HALO™

Rollover Occupant Protection System

MADE BY SAFETY ENGINEERING INTERNATIONAL


PROTECT YOUR MOST VALUABLE ASSETS,
YOUR WORKFORCE!
HALO™
ROLLOVER OCCUPANT PROTECTION SYSTEM

WHO WE ARE

Safety Engineering International is vehicle safety engineering company. Our Design Engineers have years of experience in rollover accident investigation and dynamic vehicle testing which allowed them to gain a better understanding of how injuries occur in roll-overs and what precautions can be taken to prevent serious injury. These findings are the building blocks for our High Attenuation Load Offset (HALO) HALO™ Rollover Occupant Protection System (ROPS).

OUR CLIENTS

AngloAmerican · Barloworld · bhpbilliton

IEnova Infraestructura Energética Una empresa de Sempra · Bonatti · MADISA CAT

TransCanada In business to deliver · VALE · GDI Grupo Desarrollo Infraestructura

CONCEPT & FUNCTIONALITY

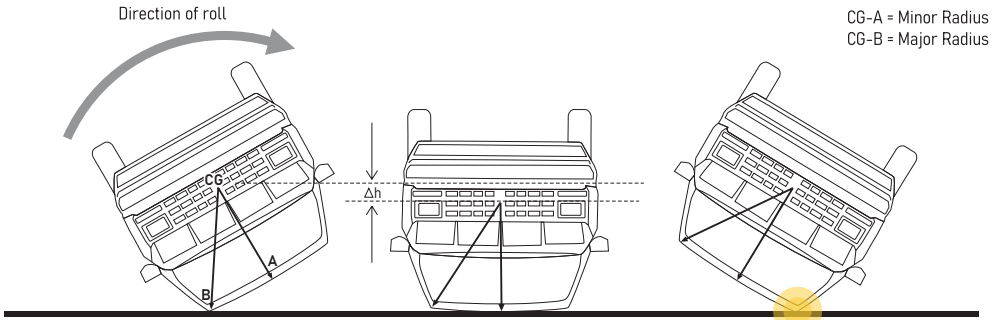
Named HALO™, the structure is a High Attenuation Load Offset device and when attached to a production vehicle roof, reduces the amount of crush and the speed of that same crush when the vehicle experiences a rollover crash to prevent catastrophic and fatal injuries to the occupants.

The HALO™ is designed to maximize the vehicle's own geometry to minimize and evenly distribute the impact forces of a rollover event over the entire vehicle body structure preventing point loading in any one place.

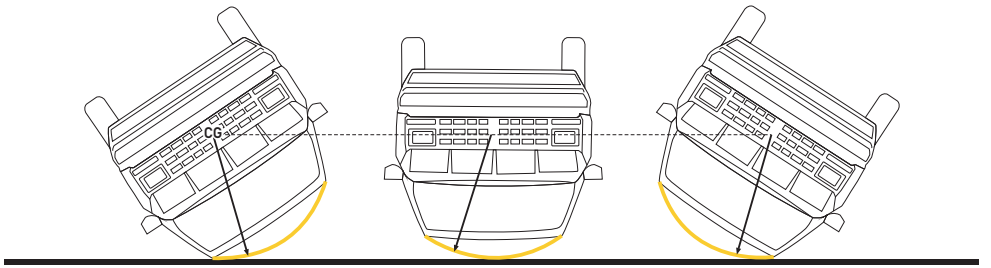
The HALO™ was developed to be the most effective and economical means of mitigating deaths and injuries in rollover crashes. The HALO™ is a comprehensive design which consists of an optimized tubular structure mounted on the vehicle roof similar to a roof rack in combination with internal pillar reinforcements that stay within the Original Equipment Manufacturer plastic trim to maintain the interior space and appearance.

The HALO™ functions by tying all of the underlying vehicle's vertical pillars together and reforming the vehicle's trapezoidal cross-sectional shape while drawing on the internal reinforcement's added vertical support.

The HALO™ is a dynamically tested ROPS that maintains the Major Radius and minimazes Roof Crush and Occupant Injury.



Without HALO, the CG drops to the Minor Radius and crushes the trailing side corner.

