1. DESCRIPTION

Powered davit carriage building maintenance units (BMU) are designed for low, mid and high-rise buildings. The equipment suits applications where the labor-intensive operation of moving portable davits from location to location must be overcome. Davit carriages are capable of servicing buildings with heights of up to **650 ft. (200 m)**.

Standard davit carriages are supplied with TRACMOD powered work platforms and have typical lengths of 20 ft. to 30 ft. (6 m to 9 m), and a maximum length of 40 ft. (13 m) These machines offer a mid-range solution between portable davit systems and roofcars.

The installation consists of:
- a **pair of powered traversing davit carriages**, each with a davit mast and manually rotating davit boom.
- a **TRACMOD work platform** suspended from the davit booms by four independent galvanized steel wire ropes.
- **Track*** for traversing.

The pair of carriages traverses to the required drop locations powered by electrical motors operated at the roof level with a pendant control.

The platform is launched over the parapet using the conventional manual davit system method. Like typical davit systems, the mast can be lowered out of view when not in use. ***(see technical sheet T4751.1 Davit Systems)***

Fig. 1: Model R3670 D2C-type Davit Carriage

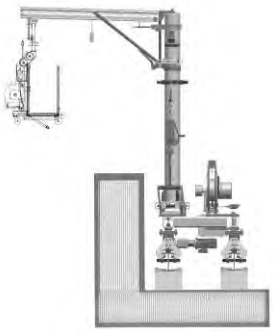
2. THE D2C MODEL RANGE

2.1 Standard roof mounted machines can be supplied to fit various track gauges and types. Mast height and reach are also variable to suit the particular application.

A study of each individual building application by Tractel's design office in consultation with the architect makes it possible to define a machine which is exactly right in terms of the:
- length of boom required to access the various locations of the building,
- lifting height required to cover the access areas.

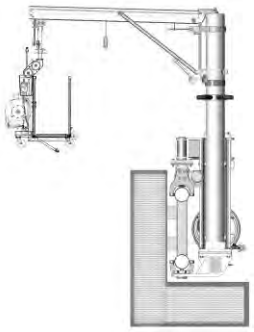
**** See technical sheet T4761.1 BMU Track***

STANDARD ROOF-MOUNTED SERIES



Model no.	Track gauge	Boom reach
R2656 R2660 R2666	2'-6"	5'-6" 6'-0" 6'-6"
R3056 R3060 R3066	3'-0"	5'-6" 6'-0" 6'-6"
R3656 R3660 R3666 R3670 R3676 R3680 R3686	3'-6"	5'-6" 6'-0" 6'-6" 7'-0" 7'-6" 8'-0" 8'-6"
R4056 R4060 R4066 R4070 R4076 R4080 R4086 R4090 R4010	4'-0"	5'-6" 6'-0" 6'-6" 7'-0" 7'-6" 8'-0" 8'-6" 9'-6" 10'-0"
R5066 R5070 R5076 R5080 R5086 R5090 R5010 R5011 R5012	5'-0"	6'-6" 7'-0" 7'-6" 8'-0" 8'-6" 9'-0" 10'-0" 11'-0" 12'-0"
R6066 R6070 R6076 R6080 R6086 R6090 R6010 R6011 R6012	6'-0"	6'-6" 7'-0" 7'-6" 8'-0" 8'-6" 9'-0" 10'-0" 11'-0" 12'-0"

STANDARD PARAPET-MOUNTED SERIES



Model no.	Track gauge	Boom reach
P3056 P3060 P3066	3'-0"	5'-6" 6'-0" 6'-6"
P3656 P3660 P3666 P3670 P3676 P3680 P3686	3'-6"	5'-6" 6'-0" 6'-6" 7'-0" 7'-6" 8'-0" 8'-6"
P4056 P4060 P4066 P4070 P4076 P4080 P4086 P4090 P4010	4'-0"	5'-6" 6'-0" 6'-6" 7'-0" 7'-6" 8'-0" 8'-6" 9'-0" 10'-0"
P5066 P5070 P5076 P5080 P5086 P5090 P5010 P5011 P5012	5'-0"	6'-6" 7'-0" 7'-6" 8'-0" 8'-6" 9'-0" 10'-0" 11'-0" 12'-0"
P6066 P6070 P6076 P6080 P6086 P6090 P6010 P6011 P6012	6'-0"	6'-6" 7'-0" 7'-6" 8'-0" 8'-6" 9'-0" 10'-0" 11'-0" 12'-0"

