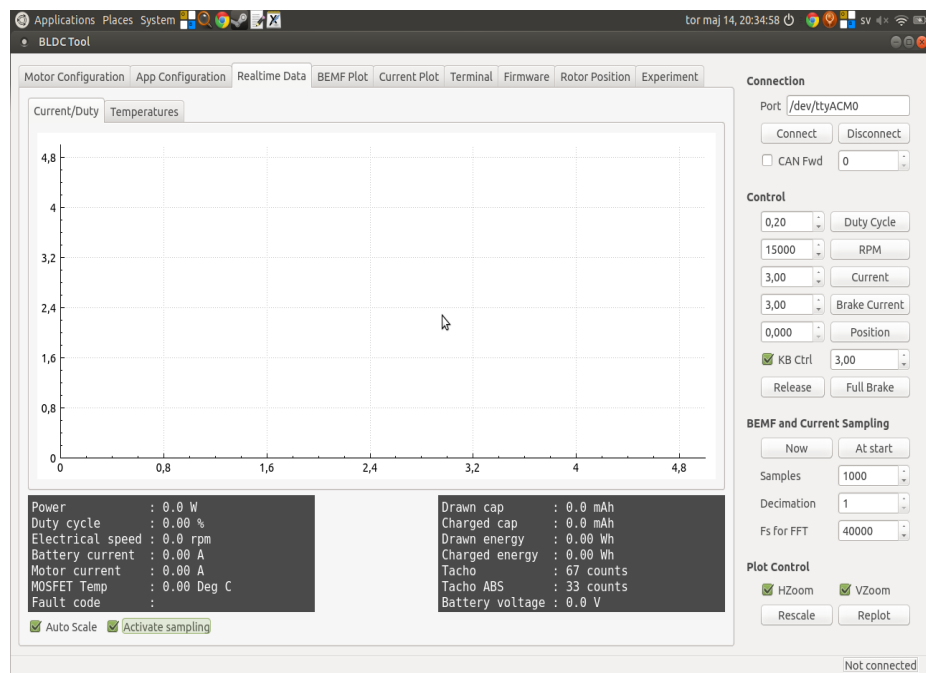
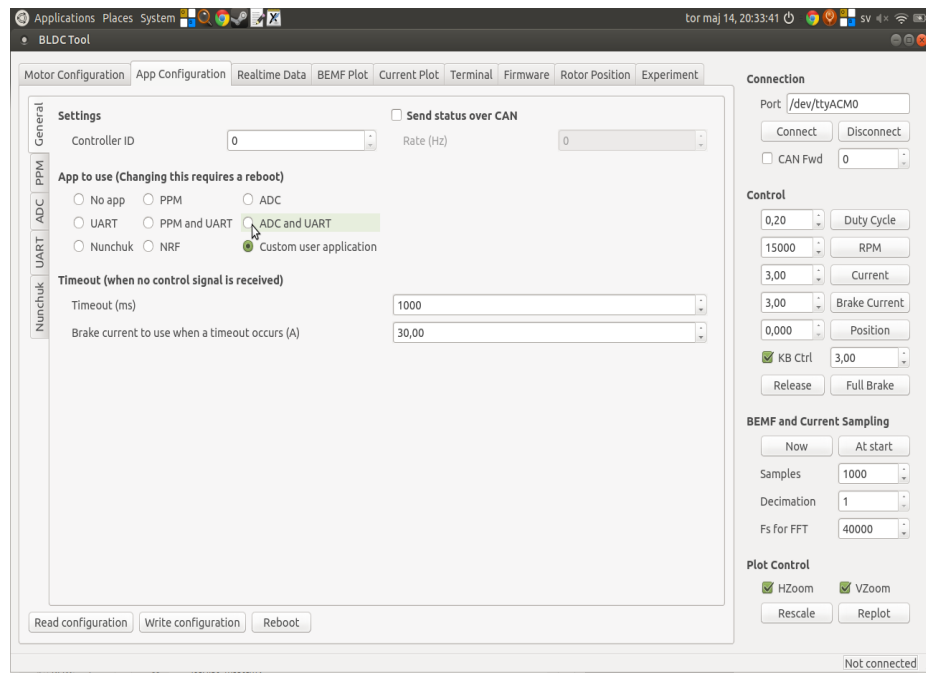


I BLDC-Tool

BLDC-Tool är en programvara skapad av Benjamin Vedder[6] för att konfigurera motordrivare och avläsa data.

The screenshot shows the 'Motor Configuration' window of the BLDC-Tool. The 'Motor Type' is set to 'BLDC'. The 'Current Limits' section includes fields for Motor max, Motor min (regen), Batt max, Batt min (regen), and Absolute max, all set to 0,00. The 'RPM Limits' section includes a checkbox for 'Limit ERPM with negative torque' and fields for Min ERPM, Max ERPM, Max ERPM at full brake, and Max ERPM at full brake in current control mode, all set to 0,00. The 'Temperature Limits' section includes fields for MOSFET Start, MOSFET End, Motor Start, and Motor End, all set to 0,00. The 'Voltage Limits' section includes fields for Minimum input voltage and Maximum input voltage, both set to 6,00. The 'Connection' section shows the port as '/dev/ttyACM0' and buttons for 'Connect' and 'Disconnect'. The 'Control' section includes sliders for Duty Cycle (0,20), RPM (15000), Current (3,00), Brake Current (3,00), and Position (0,000), along with buttons for 'Release' and 'Full Brake'. The 'BEMF and Current Sampling' section includes buttons for 'Now' and 'At start', and fields for Samples (1000), Decimation (1), and Fs for FFT (40000). The 'Plot Control' section includes checkboxes for 'HZoom' and 'VZoom', and buttons for 'Rescale' and 'Replot'. The status bar at the bottom indicates 'Not connected'.

The screenshot shows the 'App Configuration' window of the BLDC-Tool. The 'PWM mode' is set to 'Synchronous'. The 'Current control' section includes fields for Startup boost (0,000), Min current (0,00), Control gain (0,00000), and Maximum ramp step (at 1000 Hz) (0,0000). The 'Speed control' section includes fields for KP (0,00000), KI (0,00000), KD (0,00000), and MIN ERPM (0,00). The 'Position control' section includes fields for KP (0,00000), KI (0,00000), and KD (0,00000). The 'Timeouts' section includes a field for Fault stop time (in milliseconds) set to 0. The 'Connection' section shows the port as '/dev/ttyACM0' and buttons for 'Connect' and 'Disconnect'. The 'Control' section includes sliders for Duty Cycle (0,20), RPM (15000), Current (3,00), Brake Current (3,00), and Position (0,000), along with buttons for 'Release' and 'Full Brake'. The 'BEMF and Current Sampling' section includes buttons for 'Now' and 'At start', and fields for Samples (1000), Decimation (1), and Fs for FFT (40000). The 'Plot Control' section includes checkboxes for 'HZoom' and 'VZoom', and buttons for 'Rescale' and 'Replot'. The status bar at the bottom indicates 'Not connected'.

