Vehicle Certification Agency

THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

COMMUNICATION CONCERNING THE APPROVAL GRANTED (1) / ~~APPROVAL EXTENDED (1)~~ / ~~APPROVAL REFUSED (1)~~ / ~~APPROVAL WITHDRAWN (1)~~ / ~~PRODUCTION DEFINITIVELY DISCONTINUED (1)~~ OF A TYPE OF PROTECTIVE HELMET WITHOUT / ~~WITH~~ (1) ~~ONE / MORE~~ (1) SPECIFIC ACCESSORY TYPE(S) PURSUANT TO UN REGULATION NO. 22.06

E11 Approval No: E11*22R06/02*2090*00

Reason for extension: Not applicable

1. Trade mark: VEGA, AXOR, VESPA, BAJAJ, SHIRO, TVS RACING, ROYAL ENFIELD, SHAFTPRO, ALTRAX, SHAFT, STORMER, BROKEN HEAD, BR, KTM, UMA, XSPORTS, KONTROL, SPARTAN, ISP, BIKE IT, X-KOV, KOV, GENSLER, MX915, CLASSIC, TVS, APRILIA, JAWA, YEZDI, NO RISK & HERO, HXP, BR MOTORS, DELIVEROO

2. Type: Apex "P"

3. Sizes: XL (61 cm), L (59-60 cm), M (57-58 cm), S (55-56 cm), XS (53-54 cm)

4. Manufacturer's name: Vega Auto Accessories Pvt. Ltd.

5. Address:

   Plot No. 12-B, Sy. No. 342,
   BEMCIEL Industrial Estate, Udyambag,
   Belgaum – 590008
   Karnataka
   INDIA

6. If applicable, name of manufacturer's representative: Not applicable

7. Address: Not applicable

8. Brief description of helmet: See manufacturer's information documents

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9. ~~Helmet without lower face cover (J)~~ / with protective lower face cover (P) ~~/ with non protective lower face cover (NP) / with detachable or movable lower face cover (P/J)~~ (1)

10. Type of visor or visors: “Apex Visor “P” also see visor approval E11*22R06/02*1034*00

11. Brief description of visor or visors, and inner visor if any: Outer visor & Sunshield inside the outer visor. Also see visor approval E11*22R06/02*1034*00

12. Helmet ready for specific accessory (SA) / ready for universal accessories (UA) (1): Without accessories

13. Accessories included in the helmet homologation and functionality: Without accessories

14. If UA helmet, speakers (S or S45) / Microphone (M) / Front mounting (F) / Side mounting (L), Rear mounting (R) (1): Not applicable

15. Submitted for approval on: 20 August 2024

16. Technical service responsible for conducting approval tests: Vehicle Certification Agency

17. Date of report issued by that service: 23 August 2024

18. Number of report issued by that service: VCA010801-1

19. Comments: Nil

20. Approval GRANTED / ~~EXTENDED / REFUSED / WITHDRAWN~~ (1)

21. Place: BRISTOL

22. Date: 08 SEPTEMBER 2024

23. Signature:



C McCABE
Chief Technical and Statutory Operations Officer



24. The following documents, bearing the approval number shown above, are available on request

(1) Strike out what does not apply

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APPROVAL NUMBER: E11*22R06/02*2090*00

INFORMATION PACKAGE CONTENTS

INDEX REVISION NUMBER: 00

Conformity of Production (COP) Declaration	**COP Confirmed**	
Assessment Method	**VCA Audit & Control Plans**	
Date of Initial Clearance	**February**	**2016**
Date of Last Clearance	**April**	**2024**

Total number of sheets: 20 (Twenty)

Reasons for Revision: Not applicable

Revision Date
&
Office Stamp

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R22.06/ECE TYPE-APPROVAL OF PROTECTIVE HELMETS AND THEIR VISORS FOR DRIVERS AND PASSENGERS OF MOTORCYCLES AND MOPEDS

INDEX OF DOCUMENTATION

Sl. No. Description

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2. DESCRIPTION OF THE HELMET / SHELL / RETENTION SYSTEM
3. RETENTION SYSTEM / PROTECTIVE PADDING
4. COMFORT PADDING/ OTHER CHARACTERISTICS
5. ACCESSORIES & USER INSTRUCTIONS
6. ASSEMBLY DRAWING & VENTILATION LOCATIONS & ITS DIEMESIONS -Annex-1A & Annex-1B
7. FRONT VIEW ASSEMBED HELEMT WITH DIMENSIONS -Annex-2
8. SIDE VIEW ASSEMBLY HELMET WITH DIMENSIONS-Annex-3
9. SIDE EPS DRAWING-Annex-4
10. LINER WITH CROSS SECTION DRAWINGS-Annex-5
11. MOUTH CAP EPS DRAWINGS-Annex-6
12. SPOILER PART & RIVET DRAWING -Annex-7
13. NOSE GAURD & JAW PAD PART DRAWING -Annex-8
14. DOUBLE D-RING, QUICK RELEASE MECHANISM PART & CHINSTRAP ASSEMBLY DRAWING-Annex-9A & 9B

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R22.06/ECE TYPE-APPROVAL OF PROTECTIVE HELMETS AND THEIR VISORS FOR DRIVERS AND PASSENGERS OF MOTORCYCLES AND MOPEDS

1. GENERAL INFORMATION

1.1 Make **:- VEGA**

1.2 Trademark: **VEGA,AXOR,VESPA,BAJAJ,SHIRO,TVS RACING, ROYAL ENFIELD, SHAFTPRO, ALTRAX, SHAFT, STORMER, BROKEN HEAD, BR , KTM, UMA, XSPORTS, KONTROL, SPARTAN, ISP, BIKE IT, X-KOV, KOV, GENSLER, MX915,CLASSIC,TVS,APRILIA,JAWA,YEZDI, NO RISK & HERO, HXP, BR MOTORS, DELIVEROO.**

1.2. Type : **Apex "P"**

1.3. Variants : N/A

Versions : N.A.

1.4. Name and address of manufacturer:

Vega Auto Accessories Pvt. Ltd.
Plot No. 12-B, Sy. No. 342,
BEMCIEL Industrial Estate, Udyambag,
Belgaum – 590008, Karnataka INDIA

1.5. Name and address of manufacturer's Assembly Plant :

Vega Auto Accessories Pvt. Ltd.
Plot No. 12-B, Sy. No. 342,
BEMCIEL Industrial Estate, Udyambag,
Belgaum – 590008, Karnataka INDIA

1.6. If any,- name and address of manufacturer's authorized representative :

Not applicable

1.7. Location and method of affixing of the international approval mark:

Marked in a label sewn to the retention system

Note: This helmet type is provided with Outer Visor & Sun-shield

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2. DESCRIPTION OF THE HELMET

2.1. Type of Helmet: **Integral/~~Jet/Modular~~**

2.2. Type of lower face cover: **"P"- Protective/ ~~"NP"-Non Protective/ "J"/ "P/J"~~**

2.3. : Sizes As below

Size (cm)		Weight (grams)
XS	**53-54**	1650 ± 50
S	**55-56**	1650 ± 50
M	**57-58**	1650 ± 50
L	**59-60**	1650 ± 50
XL	**61**	1650 ± 50

3. SHELL

3.1. Material :**ABS**

3.2. Beading : Window Beading -**EPDM Rubber**
: Base Beading -**PVC (Poly Vinyl Chloride)**

3.3. Ventilation : **Yes**

3.3.1. Number of holes : **4**

3.3.2. Positioning on the shell: **Front Jaw, Top Vent Left & Right, Top Rear.**

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4. RETENTION SYSTEM

4.1. Chin strap: See Detail in Ref. drawing no. : **Annex-9A & 9B**

Material: **Polyester**

4.1.2. Width: **21mm**

4.2. Retention system: **Chin Strap (Double D Ring)/ Quick Release Mechanism ~~/Other~~**

4.3. Comfort padding of the retention system:

4.3.1. Composition:

Polyester cloth backed with polyurethane foam / synthetic leather or pure leather

4.3.2. Thickness: 3 **mm**

4.4. Fixing system to the shell:

By Rivets Ø4.5mmx10mm, 2 Nos**. (Refer Annex-7)**

5. PROTECTIVE PADDING

5.1. Number of pieces: 3

5.2. Composition:

Expanded Polystyrene (Ref. Attached Drawing Annex 4, 5 & 6)

5.3. Density:

(1) 65 kg/m^3 (Main part) For XS (53-54), S (55-56),- 580mm
(2) 65 kg/m^3 (Main part) For M(57-58), L (59-60), XL (61)- 620mm
(3) 30 kg/m^3 (Top part) For 53-54),S(55-56),M(57-58),L(59-60),XL (61)
(4) 70 kg/m^3 (Side part) For 53-54),S(55-56),M(57-58),L(59-60),XL (61)
(5) 70 kg/m^3(Mouth part) For 53-54),S(55-56),M(57-58),L(59-60),XL (61)

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6. COMFORT PADDING

6.1. Composition of:

Comfort padding : **Polyurethane foam**

Comfort tissue : **Polyester cloth**

Protection of the back of the neck: **Polyester cloth backed with PU foam**

7. OTHER CHARACTERISTICS

7.1. Indelible marking:

Place of Trade Mark	Back of the helmet
Place of Approval Mark	Swen in to the retention system
Place of weight mark	Back side of the helmet
Place of size mark	Back side of the helmet & Swen in to the Headband
Place of information to wearers	Swen in to the Headband

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8. ACCESSORIES

8.1. Spoiler

8.2. User's instructions

8.2.1 Text:

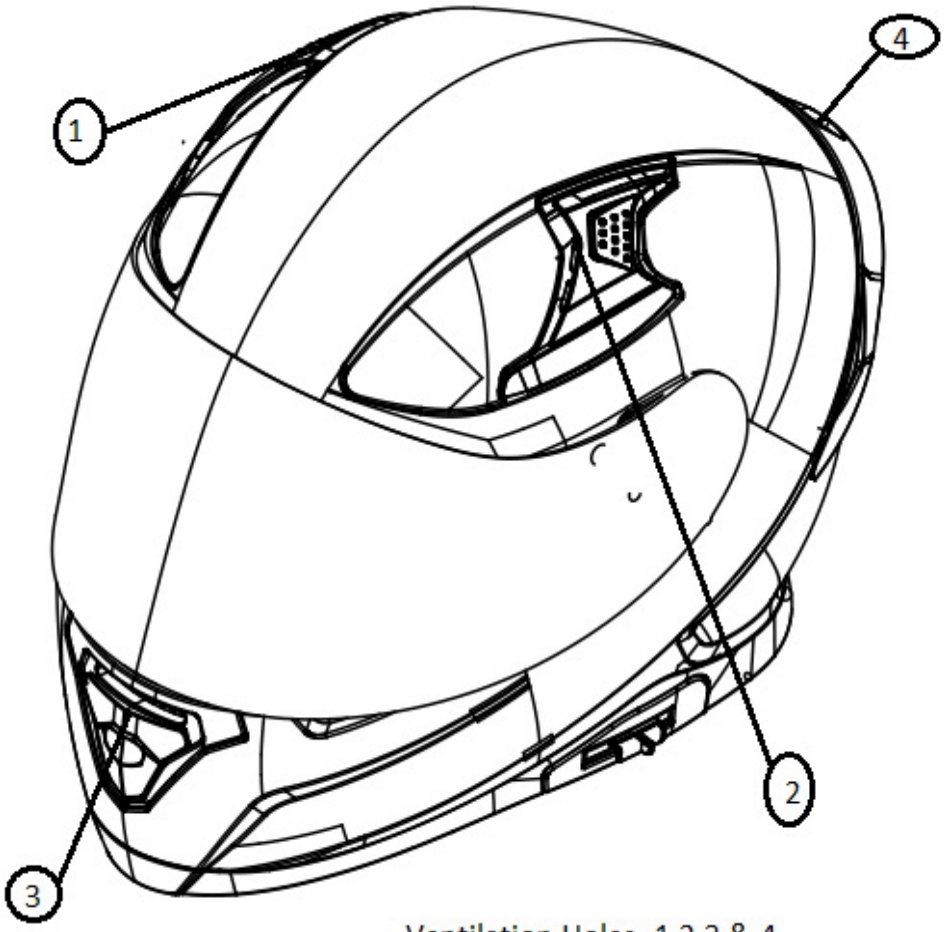
- "For adequate protection, this helmet must fit closely and be securely attached. Any helmet that has sustained a violent impact should be replaced"
- "'Warning' - Do not apply paint,stickers, petrol or other solvents to this helmet".
- The fastening of this visor is such that it will not be possible to remove it instantly from the line of sight with one hand should an emergency (such as headlamp glare or misting) occur.
- Allow adequate peripheral vision, especially when wearing goggles or other eye protection. Tinted goggles or face shield should not be worn at night (Daytime use only) or in any condition of poor visibility.
- Storage and care, When not in use, always store your helmets at room temperature in its original bag.Do not store in damp places, whatever the degree of environmental humidity.Do not store in warm places or close to heat sources (such as heaters)

8.2.2. Location:

Swen in to the Headband

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Annex-1A
ASSEMBLY DRAWING & VENTILATION LOCATIONS

