

Summit Anchor Company, Inc.[®]

Safety From The Top Down

Davit Systems and Outriggers



**Suspended Access Systems and
Fall Protection**

Davits Overview

Standards in the United States and Canada require a building to provide certified anchorages capable of supporting the required loads before any suspended maintenance work is performed.

Davits are often used in addition to roof and wall safety/tie-back anchors to provide a suspension point that will:

- clear non-load bearing parapets of a building or other architectural features that may be easily damaged.
- access areas beyond these features which are hard to reach.

Such features may include:

- glass or other finished parapets
- decorative railings
- overhangs and cornices
- sloped glazing

Davit pedestal bases are permanently mounted directly above suspension locations. Portable davit arms are moved manually to each location when needed. The mast and boom components of the davit arms may be dismantled for easy transportation.

Davits can be used alone or in pairs:

- Davits may be used singly when supporting one-man rope descents or a single-point suspension scaffold.
- Davits are used in pairs when they will be used to suspend a powered platform with hoists mounted at each end.

Davits may be ground-rigged or roof-rigged:

- Ground-rigged davits provide an anchorage point for suspending a platform situated on a lower level (e.g. sidewalk or street below). They only need to be tall enough for the boom to clear the parapet, making them easier to handle and erect than roof-rigged davits.
- Roof-rigged davits enable workers to initially rig and board a powered platform on the roof, which will then be launched outboard over the parapet and suspended along the building face. Consideration needs to be given to providing sufficient landing surface on the rooftop for the platform and a suitable load-bearing track for safely rolling it on the roof to successive drop locations. Horizontal clearance is required for the davits to rest on the deck during set-up and dismantling.



These ground-rigged, portable davits prevent loading on a glass parapet wall during suspended maintenance.



Davit pedestal bases were installed along the perimeter of this roof. The davit arm in the foreground can be moved to any davit pedestal base needed. Davits were installed to avoid loading the cornice. 5" x 5" sleeves were cast into the cornice to allow a suspended cable to pass through. This configuration maintains proper clearance between the suspended work platform and the façade.

Summit Anchor Davit Assemblies

All Summit Anchor Co. davit components are completely hot-dipped galvanized after fabrication to resist corrosion. Summit Anchor Co. davits have been engineered and tested to comply with current OSHA and ANSI/IWCA I-14.1 safety standards for suspended maintenance. Davit components are usually assembled on the roof when suspended maintenance is performed. Two qualified persons using fall protection are required to erect davits.

Davit Pedestal Base Features:

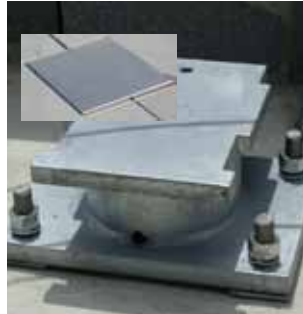
Summit Anchor Co. offers 4 davit pedestal base types:

SM-DVT-BSE-P1-*



*Standard davit pedestal;
 Compatible with Top
 Rotating or Ground
 Launched Davits*

SM-DVT-BSE-R



*Recessed davit pedestal
 base*

SM-DVT-SKT-TR-F-*



*Fixed Socket for
 Top Rotating davit
 Applications*

SM-DVT-BSE-W



Wall davit pedestal base

*-*specify 6 ft. or 8' ft. boom reach.*

The formed plate and stanchion davit pedestal bases are the most typical bases installed. The recessed davit pedestal base is ideal for traffic ways and areas such as terraces where a clean appearance is desired over noticeable penetrations. A davit cap (SM-CAP-DVT) is placed over the davit pedestal base when it is not in use. The wall davit base may be used to avoid penetrating the roof when a suitable structural wall is available.



SM-DVT-CGE: Davit cage before and after pouring of concrete slab.

Davit pedestal bases are permanently secured to the building's structure. Summit Anchor Company's davit pedestal bases can be secured to concrete slabs or steel beams using various methods:

- casting in place davit cages
- welding to steel beams
- bolting through concrete

Davit Sockets and Portable Adapters:

Davit sockets are used to connect the davit arm to the davit pedestal base. A portable adapter must also be used to connect the davit arm to the davit base wherever stanchion davit bases are installed.