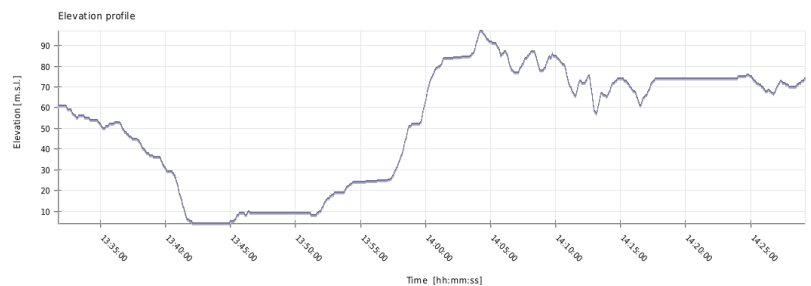
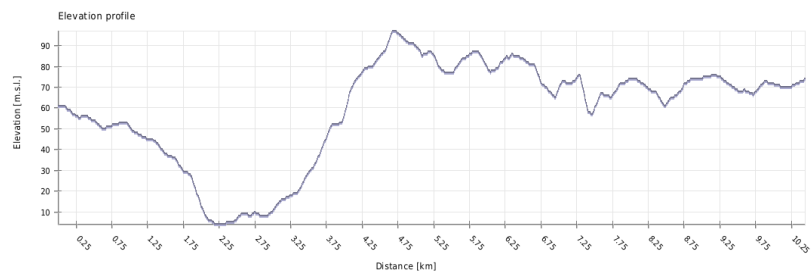


J GPS loggning: körsträcka ett

Running 5/6/15 3:31 pm

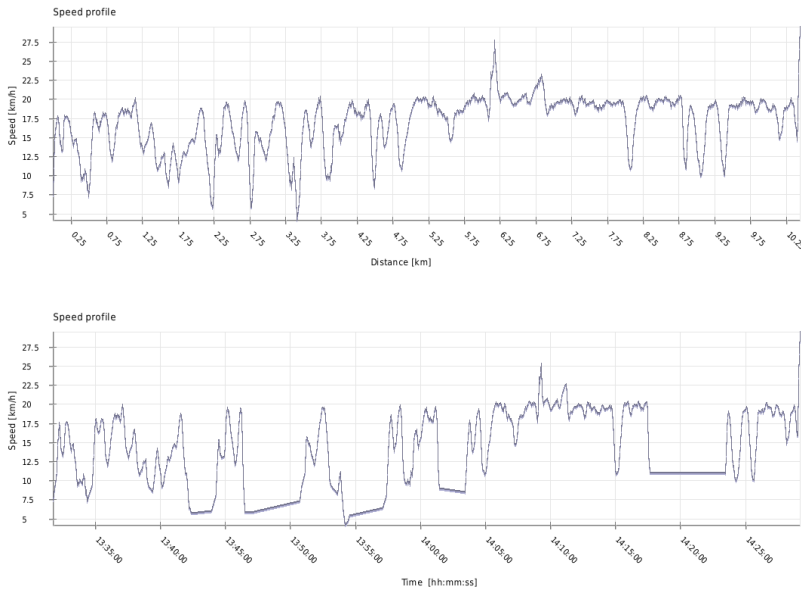
Generated by uTrack (<http://utrack.crempa.net>)

Elevation



Minimum elevation:	4 m.s.l.
Maximum elevation:	97 m.s.l.
Average elevation:	58.9 m.s.l.
Maximum difference:	93 m
Total climbing:	180 m
Total descent:	167 m
Start elevation:	61 m.s.l.
End elevation:	74 m.s.l.
Final balance:	13 m

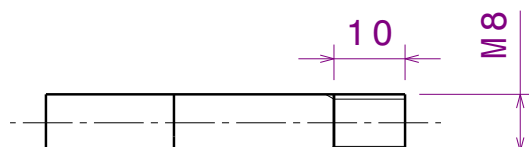
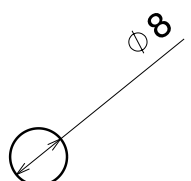
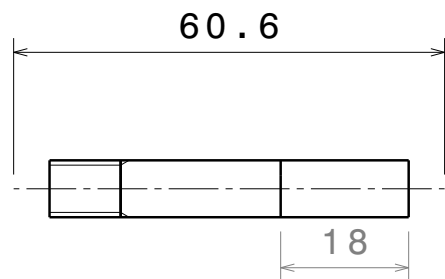
Speed

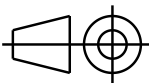


Minimum speed:	4.2 km/h
Maximum speed:	29.5 km/h
Average climbing speed :	16.9 km/h
Average descent speed :	16.5 km/h
Average flat speed:	15.8 km/h
Average speed:	16.1 km/h

