

		VELO TECH SYSTEMS LIMITED	
V-Deck Safety Specifications UK			
Revision	08	Schedule	VTS 6002-08 OPM
Page Number	Page 1 of 9	Effective Date	10.01.25
		Authorised	GB
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V-Deck™

Standards for Design, Inspection, Materials, Testing & Installation

V-Deck™ is a high strength, low weight, modular **Temporary Works Platform** that provides a strong and stable platform for temporary works access. V-Deck™ is best suited to bridges, under deck structures, helidecks, external/internal storage tanks, pipe-racks, jetties and flare booms.

1. Design and Factor of Safety

V-Deck™ is **designed** to comply with **BS 5975:2024 Code of Practice for Temporary Works** which includes scaffold, formwork, and temporary works platforms. When designing Temporary Works Platforms, the criteria listed in **UK National Annex Eurocode 1 EN1991-1-7 Actions on Structures** must be taken into account.

The Factor of Safety for yield point for temporary works (scaffold equipment) as per BS5975:2024 equipment is 1.65:1 and failure point is 2:1

The Factor of Safety for V-Deck™ equipment is a failure of minimum of 3:1 for all components.

2. Inspection Regime

Work at Height UK Regulations 2005 requires a **logged inspection of the working platform every 7 days or less according to conditions and shift changes.**

3. Standards

The governing standard for V-Deck temporary works platforms is Provision and Use of Work Equipment Regulations 1998 (PUWER) amendments 2018.

The components utilised in the V-Deck™ System meet the following technical standards:

- BS EN1004:2020 Class 4
Mobile access and working towers made of prefabricated elements - Materials, dimensions, design loads, safety and performance requirements.
- EN12811-1:2003
Temporary works equipment - Scaffolds. Performance requirements and general design
- EN12811-2:2004
Temporary works equipment - Information on materials
- EN12811-3:2002
Temporary works equipment (Scaffold equipment) - Load testing
- BS EN12811-4:2013

 VELO TECH SYSTEMS LIMITED					
V-Deck Safety Specifications UK					
Revision	08	Schedule	VTS 6002-08 OPM	Authorised	GB
Page Number	Page 2 of 9	Effective Date	10.01.25	Compiled By:	KL

Temporary works equipment - Protection fans for scaffolds. Performance requirements and product design

Note: LOLER 1998 regulations do not apply to BS5975:2024 Temporary Works Equipment or BSEN 12811-Parts 1-4 Scaffold equipment.

LOLER does not cover include the design criteria and checks required for Temporary Works Platforms as per the above standards.

LOLER Inspection is only required every six months.

LOLER Factor of Safety is not applicable to BS5975:2024 Temporary Works (Platforms) or EN1991-1-7 Actions on Structures.

4. Installation

V-Deck is installed by trained V-Deck™ trained personnel qualified in IRATA/SOFT/SPRAT Rope Access Techniques and/or scaffolding and/or Work at Height Techniques. Reference VTS 1006 OPM V-Deck™ Installers Competency.

		VELO TECH SYSTEMS LIMITED	
V-Deck Safety Specifications UK			
Revision	08	Schedule	VTS 6002-08 OPM
Page Number	Page 3 of 9	Effective Date	10.01.25
		Authorised	GB
		Compiled By:	KL

Specification Table

1. V-Deck™ System Specification and Testing	- This document describes the specification of each of the V-Deck™ System Components and the Independent Test Results. - Independent Testing of the components was undertaken by a third parties which are accredited independent testing companies. <i>V-Deck has been tested to the following standard by independent 3rd Party engineers.</i> <i>BS EN 1004: 2020 Class 4</i> <i>Mobile access and working towers made of prefabricated elements - Materials, dimensions, design loads, safety and performance requirements. UKAS certified.</i> <i>BS EN 12811-3: 2003 Class 4</i> <i>Temporary works equipment (Scaffold equipment) - Load testing</i> <i>BS EN 12811-3:2003</i> <i>Temporary works equipment (Scaffold equipment) Load Testing of Handrail System</i> <i>BS 5975:2024 Code of Practice for Temporary Works – Factors of Safety</i>		
2. V-Deck™ System Identification	- All VTS components have a unique Identification Plate or Tag attached. - The ID plate/tag details the unique serial number, year of manufacture, SWL or MBL. - Shackles and Karabiners are supplied with a Manufacturers Batch Number only. - There are no serial numbers for scaffold clamps or scaffold tubes.		
Product	Material & Minimum Break Load (MBL)	Corrosion Protection/Durability	Standards
3. V-Deck™	Marine Grade Aluminium UDL 3-5kN/m2	Marine Grade Aluminium 10 year lifespan	- BS EN1004:2004 Class 4 - UDL Max 5kN/m² - BS EN 1999-1-5:2007 - UKAS Certified
4. V-Deck™ Handrail System	High Tensile Steel Component compatible with steel scaffold tube,	EN ISO 1461 Galvanising 10 year lifespan	- BS EN 12811-1:2003 - Independently Tested