D2C-type davit carriage standard features:

- *Track type: parallel I-beam, parallel WF or parallel pipe only.*
- *Mast height options: 8 ft. or 10 ft. (2.4m or 3.0 m).*
- *Frame size: 4 ft.(1.2m) width x track gauge length.*
- *Wheel capacity: 10 kN*

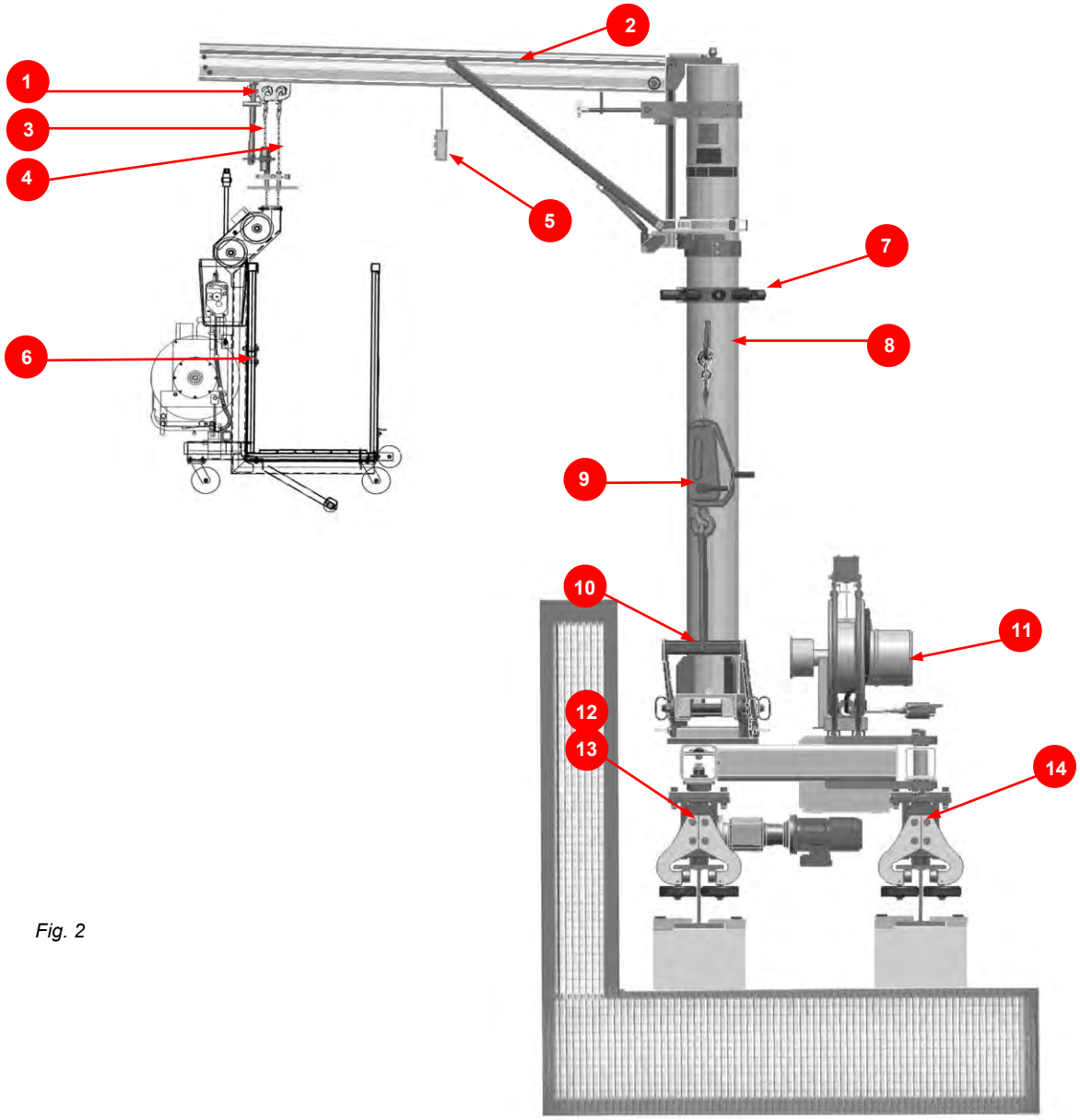


Fig. 2

3.1 MAIN COMPONENTS OF A ROOF MOUNTED POWERED DAVIT CARRIAGE BMU

1. Dual suspension trolley with manual brake
2. Aluminum davit boom
3. Primary suspension wire rope
4. Secondary suspension wire rope
5. Pendant control for traversing
6. TRACMOD powered platform
7. Davit turning bracket
8. Galvanized steel davit mast
9. Davit lifting winch
10. Davit lifting bracket
11. Electrical power cable collection reel
12. Drive wheel (foreground) (1 per carriage)
13. Front idler wheel (background) (1 per carriage)
14. Rear idler wheel (1 per carriage)