K Ritningar

K.i

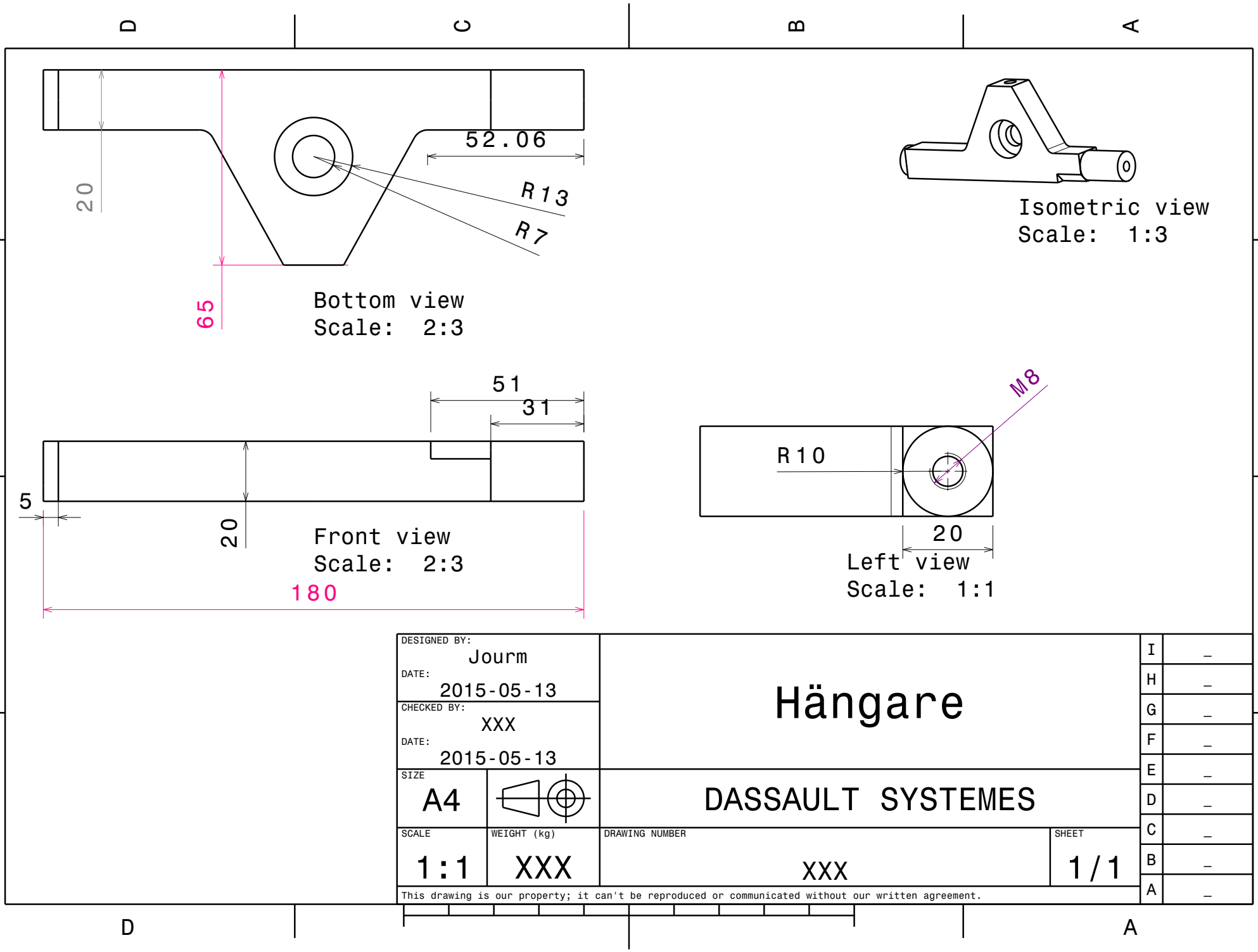


DESIGNED BY: Jourm	
DATE: 2015-05-13	
CHECKED BY: XXX	
DATE: XXX	
SIZE A4	
SCALE 1:1	WEIGHT (kg) XXX

Hängarens Axel			
		DASSAULT SYSTEMES	
DRAWING NUMBER XXX		SHEET 1 / 1	

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I	-
H	-
G	-
F	-
E	-
D	-
C	-
B	-
A	-



DESIGNED BY: Jourm	
DATE: 2015-05-13	
CHECKED BY: XXX	
DATE: 2015-05-13	
SIZE A4	
SCALE 1:1	WEIGHT (kg) XXX

Hängare	
DASSAULT SYSTEMES	
DRAWING NUMBER XXX	SHEET 1 / 1

I	-
H	-
G	-
F	-
E	-
D	-
C	-
B	-
A	-

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D

C

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A

4

4

3

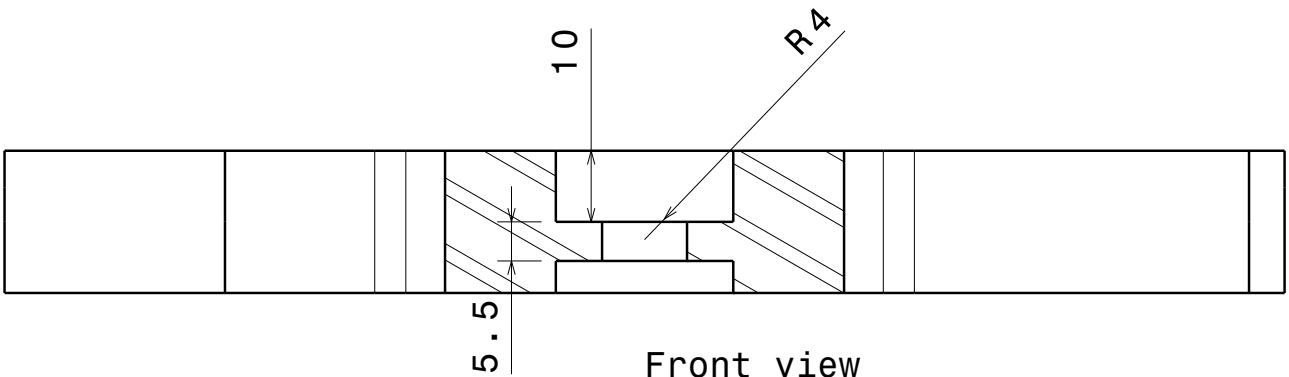
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2

