

Technical Bulletin No. A001AU Rev B Release Date: 09/2014

Subject: Anchorage Strength

Australian Standards AS/NZS 5532:2013 Manufacturing requirements for single point anchor device used for harness based work at height.

The standard AS/NZS 5532:2013 reinforces Australian standards AS/NZS1891.4:2009 requirements for performance and fall arrest anchorages

Selection of the type and location of anchorages will depend on the nature and location of the task and the type of construction of the building or supporting structure.

AS/NZS 5532:2013 includes various classes of Anchor Devices and Systems these being,

- A) General, Anchor devices intended for single or two person use only.
- B) Fixed Anchors, comprises anchor devices designed to be secured to Vertical, horizontal and inclined surfaces and /or underlying structure.
- C) Potable anchors, comprises devices such as davits and tripods.

Single point anchors may be rated for Limited free fall arrest or Free Fall arrest for both single and two persons

A table of anchorage applications and strength requirements, under the Australian and New Zealand standard AS/NZS 1891.4, and AS/NZS 5532 is given below:

Strength Requirements for Anchorages

Single Point Anchorage Application	Description	Ultimate Strength in Direction of loading
Free fall-arrest - 1 person	Fall distance in excess of 600mm	15kN
Free fall-arrest - 2 persons	Fall distance in excess of 600mm 2 persons attached to the same anchor	21kN
Limited free fall-arrest - 1 person Rope Access anchorages (Suitable for an abseiling point or work positioning)	Fall distance not exceeding 600mm	12kN
Limited free fall-arrest - 2 persons	Fall distance not exceeding 600mm	18kN
Personnel riding rope suspension 1 person	Suspension from a working line and secondary system attached	15kN
Personnel riding rope suspension 2 person	Suspension from a working line and secondary system attached	21kN
Rescue - 1 Person	Static loads on rescue system	15kN
Rescue - 2 Person	static loads on rescue system	21kN

Note: Restraint systems thought to be total restraint do have residual fall risk, Australian Standard AS/NZS1891.4:2009 requires the anchorage to fall arrest rated see above table.

AS/NZS 1891.4:2009, Section 3 states the following:

- As far as practicable all single point one-person anchorages should meet the 15kN requirement regardless of primary purpose.
- The maximum number of people connected to any one point shall be two and the anchorage point must be rated to a minimum of 21kN.
- Anchorages when using restraint technique may be 12kN or should there be any risk of a fall 15kN
 - Persons partially restrained by a device or sliding down a slope (possible to walk without hand rail assistance and attached safety line).

AS/NZS 5532:2013 States

- Requires all single point anchors as far as practicable should be rated for fall arrest even though various clauses within the standard specifies lesser strength for some categories.