ARS Permanent Roof Anchor Instruction Specification Manual 2025

ANSI Z359.18-17 Type D

des ingénieurs du Québec.

See OSHA definition.

SAS = Super Anchor Safety.

*EOR = Engineer of Record

Compliance: OSHA1926.502

Certified by a member of l'Ordre

*Qualified or Competent Person"

VERSION

!WARNING TO USER!

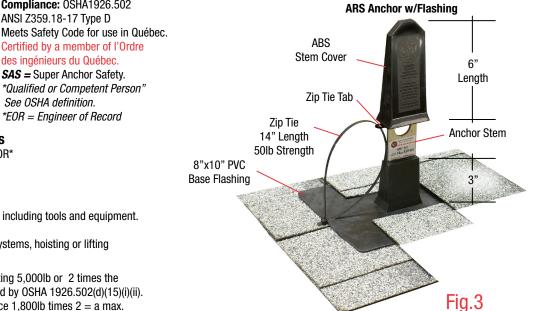
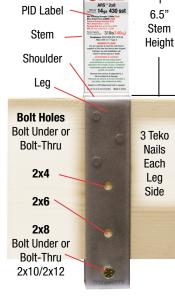


Fig.2 ARS 2x4 6.5" Stem Height





ARS 2x8

Connector

Hole 1"

Fig.1

Anchor Locations/Service Zones

Required to be specified by the project EOR* or qualified person*. See Fig.18 example.

Specification of Use

• Fall arrest or fall restraint

Materials Specifications

Anchor: 14ga. and 11ga.430sst,

Temperature Range: -30°F-120°F

Max. Arrest Force: 3,600lb(16kN)

Q235 steel, 304sst or 316sst.

Coating: HDG or dacromet

Min. Breaking Strength:

5,000lb(22kN)

- 1 person w/max. body weight of 310lb including tools and equipment.
- Max. Slope 24/12
- Do not use for work positioning, HLL systems, hoisting or lifting

Framing Requirements

Install onto top chords capable of supporting 5,000lb or 2 times the "intended fall protection load" as specified by OSHA 1926.502(d)(15)(i)(ii). **Fall Protection Load:** Max. fall arrest force 1,800lb times 2 = a max. in plane load of 3,600lb applied to a top chord or supporting structure. Engineering is required by the project EOR* or qualified person*. Install anchors below the hip or ridge as shown at Figs. 4,5,14,18.

Attachment Bolt Specifications

Attach ARS anchors with a SAS factory supplied 5/16" grd 8 bolt.

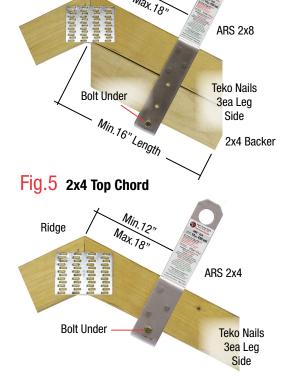
Bolt Under: See Figs. 10,11.

Bolt-Thru: Drill pilot hole w/5/16" drill bit see Fig.12.

Teko Nails: Anchors mfg. with teko nail holes, install 3 nails in each leg to prevent unwanted movement during use. See Fig.3. See teko nail warning Fig.6.

Ridge

Fig. 4 2x4 Top Chord w/Backer



Top Chord Backer

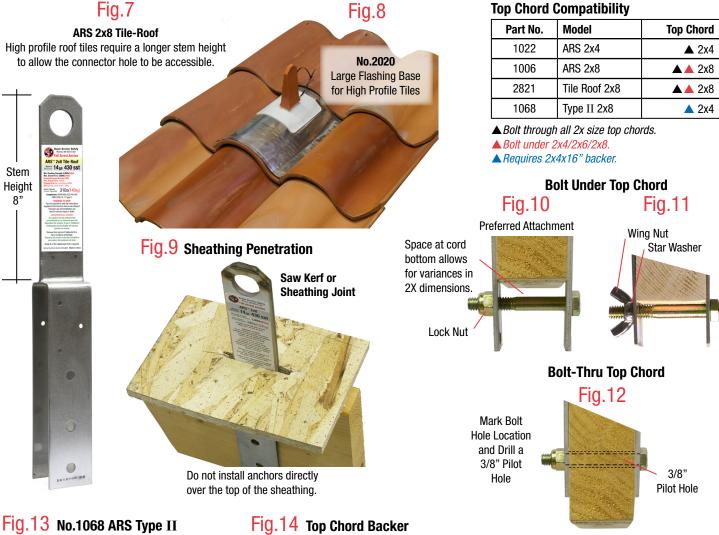
A 2x4x16" length backer is required for bolt under ARS 2x8 and ARS Type II anchors installed onto 2x4 top chords. Attach backer to the top chord to prevent movement. See Figs. 4, 14.