VELO TECH SYSTEMS LIMITED

V-Deck Safety Specifications UK

Revision	08	Schedule	VTS 6002-08 OPM	Authorised	GB
Page Number	Page 4 of 9	Effective Date	10.01.25	Compiled By:	KL

	aluminium scaffold tube or system scaffold. Exceeds 125kg vertical loading and 35kg horizontal loading		
5. V-Chains™	Grade 8 or 10 steel 7.1mm dia. MBL 70-80kN	Sherardizing to BS EN ISO 17668:2016 Painted chains are not acceptable where hydrogen embrittlement/stress corrosion conditions are present.	• EN1677-1-4 • EN818-2 • BS EN 12811-1:2003
6. V-Truss™	High Tensile Steel MBL 103kN	EN ISO 1461 Galvanising 10 year lifespan	• BS 1139-1.2:1990 • BS EN 12811-1:2003 • Independently Tested
7. V-Clamps™	High Tensile Steel MBL 80-140kN	EN ISO 1461 Galvanising 10 year lifespan	• BS 1139-1.2:1990 • BS EN 12811-1:2003 • Independently Tested
8. V-Net™	High Tenacity Polyester HTPE Edge Cord MBL 40kN Cord MBL 5kN	Polyester PVA UV stabilised Flame Retardant to BS 5867-2:2008 5 year lifespan	• BS EN1263-1:2014 • ANSI A10-11-R2016
9. Safety Bow Shackle with Locking S/S Safety Pin	Steel WLL 20kN (2t) WLL 32.5kN (3.25t)	EN ISO 1461 Galvanising Galvanised to 60µ	• EN13889
10. Wire Gate V-Net Karabiner™	Steel MBL 30kN	Zinc Passivation 50µ	• EN12275
11. Screwgate Karabiner	Steel MBL 50kN	Zinc Passivation 50µ	• EN362:2004/B
12. Ratchet Straps	High Tenacity Polyester HTPE	Ratchet Mechanism ISO 2018	• BS EN12195-2:2001



VELO TECH SYSTEMS LIMITED

V-Deck Safety Specifications UK

Revision	08	Schedule	VTS 6002-08 OPM	Authorised	GB
Page Number	Page 5 of 9	Effective Date	10.01.25	Compiled By:	KL

50mm	MBL Single Tape - 60kN MBL Double Tape 120kN	Zinc Passivation 25µ Powder Coated Polyester UV stabilised 5 year lifespan	
13. Ratchet Straps 35mm	High Tenacity Polyester HTPE MBL Single Tape – 30kN MBL Double Tape 60kN Choke Tape - 110kN	Ratchet Mechanism ISO 2018 Zinc Passivation 25µ Polyester UV stabilised 5 year lifespan	• BS EN12195-2:2001
14. Duplex Sling Green 50mm	High Tenacity Polyester HTPE MBL Single Tape - 140kN MBL Basket Tape - 280kN Choke Tape - 110kN	Polyester UV stabilised 5 year lifespan	• BS EN1492-1:2000
15. Wire Rope Strop 13mmØ	Steel Soft Eyes with Tapered Ferrules MBL Single 130kN	Galvanised to 30µ	• BS EN 13414-1:2003
16. Scaffold Tube	Steel 48.3mm OD 4mm Wall Thickness	Galvanised to 60µ Weight 4.5kg/m	• BS EN39:2001
17. Hi Yield Scaffold Tube	Steel 48.3mm OD 3.2mm Wall Thickness	Galvanised to 60µ Weight 3.2kg/m	• EN10219 S355JOH
18. Aluminium Scaffold Tube	48.3mm OD 4mm Wall Thickness	Aluminium 10 year lifespan Weight 1.67kg/m	• EN AW-6082
19. Scaffold Clamps	Steel Drop Forged Class B Slip 10kN	ISO 2018 Zinc Passivation 25µ 10 year lifespan	• BS EN74 Class B



