

Fall Protection

CE EN 362: 2004 CLASS B

CE Type Test

BSI Kitemark Court Davy Avenue Knowlhill Milton Keynes MK5 8PP United Kingdom

CLASS B CE Production Quality Control

BSI
Kitemark Court
Davy Avenue
Knowlhill
Milton Keynes
MK5 8PP
United Kingdom

SELF-LOCKING CARABINERS

Model Numbers: (See Figure 1.)

User Instruction Manual

Continued...

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	lacktriangle		2000005			
	H		Material: Alloy Steel			
		₩ \\ H	Throat Size:	4 in (19 mm)		
	F //	Minimum	A.	5,000 lbs (22.2 kN)		
		Wage III	Breaking Strength:	В.	3,600 lbs (16 kN)	
			Gate Strength:	C.	3,600 lbs (16 kN)	
	Ψ			D.	3,600 lbs (16 kN)	
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	<u> 1711</u>		Material:	${\overline{}}$	ıminum Alloy	
₩			Throat Size:	-	4 in (19 mm)	
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	v	<u> </u>		D.	3,600 lbs (16 kN)	
(\square	_	2000112			
			Material: Alloy Steel			
	.		Throat Size:			
			Minimum	Α.	5,000 lbs (22.2 kN)	
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	W		Strength:	C.	1	
			Gate Strength:	D.	· · · · ·	
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	Ф		2	000	113	
$\mathbb{A}^{\mathbb{A}}$			Material:	Alloy Steel		
	-		Throat Size:	1-3	3/16 in (30 mm)	
<u>*</u>			Minimum	A.	5,000 lbs (22.2 kN)	
			Breaking Strength:	В.	3,600 lbs (16 kN)	
			Gate Strength:	C.	3,600 lbs (16 kN)	
				D.	· · · · ·	
	*		2000114			
A 12 13 14			Material:	Alloy Steel		
			Throat Size:	-	3/16 in (56 mm)	
			Minimum Breaking	Α.	-, ,	
			Strength:	B.	3,600 lbs (16 kN)	
			Gate Strength:	C.	3,600 lbs (16 kN)	
				D.	3,600 lbs (16 kN)	
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FORM NO: 5908026

REV: A © 3M 2016

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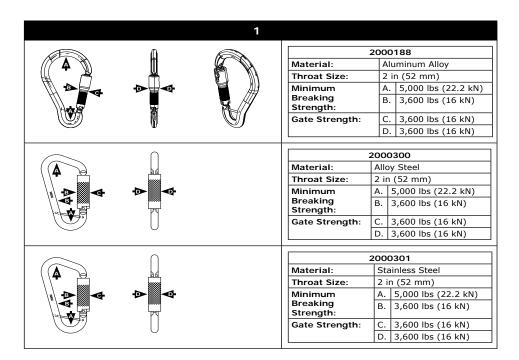




Throat Size: 1 in (25 mm)						
Minimum		5,000 lbs (22.2 kN)				
Breaking Strength:	В.	3,600 lbs (16 kN)				
Gate Strength:	C.	C. 3,600 lbs (16 kN)				
	D.	3,600 lbs (16 kN)				
2000184						

2000184					
Material:	Aluminum Alloy				
Throat Size:	7/10 in (18 mm)				
Minimum Breaking Strength:		5,000 lbs (22.2 kN)			
		3,600 lbs (16 kN)			
Gate Strength:	C.	3,600 lbs (16 kN)			
	D. 3,600 lbs (16 kN)				

Continued...



