National Qualifications 2025

X835/77/11

Graphic Communication Supplementary sheets

WEDNESDAY, 30 APRIL

1:00 PM – 3:30 PM

Supplementary sheet 1 for use with question 1, supplementary sheets 2 and 3 for use with question 3 and supplementary sheet 4 for use with question 5.

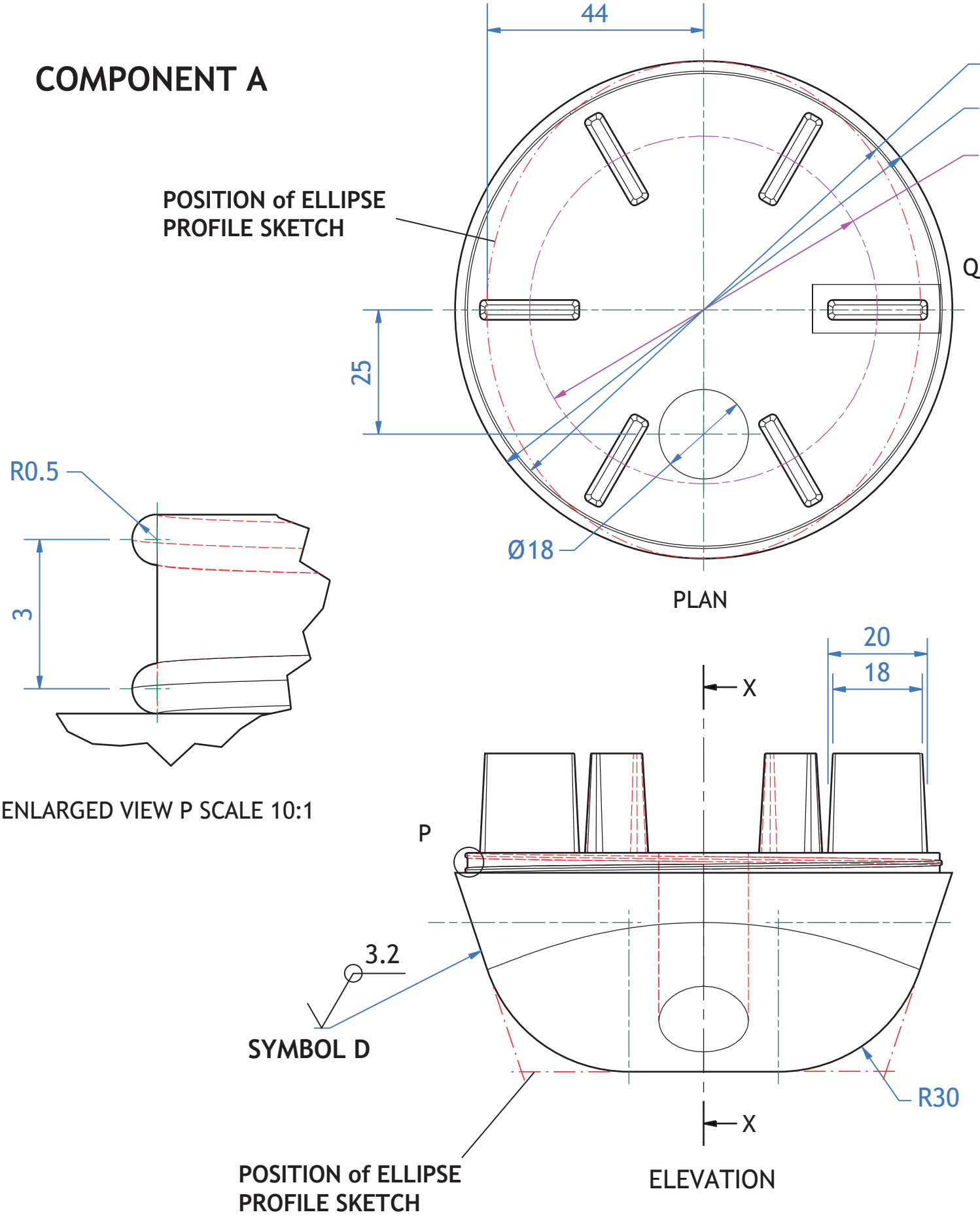
X8357711

[BLANK PAGE]