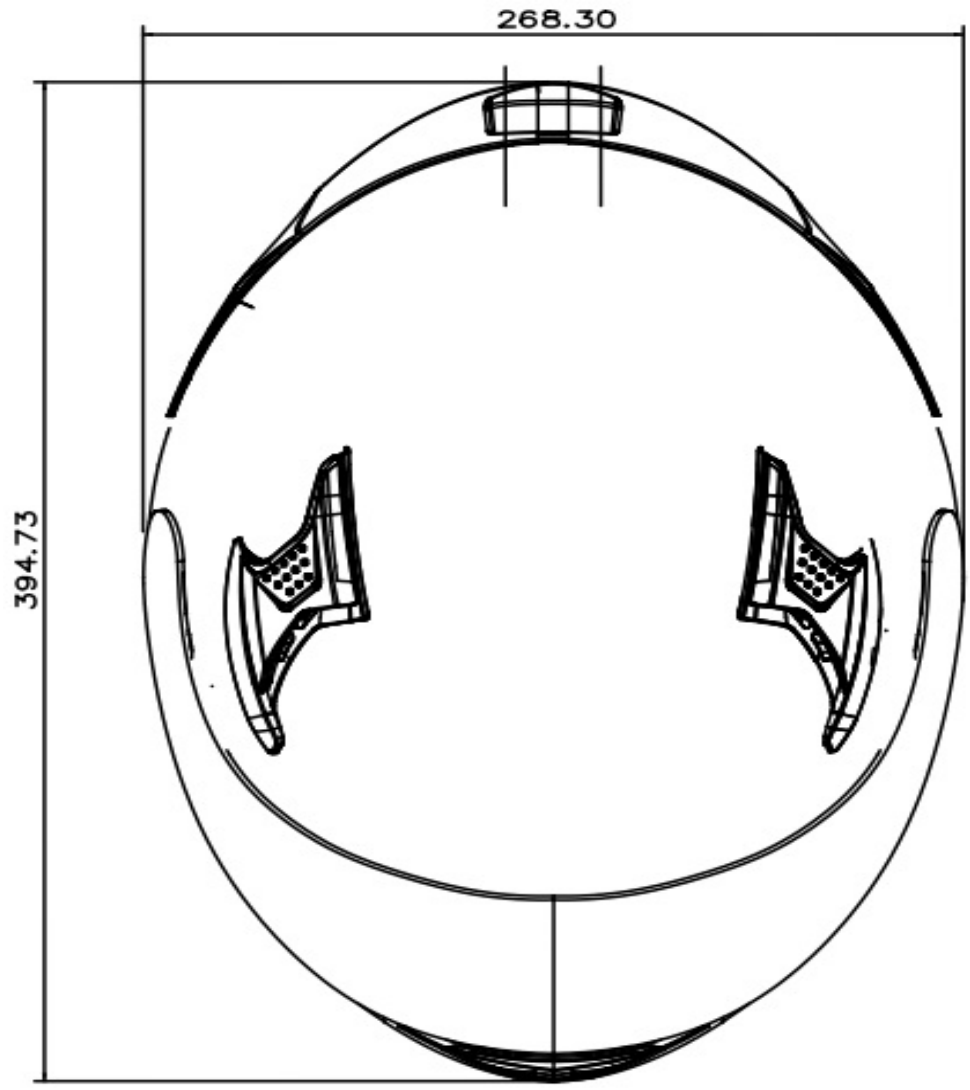


Ventilation Holes- 1,2,3 & 4

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Annex-1B

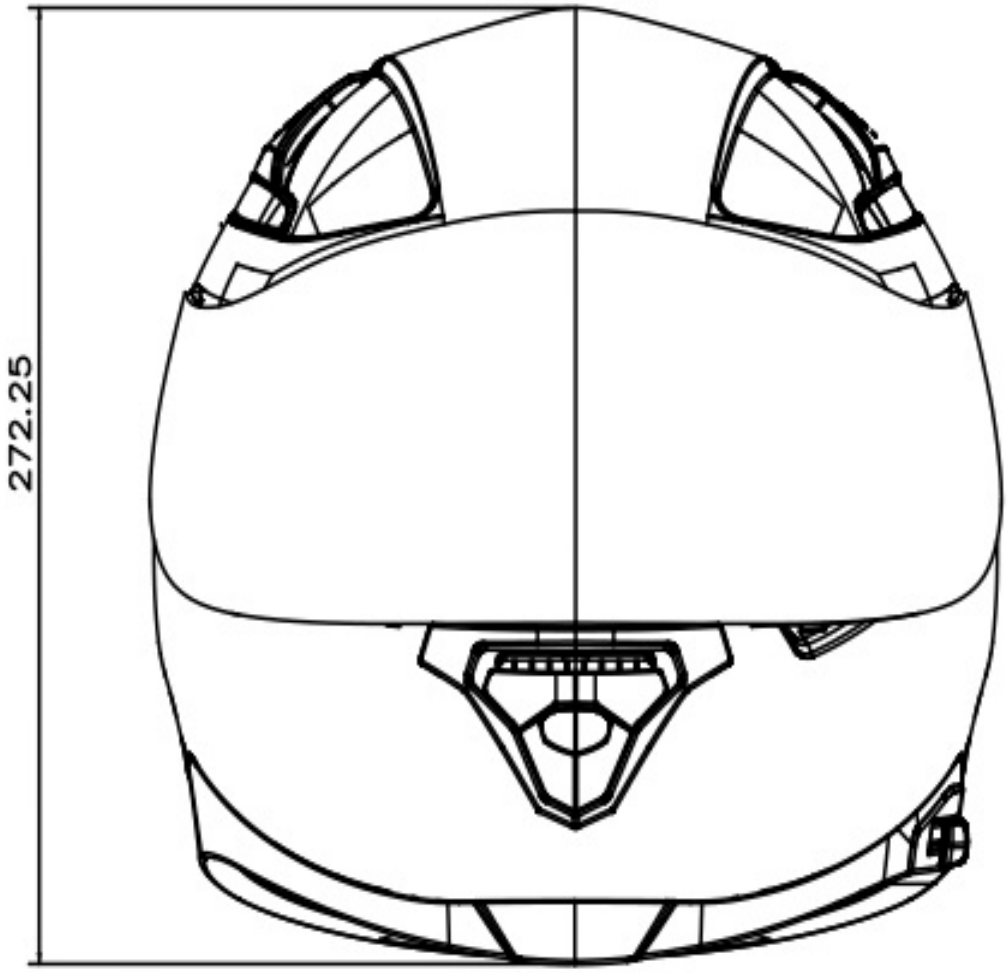
TOP VIEW ASSEMBLY DRAWING WITH DIMENSIONS



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Annex-2

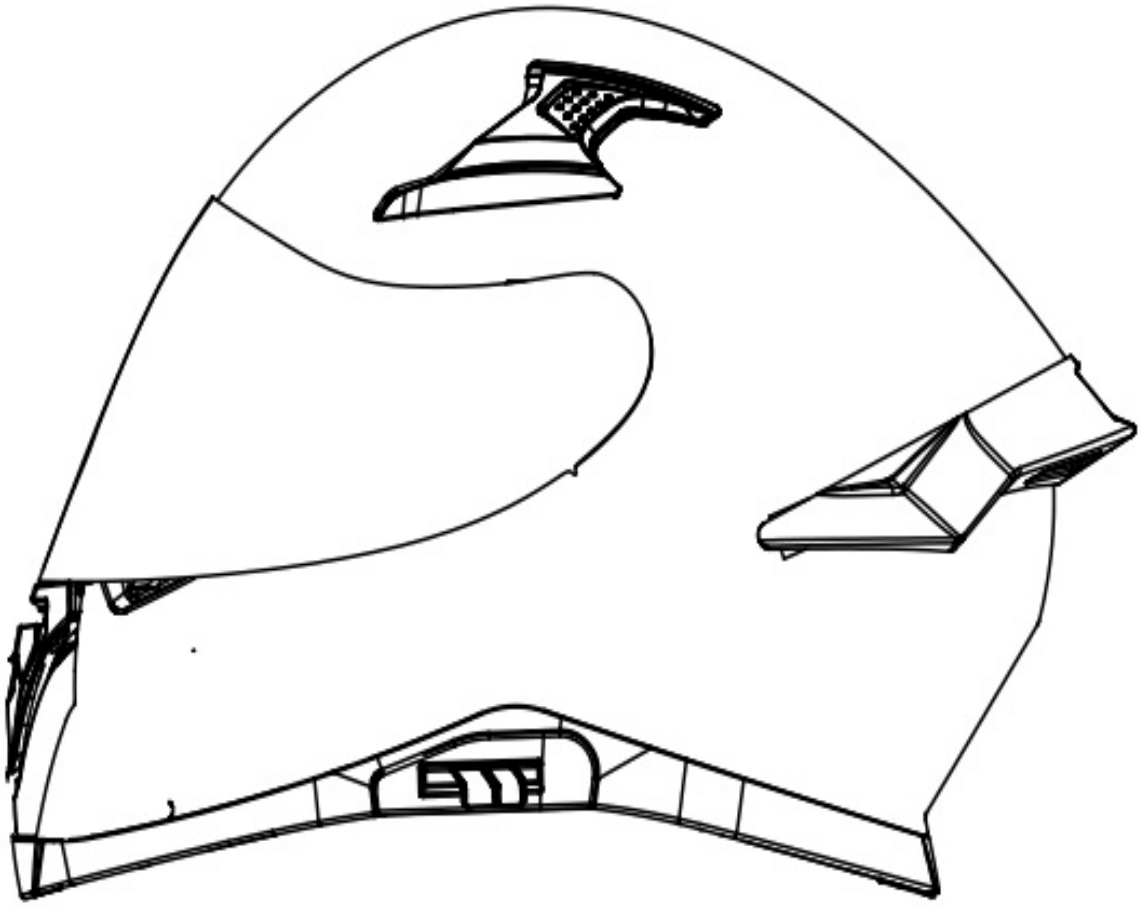
FRONT VIEW ASSEMBED HELEMT WITH DIMENSIONS



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Annex-3

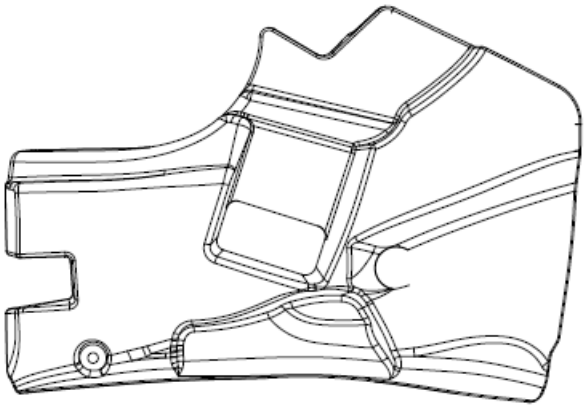
SIDE VIEW ASSEMBLY HELMET

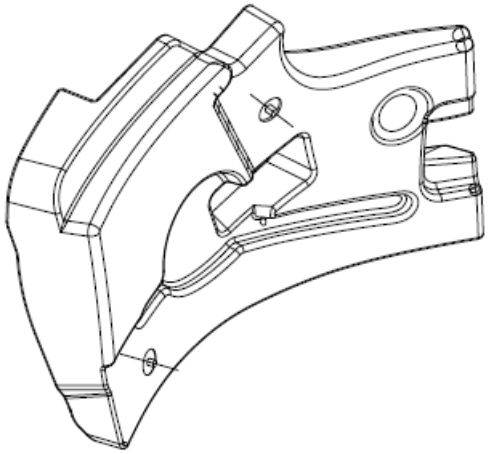


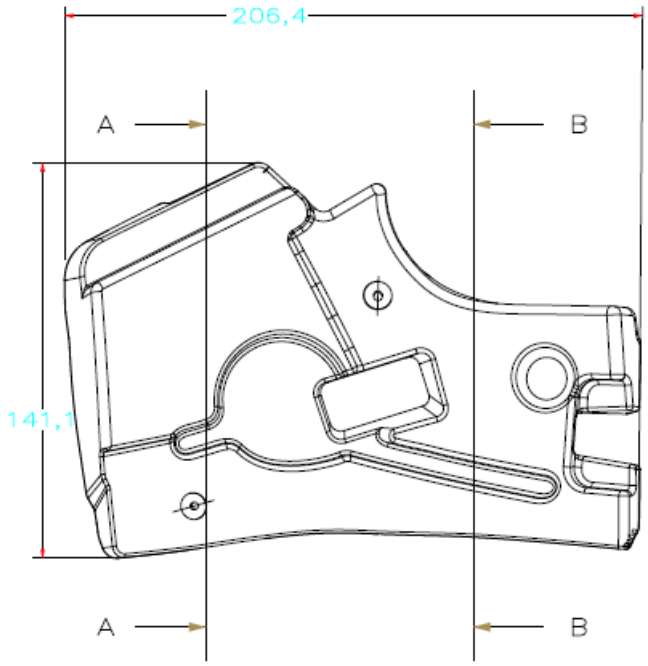
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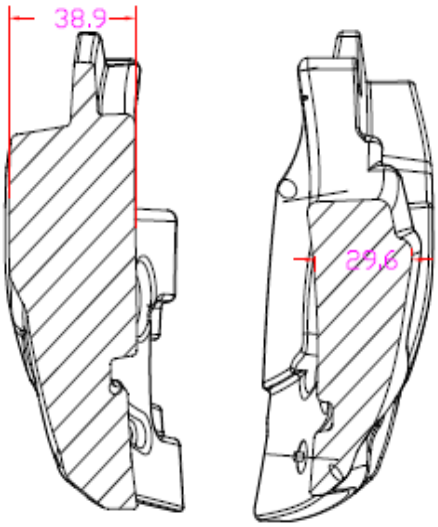
Annex-4