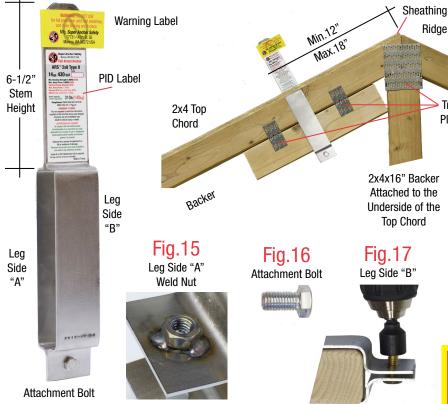
Teko Nail Warning Attachment Bolt Required!

In the event of a free fall, anchors attached only with teko nails will not arrest a fall resulting in serious injury or death.

Open Framing Warning!

Sheathing must be in place at the anchor location prior to use for fall protection. See Fig. X Use SAS Safety Bars or TrussBars for open framing fall protection.





SAS Factory Supplied 5/16"x3/4" sst Attachment Bolt. Do not substitute with other types.

Attach w/1/2""

Hex Driver

PARA PROTECCION CONTRA CAIDAS antes de que la cubierta del techo y los refuerzos de las cerchas estén instaladas

!ADVERTENCIA! NO EMPLEARLAS

Truss

Plates

ARS Type II Installation Designed for truss plant installation onto 2x4

top chords. A 2x4 backer is attached with truss plates as shown at Fig.14. Place leg "A" with the weld nut facing the truss assembly table. Install the attachment bolt from the top side thru leg "B" bolt hole as shown at Fig.17.

Attachment to Top Chord

Open the anchor legs enough to fit over the top chord and backer. Bolt legs together with SAS supplied 5/16"x3/4" attachment as shown at Figs.16,17.

Warning Label: Anchors must not be used for fall protection until sheathing is in place. A temporary warning label covers the connector hole and is easily punctured when first used. Job site safety personnel are required to confirm the anchor has been installed correctly prior to use.

Warning Label

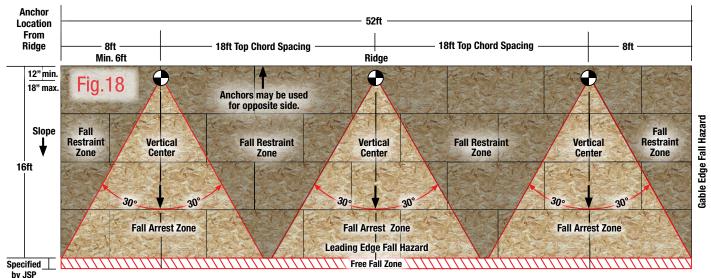
Mfg. **Super Anchor Safety** 17731-147th St. SE

Fall Protection Service Zones

Project safety personnel are required to implement a job specific fall protection plan, (JSP) identifying free fall and swing fall hazards, and instructing workers to observe fall protection service zones as shown at Fig.18. Prior to use for fall protection, sheathing is required to be installed in the area of the anchors location as shown at Figs.18,19 and 20.

ARS fall protection service Zones are based on the following factors:

- · Rafter length and top chord spacing.
- 30° Angle off left and right of vertical center.
- Max. 3,600lb in plane load applied to the top chord.
- Anchor location from the hip/ridge min.12"max. 18" or as specified by the truss mfg. EOR* or qualified person*.





Fall Restraint Zone No exposure to a free fall.



Fall Arrest Zone 30° angle off vertical center.