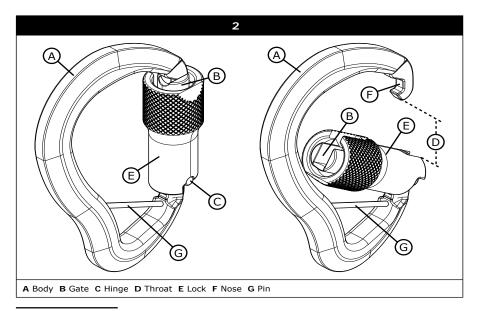
⚠ **WARNING:** This product is part of a Personal Fall Protection System. The user must follow the manufacturer's instructions for each component of the system. These instructions must be provided to the user of this equipment. The user must read and understand these instructions before using this equipment. Manufacturer's instructions must be followed for proper use and maintenance of this equipment. Alterations or misuse of this product or failure to follow instructions may result in serious injury or death.

① IMPORTANT: If you have questions on the use, care, or suitability of this equipment for your application, contact 3M Fall Protection.

① IMPORTANT: Before using this equipment, record the product identification information from the ID label in the 'Inspection and Maintenance Log' at the back of this manual.

DESCRIPTION:

Figure 1 identifies 3M Fall Protection® Self-Locking Carabiners which can be purchased separate from 3M Personal Protective Equipment (PPE)¹ and used as connectors in a Fall Protection System. Figure 2 illustrates the components of a Carabiner. Carabiners are self-locking connectors comprised of a trapezoidal or oval shaped Body (A) with a Gate (B) on a Hinge (C) that opens to attach the Carabiner around another object and, when released, automatically closes across the Throat (D) to retain connection around the object. A Lock (E) closes around the Nose (F) of the Carabiner to prevent the Gate from involuntarily opening. Some Carabiner models are equipped with a Retaining Pin (G) that provides a captive eye for connection of a Lanyard, Lifeline, or similar component.



¹ Integrated Connectors: Lanyards, SRLs, etc. are typically equipped with an integrated connector (Snap Hook, etc.) with a captive eye. Integrated Connectors can not be removed from their respective equipment without using a special tool or damaging the equipment. Use of Integrated Connectors is documented in the Manufacturer's instructions that come with the equipment.

1.0 APPLICATIONS

- **1.1 PURPOSE:** Capital Safety Self-Locking Carabiners can be used as Anchorage Connectors¹ or Connectors² in Fall Arrest, Restraint, Work Positioning, Suspension, and Rescue systems.
- **1.2 STANDARDS:** Capital Safety Carabiners conform to the national or regional standard(s) identified on the front cover of these instructions.
- 1.3 TRAINING: This equipment is intended to be used by persons trained in its correct application and use. It is the responsibility of the user to assure they are familiar with these instructions and are trained in the correct care and use of this equipment. Users must also be aware of the operating characteristics, application limits, and the consequences of improper use.
- **1.4 LIMITATIONS:** Always consider the following limitations when installing or using this equipment:
 - **MARNING:** Failure to observe the following limitations may result in injury or death.
 - Capacity: The Carabiners listed in Figure 1 are intended for use by persons with a combined weight (person, clothing, tools, etc.) of no more than 420 lbs (191 kg). Only one Personal Protective System may be connected to the Carabiner at any time, except for emergency situations.
 - Hazards: Use of this equipment in areas where surrounding hazards
 exist may require additional precautions to reduce the possibility of injury
 to the user or damage to the equipment. Hazards may include, but are
 not limited to: high heat, caustic chemicals, corrosive environments,
 high voltage power lines, explosive or toxic gases, moving machinery, or
 overhead materials that may fall and contact the user or Fall Protection
 System.
 - Corrosion: Use near seawater or other corrosive environments may require more frequent inspection or service to ensure corrosion does not affect performance of the Carabiner.
 - Chemicals: Solutions containing acid or caustic chemicals, especially at elevated temperatures, may cause damage to this equipment.
 Consult Capital Safety if doubt exists concerning use of this equipment where chemical hazards are present.
 - Electrical: Do not install Carabiners where they, or the user, may contact electrical power lines.

2.0 USE

2.1 FALL PROTECTION AND RESCUE PLAN: The employer must have a Fall Protection and Rescue Plan in place. The plan should provide guidelines and requirements for an employer's managed fall protection program, including policies, duties and training; fall protection procedures; eliminating and controlling fall hazards; rescue procedures; incident investigations; and evaluating program effectiveness.

