technical sheet	**davit systems** general information	ref.: T4751 rev. no.: 1 date: 06/01 page: 1/2

DAVIT SYSTEMS

Davit Systems are a traditional and effective method to provide permanent access to exterior building facades

The basic system is comprised of:

- ***fixed davit bases,***
- ***portable davit arms (mast & boom assemblies)***
- ***powered work platform***
- ***dual-line suspension system***
- ***horizontal life-lines***

Other davit system equipment available:

- ***TIRFOR manual davit lifting hoists***
- ***davit arm lifting brackets***
- ***davit boom turning handles***
- ***material lifting hoists***

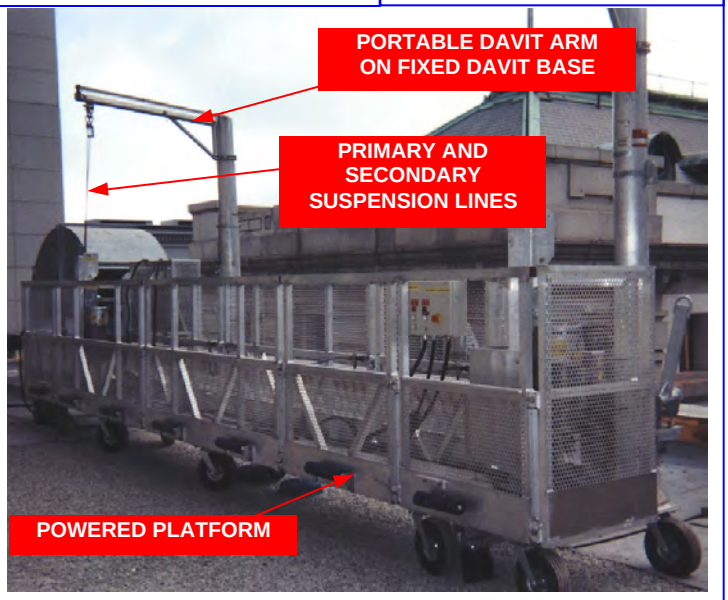
Special conditions can incorporate:

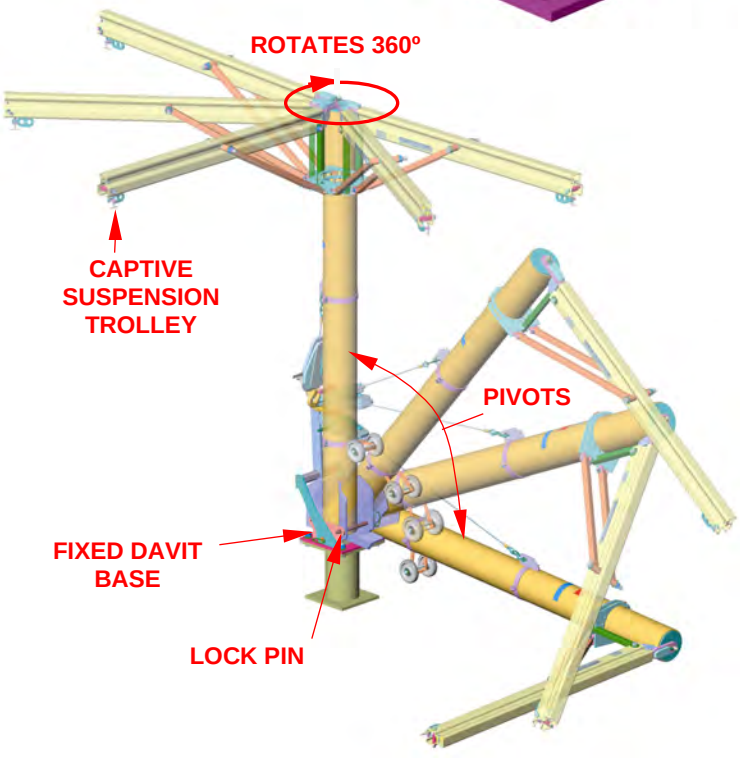
- ***portable davit bases***
- ***flush mounted pedestals***

Davit arms are typically used to suspend 20 to 30 foot (6m to 9m) long work platforms. This length is based on the spacing of the fixed bases – located at the structural elements of the building.

The davit boom rotates on a special rolling collar to allow the platform to be maneuvered over the parapet. The platform is suspended from a captive trolley allowing movement along the davit boom (see Davit Booms, T4756).

Single-user work cages and bosun's chairs may also be suspended from individual davits.





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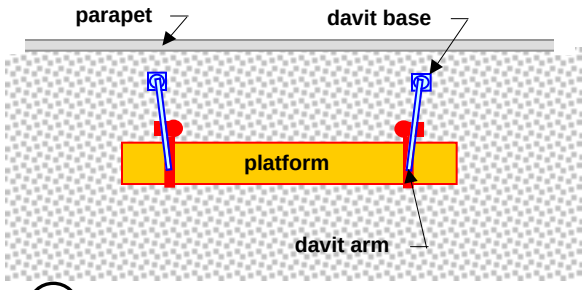
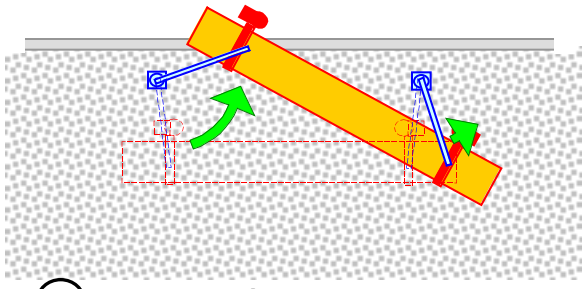
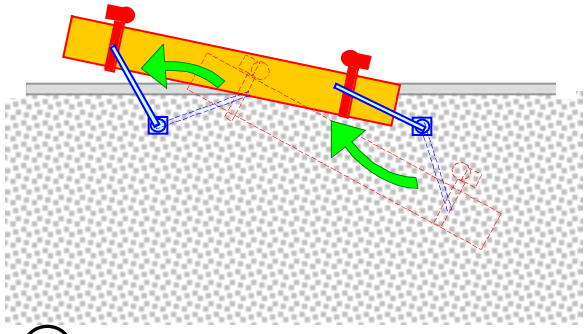


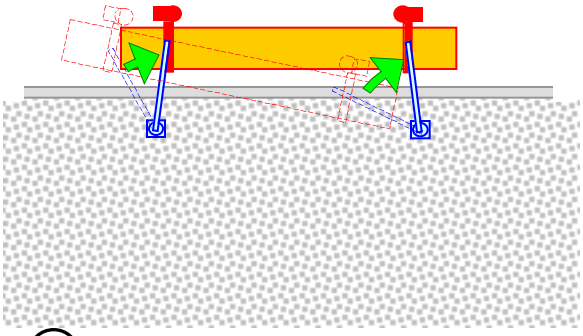
1. platform over roof



2. step A: rotation



3. step B: rotation



4. platform outboard

Boom Rotation To Move Platform Over A Parapet

The davit arms are hoisted into position and secured with pins provided. When the work is complete, the davit arms are relocated to the next work area.