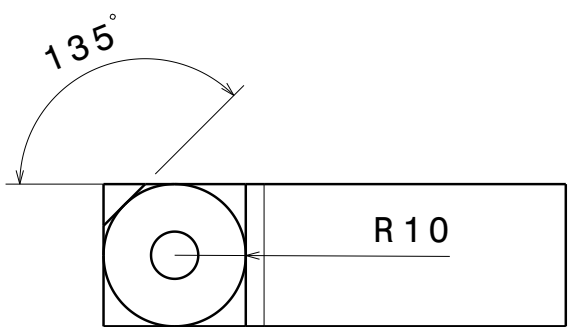
2

1

1



Front view
Scale: 1:1



Front view
Scale: 1:1

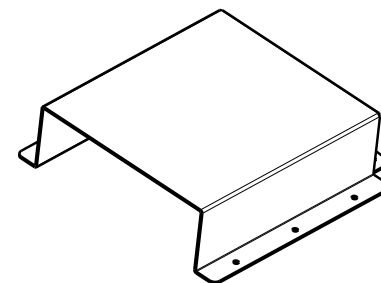
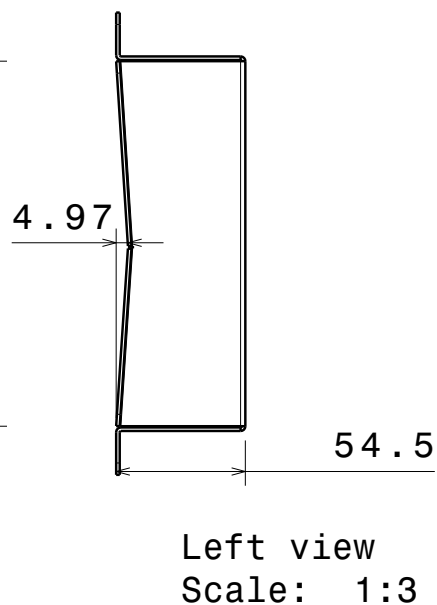
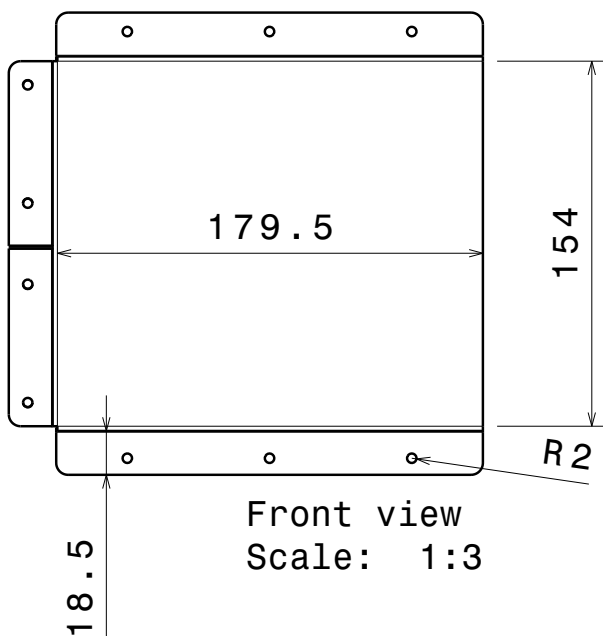
DESIGNED BY: Journ	
DATE: 2015-05-13	
CHECKED BY: XXX	
DATE: 2015-05-13	
SIZE A4	
SCALE 1:1	WEIGHT (kg) XXX

Hängare		I	-
		H	-
		G	-
		F	-
		E	-
DASSAULT SYSTEMES		D	-
		C	-
		B	-
DRAWING NUMBER XXX		A	-
SHEET 1 / 1			

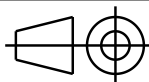
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D

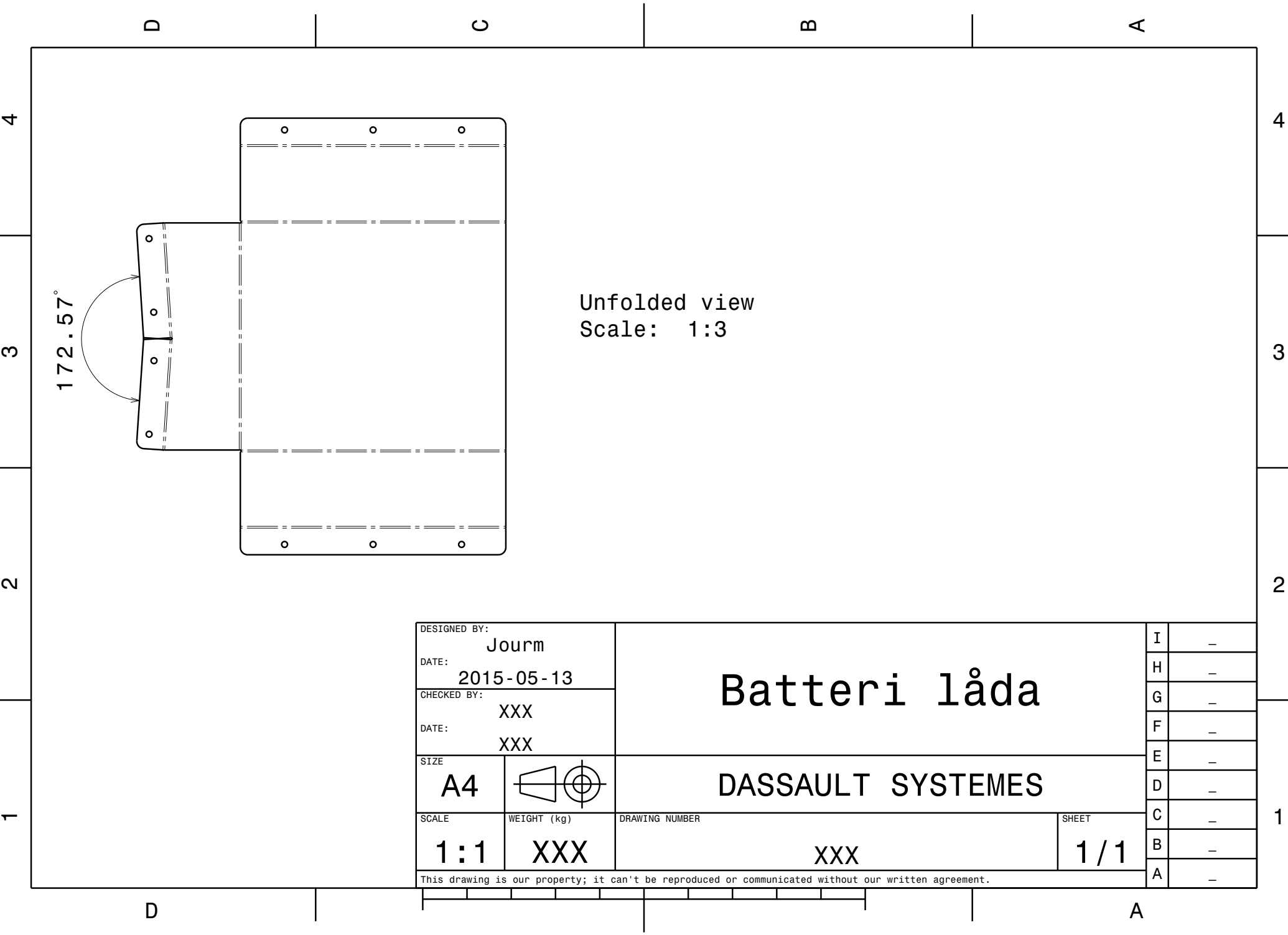
A

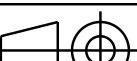


Isometric view
Scale: 1:5

DESIGNED BY: Journ		Batteri låda		I	—
DATE: 2015-05-13				H	—
CHECKED BY: XXX				G	—
DATE: XXX		DASSAULT SYSTEMES		F	—
SIZE A4				E	—
SCALE 1:1	WEIGHT (kg) XXX	DRAWING NUMBER XXX		D	—
				C	—
		SHEET 1 / 1		B	—
				A	—
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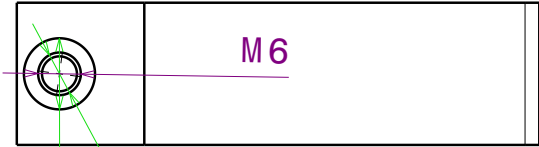
DESIGNED BY: Journ		Batteri låda		I	-
DATE: 2015-05-13				H	-
CHECKED BY: XXX				G	-
DATE: XXX		DASSAULT SYSTEMES		F	-
SIZE A4				E	-
SCALE 1:1	WEIGHT (kg) XXX			D	-
		DRAWING NUMBER XXX	SHEET 1 / 1	C	-
				B	-
				A	-
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D