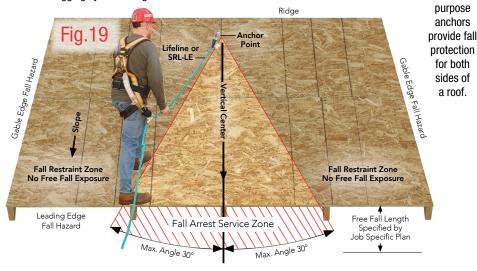
Free Fall Zone Max. 6ft free fall.

Fig.20

ARS dual

Fall Protection System Example

Figs. 19,21, are examples of a typical PPE fall protection rigging system using a vertical lifeline or SRL-LE.



Free Fall Zone **Fall Arrest Zone** 30 30 Fall Fall Restraint Vertical Restraint Zone Center Zone Ridge Slope Fall Restraint Restraint Vertical Zone Center Zone 30° **Fall Arrest Zone**

Energy Absorber (E/A)

Workers are required to use an OSHA or ANSI compliant E/A.

E/A Type	Max. Force Avg. Force	
Personal	1,800lb	900lb
SRL-LE	1,800lb	1,350lb

OSHA Free Fall Length

Max.6ft based on the following PPE rigging:

- Harness dorsal D-ring height above the leading edge.
- Service length of personal E/A vertical position. See Fig.20.
- · Length of lifeline slack.

Typical Fall Hazards:

- Leading and gable edges
- · Openings in the work surface
- · Objects in a swing fall path
- Levels below the work surface

Fall Protection Definitions

Fall Arrest OSHA 1910.140

"A system used to arrest an employee in a fall from a walking-working surface."

Fall Restraint OSHA 1926.751

"A means of fall protection that prevents the user from falling any distance."



Visual Inspection

Prior to use for fall protection, inspect the underside of the top chord and confirm if the anchor attachment bolt and teko nails are installed. See Figs.22, 23.

22b

Figs.22a
Bolt w/Lock Nut





22c

22d Bolt w/Weld Nut



Type II No Teko Nails Required

Installation Record

Project safety personnel are required to include an inspection document in the JSP, confirming the anchor has been installed as specified by *SAS* and is approved for fall protection use.



Fig.23 3 Teko Nails Both Legs

Anchor Inspection

The following are **SAS** recommendations for basic inspection procedures. Project safety personnel are required to draft their own inspection program which should include the framing to which the anchor is attached. A copy of the JSP, anchor inspection and **SAS** instruction manual should be placed in the finished building for access by the property owner.

IX Remove From Service. ✓ Corrective Action Required.

- Does not pass visual inspection.

 Figs.22. Install anchor correctly.

 ✓
- Teko nails are missing.⊠ Fig.23. Install teko nails.☑
- PID label is missing.

 Figs. 2,3,13. Replace anchor.

 ✓
- Anchor stem if deformed.

 Fig.24. Replace anchor.

 Do not re-bend the stem.
- Subjected to a fall.⊠ Replace anchor.☑

Fig.24

Damaged Anchor

Anchor stems are deformed when subjected to approx. 450lbs of force resulting from a free fall, abuse during installation, materials loading or use for work positioning.





Roof Flashings

Part No.	Material	Roofing	Size
2001	Black PVC	All Types	8"x10"
2018	Gray EPDM	Metal	8"x10"
2020	Alum EPDM	Tile	20"x20'
Stem Covers			
2007	Black ABS		
2808-G	Gray ABS		
2808-T	Terra-Cotta		



Stem Covers

Stem covers are required to prevent water penetration thru the stem seams.

Fig.27 No.2018 Alum EPDM Base Flashing No.2808-T Terra-Cotta Stem Cover

SAS Factory Bolt Kit

Use only *SAS* bolt kits supplied with anchors at time of purchase. Use lock nuts to attach the bolt. Wing nuts should be used only in an emergency if hand tools are not available. Request replacement bolt kits if needed.

Fig. 28 No. 2006 ARS Bolt Kit



OSHA Definitions

Work Positioning OSHA 1926.502(e)

A device, system, or PPE that is rigged to allow a worker to be supported on an elevated vertical surface, such as a wall, and work with both hands free. Note: ARS anchors are not rated for work positioning.

Qualified Person OSHA 1910.140

"one who by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated the ability to solve problems relating to the subject matter, work or project.