SIDE EPS





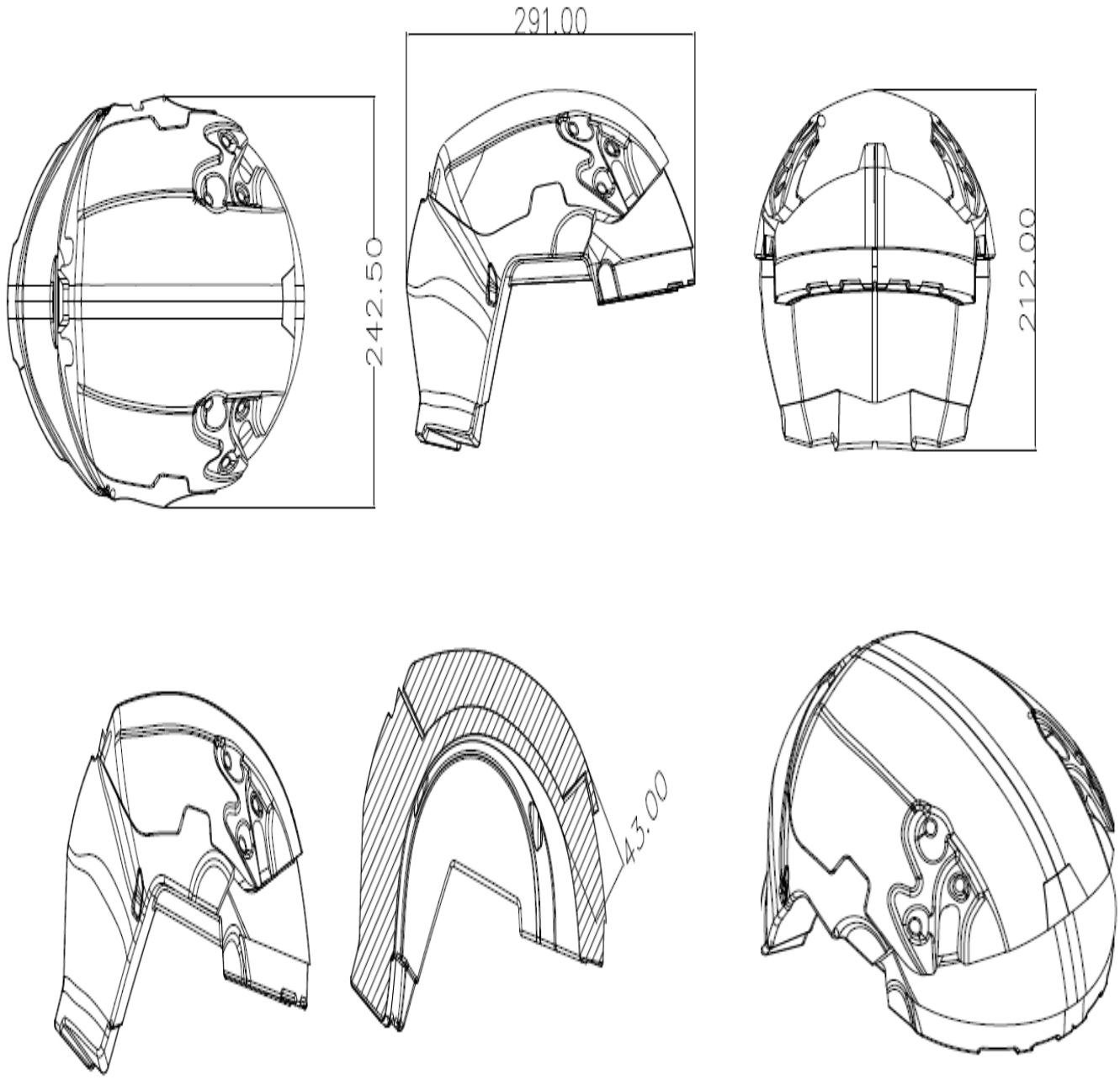




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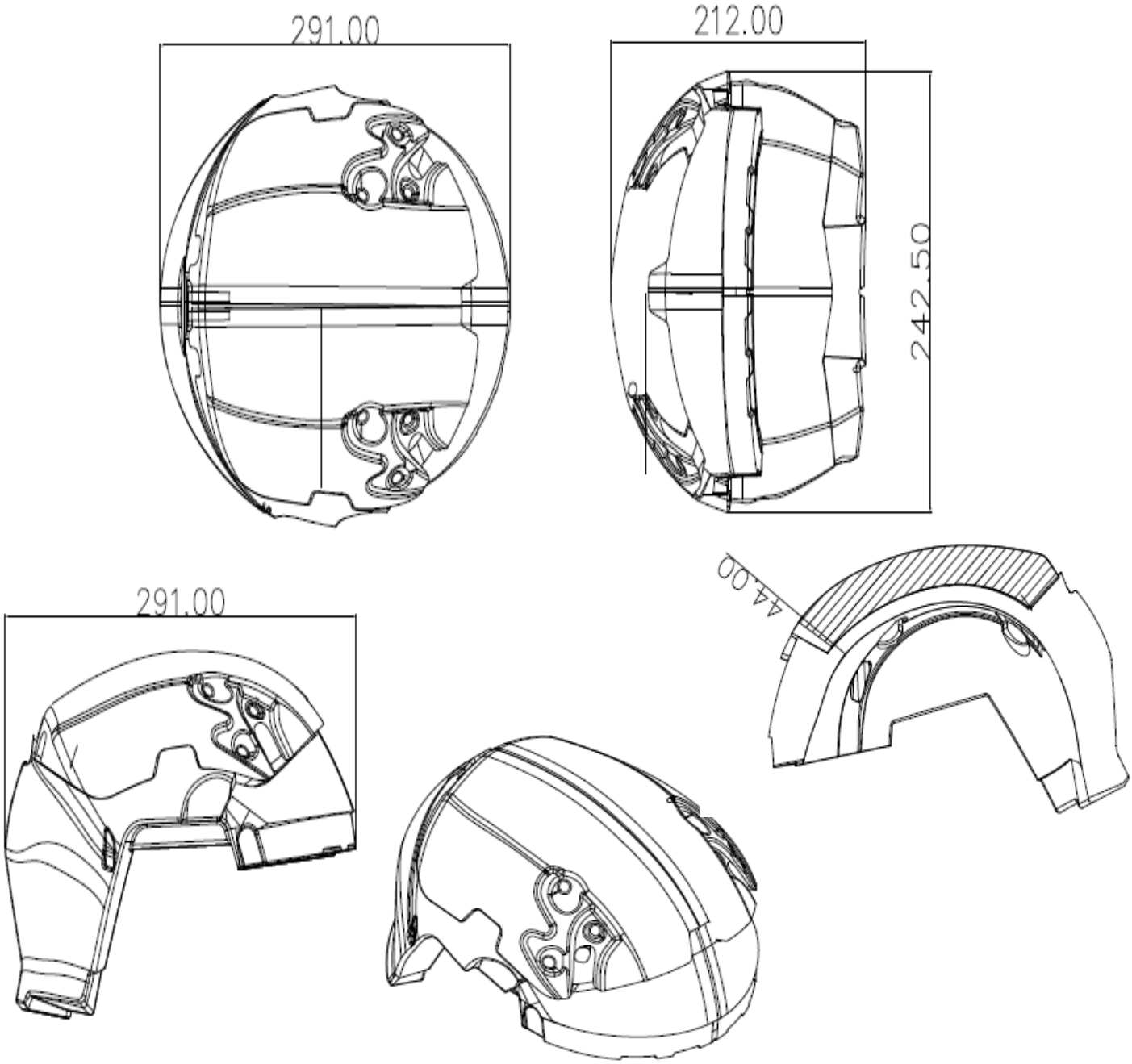
Annex-5

LINER-580 mm



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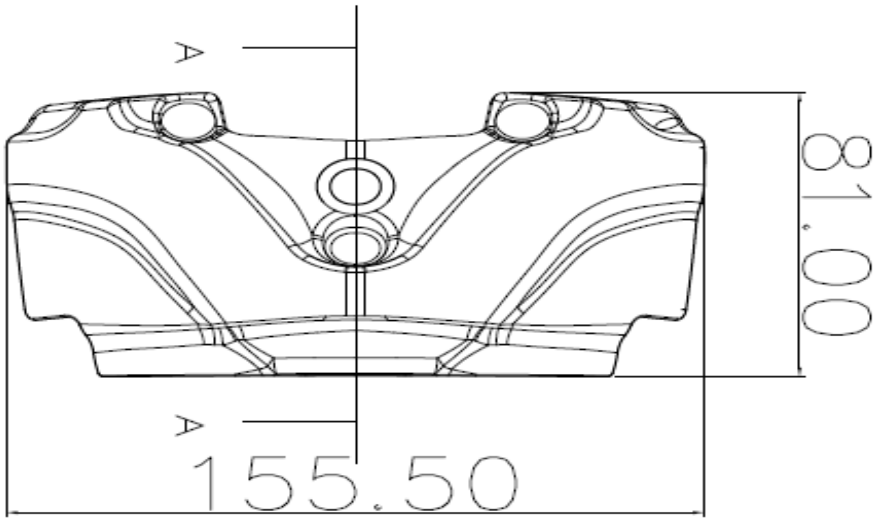
LINER-620 mm

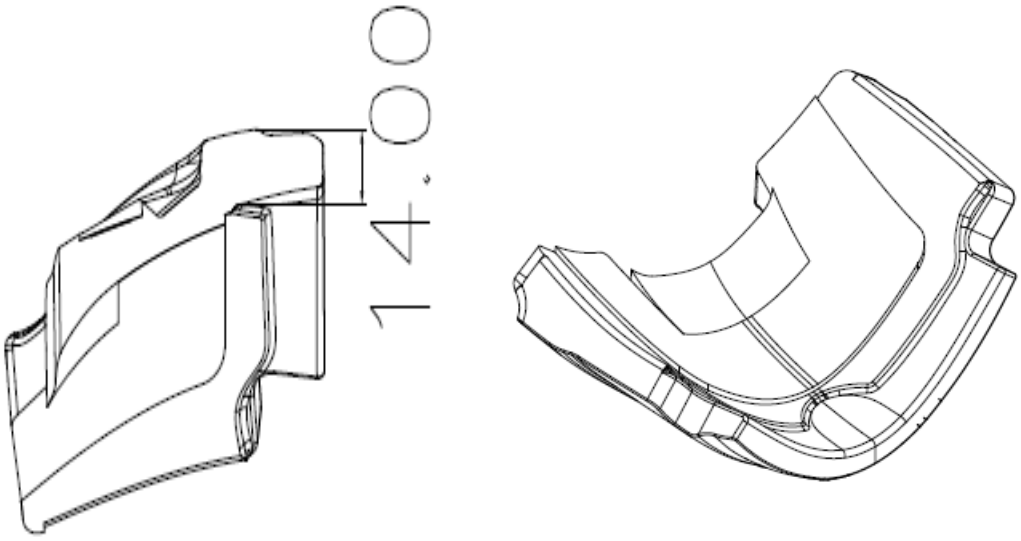


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Annex-6

MOUTH EPS

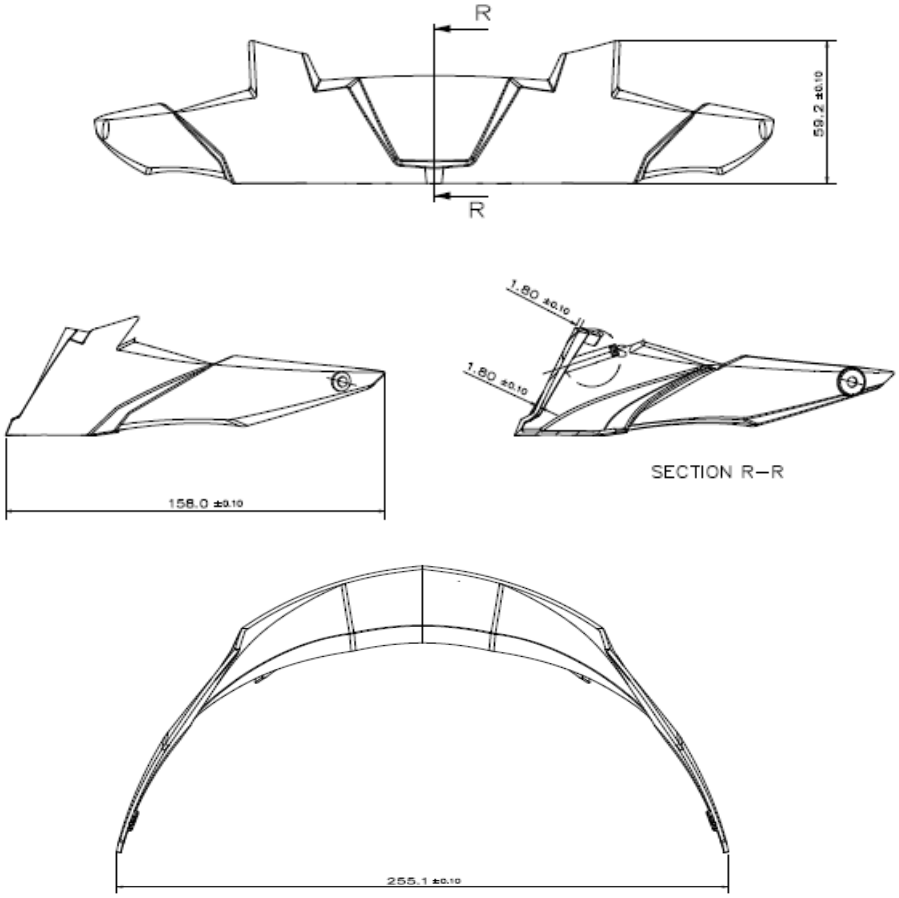




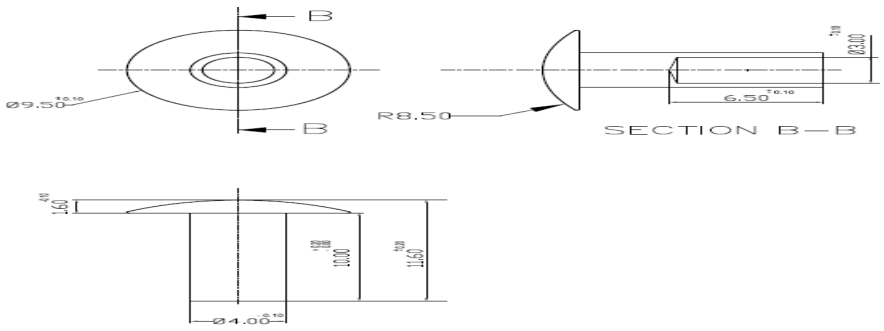
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Annex-7

