

TEST REPORT

Report Ref: LEI25040266A	
Date Received: 03/04/2025	Date Issued: 23/05/2025

Company Name & Address:	Smart Rider LTD Mishmar Hanegev 1 Mishmar Hanegev 853500 Israel
Contact Name:	Yoram Kedmi

Order No.:	None given
Description:	2 x Body protectors, CM, AM sizes
Ref / Style number:	#316
No. of Samples:	2
Size Range:	CXXS-AL sizes
Foam description:	Winboss 810
Specification:	BETA 2018 - The BETA Standard for Body and Shoulder Protectors for Equestrian Use: For Horse Riders, those working with horses and for horse drivers

Tests Conducted	Method	Pass/Fail
Protective material dimensions in protective jackets and body protectors	BS EN 13158:2018 clause 4.2.2	Pass
Exceptions to the requirements in clause 4.2.2	BS EN 13158:2018 clause 4.2.3	Pass
Adaptability and adjustability	BS EN 13158:2018 clause 4.2.5	Pass
Movement of protective material blocks and gaps between them	BS EN 13158:2018 clause 4.3	Pass
Restraint	BS EN 13158:2018 clause 4.4	Pass
Impact performance requirements	BS EN 13158:2018 clause 4.6	Pass
^Innocuousness	BS EN 13158:2018 clause 4.7	Pass
^Marking	BS EN 13158:2018 clause 6	Pass
^Information supplied by the manufacturer	BS EN 13158:2018 clause 7	Pass
^Technical File Examination		Pass

COMMENT: Where the results of a test fall close to the requirement, compliance with the specification may be affected by the uncertainty of measurement of the test.
In those circumstances, the client is advised to contact the laboratory for further information.

Unmarked tests included in this report are included on UKAS Scope 1516.
Assessments marked (^) in this report are not included in our UKAS Scope.



Simon Bretherton
Technical/Quality Coordinator

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Samples and documents

Sample Identification	Date received	Testing required		Period of testing
		Dimensions	Impact	
#316	03/04/2025	Yes	Yes	21/04/2025 – 23/04/2025

Registration date of product	January 2024
Date BETA notified of sample arrival	04/04/2025
Date BETA notified samples have not passed within two months of the registration date or within two months of first receipt of re-test samples	

Technical File number or identification	316 10.1.2024
Amendments to the Technical File	None
Amendments to the Technical File since the previous Report	None

List of all Brands marketed from the approved model submitted

None	



Photograph of body protector



Manufacturers' cleaning instructions

Sample identification	Is protective material removed?	Type of cleaning of protective material	Maximum number of cycles
Model #316	Yes	Remove foam before handwashing outer	N/A
Is cleaning up to 5 times required before examination?			No

