3M

DBI SALA®

Fall Protection

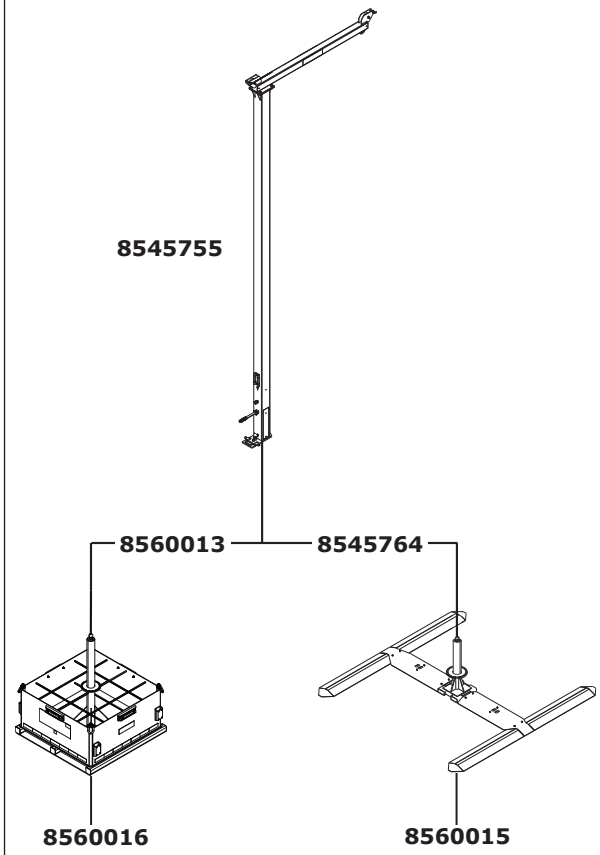
CE	EN795.2012 Type B
CE Type Test No. 2797 BSI The Netherlands B.V. Say Building John M. Keynesplein 9 1066 EP Amsterdam Netherlands	**CE Product Quality Control** No. 2797 BSI The Netherlands B.V. Say Building John M. Keynesplein 9 1066 EP Amsterdam Netherlands

flexiguard®

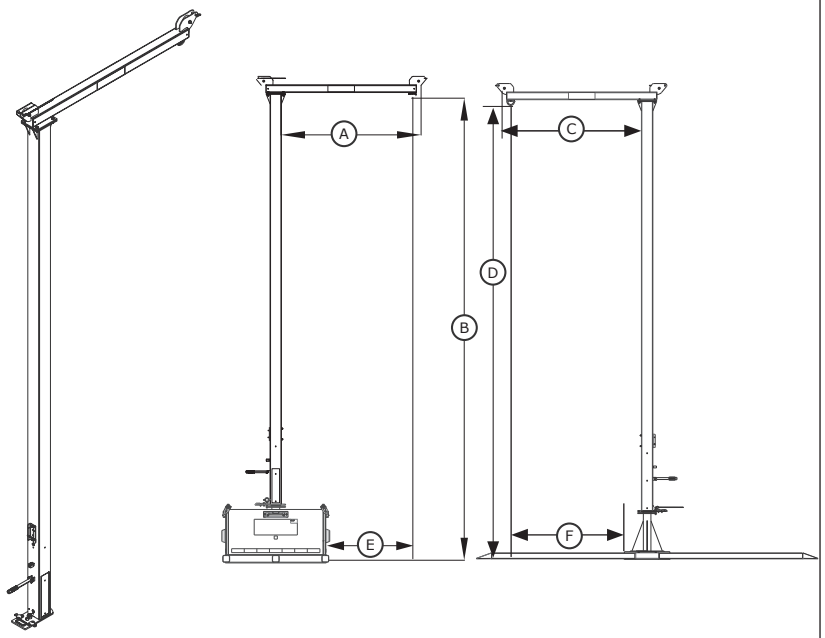
SafRig™ Fall Arrest System with Counterweight Base

USER INSTRUCTION MANUAL
5903684 Rev. H

1

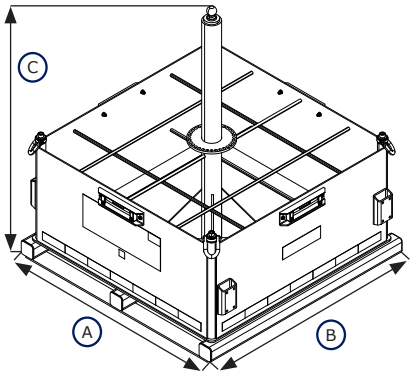


8545755					
Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ
1.0 m (3.75 ft.)	6.1 m (20 ft.)	1.8 m (72 in.)	6.1 m (20 ft.)	1.1 m (45 in.)	1.5 m (60 in.)



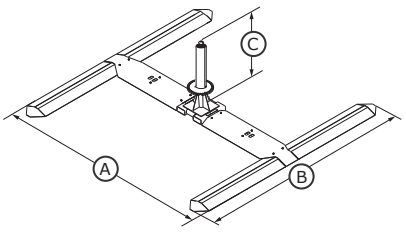
	Ⓐ	Ⓑ	Ⓒ
8560013	137 cm (54 in.)	137 cm (54 in.)	155 cm (61 in.)
8545764	457.2 cm (15 ft.)	457.2 cm (15 ft.)	155 cm (61 in.)

8560013



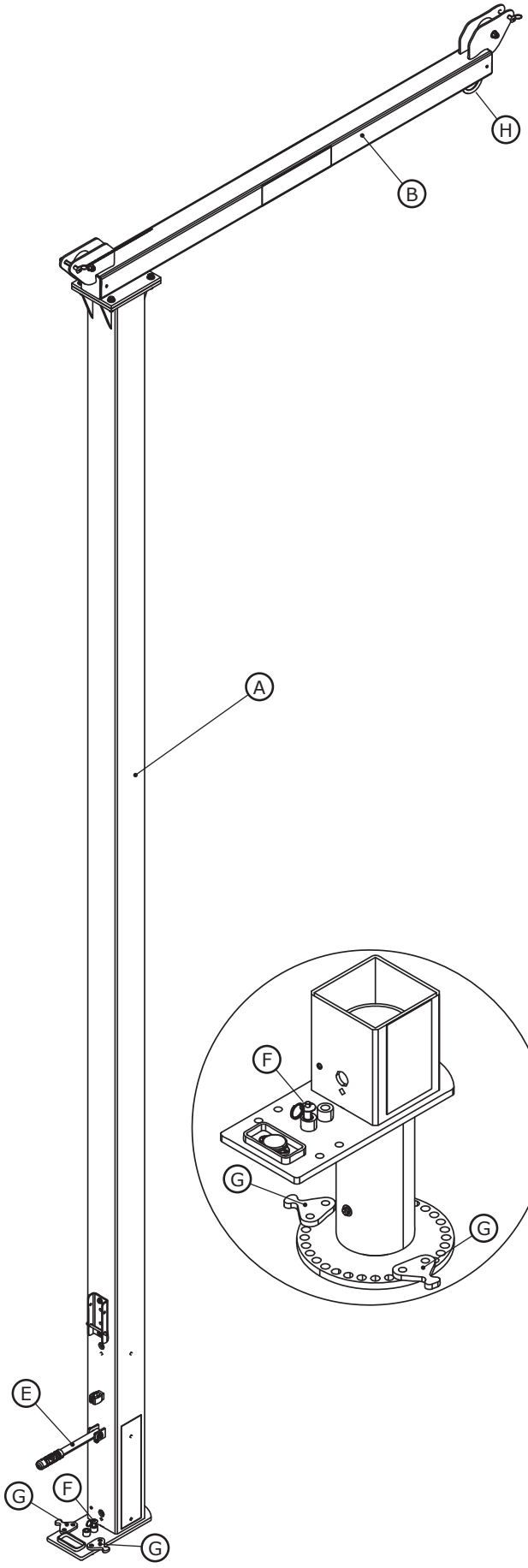
601 kg (1,325 lb.)
2,703 kg (5,960 lb.)

