEFLÓN	6
2-12	1	SOPORTE "U"	F-0222-T90	11
2-11	1	BASE CREMALLERA 420 x 30	F-0222-T90	9
2-10	1	CREMALLERA 300 x 20	F-0222-T90	10
2-09	1	PROTECTOR CAJA REDUCTORA 100 x 3	L-3321-H111	9
2-08	1	PIÑÓN Ø40 x 20	F-1540-TZ	8
2-07	1	RODAMIENTO CÓNICO SKF d18 D24.5 T24		6
2-06	1	CHAVETA EXTERIOR 15 x 4	F-114-T80	7
2-05	1	CHAVETA INTERIOR 72 x 8	F-114-T80	7
2-04	1	EJE 2-3 Ø18 x 150	AISI 4140	7
2-03	1	GUÍA CREMALLERA 250 x 3	F-0222-T90	7
2-02	1	BASE MECANISMO 200 x 10	F-114-T80	6
2-01	1	REDUCTOR STM UNIVERSAL UI-40-FA		6
DET.	QTY.	DESIGNACIÓN	MATERIAL	HOJA
②		MECANISMO IZADO		
SUB.		DESIGNACIÓN		
DESIGNED BY: J_Santos		MECANISMO DE IZADO. VISTA GENERAL DEL CONJUNTO Y DETALLE 2-02		
DATE: 05/08/2014				
CHECKED BY: J_Santos				
DATE: 06/08/2014				
SIZE A3				
SCALE 1:1	WEIGHT (kg) -	DISEÑO Y ANÁLISIS DE MEJORA DE UTILAJE AERONÁUTICO PARA EL MONTAJE DEL LOWER DE UN HELICOPTERO		SHEET 6/15
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A

D

4

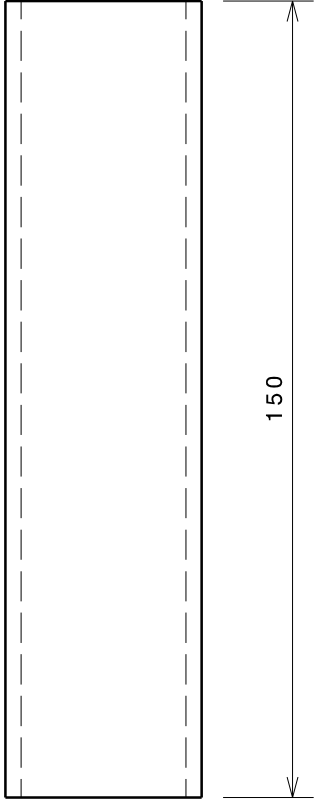
D



DET. 2-03
Scale: 1:2



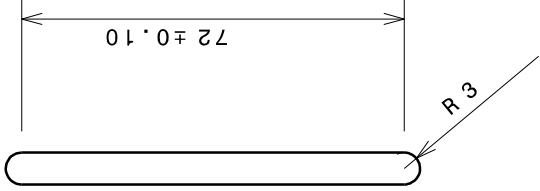
C



DET. 2-04
Scale: 1:2



B

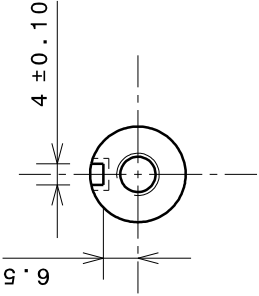
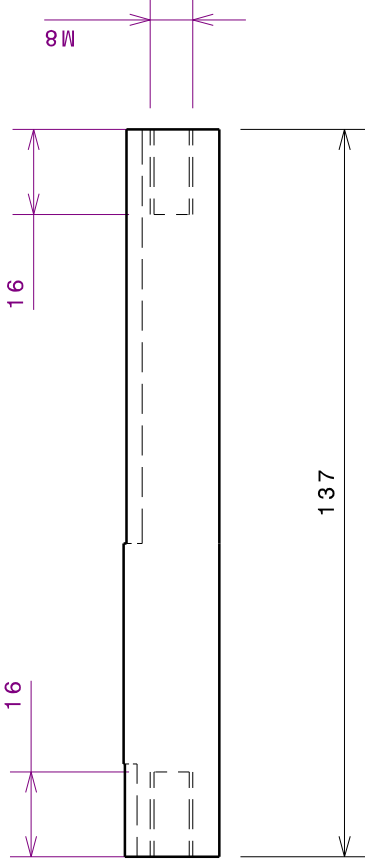
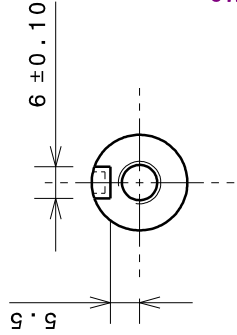
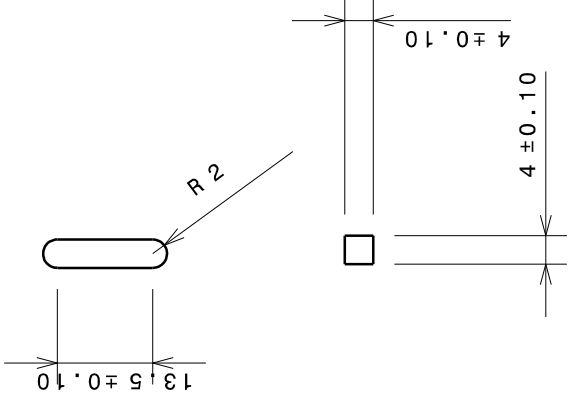


DET. 2-05
Scale: 1:2



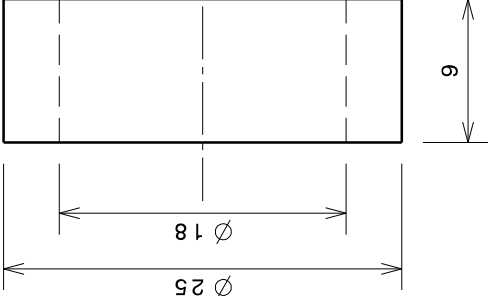
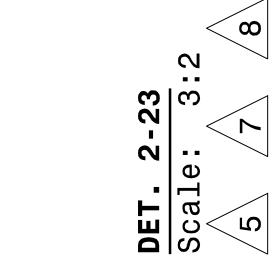
DET. 2-06
Scale: 2:3