Davit bases are the permanently fixed elements of a *Davit System*. Transportable davit arms are fitted to these bases.

Tractel standard davit bases are designed to accommodate typical applied loads, which vary according to mast height and boom reach (see Davit Bases T4752).

During installation, the leveling of these components is critical to allow ease of boom rotation when under load.

The Tractel **davit arm** is comprised of a separate boom & mast. This two-piece construction is easier to transport, and simplifies boom rotation.

Lower masts can also be used so that the boom height is just above the building's parapet. These **ground rigged systems** require a clear path of travel at ground level. With mast heights of 5'-6" (1.68m) or less, suspension arms are easy to handle. (see Davit Masts, T4755 and Davit Booms, T4756).

Standard **TRACMOD powered platforms** are supplied with suitable **TIRAK traction hoists**, complete with wire rope collection reelers. *Many* other standard features and options are also provided. (see TRACMOD Powered Platforms, T4763).

Standard Tractel davit systems are rigged with a primary suspension and secondary safety wire rope. This **dual-line suspension system** incorporates fixed horizontal life-lines along the length of the platform, to which each operator's body harness is connected.

U.S. Federal OSHA and CAN3 Canadian National Standards require that all davit systems must be designed by a Registered Professional Engineer, experienced with such systems.

DAVIT SYSTEMS

Davit Systems are a traditional and effective method to provide permanent access to exterior building facades
The basic system is comprised of:

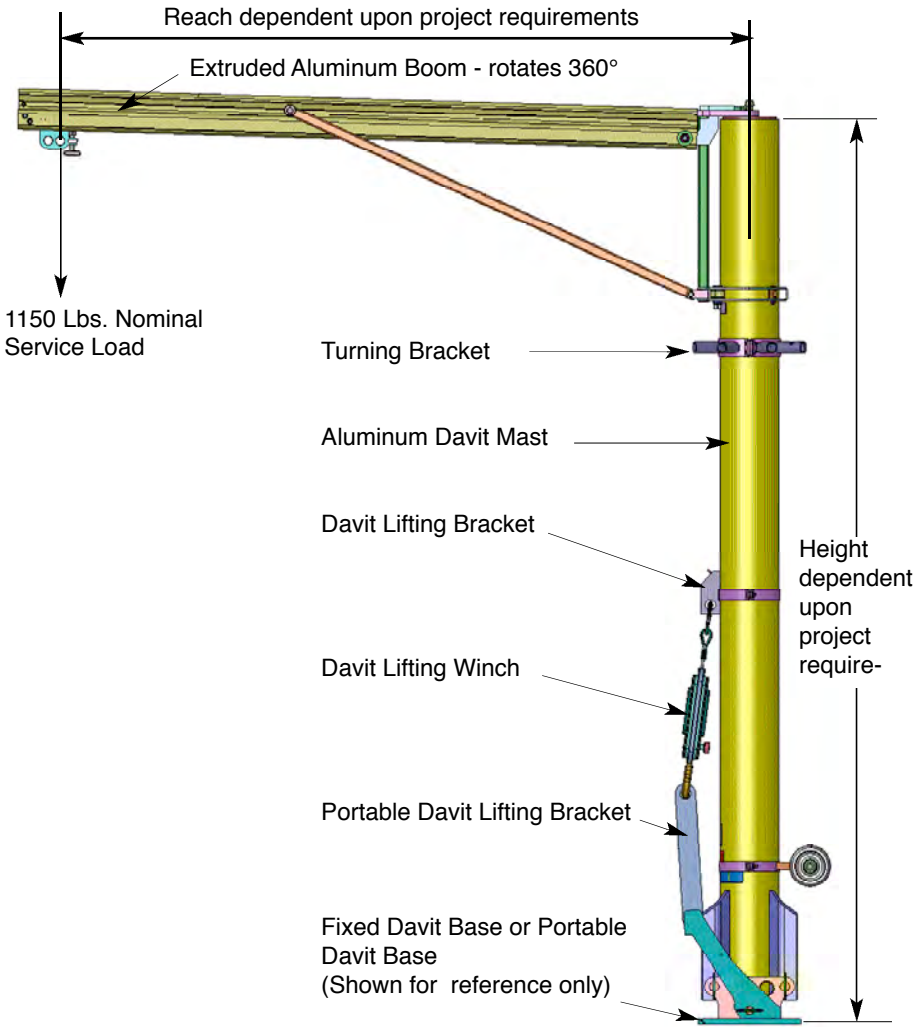
- fixed davit bases,
- portable davit arms (mast & boom assemblies)
- powered work platform
- dual-line suspension system
- horizontal life-lines

Other davit system equipment available:

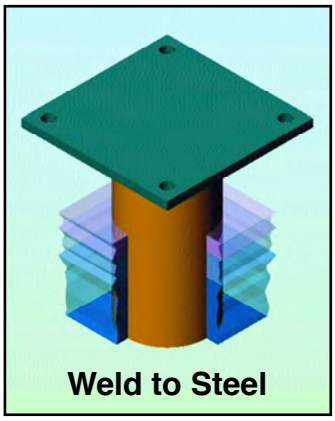
- TIRFOR manual davit lifting hoists
- davit arm lifting brackets
- davit boom turning handles
- material lifting hoists

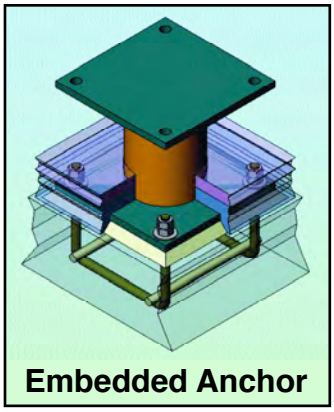
Special conditions can incorporate:

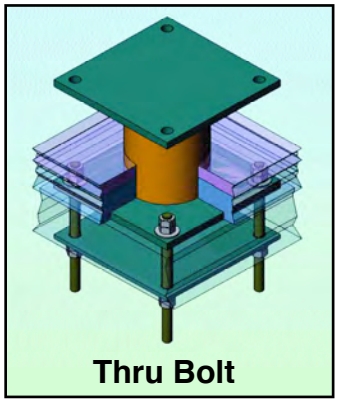
- portable davit bases
- flush mounted pedestals