DO NOT WRITE ON THIS PAGE


REGISTER / LOGIN
CUSTOMER SUPPORT
CYCLECTRIC
ROAD
GRAVEL
COMMUTER
MOUNTAIN
CROSS
ALU minium SL
CAR bon SL
TI tanium SL
FIND OUT MORE
OUR APPROACH TO SUSTAINABILITY
OUR TECHNOLOGY
OUR ACCESSORY RANGE
FLEXIBLE WAYS TO PAY
With several flexible ways to pay, you can choose to pay for your dream ride outright or spread the payments into small, manageable instalments for added convenience.
30 DAY TEST RIDE
Enjoy the added reassurance of a test ride. Because we want you to be 100% happy with your purchase, you can ride your bike and return it for a refund or any changes to be made, within 30-days. Terms and conditions apply.
IN-STORE AND ONLINE
Take advantage of our industry leading BikeBuilder customisation or visit us in-store. From choosing the right bike, sizing assistance and advice, our passionate team of bike experts are here to help.
BIKE BUILDER CUSTOMISATION
ROAD BIKE
360°
3D INTERACTIVE VIEW
Small
5'5" - 5'7"
165 - 170cm
SELECT
Medium
5'7" - 5'10"
170 - 178cm
SELECT
Large
5'10" - 6'1"
178 - 185cm
SELECT
Frame Colour
Cyan d'Azur Flip
Voodoo Bronze Flip
Reflex Green Flip
Reflex Blue Flip

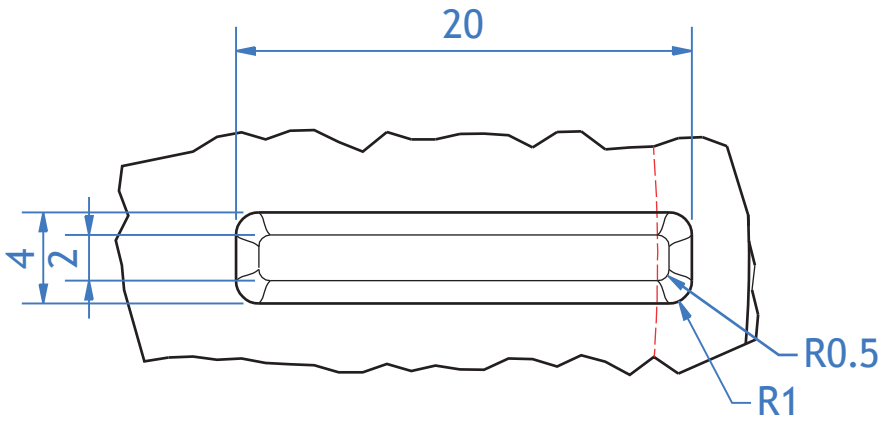
COMPONENT A


44
POSITION of ELLIPSE
PROFILE SKETCH
Q
25
Ø18
PLAN
R0.5
3
ENLARGED VIEW P SCALE 10:1
20
18
X
P
3.2
SYMBOL D
R30
X
POSITION of ELLIPSE
PROFILE SKETCH
ELEVATION