A



2

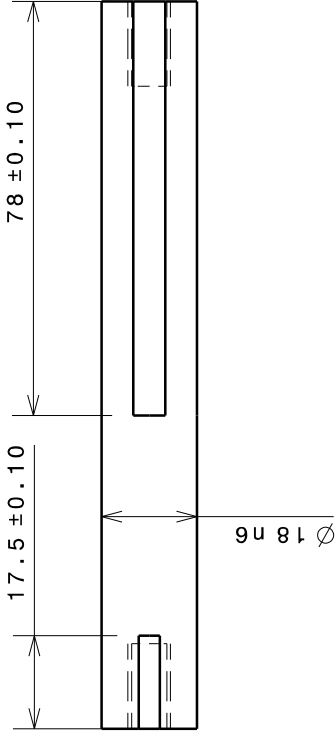
DET. 2-23
Scale: 3:2



2

1

D



DET. 2-04
Scale: 1:2



②	MECANISMO IZADO	
SUB.	SIGNIFICACIÓN	
DESIGN BY:	J_Santos	
DATE:	05/08/2014	
CHECKED BY:	J_Santos	
DATE:	06/08/2014	
SIZE	A3	
SCALE	1:1	
WEIGHT (kg)	-	
MECANISMO DE IZADO. DETALLES 2-03		
A 2-06 Y 2-23		
DISEÑO Y ANÁLISIS DE MEJORA DE UTILAJE		
AERONÁUTICO PARA EL MONTAJE DEL LOWER DE UN		
HELICÓPTERO		
SHEET		
7/15		
A		

A

A

B

C

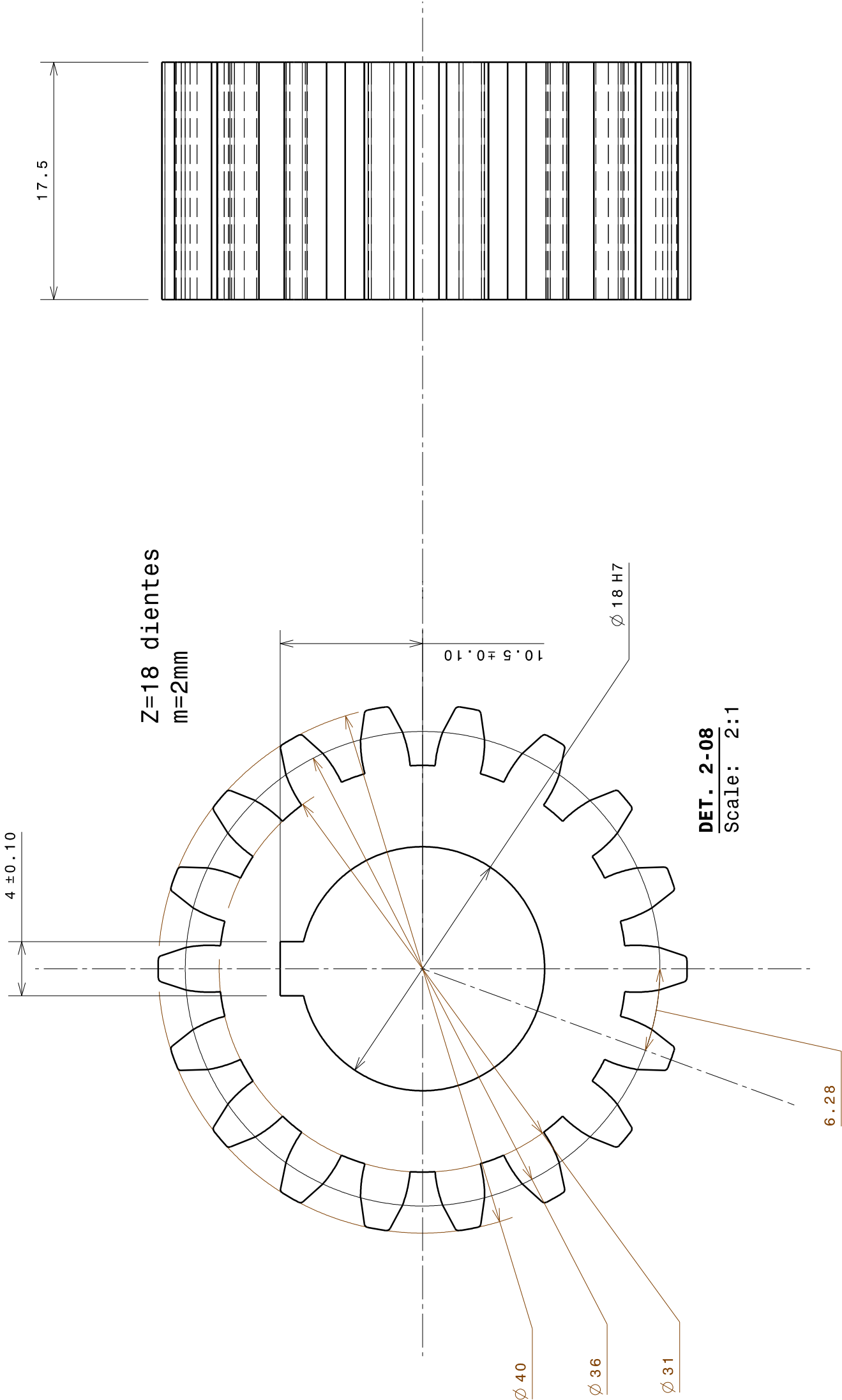
D

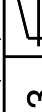
4

3

2

1



②		MECANISMO IZADO			
SUB.		DESIGNACIÓN			
DESIGNED BY: J_Santos		MECANISMO DE IZADO. DETALLE 2-08			
DATE: 05/08/2014					
CHECKED BY: J_Santos					
DATE: 06/08/2014					
SIZE	A3				
SCALE	1:1	WEIGHT (kg)			
		-	DISEÑO Y ANALISIS DE MEJORA DE UTILLAJE AERONÁUTICO PARA EL MONTAJE DEL LOWER DE UN HELICOPTERO		SHEET
					8/15
					A

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A

D

4

3

2

1

D

C

B

A

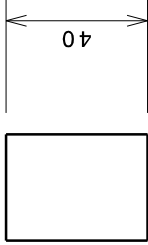
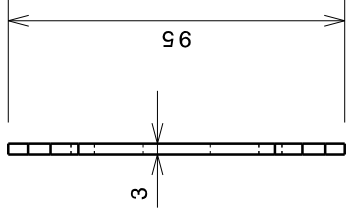
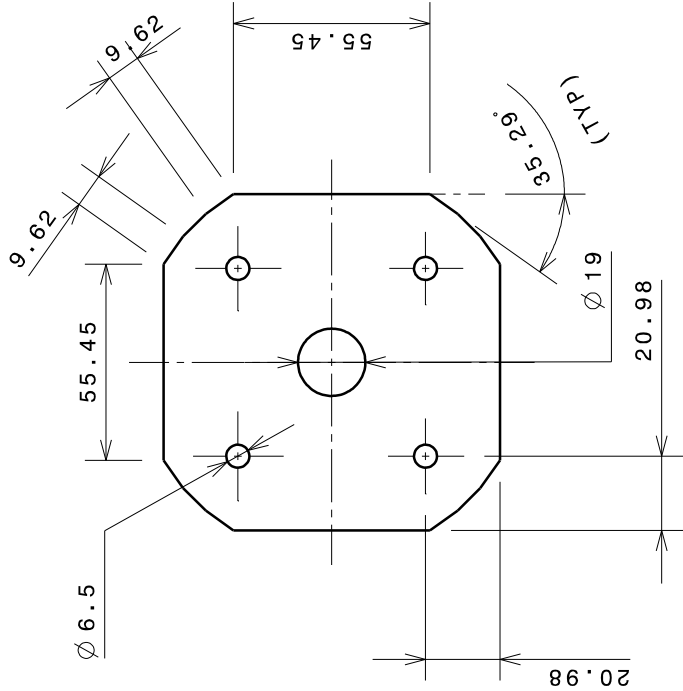
4