Standard Connections







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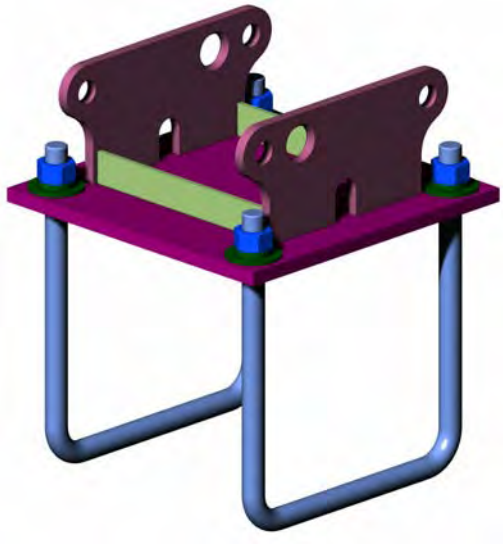
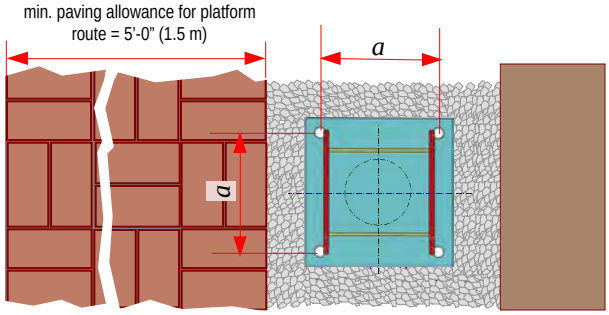
davit bases

Of the various types of *Davit Systems* available, those incorporating fixed **davit bases** are the best solution for long-term value.

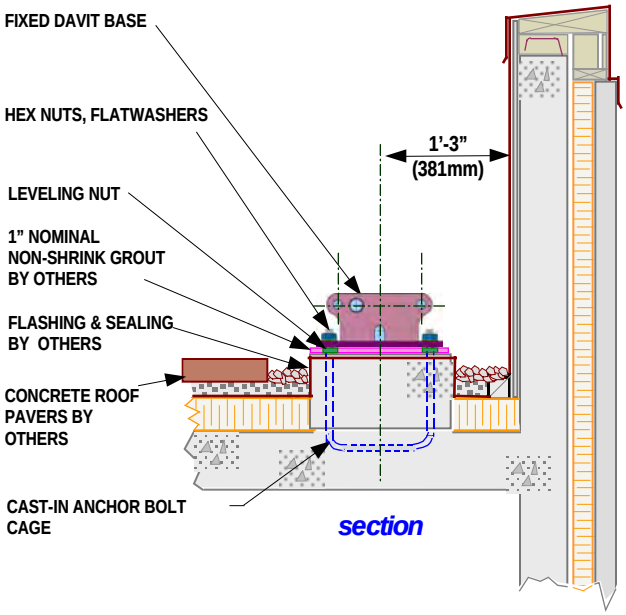
The machined tolerances of Tractel's davit bases ensure the davit mast fits securely and quickly, with no extra parts to adjust. For this reason, fixed bases are components of the most labor-efficient davit system.

Fixed models can be mounted directly to the roof structure with cast-in anchors, as shown in fig. 1, below.





plan



section

fig. 1

DAVIT BASE – *series DS*
bolted to cast-in-place anchor bolts

materials:

base
G40.21-44W galvanized steel Fy = 44 KSI

anchor bolt cage
A307 zinc plated steel

hex nuts, washers:
A307 zinc plated or A325 galvanized steel

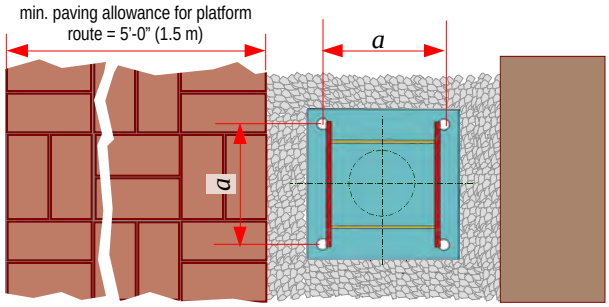
ref. no.	*maximum davit boom reach*	*a*	*weight*
DS5	8'-6" (2.59 m)	12" (305 mm)	70 lbs (32 kg)
DS8	12'-6" (3.81 m)	13" (330 mm)	90 lbs (41 kg)

davit bases *(continued)*

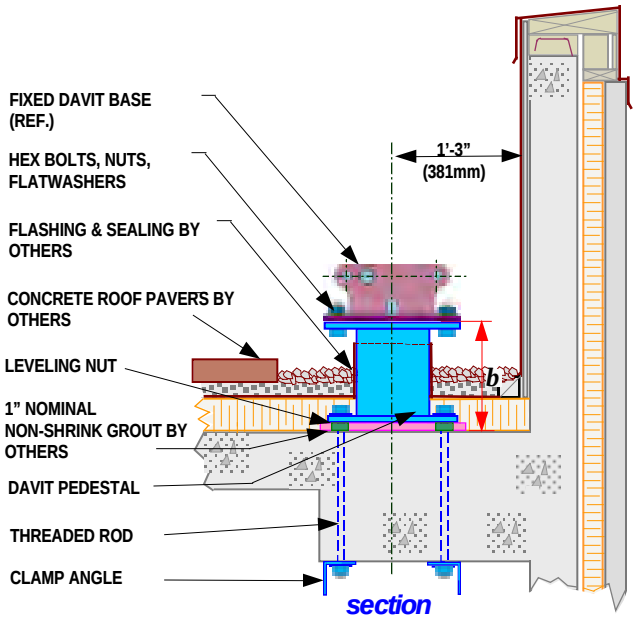
Of the various types of *Davit Systems* available, those incorporating fixed **davit bases** mounted to **pedestals** supplied during construction are an efficient solution for long-term value.

Support pedestals can be supplied and welded to the structure during construction. Tractel can provide shop drawings indicating locations and structural requirements for the pedestals, as well as bolt hole locations for the sockets. Alternatively, this connection can be welded or clamped to these supports.