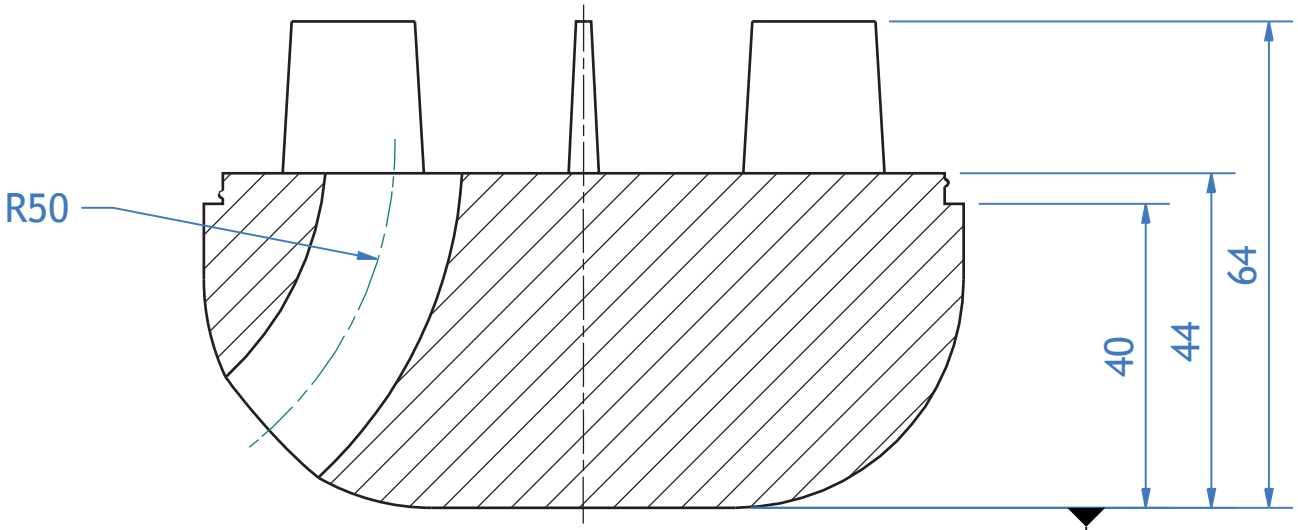
Ø95 ± 0.15 — TOLERANCE G

Ø100

PCD 70



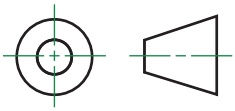
ENLARGED VIEW Q SCALE 3:1 (CENTRE LINES REMOVED FOR CLARITY)