3

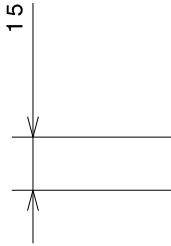
2

1

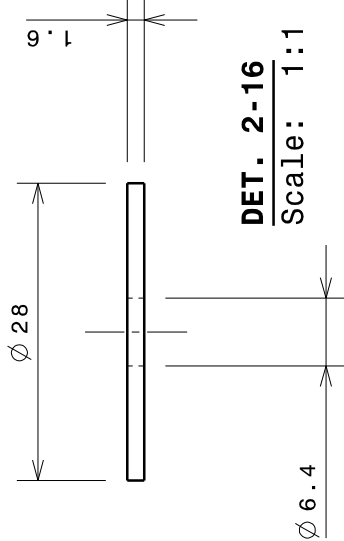
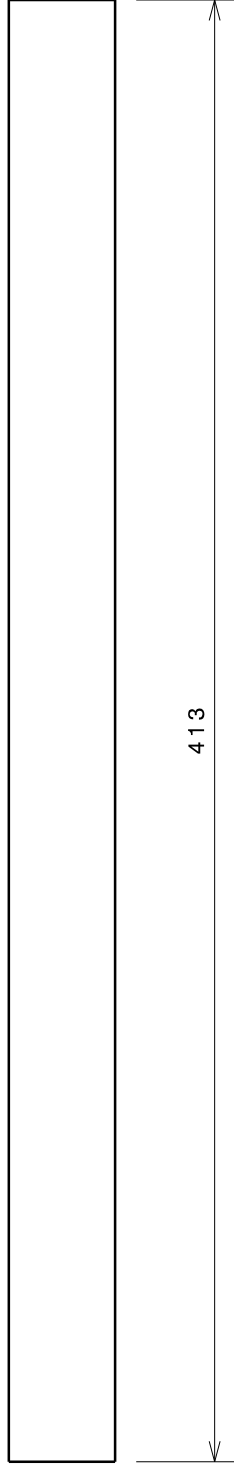
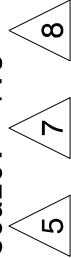
DET. 2-09
Scale: 1:3



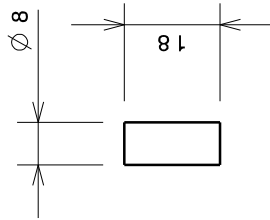
DET. 2-20
Scale: 1:3



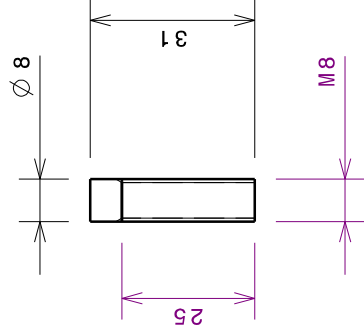
DET. 2-11
Scale: 1:3



DET. 2-16
Scale: 1:1



DET. 2-21
Scale: 1:2



DET. 2-22
Scale: 1:2

②		MECANISMO IZADO	
SUB.		SIGNIFICACIÓN	
DESIGNED BY: J_Santos		MECANISMO DE IZADO. DETALLES 2-09, 2-11, 2-16 Y 2-20 A 2-22	
DATE: 05/08/2014			
CHECKED BY: J_Santos			
DATE: 06/08/2014			
SIZE A3			
SCALE 1:1			
WEIGHT (kg) -			
SHEET 9/15			
DISEÑO Y ANALISIS DE MEJORA DE UTILLAJE AERONAUTICO PARA EL MONTAJE DEL LOWER DE UN HELICOPTERO		A	
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		I	
		H	
		G	
		F	
		E	
		D	
		C	
		B	
		A	

D

C

B

A

A

B

C

D

4

4

3

3

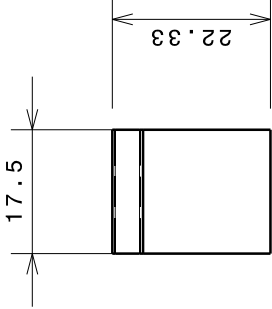
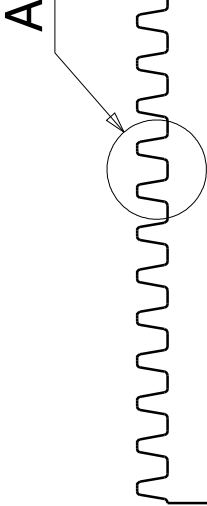
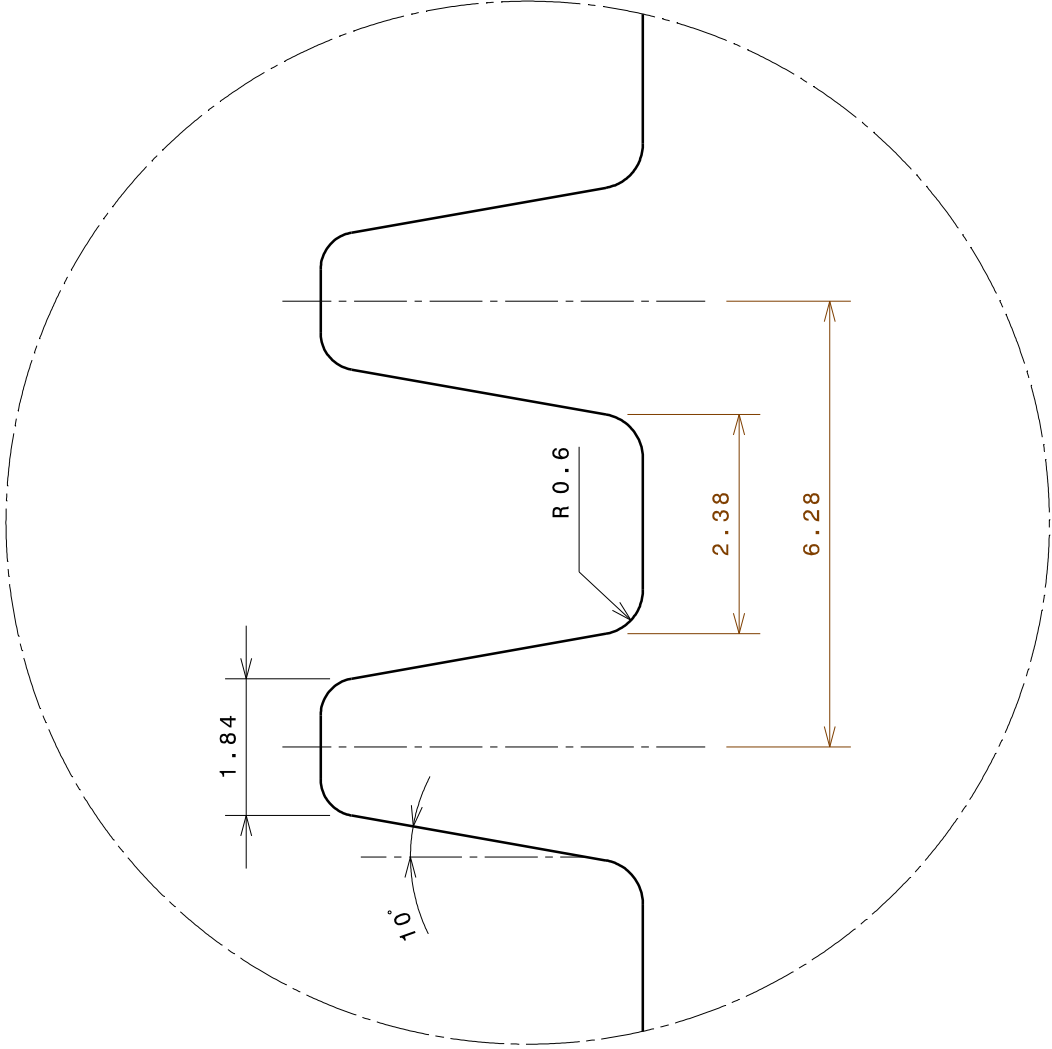
2