VELO TECH SYSTEMS LIMITED

V-Deck Safety Specifications UK

Revision	08	Schedule	VTS 6002-08 OPM	Authorised	GB
Page Number	Page 6 of 9	Effective Date	10.01.25	Compiled By:	KL



VELO TECH SYSTEMS LIMITED

V-Deck Safety Specifications UK

Revision	08	Schedule	VTS 6002-08 OPM	Authorised	GB
Page Number	Page 7 of 9	Effective Date	10.01.25	Compiled By:	KL

V-Deck™

- V-Deck™ Standard Deck Lengths are 2m and 3m x 0.6m width.
- V-Deck™ Single 2m deck has UDL of 5kN/m² – 3m deck has UDL of 3kN/m²
- V-Deck™ Checker Plate Deck can supplied in 1-4m lengths x 0.4-0.6m width.
- Constructed to BS EN1004:2004 Class 4 UDL 3kN/m² with Factor of Safety 3:1.
- Point Loading Test on Checker Plate 50mm x 50mm.
- End Hook Pull Out Load 16kN
- UKAS Independently Tested & Certified.

V-Deck™ Handrail System

- Handrail system exceeds 125kg vertical load and 35kg horizontal load as required by EN12811-3:2003
- Handrail system is compatible with steel scaffold tube and fittings
- Handrail system is compatible with aluminium scaffold tube and fittings
- Handrail system is compatible with system scaffold components.
- Independently Tested.

V-Chains™

- The intermediate suspension chains are an assembly of the individual components listed below.
- Standard Suspension Chains are in 7mm chain sherardized with lengths of 3m and 5m.
- Chains may be supplied in diameters of 6-10mm and any length.
- Master Link Grade 8/10 BS EN1677-4.
- Chain Connector 7/8mm Grade 8/10 BS EN1677-1.
- Chain 7.1mm Grade 8/10 BS EN 818-2.
- Clutch 8mm Chain Tested to MBL 200kN.
- Hook 7/8mm Grade 8/10 BS EN1677-2.



VELO TECH SYSTEMS LIMITED

V-Deck Safety Specifications UK

Revision	08	Schedule	VTS 6002-08 OPM	Authorised	GB
Page Number	Page 8 of 9	Effective Date	10.01.25	Compiled By:	KL

V-Truss™

- V-Truss™ standard lengths are 1.2m, 1.8m and 2.4m.
- V-Truss™ can be supplied in 0.6 - 3.0m lengths.
- End Plate Tension Pull at 45 deg 25kN, 90 deg 11kN.
- End Plate Compression Pull at 45 deg 25kN, 90 deg 11kN.
- End Plate Eyes MBL 103kN.
- Coded Welded BSEN287 to AWS and ASME IX procedures.
- Independently Tested

V-Clamp™

- V-Clamp™ Universal Beam standard flange sizes are:
100-180mm; 150-250mm; 200-350mm; 300-450mm and 400-600mm and 600mm – 1.5m.
Mean Break Load 170kN at 0-45deg.
- V-Clamp™ PFC (L) Beam standard flange sizes are:
75-90mm and 80-100mm.
Mean Break Load 130kN at 0-45deg.
- V-Clamp™ Bulb Nose Beam standard flange sizes are:
160x9mm to 200x12mm.
Mean Break Load 60kN at 0-45deg.
- Bespoke Clamps are Made to Order and Independently Tested.

V-Net™

- Edge and Containment Nets are HTPE Knotted 60mm Mesh.
- Net Edge Mean Break Load 40kN.
- Strand Mean Break Load is 500kg.
- Standard Sizes are 5m x 2m, 10m x 2m, 5m x 5m'
- Any combination of mesh, strand size and material can be Made to Order.
- Independently Tested and Certified by DNV.



VELO TECH SYSTEMS LIMITED

V-Deck Safety Specifications UK

Revision	08	Schedule	VTS 6002-08 OPM	Authorised	GB
Page Number	Page 9 of 9	Effective Date	10.01.25	Compiled By:	KL

V-Deck™ Engineering Design and Uniform Load Capacity UDL kN/m²

- V-Deck™ is modular in design and thus the UDL capacity may be adjusted simply and quickly from 1kN/m² to 5kN/m² as required.
- Wind Load, tidal and wave loading are additional calculations as per site and location requirements.

Note Important Information

All the components in the V-Deck™ System are to be used for Work Platforms only.

The use of the components for lifting operations is strictly prohibited.