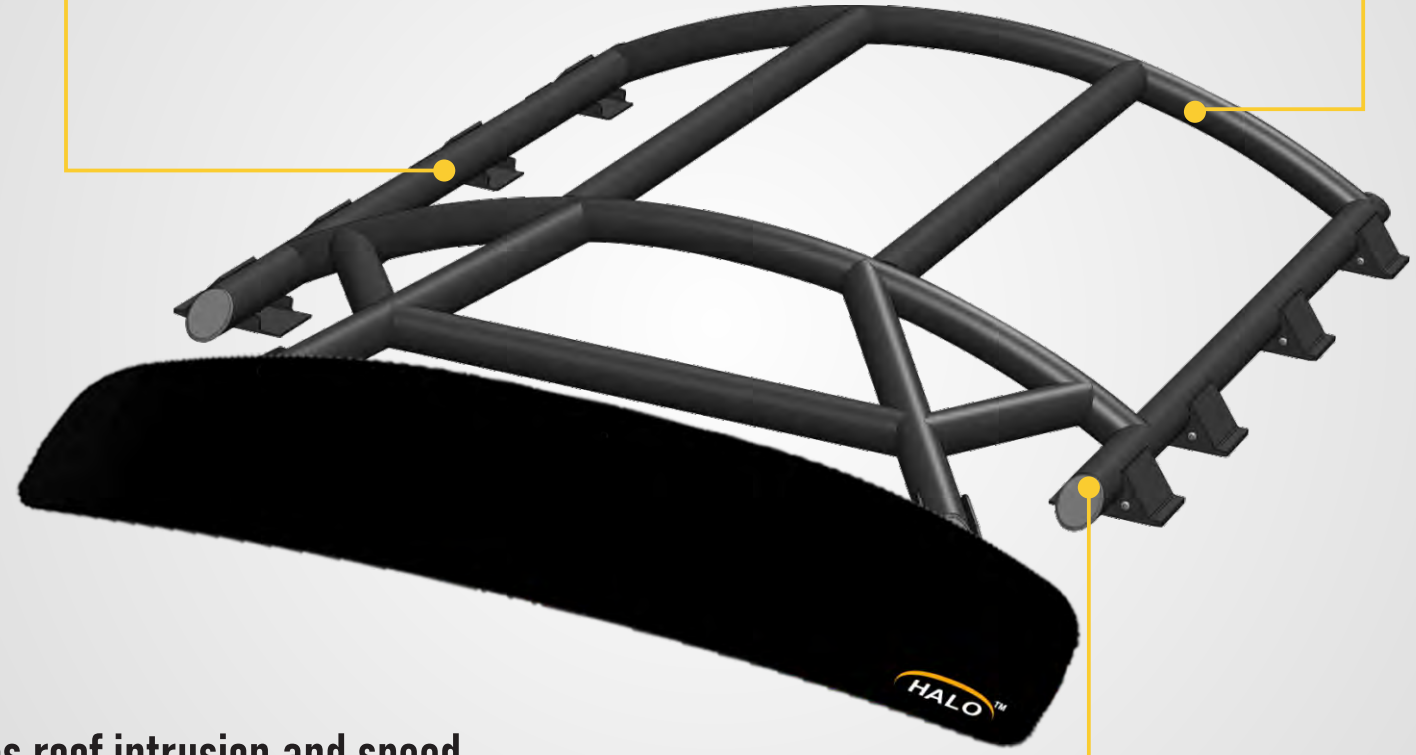


With HALO, the CG maintains the Major Radius and prevents crushing on the trailing side.

HALO™ CHARACTERISTICS

Maintains the vehicle's roll radius characteristic allowing the vehicle body to roll smoothly.

Distributes the roof loads across the roof surface allowing for smooth and even roof structure ground loading.



Minimizes roof intrusion and speed at the A and B Pillars which keeps the roof up and away from the occupants.

HALO SAVES LIVES

Finite Element Analysis

WITHOUT HALO™ WITH HALO™

With more than1,000 HALO™ ROPS installed worldwide, it's successfully protect occupants in more than 40 Rollover events.

HALO™ is equipped on thousands of trucks over the world protecting lives. In over 80 rollovers, there were no injuries to the belted occupants of these vehicles.

REAL WORLD RESULTS

MODELS

TOYOTA HILUX | DUAL CAB

CURRENT MODEL - 2016+

Item Number: H16AKIT
Weight: 47 lbs (21 kg)

Dimensions: 57 x 45 x 9 in
1455 x 1138 x 239 mm

MODEL 2009 - 2015

Iten Number: H6AKIT
Weight: 47 lbs (21 kg)

Dimensions: 58 x 46 x 9 in
1472 x 1168 x 224 mm

MITSUBISHI L200 | DUAL CAB

CURRENT MODEL - 2016+

Item Number: H51AKIT
Weight: 47 lbs (21 kg)

Dimensions: 54 x 48 x 7 in
1369 x 1116 x 182 mm

MODEL 2009 - 2015

Item Number: H5AKIT
Weight: 47 lbs (21 kg)

Dimensions: 54 x 48 x 7 in
1369 x 1116 x 182 mm

FORD RANGER | DUAL CAB

CURRENT MODEL - 2013+

Item Number: H9 AKIT
Weight: 50 lbs (23 kg)