2

1

1

Detail A
Scale: 7:1



DET. 2-10
Scale: 2:3



②		MECANISMO IZADO	
SUB.		DESIGNACIÓN	
DESIGNED BY: J_Santos		MECANISMO DE IZADO. DETALLE 2-10	
DATE: 05/08/2014			
CHECKED BY: J_Santos			
DATE: 06/08/2014			
SIZE	A3		
SCALE	1:1	WEIGHT (kg)	
		DISEÑO Y ANALISIS DE MEJORA DE UTILLAJE AERONÁUTICO PARA EL MONTAJE DEL LOWER DE UN HELICOPTERO	
		SHEET 10/15	
		I	—
		H	—
		G	—
		F	—
		E	—
		D	—
		C	—
		B	—
		A	—
This drawing is our property; it can't be reproduced or communicated without our written agreement.			

D

A

D

C

B

A

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2

1

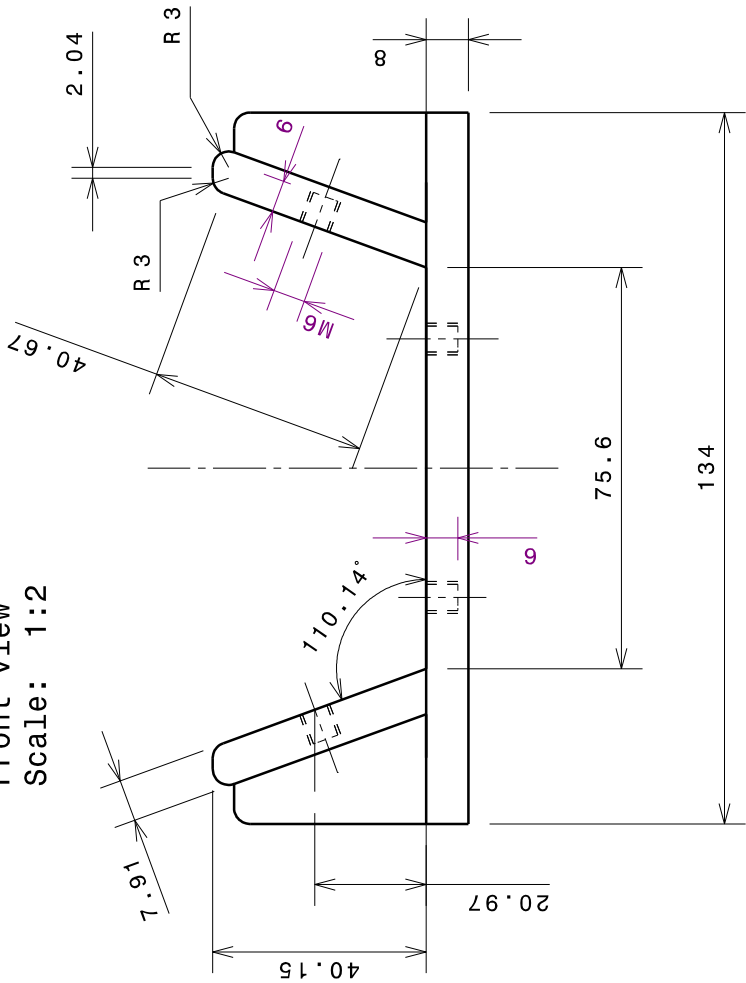
D

C

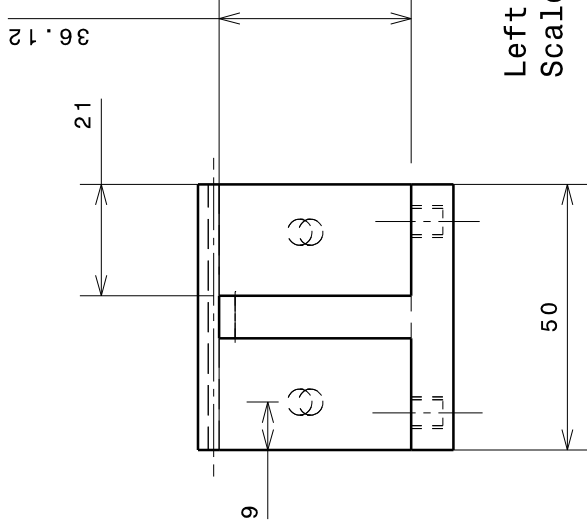
B

A

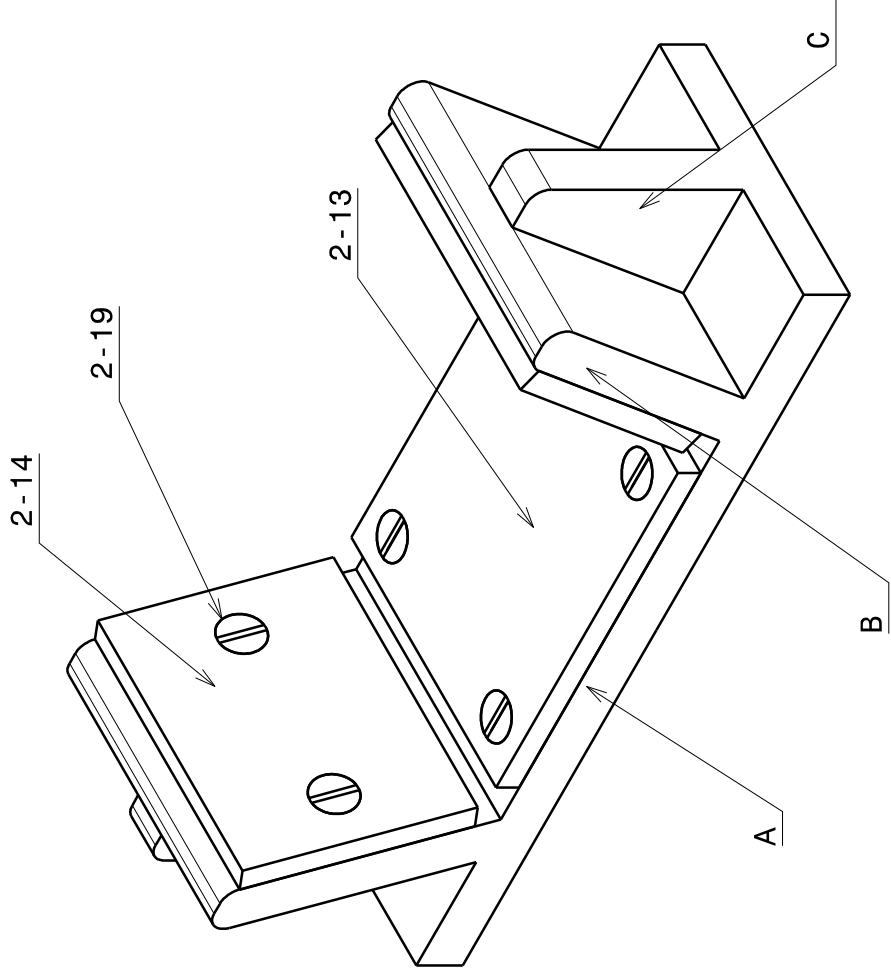
Front view