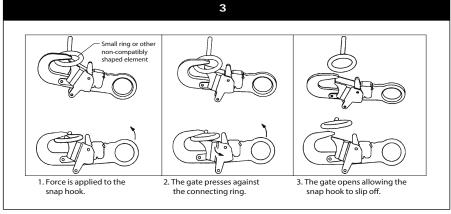
¹ Anchorage Connector: A component or subsystem that functions as a coupling between the anchorage and a fall protection, work positioning, rope access, or rescue system.

² Connector: A component or element that is use to couple parts of the system.

2.2 INSPECTION FREQUENCY: Carabiners shall be inspected by the authorized person³ or rescuer⁴ before each use (See Section 4). Additionally, inspections shall be conducted by a competent person⁵ other than the user. Extreme working conditions (harsh environment, prolonged use, etc.) may necessitate more frequent competent person inspections. The competent person shall use the Inspection Schedule (Section 4) to determine appropriate inspection intervals. Inspection procedures are described in Section 4. Results of the Competent Person inspection should be recorded in the "Inspection and Maintenance Log" on the back pages of these instructions.

⚠ **WARNING:** If the carabiner has been subjected to fall arrest forces: remove it from service, mark or tag as "UNUSABLE", inspect and service as instructed in Section 4. Continued use of the carabiner after fall arrest may result in injury or death.

2.3 COMPATIBILITY OF CONNECTORS: Connectors are considered to be compatible with connecting elements when they have been designed to work together in such a way that their sizes and shapes do not cause their gate mechanisms to inadvertently open regardless of how they become oriented. Contact Capital Safety if you have any questions about compatibility. See Figure 3 Uninentional Disengagement (Roll Out).



2.4 MAKING CONNECTIONS: Only self-locking snap hooks and/or carabiners shall be used with this equipment. Ensure all connectors are fully closed and locked and compatible. See Figure 4 Inappropriate Connections.

DBI-SALA connectors (snap hooks and carabiners) are designed to be used only as specified in each product's user instructions. See Figure 4 for inappropriate connections. DBI-SALA snap hooks and carabiners should not be connected:

- A. To a D-ring which another connector is already attached.
- B. In a manner that would result in a load on the gate.

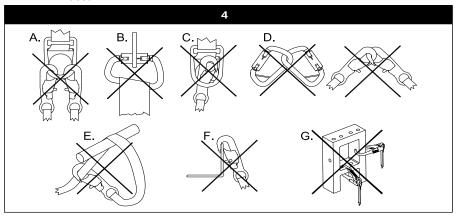
³ Authorized Person: A person assigned by the employer to perform duties at a location where the person will be exposed to a fall hazard.

⁴ Rescuer: Person or persons other than the rescue subject acting to perform an assisted rescue by operation of a rescue system.

⁵ Competent Person: An individual designated by the employer to be responsible for the immediate supervision, implementation, and monitoring of the employer's managed fall protection program who, through training and knowledge, is capable of identifying, evaluating, and addressing existing and potential fall hazards, and who has the employer's authority to take prompt corrective action with regard to such hazards.

NOTE: Large throat snap hooks should not be connected to standard size D-rings or similar objects which will result in a load on the gate if the hook or D-ring twists or rotates, unless the snap hook complies with CE EN362:2004. Check the marking on your snap hook to verify that it is appropriate for your application.

- C. In a false engagement, where features that protrude from the snap hook or carabiner catch on the D-ring, and without visual confirmation seems to be fully engaged to the anchor point.
- **D.** Directly to webbing or rope lanyard for tie-back (unless specifically provided by the manufacturer).
- E. To any object which is shaped or dimensioned such that the snap hook or carabiner will not close and lock, or where roll-out could occur.