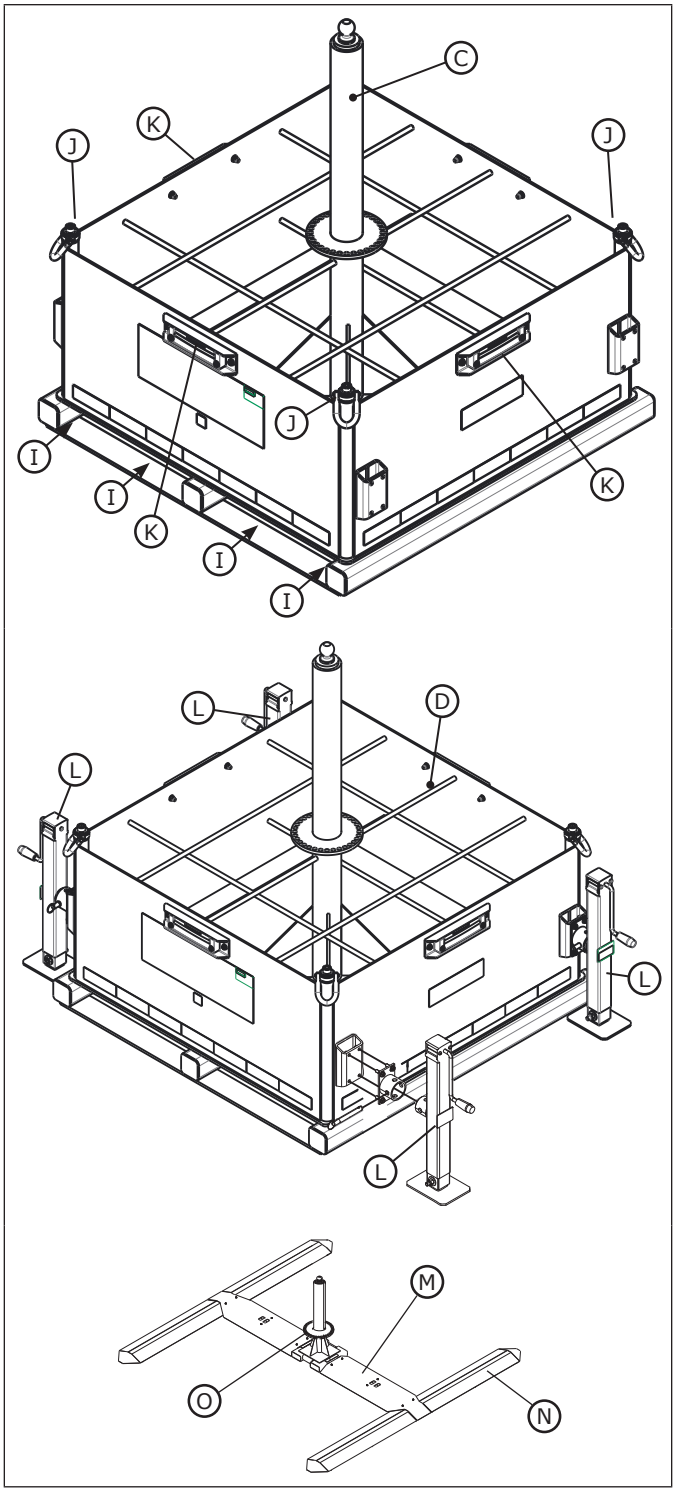
8545764



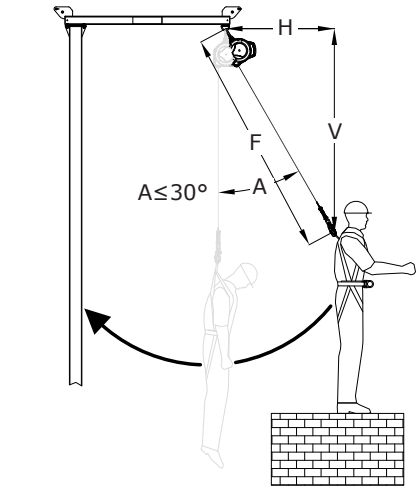
590 kg (1,300 lb.)

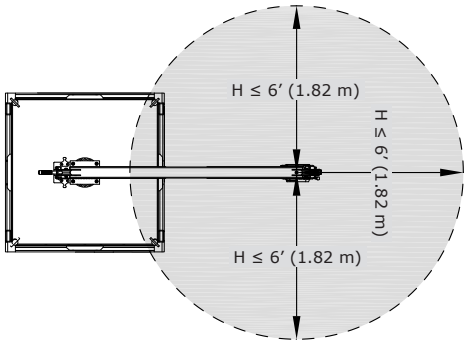
2





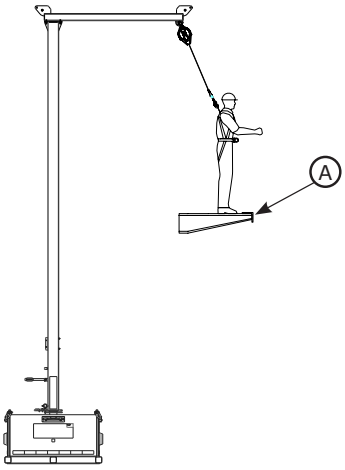
3



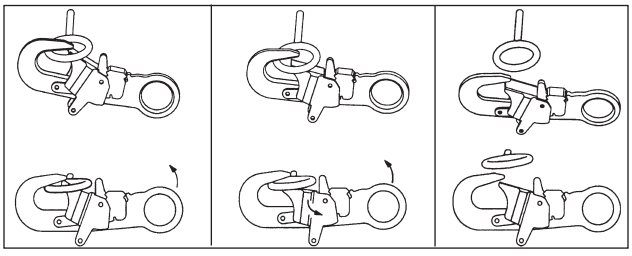


F ft (m)	← H - ft (m) →						
	0 (0.0)	1 (0.3)	2 (0.6)	3 (0.9)	4 (1.2)	5 (1.5)	6 (1.8)
← V - ft (m) →							
0 (0.0)	0.0 (0.0)	1.0 (0.3)	2.0 (0.6)	3.0 (0.9)	4.0 (1.2)	5.0 (1.5)	6.0 (1.8)
1 (0.3)	1.0 (0.3)	1.4 (0.4)	2.2 (0.7)	3.2 (1.0)	4.1 (1.3)	5.1 (1.6)	6.1 (1.9)
2 (0.6)	2.0 (0.6)	2.2 (0.7)	2.8 (0.9)	3.6 (1.1)	4.5 (1.4)	5.4 (1.6)	6.3 (1.9)
3 (0.9)	3.0 (0.9)	3.2 (1.0)	3.6 (1.1)	4.2 (1.3)	5.0 (1.5)	5.8 (1.8)	6.7 (2.0)
4 (1.2)	4.0 (1.2)	4.1 (1.3)	4.5 (1.4)	5.0 (1.5)	5.7 (1.7)	6.4 (2.0)	7.2 (2.2)
5 (1.5)	5.0 (1.5)	5.1 (1.6)	5.4 (1.6)	5.8 (1.8)	6.4 (2.0)	7.1 (2.2)	7.8 (2.4)
6 (1.8)	6.0 (1.8)	6.1 (1.9)	6.3 (1.9)	6.7 (2.0)	7.2 (2.2)	7.8 (2.4)	8.5 (2.6)
7 (2.1)	7.0 (2.1)	7.1 (2.2)	7.3 (2.2)	7.6 (2.3)	8.1 (2.5)	8.6 (2.6)	9.2 (2.8)
8 (2.4)	8.0 (2.4)	8.1 (2.5)	8.2 (2.5)	8.5 (2.6)	8.9 (2.7)	9.4 (2.9)	10.0 (3.0)
9 (2.7)	9.0 (2.7)	9.1 (2.8)	9.2 (2.8)	9.5 (2.9)	9.8 (3.0)	10.3 (3.1)	10.8 (3.3)
10 (3.0)	10.0 (3.0)	10.0 (3.1)	10.2 (3.1)	10.4 (3.2)	10.8 (3.3)	11.2 (3.4)	11.7 (3.6)
11 (3.4)	11.0 (3.4)	11.0 (3.4)	11.2 (3.4)	11.4 (3.5)	11.7 (3.6)	12.1 (3.7)	12.5 (3.8)
12 (3.7)	12.0 (3.7)	12.0 (3.7)	12.2 (3.7)	12.4 (3.8)	12.6 (3.9)	13.0 (4.0)	13.4 (4.1)
13 (4.0)	13.0 (4.0)	13.0 (4.0)	13.2 (4.0)	13.3 (4.1)	13.6 (4.1)	13.9 (4.2)	14.3 (4.4)
14 (4.3)	14.0 (4.3)	14.0 (4.3)	14.1 (4.3)	14.3 (4.4)	14.6 (4.4)	14.9 (4.5)	15.2 (4.6)
15 (4.6)	15.0 (4.6)	15.0 (4.6)	15.1 (4.6)	15.3 (4.7)	15.5 (4.7)	15.8 (4.8)	16.2 (4.9)
16 (4.9)	16.0 (4.9)	16.0 (4.9)	16.1 (4.9)	16.3 (5.0)	16.5 (5.0)	16.8 (5.1)	17.1 (5.2)
17 (5.2)	17.0 (5.2)	17.0 (5.2)	17.1 (5.2)	17.3 (5.3)	17.5 (5.3)	17.7 (5.4)	18.0 (5.5)
18 (5.5)	18.0 (5.5)	18.0 (5.5)	18.1 (5.5)	18.2 (5.6)	18.4 (5.6)	18.7 (5.7)	19.0 (5.8)
19 (5.8)	19.0 (5.8)	19.0 (5.8)	19.1 (5.8)	19.2 (5.9)	19.4 (5.9)	19.6 (6.0)	19.9 (6.1)
20 (6.1)	20.0 (6.1)	20.0 (6.1)	20.1 (6.1)	20.2 (6.2)	20.4 (6.2)	20.6 (6.3)	20.9 (6.4)
21 (6.4)	21.0 (6.4)	21.0 (6.4)	21.1 (6.4)	21.2 (6.5)	21.4 (6.5)	21.6 (6.6)	21.8 (6.7)
22 (6.7)	22.0 (6.7)	22.0 (6.7)	22.1 (6.7)	22.2 (6.8)	22.4 (6.8)	22.6 (6.9)	22.8 (7.0)
23 (7.0)	23.0 (7.0)	23.0 (7.0)	23.1 (7.0)	23.2 (7.1)	23.3 (7.1)	23.5 (7.2)	23.8 (7.2)
24 (7.3)	24.0 (7.3)	24.0 (7.3)	24.1 (7.3)	24.2 (7.4)	24.3 (7.4)	24.5 (7.5)	24.7 (7.5)
25 (7.6)	25.0 (7.6)	25.0 (7.6)	25.1 (7.6)	25.2 (7.7)	25.3 (7.7)	25.5 (7.8)	25.7 (7.8)