C

B

A



Bottom view

Scale: 1:1

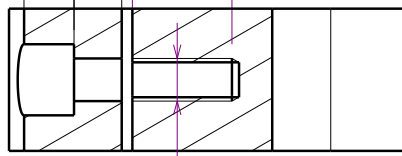


Isometric view

Scale: 1:2

7.04 6.71

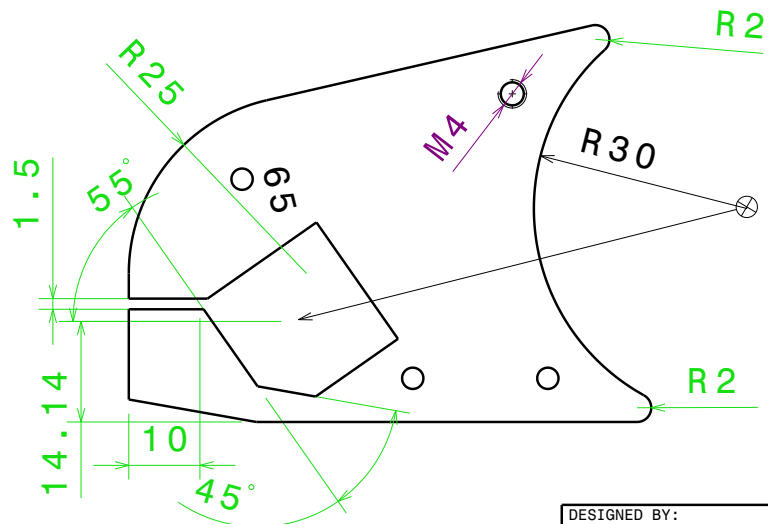
14



M6

Front view

Scale: 1:1



Front view

Scale: 1:1

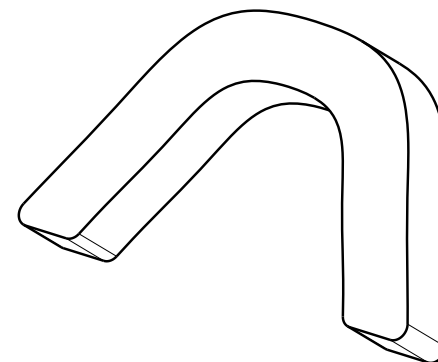
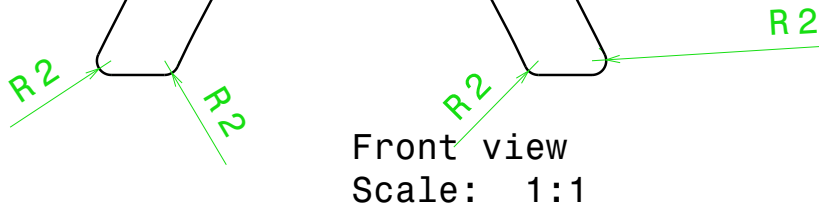
DESIGNED BY: Jourm	
DATE: 2015-05-13	
CHECKED BY: XXX	
DATE: 2015-5-13	
SIZE A4	
SCALE 1:1	WEIGHT (kg) XXX

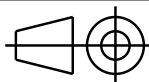
Stödkloss		I	-
		H	-
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		F	-
		E	-
DASSAULT SYSTEMES		D	-
		C	-
		B	-
DRAWING NUMBER XXX		A	-
SHEET 1/1			

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D

A



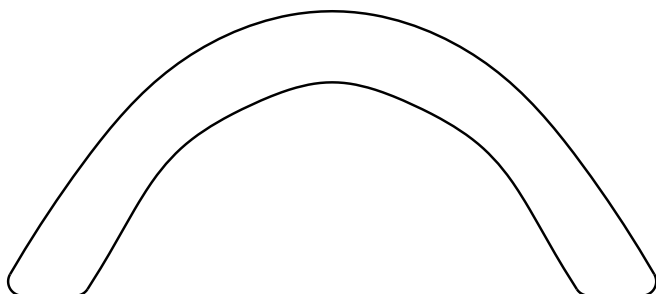
DESIGNED BY: Journ		Bakre Ledfäste		I	—
DATE: 2015-05-13				H	—
CHECKED BY: XXX				G	—
DATE: 2015-05-13				F	—
SIZE A4		DASSAULT SYSTEMES		E	—
SCALE 1:1	WEIGHT (kg) 0,01			D	—
		DRAWING NUMBER LED_bak	SHEET 1 / 1	C	—
				B	—
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D

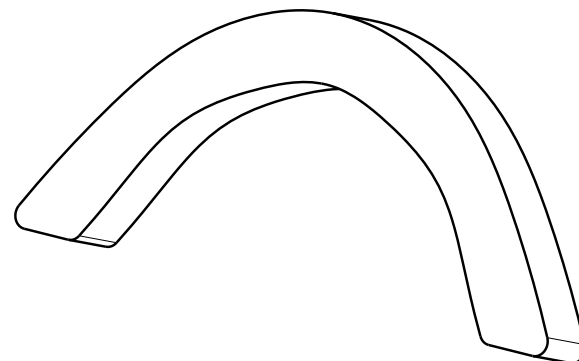
C

B

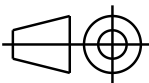
A



Front view
Scale: 1:1

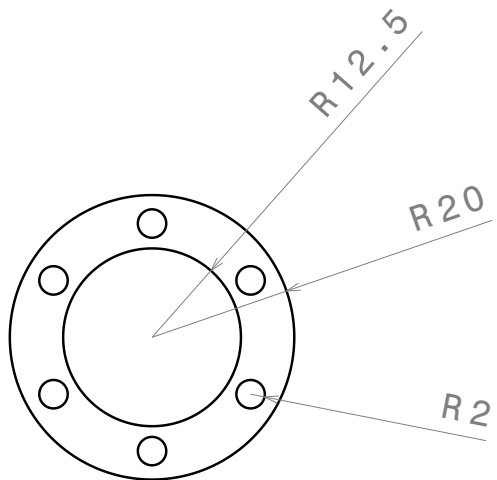


Isometric view
Scale: 1:1

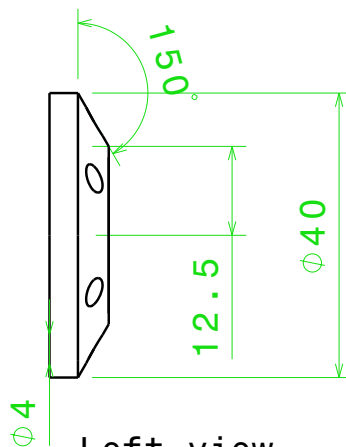
DESIGNED BY: Jourm		Främre Ledfäste		I	—
DATE: 2015-05-13				H	—
CHECKED BY: XXX				G	—
DATE: 2015-05-13				F	—
SIZE A4		DASSAULT SYSTEMES		E	—
SCALE 1:1	WEIGHT (kg) XXX	DRAWING NUMBER XXX	SHEET 1 / 1	D	—
This drawing is our property; it can't be reproduced or communicated without our written agreement.				C	—
				B	—
				A	—