OTHER RESTRICTIONS:

- Do not make connections where the hook locking mechanism can come into contact with a structural member or other equipment and potentially release the hook.
- Do not attach connector into a loop or thimble of a wire rope or attach in any way to a slack wire rope.
- The connector must be free to align with the applied load as intended - regardless of the size or shape of the mating connector.
- A carabiner may be used to connect to a single or pair of soft loops on a body support such as a body belt or full body harness, provided the carabiner can fully close and lock. This type of connection is not allowed for snap hooks.
- A carabiner may be connected to a loop or ring connector that is already occupied by a choker style connector. This type of connection is not allowed for snap hooks.
- **2.5 ANCHORAGE STRENGTH:** The anchorage strength required is dependent on the application type.
 - A. FALL ARREST: Anchorages selected for fall arrest systems shall have a strength capable of sustaining static loads applied in the directions permitted by the system of at least 12 kN (2,700 lbs) per EN 795.

3.0 OPERATION AND USE

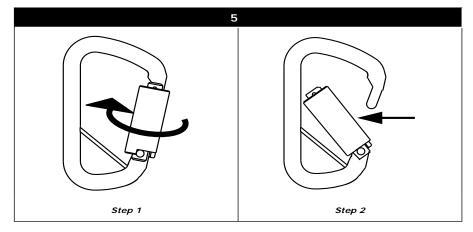
WARNING: Do not alter or intentionally misuse this equipment. Consult 3M when using this equipment in combination with components or subsystems other than those described in this manual. Some subsystem and component combinations may interfere with the operation of this equipment. Use caution when using this equipment around moving machinery, electrical hazards, chemical hazards, and sharp edges.

WARNING: Consult your doctor if there is reason to doubt your fitness to safely absorb the shock from a fall arrest. Age and fitness seriously affect a worker's ability to withstand falls. Pregnant women or minors must not use 3M carabiners.

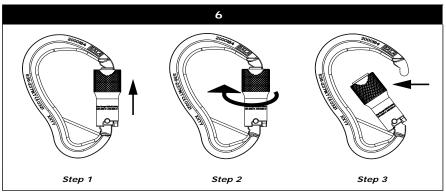
WARNING: Follow the manufacturer's instructions for associated equipment (full body harness, lanyard, lifeline, etc.) used in your personal fall arrest, restraint, work positioning, suspension, or rescue system.

3.1 CARABINER OPERATION

A. CONNECT DOUBLE ACTION CARABINER: Connect the carabiner to the connection point, rotate the gate clockwise and push to the center of the carabiner. When positioned around a connection point, release gate to close and lock. See Figure 5.



B. CONNECT TRIPLE ACTION CARABINER: Connect the carabiner to the connection point, rotate the gate clockwise, then pull gate up and push to the center of the carabiner. Position around a connection point, then release gate to close and lock. See Figure 6.



3.2 USE CONSIDERATIONS

When making a connection using a carabiner, the mating connector must be compatible in size and shape. Improper loading directions can cause the hook to fail or the gate to open, releasing the load. Do not use hooks that will not completely close over the attachment object. Do not connect carabiners to carabiners, or snap hooks to carabiners. Do not install more than one snap hook or carabiner into a single connection ring or opening (except for emergency situations). Do not connect snap hooks or carabiners to objects or openings that may abrade or wear the hook material.

4.0 INSPE	CTION AND	MAINTE	NANCE	LOG			
Serial Numbers:							
Model Numbers:							
Inspection Date:	·	Inspecte	ed By:				
Inspection: (See Section 2.2 f	or Inspection Fre	equency)	-	User	Competent Person		
Inspect the snap hook or carabiner for sharp edges, burrs, dents, or deform							
Inspect the snap hook or carabiner for excessive corrosion. The gate and lock should operate smoothly, with no difficulty. Gates must fully close and engage nose of hook. See Figure 1.							
Inspect markings. Markings sho	ould be present a	nd fully leg	ible.				
Inspect each system componen manufacturer's instructions.	t or subsystem a	ccording to	ı				
Record the inspection date and maintenance log.	results in the in	the inspect	ion and				
Corrective Action/Maintenance	::		Approved	d By:			
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LIMITED LIFETIME WARRANTY