SPOILER



Rivet

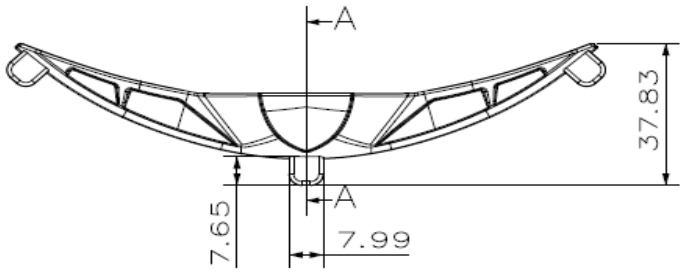


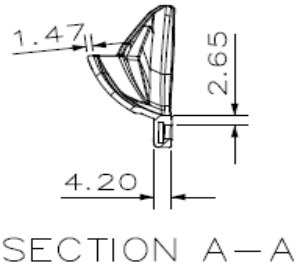
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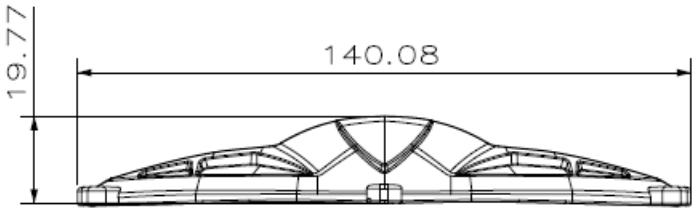
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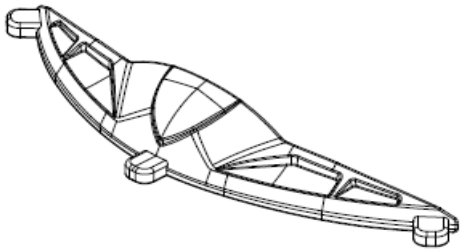
Annex-8

NOSE GAURD

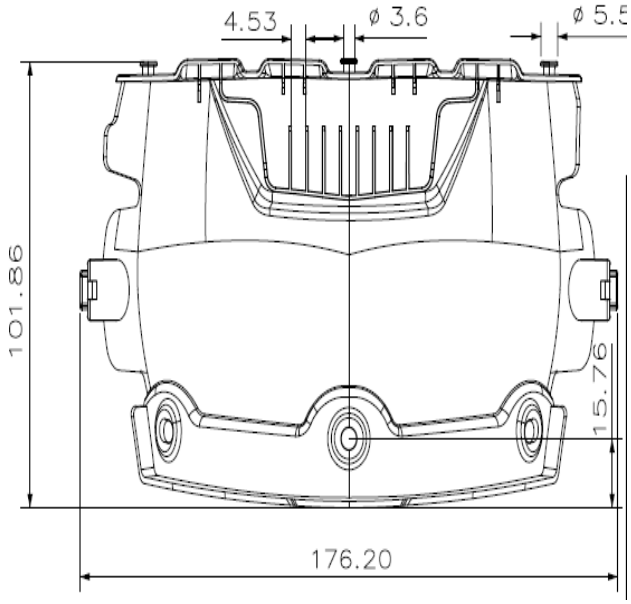


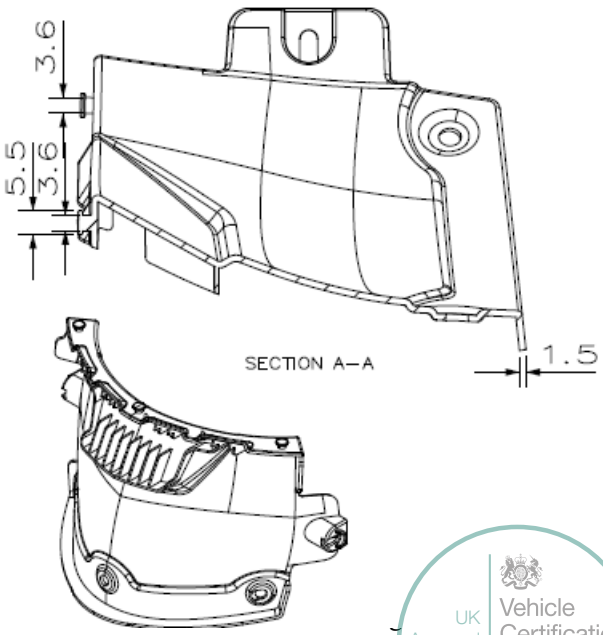






JAW PAD



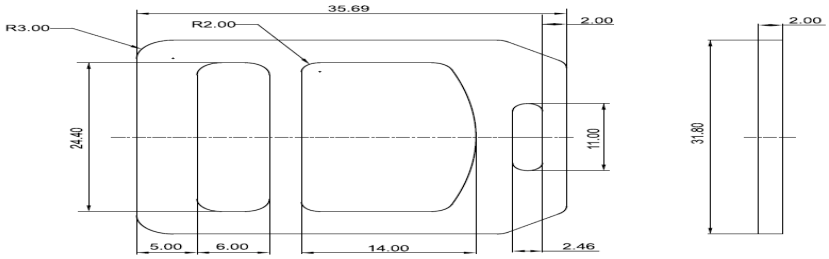


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Annex-9A
Double D-Ring

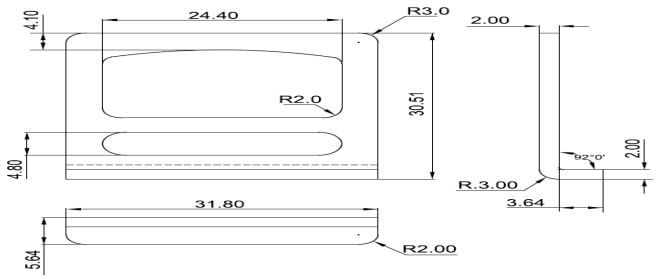
DRAWING NO:VA-19-AXC-24

BUCKLE 1

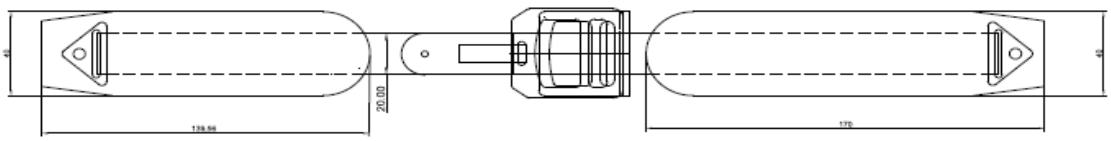


DRAWING NO:VA-19-AXC-25

BUCKLE 2



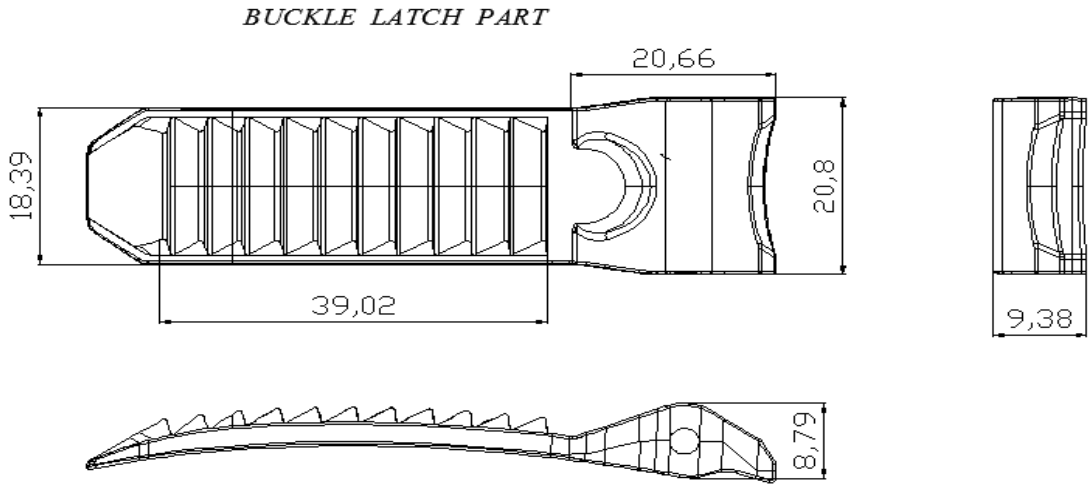
CHIN STRAP ASSEMBLY
DRAWING NO: VA-19-AXC-26



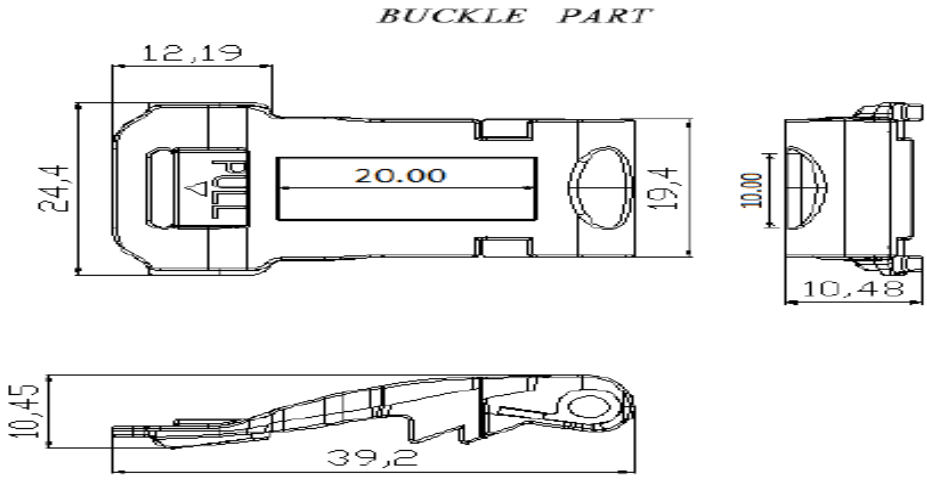
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Annex-9B
Quick Release Mechanism

BUCKLE LATCH PART
PART NO: VAA/MLK/C/01

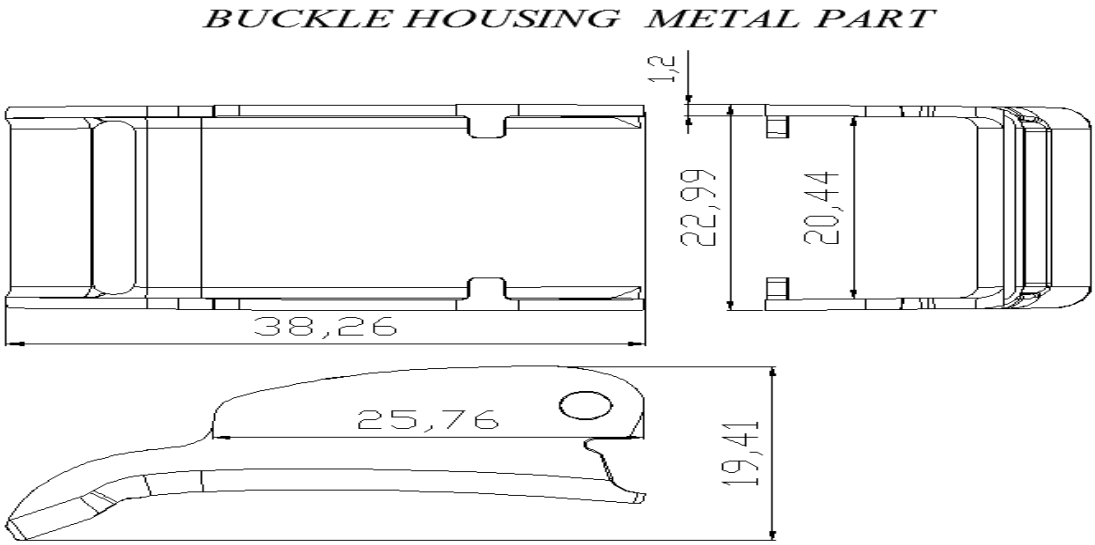


BUCKLE PART
PART NO: VAA/LMLK/C/02

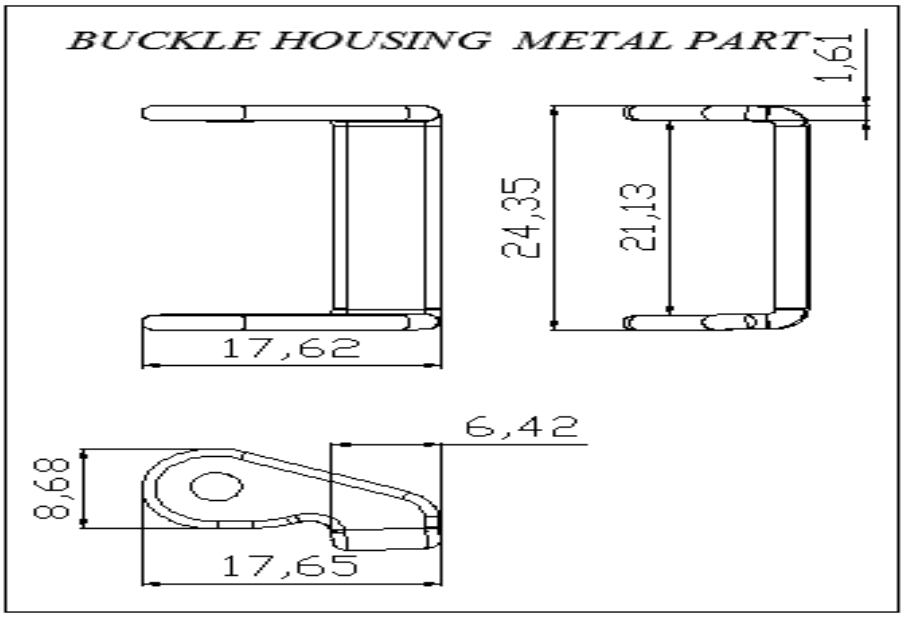


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BUCKLE HOUSING METAL PART
PART NO:VAA/MLK/C/03