DESIGN AND MEASUREMENT FOR HORSE RIDERS
BS EN 13158:2018
Clause 4.2.2

RESULTS

			Required Value, cm 'more than', or 'less than' according to sign		Measured Value (cm)					
Size			CM		AM					
			Min	Max	Min	Max				
A	Manufacturer's Size Chart		77	81	95	100				
B			74	77	90	98				
C			78	84	89	95				
D-D ¹ E-E ¹		$\frac{1}{4} A_{max}$	20.3		25					
M		$\frac{1}{2} C_{max}$	42		47.5					
Measurements			R	M	R	M				
Clause 4.2.2 Table 1	A ¹ _{min}	<107% A _{min} D	82.4	79.0	101.7	92.0				
	A ¹ _{min}	<107% A _{min} A	82.4	0.0	101.7	0.0				
	A ¹ _{max}	>103% A _{max}	83.4	87.0	103.0	105.0				
	B ¹ _{min}	<110% B _{min} D	81.4	71.0	99.0	90.0				
	B ¹ _{min}	<110% B _{min} A	81.4	0.0	99.0	0.0				
	B ¹ _{max}	>102% B _{max}	78.5	82.0	100.0	101.0				
	D	Chest	>43% C _{max}	36.1	42.4	40.9	48.7			
	E	Back	>57% C _{max}	47.9	50.7	54.2	60.5			
	F	C/Back	>52% C _{max}	43.7	47.2	49.4	51.0			
	G	Size	>15% C _{max}	12.6	19.5	14.3	21.4			
	H	C/Front	>28% C _{max}	23.5	27.0	26.6	33.0			
	I	Back W	>27% A _{max}	21.9	24.5	27.0	29.0			
	J	Chest W	>20% A _{max}	16.2	23.0	20.0	25.5			
	K	W Back	>20% A _{max}	16.2	38.1	20.0	45.0			
	L	Arm-H	<80% A _{max}	64.8	56.0	80.0	73.0			
	N	Sh Strap	>4% A _{max}	3.2	5.0	4.0	4.5			
Clause 4.2.2 Table 1	(c)	Waist total		+	8.1	0.0	10.0	2.5		
		$\frac{1}{2} Th =$	Outer $\frac{1}{2}$ <						3.8	6.0
			Inner $\frac{1}{2}$ <							
		<0.1 A _{max}	OL>	2.5	3.5	2.5	3.4			
		(e)	Shoulder	Left	Outer $\frac{1}{2}$ <	+	8.1	0.0	10.0	2.3
					Inner $\frac{1}{2}$ <					
	Right			OL>	2.5	4.8	2.5	2.8		
	>25 mm			Overall Exceptions [^]	16.2	6.8	20.0	15.9		
	(a)	Shoulder	Left	L ₂ Front <	3.6	1.0	4.3	2.8		
				$\frac{1}{2} Th$	L ₂ Back <	3.6	1.0	4.3	2.1	
L ₂ =				L ₃ OL >	2.5	3.9	2.5	2.7		
<0.035A _{max} + 8 mm				L ₁ Front <	6.4	4.3	6.8	3.0		
L ₃ OL =				L ₁ Back <	6.4	1.3	6.8	4.6		
>25mm				Right	L ₂ Front <	3.6	1.4	4.3	2.6	

Clause 4.2.5	(b)	L ₁ =	L ₂ Back <	3.6	0.7	4.3	1.3
		Value in	L ₃ OL >	2.5	3.5	2.5	2.7
		Table 2 in	L ₁ Front <	6.4	4.2	6.8	2.6
		EN 13158	L ₁ Back <	6.4	1.1	6.8	4.0
		UA ½ Th =	L ≤				
	≤25 ⁻⁴ A ²	R ≤					
	Ad (girth)	>5% A _{max}	4.1	8.0	5.0	13.0	
	Ad A _{max} - min	>80% max - min A	3.2	8.0	4.0	13.0	
	'Over riding value'			87.0		105.0	
	Width of coloured markers > 10 mm	Shoulder	1.0	6.1	1.0	6.2	
	Waist	1.0	6.0	1.0	5.8		

^ Note: Should one side of the waist half thickness gaps on the garment fail. This could indicate unevenness in the distribution of the foam. However, providing the overall exceptions pass, the garment passes this area but attention is required.

Key to dimensions (see previous page)

A _{max}	is the chest girth or bust girth given by the manufacturer for the largest user.
A _{min}	is the chest girth or bust girth given by the manufacturer for the smallest user
B _{max}	is the waist girth given by the manufacturer for the largest size
B _{min}	is the waist girth given by the manufacturer for the smallest size
C _{max}	is the over-the-shoulder length given by the manufacturer for the largest size
C _{min}	is the over-the-shoulder length given by the manufacturer for the smallest size
A ¹ _{max}	is the maximum internal girth of the garment below the armholes
A ¹ _{min}	is the minimum internal girth of the garment below the armholes
A ¹ _{min} 'D'	'Designed' The minimum girth of the garment below the armholes with the closures closed with half thickness foam butting together
A ¹ _{min} 'A'	'Absolute' The minimum girth of the garment below the armholes with the closure tightened as far as it will go, half thickness foam riding over full thickness foam.
B ¹ _{max}	is the maximum internal girth of the garment at the lower edge of the protective material
B ¹ _{min}	is the minimum internal girth of the garment at the lower edge of the protective material.
B ¹ _{min} 'D'	'Designed' The minimum girth of the garment at the lower edge of the protective material with the closure closed with half thickness foam butting together.
B ¹ _{min} 'A'	'Absolute' The minimum girth at the lower edge of the protective material with the closure tightened as far as it will go, half thickness foam riding over full thickness foam
D and D ¹	are vertical lines on the chest separated by a distance of 25% of A
E and E ¹	are vertical lines on the back separated by a distance of 25% of A
F	is the centre back line.
G	is the height of the side below the armhole
H	is the centre front length
I	is the width across the back between the armholes measured at a level half-way down the armhole opening
J	is the width across the chest between the armholes measured at a level half-way down the armhole opening
K	is the width at the back at a distance equal to 50% of dimension C _{max} from the neck inlet
L	is the circumference of the armhole.
M	is the distance below the centre of the back of the neck of the garment at which dimension K is measured. (M = 0.5 C _{max})
N	is the smallest with of the shoulder strap

