



UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH

Escola Superior d'Enginyeries Industrial,
Aeroespacial i Audiovisual de Terrassa

Design of a system for measuring the weight and balance of sailplanes

Drawings

Student: Marc Gort Mas

Director: Rafael Weyler Pérez

Co-Director: Ricardo Alberto Villar Ribera

Studies: Grau en Enginyeria en Tecnologies Aeroespacials

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4 3 2 1

F

F

LCEC-1K load cells

450

10

15

87,50

25,40

E

E

450

87,50

25,40

D

D

62

87,50

58,10

C

C

$\varnothing 60$
R62

25

127

38,10

B

B

10

25

A

A

DRAWING TITLE:
Front scale

SIZE:
A4

SCALE:
1:5

SHEET:
1

4 3 2 1

4

3

2

1

F

F

E

E

D

D

C

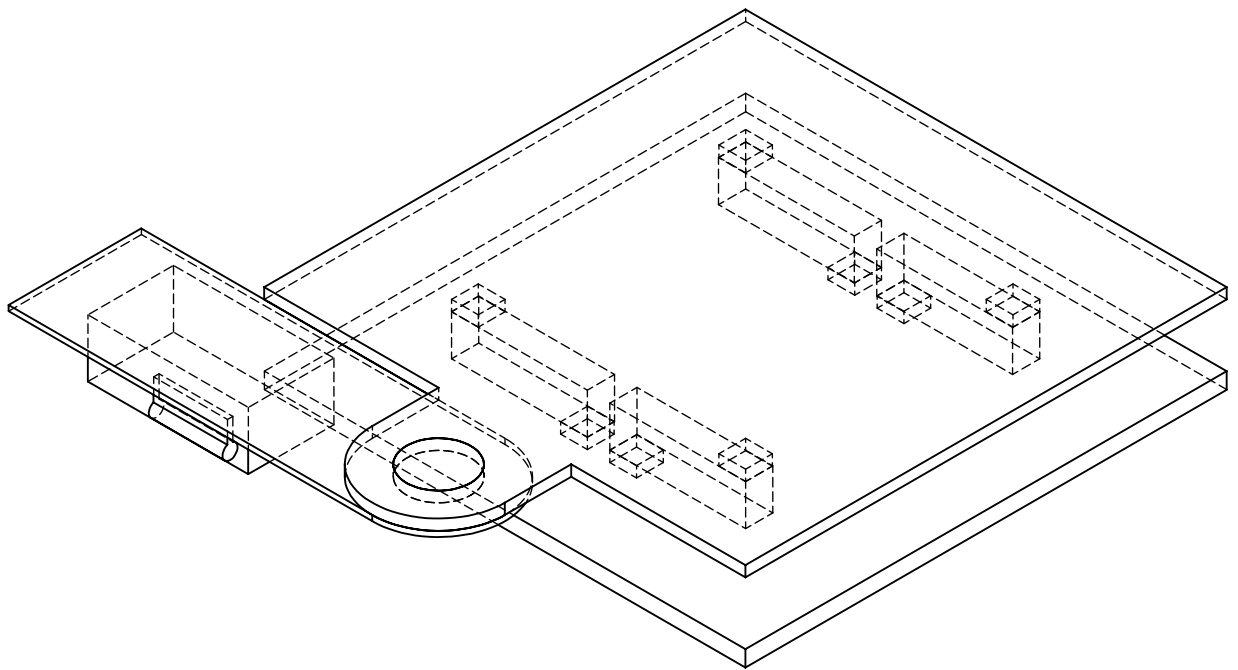
C

B

B

A

A



DRAWING TITLE:

Front scale isometric

SIZE:

A4

SCALE:

1:5

SHEET:

2

4

3

2

1

4

3

2

1

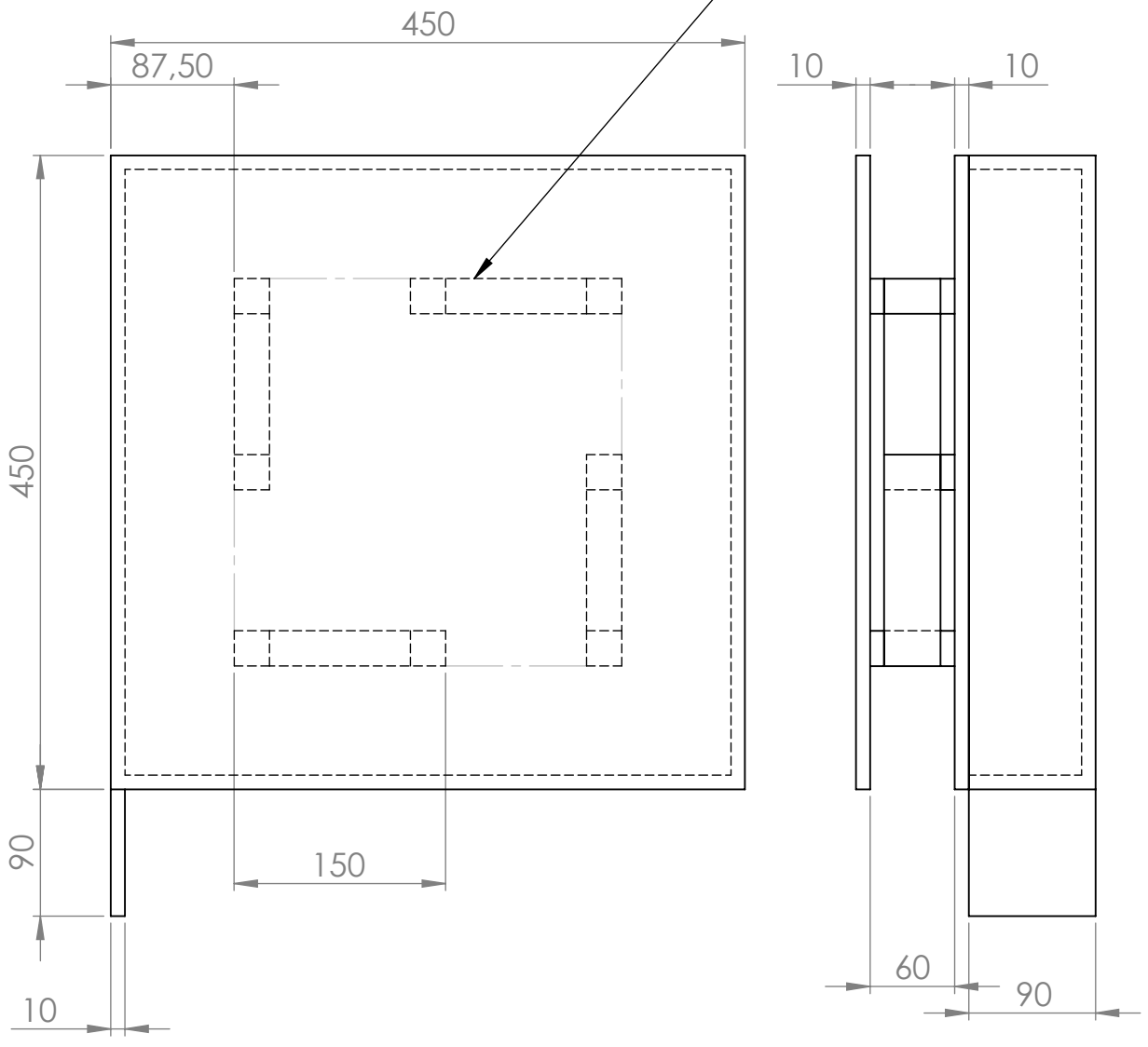
F

F

LCAE-45KG load cells

E

E



D

D

C

C

25 25

B

B

Elevating mechanism

A

A

DRAWING TITLE:
Rear scale

SIZE: A4	SCALE: 1:5	SHEET: 3
--------------------	----------------------	--------------------

4

3

2

1

4

3

2

1

F

F

E