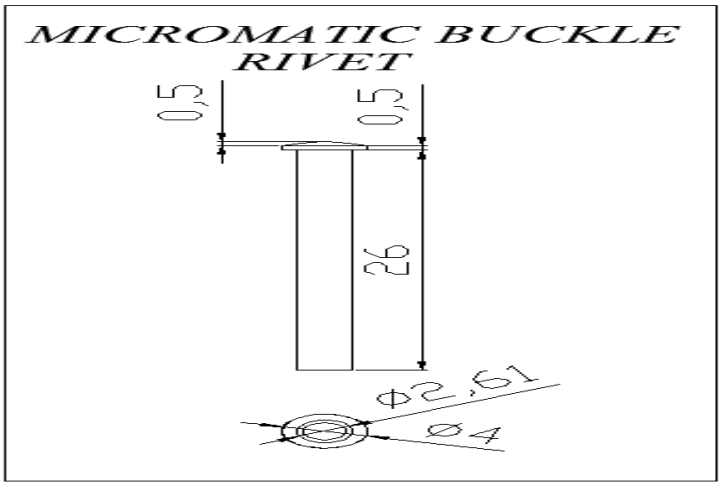


BUCKLE LATCH HOUSING METAL PART
PART NO: VAA/MLK/C/04



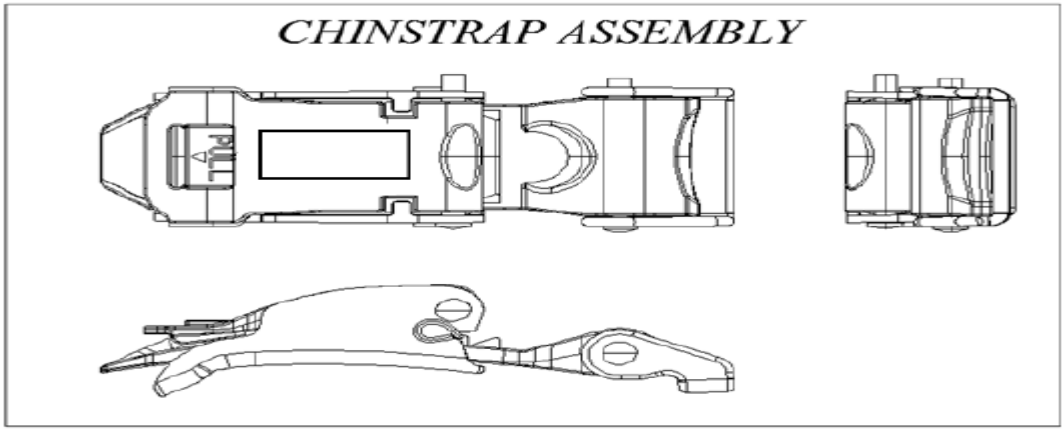
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PART NO:VAA/MLK/C/05

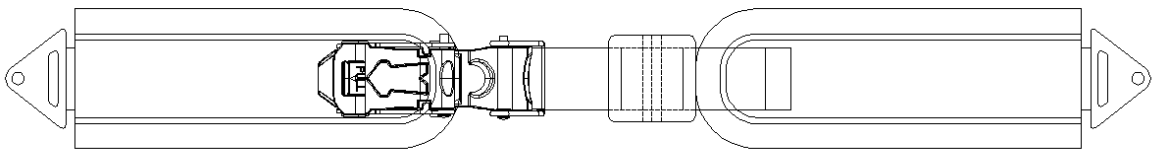


CHINSTRAP ASSEMBLY DRAWING

PART NO :-VAA/MLK/C/06



CHINSTRAP ASSEMBLY



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VCA, 1 Eastgate Office Centre,
Eastgate Road, Bristol, BS5 6XX, United Kingdom
enquiries@vca.gov.uk |
www.vehicle-certification-agency.gov.uk |
+44(0) 300 330 5797

Vehicle Certification Agency

Report Number: VCA010801-1 Issue: 0

This test report shall not be reproduced except in full, without written approval of the technical service.

Inspection/Test Report: Protective Helmets and their Visors for Drivers and Passengers of Motorcycles and Mopeds

Legislation

UNECE Regulation 22.06 (Revision 4 Amendment 3)

Inspection/Test Details

Location of Inspection/Test:	Vega Auto Accessories Pvt. Ltd. Testing Laboratory - Belgaum
Date of Inspection/Test:	20 August 2024 to 22 August 2024
VCA Representative(s):	~~VCA HQ/VCA MC/VCA Europe/ VCA USA/VCA SA/VCA East Asia/VCA Australia~~/VCA India/~~VCA China~~
Inspectors Home Office Location:	Sandip Kumbhar / Bhavesh Tupare
Manufacturer's Representative(s):	New approval / ~~Extension of approval / Report only~~
Reason for Test Report:	

Manufacturer Details

Name and Address:	Vega Auto Accessories Pvt. Ltd. Plot No. 12-B, Sy. No. 342, BEMCIEL Industrial Estate, Udyambag, Belgaum – 590008, Karnataka INDIA
Type:	Apex "P"
Commercial Description:	Protective helmet with lower face "P" type fitted with outer Visor & sunshield inside the outer visor
Category:	Not applicable

Conclusion

The above mentioned component was tested in accordance with the above mentioned legislation and was found to comply in all respects. This report relates only to the items tested

Witness Engineer/Test Engineer Signature:	
Name:	Swapnil S Mandekar
Position:	Type Approval Engineer
Date:	23 August 2024

List of Annexes

Annex	No of Pages	Subject
I	20	Manufacturer information document
II	09	Production qualification report

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Report Number: VCA010801-1 Issue: 0

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Issue Record

Issue 0 is original report

Worst Case Rationale

Representative protective helmets tested for approval as submitted by manufacturer. Protective helmet type “Apex "P" will be provided with outer visor & sunshield inside the outer visor. Visor certificate number: E11*22R06/02*1034*00

Note: Include information on variants and versions this report covers, as applicable. Supporting documents may be annexed to this report

Significant Interpretations, Alternative Test Methods, New Technologies

none

Inspection/Tests Required

	Yes, NA, See Report … / Approval … / Annex …
Markings:	Yes
General Specifications:	Yes
Impact Absorption:	Yes
Projection and Surface Friction:	Yes
Rigidity:	Yes
Retention System (Dynamic):	Yes
Retention (Detaching):	Yes
Micro-slip of the Chin Strap:	Yes
Resistance to Abrasion of the Chin Strap:	Yes
Retention Systems Relying on Quick Release Mechanism:	Yes
Tests for Oblique impact and measurement of rotational acceleration:	Yes

Helmet Specification

Style of Helmet:	Protective helmet with lower face “P” type
<u>Size</u>	
Shell Size:	Single shell
Consumer Size:	XL (61 cm), L (59-60 cm), M (57-58 cm), S (55-56 cm), XS (53-54 cm)
Weight:	1650 ± 50 (each size)
<u>Materials</u>	
Shell:	ABS
Padding:	Polyester cloth backed with polyurethane foam/ synthetic leather or pure leather

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Liner:	Expanded polystyrene
Chin Strap:	Polyester (21 mm)
Retention System	
Type:	Chin Strap (Double D Ring & Quick release mechanism)
Buckle:	Yes, Refer Annex 9B
Strap Retainer:	Yes, Double D ring: Refer Annex 9A Quick Release Mechanism: Refer Annex 9B
Anchorages:	By RivetsØ4.5mmX10mm, 2 Nos. (Refer Annex-7)
Ventilation System:	Yes (Refer manufacturer information document) (4 holes)
Type of Shell Edging:	Window Beading -EPDM Rubber Base Beading -PVC (Poly Vinyl Chloride)
Accessories:	No any specific accessories. Helmet will be provided spoiler. Refer information document for more clarity.
Reflecting Band:	NA
Conspicuity marking:	NA
Additional Features:	NA

Manufacturer's Documentation

Manufacturer's documentation is complete and reflects the agreed specification for the component tested, and covers all variants and versions agreed in the worst case rationale. Information document uploaded to job folder and identified by job number. — Yes

Facility and Equipment Checks

Facility Appraisal reference and date *(Reference and date if formal; state if ad-hoc appraisal).* — Ad-hoc appraisal has been verified before test and ISO 17025 accredited lab

Calibration certificates checked and valid, recorded in the following table: — Yes

Equipment

Description	Make	Model	Serial number	Calibration due date*
Impact Test Set-up	DTS	6DX-A,500 g, 8 Kdeg/sec (2000 hz)	6DXA0016	20/08/2025
Ultraviolet-Radiation Conditioning Chamber	Yudian	--	VA/UV/12 (B)	03/07/2025
Ultraviolet-Radiation Conditioning Chamber timers	Delta	--	VA/UV/12 (C, D, E, F)	24/06/2025
Temp indicator/controller with sensor (low temp. conditioning)	Subzero	--	VA/TC/03	03/07/2025

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Temp indicator/controller with sensor (Heat conditioning)	Thermotech	--	VA/OV/05(A)	03/12/2024
Temperature controller with sensor	Vigital	--	VA/HC/04 (A)	03/07/2025
Humidity controller	Vigital	--	VA/HC/04 (B)	24/06/2025
Rigidity Testing Machine (Uniaxial testing machine)	GSP	--	VA/RT/13	20/06/2025
Degree protector for detaching test	Kristeel	--	VA/AP/06	27/02/2025
Head Forms (535 mm)	GTM	--	VA/MFH/28	04/03/2025
Head Forms (575 mm)	GTM	--	VA/MFH/30	04/03/2025
Head Forms (605 mm)	GTM	--	VA/MFH/31	04/03/2025
Tensile testing machine	GSP	--	VA/TTM/01	20/06/2025
Scale for Tensile Machine for chin strap	Omega	--	VA/MS/05	27/02/2025
Digital stop watch (Dynamic test of retention system)	Racer	--	VA/SW/01	05/01/2025
Measuring scale (Dynamic test of retention system)	Omega	--	VA/MS/011	05/01/2025
Dead weight (Dynamic test of retention system)	Vega	Vega	VA/DW/11	03/01/2025
Peripheral vision test/helmet marking (angle gauge)	AD engineering	--	VA/AG/01	04/08/2025
Weighing balance machine	Seico	--	VA/WB/01	28/02/2025
Micro slip & Resistance to abrasion pressure gauge	Spac	--	VA/PG/02	28/02/2025
Micro slip & Resistance to abrasion dead weight	Vega	Vega	VA/DW/18	03/01/2025
Projection and surface friction dead weight	GSP	--	VA/DW/19	08/07/2025
Projection and surface friction load cell with indicator	GSP	--	VA/PLC/01	03/01/2025
Projection and surface friction pressure gauge	Spac	--	VA/PG/03	28/02/2025

**Specify calibrated date + (interval) or calibration due date.*

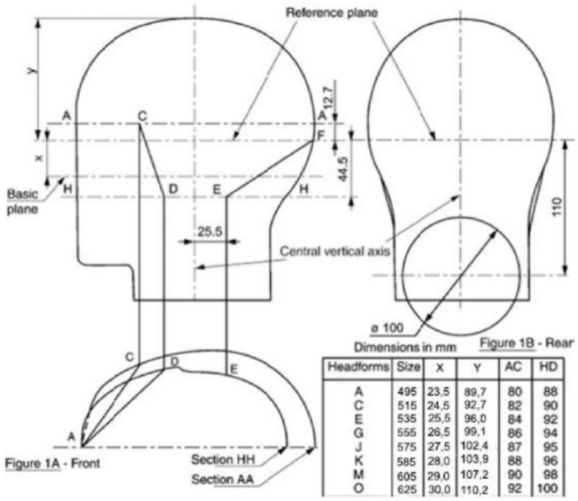
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Inspection/Test Requirements		Complies Yes / NA
Markings		
4.1.1.	On the helmet, it bears the applicant's trade name or mark, and an indication of the size and, if appropriate, an indication of the unsuitability of the lower face cover to offer any protection against impacts to the chin.	Yes
4.3.	Marking is not placed within the main visibility area.	Yes
4.4.	Marking is indelible, clearly legible and in a readily accessible place.	Yes
8.2	Raw data of test paragraph 7.13. stored by the technical service and available to the approval authority. (for the purpose of improvement of the Regulation at a later stage.)	Yes
General Specifications		
6.1.	Basic construction of the helmet is in the form of a hard outer shell, containing additional means of absorbing impact energy and a retention system.	Yes
6.2.	Protective helmet may be fitted with ear flaps and a neck curtain. It may also have a detachable peak, a visor, additional sun shield, electronic equipment or accessories and a lower face cover. If fitted with a non-protective lower face cover, the outer surface of the cover is marked 'Does not protect chin from impacts' and/or with the symbol shown in Figure 1 below, indicating the unsuitability of the lower face cover to offer any protection against impacts to the chin.	Yes (Protective lower face, with outer visor, & sun shield)
		
	Note: this symbol or indication must be visible and extend over at least 2 cm^2	
6.3.	No component or device is fitted to or incorporated in the protective helmet, unless it is designed in such a way that it will not cause injury and that, when it is fitted to or incorporated in the protective helmet, the helmet still complies with the requirements of this regulation.	Yes

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6.4.1.	Shell covers all areas above plane AA' and extends downwards at least as far as the lines 'CDEF' on both sides of the headform. *Note: See Annex 4, Figure 1A.*	Yes



Dimensions in mm

Headforms	Size	X	Y	AC	HD
A	495	23,5	89,7	80	88
C	515	24,5	92,7	82	90
E	535	25,5	96,0	84	92
G	555	26,5	99,1	86	94
J	575	27,5	102,4	87	95
K	585	28,0	103,9	88	96
M	605	29,0	107,2	90	98
O	625	30,0	110,2	92	100

6.4.2.	At the rear, the rigid parts and, in particular, the shell, are not within a cylinder, defined as follows: - Diameter: 100 mm; - Axis situated at the intersection of the medium plane of symmetry of the headform and of a plane parallel to and 110 mm below the reference plane. *Note: See Annex 4, Figure 1B.*	Yes
6.4.3.	Protective padding covers all the areas defined in paragraph 6.4.1, with account being taken of the requirements of paragraph 6.5.	Yes
6.5.	Helmet does not dangerously affect the wearer's ability to hear.	Yes
6.5.	Temperature in the space between the head and the shell does not rise inordinately. *Note: To prevent this, ventilation holes may be provided in the shell.*	Yes (holes provided for ventilation)
6.5.	Where means for attaching a visor are not provided, the profile at the front edge does not prevent the wearing of goggles.	Yes
6.6.	All projections from, or irregularities in the outer surface of the shell greater than 2 mm, are tested for shear assessment according to paragraphs 7.4.1 or 7.4.2. The outer surface of the helmet is tested for friction assessment, according to paragraphs 7.4.1 or 7.4.2. This applies in particular to a movable lower face cover in all positions intended by the manufacturer.	Yes
6.7.	All external projections are radiused and any external projections other than press-fasteners are smooth and adequately faired.	Yes (no any sharp edges)