PROTECTIVE MATERIAL DIMENSIONS IN PROTECTIVE JACKETS AND BODY PROTECTORS & EXCEPTIONS TO THE REQUIREMENTS BS EN 13158:2018 Clauses 4.2.2 & 4.2.3			
RESULTS			
Clause	Question	Answer	Result
4.2.2	Were any removable parts of torso protection found?	No	Pass
4.2.2	Did the sample(s) meet the requirements for the dimensions of protective material (clause 4.2.2) with all removable parts taken off?	N/A	Pass
4.2.2	Is the central 200mm of the back (scaled to $A_{max} = 1000mm$) constructed so that it can only be shortened by a destructive process?	Yes	Pass
4.2.3 (d)	Do shoulder protectors substitute for torso protector material?	No	Pass
4.2.3 (d)	Do such shoulder protectors cover gaps in the torso protection when the arms are raised laterally 60° to the torso and swung forward?	N/A	Pass
4.2.3 (e)	Do perforations in the foam or similar material exceed 15mm diameter?	N/A No perforations	Pass

ADAPTABILITY AND ADJUSTABILITY BS EN 13158:2018 Clause: 4.2.5		
RESULTS		
Examination to ensure appropriate construction of adjusters and closures		
Question	Observation	Result
Is there an absence of excessive touch & close fastener or other features that would permit the garment to be worn with the adjustment set excessively wide?	Yes	Pass
Are there appropriate coloured markers exceeding 10mm in width? Or Is there an alternative acceptable system?	Yes	Pass
What are the background and contrast colours?	Black/Red	Pass

MOVEMENT OF PROTECTIVE MATERIAL BLOCKS AND GAPS BETWEEN THEM BS EN 13158:2018 Clause 4.3		
RESULTS		
Question	Answer	Result
Do the test bars come into contact in any gaps between padding block in the test described in clause 5.5 of EN 13158? And if so list examples	No - A	Pass

CLOSURE STRENGTH OF ADJUSTERS AND RESTRAINT
BS EN 13158:2018
Clause 4.4

RESULTS

Closure strength

Condition of the test	Position of closure	Did the closure open?	Did any gap in the protective padding less than 15mm wide appear?	Result
		Yes / No	Yes / No	
Widest setting of adjusters, 50N pull	Waist Left Side	No	No	Pass
Widest setting of adjusters, 50N pull	Waist Right Side	No	No	Pass
Widest setting of adjusters, 50N pull	Shoulder Left Side	No	No	Pass
Widest setting of adjusters, 50N pull	Shoulder Right Side	No	No	Pass
Widest setting of adjusters, 50N pull	Centre Front	No	No	Pass

Restraint

Maximum movement during 50N pull to be less than $A_{max} \times 0.1 =$				10.0 cm
Position of clamp	Direction of pull	Movement in cm	Result	
Lower edge – Centre Front	Upwards	2.0	Pass	
Lower edge – Left side	Upwards	3.0	Pass	
Lower edge – Right side	Upwards	3.0	Pass	
Lower edge – Centre Back	Upwards	2.5	Pass	
Shoulder area, pull on the edge of the arm hole on the chest	Forwards	2.5	Pass	
Shoulder area, pull on the edge of the arm hole at the top	Upwards	3.0	Pass	
Shoulder area, pull on the edge of the arm hole on the back	Backwards	2.0	Pass	

UoM: $\pm 5.71\%$

IMPACT BS EN 13158:2018 Clause: 4.6			
Sample: Model #316			
RESULTS			
Conditions:	20°C / 65% rh		
Date of Testing:	23/05/2025		
Performance Level:	3		
Flat Impactor, Guard Ring at 0 mm, 150 mm Radius Dome Anvil		Narrow Bar, Guard Ring at 10 mm, 150 mm Radius Dome Anvil	
Result 1	1.702 kN (Zip)	Result 1	2.019 kN (Zip)
Result 2	2.853 kN	Result 2	4.153 kN
Result 3	2.953 kN	Result 3	3.759 kN
Result 4	3.020 kN	Result 4	4.181 kN
Result 5	kN	Result 5	kN
Result 6	kN	Result 6	kN
Mean	kN	Mean	3.528 kN
Comment: Pass		Comment: Pass	
REQUIREMENTS			
Mean: ≤ 4 kN			
No single value shall exceed 6 kN			