D

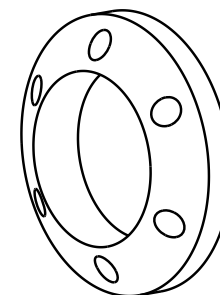
A



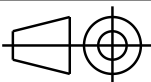
Front view
Scale: 1:1



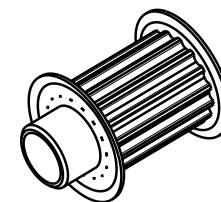
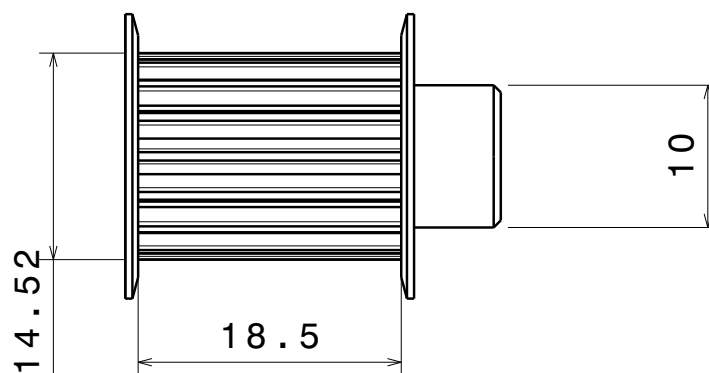
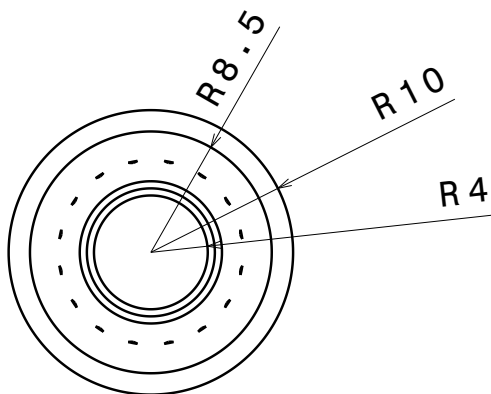
Left view
Scale: 1:1

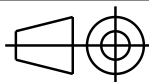


Isometric view
Scale: 1:1

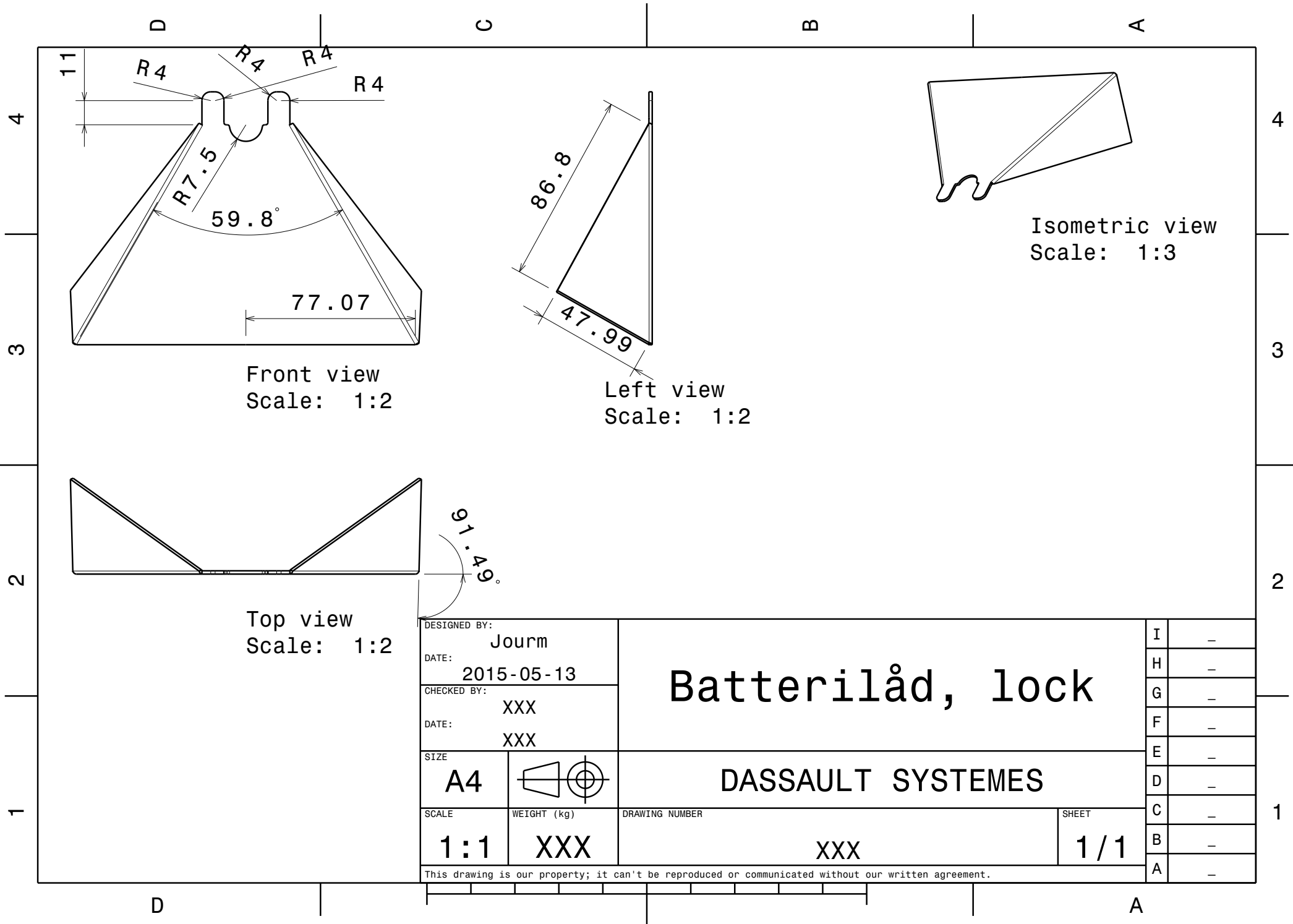
DESIGNED BY: Journ		Yttre bricka		I	—
DATE: 2015-05-13				H	—
CHECKED BY: XXX				G	—
DATE: 2015-05-13				F	—
SIZE A4		DASSAULT SYSTEMES		E	—
				D	—
SCALE 1:1	WEIGHT (kg) XXX	DRAWING NUMBER XXX		C	—
				B	—
		SHEET 1 / 1		A	—
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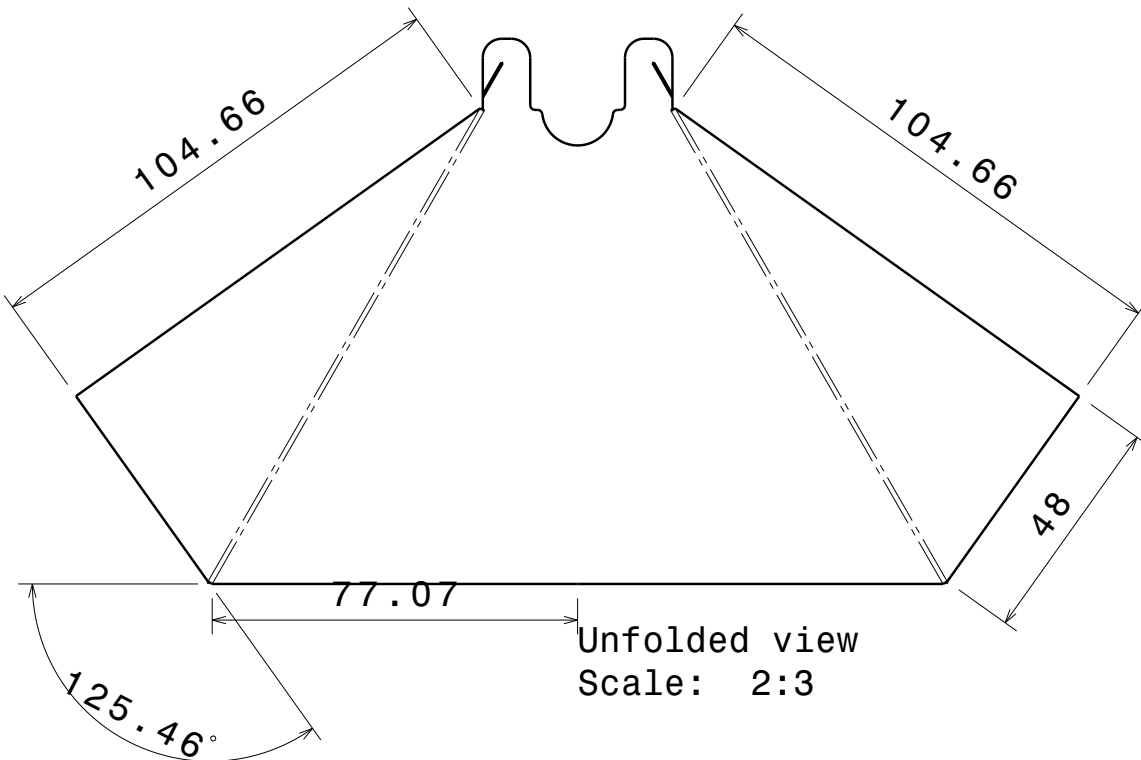
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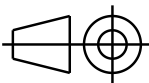