Scale: 1:2



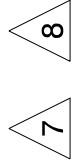
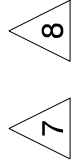
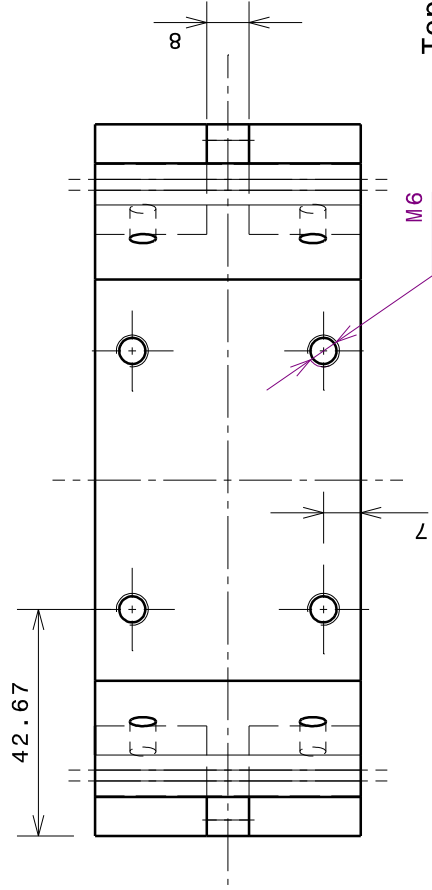
Left view
Scale: 1:2



Isometric view
Scale: 2:3



Top view
Scale: 1:2



2-19	8	TORNILLO NLM 07175-104x10		11
C	2	REFUERZO 35 x 8		11
B	2	LATERAL 50 x 8		11
A	1	BASE 150 x 8		11
2-12	1	SOPORTE "U"		11
DET.	QTY.	DESIGNACIÓN	MATERIAL	HOJA
②		MECANISMO IZADO		
SUB.		DESIGNACIÓN		
DESIGNED BY: J_Santos		MECANISMO DE IZADO. DETALLE 2-12		
DATE: 05/08/2014				
CHECKED BY: J_Santos				
DATE: 06/08/2014				
SIZE	A3			
SCALE	1:1	WEIGHT (kg)		
		DISEÑO Y ANALISIS DE MEJORA DE UTILAJE AERONAUTICO PARA EL MONTAJE DEL LOWER DE UN HELICOPTERO		SHEET
				11/15
				C
				D
				E
				F
				G
				H
				I