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6.7.1.	All external projections not more than 2 mm above the outer surface of the shell (e.g. rivet heads) have a radius of a minimum of 1 mm.		Yes
6.7.2.	All external projections more than 2 mm above the outer surface of the shell have a radius of a minimum of 2 mm. *Note: Latter specific requirements do not apply if a projection satisfies the requirements in paragraphs 7.4.1 or 7.4.2 below.*		Yes
6.8.	There are no inward-facing sharp edges on the inside of the helmet; rigid, projecting internal parts are covered with padding so that any stresses transmitted to the head are not highly concentrated.		Yes
6.9.	Various components of the protective helmet are so assembled that they are not liable to become easily detached as a result of an impact.		Yes
6.9	In the case of visor and movable or detachable lower face cover, only when in not protective position, the detachment is acceptable provided that it is complete and not to cause possible injuries to the user		NA
6.10.	Retention systems are protected from abrasion.		Yes
6.11.	Helmet is held in place on the wearer's head by means of a retention system, which is secured under the lower jaw. All parts of the retention system are permanently attached to the system or to the helmet.		Yes
6.11.1.	If the retention system includes a chin-strap, the strap is not less than 20 mm wide under a load of 150 N ± 5 N, applied under the condition prescribed in paragraph 7.6.2:	21 mm	Yes
6.11.2.	Chin strap does not include a chin cup.		NA
6.11.3.	Chin straps are fitted with a device to adjust and maintain tension in the strap.		Yes
6.11.4.	Chin strap fastening and tensioning devices are positioned on the straps so that: - There are no rigid parts extending more than 130 mm vertically below the headform reference plane, with the helmet mounted on the appropriate sized headform* - The whole of the device is between the bony projections of the underside of the lower jaw* **Strikethrough, as appropriate.*		Yes

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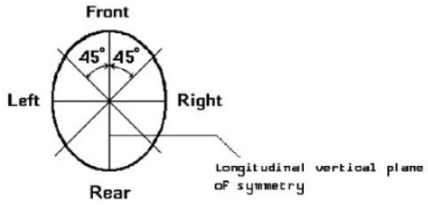
6.11.5.	If the retention system includes either a double-D ring or sliding bar fastening device ("roller buckle"), then means are provided to prevent the retention system being completely undone and also to retain the free end of the strap when the retention system is adjusted. (If the retaining system can be opened completely, it must be possible only with voluntary action. To prevent any possible misuse, the helmet must be provided with detailed instructions on the use of the buckle if required.)	Yes
6.11.6.	Sliding bar and double-D ring fastening devices are fitted with a pulling flap to be used for releasing the retention system. Its colour is red and its minimum dimensions are 10 x 20 mm.	Yes
6.11.7.	If a retention system includes a quick-release mechanism, then the method of release of this mechanism is self-evident. Any levers, tabs, buttons or other components that need to be operated to release the mechanism are coloured red; those parts of the rest of the system that are visible when closed are not similarly coloured, and the mode of operation is permanently indicated.	Yes
6.11.8.	Retention system remains closed when the tests described in paragraphs 7.3, 7.6 and 7.7 are carried out.	Yes
6.11.9.	Buckle of the retention system is designed so as to preclude any possibility of incorrect manipulation. This means inter alia (among other things) that it is not possible for the buckle to be left in a partially closed position.	Yes
6.12.	If the lower face cover is detachable or movable, the lower face cover is fitted with a device that maintains the intended position even during the complete series of impacts and retention (detaching) test. The device is such that incorrect handling is impossible. The control/actuating device must be of red colour. The helmet must comply with the requirements for helmet categories "J","P" or both.	NA
6.13.	Characteristics of the materials used in the manufacture of helmets are known not to undergo appreciable alteration under the influence of ageing or of the circumstances of use to which the helmet is normally subjected, such as exposure to sun, extremes of temperature and rain. For those parts of the helmet coming into contact with the skin, the materials used are known not to undergo appreciable alteration through the effect of perspiration or of toilet preparations. The manufacturer does not use materials known to cause skin troubles. The suitability of a proposed new material is established by the manufacturer.	Yes
6.14.	After the performance of one of the prescribed tests, the protective helmet does not exhibit any breakage or deformation dangerous to the wearer.	Yes

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	Note: As example visor sunshield and shell significant cracks or any part partially detached (spoiler, lower face cover, accessories) that can hurt the user while he's rolling on the road.		
	Peripheral Vision		
6.15.1 *6.15.2*	The technical service has selected from among the existing sizes of a helmet type the size it considers likely to yield the least favourable result and helmet placed on the headform corresponding to its size by the procedure set out in Annex 5 to this Regulation;		Yes
6.15.3.	There is no occultation in the field of vision bounded by:		Yes
6.15.3.1.	- Horizontally: Two segments of dihedral angles symmetrical in relation to the median longitudinal vertical plane of the headform and situated between the reference and the basic planes. Each of these dihedral angles is defined by the median longitudinal vertical plane of the headform and the vertical plane forming an angle of not less than 105° with the median longitudinal vertical plane and whose edge is the straight line LK;		
6.15.3.2.	- Upwards: Dihedral angle defined by the reference plane of the headform and a plane forming an angle of not less than 7° with the reference plane and whose edge is the straight line L_1 L_2, the points L_1 and L_2 representing the eyes;		
6.15.3.3.	- Downwards: Dihedral angle defined by the basic plane of the headform and a plane forming an angle of not less than 45° with the basic plane, and whose edge is the straight line K_1 K_2.		
	Visors		
6.16.1.	Systems of attachment of a visor to a helmet is such that the visor is removable. It is possible to manoeuvre the visor out of the field of vision with a simple movement of one hand. (However, the latter prescription may not be required for helmets which do not provide chin protection provided that a label is attached to the helmet to the effect of warning the purchaser that the visor cannot be manoeuvred.)		Yes
6.16.2.	Angle opening (see annex 9) ≥ 5°:	$>5^0$ °	Yes
	Sun Shield		
6.17.1	Sun shield does not restrain or prevent the movement of the visor. On opening the visor, the sun shield can pivot in the working position. By means of a simple movement the sun shield is able to be moved separately from the visor out of the visual field.		Yes
6.17.2.1	Sun shield does not restrict the field of vision given in paragraph		Yes

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	6.15. in the working or parking position. If the sun shield is fixed outside of the visor, the surface may include fixings or devices to make movement possible. The total surface of the fixings or devices does not exceed 2cm^2; they can be distributed on both sides of the field of vision.	(Sun shield fitted inside the outer visor)
	Conspicuity Marking	
6.18.1.	In order to comply with national requirements for use, the helmet may be required by individual Contracting Parties to contribute to the conspicuity of the user both during the daytime and at night from the front, rear, right and left, by means of parts made of reflective materials that conform to the specifications laid down in paragraphs 6.16.2 to 16.6.6 of this regulation.	NA
6.18.1.	It is allowed that the helmet is equipped with reflective materials in the box, with proper indications to the user on where and how to apply them on the helmet. *Note: Mandating of conspicuity marks is left to the discretion of individual Contracting Parties. Article 3 of the Agreement to which this regulation is annexed does not prevent the Contracting Parties from prohibiting the use of helmets not meeting the conspicuity requirements.*	NA
6.18.2	**Reflective Parts**	
6.18.2.1.	Total surface area and shape of the reflective part used is such that in each direction, corresponding to one of the areas defined in the figure below, visibility is ensured by a surface area of at least 18 cm^2 of simple shape and measured by application on a plane.  	NA
6.18.2.1.	In each surface area of minimum 18 cm^2, it is possible to mark either a: - Circle of 40 mm diameter* - Rectangle of at least 12.5 cm^2 in surface area and at least 20 mm in width*	NA
6.18.2.1.	Each of these surfaces are situated as near as possible to the point of contact with the shell of a vertical plane parallel to the longitudinal vertical plane of symmetry, to the right and to the left, and as near as possible to the point of contact with the shell of a vertical plane perpendicular to the longitudinal plane of symmetry, to the front and to the rear.	NA

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6.18.3.	Each of the retro-reflective areas emit white light when it is illuminated with standard illuminant A, with an observation angle of 1/3° and an illumination angle $\beta 1 = \beta 2 = 0°$ (or $\beta 1 = \pm 5°$, $\beta 2 = 0°$).	NA
6.18.4.	Minimum value of the luminous intensity coefficient of a surface area of 18 cm^2 of material, when revolved, is not less than the values specified in the table below, expressed in millicandelas per lux.	NA

Angle of Divergence (')	Angle of Illumination (°)		
	0	20	40
20	100	60	25

6.18.5.	After each conditioning as described in paragraph 7.2, the helmet is visually inspected. There are no signs of cracking or appreciable distortion of the retro-reflective material.	NA
6.18.6.	Neither the adhesive nor the retro-reflective material affects the mechanical performance of the helmet according to the related tests in this regulation.	NA

Tests

7.1	Each helmet type, fitted with its visor if placed on the market with a visor, conditioned as shown below.	Yes

Test	Number of helmets to be conditioned				Total
	ambient-temperature and hygrometry conditioning	Heat conditioning	low-temperature conditioning	ultra- violet radiation conditioning and moisture conditioning	
Impact absorption	2	1	1	1	5
Imp. Abs. extra point	2				2
Hi/Low energy impact	2				2
Rotational	2				2
Projection and surface friction	1				1
Rigidity	2				2
Retention system	1				1
					15

7.1	Testing Notes: The largest size of each combination shell size and protective padding of each helmet type shall be tested for impact absorption, rotational and rigidity. For impact absorption on extra point, Hi and Low energy impacts and tests of the retention system, helmet sizes shall be chosen such that the helmet to be tested shall be that offering the likely least favorable conditions (such as thickest padding, etc). All the types of retention systems available for the helmet must be tested. Supplementary samples could be necessary. Additionally, for each smaller headform size within the size range of the helmet type two helmets shall undergo the impact absorption test. One helmet shall be heat conditioned, and the other low	Yes

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	temperature conditioned. The conditioned helmets shall be impacted against either anvil, in equal numbers if possible, at the choice of the laboratory.	
	Types of Conditioning	
7.2	Prior to any type of further conditioning for mechanical tests, as specified in paragraph 7.1., each helmet shall be subject:	Yes
7.2.1.	Ambient-temperature and hygrometry conditioning: The helmet shall be exposed to a temperature of 25 °C ± 5 °C and a relative humidity of 50 per cent ± 10 per cent for at least 4 hours.	Yes
7.2.2.	Heat conditioning: The helmet shall be exposed to a temperature of 50 °C ± 2 °C for not less than 4 hours and not more than 8 hours.	Yes
7.2.3.	Low-temperature conditioning: The helmet shall be exposed to a temperature of -10 °C ± 2 °C for not less than 4 hours.	Yes
7.2.4.	Ultraviolet-radiation conditioning and moisture conditioning. The outer surface of the protective helmet shall be exposed successively to: ultraviolet irradiation by a 150-watt xenon-filled quartz lamp for 48 hours at a range of 25 cm; spraying for 4 to 8 hours with water at ambient temperature at the rate of 1 litre per minute.	Yes

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Test Results

Impact Absorption Tests

7.3.1.4. The tests completed not more than five minutes after the helmet is taken from the conditioning chamber. **Yes**

7.3. Helmet size: **XL (61 cm)**

Helmet ID Number	H.F. Size Number	Impact Point	Anvil*	Cond. (°C)	Speed (m/s)	HIC *(≤ 2,400)*	Deceleration *(≤ 275 g)*
XL - 01	M (605 mm)	B	K	AMB	7.61	794.4	184
		X	K		7.55	777.7	149
		P	K		7.54	786.2	153
		R	K		7.50	686.7	137
XL - 02	M (605 mm)	B	F	AMB	7.54	1139.8	233
		X	F		7.52	1336.3	229
		P	F		7.54	1441.3	198
		R	F		7.55	928.5	171
XL - 03	M (605 mm)	B	K	+50	7.59	850.4	224
		X	K		7.53	722.7	153
		P	K		7.52	762.1	143
		R	K		7.50	632.3	133
XL - 04	M (605 mm)	B	F	-10	7.62	1340.9	263
		X	F		7.61	1719.6	261
		P	F		7.55	1835.1	230
		R	F		7.56	1471.2	233
		S	F		6.12	562.2	250
XL - 05	M (605 mm)	B	K	UV + H2O	7.52	830.9	167
		X	K		7.57	747.2	153
		P	K		7.52	923.1	154
		R	K		7.59	984.8	236

*F = Flat; K = Kerbstone

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7.3. Helmet size: XL (61 cm)

Extra Impact points (Worst Case Size Selected):

Helmet ID Number	H.F. Size Number	Impact Point	Anvil[1]	Cond. (°C)	Required Speed (m/s)	Measured Speed (m/s)	HIC requirement	Measured HIC	Decel requirement	Measured Decel
XL-06	M (605 mm)	BXL	F	AMB	7.5	7.58	≤ 2,400	1014	≤ 275 g	185
		XPR	F		7.5	7.62	≤ 2,400	1131.7	≤ 275 g	212
		XRL	F		7.5	7.61	≤ 2,400	1379.8	≤ 275 g	211
XL-07	M (605 mm)	BXL	K		7.5	7.62	≤ 2,400	700.5	≤ 275 g	181
		XPR	K		7.5	7.57	≤ 2,400	700.1	≤ 275 g	152
		XRL	K		7.5	7.50	≤ 2,400	617.0	≤ 275 g	131
XL-08 (high energy)	M (605 mm)	B	F	AMB	8.2	8.21	≤ 2,880	1289.4	≤ 275 g	221
		X	F		8.2	8.29	≤ 2,880	1551.9	≤ 275 g	252
		P	F		8.2	8.21	≤ 2,880	1843.5	≤ 275 g	221
		R	F		8.2	8.20	≤ 2,880	1408.6	≤ 275 g	218
XL-09 (low energy)	M (605 mm)	B	F		6.0	6.03	≤ 1,300	750.2	≤ 180 g	153
		X	F		6.0	6.06	≤ 1,300	785.6	≤ 180 g	159
		P	F		6.0	6.09	≤ 1,300	992.3	≤ 180 g	168
		R	F		6.0	6.08	≤ 1,300	829.4	≤ 180 g	159