DESIGNED BY: Journ		liten remskiva		I	—
DATE: 2015-05-13				H	—
CHECKED BY: XXX				G	—
DATE: 2015-05-13		DASSAULT SYSTEMES		F	—
SIZE A4				E	—
SCALE 1:1	WEIGHT (kg) XXX			D	—
DRAWING NUMBER XXX		SHEET 1 / 1		C	—
				B	—
				A	—
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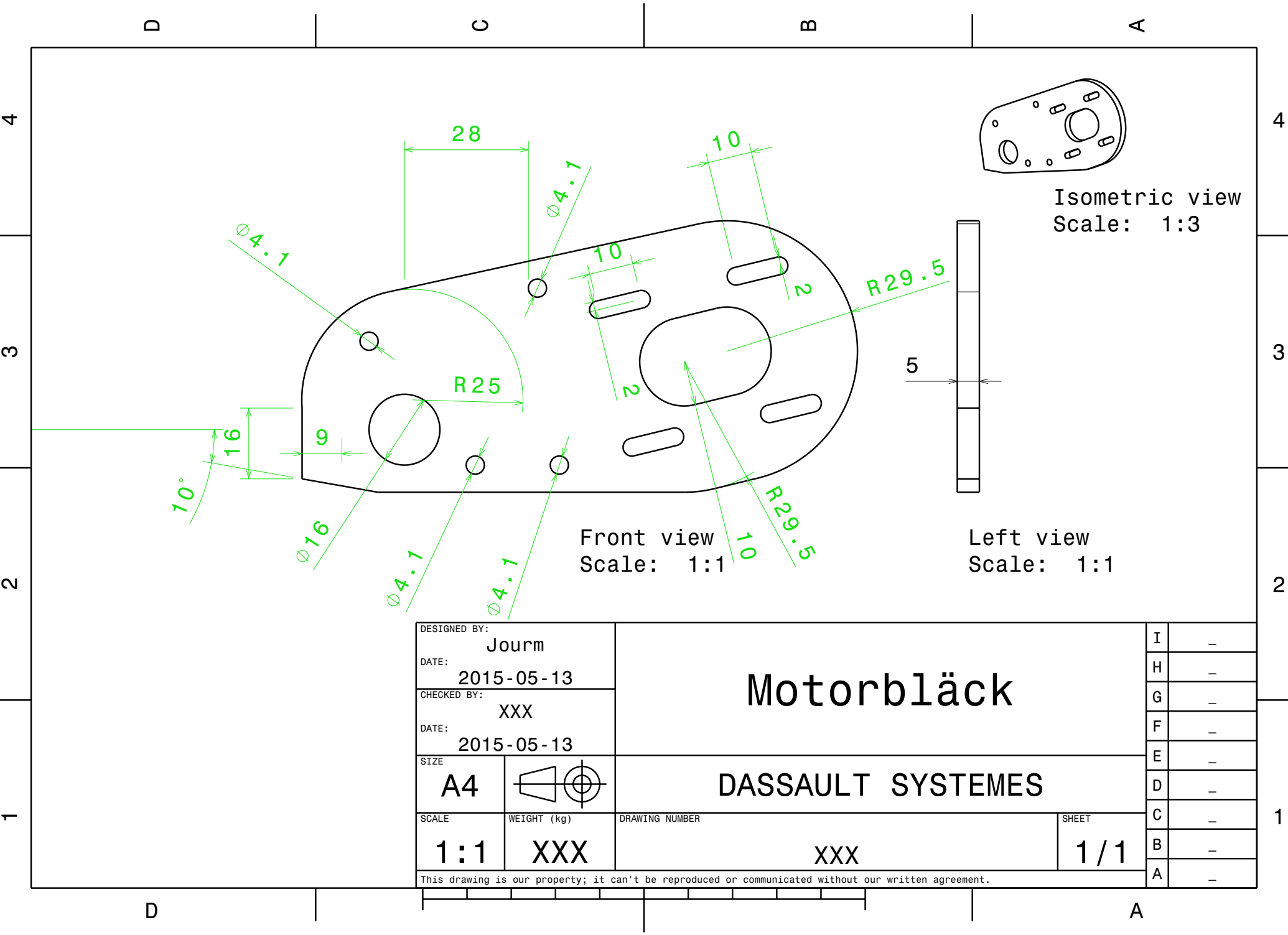