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D

C

B

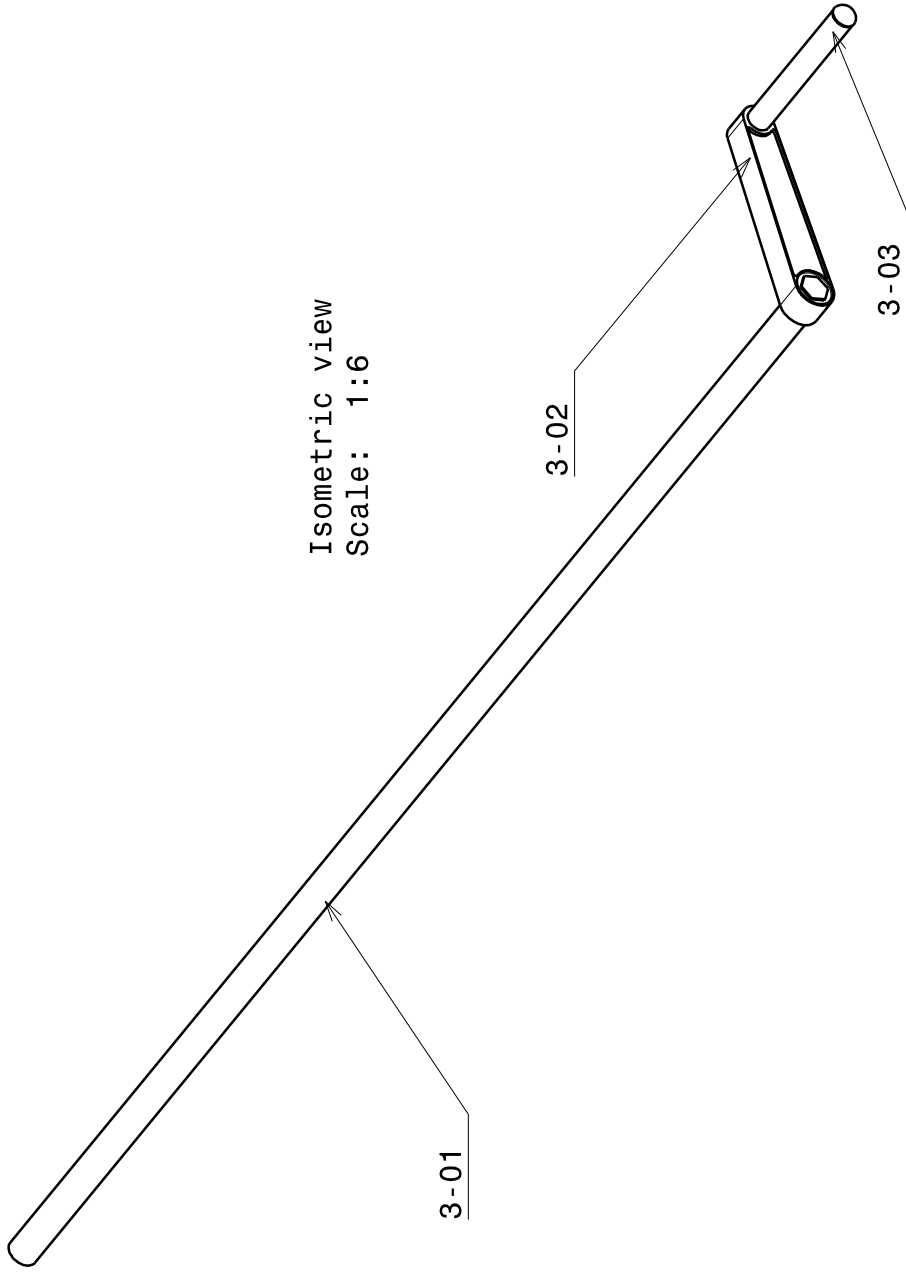
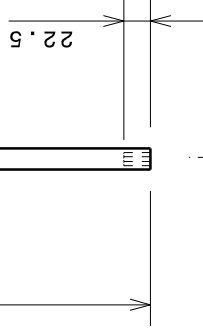
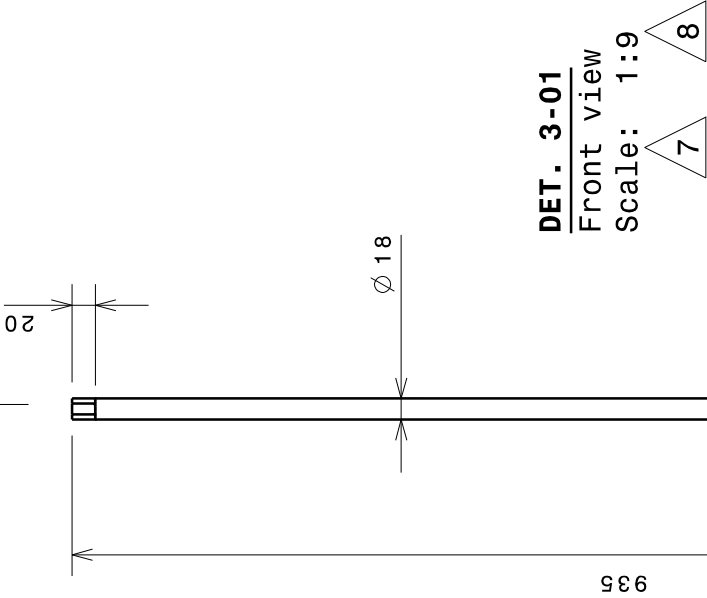
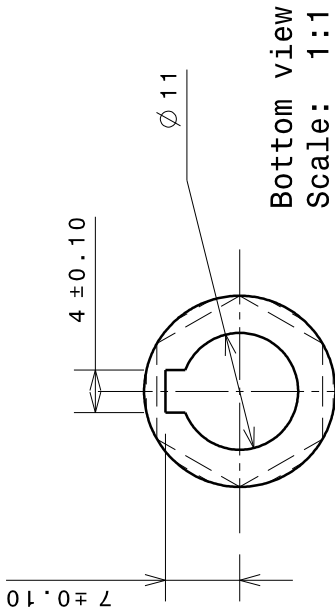
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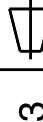
4

3

2

1



3-03	1	EMPUÑADURA NLM 06314-18	12
3-02	1	PALANCA	13
3-01	1	EJE Ø18 x 950	12
DET.	QTY.	DESIGNACIÓN	MATERIAL
③		CONJUNTO MANIVELA	
SUB.	DESIGNACIÓN		
DESIGNED BY: J_Santos		CONJUNTO MANIVELA. VISTA ISOMÉTRICA Y DETALLE 3-01	
DATE: 05/08/2014			
CHECKED BY: J_Santos			
DATE: 06/08/2014			
SIZE	A3		
SCALE	1:1	WEIGHT (kg)	
		DISEÑO Y ANÁLISIS DE MEJORA DE UTILAJE AERONAUTICO PARA EL MONTAJE DEL LOWER DE UN HELICOPTERO	SHEET 12/15
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D

D

D

D

A

4

3

2

1

4

3

2

1

D

C

B

A

116.8

5.0

Ø 18

A

R 1.5

R 1.3

Ø 25

Ø 20

M 8

DET. 3-02

Scale: 1:1



Isometric view
Scale: 2:3

A

Section view A-A
Scale: 1:1

1

19

2

③		CONJUNTO MANIVELA	
SUB.		DESIGNACIÓN	
DESIGNED BY: J_Santos		CONJUNTO MANIVELA. DETALLE 3-02	
DATE: 05/08/2014			
CHECKED BY: J_Santos			
DATE: 06/08/2014			
SIZE A3			
SCALE 1:1	WEIGHT (kg) -		
DISEÑO Y ANALISIS DE MEJORA DE UTILLAJE AERONAUTICO PARA EL MONTAJE DEL LOWER DE UN HELICOPTERO			
13/15			
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		A	
		I	
		H	
		G	
		F	
		E	
		D	
		C	
		B	
		A	