E

D

D

C

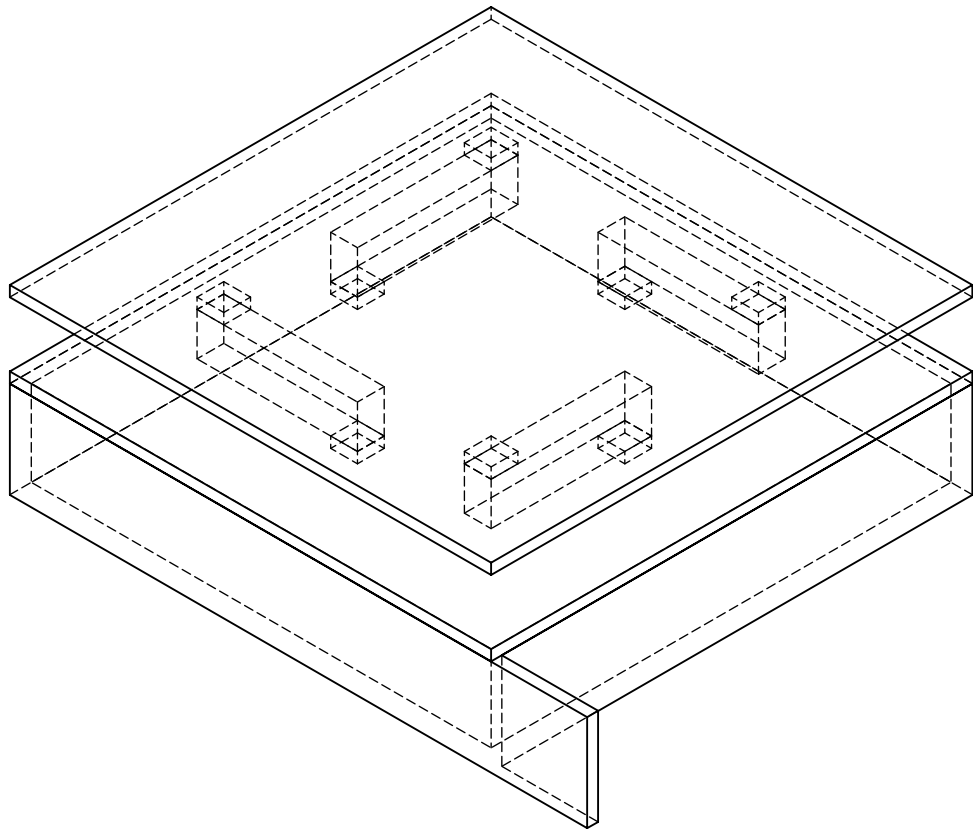
C

B

B

A

A



DRAWING TITLE:

Rear scale isometric

SIZE:

A4

SCALE:

1:5

SHEET:

4

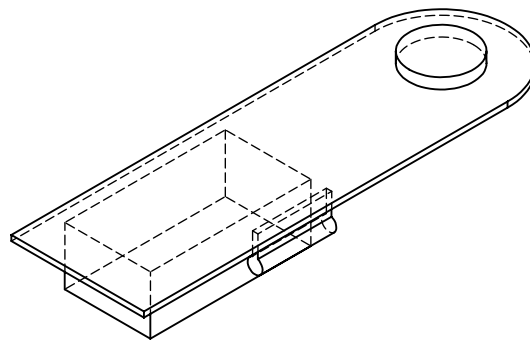
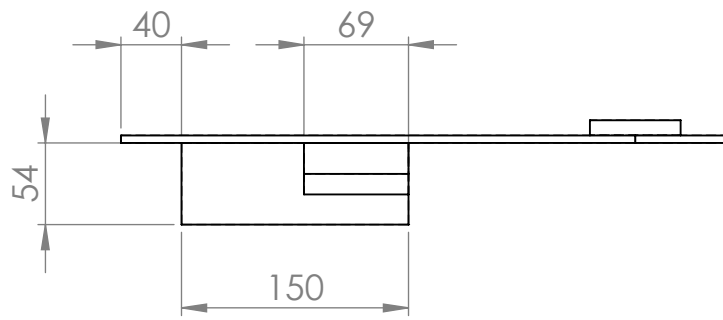
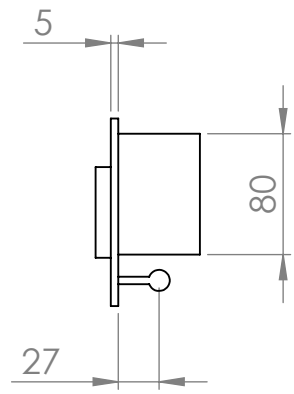
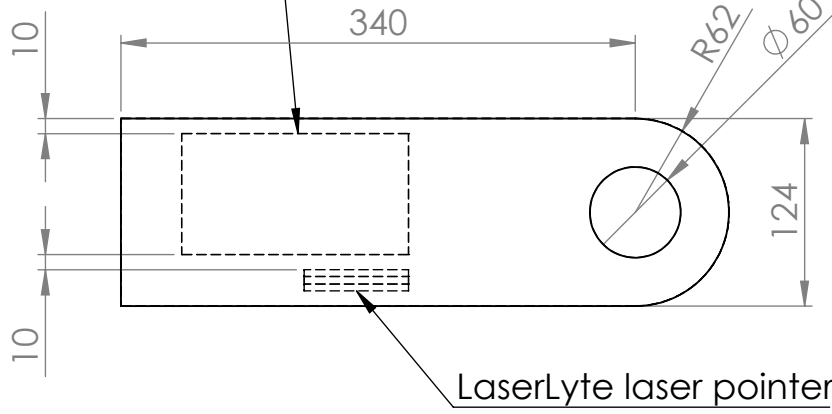
4