The machined tolerances of the bases ensure the davit mast fits securely and quickly, with no extra parts to adjust. For this reason, *fixed davit bases* are components of the most labor-efficient davit system.



plan



section

fig. 2

DAVIT BASE *series DS*

bolted to pedestal

materials:

base
G40.21-44W galvanized steel Fy = 44 KSI

anchor bolts
A307 zinc plated steel

hex bolts, nuts, washers:
A307 zinc plated or A325 galvanized steel

DAVIT PEDESTALS *series DPB*

clamped to concrete

materials:

pedestal, clamp angle
G40.21-44W galvanized steel Fy = 44 KSI

anchor rod
A307 zinc plated steel

hex nuts, washers:
A307 zinc plated or A325 galvanized steel

ref. no.	*maximum davit boom reach*	*a*	*weight*
DS5	8'-6" (2.59 m)	12" (305 mm)	70 lbs (32 kg)
DS8	12'-6" (3.81 m)	13" (330 mm)	90 lbs (41 kg)

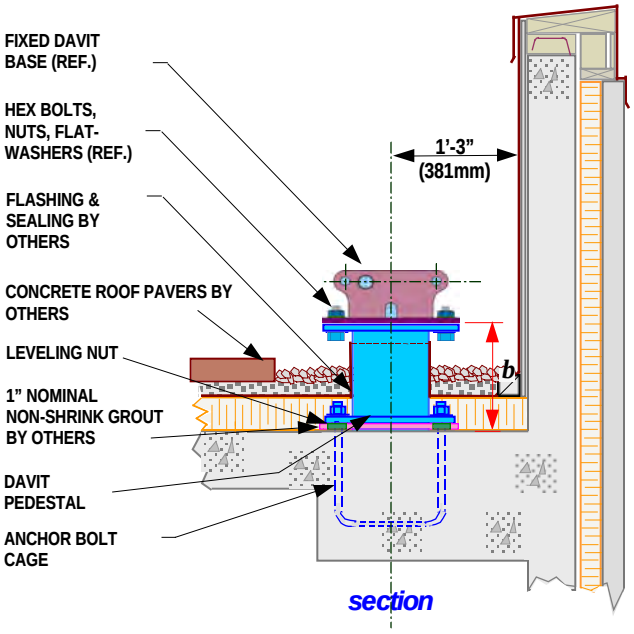


fig. 3

DAVIT PEDESTALS *series DPB*

bolted to cast-in-place anchor bolts

materials:

pedestal
G40.21-44W galvanized steel Fy = 44 KSI

anchor bolt cage
A307 zinc plated steel

hex nuts, washers
A307 zinc plated or A325 galvanized steel

ref. no.	*maximum davit boom reach*	*a*	*weight*
DS5	8'-6" (2.59 m)	12" (305 mm)	70 lbs (32 kg)
DS8	12'-6" (3.81 m)	13" (330 mm)	90 lbs (41 kg)

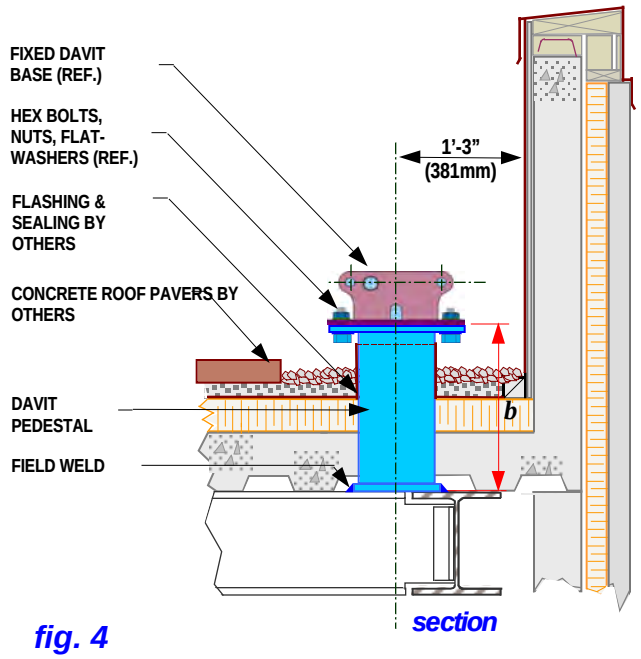


fig. 4

DAVIT PEDESTALS *series DPB*

welded to steel structure

materials:

pedestal
G40.21-44W galvanized steel Fy = 44 KSI

ref. no.	*maximum davit boom reach*	*a*	*weight*
DS5	8'-6" (2.59 m)	12" (305 mm)	70 lbs (32 kg)
DS8	12'-6" (3.81 m)	13" (330 mm)	90 lbs (41 kg)

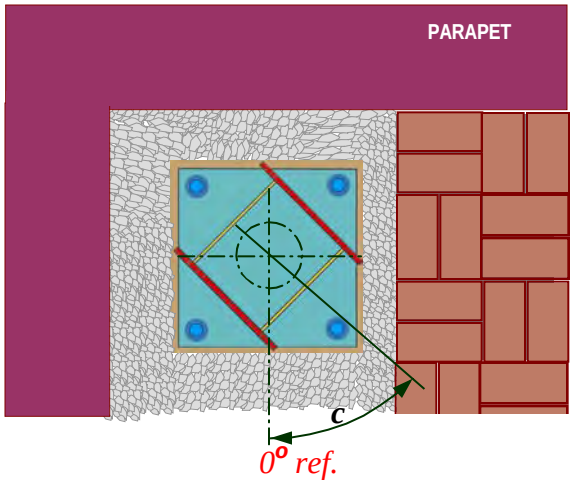


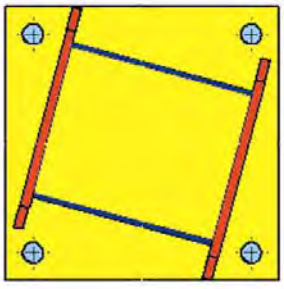
fig. 11

davit base angulation

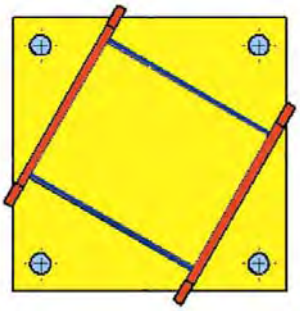
Tractel davit bases are typically supplied at an angle to the parapet wall. This angulation ensures worker safety, as the davit arm erection never occurs alongside the parapet wall. Often all davit bases are supplied with the same angle to prevent incorrect location during installation.

Angled davit bases are especially required when space limitations prevent erecting the davit arm at right angles to the parapet wall.