4

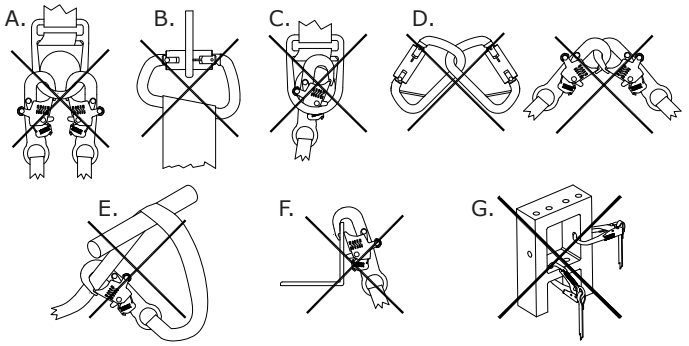


5

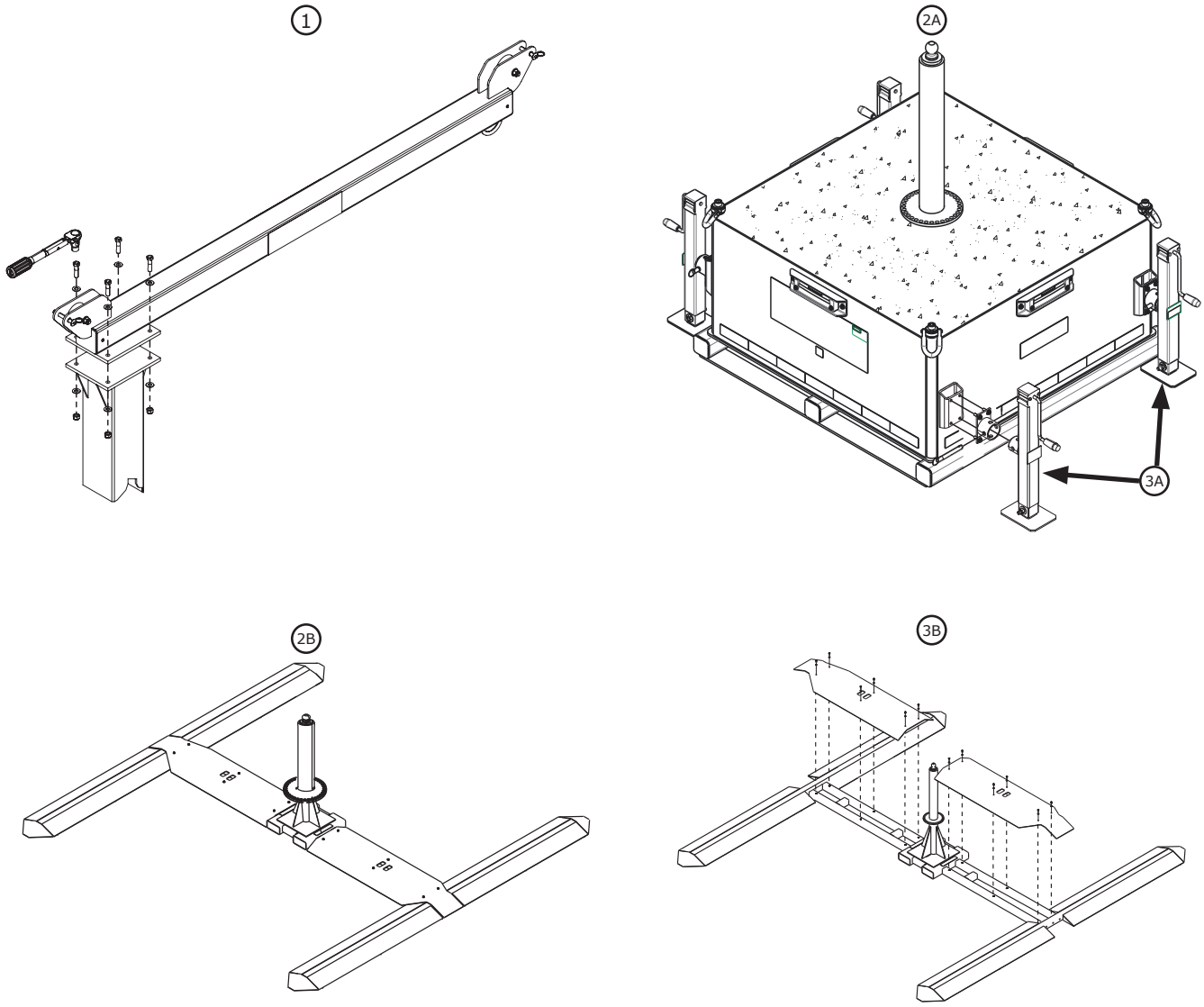


A B C

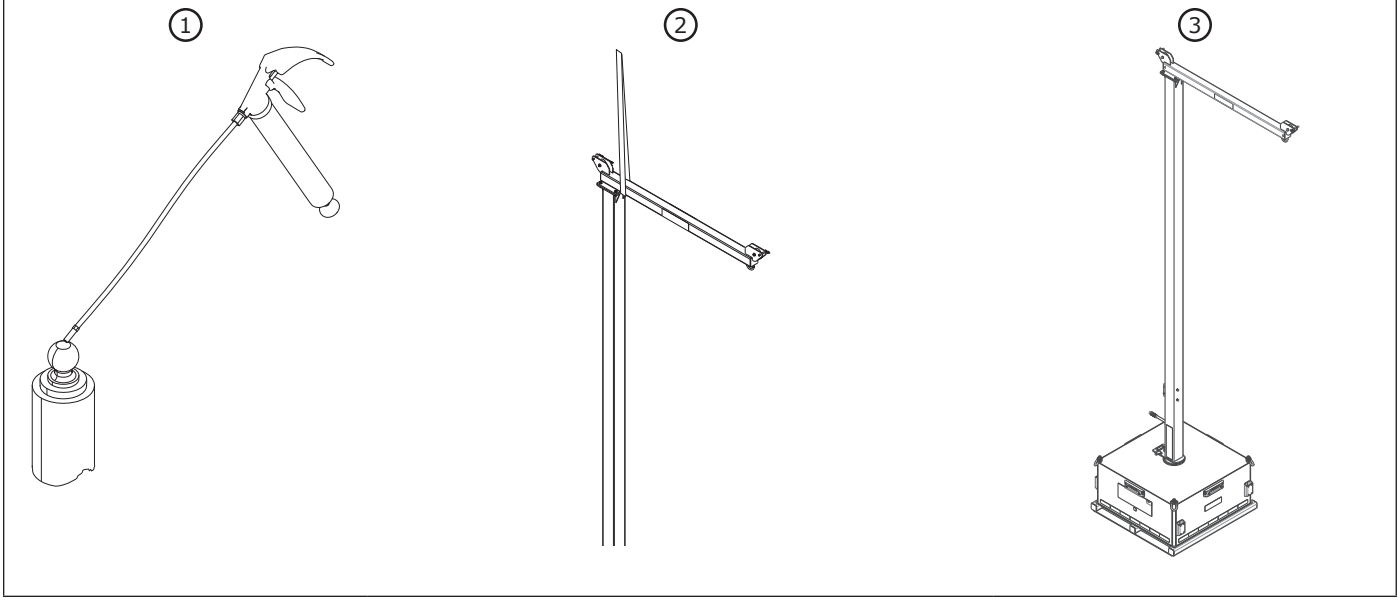
6



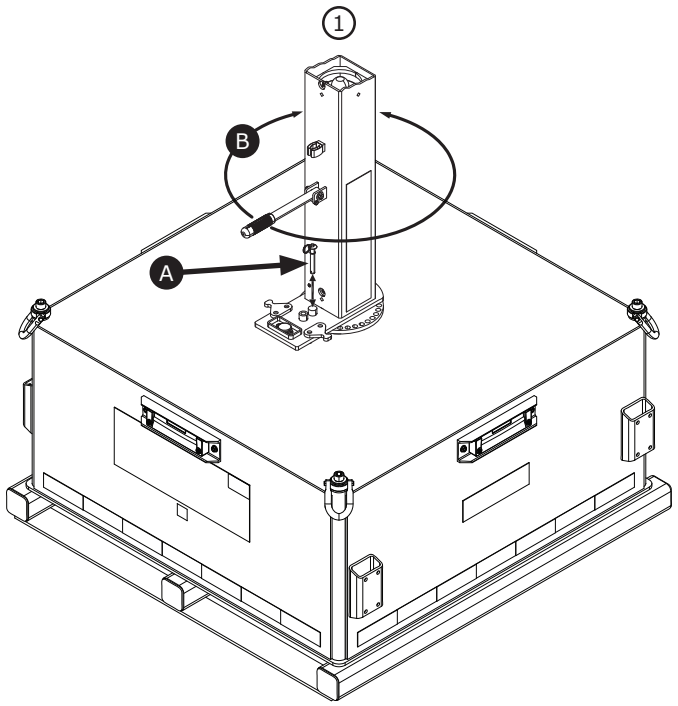
7

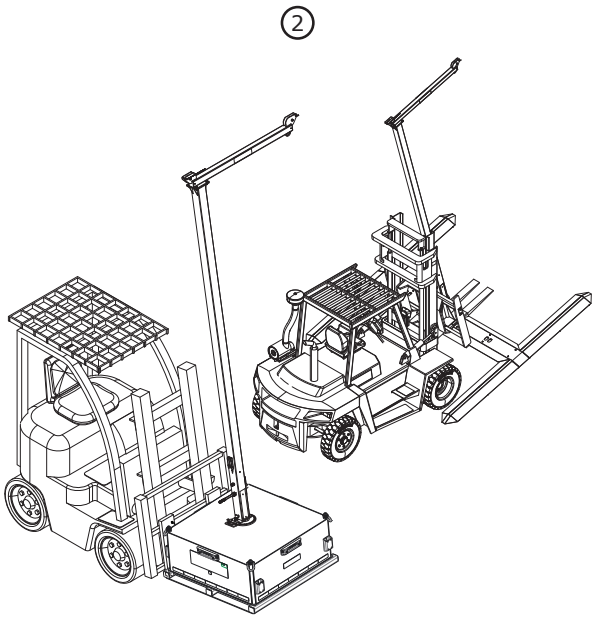


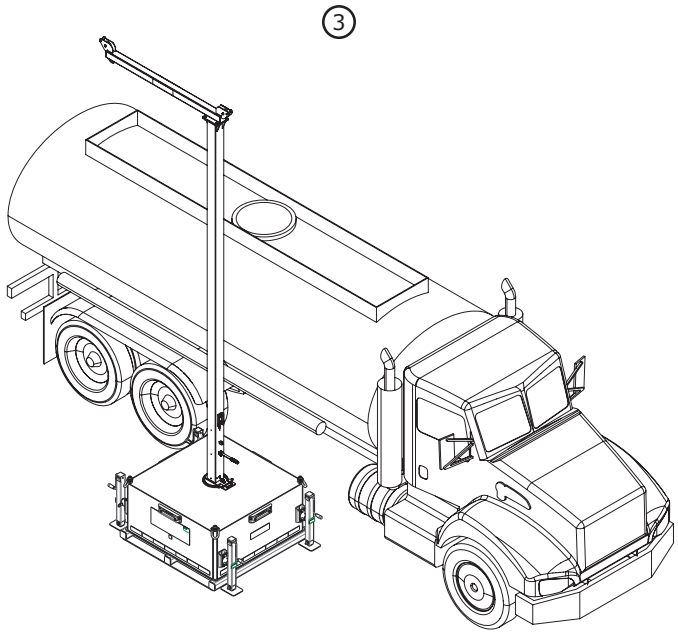
8

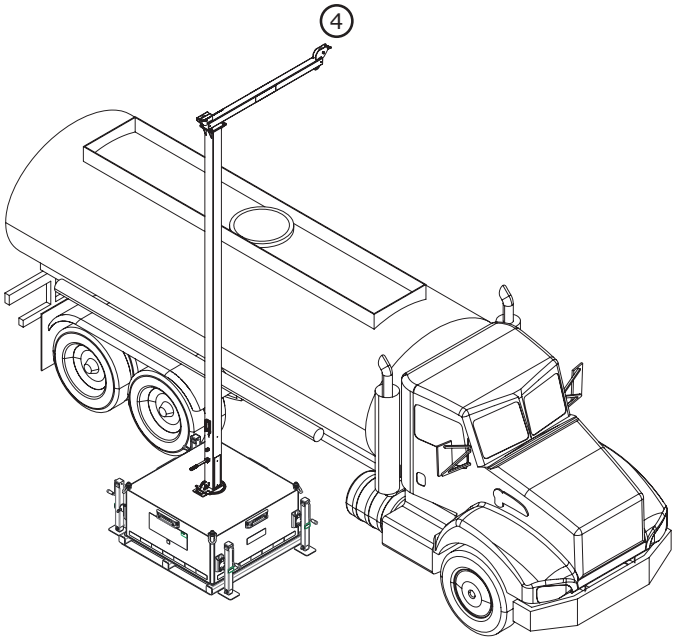


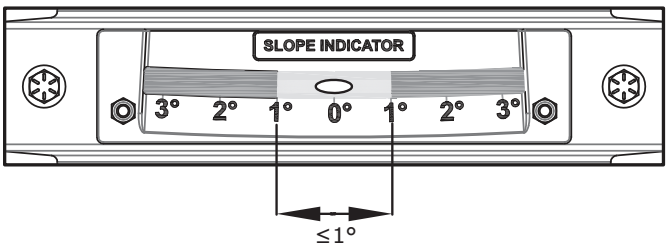
9

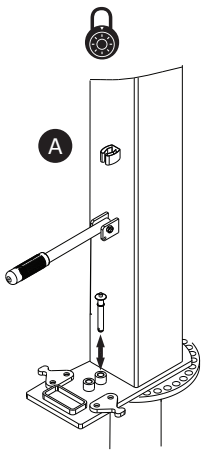


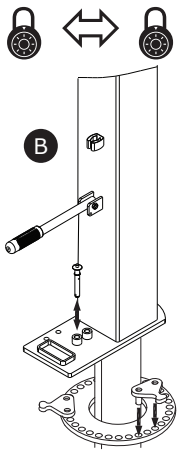




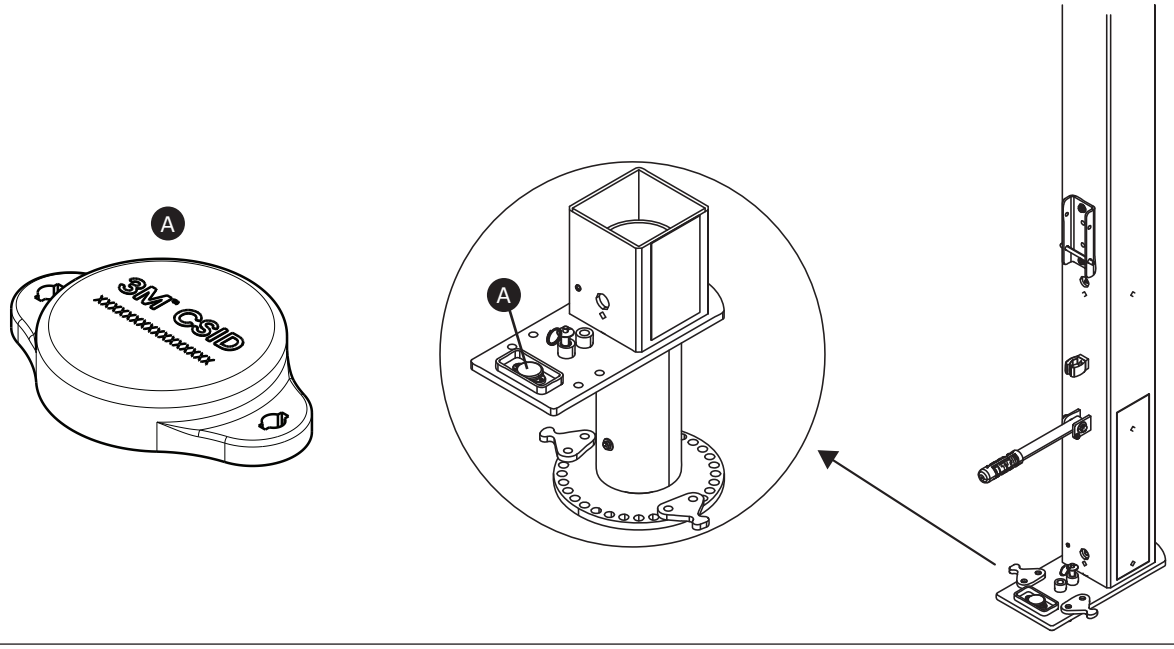


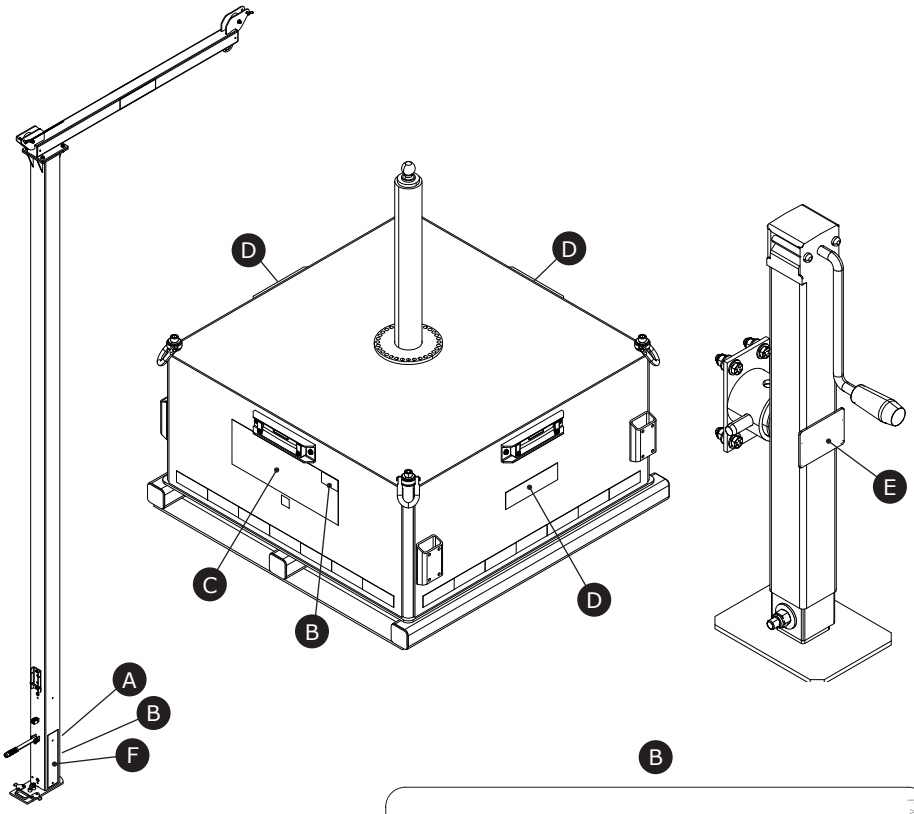






10





A

3M | DBI SALA

① CE 2797 ②

EN795:2012

TYPE "B"

③

9508037 Rev. B

B

3M | DBI SALA Fall Protection

9504547 Rev. J

① SERIAL NO.: XXXXXX
Numéro de série:

3M.com/FallProtection
Red Wing, MN 55066, USA

MFRD(Y/M): Fabriqué(a/ m)	LOT NO.: Numéro de lot:	MODEL NO.: Numéro du modèle:	LENGTH (FT): Longueur(m):
②	③	④	⑤

D

WARNING

APPROXIMATE WEIGHT

① 6000 lbs / 2,722 kg

9509784 REV A

E

WARNING ① AVERTISSEMENT

MAXIMUM LIFT CAPACITY: 5000 lbs / 22kN
Capacite maximale de portance: 5000 lbs / 22kN

Do not remove this label. Fully retract or rotate jack before towing. Engage locking pin on swivel jack before towing or using jack. Blocks used to increase height can cause instability and may cause injurt or death. Enlever pas cette etiquette. Retracter completement la prise avant le remorquage. Engager la pin pivotent avant de remorquage ou en utilisent la prise. Blocs utilize pour augmenter la hauteur peut entrainer une instabilite et peuvent cause une blesseur our la mort.