SM-DVT-PA-*: Portable Davit Adaptor is attached to the top of the Davit Pedestal



SM-DVT-SKT-P-*: Portable Davit Socket is attached to the top of the Davit Adaptor



SM-DVT-ARM-x-**
 Davit Arm - Ground Launched
 -* Specify either 6 ft. or 8' Boom Reach
 -** Specify either 1,250 lb. or 1,000 lb. Capacity

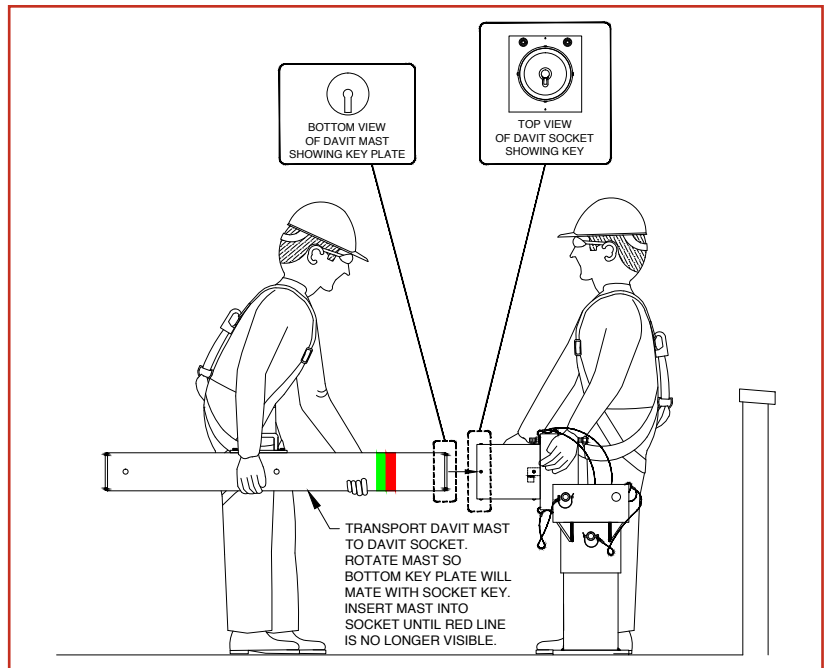


SM-DVT-ARM-TR-x-**
 Davit Arm - Top Rotating
 -* Specify either 6 ft. or 8' Boom Reach
 -** Specify either 1,250 lb. or 1,000 lb. Capacity

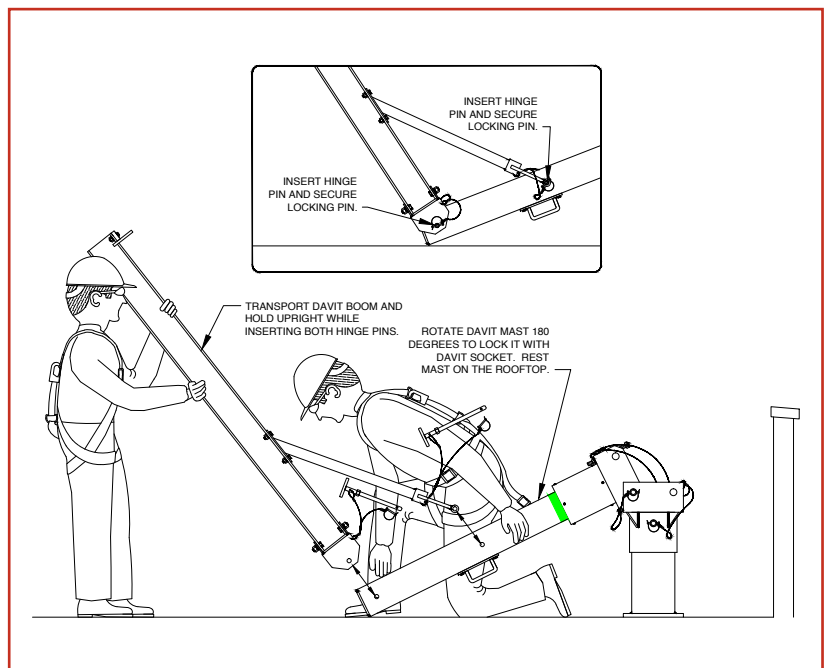
Davit Arm Features:

The davit arm consists of 2 main components: the mast and the boom. The mast and the boom must be assembled on the roof and locked into the davit socket before the davit arm can be erected and used. Roof rigged davits have optional wheels on the mast for easier rooftop transportation. Two qualified workers are required to set up the davit assembly. The pictures below are for illustrative purposes only and do not constitute the site specific instructions for any Summit Anchor product.