D

A

A

B

C

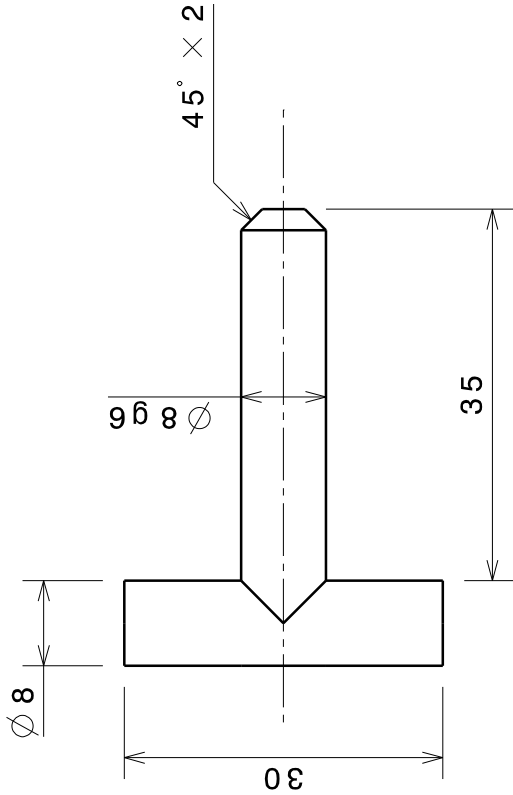
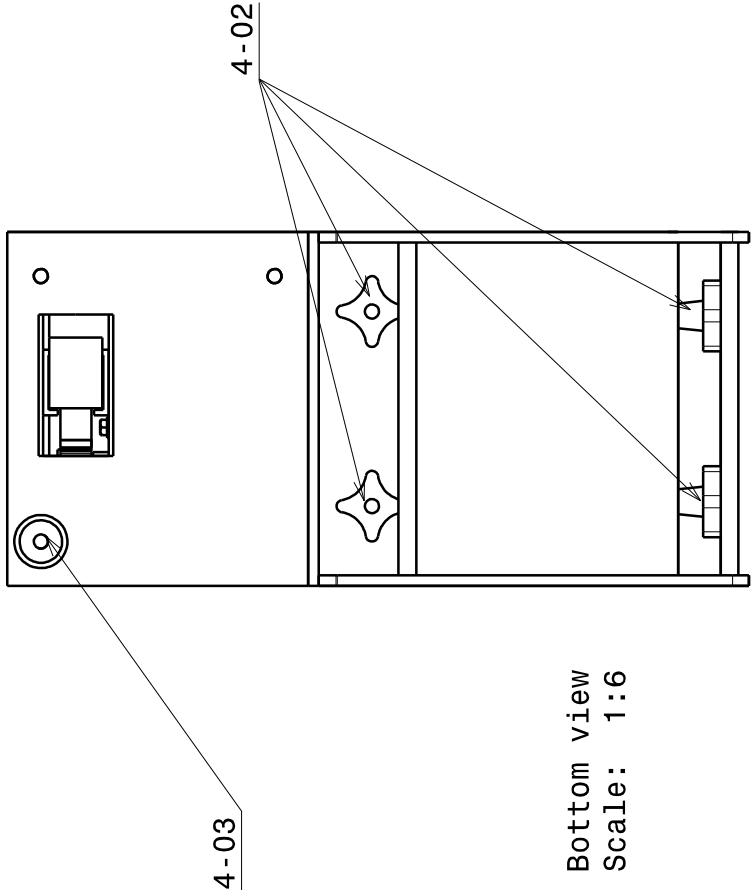
D

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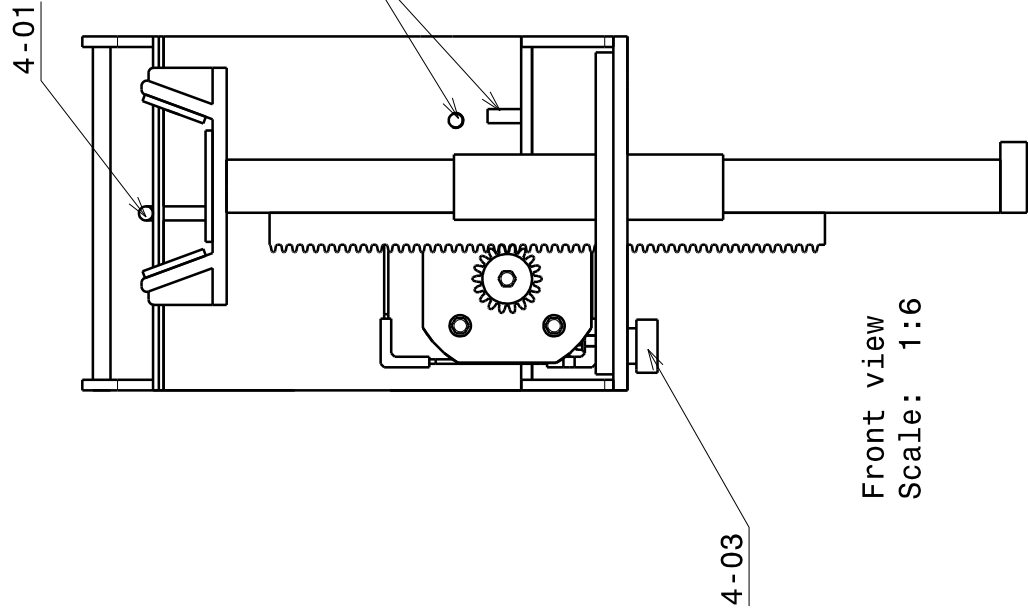
3

2

1



DET. 4-01
Scale: 1:1



4-03	1	TUERCA NLM 06010-108		14
4-02	4	PALOMETA NLM 06180-508x25		14
4-01	1	PASADOR EN T Ø8 x 80	F-114-T80	14
DET.	QTY.	DESIGNACIÓN	MATERIAL	HOJA
④		ELEMENTOS DE FIJACIÓN		
SUB.		DESIGNACIÓN		
DESIGNED BY: J_Santos		ELEMENTOS DE FIJACIÓN		
DATE: 05/08/2014				
CHECKED BY: J_Santos				
DATE: 06/08/2014				
SIZE A3				
SCALE 1:1	WEIGHT (kg) -	DISEÑO Y ANÁLISIS DE MEJORA DE UTILLAJE AERONÁUTICO PARA EL MONTAJE DEL LOWER DE UN HELICOPTERO		SHEET 14/15
				C
				B
				A