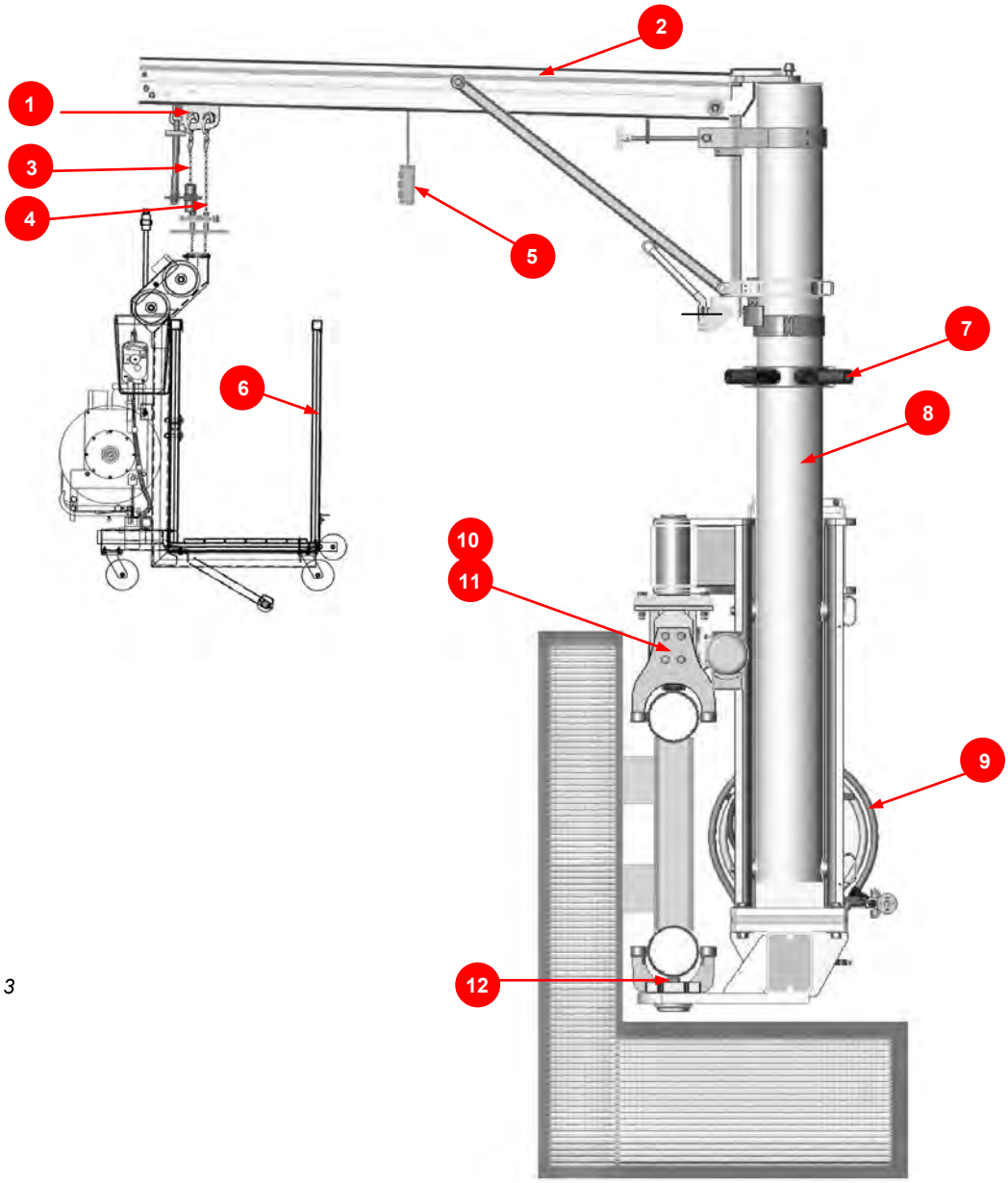


Fig. 3

3.2 MAIN COMPONENTS OF A PARAPET MOUNTED POWERED DAVIT CARRIAGE BMU

1. Dual suspension trolley with manual brake
2. Aluminum davit boom
3. Primary suspension wire rope
4. Secondary suspension wire rope
5. Control for traversing
6. TRACMOD powered platform
7. Davit turning bracket
8. Galvanized steel davit mast
9. Electrical power cable collection reel
10. Drive wheel (foreground) (1 per carriage)
11. Upper idler wheel (background) (1 per carriage)
12. Lower idler wheel (1 per carriage)

4. DESCRIPTION OF THE COMPONENTS

4.1 Traversing carriages

Both carriages are constructed of rectangular steel tube, galvanized for anti-corrosion protection.
The carriage and the masts are connected with pins or bolts connections. The davit mast assembly is lifted into position with manual winches connected to special lifting brackets. The winches are also used to lower the mast to a position out of view when not in use.

4.2 Traversing system

Three wheel assemblies are fitted to the frame. The powered drive wheel is located on the parapet side of the unit. The other two idler wheels are located at the front and rear of each unit.
Traversing is powered by an electrical motor with a speed of approximately 20 ft./min (6 m/min.)

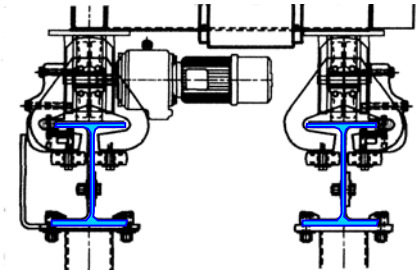


Fig. 4 - Traversing on I beam track bolted to upstands

4.3 Descent and ascent

Platform descent and ascent controlled from a central control panel operated by one worker on the TRACMOD work platform

(see TRACMOD Platform Technical Sheet ST003).

4.4 Stabilization

Note: The platform must be tied into structure as it descend the building façade in accordance with all applicable codes.