Warranty to End User: CAPITAL SAFETY warrants to the original end user ("End User") that its products are free from defects in materials and workmanship under normal use and service. This warranty extends for the lifetime of the product from the date the product is purchased by the End User, in new and unused condition, from a CAPITAL SAFETY authorised distributor. CAPITAL SAFETY'S entire liability to End User and End User's exclusive remedy under this warranty is limited to the repair or replacement in kind of any defective product within its lifetime (as CAPITAL SAFETY in its sole discretion determines and deems appropriate). No oral or written information or advice given by CAPITAL SAFETY, its distributors, directors, officers, agents or employees shall create any different or additional warranties or in any way increase the scope of this warranty. CAPITAL SAFETY will not accept liability for defects that are the result of product abuse, misuse, alteration or modification, or for defects that are due to a failure to install, maintain, or use the product in accordance with the manufacturer's instructions. THIS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO OUR PRODUCTS AND IS IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES. EXPRESSED OR IMPLIED.





Fall Protection

USA

3833 SALA Way Red Wing, MN 55066-5005 Toll Free: 800.328.6146 Phone: 651.388.8282 Fax: 651.388.5065 solutions@capitalsafety.com

Rua Anne Frank, 2621 Boqueirão Curitiba PR 81650-020 Brazil

Phone: 0800-942-2300 brasil@capitalsafety.com

Calle Norte 35, 895-E Col. Industrial Valleio C.P. 02300 Azcapotzalco Mexico D.F.

Phone: (55) 57194820 mexico@capitalsafety.com

Colombia

Compañía Latinoamericana de Seguridad S.A.S. Carrera 106 #15-25 Interior 105 Manzana 15 Zona Franca - Bogotá, Colombia

Phone: 57 1 6014777

servicioalcliente@capitalsafety.com

Canada

260 Export Boulevard Mississauga, ON L5S 1Y9 Phone: 905.795.9333 Toll-Free: 800.387.7484 Fax: 888.387.7484 info.ca@capitalsafety.com

EMEA (Europe, Middle East, Africa) EMEA Headquarters:

5a Merse Road North Moons Moat Redditch, Worcestershire B98 9HI LIK Phone: + 44 (0)1527 548 000 Fax: + 44 (0)1527 591 000 csgne@capitalsafety.com

France: Le Broc Center

Z.I. 1re Avenue - BP15 06511 Carros Le Broc Cedex Phone: + 33 04 97 10 00 10 Fax: + 33 04 93 08 79 70 information@capitalsafetv.com

Australia & New Zealand 95 Derby Street

Silverwater Sydney NSW 2128 Australia Phone: +(61) 2 8753 7600 Toll-Free: 1800 245 002 (AUS) Toll-Free: 0800 212 505 (NZ) Fax: +(61) 2 8753 7603 sales@capitalsafety.com.au

Asia Singapore:

69, Ubi Road 1, #05-20 Oxley Bizhub Singapore 408731 Phone: +65 - 65587758 Fax: +65 - 65587058 inquiry@capitalsafety.com

Shanghai:

Rm 1406, China Venturetech Plaza 819 Nan Jing Xi Rd, Shanghai 200041, P R China Phone: +86 21 62539050 Fax: +86 21 62539060 inquiry@capitalsafety.cn

www.capitalsafety.com





ATMÓSFERAS EXPLOSIVAS

Instrucciones de uso

INSTRUCCIONES ADICIONALES 5908513 Rev. A

1.0 DESCRIPCIÓN

ES

Si tiene preguntas relacionadas con este documento adicional y los códigos y certificaciones incluidos en el mismo, póngase en contacto con 3M Fall Protection. Para obtener más información sobre los productos incluidos, consulte los manuales de instrucciones del usuario del producto correspondiente.