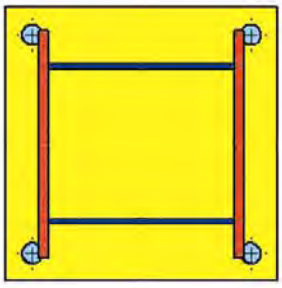
TYPICAL ANGULATION – angle *c*



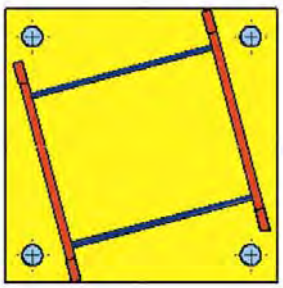
15º CW - D3



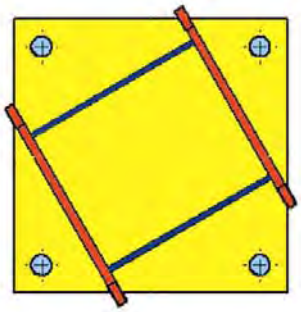
30º CW - D4



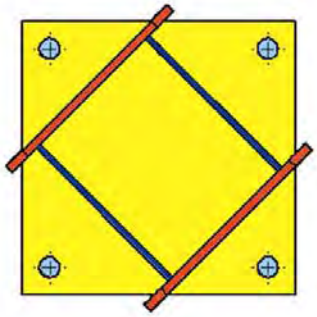
0º - 90º - D0



15º CCW - D8



30º CCW – D9



45º - D5

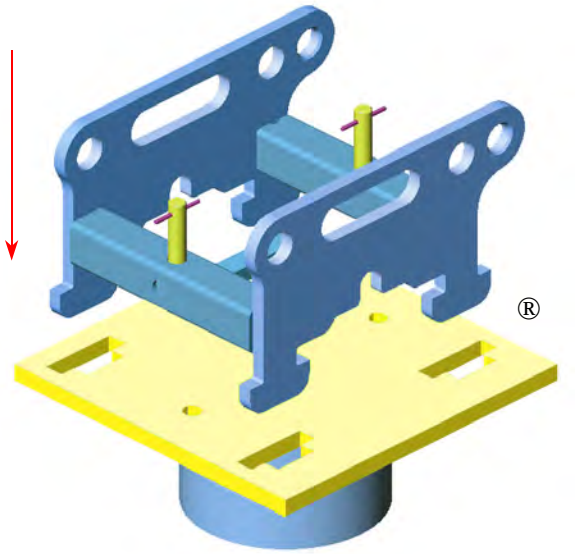
technical sheet	davit systems portable davit base & pedestal	ref.: T4753 rev. no.: 2 date: 07/04 page: 1/1

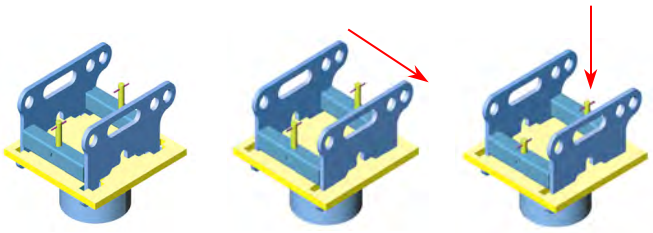
flush davit base,
used as a portable davit base

Flush davit bases, when used with fixed flush style pedestals, can provide a cost-effective approach to provide the support equipment for a davit system. These portable systems are most effective on smaller, single level applications, and are accepted by many regional codes.

A pair of portable flush davit bases slide into the fixed flush style davit pedestals and are secured with provided pins. Davit arms are then fitted to each base, and the davits are erected and secured. The flush davit bases are then moved from location to location, along with the powered platform.

All varieties of flush style pedestals are available for every mounting method, including new or retrofit applications. Fig. 2 shows a typical detail, and other attachment methods are available.





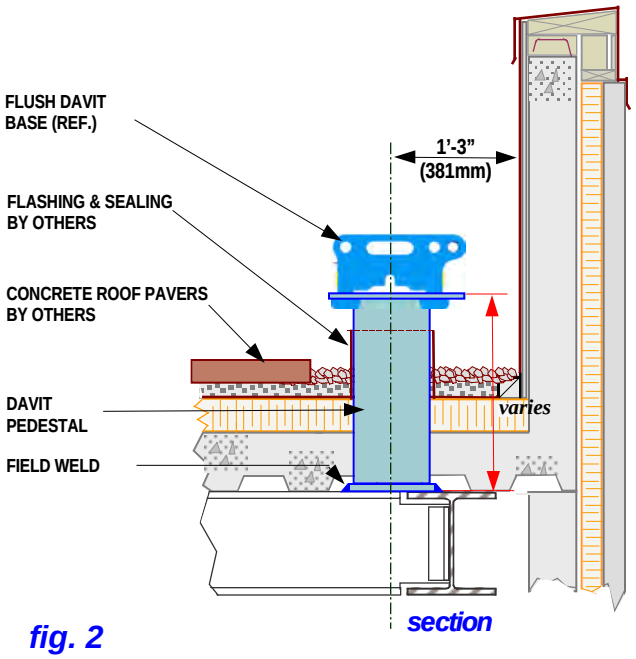


fig. 2

FLUSH DAVIT BASE *series DS*

materials:

base - G40.21-44W galvanized steel Fy = 44 KSI

ref. no.	*maximum davit boom reach*	*weight*
DS5F	8' – 6" (2.59 m)	36 lbs. (16 kg)

FLUSH DAVIT PEDESTAL *series DPF*

welded to steel structure

materials:

pedestal - G40.21-44W galvanized steel Fy = 44 KSI

Tractel Ltd.
Swingstage Division

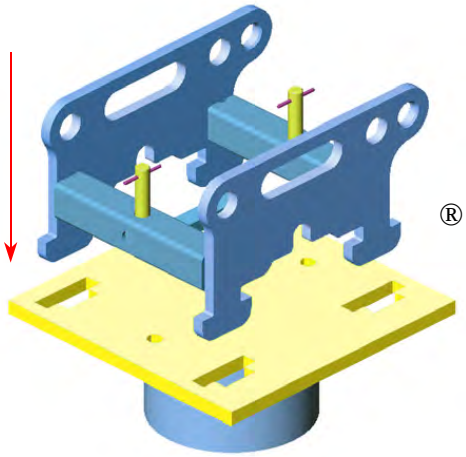
technical sheet	davit systems flush davit base & pedestal	ref.: T4754 rev. no.: 2 date: 07/04 page: 1/1

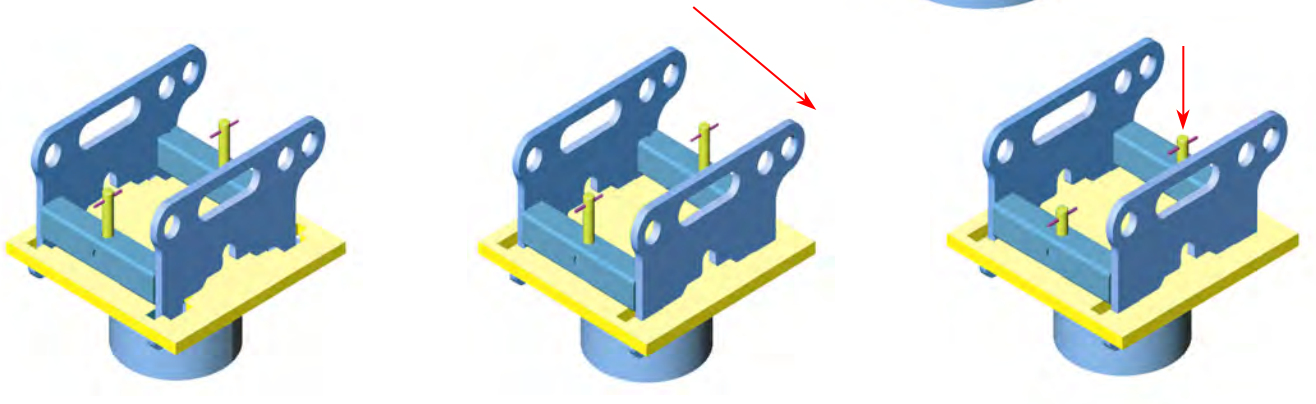
flush davit bases & pedestals

When davit bases are required on roofs where aesthetics, pedestrians or other traffic does not permit any protuberances, Tractel's **flush davit pedestals** provide an attractive solution.