[1] : F = Flat; K = Kerbstone
[2]: Extra test locations to be selected from the 12 listed in section 7.3.4.2.1

Helmet size: L (59-60 cm)

(Tested on largest size)

Helmet ID Number	H.F. Size Number	Impact Point	Anvil*	Cond. (°C)	Speed (m/s)	HIC *(≤ 2,400)*	Deceleration *(≤ 275 g)*
L-10	M (605 mm)	B	K	+50	7.53	852.1	225
		X	K		7.54	732.6	156
		P	K		7.54	742.2	144
		R	K		7.52	652.4	136
L-11	M (605 mm)	B	F	-10	7.61	1341.2	260
		X	F		7.62	1718.3	262
		P	F		7.58	1838.1	233
		R	F		7.59	1472.3	234
		S	F		6.11	569.9	256

**F = Flat; K = Kerbstone*

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Helmet size: M (57-58 cm)

(Tested on largest size)

Helmet ID Number	H.F. Size Number	Impact Point	Anvil*	Cond. (°C)	Speed (m/s)	HIC *(≤ 2,400)*	Deceleration *(≤ 275 g)*
M-12	J (575 mm)	B	K	+50	7.60	850.4	225
		X	K		7.54	722.7	157
		P	K		7.52	762.1	146
		R	K		7.50	632.3	134
M-13	J (575 mm)	B	F	-10	7.60	1340.9	271
		X	F		7.61	1719.6	267
		P	F		7.56	1835.1	235
		R	F		7.58	1471.2	237
		S	F		6.13	562.2	251

**F = Flat; K = Kerbstone*

Helmet size: S (55-56 cm)

(Tested on largest size)

Helmet ID Number	H.F. Size Number	Impact Point	Anvil*	Cond. (°C)	Speed (m/s)	HIC *(≤ 2,400)*	Deceleration *(≤ 275 g)*
S-16	E (535 mm)	B	F	AMB	7.52	1034.9	200
		X	F		7.56	1477.1	233
		P	F		7.57	1888.8	235
		R	F		7.56	1955.1	248
S-17	E (535 mm)	B	K	AMB	7.51	1193.4	217
		X	K		7.51	873.9	158
		P	K		7.57	964	175
		R	K		7.58	815	170
S-18	E (535 mm)	B	K	+50	7.52	750.4	151
		X	K		7.54	785.7	154
		P	K		7.58	992.1	166
		R	K		7.57	829.1	158
S-19	E (535 mm)	B	F	-10	7.61	1340.9	255
		X	F		7.60	1719.6	251
		P	F		7.58	1835.1	230
		R	F		7.59	1471.2	233
		S	F		6.12	562.2	242
S-20	E (535 mm)	B	F	UV + H2O	7.61	830.9	166
		X	F		7.57	747	152
		P	F		7.51	923.8	158
		R	F		7.64	984.9	232

**F = Flat; K = Kerbstone*

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Helmet size: XS (53-54 cm)

(tested on largest size)

Helmet ID Number	H.F. Size Number	Impact Point	Anvil*	Cond. (°C)	Speed (m/s)	HIC *(≤ 2,400)*	Deceleration *(≤ 275 g)*
XS-21	E (535 mm)	B	K	+50	7.53	752.5	153
		X	K		7.55	787.4	156
		P	K		7.56	996.3	168
		R	K		7.58	828.8	159
XS-22	E (535 mm)	B	F	-10	7.59	1341.4	249
		X	F		7.58	1714.3	239
		P	F		7.54	1837.2	228
		R	F		7.54	1474.5	229
		S	F		6.10	569.2	232

**F = Flat; K = Kerbstone*

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Test for Projection and Surface Friction (Method B)

	Helmet ID Number	Test	Tested Point	Results
7.4.2.1.3.1.	XL-23	Projection	Top Vent	Pass
7.4.2.1.3.2.	XL-24	Surface	Top	Pass

Test for projections of the category P/J with movable lower face cover

7.4.3.1	Strength assessment of the movable face cover in the position "J", the helmet placed on the appropriate test head form selected from Annex 4 in compliance with paragraph 7.3.1.3.1.	NA
7.4.3.2	Falling mass of 4 kg ± 0.01 kg released in guided free fall from a height of 600 ± 5 mm hooked on to the front part of the chin section in the position "J" in the median vertical plane of the helmet.	NA
7.4.3.3	Test apparatus used to apply a shock load to a helmet secured to the headform by its own retention system. Headform secured in a test fixture with its vertical axis pointing upward at 45° to the direction of gravity. Equipment allows drop weight to slide in a guided free fall to impact a rigid stop anvil. Mass of the guide is 1.0 -0.0 +0.2 kg. Impact speed not less than 95 per cent of the theoretical speed.	NA
7.4.3.4	Movement such to avoid any possible interference of the chin guard with 100 mm cylinder as defined in paragraph 6.4.2. (Partial detachment is not acceptable.)	NA

Rigidity Tests

7.5.1.	The test helmets have undergone ambient-temperature and hygrometry conditioning.	Yes

Helmet ID Number	Helmet Size	Load Direction	Deformation (mm)		
			Initial *(load 30 N)*	Max *(load 630 N) (≤ 40 mm)*	Final *(load 30 N) (≤ 15 mm)*
XL-25	XL (61 cm)	Longitudinal	2.5	11.2	6.4
XL-26	XL (61 cm)	Transversal	4.5	15.4	7.8
XS-27	XS (53-54 cm)	Longitudinal	3.1	10.8	3.9
XS-28	XS (53-54 cm)	Transversal	5.3	15.8	4.7

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Dynamic Test of the Retention System

7.6.1	Helmet is positioned as prescribed in paragraph 7.3.1.3.1.	Yes
7.6.2	Set up is as per 7.6.2 and Annex 8, Figure 2	Yes
7.6.3	Falling mass of 10 kg ± 0.1 kg released drops in guided free fall from a height of 750 ± 5 mm.	Yes
7.6.4	During the test, the dynamic displacement of the point of application of the force shall not exceed 35 mm	Yes
7.6.5	After two minutes, the residual displacement of the point of application of the force, as measured under a mass of 15 kg ± 0.5 kg, does not exceed 25 mm.	Yes

Helmet ID Number	Helmet Size	Chin Strap	Extension Dynamic *(≤ 35 mm)*	Extension Residual *(≤ 25 mm)*
XL-29	XL (61 cm)	Double D ring	20	4
XS-30	XS (53-54 cm)	Double D ring	25	3
XL-33	XL (61 cm)	Quick release mechanism	25	4
XS-34	XS (53-54 cm)	Quick release mechanism	23	1

Retention (Detaching) Test

7.7.1.	The test helmets have undergone ambient-temperature and hygrometry conditioning.	Yes
7.7.6.	Modular helmets tested in J and P configuration.	NA

Helmet ID Number	Helmet Size	Chin Strap	After the Test *(Angle ≤ 30°)*
XL-31	XL (61 cm)	Double D ring	24^0
XS-32	XS (53-54 cm)	Double D ring	25^0
XL-35	XL (61 cm)	Quick release mechanism	26^0
XS-36	XS (53-54 cm)	Quick release mechanism	24^0

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Micro-slip Test of the Chin Strap
Note: See Annex 8, Figure 4)

Chin strap	Total Slip *(≤ 10 mm)*
XL-CS-01	1.4
XS-CS-02	1.2

Test for Resistance to Abrasion of the Chin Strap
Note: See Annex 8, Figure 5.

7.11.5 Strap tested to a tension of 3 kN without breaking. Yes

Chin Strap	Tension of 3 kN
XL-CS-03	3.19 kN
XS-CS-04	3.21 kN

Tests for Retention Systems Relying on Quick Release Mechanism

7.12.2 Tests carried out as per the procedures of 7.12.2 in the order given. Yes

	Helmet ID Number	Test	Results
7.12.1.	--	Inadvertent release by pressure	NA
7.12.2.	XL-37	Ease of release *(Max. load ≤ 30 N or ≤ 60 N)*	Yes (38.2N)
7.12.3.2.	01	Durability of quick release mechanisms *(Release after 5,000 cycles)*	Yes
7.12.3.3.	02	Durability of quick release mechanisms *(Saline spray)*	Yes
7.12.3.4.	03	Durability of quick release mechanisms *(Traction 2 kN ± 50 N)*	Yes (2.21 N)

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Tests for Oblique impact and measurement of rotational acceleration

7.13	The test helmets have undergone ambient-temperature and hygrometry conditioning.	Yes
Annex 7, 2.4.	Coefficient of friction (m) 0.3 ± 0.05 between the outer surface of the head form and the common fabric used in the comfort padding of the helmet.	Yes
Annex 7, 2.5.	Chin strap force controller "Tightened as for normal use". (This means that the helmet must be tightened before each test after having applied below the chin a rigid cylinder 10 mm diameter at least 30 mm long that will be removed before the test. According paragraph 7.3.1.3.)	Yes
Annex 7, 2.6.	Instrumentation for measuring the head kinematics during impact calibrated in line with Annex 7, 2.6.	Yes
Annex 7, 2.7.	Headform coefficient of friction calibrated in line with Annex 7, 2.7.	Yes
Annex 7, 3.1	Helmet placed on a headform of appropriate size in accordance with the requirements of Annex 5. Helmet positioned in accordance to the HPI (helmet positioning index) provided by the manufacturer. If it is not available, the helmet shall be tipped towards the rear so that the front edge of the helmet in the median plane is displaced by 25 mm.	Yes
Annex 7, 3.2.2	Anvil (A) as per Annex 7, 3.2.2 and figure 2	Yes
Annex 7, 3.	Test method in accordance with Annex 7, 3.	Yes

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Helmet ID Number	H.F. Size Number	Impact Point	Cond. (°C)	Speed (8.0m/s)	Peak Resultant Acceleration (PRA) ≤ *10,400 rad/s²*	Brain Injury Criterion (BrIC) *≤ 0.78*
XL-33	M (605 mm)	Front lateral right (45°)	AMB	8.11	9067	0.62
		Rear (180°)		8.05	8935	0.46
		Lateral left (270°)		8.04	8224	0.52
XL-34	M (605 mm)	Front (0°)	AMB	8.10	8674	0.46
		Rear-lateral right (135°)		8.08	8299	0.35

Helmet ID Number	H.F. Size Number	Impact Point	Cond. (°C)	Speed (8.0m/s)	Peak Resultant Acceleration (PRA) ≤ *10,400 rad/s²*	Brain Injury Criterion (BrIC) *≤ 0.78*
S-35	E (535 mm)	Front lateral right (45°)	AMB	8.10	9612	0.65
		Rear (180°)		8.05	8565	0.57
		Lateral left (270°)		8.02	8332	0.52
S-36	E (535 mm)	Front (0°)	AMB	8.08	8654	0.48
		Rear-lateral right (135°)		8.07	8114	0.36

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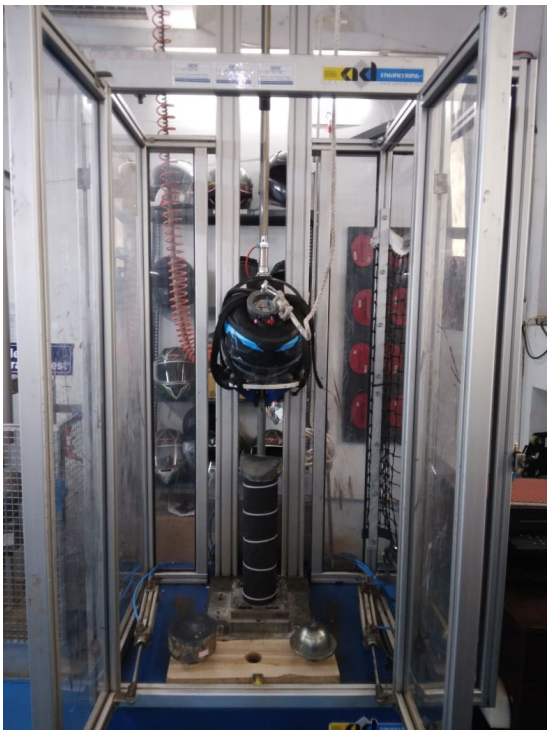
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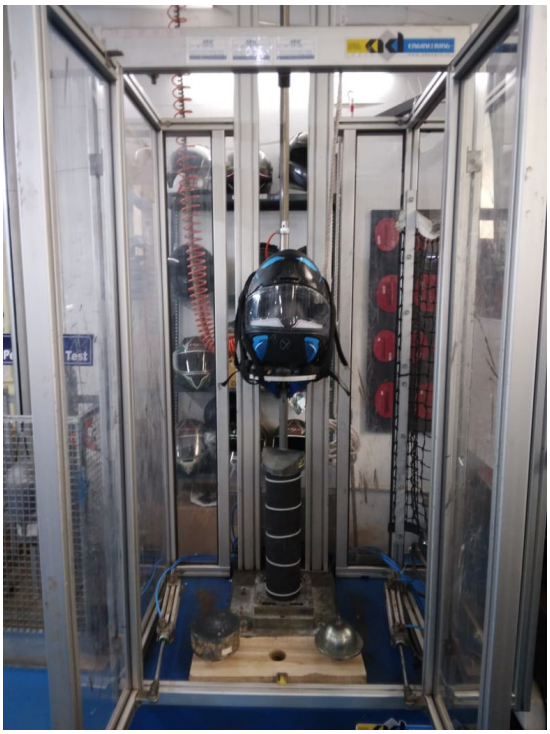
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Photographs

Impact on point B



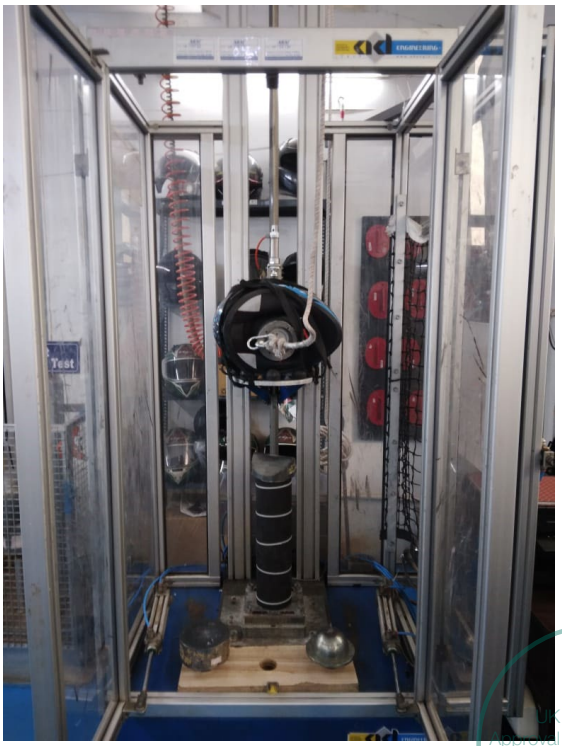
Impact on point P



Impact on point R



Impact on point X



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Impact on point S



Remarks

Production qualification of helmet type Apex “P” is determined. Refer PQ test report VCA010801-1a.