UoM: ±2.58%

Innocuousness and overall 'safety' examination, clause 4.7	
Are the garments on the evidence of the handling, examination and testing, free of noxious, irritating and unsafe materials and constructions? Specifically are the garments free of hard structures sufficiently bulky to be likely to cause bruising to the user in the event of a fall from a horse?	
Yes	#316
No	
List of points concerning which there is some doubt:-	
1	
2	
3	

Chemical safety (clause 4.7)				
Does the Technical File or supporting documentation provide evidence of the chemical safety of all constituent parts of the garments?				
Material in garment		Category of documentation listed in 4.7 of EN 13158 that it is claimed demonstrates safety	Is this documentation adequate?	If NO what information should be sought?
1	PVC/Nitrile foam – 810 - WINBOSS-Taiwan	BV Test reports (6223)010-0241 & 6223)010-0243	Yes	
2	Outer fabric – 58” NYLON 210DX210D 118T PUX2 WR BLACK - YIDA TEXTILE CO.LTD	HCT Test reports WTH23H02014860C, WTH23H02014859C & WTH23H02014861C	Yes	
3	Lining fabric – 60” 300G/YD NYLON/POLYESTER LYCRA BLACK – CAIHONGZ	SGS Test reports SL92209241526801FW, SL92209241526101FW & SL92209241526601FW	Yes	
4	Red and Black touch and close fastener fabrics – NYLON VELCRO 19-1557TC – PAIHONG INDUSTRIAL CO	SGS Test report SL92219314627001FW	Yes	
5	Zip fastener – #5 YKK VSOR-56 DA E PLASTIC OPEN END W/AUTOMATIC LOCK SLIDER BLACK – YKK TAIWAN CO.LTD	Oeko-Tex certificate TP001157591 – validity checked	Yes	
6	Woven strap material – 32X1.5MM PP 900D WEBBING 3 TWILL BLACK – MEMEI WEBBING CO.	BV Test reports (9323)048-1663, (9323)048-1665 & (9323)048-1674	Yes	

Marking, clause 6		
The requirements in the Standard		Is the requirement met on the garment or packaging?
1	The name or trade mark of the manufacturer or his authorized representative in the EEC or country where the product is placed on the market	Yes
2	Designation of the product type, commercial name or code, that uniquely identifies the item.	Yes
3	The size designation including the pictogram(s), figure 5, on both of separable panels.	Yes
4	The level of performance of the garment (EN 13158)	Yes
5	The appropriate official BETA Label obtainable only from the British Equestrian Trade Association Ltd.	Yes
6	An instruction to see the Instructions for Use in the Information Supplied by the Manufacturer provided with the garment.	Yes
7	The year of manufacture of the product. Visible and not coded	Yes
8	A warning that the coloured markers should not be visible. A statement of the colour of the markers	Yes
9	The text of the WARNING on Level 1 garments	N/A
10	The text of the WARNING on horse drivers and passengers garments	N/A
11	The number of the European Standard	Yes
The following information should be given whenever practical. It shall be given in the instructions for use if it is not on the product:		
13	The class of use for which the protectors are intended. Any class of use for which the protectors are specifically NOT intended.	Yes
14	The hazards specific to horse riding against which some protection is given.	Yes
15	The hazards specific to horse riding against which protection is NOT given.	Yes
16	Textile and material type and content.	Yes
17	International care label symbols. (Negative labels are important).	Yes