Davit base adapters are temporarily fitted fixed to these special pedestals, secured with provided pins, making them ready to accept the davit arm.

All varieties of standard pedestals are available for every mounting method, including new or retrofit applications. Fig. 2 shows a typical detail, and other models are available.





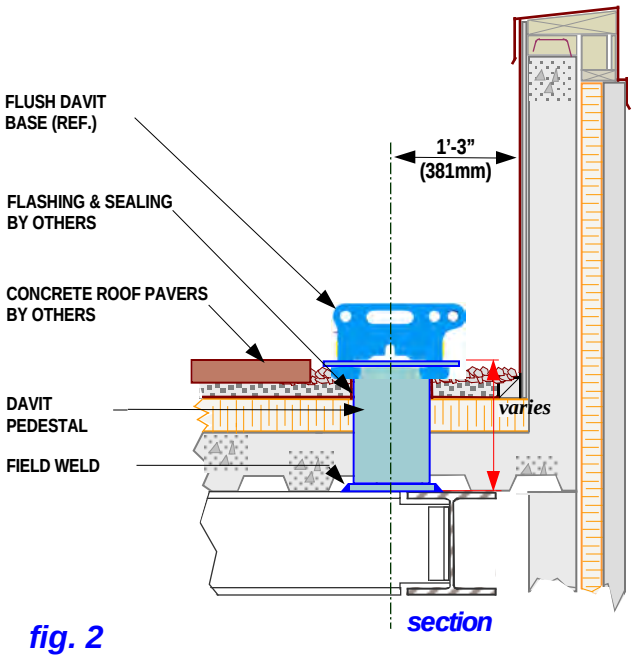


fig. 2

FLUSH DAVIT BASE *series DS*

materials:

base - G40.21-44W galvanized steel Fy = 44 KSI

ref. no.	maximum davit boom reach	weight
DS5F	8' – 6" (2.59 m)	36 lbs (16 kg)

FLUSH DAVIT PEDESTAL *series DPF*

welded to steel structure

materials:

pedestal - G40.21-44W galvanized steel Fy = 44 KSI

Tractel Ltd.
Swingstage Division

davit masts

The davit mast separates from the boom and is transportable by means of a permanent pair of wheels at one end. Davit pivoting pins are provided for connection to the davit base. The turning bracket & handle permit easy boom rotation from inside the platform.

All standard masts have a rated capacity of 1150 lbs. or 525kg.

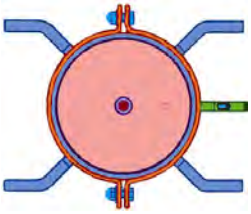
options:

Davit lifting bracket, manual lifting hoist, davit turning handle.

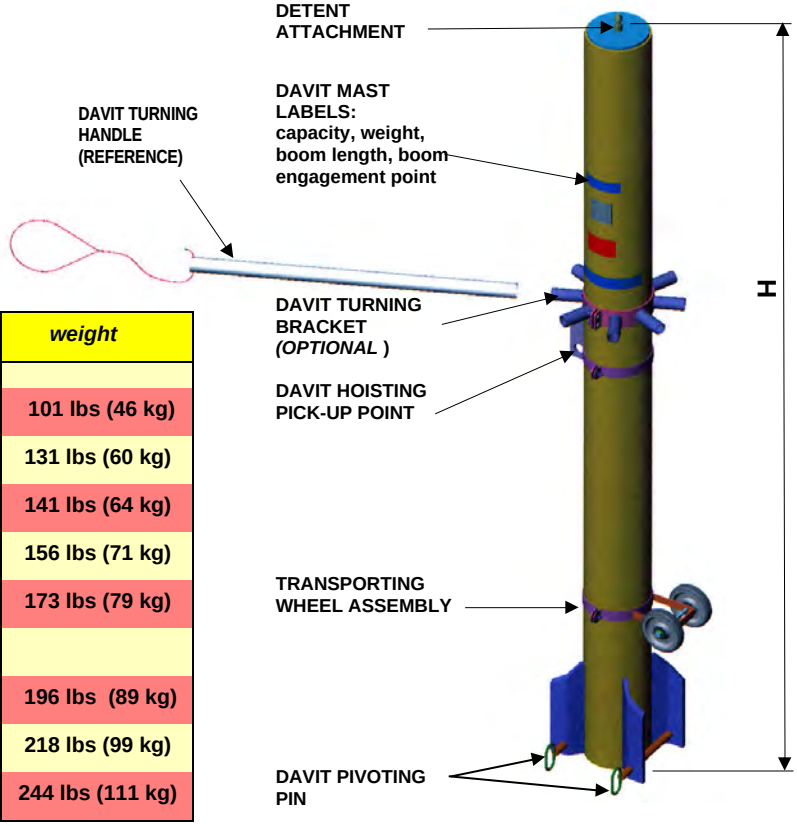
materials:

Type 6061 T-6 aluminum, G40.21-44W galvanized steel Fy = 44 KSI, A307 zinc plated or A325 galvanized steel, rubber/urethane wheels.

TOP VIEW



DAVIT MAST



plan

boom reach	*model no.*	*height (H)*	*weight*
5' to 8'-6"	DAM5062-000*	5'-3" (1.63 m)	101 lbs (46 kg)
	DAM5100-000	8'-4" (2.54 m)	131 lbs (60 kg)
	DAM5112-000	9'-4" (2.87 m)	141 lbs (64 kg)
	DAM5130-000	10'-10" (3.33 m)	156 lbs (71 kg)
	DAM5150-000	12'-6" (3.81 m)	173 lbs (79 kg)
9' to 12'-6"	DAM8112-000	9'-4" (2.87 m)	196 lbs (89 kg)
	DAM8130-000	10'-10" (3.33 m)	218 lbs (99 kg)
	DAM8150-000	12'-6" (3.81 m)	244 lbs (111 kg)

*** Transporting Wheels Optional**

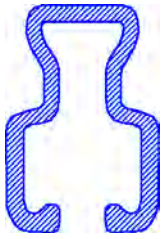
davit booms

The **davit boom** separates from the mast for ease of transportation. The boom rotates smoothly around the mast on a unique roller collar, while a captive trolley rolls within the custom extrusion, to allow optimum positioning of the work platform it suspends. See ***General Information T4751 page 2.***

All booms have a rated capacity of 1150 lbs. or 525kg.