El producto 3M incluido en este documento adicional está clasificado para su uso en entornos potencialmente explosivos. Consulte la sección 2.0 para ver los detalles de este uso y certificación. En la sección 3.0 se indican los números de modelo de productos 3M cubiertos por estas instrucciones.

La inclusión de este documento adicional con su producto certifica que está clasificado para su uso en entornos potencialmente explosivos. El producto ha sido evaluado según el Anexo II de la Directiva ATEX 2014/34/UE¹ y cumple con los requisitos de EHSR 2.6 del Reglamento sobre EPI 2016/425². Los EPI destinados a utilizarse en entornos potencialmente explosivos deben diseñarse y fabricarse de tal manera que no puedan ser la fuente de un arco o chispa eléctrico, electrostático o inducido por impacto que pueda encender una mezcla explosiva.

2.0 CLASIFICACIÓN DEL PRODUCTO

El producto cubierto por estas instrucciones se clasifica de acuerdo con los siguientes códigos3:

EX II 2 G IIA

- **EX** = Protección contra explosiones
- II = Clasificación del grupo de equipos; para uso en lugares que no sean minas subterráneas (ubicaciones de superficie)
- 2 = Clasificación de zonas peligrosas; para uso en lugares en los que pueda existir ocasionalmente una atmósfera explosiva durante el funcionamiento normal
- G = Clasificación medioambiental; equipos certificados para su uso en atmósferas con gas inflamable
- IIA = Certificación de grupo de gas; para su uso con gases inflamables cuya ignición sea más difícil (por ejemplo, propano)

3.0 APLICACIÓN

Esta clasificación y las certificaciones a las que se hace referencia en este documento adicional se aplican a los siguientes números de modelo de producto 3M:

1112900	1200312	2108412	3400830	6100515	6116635	8000101	8000119	AL4215WAK
1112901	1200313	2108413	3400856	6100530	6116636	8000102	8518558	AL4220WAA
1112902	1200316	2108414	3400951	6104XXX	6116638	8000107	8518559	AL4220WAE
1112903	1200324	2108415	3400956	6105XXX	6160030	8000108	8518560	AL4220WAF
1112904	1245534	3101207	3401025	6106XXX	6160047	8000112	8518561	AL4220WEF
1112905	1245541	3101208	6100140	6107XXX	6160052	8000113	AL42065WEF	KF71201466
1112906	2000112	3101260	6100400	6116631	6160054	8000114	AL4208WAK	KM418
1112907	2103148	3101264	6100401	6116632	6160065	8000115	AL4215WAA	KM419
1112908	2104711	3101298	6100457	6116633	8000095	8000117	AL4215WAE	KM421
1200311	2104716	3400805	6100513	6116634	8000096	8000118	AL4215WAF	

4.0 USO

☑ El uso de este producto debe cumplir con las clasificaciones y certificaciones definidas en estas instrucciones, además de las enumeradas en el manual de instrucciones del usuario del producto.

- **4.1 ELECTRICIDAD ESTÁTICA:** Las descargas electrostáticas pueden provocar la ignición en ciertos entornos y el usuario final debe evitarlas mediante medidas apropiadas. Se recomienda limpiar todos los productos con materiales no estáticos como trapos húmedos para reducir la electricidad estática.
 - ☑ Este equipo no genera un riesgo potencial de ignición (como consecuencia de arcos, chispas y electricidad estática) cuando se usa de acuerdo con el manual de instrucciones del usuario y estas instrucciones complementarias.

¹ Anexo II de la Directiva ATEX 2014/34/UE: Requisitos esenciales de salud y seguridad relacionados con el diseño y la construcción de equipos y sistemas de protección destinados a ser utilizados en atmósferas potencialmente explosivas

² Requisitos esenciales de salud y seguridad (EHSR) 2.6 del Reglamento sobre EPI 2016/425: EPI para uso en atmósferas potencialmente explosivas

³ Clasificación del producto: Según aplicación de EN 60079-0:2017 (Cláusula 29) y EN ISO 80079-36 (Cláusula 11).