3

2

1

Dimetix laser sensor



DRAWING TITLE:

Rotating arm

SIZE:

A4

SCALE:

1:5

SHEET:

5

4

3

2

1

F

F

E

E

D

D

C

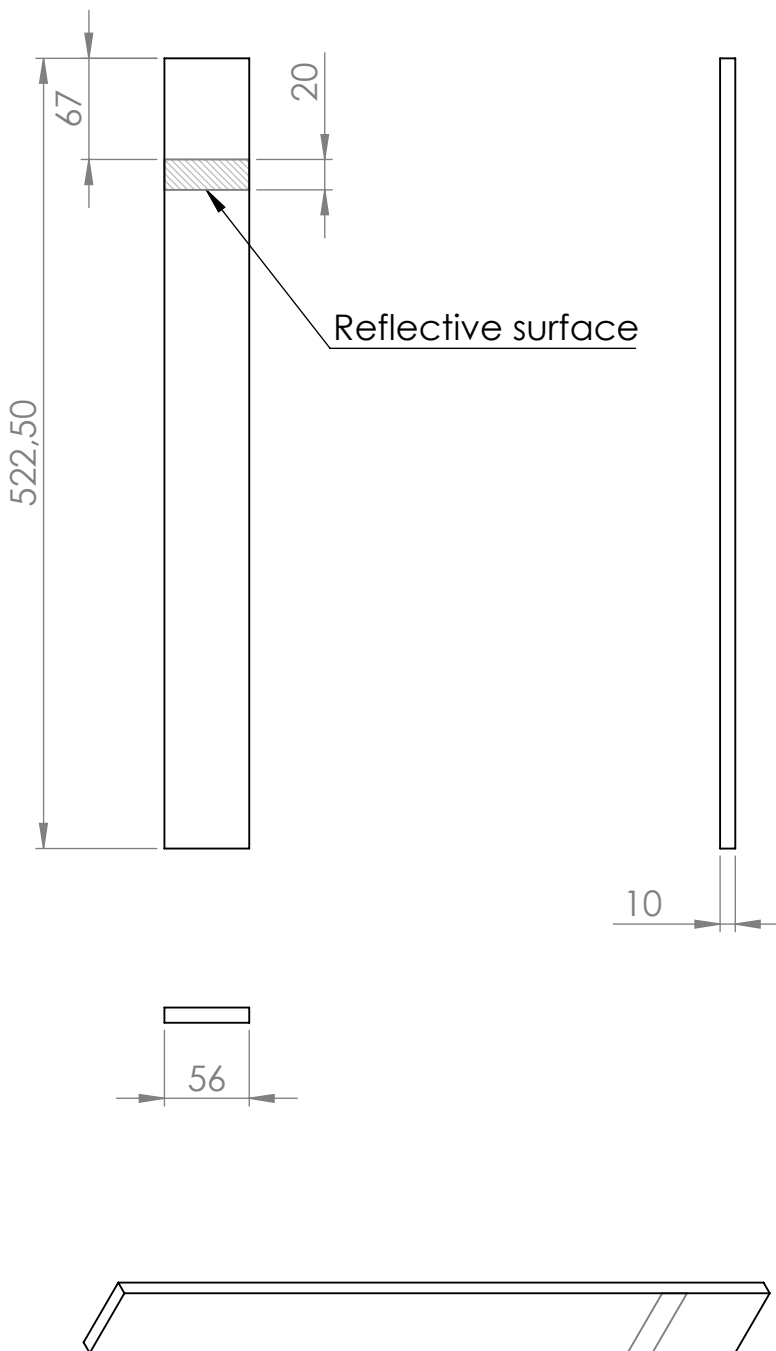
C

B

B

A

A



DRAWING TITLE:

Datum bar

SIZE:

A4

SCALE:

1:5

SHEET:

6

4

3

2

1

4

3

2

1

F

F

E

E

D

D

C

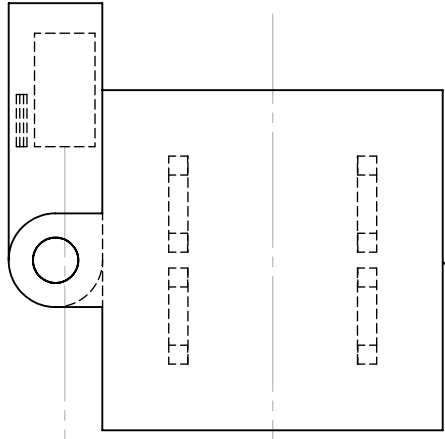
C

B

B

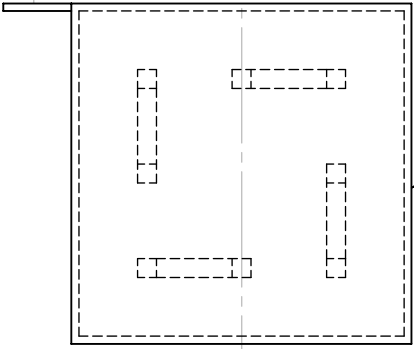
A

A



Front scale
(G1)

Laser sensor
beam



Rear scale
(G2)

DRAWING TITLE:		
<h1>L1 measurement</h1>		
SIZE:	SCALE:	SHEET:
A4	1:10	7

4

3

2

1

4

3

2

1

F

F

E

E

Laser pointer beam

Laser sensor beam

Datum bar

D

D

C

C

B

B

A

A

4

3

2

1

DRAWING TITLE:

Aft L2
measurement

SIZE:

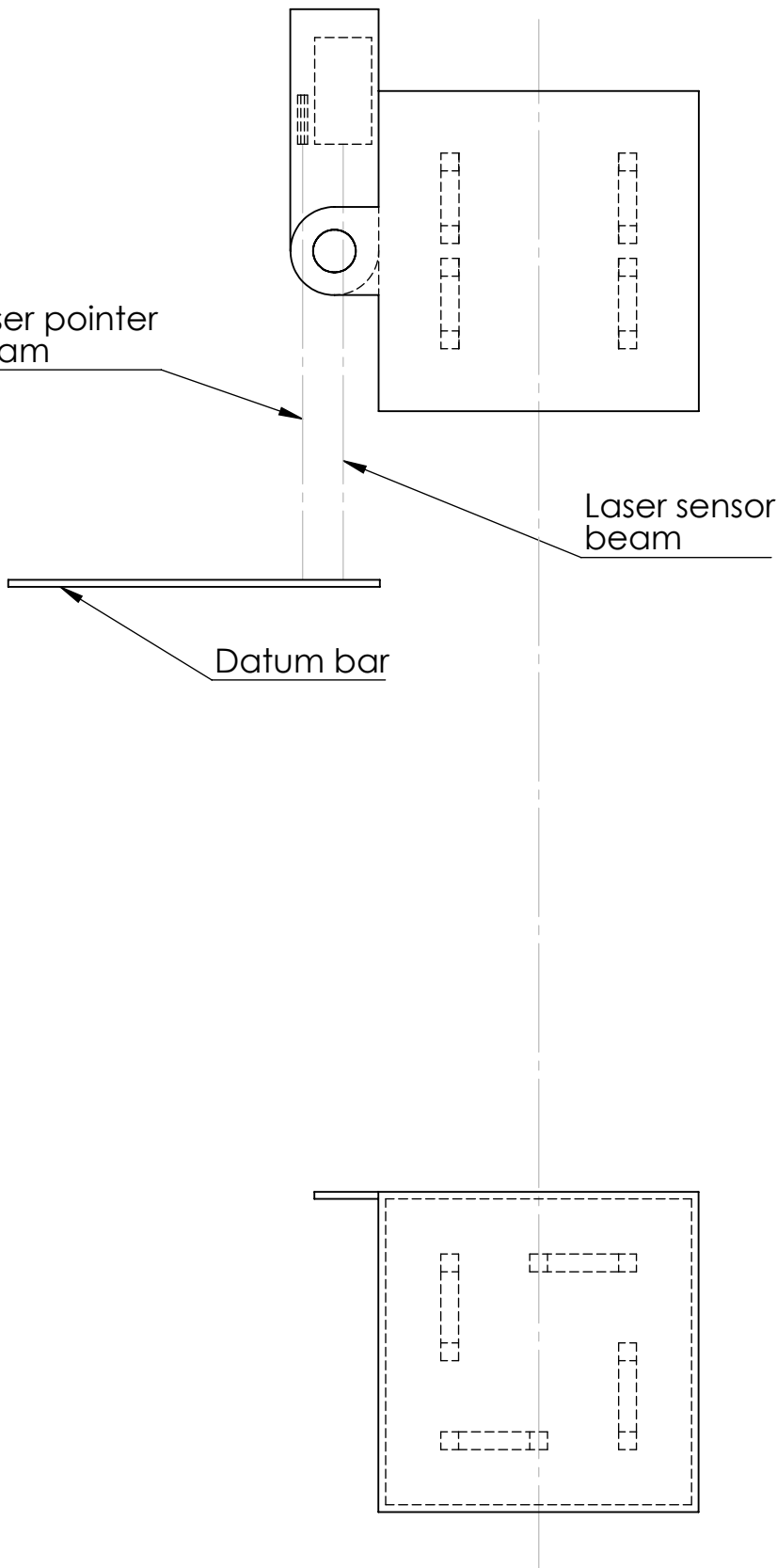
A4

SCALE:

1:10

SHEET:

8



4

3

2

1

F

F

Datum bar

Laser pointer beam

Laser sensor beam

E

E

D

D

C

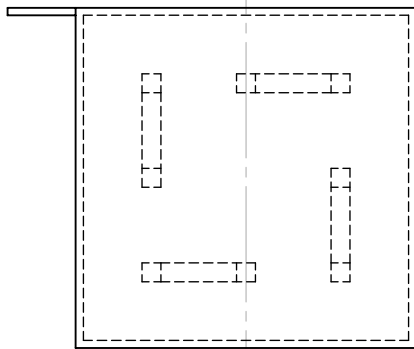
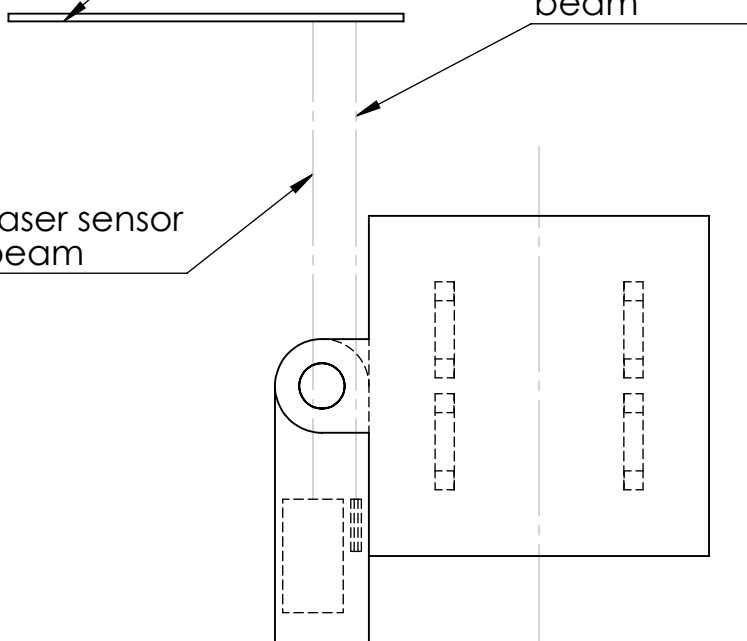
C

B

B

A

A



DRAWING TITLE:

Forward
L2 measurement

SIZE:

A4

SCALE:

1:10

SHEET:

9

4

3

2

1