materials:

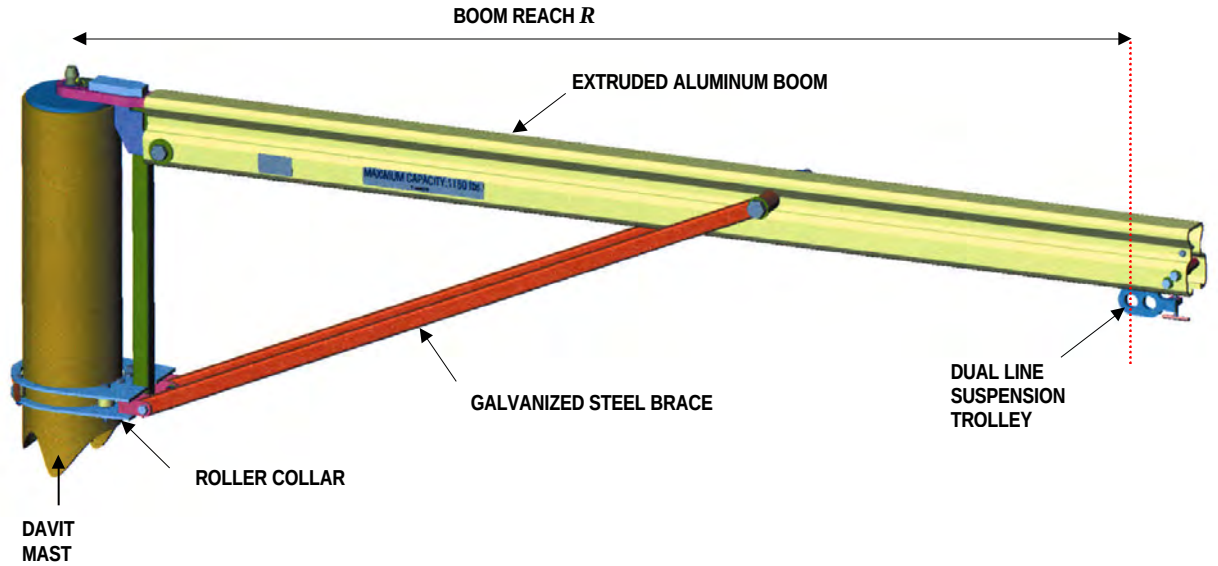
Type 6061 T-6 aluminum, G40.21-44W galvanized steel Fy = 44 KSI, A307 zinc plated steel, A307 zinc plated or A325 galvanized steel fasteners, bronze bushings.



ALUMINUM EXTRUSION SECTION
series DAB

DAVIT BOOMS *series DAB*

Model #	*Boom Reach R*	*Weight*
DAB050-000	5'-0" (1.53 m)	79 lbs (36 kg)
DAB056-000	5'-6" (1.68 m)	81 lbs (37 kg)
DAB060-000	6'-0" (1.83 m)	84 lbs (38 kg)
DAB066-000	6'-6" (1.98 m)	86 lbs (39 kg)
DAB070-000	7'-0" (2.18 m)	96 lbs (44 kg)
DAB076-000	7'-6" (2.29 m)	99 lbs (45 kg)
DAB080-000	8'-0" (2.44 m)	101 lbs (46 kg)
DAB086-000	8'-6" (2.59 m)	103 lbs (47 kg)
DAB090-000	9'-0" (2.74 m)	157 lbs (71 kg)
DAB096-000	9'-6" (2.90 m)	159 lbs (72 kg)
DAB100-000	10'-0" (3.05 m)	161 lbs (73 kg)
DAB106-000	10'-6" (3.20 m)	164 lbs (75 kg)
DAB110-000	11'-0" (3.35 m)	176 lbs (80 kg)
DAB116-000	11'-6" (3.51 m)	178 lbs (81 kg)
DAB120-000	12'-0" (3.66 m)	181 lbs (82 kg)
DAB126-000	12'-6" (3.81 m)	183 lbs (83 kg)



technical sheet	davit systems lifting kits	ref.: T4757 rev. no.: 1 date: 06/01 page: 1/1

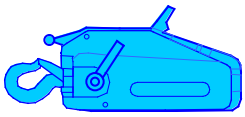
lifting kits

Lifting kits are standard davit system accessories and used with larger davit arms. They are comprised of: *a davit lifting bracket, a manual lifting hoist,* and a length of *wire rope*, complete with connection points at each end.

Usage

The **davit lifting bracket** is installed over the davit base, and secured with a captive pin. The davit arm mounting holes are aligned with the davit base and secured.

A **manual lifting hoist**, complete with **wire rope,** is attached between the **davit lifting bracket** and the **davit hoisting pick-up point**. The davit arm can now be easily erected using the hoist.