8518723 Rev. B

C

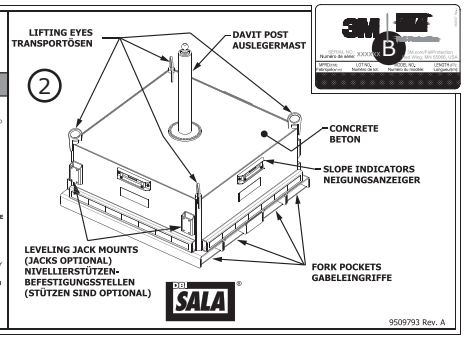
flexiguard

OPERATORS INSTRUCTIONS
BENUTZERANWEISUNGEN:

PORTABLE COUNTERWEIGHTED JIB BASE SYSTEM WITH CENTER MOUNTED SLEEVE
PORTABLES AUSLEGERAUFZUGS-SOCKELSYSTEM MIT ZENTRAL ANGEBRACHTER MASTBUCHSE

① WARNING / WARNUNG

- **DO NOT USE THIS SYSTEM UNLESS IT HAS BEEN FILLED WITH 4000 PSI CONCRETE.** DIESES SYSTEM DARF BIST VERWENDET WERDEN, NACHDEM ES MIT EINER BETONMISCHUNG MIT EINER DRUCKFESTIGKEIT VON 4000 PSI GEFÜLLT WURDE.
- **DO NOT FILL THE DAVIT SLEEVE WITH CONCRETE. PLUG HOLE WHILE FILLING BOX.** HÜSE AUSLEGERMASTBUCHSE NICHT MIT BETON FÜLLEN. DAS LOCH WÄHREND DER FÜLLUNG DES SOCKELKASTENS VERSCHLIESSEN.
- **ALL USERS MUST READ AND UNDERSTAND THE INSTRUCTIONS PRIOR TO USING THIS SYSTEM.** DIE AUSLEGERMASTBUCHSE NICHT MIT BETON FÜLLEN. DAS LOCH WÄHREND DER FÜLLUNG DES SOCKELKASTENS VERSCHLIESSEN.
- **DO NOT TRANSPORT AT SPEEDS GREATER THAN 5 MPH / 8 KPH.** NICHT MIT GESCHWINDIGKEITEN HÖHER ALS 8 KM/H. (5 MPH) TRANSPORTIEREN.
- **PLEASE SEE DAVIT WARNING LABEL TO DETERMINE SAFE NUMBER OF USERS,** SIEHE DEN WARNHINWEIS AM AUSLEGER ZUR ERMITTLUNG DER SICHERN ANZAHL VON BENUTZERN.
- **NO MORE THAN ONE PERSON IS ALLOWED TO BE ATTACHED TO A GLIDE RAIL TROLLEY OR ANCHOR POINT AT ANY GIVEN TIME.** IN KEINEM FALL DARF MEHR ALS EINE PERSON ZUR GLEICHEN ZEIT AN GLEITSCHIENENLAUFER ODER VERANKERUNGSPUNKT GESICHERT SEIN.
- **BE CAUTIOUS OF OVERHEAD POWER LINES OR OTHER ELECTRIC SOURCES WHICH CAN CAUSE ELECTRIC SHOCK.** VORSICHT VOR FREILEITUNGEN ODER ANDEREN ELEKTRISCHEN QUELLEN, DIE EINEN ELEKTROSCHEN SCHLAG VERURSACHEN KÖNNEN.
- **DO NOT USE THIS SYSTEM UNLESS THE SLOPE INDICATORS ARE INDICATING 1° OR LESS OF SLOPE. THE LEVELING JACKS (IF SUPPLIED) SHOULD BE USED TO LEVEL THE SYSTEM WITHIN THE 1° REQUIREMENT.** DIESES SYSTEM DARF NICHT VERWENDET WERDEN, ES SEI DENN, DIE NEIGUNGSANZEIGEN ZEIGEN 1° NEIGUNG ODER WENIGER AN. DIE NIVELLIERSTÜTZEN (SOFERN VORHANDEN) SOLLTEN VERWENDET WERDEN, UM DAS SYSTEM INNERHALB DER 1°-ANFORDERUNG ZU NIVELLIEREN.
- **ENSURE EQUIPMENT USED TO TRANSPORT THIS SYSTEM HAS SUFFICENT CAPACITY,** ES MUSS SICHERGESTELLT WERDEN, DASS DIE ZUM TRANSPORT DIESES SYSTEMS VERWENDETEN TRANSPORTMITTEL ÜBER AUSREICHENDE KAPAZITÄTEN VERFÜGEN.
- **IF YOU HAVE ANY QUESTIONS OR CONCERNS ON THE USEAGE, CARE, OR SUITABILITY OF THIS EQUIPMENT, PLEASE CONTACT CAPITAL SAFETY BEFORE USING IT.** BITTE BEI FRAGEN ZUM GEBRAUCH, ZUR PFLEGE ODER TAUGLICHKEIT DIESER AUSRÜSTUNG FÜR DEN JEWEILIGEN ANWENDUNGSBEREICH CAPITAL SAFETY KONTAKTIEREN.
- **SUPPORTING STRUCTURES MUST BE CERTIFIED AND CAPABLE OF SUPPORTING THE ENTIRE WEIGHT OF THE CONFIGURED SYSTEM ALONG WITH ANY LOADS THAT COULD POTENTIALLY BE INTRODUCED IN THE EVENT OF A FALL.** UNTERSTÜTZENDE STRUKTUREN MÜSSEN ZERTIFIZIERT SEIN UND DAS GESAMTGEWICHT DES KONFIGURIERTEN SYSTEMS SOWIE ALLER LASTEN, DIE MÖGLICHERWEISE IM FALLE EINES ABSTURZES AUFTRETEN KÖNNTEN, UNTERSTÜTZEN.
- **WHEN TRANSPORTING THIS SYSTEM USING THE LIFTING EYES, ALWAYS LIFT FROM ALL FOUR POINTS EVENLY. DO NOT STAND BELOW THE SYSTEM WHILE IT IS BEING LIFTED OR TRANSPORTED,** BEIM TRANSPORT DIESES SYSTEMS MITTELS DER TRANSPORTÖSEN IMMER ALLE VIER PUNKTE GLEICHMÄSSIG ANGEHOBEN WERDEN. WÄHREND DES HEBENS ODER TRANSPORTS DES SYSTEMS DARF SICH KEINE PERSON UNTERHALB DES SYSTEMS AUFHALTEN.



9509793 Rev. A

F

3M | DBI SALA

SAFRIG FALL PROTECTION SYSTEM
OPERATORS INSTRUCTIONS

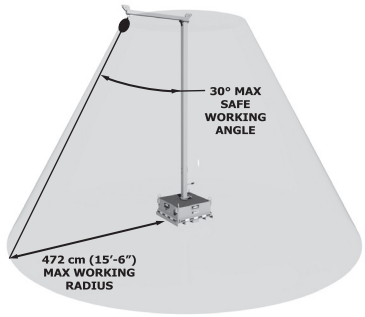
① WARNING

- ALL USERS MUST READ AND UNDERSAND THE INSTRUCTIONS PRIOR TO USING THIS SYSTEM.
- RETRACTABLE DEVICES AND SHOCK ABSORBERS USED WITH THIS PRODUCT MUST HAVE A MAXIMUM ARRESTING FORCE OF NOT GREATER THAN 6 kN (1,350 LB).
- DO NOT EXCEED THE MAXIMUM NUMBER OF USERS RATING.
- NO MORE THAN ONE PERSON IS ALLOWED TO BE ATTACHED TO A GLIDE RAIL TROLLEY OR ANCHOR POINT AT ANY GIVEN TIME.
- DO NOT EXCEED THE RECOMMENDED SAFE WORKING ANGLE OF 30° AS SHOWN IN FIGURE 1. FAILURE TO WORK WITHIN THE SAFE WORKING AREA MAY CAUSE SERIOUS INJURY OR DEATH.
- BE CAUTIOUS OF OVERHEAD POWER LINES OR OTHER ELECTRIC SOURCES WHICH CAN CAUSE ELECTRIC SHOCK.
- IF YOU HAVE ANY QUESTIONS OR CONCERNS ON THE USAGE, CARE OR SUITABILITY OF THIS EQUIPMENT, PLEASE CONTACT 3M BEFORE USING IT.
- SUPPORTING STRUCTURES FOR THIS SYSTEM MUST BE CERTIFIED AND CAPABLE OF SUPPORTING THE ENTIRE WEIGHT OF THE CONFIGURED SYSTEM ALONG WITH ANY LOADS THAT COULD POTENTIALLY BE INTRODUCED IN THE EVENT OF ARRESTING A FALL.
- ONLY USE THIS SYSTEM ON LEVEL GROUND.

FIGURE 1 ②

8560015

8560016



③ **WEIGHTS**

INDIVIDUAL COMPONENTS:

DAVIT - 249 kg [550 lbs.]
C/W BASE - 2703 kg [5,960 lbs.]
I-BASE - 590 kg [1,300 lbs.]

TOTAL SYSTEM:

8560015 - 839 kg [1,850 lbs.]
8560016 - 2953 kg [6,510 lbs.]

THIS MAN-RATED SYSTEM IS DESIGNED FOR A MAXIMUM OF

④ **1 PERSON**

USER CAPACITY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY OR DEATH.

THIS SYSTEM MEETS EN 795: 2012 TYPE B

9509794 Rev. C

SAFETY INFORMATION

Please read, understand, and follow all safety information contained in these instructions prior to the use of this Flexiguard System. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH.

These instructions must be provided to the user of this equipment. Retain these instructions for future reference.

Intended Use:

This Flexiguard System is intended for use as part of a complete fall protection or rescue system.

Use in any other application including, but not limited to, material handling, recreational or sports related activities, or other activities not described in the User Instructions, is not approved by 3M and could result in serious injury or death.