Dimensions: 53 x 48 x 7 in
1344 x 1221 x 188 mm

ISUZU KB250

SINGLE CAB MODEL

Item Number: H11AKIT
Weight: 65 lbs (29 kg)
Dimensions: 36 x 58 x 9 inches
894 x 1482 x 235 mm

DUAL CAB MODEL

Item Number: H12AKIT
Weight: 52 lbs (24 kg)
Dimensions: 58 x 46 x 9 inches
1465 x 1180 x 240 mm

MAHINDRA PIK UP | DUAL CAB

CURRENT MODEL

Item Number: H18AKIT
Weight: 101 lbs (46 kg)

Dimensions: 55 x 51 x 12 inches
1399 x 1288 x 300 mm

TOYOTA HILUX | SINGLE CAB

CURRENT MODEL 2016+

Item Number: H17AKIT
Weight: 65 lbs (29 kg)

Dimensions: 35 x 46 x 9 inches
894 x 1161 x 227 mm

MODEL 2010 - 2015

Item Number: H10AKIT
Weight: 65 lbs (29 kg)

Dimensions: 36 x 57 x 9 inches
911 x 1466 x 238 mm

NISSAN NP300 HARDBODY | DUAL CAB

CURRENT MODEL* 2016+

Item Number: H13AKIT
Weight: 51 lbs (23 kg)

Dimensions: 56 x 46 x 9 inches
1427 x 1163 x 218 mm

TOYOTA LAND CRUISER 79

SINGLE CAB MODEL

Item Number: H14AKIT
Weight: 75 lbs (34 kg)

Dimensions: 40 x 61 x 10 inches
1016 x 1537 x 243 mm

DUAL CAB MODEL

Item Number: H15AKIT
Weight: 84 lbs (38 kg)

Dimensions: 63 x 50 x 14 inches
1604 x 1261 x 358 mm

NEW MODELS | COMING SOON

NISSAN NP300 FRONTEIR/NAVARA
DUAL CAB

FORD F-350 4-DOOR

TOYOTA COASTER MINIBUS

WEIGHTS AND DIMENSIONS

PRODUCT	MAKE / MODEL	LENGTH (MM/IN)	WIDTH (MM/IN)	HEIGHT (MM/IN)	PRODUCT WEIGHT (KG/LBS)
H6AKIT	TOYOTA HILUX (2009-2015)	1472 / 58	1168 / 46	224 / 9	21 / 47
H9AKIT	FORD RANGER	1344 / 53	1221 / 48	188 / 7	23 / 50
H10AKIT	TOYOTA HILUX (SINGLE CAB 2010-2015)	911 / 36	1446 / 57	238 / 9	29 / 65
H11AKIT	ISUZU KB250 (SINGLE CAB)	894 / 36	1482 / 58	235 / 9	29 / 65
H12AKIT	ISUZU KB250 (DUAL CAB)	1465 / 58	1180 / 46	239 / 9	24 / 52
H13AKIT	NISSAN NP300 (HARDBODY)	1427 / 56	1163 / 46	218 / 9	23 / 50
H14AKIT	TOYOTA LANDCRUISER 79 (SINGLE CAB)	1016 / 40	1537 / 61	243 / 10	34 / 75
H15AKIT	TOYOTA LANDCRUISER 79 (DUAL CAB)	1604 / 63	1261 / 50	358 / 14	38 / 84
H16AKIT	TOYOTA HILUX (2016+)	1455 / 57	1138 / 45	239 / 9	21 / 47
H17AKIT	TOYOTA HILUX (SINGLE CAB 2016+)	894 / 35	1161 / 46	227 / 9	29 / 65
H18AKIT	MAHINDRA PIK UP	139 / 559	1288 / 51	300 / 12	46 / 101
H19AKIT	NISSAN NP300 (2018+)	1344 / 53	1221 / 48	188 / 7	-
H51AKIT	MITSUBISHI L200 (2016+)	1369 / 54	1116 / 44	182 / 7	21 / 47

CONTACT US

INFORMATION AND SALES

YOUR LOCAL HALO ROPS CERTIFIED DEALER IS:

SEI
Safety Engineering International

5949 Hollister Ave Suite A | Goleta, CA. 93117
US +1 805-895-5192 | MX +52 844-350-9630 | SA +27 31-713-1700
info@safetyei.com

INTELLECTUAL PROPERTY

Safety Engineering International has received a Patent with the USPTO #7717492 and Intl Patent #S024-1004032A pending, which includes South Africa, for the geometric roof retrofit rollover damage minimization device.

United States Patent No. US 7,717,492
South Africa Patent No. 2011/02026
Australia Patent No. PCT/US2009/054293
Singapore Patent No. WO/2010/022141
Mexico Copyright Registration No. 03-2016-120912494800-001
Canada Patent No. CA 2735042

Patent Pending: Brazil, India, Korea