

## RotorStep Ladders

The Safe-Away® RotorSteps have been designed to provide a low maintenance, ergonomic and safe access for the operators and maintenance personnel of graders, scrapers or excavators in the heavy mining and earthmoving industries.

The RotorStep Ladders are electro-hydraulically controlled and rotate through an arc of 180° to the upright, 'parked' position to protect the ladders from physical damage when the equipment is in use.



# Safety & Efficiency

The **Safe-Away® RotorStep Ladders** have been specifically designed to suit a wide range of equipment and provide:

- A retractable 62° ladder for access and egress while carrying tools and other items.
- Steps of regulation size.
- Fixed handrail system for three points of contact.
- A simple robust hydraulic actuator that rotates through an arc of 180° to the upright position to protect the ladders from physical damage when the equipment is in use.
- Interlock switch senses if door is closed before allowing ladder movement to prevent collision.
- Park brake interlock warns operator if park brake is released before ladder is fully raised (Note: not applicable with Momentary operation configuration).



RotorStep M3 Ladder shown fitted to a Cat 18M3 Grader



# Innovation

The **Safe-Away® 2009 Series Access Control System** manages all ladder operations.

It provides:

- Simple downloading of day to day logged data to a USB.
- Sequential reports on all events with time and date stamps:
  - Raising and lowering,
  - Fault indications.
- Operational history data logs
- Diagnostics and error reporting accessed directly from the incab control digital display.



## Access Control System Features

- Incab control panel with a digital touch pad display showing:
  - Access system status; UP, DOWN and IN MOTION.
  - Detailed fault indication with audible alarm and system event log.
  - 3,000 point event data log with download using a USB key connection to the side of the in cab control panel.
- View downloaded log files as summary and/or full log data in Microsoft® Excel using the supplied SAL to XLS file converter.

The **Safe-Away® 2009 Series Power Pack** is driven by the Access Control System. The hydraulic Power Pack may be mounted vertically, at a convenient location of your choosing, on the vehicle.

It includes:

- Harnesses and Leads.
- Battery Circuit Breaker Kit.
- A Reservoir Heater ensuring the viscosity of the oil is maintained to raise and lower the ladder in cold climates.



Log Index	Event Label	Event Code	Date
1	Ladder Down	254	01/09/2000 11:31:47 PM
2	System Voltage Below 18V	18	02/09/2000 12:15:21 AM
3	Ladder Up	255	02/09/2000 12:20:20 AM
4	Ladder Down	254	02/09/2000 01:38:55 AM
5	Ladder Up	255	02/09/2000 01:40:34 AM
6	Ladder Down	254	02/09/2000 04:38:29 AM
7	Ladder Up	255	02/09/2000 05:21:04 AM
8	Ladder Down	254	02/09/2000 06:37:10 AM
9	System Voltage Below 18V	18	02/09/2000 06:42:51 AM
10	Ladder Up	255	02/09/2000 07:19:39 AM
11	System Voltage < 18V During Movement	17	02/09/2000 07:19:46 AM
12	Ladder Down	254	02/09/2000 08:00:52 AM
13	System Voltage Below 18V	18	02/09/2000 08:01:40 AM
14	Ladder Up	255	02/09/2000 08:08:12 AM
15	Ladder Down	254	02/09/2000 08:22:30 AM
16	System Voltage Below 18V	18	02/09/2000 08:24:54 AM
17	System Voltage Below 18V	18	02/09/2000 12:34:06 PM

# Designed to suit your fleet

There are 6 models of **Safe-Away® RotorStep Ladders** designed to suit OEM vehicles.

Each of these RotorStep models may be varied to accommodate your requirements for specific mount points, platform handrails, infills, platforms, site/OEM colors, and Power Pack locations.

## RotorSteps

Model	Compatible with:	Features & Benefits
<b>RotorStep M3</b>	Cat 18M3 Graders Cat 16M3 Graders	Top landing on M3 Models. Safer direct access to cabin.
<b>RotorStep G</b>	Cat 16G Graders Cat 16H Graders	The compact mount ensures visibility to the point of the blade. Will not obstruct an operators vision when in the raised position.
<b>RotorStep GM</b>	Cat16M Graders	Will not obstruct an operators vision when in the raised position.
<b>RotorStep GK</b>	Komatsu GD825 Graders	
<b>RotorStep L</b>	Excavators and Trucks 320C 320D 320E 385B 385C PC300 PC1000 ZX350 934 974	Unique design keeps the ladder off the tracks. Compact mount plates to ensure visibility. Operates with the cab door fully open or close. Will not obstruct an operators vision when in the raised position.
<b>RotorStep S</b>	Cat Scrapers 631D 631E 631G 637D 637E 637G 651B 651E 657B 657E 657G	A rotating platform section provides a walkway between the cab and the ladder. It sits in an upright position when the scraper is operational. A robust mount minimises damage to ladder when positioned on the scaper front corners. Operates with the cab door fully open or closed. Will not obstruct an operators vision when in the raised position.