• **Step 1: Attach the mast**

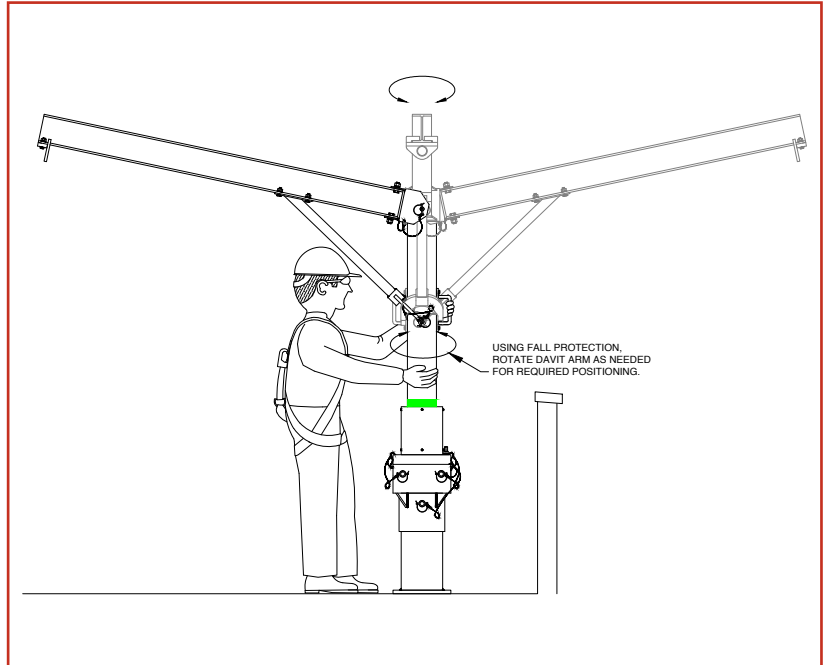


• **Step 2: Attach the boom**



Summit Anchor Co. davit arms can be configured for a maximum outreach of up to 8'-0". The davit mast can rotate 360° and has an adjustable suspension point that can be located along the davit boom for best positioning of the platform.

• **Step 3: Position arm to perform work**



The davit arm can be dismantled and transported easily from davit base to davit base. Fall protection is not required for workers when setting up or dismantling davit assemblies if a 42-inch guardrail is present.

Roof Rigged Davit



Raising Davit Boom and Mast... Consideration needs to be given to providing sufficient landing surface for davit arms, as well as, the powered platform.



Davit Mast is locked into place once hoisted upright.



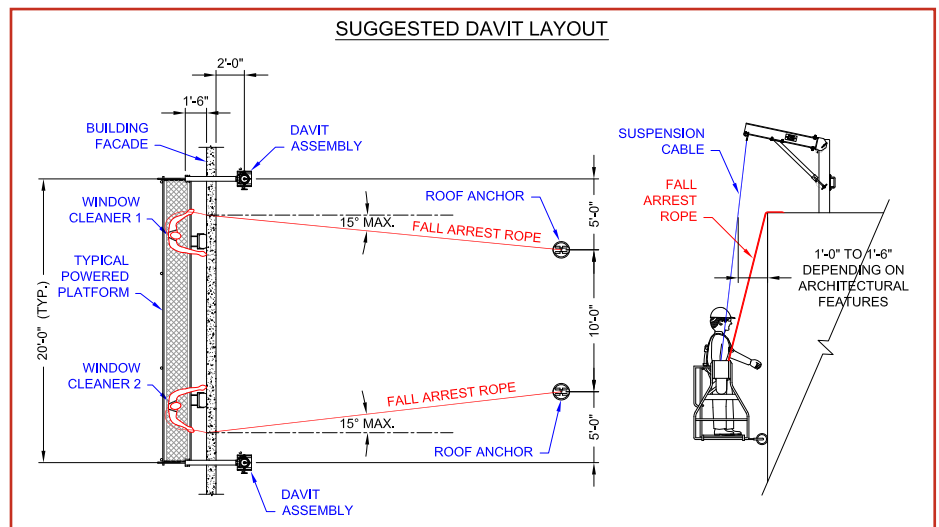
Davit can be rotated under load 360°

Davit Layout Requirements

Each maintenance worker's lifeline should be attached to an independent anchorage on the roof. Davit spacing should take into consideration the length of the powered platform that will be used by workers in the future. The diagram below illustrates a sample davit layout:

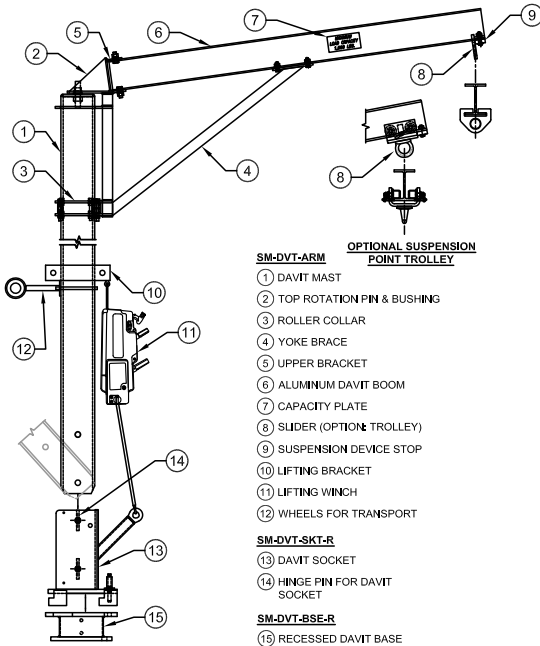
Notes:

1. Davit spacing may vary depending on roof conditions; however, spacing should be kept as consistent as possible to allow for standard powered
2. platform length.
3. Each worker must be independently tied to an anchor on the roof.
4. Placement of davits and roof anchors shall allow cables suspending powered platform to hang parallel and in plane or slightly angulated with the building when in use to allow the platform to press firmly against the building during its vertical travel.



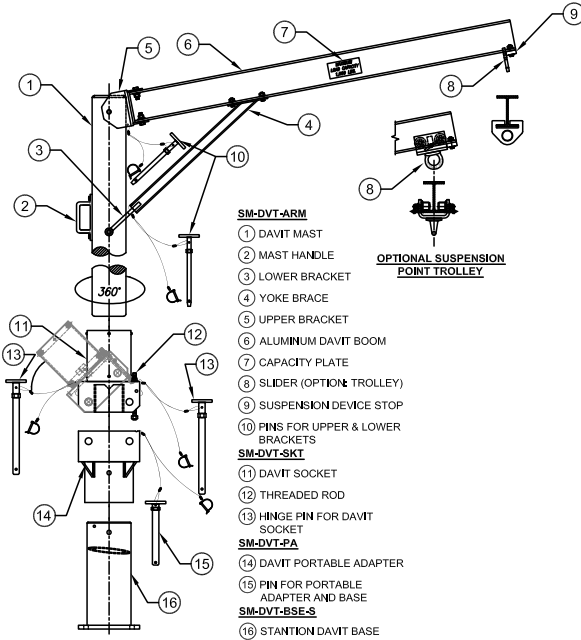
ROOF RIGGED DAVIT ASSEMBLY WITH RECESSED PEDESTAL BASE

SUMMIT MODELS: SM-DVT-ARM
 SM-DVT-SKT-R, SM-DVT-BSE-R



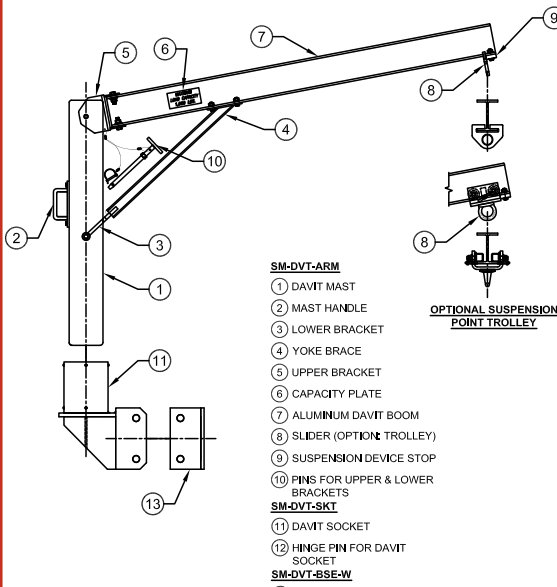
DAVIT ASSEMBLY WITH STANTION PEDESTAL BASE