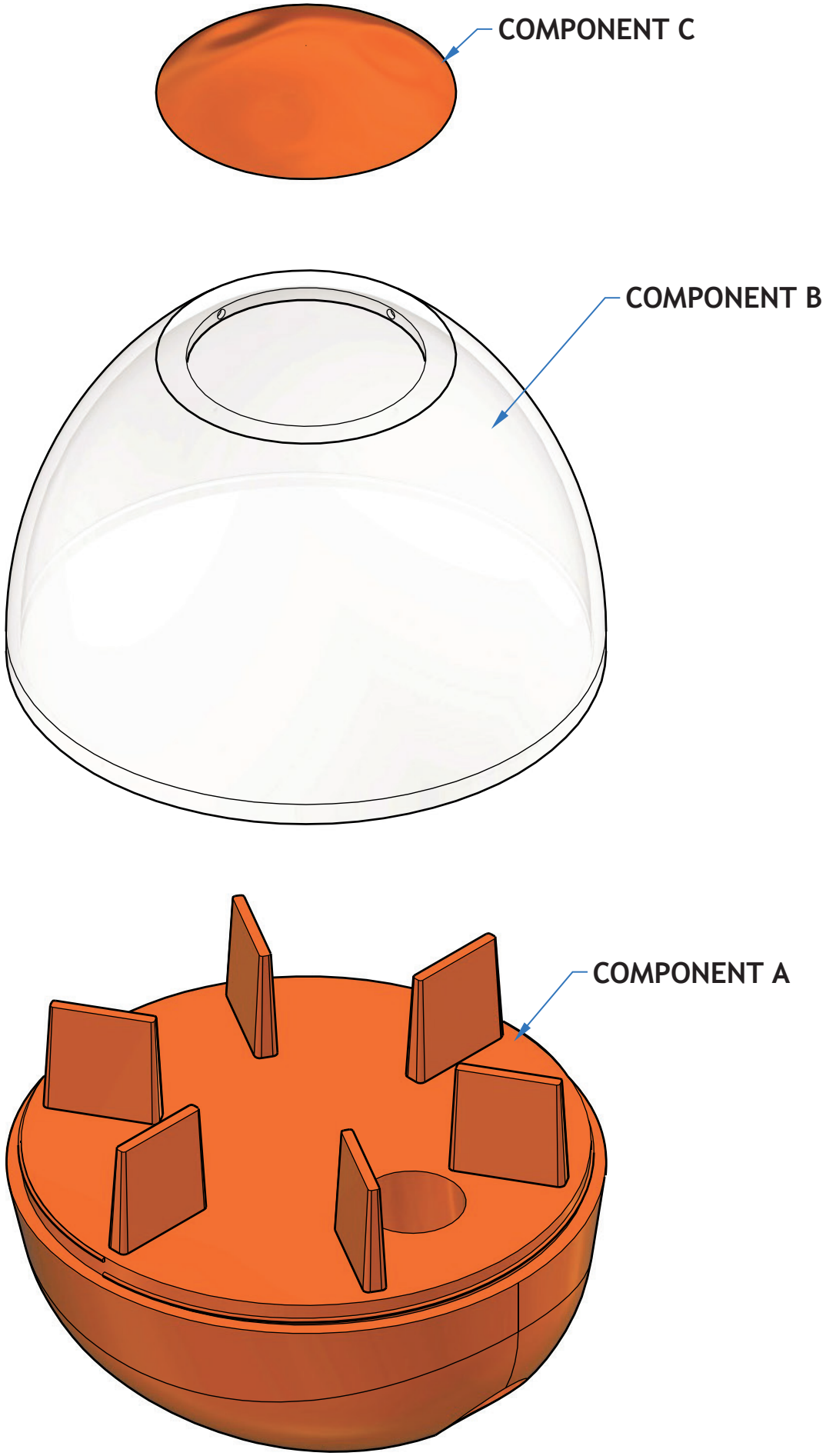


SECTION X-X

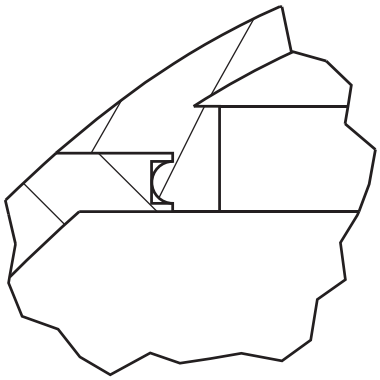
SYMBOL E

TOLERANCE F

TITLE: DOG TREAT TOY	
DRAWING NUMBER: 1	
ALL DIMENSIONS IN MM TOLERANCE ± 0.2 UNLESS OTHERWISE STATED	SCALE: 1:1
AUTHOR: A.NON	DATE: 10/10/23



