

Regulatory and Equipment Changes and Innovations in Fall Protection

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- ▶ ANSI Z359.1–1992/(Rev 1999)
- ▶ ANSI Z359.1–2007 (Snaphook)
- ▶ ANSI Z359 2007–Present
 - Committee structure
 - Subdivision of Standards
 - Major Changes
 - Expected timeline

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Original Regulatory provisions

- ▶ Snaphooks
- ▶ Weights
- ▶ Free Fall
- ▶ Lanyard Construction
- ▶ Labeling
- ▶ Testing Changes

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Basic Provisions of Fall Protection Regulations

- ▶ Guard every floor hole into which a worker can accidentally walk (using a railing and toe-board or a floor hole cover).
- ▶ Provide a guard rail and toe-board around every elevated open sided platform, floor or runway.
- ▶ Regardless of height, if a worker can fall into or onto dangerous machines or equipment (such as a vat or acid or a conveyor belt) employers must provide guardrails and toe-boards to prevent workers from falling and getting injured.
- ▶ Other means of fall protection that may be required on certain jobs include safety and harness and line, safety nets, stair railings and hand rails.

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Current Changes Already Implemented

- ▶ ANSI/ASSE Z359.0-2012
 - Definitions and Nomenclature used for Fall Protection and Fall Arrest
- ▶ ANSI/ASSE Z359.1-2007
 - Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components
- ▶ ANSI/ASSE Z359.2-2007
 - Minimum Requirements for a Comprehensive Managed Fall Protection
- ▶ ANSI/ASSE Z359.3-2007
 - Safety Requirements for Positioning and Travel Restraint Systems
- ▶ ANSI/ASSE Z359.4-2013
 - Safety Requirements for Assisted-Rescue Systems, Subsystems and Components

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Current Changes Already Implemented (page 2)

- ▶ ANSI/ASSE Z359.6–2009
 - Specifications and Design Requirements for Active Fall Protection Systems
- ▶ ANSI/ASSE Z359.7–2011
 - Qualification and Verification Testing of Fall Protection Products
- ▶ ANSI/ASSE Z359.12–2009
 - Connection Components for Personal Fall Arrest Systems
- ▶ ANSI/ASSE Z359.13–2013
 - Personal Energy Absorbers and Energy Absorbing Lanyards
- ▶ ANSI/ASSE Z359.14–2012
 - Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems.

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Future Implementations on the Horizon

- ▶ ANSI/ASSE Z359.11
 - Safety Requirements for Full Body Harnesses
- ▶ ANSI/ASSE Z359.15
 - Safety Requirements for Single Anchor Lifelines and Fall Arrestors for Personal Fall Arrest Systems
- ▶ ANSI/ASSE Z359.16
 - Safety Requirement for Climbing Ladder Fall Arrest Systems
- ▶ ANSI/ASSE Z359.17
 - Safety Requirements for Horizontal Lifelines for Personal Fall Arrest Systems
- ▶ ANSI/ASSE Z359.18
 - Anchorage Connectors

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New innovations in equipment

- ▶ Reflective harness for hi-viz and confined space
- ▶ Redesigned SRLs
- ▶ Reusable anchor points

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High Visibility Reflective Harness



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High Visibility Reflective Harness



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High Visibility Reflective Harness

- ▶ Hi-Viz Orange for easy identification in low light
- ▶ Reflective material woven into the harness webbing
- ▶ Wider 1 ¾" webbing to accommodate 5 reflective tracers increasing visibility
- ▶ Excellent for simple identification
- ▶ Ideal for location in confined space

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Ultra Lightweight SRLs



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Ultra Lightweight SRLs

- ▶ Galvanized Zinc Wire Rope
 - ▶ 3/16" dia. 19 x 7 Minimum breaking load 3400 LBS
- ▶ Webbing
 - ▶ Dyneema® 1 inch. Minimum breaking load 4500 LBS
- ▶ Capacity
 - ▶ Wire Rope = 30 Foot.
 - ▶ Dyneema® Webbing = 26 Foot
- ▶ Maximum Arresting force
 - ▶ Wire Rope = 1800 LBS
 - ▶ Dyneema® Webbing = 1800 LBS
- ▶ Average Arresting force
 - ▶ Wire Rope = < 900 LBS
 - ▶ Dyneema® Webbing = < 900 LBS
- ▶ Total Arrest distance
 - ▶ < 54 inches without freefall.
- ▶ User Weight
 - ▶ 310 LBS maximum



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Independent Brake Pawls

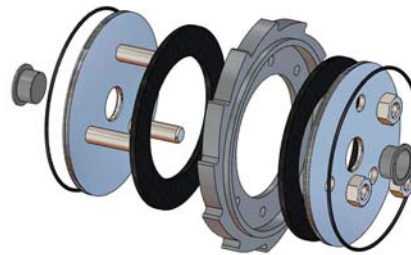
The two pawls work independently of one another, this ensures a “fail safe” capability if one should stop working.



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Sealed Brake Module

The brake module is a stainless/alloy unit which can be easily replaced after a fall, the “O” rings provide a seal from dust and water ingress.



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Load Bearing Chassis

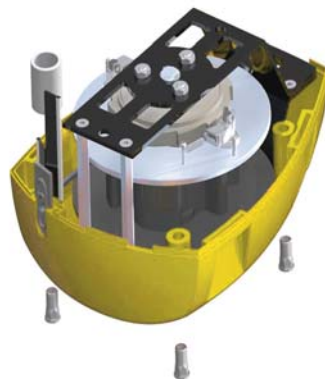
The chassis is comprised of steel hangers which give the block its strength and keep the weight to a minimum.



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PC/ABS Housing

The PC/ABS housings give the block its lightness and exceptional durability, these housings enclose and protect the mechanical assembly.



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Ultra Lightweight SRLs

- ▶ Spoke design drum cutting drum weight be nearly half
- ▶ Brake system sealed with O rings
- ▶ Independent brake pawls, virtually eliminating overall brake failure
- ▶ Loadbearing steel chassis
- ▶ Ceramic insert to lessen web wear
- ▶ Unique brush design to eliminate ingress of foreign matter
- ▶ Dyneema cut resistant fabric woven in

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Reusable anchor point



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Reusable anchor point

- ▶ “Drop Thru” anchor requires 2” opening for D-ring
- ▶ 2:1 plate to hole ratio
- ▶ Can be used in/through concrete, steel and even catwalk (rated)
- ▶ Completely reusable
- ▶ Customizable
- ▶ Low cost

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