This system is only to be used by trained users in workplace applications.

⚠ WARNING

This Flexiguard System is part of a personal fall protection or rescue system. It is expected that all users be fully trained in the safe installation and operation of the complete system. **Misuse of this system could result in serious injury or death.** For proper selection, operation, installation, maintenance, and service, refer to all Product Instructions and all manufacturer recommendations, see your supervisor, or contact 3M Technical Service.

- **To reduce the risks associated with transporting a Flexiguard system which, if not avoided, could result in serious injury or death:**
  - Ensure the system is properly secured or configured prior to transport. Refer to the User Instructions for detailed transportation requirements.
  - Only transport below 5 mph (8 km/h) and at inclines of 10° or less, or as outlined in the User Instructions.
  - Ensure the system will not contact overhead objects or electrical hazards while transporting or in use.

- **To reduce the risks associated with working with a Flexiguard system which, if not avoided, could result in serious injury or death:**
  - Inspect all components of the system before each use, at least annually, and after any fall event, in accordance with the User Instructions.
  - If inspection reveals an unsafe or defective condition, remove the system from service and repair or replace according to the User Instructions.
  - Any system that has been subject to fall arrest or impact force must be immediately removed from service. Refer to the User Instructions or contact 3M Fall Protection.
  - The substrate or structure on which the system is attached/positioned must be able to sustain the static loads specified for the system in the orientations permitted in the User Instructions or Installation Instructions.
  - Do not exceed the number of allowable users as per the User Instructions.
  - Never attach to a system until it is fully assembled, positioned, adjusted, and installed. Do not adjust the system while a user is attached.
  - Never work outside the safe work area as defined by the User Instructions.
  - Do not connect to the system while it is being transported or installed.
  - Always maintain 100% tie-off when transferring between anchor points on the system.
  - Use caution when installing, using, and moving the system as moving parts may create potential pinch points.
  - Ensure proper lockout/tagout procedures have been followed when applicable.
  - Only connect fall protection subsystems to the designated anchorage connection point on the system.
  - When drilling holes for assembly or installation of the system, ensure no electric lines, gas lines, or other critical materials or equipment will be contacted by the drill.
  - Ensure that fall protection systems/subsystems assembled from components made by different manufacturers are compatible and meet the requirements of applicable standards, including the ANSI Z359 or other applicable fall protection codes, standards, or requirements. Always consult a Competent or Qualified Person before using these systems.

- **To reduce the risks associated with working at heights which, if not avoided, could result in serious injury or death:**
  - Ensure your health and physical condition allow you to safely withstand all of the forces associated with working at height. Consult with your doctor if you have any questions regarding your ability to use this equipment.
  - Never exceed allowable capacity of your fall protection equipment.
  - Never exceed maximum free fall distance of your fall protection equipment.
  - Do not use any fall protection equipment that fails pre-use or other scheduled inspections, or if you have concerns about the use or suitability of the equipment for your application. Contact 3M Technical Services with any questions.
  - Some subsystem and component combinations may interfere with the operation of this equipment. Only use compatible connections. Consult 3M prior to using this equipment in combination with components or subsystems other than those described in the User Instructions.
  - Use extra precautions when working around moving machinery (e.g. top drive of oil rigs) electrical hazards, extreme temperatures, chemical hazards, explosive or toxic gases, sharp edges, or below overhead materials that could fall onto you or the fall protection equipment.
  - Use Arc Flash or Hot Works devices when working in high heat environments.
  - Avoid surfaces and objects that can damage the user or equipment.
  - Ensure there is adequate fall clearance when working at height.
  - Never modify or alter your fall protection equipment. Only 3M or parties authorized in by 3M may make repairs to the equipment.
  - Prior to use of fall protection equipment, ensure a rescue plan is in place which allows for prompt rescue if a fall incident occurs.
  - If a fall incident occurs, immediately seek medical attention for the fallen worker for the worker who has fallen.
  - Do not use a body belt for fall arrest applications. Use only a Full Body Harness.
  - Minimize swing falls by working as directly below the anchorage point as possible.
  - If training with this device, a secondary fall protection system must be utilized in a manner that does not expose the trainee to an unintended fall hazard.
  - Always wear appropriate personal protective equipment when installing, using, or inspecting the device/system.

☑ *Prior to installation and use of this equipment, record the product identification information from the ID label in the Inspection and Maintenance Log (Table 2) at the back of this manual.*

☑ *Always ensure you are using the latest revision of your 3M instruction manual. Visit the 3M website or contact 3M Technical Services for updated instruction manuals.*

PRODUCT DESCRIPTION:

Figure 1 illustrates the Flexiguard® SafRig Fall Arrest System. The SafRig Fall Arrest System is a fixed height boom mounted Fall Arrest System that rotates 360° on a concrete filled Counterweight Base.

Figure 2 illustrates components of the SafRig Fall Arrest System. See Table 1 for Component Specifications. A Vertical Mast (A) with an Offset Arm (B) is mounted on a Hitch Ball Post (C) embedded in the concrete filled Counterweight Base (D). The Mast can be rotated 360° with a foldable Roatation Handle (E) and locked at 11° increments with a Rotation Lock Pin Mechanism (F), or allowed to rotate through a range defined by two Rotation Limiters (G). The Offset Arm is equipped with a Fall Arrest Connection Point (H).

The Counterweight Base has Lifting Channels (I) and Lifting Eyes (J) for transport with a Forklift, Pallet Jack, Crane, etc. and Slope Indicators (K) to ensure the system is level. Optional Leveling Jacks (L) can be installed on Jack Brackets on the Couterweight Base.

Table 1 – Specifications

System Specifications:	
Capacity:	1 Person with a combined weight (including clothing, tools, etc.) of no more than 140 kg (310 lb.).
Anchorage:	Structure supporting the Fall Arrest System must withstand a 41.0 kN (9,210 lbf) vertical load.

Component Specifications:		
Figure 2 Reference	**Component**	**Materials**
Ⓐ	Vertical Mast	Tube - Steel
Ⓑ	Offset Arm	Steel
Ⓒ	Hitch Ball Post	Tube - Steel Hitch Ball Pivot - Steel
Ⓓ	Counterweight Base	Steel Shell, Concrete with Steel Rebar Weight: 601 kg (1,325 lb.) when empty; 2,703 kg (5,960 lb.) when full
Ⓔ	Rotation Handle	Tube - Steel Hand Grip - Rubber
Ⓕ	Rotation Lock Pin Mechanism	Plate - Steel, Pin - Zinc Plated Steel
Ⓖ	Rotation Limiters	Steel with Magnets
Ⓗ	Fall Arrest Connection Point	Steel
Ⓘ	Lifting Channels	Steel
Ⓙ	Lifting Eyes	Steel
Ⓚ	Slope Indicators	Plastic Gauge on Aluminum C-Channel
Ⓛ	Jack Kit - 8530563 *(Optional - sold seperately)*	Jack - Steel Mounting Tubes - Steel Mounting Pin - Steel
Ⓜ	Drive Over Base	Steel Weight: 590 kg (1,300 lb.)
Ⓝ	Outrigger	Steel
Ⓞ	Center Section	Steel

1.0 PRODUCT APPLICATION

1.1 PURPOSE: Flexiguard™ Anchorage Systems are designed to provide anchorage connection points for a Personal Fall Arrest System (PFAS).

1.2 STANDARDS: Your Flexiguard Anchorage System conforms to the national or regional standard(s) identified on the front cover of these instructions. If this product is resold outside the original country of destination, the re-seller must provide these instructions in the language of the country in which the product will be used.

1.3 SUPERVISION: Installation of this equipment must be supervised by a Qualified Person[1]. Use of this equipment must be supervised by a Competent Person[2].

1.4 TRAINING: This equipment must be installed and used by persons trained in its correct application. This manual is to be used as part of an employee training program as required by CE. It is the responsibility of the users and installers of this equipment to ensure they are familiar with these instructions, trained in the correct care and use of this equipment, and are aware of the operating characteristics, application limitations, and consequences of improper use of this equipment.

1.5 RESCUE PLAN: When using this equipment and connecting subsystem(s), the employer must have a rescue plan and the means at hand to implement and communicate that plan to users, authorized persons[3], and rescuers[4]. A trained, on-site rescue team is recommended. Team members should be provided with the equipment and techniques to perform a successful rescue. Training should be provided on a periodic basis to ensure rescuer proficiency.

1.6 INSPECTION FREQUENCY: The Flexiguard Anchorage System shall be inspected by the user before each use and, additionally, by a Competent Person other than the user at intervals of no longer than one year.[5] Inspection procedures are described in the *"Inspection and Maintenance Log"*. Results of each Competent Person inspection should be recorded on copies of the *"Inspection and Maintenance Log"*.

1.7 AFTER A FALL: If the Flexiguard Anchorage System is subjected to the forces of arresting a fall, remove the system from service immediately and clearly mark it "DO NOT USE." Destroy or repair the system as required by these instructions.

2.0 SYSTEM REQUIREMENTS

2.1 ANCHORAGE: Anchorage requirements vary with the fall protection application. Structure on which the Flexiguard Anchorage System is placed or mounted must meet the Anchorage specifications defined in Table 1.

2.2 PERSONAL FALL ARREST SYSTEM: Personal Fall Arrest Systems (PFAS) used with the system must meet applicable Fall Protection standards, codes, and requirements. Refer to the instructions included with your connecting subsystem for additional fall requirements. The PFAS must incorporate a Full Body Harness and limit Arresting Force to the following values:

Connecting Subsystem	Maximum Arresting Force
Energy Absorbing Lanyard	6 kN (1,350 lbf)
Self-Retracting Device (SRD)	6 kN (1,350 lbf)

2.3 FALL PATH AND SRD LOCKING SPEED: A clear path is required to assure positive locking of an SRD. Situations which do not allow for an unobstructed fall path should be avoided. Working in confined or cramped spaces may not allow the body to reach sufficient speed to cause the SRD to lock if a fall occurs. Working on slowly shifting material, such as sand or grain, may not allow enough speed buildup to cause the SRD to lock.