DESIGNED BY: Jourm	
DATE: 2015-05-13	
CHECKED BY: XXX	
DATE: XXX	
SIZE A4	
SCALE 1:1	WEIGHT (kg) XXX

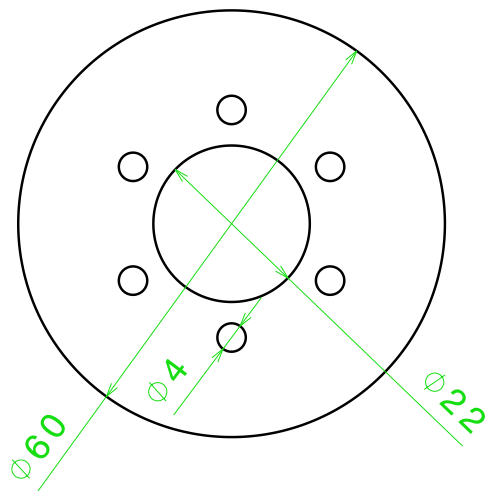
Batterilåda, lock		
		DASSAULT SYSTEMES
DRAWING NUMBER XXX		SHEET 1 / 1

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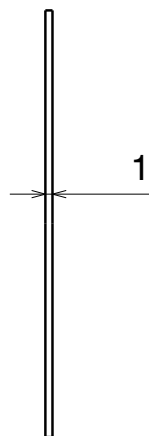
I	-
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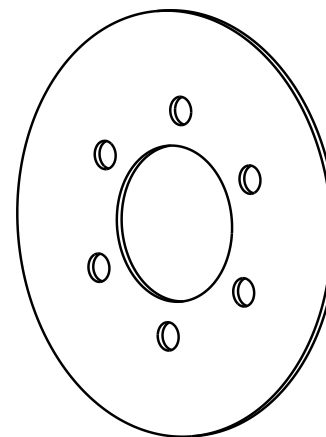
DESIGNED BY: Journ		Motorbläck		I	-
DATE: 2015-05-13				H	-
CHECKED BY: XXX				G	-
DATE: 2015-05-13		DASSAULT SYSTEMES		F	-
SIZE A4				E	-
				D	-
SCALE 1:1	WEIGHT (kg) XXX	DRAWING NUMBER XXX	SHEET 1 / 1	C	-
				B	-
				A	-
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Front view
Scale: 1:1



Left view
Scale: 1:1



Isometric view
Scale: 1:1

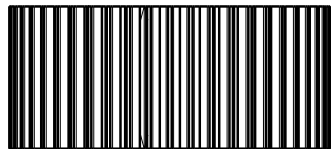
DESIGNED BY: Jourm		Inre bricka		I	—
DATE: 2015-05-13				H	—
CHECKED BY: XXX				G	—
DATE: 2015-05-13				F	—
SIZE A4		DASSAULT SYSTEMES		E	—
SCALE 1:1	WEIGHT (kg) XXX			D	—
DRAWING NUMBER XXX		SHEET 1 / 1	C	—	
This drawing is our property; it can't be reproduced or communicated without our written agreement.			B	—	
			A	—	

D

C

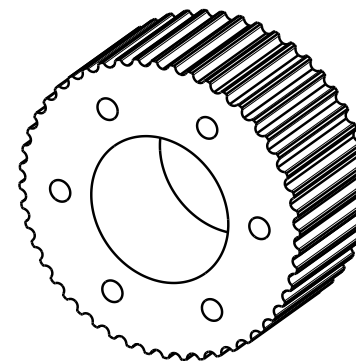
B

A

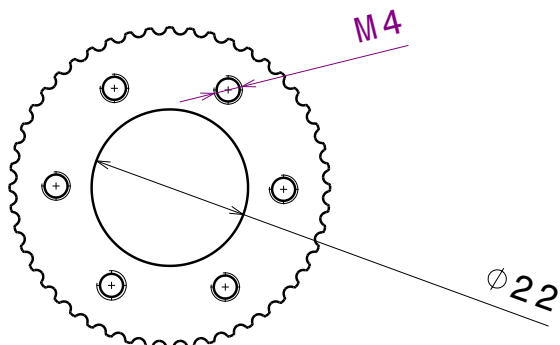


20

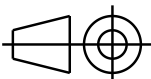
Bottom view
Scale: 1:1



Isometric view
Scale: 1:1



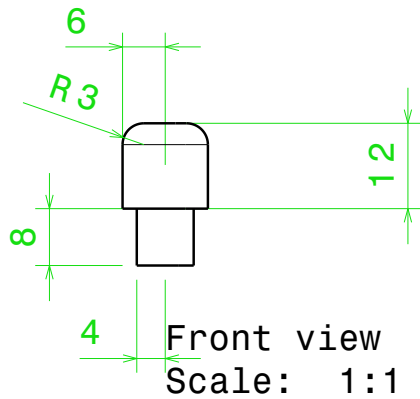
Front view
Scale: 1:1

DESIGNED BY: Journ		3m 48 kugg		I	—
DATE: 2015-05-13				H	—
CHECKED BY: XXX				G	—
DATE: 2015-05-13		DASSAULT SYSTEMES		F	—
SIZE A4				E	—
SCALE 1:1	WEIGHT (kg) XXX	DRAWING NUMBER XXX		D	—
				C	—
				B	—
				A	—
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		SHEET 1 / 1			

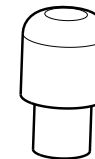
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D

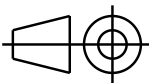
A



Top view
Scale: 1:1



Isometric view
Scale: 1:1

DESIGNED BY: Jourm		Tapp		I	-
DATE: 2015-05-13				H	-
CHECKED BY: XXX				G	-
DATE: 2015-05-13				F	-
SIZE A4		DASSAULT SYSTEMES		E	-
SCALE 1:1	WEIGHT (kg) XXX	DRAWING NUMBER XXX		D	-
		SHEET 1 / 1		C	-
				B	-
				A	-

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