RotorStep G Ladder shown fitted to a Cat 16G Grader



RotorStep GM Ladder shown fitted to a 16M Grader



RotorStep L Ladder shown fitted to a Hitachi EX350 excavator



RotorStep S Ladder shown fitted to a Cat 657 scraper

## Optional extras

### 1. Additional Raise and Lower Control Panel Kit

A remotely mounted control panel designed to enable the raise and lower operation from outside of the vehicle's cab, or at a position accessible from ground level. Encased in a protective aluminium case.



### 2. Boarding Light and Audible Alarm Kit

The boarding light and audible alarm are activated by pressing the up or down directional switch. The light will stay on for an adjustable/preset period.



### 3. Inhibit Kit

A relay with connecting harness for customer only installation of machine inhibit functions independent of the standard Safe-Away® in-built ladder safety functions.

### 4. Momentary Operation

Safe-Away® Access Systems can be supplied with momentary operation.

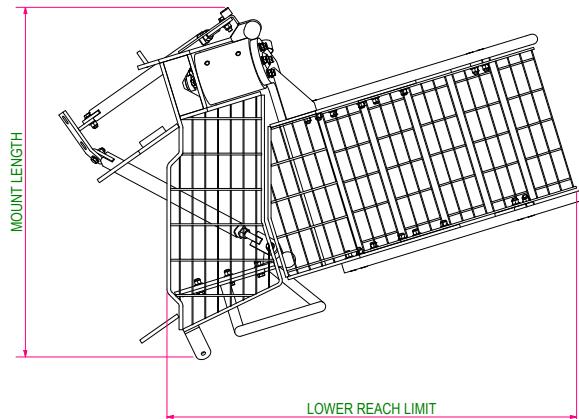
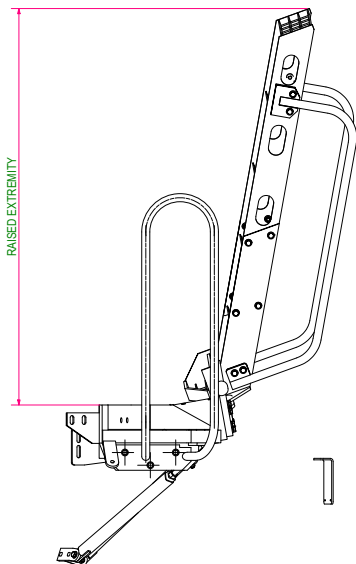
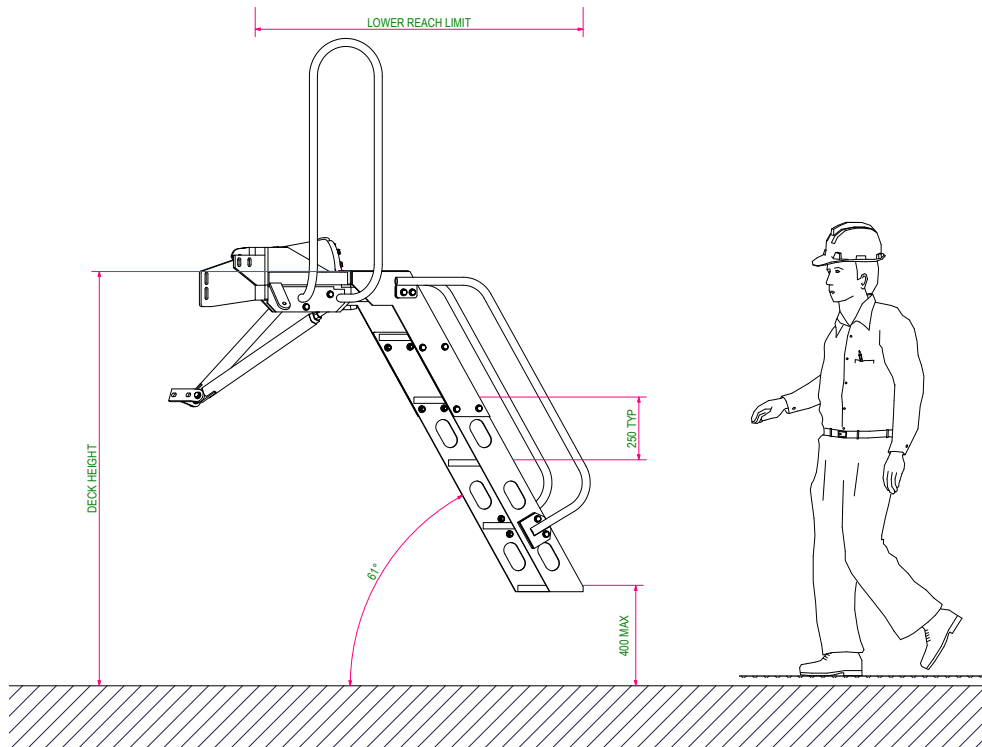
# Specifications

This Safe-Away® RotorStep GM has been designed and manufactured to comply where practicably possible with the relevant sections of the following standards:-

SAE J185\_200305    ISO 2867:2011    ANSI Z535.4-2007    ANSI A14.2-2007    AS 3868-1991    AS1657-2013

## RotorStep GM Range Dimensions

Steps	Deck Height Maximum	Lowered Reach Limit	Raised Extremity	Handrail Height
6	63.7in    1620mm	38.5in    980mm	66.1in    1680mm	36.6in    931mm



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