2.4 HAZARDS: Use of this equipment in areas with environmental hazards may require additional precautions to prevent injury to the user or damage to the equipment. Hazards may include, but are not limited to: heat, chemicals, corrosive environments, high voltage power lines, explosive or toxic gases, moving machinery, sharp edges, or overhead materials that may fall and contact the user or Personal Fall Arrest System.

2.5 FALL CLEARANCE: There must be sufficient clearance below the user to arrest a fall before the user strikes the ground or other obstruction. Fall Clearance is dependent on the following factors:

- Deceleration Distance
- Free Fall Distance
- Worker Height
- Movement of Harness Attachment Element
- Elevation of Anchorage Connector
- Connecting Subsystem Length

See the instruction manual of your connecting subsystem for specifics regarding Fall Clearance calculation.

2.6 SWING FALLS: Swing Falls occur when the anchorage point is not directly above the point where a fall occurs (see Figure 3). The force of striking an object in a swing fall may cause serious injury or death. Minimize swing falls by working as directly below the anchorage point as possible. Do not permit a swing fall if injury could occur. Swing falls will significantly increase the clearance required when a Self-Retracting Device or other variable length connecting subsystem is used.

2.7 SHARP EDGES: Avoid working where Lifeline or Lanyard components of the Personal Fall Arrest System (PFAS) can contact or abrade against unprotected sharp edges (see Figure 4). Where contact with a sharp edge is unavoidable, cover the edge with protective material (A).

---

1 ***Qualified Person:*** *A person with a recognized degree of professional certificate and with extensive knowledge, training, and experience in the fall protection and rescue field who is capable of designing, analyzing, evaluating, and specifying fall protections and rescue systems to the extent required by OSHA and other applicable standards.*

2 ***Competent Person:*** *One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.*

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 ***Inspection Frequency:*** *Extreme working conditions (harsh environments, prolonged use, etc.)may require increasing the frequency of competent person inspections.*

2.8 COMPONENT COMPATIBILITY: 3M equipment is designed for use with 3M approved components and subsystems only. Substitutions or replacements made with non-approved components or subsystems may jeopardize compatibility of equipment and may affect the safety and reliability of the complete system.

2.8 CONNECTOR COMPATIBILITY: 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 3M if you have any questions about compatibility.

Connectors must comply with EN 362. Connectors must be compatible with the anchorage or other system components. Do not use equipment that is not compatible. Non-compatible connectors may unintentionally disengage (see Figure 5). Connectors must be compatible in size, shape, and strength. If the connecting element to which a snap hook or carabiner attaches is undersized or irregular in shape, a situation could occur where the connecting element applies a force to the gate of the snap hook or carabiner (A). This force may cause the gate to open (B), allowing the snap hook or carabiner to disengage from the connecting point (C).

2.9 MAKING CONNECTIONS: Snap hooks and carabiners used with this equipment must be self-locking. Ensure all connections are compatible in size, shape and strength. Do not use equipment that is not compatible. Ensure all connectors are fully closed and locked.

3M connectors (snap hooks and carabiners) are designed to be used only as specified in each product's user's instructions. See Figure 6 for examples of inappropriate connections. Do not connect snap hooks and carabiners:

A. To a D-ring to which another connector is attached.

B. In a manner that would result in a load on the gate. 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 is equipped with a 16 kN (3,600 lbf) gate. 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 anchor, and without visual confirmation seems to be fully engaged to the anchor point.

D. To each other.

E. Directly to webbing or rope lanyard or tie-back (unless the manufacturer's instructions for both the lanyard and connector specifically allows such a connection).

F. To any object which is shaped or dimensioned such that the snap hook or carabiner will not close and lock, or that roll-out could occur.

G. In a manner that does not allow the connector to align properly while under load.

3.0 INSTALLATION

☑ *The Flexiguard SafRig FAS must be installed by a Qualified Person and the installation must be certified by a Qualified Person as meeting the criteria for a Certified Anchorage, or capable of supporting the potential forces that could be encountered during a fall.*

☑ *Labels and markings present on the SafRig FAS should be accessible to the user at all times. If inaccessible after installation, it is recommended that labels and markings be documented with additional markings near the installation site.*

3.1 PLANNING: Plan your fall protection system prior to installation of the Flexiguard SafRig FAS Fall Arrest System (SafRig FAS). Account for all factors that may affect your safety before, during, and after a fall. Consider all requirements, limitations, and specifications defined in Section 2 and Table 1. Refer to Figure 2 for identification of SafRig system components.

3.2 SYSTEM SETUP - COUNTERWEIGHT BASE: Figure 7 illustrates the setup of the SafRig FAS:

1. **Install the Offset Arm on the Vertical Mast:** See Figure 7 (1). Bolt the Offset Arm to the Vertical Mast with the supplied hardware. Torque hardware to 81 N-m (60 ft-lb).
2. **Fill the Counterweight Base with Concrete:** See Figure 7 (2A). Fill the Counterweight Base with 4,000 psi concrete. (Contact 3M Technical Services for specific concrete requirements).
3. **Install Leveling Jacks:** See Figure 7 (3A). If the optional Leveling Jack Kit (8530563) was purchased with your Counterweight Base, install the Leveling Jacks on the Counterweight Base as instructed in the Installation Instructions included with the Leveling Jack Kit.

3.3 SYSTEM SETUP - STEEL OUTRIGGER BASE: Figure 7 illustrates the setup of the SafRig FAS:

1. **Install the Offset Arm on the Vertical Mast:** See Figure 7 (1). Bolt the Offset Arm to the Vertical Mast with the supplied hardware. Torque hardware to 81 N-m (60 ft-lb).
2. **Assemble Steel Outrigger Base:** See Figure 7 (2B). Position the center section of the base. Set the two outriggers in place and attach with the supplied hardware. Torque hardware to 81 N-m (60 ft-lb).
3. **Drive Over Guards:** See Figure 7 (3B). Position the drive over guards. Attach with the supplied hardware. Torque hardware to 61 N-m (45 ft-lb).

3.4 INSTALL THE MAST: Figure 8 illustrates installation of the assembled Vertical Mast and Offset Arm on the Counterweight Base.

1. **Lubricate the Hitch Ball:** Liberally grease the Hitch Ball on the Hitch Ball Post.
2. **Position the Vertical Mast over the Base:** Lift the assembled Vertical Mast with a Lifting Sling and Forklift or Crane. Position the Vertical Mast so the Mounting Socket in the bottom of the Vertical Mast is directly over the Hitch Ball Post.
3. **Lower the Vertical Mast onto the Base:** Lower the Vertical Mast onto the Base until the Hitch Ball fully seats in the Vertical Mast mounting socket.

3.5 TRANSPORT AND POSITION THE SYSTEM: Transport and position the SafRig FAS as illustrated in Figure 9:

1. **Rotate and lock the Mast and Arm:** Remove the Rotation Lock Pin (A). Rotate the Vertical Mast and Offset Arm (B) for best clearance during transport and then reinsert the Rotation Lock Pin.

   ☑ *Never transport the system without the Rotation Lock Pin inserted.*

2. **Transport the System:** Transport the SafRig FAS to the desired work location using a Forklift or Pallet Jack and the Lifting Channels.

   ☑ *Do not transport at speeds exceeding 8 kph (5 mph). Never transport the system on slopes greater than 10°. Excessive speeds or slopes may cause system and transport vehicle tip-overs resulting in serious injury or death.*

   ☑ *When transporting the SafRig System, be aware of overhead obstructions and electrical hazards which may result in serious injury or death.*

3. **Place the System:** Place the SafRig FAS near the work area on a surface with 1° or less of slope. Use the Slope Indicators on the Counterweight Base to verify that the system is level.

   ☑ *Leveling Jacks may be installed in the Leveling Jack Mounts on the Counterweight Base for purposes of leveling the system on a surface that is not level. Extend the Leveling Jacks until they contact the ground. Crank the Leveling Jacks up or down as needed until all Slope Indicators indicate less than 1° of slope.*

   ☑ *Personnel shall not be attached to the SafRig FAS while it is being positioned.*

4. **Rotate and lock the Mast and Arm:** Rotate the Vertical Mast and Offset Arm to the desired work position and then set the Rotation Limits. The Mast can be locked at 11° rotation increments with the Rotation Lock Pin Mechanism or allowed to rotate through a range defined by two Rotation Limiters:
   - **No Rotation (A):** Insert the Rotation Lock Pin through the inside Pin Hole and aligned hole in the Rotation Plate to prevent the Jib Boom from rotating.
   - **Rotation Range (B):** Insert the Rotation Lock Pin through the outside Pin Hole and then move the Rotation Limiters to the desired limits on the Rotation Plate. Insert the Rotation Limiter Pegs through the desired holes in the Rotation Plate to define the rotation range.

☑ *The SafRig FAS may be used without the Rotation Lock Pin or Rotation Limiters inserted, allowing 360° rotation; but can cause increased swing fall in multiple directions in the event of a fall.*

4.0 USE

☑ *Consult your doctor if there is any reason to doubt your fitness to safely absorb the shock from a fall arrest or suspension. Age and fitness seriously affect a worker's ability to withstand falls. Pregnant women or minors must not use DBI-SALA equipment unless in an emergency situation.*

☑ *Never exceed the Capacity requirements specified in Table 1. Exceeding the stated capacity could collapse or tip the system, resulting in serious injury or death.*

☑ *The SafRig Fall Arrest System may be used for Fall Arrest applications only. Do not connect lifting equipment to this system.*

4.1 BEFORE EACH USE: Verify that your work area and Personal Fall Arrest System (PFAS) meet all criteria defined in Section 2 and a formal Rescue Plan is in place. Inspect the SafRig FAS per the '*User*' inspection points defined on the "*Inspection and Maintenance Log*" (Table 2). If inspection reveals an unsafe or defective condition, do not use the SafRig FAS. Remove the system from service, clearly mark "DO NOT USE", and destroy it or contact 3M regarding replacement.