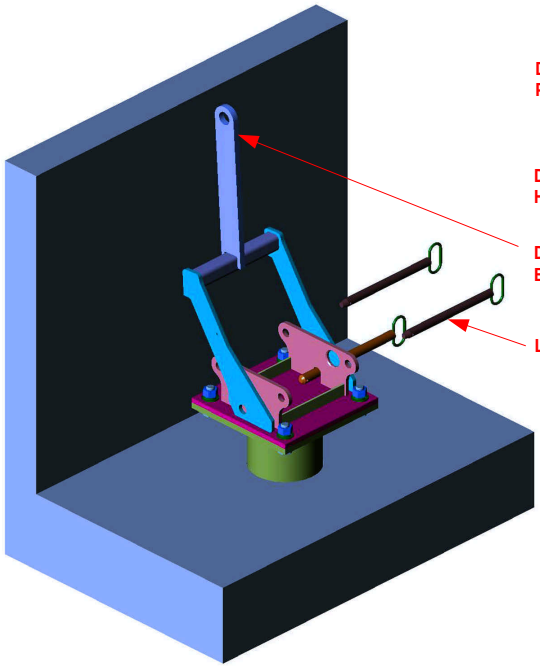


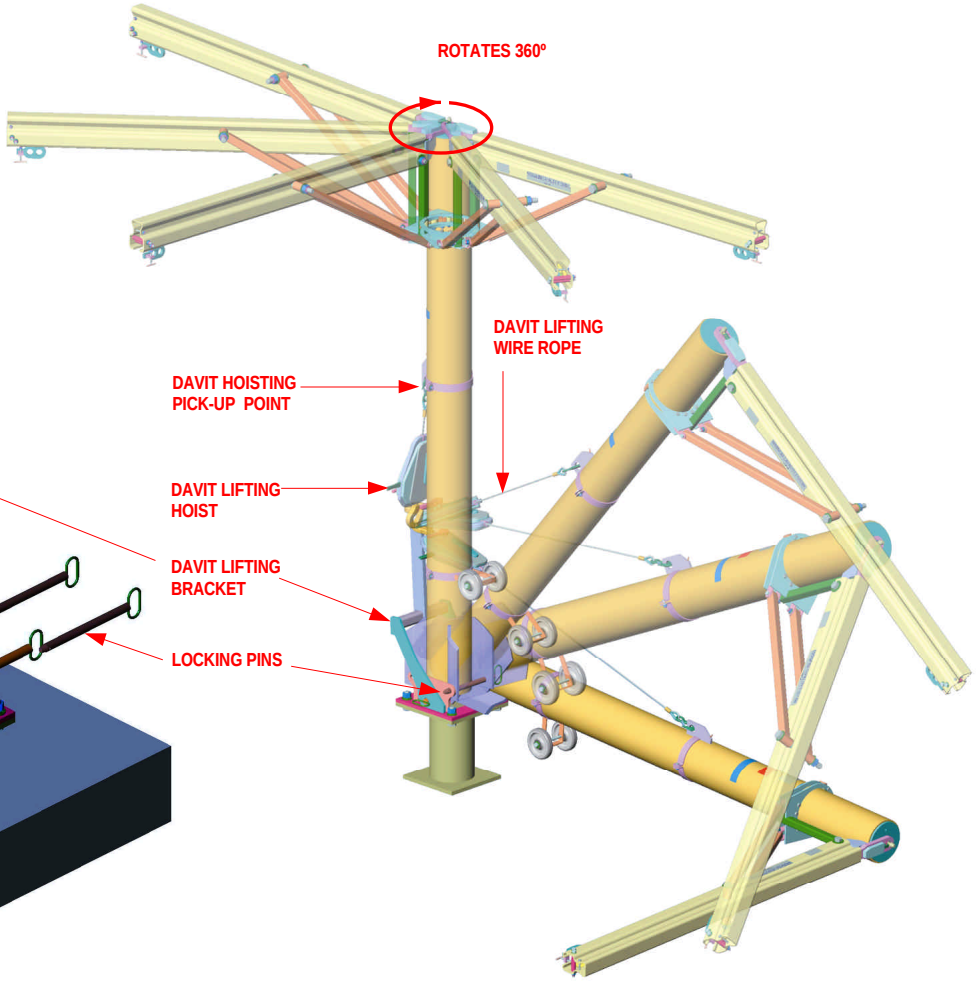
TIRFOR TU-17 **MANUAL LIFTING HOIST**

DAVIT LIFTING KIT – DLI126-000

model no.	*maximum davit mast height*	*weight*
DLI126-000	**10’ - 10” (3.33 m)**	**40 lbs (18kg)**

DAVIT LIFTING BRACKET





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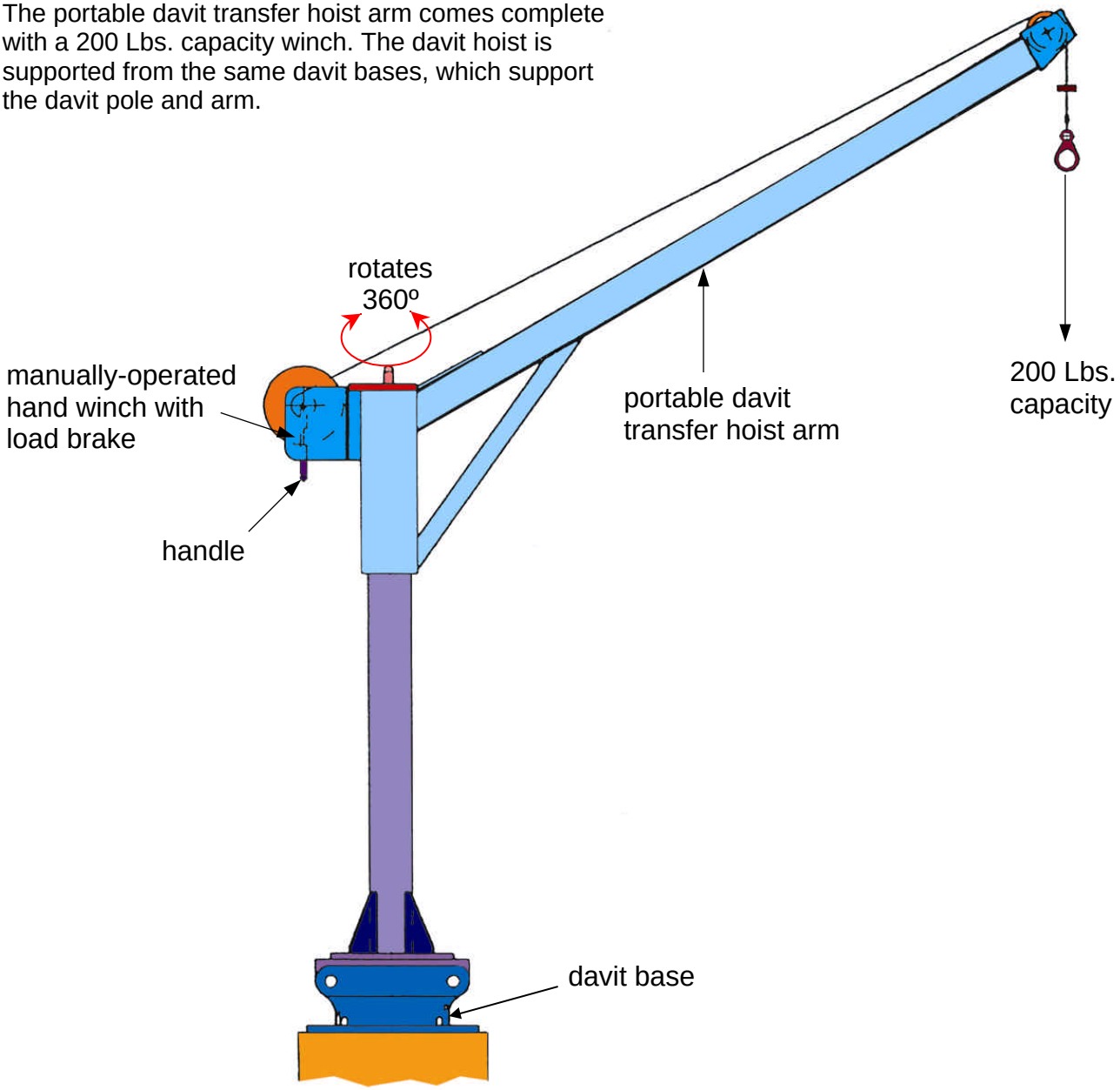
technical sheet	davit hoist	ref.: T4781 rev. no.: date: 05/01 page: 1

Description

The davit hoist has been designed for buildings with multiple roof levels to transfer the davit arms and suspension wire/ropes between various roof levels.

The portable davit transfer hoist arm comes complete with a 200 Lbs. capacity winch. The davit hoist is supported from the same davit bases, which support the davit pole and arm.



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