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A

D

A

B

C

D

4

4

3

3

2

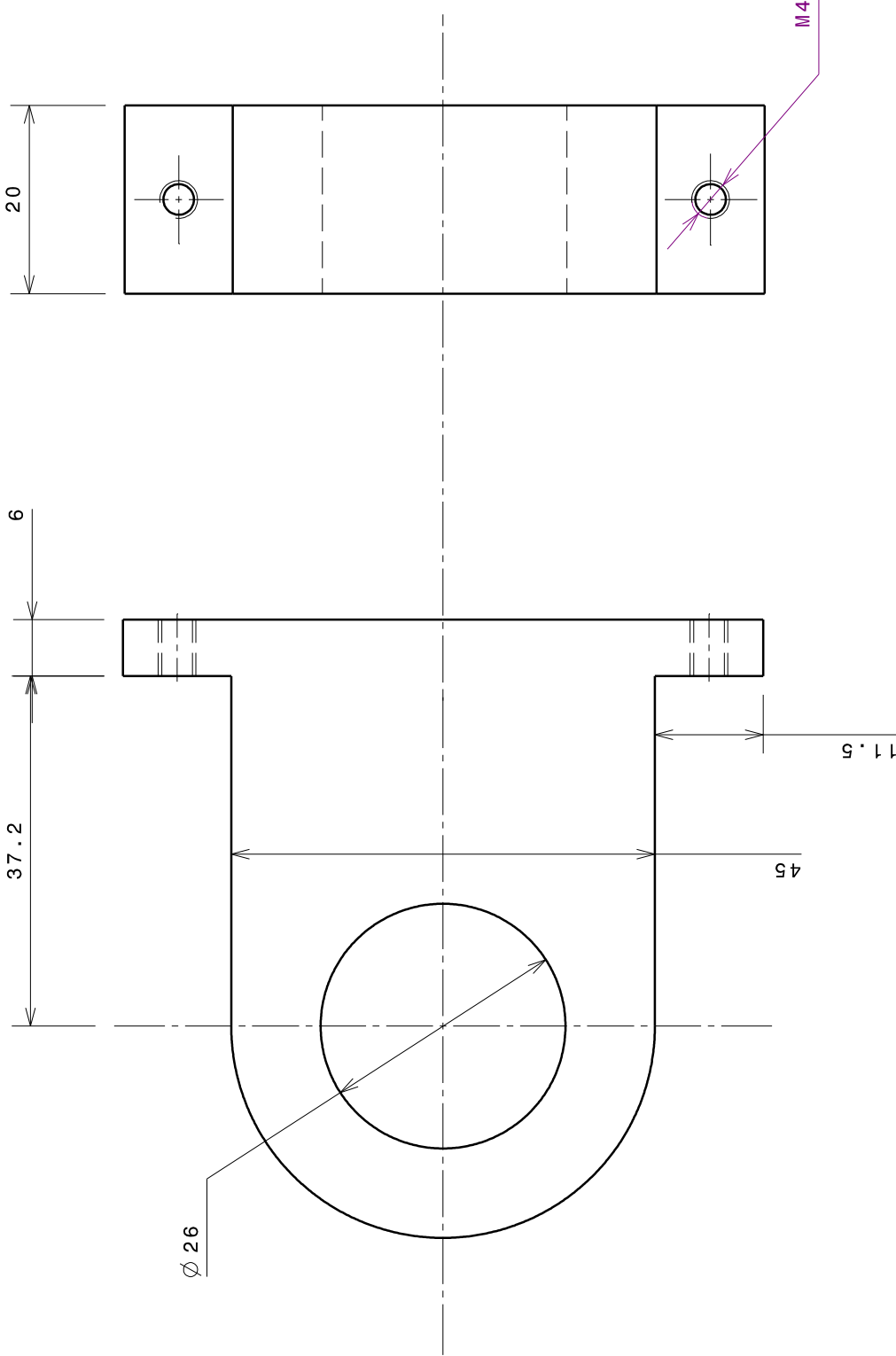
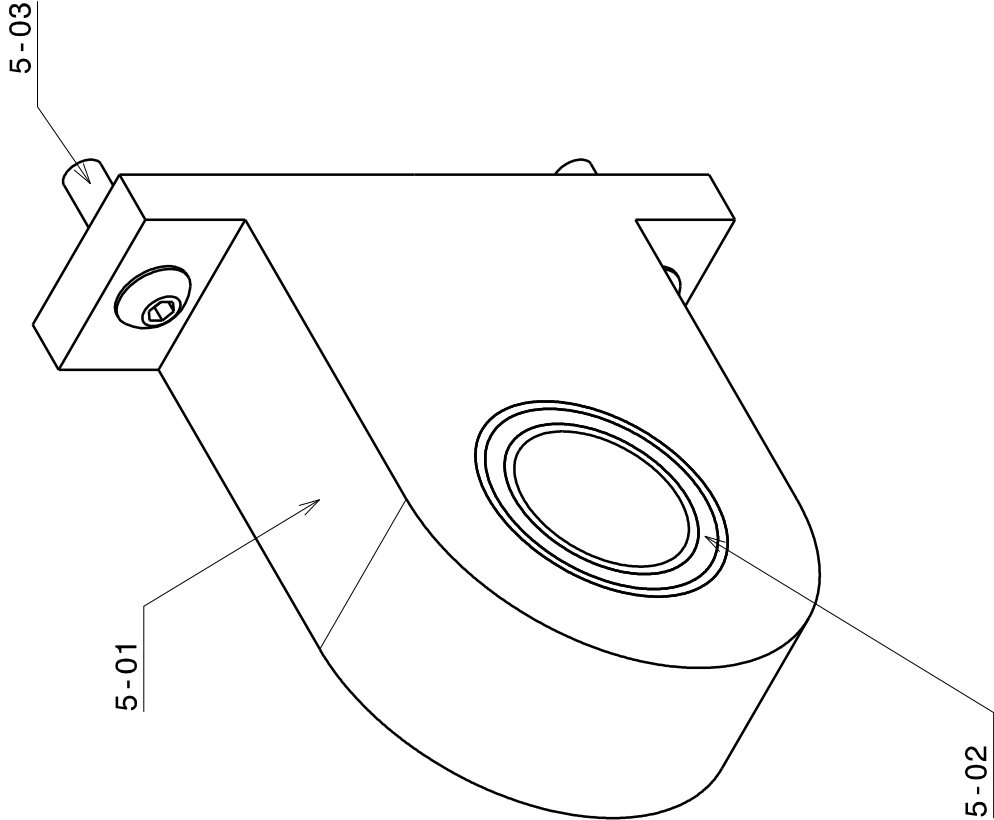
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1

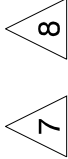
1

A

D



DET. 5-01
Scale: 1:1



5-03	2+2	TORNILLO DIN 967 M4 L16	-	15
5-02	1+1	RODAMIENTO AXIAL DE BOLAS SKF d18 D26 T20	-	15
5-01	1+1	GUÍA 70 X 20	F-0222-T90	15
DET.	QTY.	DESIGNACIÓN	MATERIAL	HOJA
⑤	GUÍAS MANIVELA			
SUB.	DESIGNACIÓN			
DESIGNED BY: J_Santos		GUÍAS DE LA MANIVELA		
DATE: 05/08/2014				
CHECKED BY: J_Santos				
DATE: 06/08/2014				
SIZE	A3			
SCALE	1:1	WEIGHT (kg)		
		DISEÑO Y ANÁLISIS DE MEJORA DE UTILLAJE AERONAUTICO PARA EL MONTAJE DEL LOWER DE UN HELICOPTERO	SHEET	15/15
			C	-
			D	-
			E	-
			F	-
			G	-
			H	-
			I	-
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A				