See Technical sheet T517.2 Guiding of BMU Platforms

4.5 Electrical system

The electrical system consists of the following main items:

a) On the building

- the power supply, located on the roof
  3-phase + ground, with on/off switch positioned along the track and protected by a 30 mA differential circuit-breaker (supplied by the customer).

b) On the traversing carriage

- the power supply cable for connecting the BMU frame to the power points. This cable is stored on a reel on the unit.
- an electrical panel with a pendant control for traversing only.

c) On the platform

- Central control on the TRACMOD platform for decent and ascent.

(see TRACMOD Platform Technical Sheet ST003).

4.6 TRACMOD Platform with D2C Davit Carriages

All davit carriages suspend TRACMOD powered work platforms. The TRACMOD powered platforms are 'F-type' as defined by US Federal OSHA (dual-line suspension). Typical platform lengths when used with davit carriages range from 20 ft. to 30 ft. (6 m to 9 m). This may be increased to a maximum of 40 ft.(13m), conditions permitting.

(see TRACMOD Platform Technical Sheet ST003).

5. SAFETY DEVICES

To ensure safe operation and user safety, the machine is fitted with a number of safety devices that monitor the correct operation of various components and operate in the event of a breakdown or fault.

5.1. Safety devices on the platform

- emergency stop
- lower obstruction bar
- overload safety device
- anti-tilt safety device

5.1.1 Optional safety devices on the platform

- upper obstruction bar

anemometer(wind speed indicator)

5.2 Safety devices on the davit carriage

- emergency stop
- platform upper limit sensor for carriage traverse
- electrical supply cable end limit
- end of track limit