

Section 11000 – Equipment (or 14600 – Hoists and Cranes)

Part 1 – General

- 1.1 Experience: manufacturer shall have a minimum of 5 years experience producing substantially similar equipment.
- 1.2 Quality Assurance: manufacturer shall be registered ISO 9001:2000 compliant with an independent certification agency approved by the International Organization for Standardization.

Part 2 – Products

2.1 Davit Crane

- 2.1.1 Manufacturer: davit crane shall be as manufactured by Thern, Inc., Series 5122.
- 2.1.2 Design Factor: designed with an ultimate design factor greater than 3:1 for all components including the lifting winch and base.
- 2.1.3 Lift Capacity: davit crane shall have a fixed lift capacity of 500 pounds at all boom positions.
- 2.1.4 Hook Reach: boom when horizontal shall have a minimum hook reach of 42 inches measured from mast center to hook center.
- 2.1.5 Hook Height: hook height shall be adjustable to two positions, one at horizontal and the other at 45 degrees from vertical, with a minimum of 22 inches between the lowest position and the highest position.
- 2.1.6 Boom Sheave: wire rope shall pass over a sheave at the end of the boom.
- 2.1.7 Clearance: minimum height of the boom shall be 24 inches between mounting surface and the underside of the boom in all base configurations.
- 2.1.8 Rotation: mast and boom shall rotate 360 degrees in the base.
- 2.1.9 Fastening Pins: crane components shall be fastened together using stainless steel clevis style pins.
- 2.1.10 Portability: davit crane shall fold down or break down into portable components, with total crane weight not to exceed 78 pounds.
- 2.1.11 Winch Location: lifting winches shall be located such that the center point of the drive shaft is behind the centerline of the mast.
- 2.1.12 Nametag: davit crane shall be labeled with a non-corrosive metal identification plate labeled or imprinted with the manufacturer's name, model number, serial number, capacity rating, and other essential information.

2.2 Crane Base

- 2.2.1 Manufacturer: crane base shall be as manufactured by Thern, Inc., Series 522.
- 2.2.2 Interface: crane base shall allow for removal of the mast.
- 2.2.3 Bearings: crane base shall have a Nylatron GSM bearing sleeve to support the mast at the top of the base.

5122 Series Specifications

FOR 514 WHEEL BASE

- 2.2.4 Leg Width: wheel base width shall be less than 30 inches measured from outside edge to outside edge.
- 2.2.5 Leg Length: wheel base length shall be less than 45 inches measured front to back from the outside edges.
- 2.2.6 Non-Rotation: bolt through base shall secure mast and prevent rotation.
- 2.2.7 Wheels: wheel base shall have 4 inch diameter wheels in front and 2.5 inch diameter caster wheels in the rear.

2.3 Crane and Base Finish

FOR STANDARD MODELS

- 2.3.1 Material: crane boom, mast and base shall be fabricated from steel meeting ASTM standards.
- 2.3.2 Finish: crane boom, mast and base shall have a corrosion resistant finish.

FOR GALVANIZED MODELS ENDING WITH GAL

- 2.3.1 Material: crane boom, mast and base shall be fabricated from steel meeting ASTM standards.
- 2.3.2 Finish: crane boom, mast and base shall be hot-dipped galvanized.

FOR STAINLESS STEEL MODELS ENDING WITH SS

- 2.3.1 Material: crane boom, mast and base shall be fabricated from AISI 304/304L/316 stainless steel, with electro-polish finish.

2.4 Lifting Winch

FOR M4022PB-K OR CRANE MODELS ENDING IN M1

- 2.4.1 Lifting Winch: winch shall have machine cut gears, an adjustable handle that mounts securely to the drive shaft, bronze bearings, and a positive load holding Weston style brake able to stop and hold the load automatically if the winch handle is released.
- 2.4.2 Cable Anchor: lifting winch shall include the Thern Quick Disconnect feature allowing quick attachment and detachment of wire rope equipped with a swaged ball anchor.
- 2.4.3 Finish: lifting winch shall have a zinc and iridescent dichromate plated corrosion resistant finish.

FOR M4042PBSS-K OR CRANE MODELS ENDING IN M3

- 2.4.1 Lifting Winch: winch shall have machine cut gears, an adjustable handle that mounts securely to the drive shaft, bronze bearings, and a positive load holding Weston style brake able to stop and hold the load automatically if the winch handle is released.



5122 Series Specifications

- 2.4.2 Cable Anchor: lifting winch shall include the Thern Quick Disconnect feature allowing quick attachment and detachment of wire rope equipped with a swaged ball anchor.
- 2.4.3 Material: lifting winch shall be fabricated from type 304/17-4 stainless steel minimum, with electro-polish finish.

2.5 Wire Rope

- 2.5.1 Wire Rope: wire rope construction shall be 7 x 19 type 304 stainless steel cable.
- 2.5.2 Hooks: latch type hooks shall be used and shall be either non-rotating eye type or swivel type to allow 360 degree rotation under all load conditions. Hooks shall be heat treated drop forged type 304/316 stainless steel.