A & K INNOVATIONS
FALL RESTRAINT DEVICE

INSTRUCTION MANUAL
Brookfield Multiplex

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FALL RESTRAINT DEVICE

INTRODUCTION

Thank you for purchasing A& K Innovations Fall Restraint Device. This device is based on the No 2 Acroprop which has been proven for many years in the building industry as a reliable, durable and long lasting piece of equipment. This Fall Restraint Device is designed for 2 person operation and is quick and easy to install and needs no other fixings.

DESCRIPTION

The A & K Innovations Fall Restraint Device is suitable for concrete floor and ceiling buildings with a floor height between 1.9 metres and 3.1 metres.

SPECIFICATIONS

DESCRIPTION	Fall Restraint Device
SUPPLIER	A & K Innovations 1 Carham Court Nerang 0438 279 202
COMPLIANCE	AS 1891
BASE UNIT	Boral No 2 Acroprop
DESIGN LOAD	200 Kg

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SAFETY

- Ensure all operators of this equipment have read and understood this manual.
- Only authorized persons may use this equipment.
- This fall restraint device should not be used for any other purpose other than for its intended use.
- This device is designed for 2 person use only.
- Do not use this fall restraint device without first drilling the appropriate holes in the concrete (refer to installation guide).
- This device should not be installed upside down (refer to installation guide).
- Fall restraint equipment should be handled, transported and stored to avoid any damage.
- Ensure that this device is correctly installed and that the adjusting nut is tightened sufficiently before placing any load on it.
- This device must only be used if there is adequate fall clearance to operate safely.
- Ensure that an approved fall arrest harness is used and that it is fitted correctly.
- An approved retractable shock absorbing lanyard must always be used.
- The fall restraint device should be inspected regularly for signs of cracking, bending, or other visible defects and taken out of service immediately if there is any doubt to its suitability.
- Ensure that this equipment has been inspected as per directed (refer maintenance section).
- If this device has been used to arrest a fall, it should be withdrawn from use and referred for inspection.
- Before operating this equipment, an emergency rescue plan must be in place to ensure rescue without risk or injury to others, within a timeframe that minimizes conditions such as suspension trauma.

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INSTALLATION

1. Select a suitable location for the device. This location should be as close as possible to the work location to avoid any lateral movement or swing in the event of a fall. This Fall Restraint Device should not be located closer than 1m from the concrete edge.

2. Drill two 18 mm diameter holes in the floor and ceiling slab, approximately 60 mm deep. Ensure both holes are perpendicular to the floor and concentric.

3. Place the securing lug on the outer tube into the lower hole and secure by placing your foot on the lower pad.

4. Lift the inner tube until the upper securing lug engages the upper hole. Insert the pin through the slot in the outer tube passing through the adjacent hole in the inner tube.

5. Turn the handle of the adjuster nut until the correct tension is achieved. Use only the handle provided for tightening.

6. Check the final installation before attaching lanyards.

7. An energy absorbing retractable lanyard can then be attached to the Fall Restraint Device attachment point to the lanyard manufacturer's instructions.

Lanyard connection point

Adjuster nut & pin

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MAINTENANCE

The A & K Innovations Fall Restraint Device needs no regular maintenance other than regular inspections as detailed below. Conditions of storage and transport should ensure that no part of the device is subjected to unnecessary strain or pressure or to excessive heat, humidity or moisture and that the device is protected from contact with sharp edges, corrosive substances and other possible causes of damage.

INSPECTION

1. Inspection by operator – the operator should check the device before and after each use. The fall Restraint device should be inspected regularly for signs of cracking, bending, or other visible defects and taken out of service immediately if there is any doubt to its suitability. The device should be clean and free of contaminants such as dirt, grit, sand, cement, oil and grease. The device should also be checked for corrosion.

2. 12 monthly inspections – this device should be disassembled and inspected by a competent person every 12 months.

3. Re-entry into service after a period of storage or out of service – this device should be inspected by a competent person if it has been stored or out of service for a period of 12 months or more.

4. After fall arrest – this device should be taken out of service immediately and inspected by a competent person if it has been used to arrest a fall.

5. Life expired devices – after 10 years from the date of manufacture, this device should be taken out of service and destroyed.

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MAINTENANCE
LOG BOOK

ITEM	DATE	INSPECTED BY	NOTES	SIGNATURE
Original purchase date	11/12/2009	J JONES	Serial # AKJ-20377-2011-1	
12 month inspection				
12 month inspection				
12 month inspection				
12 month inspection				
12 month inspection				
12 month inspection				
12 month inspection				
12 month inspection				
12 month inspection				
Removal from service				
Operators notes / Additional repairs				

Certificate of Compliance

On Wednesday 24th August 2005 A&K Engineering carried out tests on Lanyard Fixing Points attached to a standard Acrow Prop.

The tests where carried out at the Circle on Cavill construction site with representation from Sunland Constructions, Highrise Installations & A&K Engineering.

Test No.1

Drop test with a 200kg mass fixed via a fibre sling with no elasticity.

The 200kg mass was dropped a distance of more than 1 metre to simulate 2 persons free falling at the same time.

No distortion was evident from the top fixing.
Distortion of the support member (Acrow Prop) was evident from the central fixing.

Test No. 2

Load test the Lanyard fixing point from a lateral direction to determine that the fixing point meets the requirements of 2200kg of applied force.

A load test was set up using a 6 tonne winch & calibrated Load Cell.

Results show that the fixing point will withstand in excess of 2200kg force without distortion.

SUMMARY

It is A&K Engineering understands that the Lanyard fixing point on the top end of the Acrow prop is suitable for 2 persons to be attached to.

The lower fixing point is not suitable & so will be deleted from the props.

It was also decided that the best size Acrow prop to maximise safety & aid installation ease is the No. 2 Prop.

Load signs will be attached to each Acrow prop

Ned Neatherway
M/D

R.F.Soderholm
Consulting Engineer

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March 15, 2007

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ARUNDLE Qld.
PO Box 395
ASHMORE CITY 4214

ACROW PROP FALL ARREST DEVICE
Dwg AKJ-6327

Dear Sir,

I wish to advise that I have checked the Designs for the Acrow Prop Fall Arrest Device as shown on Assembly Drawing AKJ-6327 and advise that it complies with AS/NZ 1891.4-2000 Section 3 Table 3.1 for a Free Fall Arrest with 2 persons attached to the same anchor and with an Ultimate Load of 21 kN .

Yours faithfully

R.F.Soderholm CPEng RPEQ 1548

Registered Professional Engineer 289561
Mr R. F. Soderholm
MIEAust CPEng (Mechanical) NPER-3
Signature ..... Date 15/3/07
Registered on the NPER-3 in the Category of
Mechanical
National Professional Engineers Register Section Three