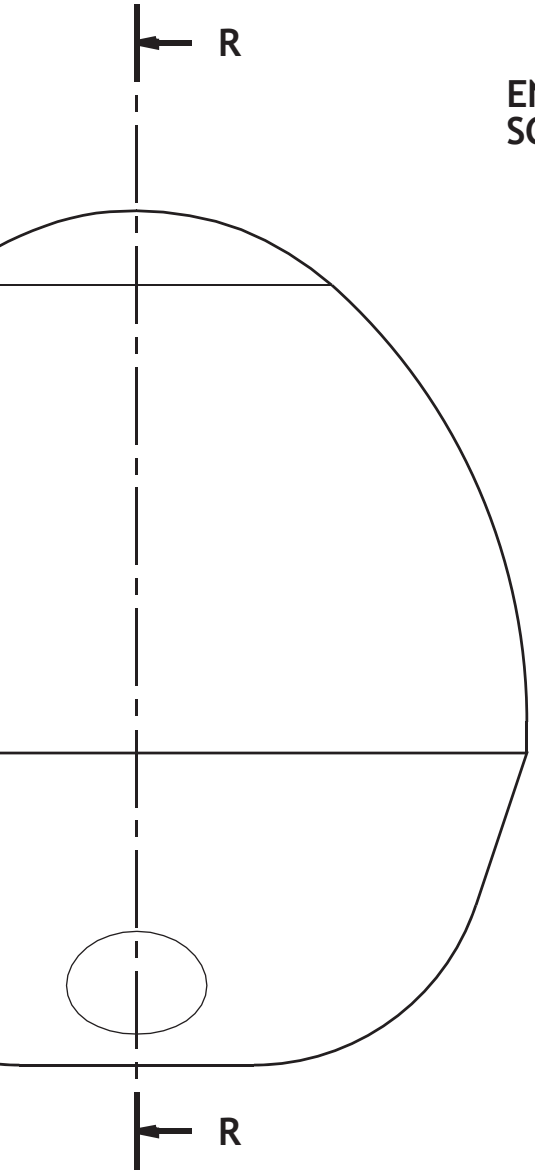
EXPLODED



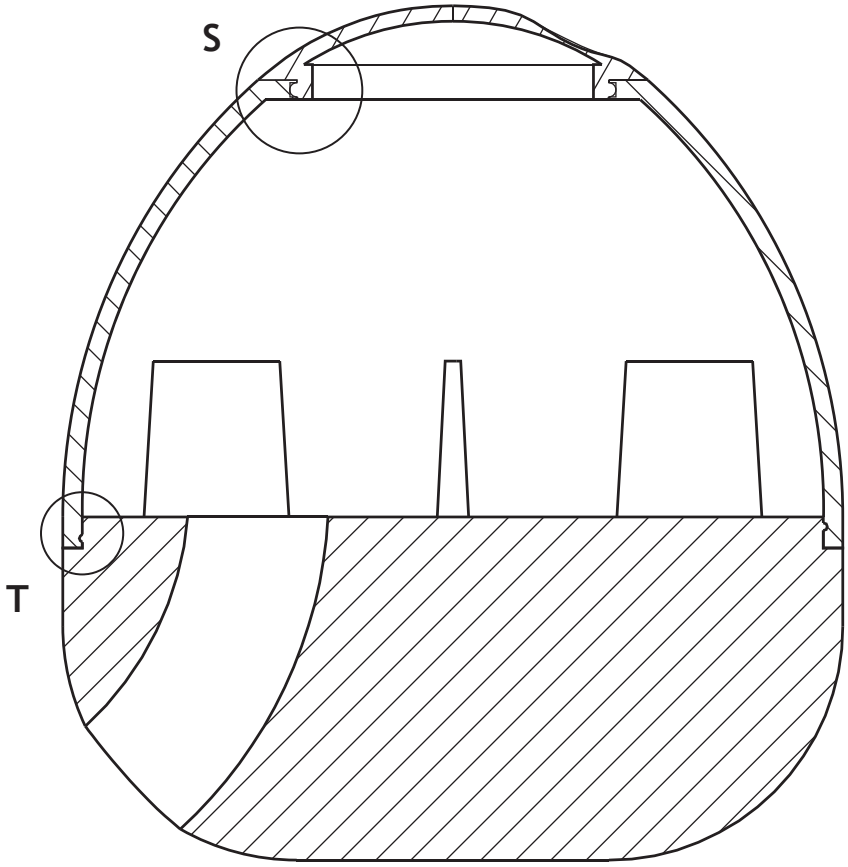
ASSEMBLED

CENTRE LINES HAVE BEEN REMOVED FOR CLARITY

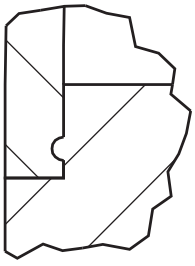
ENLARGED VIEW S
SCALE 4:1



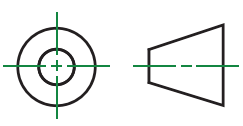
ELEVATION



SECTION R-R



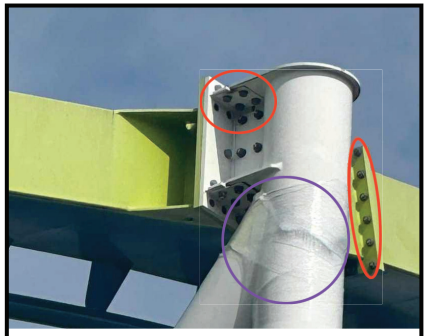
ENLARGED VIEW T
SCALE 4:1

TITLE: DOG TREAT TOY	
DRAWING NUMBER: 2	
EXPLODED AND ORTHOGRAPHIC VIEWS	SCALE: 1:1
AUTHOR: A.NON	DATE: 10/10/23

Specification

- Footprint: 66×40 m approx
- Height: 20.1 m
- First loop height: 20 m
- Second loop height: 15.4 m
- Track length: 425 m
- Max speed: 18 m/s (65 km/h)
- Acceleration max: 4.2 g
- Run time: 75/80 s
- Number of trains: 1 with 6 cars, 4 seats each
- Track material: Steel
- Foundation material: Concrete
- Foundation connected to supports using fixing bolts
- Frame, supports and tracks assembled using bolts and welding