Information Supplied by the Manufacturer, clause 7		
	The requirement in the Standard	Is the requirement met in the booklet supplied with the garment?
1	All the information required in section 6 Marking.	Yes
2	The full address of the manufacturer or importer.	Yes
3	The sizing pictogram	Yes
4	An explanation of any additional pictogram used on the garment	N/A
5	How to select protective clothing of the correct level of performance. An explanation of the performance levels of protective clothing available under the European Standard.	Yes
6	How to choose the correct size, and check its fit. How to ensure the protective clothing is suitable for the anticipated movements during use. Details of compatible normal clothing. Details of the sizes of protective clothing available and the body dimensions to which they relate. Details of compatible front and back panels where these may be interchanged.	Yes
7	How to adjust the protective clothing. The meaning of coloured markers and their colour.	Yes
8	A warning to adjust the body protective clothing to give a close fit on the torso.	Yes
9	Instructions about wearing other PPE such as a helmet to provide the protection intended.	Yes
10	A warning about changes in environmental conditions such as temperature, that would significantly reduce the performance of the protective clothing.	Yes
11	Information about the performance of the protective clothing if it has been impact tested at a temperature of 30°C.	N/A
12	A warning that no protective clothing can offer full protection against injury. A specific warning that spinal injuries will not be prevented by the body protector or protective jacket.	Yes
13	A warning about any contamination, alteration to the protective clothing, or misuse that would dangerously reduce the performance of the protective clothing.	Yes
14	A warning about any materials used in the product that may cause allergic responses in sensitized people.	N/A
15	The text of any additional warnings placed on the protective clothing by the manufacturer.	Yes
16	Detailed instructions for caring for and cleaning the protective clothing.	Yes
17	The year of manufacture of the protective clothing. Instructions concerning inspection and repair of the protective clothing, and how to decide that it should be thrown away because it may no longer provide adequate protection due to damage, wear or age.	Yes

Check list of results		
Points examined		Result
		✓, No or N/A
1	Is the Technical File sufficiently complete to make the examination?	✓
2	Is the garment submitted accurately shown in the Technical File?	✓
3	Does the garment fit a subject of the appropriate size?	✓
4	Are the foam panels large enough in the torso region?	✓
5	Is the extent of padding adequate in the shoulder region?	N/A
6	Is the adjustment the correct size?	✓
7	Are there measures to prevent the closures being wrongly adjusted? Coloured markers and labels?	✓
8	Is there an absence of padding block separation?	✓
9	Are the closures strong enough?	✓
10	Is the restraint in the torso region adequate?	✓
11	Is the restraint in the shoulder region adequate?	✓
12	Impact testing: Does the torso region meet the performance level claimed?	✓
13	Impact testing: Do the shoulder regions meet the requirements?	N/A
14	Is there an absence of potentially hazardous materials and surfaces on the outside and inside of the garment?	✓
15	Is there adequate evidence the garment is free of noxious substances?	✓
16	Is the marking adequate?	✓
17	Is the 'Information Supplied by the Manufacturer' adequate?	✓
Lowest Performance Levels reached by the materials and constructions used in the garments.		
18	Body protectors and the torso regions of jackets	Level 3
19	Shoulder protectors and the shoulder regions of jackets	

Action Points				
Examination of the Manufacturer's response to Action Points noted in this Test Report and notified to the manufacturer				
Action Point		Subject	Reference of Manufacturer's response	Response OK?
Number	Page			
1	12	Requested chemical safety / innocuousness documents	Documents submitted	Yes
2				
3				
4				
5				

Aspects of the materials, design or construction of the garments that are not in accordance with the requirements of the cited documents. Comments.

Number	Description of problem	Comment
1		
2		
3		

End of Report

The client acknowledges and agrees that any services provided and/or reports produced by Intertek are done so within the limits of the scope of work agreed pursuant to the client's specific instructions. This report relates specifically to the sample(s) tested that were drawn and delivered by the client or their nominated third party. Intertek does not make any representation or warranty for any bulk samples or certify the bulk samples received from the client. Furthermore, Intertek does not provide a warranty or verification on the sample(s) representing any specific goods, material and/or shipment and only relate to the sample(s) as received and tested. Intertek have aimed to conduct the review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or willful misconduct. In no event, will the contents of any reports or any extracts, excerpts or parts of any reports be distributed or published without the prior written consent of Intertek in each instance. Only the client is authorized to permit copying or distribution of this report (and then only in its entirety). Any such third parties to whom this report may be circulated rely on the content of the report solely at their own risk.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor of $k = 2$, providing a level of confidence of approximately 95 %. Unless otherwise specified all compliance and pass/fail statements are binary simple acceptance based on the tolerance interval and, with the exception of graded methods, a test uncertainty ratio greater (TUR) than 4:1. For graded methods the TUR will drop to as low as 0.5:1 when the tolerance limits are within a grade division of the upper scale limit. The Uncertainty budgets are stated for each Test method, these are for reference, and should be considered when results are on or close to Specification Limits / Requirements and in such cases it should be noted that the risk of false acceptance or rejection may be as high as 50%, for further information please refer to ILAC G8.