SUMMIT MODELS: SM-DVT-ARM,
 SM-DVT-PA, SM-DVT-SKT, SM-DVT-BSE-S



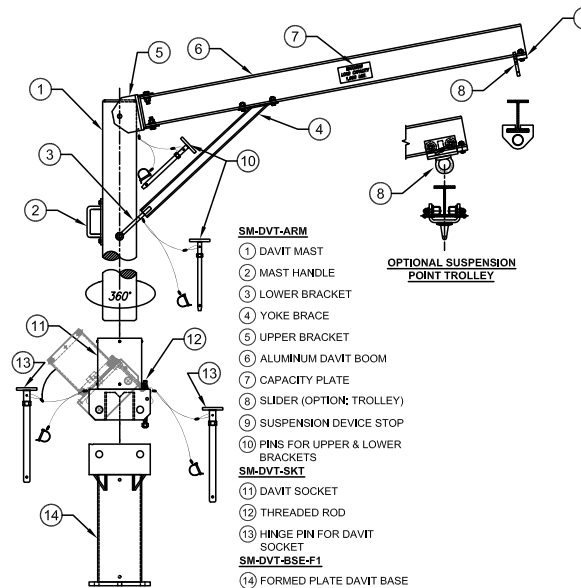
DAVIT ASSEMBLY WITH WALL PEDESTAL BASE

SUMMIT MODELS: SM-DVT-ARM,
 SM-DVT-SKT-W, SM-DVT-BSE-W



DAVIT ASSEMBLY WITH FORMED PLATE PEDESTAL BASE

SUMMIT MODELS: SM-DVT-ARM,
 SM-DVT-SKT, SM-DVT-BSE-F

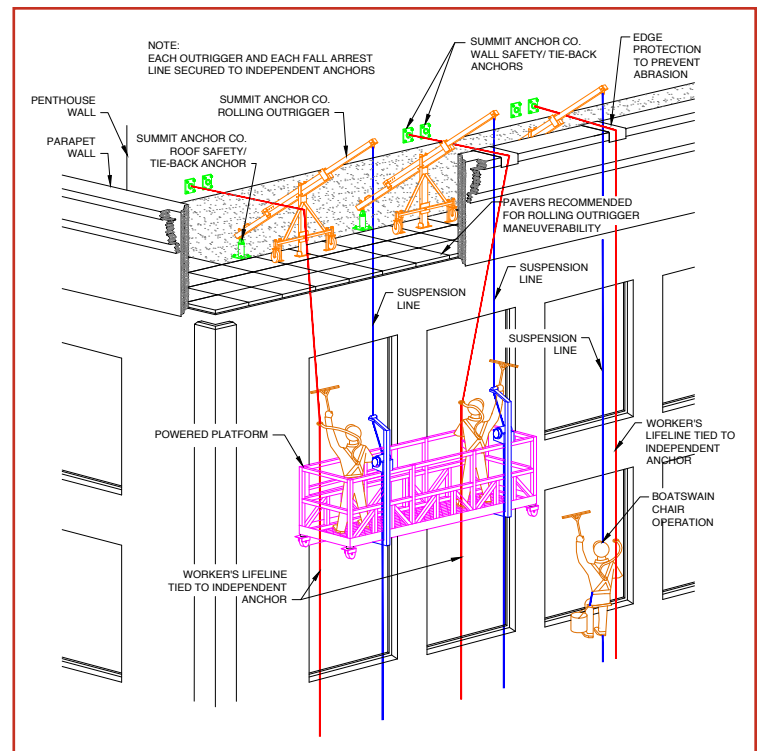


Outriggers Overview

In some circumstances, outriggers may be installed as an alternative to provide certified anchorages for suspended maintenance. Outriggers may be used to support one-man rope descents or a ground-rigged powered platform. Unlike davits, which concentrate their operating load into a single roof socket location, outriggers distribute some of the operating load forces and may require less structure for a safe anchorage. Outriggers require more space on the roof top than davits while in use for suspension. Site specific instructions regarding attachment and stability must be provided and followed closely before any worker is suspended. Each maintenance worker's lifeline must be attached to an independent anchorage on the roof.



Left: A typical outrigger tied down to a single roof anchor. Unlike davits, outriggers do not concentrate their operating load into a single roof socket.



Design Assistance

Summit Anchor Co. offers design assistance to give you an idea of what may be required to accommodate your project's suspended maintenance needs. We will review your project's needs, and based on our expert experience, we will offer suggestions for the correct type of equipment needed and the general locations where these should be installed.

Please provide us with the following information in the form of AutoCAD drawing files:

- Architectural and structural plans of any level where equipment is required
- Building elevations
- Section drawings of parapet walls, penthouse walls, and roof levels
- Any other drawings that will be useful in understanding your project's needs

Contact Summit Anchor Co. today at 1.800.372.1098.