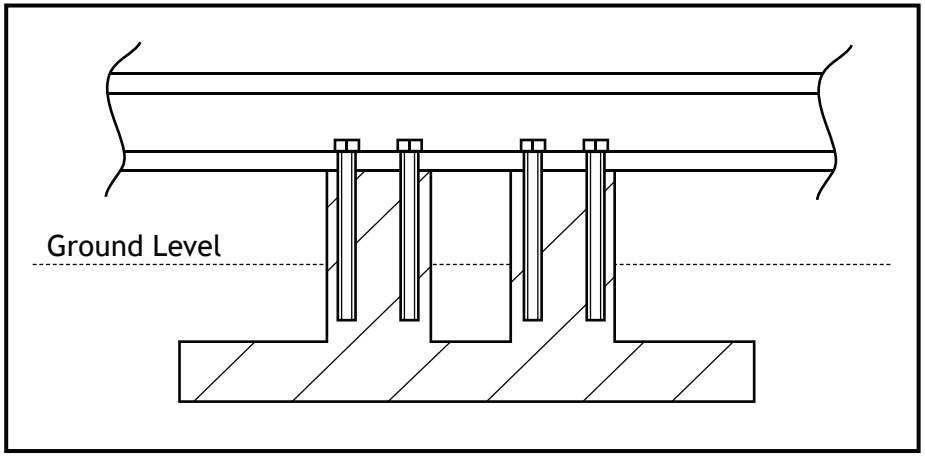
Joining Methods



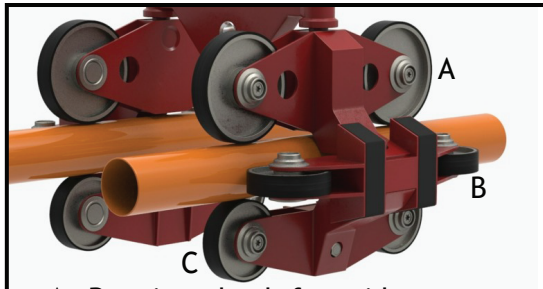
A: Fixing bolts with nut

B: Welded steel supports

Column Foundation (Not to BS8888)



Mechanical wheel and brake system

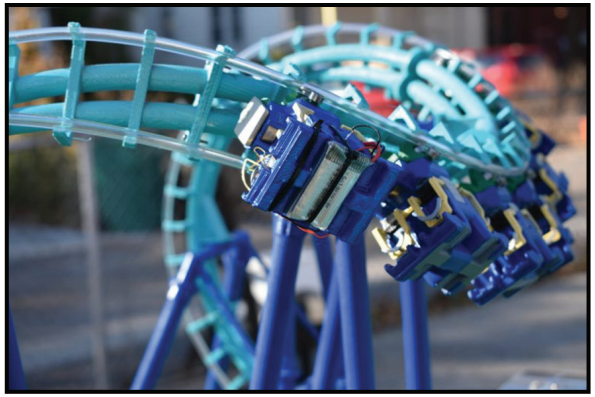


A: Running wheels for guidance

B: Side friction wheels for cornering

C: Up wheels to keep coaster on track

3D Printed model



[BLANK PAGE]

DO NOT WRITE ON THIS PAGE

[BLANK PAGE]

DO NOT WRITE ON THIS PAGE

[BLANK PAGE]

DO NOT WRITE ON THIS PAGE

[BLANK PAGE]

DO NOT WRITE ON THIS PAGE

Acknowledgement of copyright

Supplementary sheet 1 Pay icon: https://pixabay.com/vectors/money-wallet-bank-banknote-bill-3722123/

Location icon: https://pixabay.com/vectors/location-position-job-you-are-here-1132648/

Test icon: https://pixabay.com/vectors/checkmark-tick-check-yes-mark-303752/

Home icon: https://pixabay.com/vectors/house-icon-home-symbol-sign-308936/

Bike helmet: https://pixabay.com/photos/bicycle-helmet-helmet-bike-helmet-505399/

Supplementary sheet 4 Joining methods: Image is taken from Davide Mavillonio on LinkedIn, https://www.linkedin.com/posts/davide-mavillonio_fem-cfd-ansys-ugcPost-7082302878328995840-Wn4t/

SQA has made every effort to trace the owners of copyright of this item and seek permissions. We are happy to discuss permission requirements and incorporate any missing acknowledgement. Please contact question.papers@sqa.org.uk.

Column foundation photo: Image is taken from https://clarkreder.com/entertainment/projects/amusement/mystic-timbers-roller-coaster-foundations

SQA has made every effort to trace the owners of copyright of this item and seek permissions. We are happy to discuss permission requirements and incorporate any missing acknowledgement. Please contact question.papers@sqa.org.uk.

Mechanical wheel and brake system: Image is taken from https://free3d.com/3d-model/roller-coasterwheel-884.html

SQA has made every effort to trace the owners of copyright of this item and seek permissions. We are happy to discuss permission requirements and incorporate any missing acknowledgement. Please contact question.papers@sqa.org.uk.

3D printed model: Image is taken from 3D Printed Working Roller Coaster Model | MatterHackers

SQA has made every effort to trace the owners of copyright of this item and seek permissions. We are happy to discuss permission requirements and incorporate any missing acknowledgement. Please contact question.papers@sqa.org.uk.

Rollercoaster in motion model: Image is taken from See a Functional 3D-Printed Roller Coaster at SOLIDWORKS World 2019 | MySolidWorks

SQA has made every effort to trace the owners of copyright of this item and seek permissions. We are happy to discuss permission requirements and incorporate any missing acknowledgement. Please contact question.papers@sqa.org.uk.