Note: VCA apply measurement uncertainty to calibrated items but not test results.

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Report Number: VCA010801-1a Issue: 0

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Inspection/Test Report: Protective Helmets and their Visors for Drivers and Passengers of Motorcycles and Mopeds

Legislation

UNECE Regulation 22.06 (Revision 4 Amendment 3)

Inspection/Test Details

Location of Inspection/Test:	Vega Auto Accessories Pvt. Ltd. Testing Laboratory - Belgaum
Date of Inspection/Test:	21 August 2024 to 22 August 2024
VCA Representative(s):	~~VCA HQ/VCA MC/VCA Europe/ VCA USA/VCA SA/VCA East Asia/VCA Australia~~/VCA India/~~VCA China~~
Inspectors Home Office Location:	Sandip Kumbhar / Bhavesh Tupare
Manufacturer's Representative(s):	Production Qualification
Reason for Test Report:	

Manufacturer Details

Name and Address:	Vega Auto Accessories Pvt. Ltd. Plot No. 12-B, Sy. No. 342, BEMCIEL Industrial Estate, Udyambag, Belgaum – 590008, Karnataka INDIA
Type:	Apex "P"
Commercial Description:	Protective helmet with lower face "P" type fitted with outer Visor & sunshield inside the outer visor
Category:	Not applicable

Conclusion

The above mentioned component was tested in accordance with the above mentioned legislation and was found to comply in all respects. This report relates only to the items tested

Witness Engineer/Test Engineer Signature:



Name:	Swapnil S Mandekar
Position:	Type Approval Engineer
Date:	23 August 2024

List of Annexes

Annex	No of Pages	Subject
I	--	--

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Issue Record

Issue 0 is original report

Worst Case Rationale

Production qualification testing done on 50 quantities of helmets. For type approval testing, Refer VCA test report number VCA010801-1a dated 23 August 2024.

Note: Include information on variants and versions this report covers, as applicable. Supporting documents may be annexed to this report

Significant Interpretations, Alternative Test Methods, New Technologies

None.

Inspection/Tests Required

	Yes, NA, See Report … / Approval … / Annex …
Information for wearers:	Yes
Impact Absorption Tests:	Yes
Dynamic Test of the Retention System:	Yes

Specification

<u>Number of Samples</u>	
Shell Size:	Single shell
Consumer Size:	XL (61 cm), L (59-60 cm), M (57-58 cm), S (55-56 cm), XS (53-54 cm)
Sample Quantity:	60
Production Batch Quantity:	3200
Production Batch Serial Number:	01-3200
<u>Materials</u>	
Shell:	ABS
Padding:	Polyester cloth backed with polyurethane foam/ synthetic leather or pure leather
Liner:	Expanded polystyrene
Chin Strap:	Polyester (21 mm)
<u>Retention System</u>	
Type:	Chin Strap (Double D Ring & Quick release mechanism)
Buckle:	Yes, Refer Annex 9B
Strap Retainer:	Yes, Double D ring: Refer Annex 9A Quick Release Mechanism: Refer Annex 9B
Anchorages:	By RivetsØ4.5mmX10mm, 2 Nos. (Refer Annex-7)
Ventilation System:	Yes (Refer manufacturer information document) (4 holes)
Type of Shell Edging:	Window Beading :- EPDM Rubber Base Beading:- PVC (Poly Vinyl Chloride)
Accessories:	No any specific accessories. Helmet will be provided spoiler.

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Reflecting Band:	Refer information document for more clarity.
Additional Feature:	NA
	NA

Manufacturer's Documentation

Manufacturer's documentation is complete and reflects the agreed specification for the component tested, and covers all variants and versions agreed in the worst case rationale. Information document uploaded to job folder and identified by job number. **Yes**

Facility and Equipment Checks

Facility Appraisal reference and date *(Reference and date if formal; state if ad-hoc appraisal).* **Ad-hoc appraisal has been verified before test and ISO 17025 accredited lab**

Calibration certificates checked and valid, recorded in the following table: **Yes**

Equipment

Description	Make	Model	Serial number	Calibration due date*
Impact Test Set-up	DTS	6DX-A,500 g, 8 Kdeg/sec (2000 hz)	6DXA0016	20/08/2025
Weighing balance machine	Seico	--	VA/WB/01	28/02/2025
Head Forms (535 mm)	GTM	--	VA/MFH/28	04/03/2025
Head Forms (575 mm)	GTM	--	VA/MFH/30	04/03/2025
Head Forms (605 mm)	GTM	--	VA/MFH/31	04/03/2025
Temp indicator/controller with sensor (low temp. conditioning)	Subzero	--	VA/TC/03	03/07/2025
Temp indicator/controller with sensor (Heat conditioning)	Thermotech	--	VA/OV/05(A)	03/12/2024
Digital stop watch (Dynamic test of retention system)	Racer	--	VA/SW/01	05/01/2025
Measuring scale (Dynamic test of retention system)	Omega	--	VA/MS/011	05/01/2025
Dead weight (Dynamic test of retention system)	Vega	Vega	VA/DW/11	03/01/2025
dead weight (Quick release mechanism)	Vega	Vega	VA/DW/18	03/01/2025

**Specify calibrated date + (interval) or calibration due date.*

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Qualifying the Production of Helmets

	The production of each new approved type of helmet must be subjected to production qualification tests.	
9.2	The first batch is considered to be the production of the first tranche containing a minimum of 200 helmets and a maximum of 3,200 helmets.	
-	Random sample of helmets taken from the first batch, divided into homogenous lots of 10, choosing the biggest helmet sizes for each shell size.	Yes
-	At least two lots among those subjected to the shock-absorption test shall consist of maximum size helmets.	Yes
9.2.1.	Test on the system of retention	
9.2.1.1.	The 10 helmets of the smallest size of each shell subjected to the test of the retention system described in paragraph 7.6.	Yes
-	All the types of retention system available for the helmet checked.	Yes
9.2.2.	Shock absorption test	
-	From every shell size of helmet type take two groups each with 10 helmets of the largest size.	Yes
9.2.2.2.	All of the helmets in a group subjected to the same conditioning treatment and then subjected to the shock absorption test described in paragraph 7.3. at the same point of impact.	Yes
-	The conditioning and the anvil for each group chosen by the technical service which conducted the approval tests.	Yes
-	The location of the points must be the same for all the helmets of the same batch.	Yes
-	The helmets of the same batch can be submitted to test up to three different impact point.	Yes
9.2.2.3.	All the shell sizes of a type of helmet submitted to standard linear impact test on the BXPR and S points if present.	Yes (S point applicable)

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Information for wearers

14.1.	Every protective helmet placed on the market shall bear a clearly visible label with the following inscription in the national language, or at least one of the national languages of the country of destination. This information shall contain: "For adequate protection, this helmet must fit closely and be securely attached. Any helmet that has sustained a violent impact should be replaced" and, if fitted with a non-protective lower face cover: "Does not protect chin from impacts" together with the symbol indicating the unsuitability of the lower face cover to offer any protection against impacts to the chin.	Yes (protective helmet)
14.2.	Additionally where hydrocarbons, cleaning fluids, paints, transfers or other extraneous additions affect the shell material adversely a separate and specific warning shall be emphasized in the above-mentioned label and worded as follows: " 'Warning' - Do not apply paint, stickers, petrol or other solvents to this helmet".	Yes
14.3.	Every protective helmet shall be clearly marked with its size and its maximum weight, to the nearest 50 grams, as placed on the market. The maximum weight quoted should include all the accessories that are supplied with the helmets, within the packaging, as it is placed on the market, whether or not those accessories have actually been fitted to the helmet.	Yes
14.4.	Every protective helmet offered for sale shall bear a label showing the type or types of visor that have been approved at the manufacturer's request.	Yes (visor approval number E11*22R06/02*1034*00)

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Inspection/Test Results

Impact Absorption Tests

7.3. Helmet size: XL (61 cm)

Group	Sample Number	H.F. Size Number	Impact Point	Anvil*	Cond. (°C)	Speed (m/s)	HIC *(≤ 2,640)*	Deceleration *(≤ 302.5 g)*
1	1	M (605 mm)	B	F	-10	7.54	577.4	139
	2		B	F		7.58	587.35	138
	3		B	F		7.58	456	137
	4		B	F		7.56	484.5	126
	5		B	F		7.61	759.9	164
	6		B	F		7.64	461	132
	7		B	F		7.56	587.40	132
	8		B	F		7.52	659	147
	9		B	F		7.56	668	149
	10		B	F		7.54	577.4	139
2	11	M (605 mm)	X	K	+50	7.58	861.9	168
	12		X	K		7.58	1099.3	188
	13		X	K		7.55	866.5	169
	14		X	K		7.52	839.8	168
	15		X	K		7.54	814.3	162
	16		X	K		7.59	811.3	162
	17		X	K		7.54	926.5	176
	18		X	K		7.51	929.8	174
	19		X	K		7.53	1067.6	206
	20		X	K		7.52	879.8	170
3	21	M (605 mm)	P	F	-10	7.60	1089.2	174
	22		P	F		7.55	1278.4	188
	23		P	F		7.64	1367.3	187
	24		P	F		7.61	1318.5	231
	25		P	F		7.62	1069.4	218
	26		P	F		7.54	792.9	187
	27		P	F		7.61	1368.4	179
	28		P	F		7.64	1328.2	233
	29		P	F		7.64	1059.2	219
	30		P	F		7.60	1089.2	174

**F = Flat; K = Kerbstone*

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Report Number: VCA010801-1a Issue: 0

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Helmet size: XL (61 cm)

Group	Sample Number	H.F. Size Number	Impact Point	Anvil*	Cond. (°C)	Speed (m/s)	HIC *(≤ 2,640)*	Deceleration *(≤ 302.5 g)*
4	31	M (605 mm)	R	K	+50	7.61	1032.9	185
	32		R	K		7.57	1160.1	189
	33		R	K		7.52	855.4	158
	34		R	K		7.56	850.9	166
	35		R	K		7.62	887.9	172
	36		R	K		7.56	854.6	160
	37		R	K		7.54	852.9	169
	38		R	K		7.60	888.8	180
	39		R	K		7.55	1162.4	179
	40		R	K		7.57	1167.3	197
5	41	M (605 mm)	S	F	-10	6.05	169.8	100
	42		S	F		6.01	112.16	77
	43		S	F		6.01	112.6	77
	44		S	F		6.03	231.2	112
	45		S	F		6.01	269	120
	46		S	F		6.07	176.25	109
	47		S	F		6.05	168.08	108
	48		S	F		6.06	169.17	108
	49		S	F		6.03	119.2	81
	50		S	F		6.05	168.17	112

**F = Flat; K = Kerbstone*

Statistical Analysis

Group	Sample Number	Impact Point	S *(Standard deviation of the values)*	2.4 S	X *(Mean of the values)*	X + 2.4 S
1	1 - 10	B	10.77	25.85	140.3	166.2
2	11 - 20	X	13.43	32.24	174.3	206.5
3	21 - 30	P	23.57	56.57	199.0	255.6
4	31 - 40	R	12.73	30.55	175.5	206.1
5	40 - 50	S	16.04	38.49	100.4	138.9

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Dynamic Test of the Retention System

Note: See Annex 8, Figure 2.

7.6. Helmet size: XS (53-54 cm)

(Double D Ring)

Sample Number	Extension Dynamic *(≤ 38.5 mm)*	Extension Residual *(≤ 27.5 mm)*	Note
51	25	3	Satisfactory
52	24	4	Satisfactory
53	23	4	Satisfactory
54	25	3	Satisfactory
55	23	4	Satisfactory
56	25	4	Satisfactory
57	24	5	Satisfactory
58	25	3	Satisfactory
59	25	4	Satisfactory
60	25	3	Satisfactory

Statistical Analysis

Sample Number	Displacement	S *(Standard deviation of the values)*	2.4 S	X *(Mean of the values)*	X + 2.4 S *Extension dynamic (≤ 35 mm) Extension residual (≤ 25 mm)*
51 - 60	Extension dynamic	0.84	2.02	24.4	26.42
51 - 60	Extension residual	0.67	1.62	3.7	5.32

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7.6. Helmet size: XS (53-54 cm)

(Quick release mechanism)

Sample Number	Extension Dynamic *(≤ 38.5 mm)*	Extension Residual *(≤ 27.5 mm)*	Note
51	25	4	Satisfactory
52	25	3	Satisfactory
53	22	5	Satisfactory
54	25	3	Satisfactory
55	23	6	Satisfactory
56	25	3	Satisfactory
57	22	4	Satisfactory
58	25	3	Satisfactory
59	23	5	Satisfactory
60	25	4	Satisfactory

Statistical Analysis

Sample Number	Displacement	S *(Standard deviation of the values)*	2.4 S	X *(Mean of the values)*	X + 2.4 S *Extension dynamic (≤ 35 mm) Extension residual (≤ 25 mm)*
51 - 60	Extension dynamic	1.33	3.20	24	27.2
51 - 60	Extension residual	1.05	2.53	4.0	6.53

Remarks

Batch size of 3200 helmet.

Note: VCA apply measurement uncertainty to calibrated items but not test results.

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