4.2 SAFE WORK AREA: Figure 3 illustrates the Safe Work Area for the SafRig FAS. The gray shading on the table designates safe working distances where the angle of the Lifeline is less than or equal to 30° from vertical and the Horizontal Distance (H) from the anchorage connection point is less than or equal to 1.82 m (6.0 ft.). Never work at a Horizontal Distance (H) and Vertical Distance (V) that results in a calculated Vertical Fall Distance (F) exceeding the gray shaded values on the table in Figure 3.

4.3 SYSTEM CONNECTIONS: The SafRig FAS must be used with a Full Body Harness and Fall Arrest subsystem. Consult the instructions provided with your respective Fall Arrest equipment for additional details regarding proper connection and use.

5.0 INSPECTION

☑ *After equipment has been removed from service, it may not be returned to service until a Competent Person confirms in writing that it is acceptable to do so.*

5.1 INSPECTION FREQUENCY: The SafRig FAS must be inspected at the intervals defined in Section 1. Inspection procedures are described in the *"Inspection and Maintenance Log" (Table 2)*. Inspect all other components of the Fall Protection System per the frequencies and procedures defined in the manufacturer's instructions.

Record the inspection date on the inspected equipment. Record the inspection date and results on the *"Inspection and Maintenance Log"* at the back of this manual.

5.2 DEFECTS: If inspection reveals an unsafe or defective condition, or if any doubt should arise as to its condition for safe use, remove the SafRig FAS from service immediately and clearly mark it "DO NOT USE". Destroy the system or contact 3M regarding replacement. Do not attempt to repair the SafRig FAS.

5.3 PRODUCT LIFE: The functional life of the SafRig FAS is determined by work conditions and maintenance. As long as the product passes inspection criteria, it may remain in service.

6.0 MAINTENANCE, SERVICING, STORAGE

6.1 CLEANING: Periodically clean the metal components of the SafRig FAS with a soft brush, warm water, and a mild soap solution. Ensure parts are thoroughly rinsed with clean water.

☑ *Although highly resistant to chemicals and environmental conditions, avoid contaminating the SafRig FAS with acids, bitumen, cement, paint, cleaning fluids, etc. If the equipment contacts acids or other caustic chemicals, remove from service and wash with water and a mild soap solution. Inspect per Table 2 before returning to service.*

6.2 SERVICE: Only 3M Fall Protection or parties authorized in writing by 3M Fall Protection may make repairs to this equipment. If the SafRig FAS has been subject to fall force or if inspection reveals an unsafe or defective condition, remove the system from service immediately. Clearly mark "DO NOT USE" and destroy it or contact 3M regarding replacement.

6.3 STORAGE AND TRANSPORT: The SafRig FAS is designed to be stored outdoors during normal weather conditions. If the weather is severe, it is recommended to store the system in an area that protects against damage to the system. Store the SafRig FAS and associated fall protection equipment in a cool, dry, clean environment out of direct sunlight. Avoid areas where chemical vapors may exist. Thoroughly inspect components after extended storage. If the system is transported long distances, it should be disassembled and all components secured and protected from severe conditions during transport.

7.0 RFID TAG

7.1 LOCATION: 3M product covered in these user instructions is equipped with a Radio Frequency Identification (RFID) Tag. RFID Tags may be used in coordination with an RFID Tag Scanner for recording product inspection results. See Figure 10 for where your RFID Tag is located.

7.2 DISPOSAL: Prior to disposing of this product, remove the RFID Tag and dispose/recycle in accordance with local

regulations. For additional information on how to remove the RFID Tag, please refer to the website link below.

	Do not dispose of your product as unsorted municipal waste. The crossed-out wheelie bin symbol indicates that all EEE (Electrical and Electronic Equipment) must be disposed of according to local law through available return and collection systems. Please contact your dealer or your local 3M representative for further information.

For more information, please visit our website: *http://www.3M.com/FallProtection/RFID*

CE

8.0 LABELS

Figure 11 illustrates labels on the SafRig FAS. Labels must be replaced if they are not fully legible. Information provided on each label is as follows:

A	1) Notified Body 2) Applicable Standard 3) Read all instructions.
B	1) Serial Number 2) Manufactured (Year/Month) 3) Lot Number 4) Model Number 5) Length (ft.)
C	1) Warning Statements 2) Counterweight Base Components
D	1) Approximate Weight: 2,722 kg (6,000 lb.)
E	1) Warning Statements: Maximum Lift Capacity 22 kN (5,000 lbf)
F	1) Warning Statements 2) Working Diagrams 3) System Weights 4) Maximum Capacity 1 Person

Table 2 – Inspection and Maintenance Log			
Inspection Date:	**Inspected By:**		
Components:	**Inspection:** (See Section 1 for *Inspection Frequency*)	**User**	**Competent Person**
Vertical Mast and Offset Arm (Figure 2)	Inspect the Boom (B) and Vertical Mast (A) for structural defects or damage including bends, corrosion, etc.	☐	☐
	Inspect all system fasteners to ensure they are tight.	☐	☐
	Periodically apply grease to the Grease Zerk (located at the bottom of the Vertical Mast) to lubricate the internal Hitch Ball Pivot (C).		☐
Fall Arrest Connection Point (Figure 2)	Verify that the Fall Arrest Connection Point (H) is free of corrosion, cracks, or other imperfections that may cause malfunction during operation.	☐	☐
Guide Pulleys (Figure 2)	Ensure that the Guide Pulleys (I) turn freely and are free of cracks and abrasion.	☐	☐
Labels (Figure 11)	Verify that all labels are securely attached and are legible.	☐	☐
PFAS and Other Equipment	Additional Personal Fall Arrest System (PFAS) equipment, winches, etc. that are used with the Flexiguard SafRig Fall Arrest System should be installed and inspected per the manufacturer's instructions.	☐	☐

Serial Number(s):	**Date Purchased:**
Model Number:	**Date of First Use:**

Corrective Action/Maintenance:	Approved By:	Next inspection due:
	Date:	
Corrective Action/Maintenance:	Approved By:	Next inspection due:
	Date:	
Corrective Action/Maintenance:	Approved By:	Next inspection due:
	Date:	
Corrective Action/Maintenance:	Approved By:	Next inspection due:
	Date:	
Corrective Action/Maintenance:	Approved By:	Next inspection due:
	Date:	
Corrective Action/Maintenance:	Approved By:	Next inspection due:
	Date:	
Corrective Action/Maintenance:	Approved By:	Next inspection due:
	Date:	
Corrective Action/Maintenance:	Approved By:	Next inspection due:
	Date:	
Corrective Action/Maintenance:	Approved By:	Next inspection due:
	Date:	
Corrective Action/Maintenance:	Approved By:	Next inspection due:
	Date:	
Corrective Action/Maintenance:	Approved By:	Next inspection due:
	Date:	
Corrective Action/Maintenance:	Approved By:	Next inspection due:
	Date:	
Corrective Action/Maintenance:	Approved By:	Next inspection due:
	Date:	
Corrective Action/Maintenance:	Approved By:	Next inspection due:
	Date:	
Corrective Action/Maintenance:	Approved By:	Next inspection due:
	Date:	

3M | DBI SALA® PROTECTA®

Fall Protection

USA
3833 SALA Way
Red Wing, MN 55066-5005
Toll Free: 800.328.6146
Phone: 651.388.8282
Fax: 651.388.5065
3Mfallprotection@mmm.com

Brazil
Rua Anne Frank, 2621
Boqueirão Curitiba PR
81650-020
Brazil
Phone: 0800-942-2300
falecoma3m@mmm.com

Mexico
Calle Norte 35, 895-E
Col. Industrial Vallejo
C.P. 02300 Azcapotzalco
Mexico D.F.
Phone: (55) 57194820
3msaludocupacional@mmm.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
fallprotection-co@mmm.com

Canada
260 Export Boulevard
Mississauga, ON L5S 1Y9
Phone: 905.795.9333
Toll-Free: 800.387.7484
Fax: 888.387.7484
3Mfallprotection-ca@mmm.com

EMEA (Europe, Middle East, Africa)
EMEA Headquarters:
Le Broc Center
Z.I. 1re Avenue - BP15
06511 Carros Le Broc Cedex
France
Phone: + 33 04 97 10 00 10
Fax: + 33 04 93 08 79 70
informationfallprotection@mmm.com

Australia & New Zealand
137 McCredie Road
Guildford
Sydney, NSW, 2161
Australia
Toll-Free : 1800 245 002 (AUS)
Toll-Free : 0800 212 505 (NZ)
3msafetyaucs@mmm.com

Asia
Singapore:
1 Yishun Avenue 7
Singapore 768923
Phone: +65-6450 8888
Fax: +65-6552 2113
TotalFallProtection@mmm.com

China:
38/F, Maxdo Center, 8 Xing Yi Rd
Shanghai 200336, P R China
Phone: +86 21 62753535
Fax: +86 21 52906521
3MFallProtecton-CN@mmm.com

Korea:
3M Koread Ltd
20F, 82, Uisadang-daero,
Yeongdeungpo-gu, Seoul
Phone: +82-80-033-4114
Fax: +82-2-3771-4271
TotalFallProtection@mmm.com

Japan:
3M Japan Ltd
6-7-29, Kitashinagawa, Shinagawa-ku, Tokyo
Phone: +81-570-011-321
Fax: +81-3-6409-5818
psd.jp@mmm.com

WEBSITE:
3M.com/FallProtection

ISO 9001

bsi. ISO 9001 Quality Management FM534873

EU DECLARATION OF CONFORMITY:
3M.com/FallProtection/DOC